GRID OF THE FUTURE

First Iteration of the Grid of the Future Plan

NYSERDA and DPS

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Prepared by:

Karen Cramton
Kelly Marrin
Teague Douglas
Marellie Akoury-Shima
Angeliki Gkogka
Edward Sparrow
Jack Riordan
Kytson McNeil
Khadija Holder

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1 EXECUTIVE SUMMARY

This report constitutes the first iteration of the Grid of the Future Plan (the Plan) and documents the methods, approaches to, and results of the work conducted as part of Phase 2 of the Grid of the Future proceeding as defined in the New York State Public Service Commission (the Commission) Instituting Order.

1.1 Background

In April of 2024, the Commission initiated the Grid of the Future proceeding, which aims to develop a comprehensive plan to build on the investments made to-date and deliver a more reliable, affordable, and decarbonized grid for all New Yorkers. The objective of the Grid of the Future proceeding, as described in the Instituting Order, is "to unlock innovation and investment to deploy flexible resources—such as distributed energy resources (DERs) and virtual power plants (VPPs)—to achieve our clean energy goals at a manageable cost and at the highest levels of reliability."[1]

The Order lays out a three-phase approach for the Grid of the Future proceeding.

- Phase 1 includes the Grid Flexibility Study (the Study).[2]
- Phase 2—the subject of this report—uses insights from the Study to guide the development of a more expansive Distributed System Implementation Plan (DSIP) aligned with the goals of the Grid of the Future proceeding. DSIPs are biannual filings by the six investor-owned utilities reporting on the implementation of a Distributed System Platform (DSP).[3]
- Phase 3 is the second iteration of the Grid of the Future Plan to be filed by December 31, 2025.

A DSP, in the words of the Commission, is "an intelligent network platform that will provide safe, reliable, and efficient electric services by integrating diverse resources to meet customers' and society's evolving needs. The DSP fosters broad market activity that monetizes system and social values, by enabling active customer and third-party engagement that is aligned with the wholesale market and bulk power system."[4]

The DSIPs were developed alongside the Reforming the Energy Vision (REV) initiative to "describe the utility's progress and plans related to the implementation of a [DSP]."[5] Since the inception of the DSIP process in 2015, Department of Public Service Staff (Staff) have provided recommended guidance through whitepapers, and the Commission has issued several orders. Currently, Staff's recommended guidance requires that utilities provide information across 13 topic areas.

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1 Case 24-E-0165, Proceeding on Motion of the Commission Regarding the Grid of the Future, Order Instituting Proceeding, (issued April 18, 2024) (Instituting Order), p. 3.

2 Case 24-E-0165, Grid Flexibility Study Phase 1 Final Report – Volume I – Summary Report & Grid Flexibility Study Phase 1 Final Report – Volume II – Technical Appendix, (issued January 31, 2025) (Grid Flexibility Study).

3 The investor-owned utilities are: Central Hudson Gas and Electric Corporation; Consolidated Edison Company of New York, Inc.; New York State Electric & Gas Corporation; Niagara Mohawk Power Corporation d/b/a National Grid; Orange and Rockland Utilities, Inc.; and Rochester Gas and Electric Corporation (collectively, the Joint Utilities of New York).

4 Case 15-M-0180, In the Matter of Regulation and Oversight of Distributed Energy Resource Providers and Products, Order Establishing Oversight Framework and Uniform Business Practices for Distributed Energy Resource Providers (issued October 19, 2017), Appendix A - Uniform Business Practices for Distributed Energy Resource Suppliers, p 2.

5 Case 24-E-0165, Instituting Order, p 9.

The Instituting Order states that "while the DSIPs have become more informative with each update, an in-depth review of them is necessary at this time to determine if they adequately identify, characterize, and plan for the full range of DSP capabilities that will be foundational to supporting the State's clean energy and electrification goals."[6]

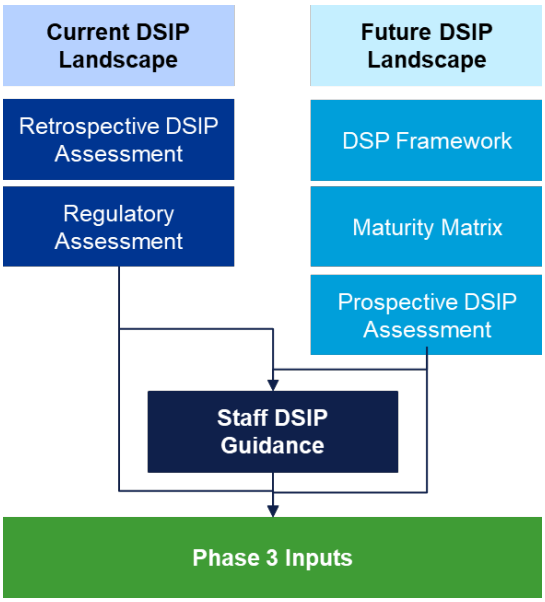
1.2 Objectives

As noted above, Phase 2 focuses on the development of a DSIP process that is better aligned with the goals of the Grid of the Future proceeding. The five key objectives of Phase 2 are:

1. Assess the 2023 utility DSIP updates to determine how well each DSIP is aligned with Staff recommended guidance for the 2023 DSIP updates. This assessment focuses on compliance and the quality of responses rather than the maturity of the utilities' DSP plans and activities.
2. Identify headwinds and tailwinds affecting those DSP activities that support 2030 and 2040 State climate and energy goals.
3. Develop a framework that identifies those critical elements and capabilities that could support the creation of a DSP aligned with State climate and energy goals, including the Climate Leadership and Community Protection Act (CLCPA).
4. Perform a Prospective DSIP Assessment, consistently assessing the maturity of each utility's DSIP, with a particular focus on the critical capabilities needed to achieve a DSP.
5. Provide short- and long-term recommendations for Commission requirements of future DSIP filings to ensure alignment with 2030 and 2040 State climate and energy objectives.

1.3 Methodology

The figure to the right summarizes our approach to the Phase 2 work. We first looked at the current DSIP landscape in order to understand the DSIP process and filings along with the wider regulatory environment. Next, we turned our attention to the future so that we could understand and communicate the critical capabilities that would be required to create a successful DSP and assess the utility DSIPs for the presence of those capabilities. These two perspectives allowed us to provide robust and actionable recommendations for future updates to recommended guidance and Commission orders on the DSIP process. These activities also resulted in a suite of assessments and tools that will support Phase 3.



1.3.1 Retrospective DSIP Assessment

To assess the current state of the DSIP process, we reviewed the 2023 DSIPs themselves, secondary research, and direct utility feedback. We performed the first phase of this assessment independently,

[6] Case 24-E-0165, Instituting Order, p. 10.

with DNV and Staff working alone. The second phase was collaborative, including the utilities and collecting their feedback.

We developed an assessment tool and assembled a team of DNV subject matter experts (SMEs) to assess each utility's DSIP, rating across technical topic areas for completeness and consistency with DSIP guidance. We then solicited utility feedback and insight into the DSIP process. We used this assessment to develop recommendations for changes to Staff DSIP guidance.

1.3.2 Regulatory Assessment

We performed two distinct reviews of the regulatory landscape surrounding the development of a DSP in New York: a document review of 96 relevant orders, rulings, proceedings, and state policies and an industry review that leveraged secondary research and industry experience. Both reviews allowed us to compile a list of headwinds and tailwinds hindering and supporting DSP development.

To more easily digest the regulatory landscape, we grouped the headwinds and tailwinds into five broad categories—costs, data, markets, operations and planning, and technology—and rated the impact of each headwind/tailwind on New York's progress toward a DSP.

1.3.3 DSP Framework and Maturity Matrix

After assessing the current state of the DSIP process and the regulatory environment surrounding the creation of DSP, we created tools that can help guide the future development of the DSIPs. We developed a DSP Framework to identify those capabilities and activities that are critical to the development of a DSP in New York. The capabilities were classified under a set of five pillars and six enablers. We created a Maturity Matrix to gauge each utility's progress toward those critical capabilities and activities identified in our framework.

1.3.4 Prospective DSIP Assessment

We used the DSP Framework and Maturity Matrix for a Prospective DSIP Assessment, tapping the same team of DNV SMEs who performed our Retrospective Assessment, to measure the utilities' progress against the DSP Framework and the current state of the DSIPs against the DSP conditions outlined in the DSP Framework. This allowed us to craft recommendations for DSIP guidance and lay the groundwork for Phase 3, the full Grid of the Future Plan.

1.4 Findings

Below, we include findings from our three main assessments: the Retrospective DSIP Assessment, the Regulatory Assessment, and the Prospective DSIP Assessment.

1.4.1 Retrospective DSIP Findings

The DSIPs are currently focused on documenting activities that support the development of a DSP. The DSIPs do not request or provide outcome- or goal-oriented information, and, without clear objectives or metrics, it is difficult to assess precisely how utility activities are progressing toward the goal of a functional DSP. As such, our Retrospective DSIP Assessment focused on compliance with the most recent set of Staff guidance, completeness of responses, and clarity of information.

Overall, the **DSIPs achieved the stated goals** of providing information regarding current and planned activities within each of the 13 technical topic areas. Most questions were answered

sufficiently, and multiple stakeholder resources were provided. Throughout our review we identified several areas of potential improvement as follows.

- **Inconsistent reporting complicated our assessment of the DSIPs.** Our Retrospective DSIP Assessment found that the DSIPs varied considerably in their organization, detail, and accessibility. For some technical areas, utilities provided substantial detail, while other responses were cursory or provided only links to different sections of the DSIP or external resources.
- **Incomplete answers were more common for complex questions, questions related to active proceedings, and questions about stakeholder engagement.** Prompts that asked several questions were often incompletely answered. Utilities also struggled to provide useful responses when data was unavailable, they had already provided similar answers in other sections, activities had not yet started, were in flight or changing rapidly, were not applicable, or complicated for some other reason.
- **Collective action resulted in more comprehensive answers**. Those areas where the Joint Utilities of New York (Joint Utilities) have established working groups were also the areas where DSIPs were the most consistent and complete, although it was difficult to distinguish the collective action of the Joint Utilities from the individual action of each utility.

1.4.2 Regulatory Findings

New York's regulatory environment is not an undue obstacle to the development of a DSP. For each of the five regulatory categories in our review, our assessment found headwinds but also tailwinds. Indeed, in some cases the same technical topic could be considered headwind and tailwind.

The most **substantial headwinds** were identified in the areas of **grid investment costs and market design**, which hinders efficiency and slows adoption. The most **significant tailwinds** were provided in the areas of **data access and standardized interconnection requirements.**

1.4.3 Prospective DSIP Findings

Across the capabilities assessed, **maturity most often scored between 2 and 3 on our 5-point maturity scale**. This means that some of the capabilities identified as being critical to a DSP were fully deployed and integrated. However, many of the capabilities had not been automated, were not well integrated, or were not deployed utility-wide. Similar to the Retrospective DSIP Assessment, collective action also resulted in similar capabilities and maturities across utilities. Some additional insights within the specific scored areas (pillars or enablers) follow:

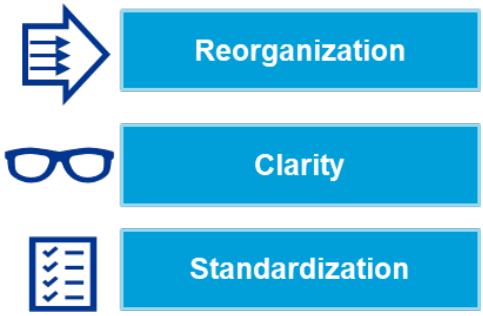
- **Distribution Planning and Network Development.** As noted in the 2023 DSIP filings, several utilities have plans to develop more granular, bottom-up forecasting capabilities but most are still forecasting at the system level. NWA planning is strong across the utilities especially compared to the market, but there are reported barriers to soliciting proposals, awarding contracts, and implementing NWA projects. We also observed varying levels of data integration and minimal discussion of integrated planning from the CGPP perspective.
- **Interconnection and Network Reinforcement.** The utilities actively participate in two working groups that support the development and standardization of many core DER interconnection technologies, practices, and policies. Therefore, the interconnection-related resources and practices across the 6 utilities were fairly similar. In general, the utilities should aim to increase the granularity and publication frequency of hosting capacity maps, include a forecast of hosting

capacity, increase the granularity of their forecasts, and share a broader range of data through a state-wide platform.

- **Distribution Network Operations.** Most utilities implemented an advanced distribution management system (ADMS) and distributed energy resource management system (DERMS) platform, however, there was limited information on the integration of systems for grid operations. For most utilities to move to the next maturity level we need to understand how core platforms like automated metering infrastructure (AMI), supervisory control and data acquisition (SCADA) systems, ADMS, Distribution Management System (DMS), Outage Management System (OMS) and DERMS are being integrated to provide efficient business practices.
- **Customer Services and Engagement.** There are distinct differences in customers' access to their energy consumption data through the utilities' customer portals. There are also distinct differences in how the utilities use AMI data and capabilities to enable customer programs and tariffs. While all utilities participate in New York State Energy Research and Development Authority (NYSERDA) led customer programs (e.g., NYSERDA Clean Heat Program), the quality of the programs and the level of modernity/innovation in those offerings varies widely.
- **Data Governance.** The requirements for utility system and customer data to support the Integrated Energy Data Resource's (IEDR) initial use cases were firmly established and clearly communicated to the utilities in time for inclusion in their 2023 DSIP updates. During that same period, the requirements for data needed to support a significant number of additional IEDR use cases were not fully identified and finalized. Therefore, due to that uncertainty around the data requirements for those additional use cases, the utilities were not able to include details related to those requirements in their 2023 DSIP updates and, as a consequence, there is insufficient information to form a basis for Prospective Assessment of this area in the utilities' 2023 DSIP updates. Nonetheless, the information provided in the 2023 DSIP updates shows that some of the utilities are further along in planning and implementing more advanced capabilities for generating and sharing data that is useful to a variety of stakeholders. There are also distinct differences in the utilities' ability to generate, analyse, and use system and customer data to improve operational efficiencies or develop new capabilities.
- **Stakeholder Engagement and Change Management.** The utilities actively collaborate with stakeholders to standardize key processes, share knowledge, and accelerate the achievement of DSP goals. The utilities have regular engagement opportunities to solicit stakeholder input, with transparent reporting demonstrating how feedback shapes planning and implementation efforts. To increase their level of maturity, the utilities need to demonstrate comprehensive change management practices that guide enterprise-wide initiatives with proactive engagement planning, ensuring consistent stakeholder interaction. The utilities should provide measurable outcomes, validate stakeholder engagement effectiveness, and show continuous improvement of their approach to outreach. We qualify this by noting that DSIP prompts asking about stakeholder engagement were often unanswered or minimally answered. We recommend that the utilities provide more information in future DSIPs.

1.5 Recommendations

We developed short- and long-term recommendations to better align Staff DSIP recommended guidance with the State's CLCPA goals.



These recommendations align with the themes of reorganization, clarity, and standardization, focusing on improving the current process without recommending sweeping changes. We expect that Phase 3 will provide more specific recommendations.

Given the inconsistencies we found among the DSIPs, Staff have an opportunity to **clarify their recommended guidance** and elicit more consistent, clear responses. More prescriptive guidance can make the DSIPs more consistent and sharpen their purpose. If utilities better understand not only what they are being asked, but why, they will be better able to respond to prompts.

Standardizing the format of prompts to eliminate multi-pronged questions, prescribe organization of content where helpful, and provide explicit expectations for the organization and thoroughness of answers can simplify the creation of a DSIP and make them into more robust references—not least of all for the utilities themselves, which are not yet using the DSIPs as strategic tools to guide their progress toward a DSP.

Technical topic areas, which Staff have tweaked before, can be **streamlined and reorganized** to better reflect the evolving needs of a DSP.

We have also provided recommendations that will help to transform the DSIP process from a useful regulatory check-in to a strategic tool that can help guide utilities, Staff, and other stakeholders as they build New York's Grid of the Future.

Instead of focusing on documenting processes and activities, future iterations of the DSIPs could focus on the **value** of those processes and activities, the **outcomes** toward which they are building, and specific **metrics** to track a utility's progress toward achieving a fully functioning DSP. Staff could also develop utility-specific priorities to encourage the development of various capabilities necessary to a DSP.

More **detailed and streamlined** guidance that provides standardized tables, templates, and metrics for utilities to track will not just make the DSIPs more consistent and digestible, it will also make them easier to compare, transforming them into a resource for the many stakeholders that must be part of any DSP.

Addressing gaps identified by the capabilities in the DSP Framework will ensure that the DSIPs are comprehensive. Including a focus on market design and implementation will allow utilities to report on grid edge capabilities. In addition, defining data and data access standards as well as interoperability and technology standards can facilitate the coordination and interconnection a DSP requires.

If our electrical grid is the world's largest machine, then remaking it for the future will be the world's largest retrofit—one that must be completed cost effectively and without interruption to service. Such a complex task, requiring so much innovation and collaboration, demands reliable and sustainable systems processes. The DSIP process can be such a tool.

2 INTRODUCTION

This report constitutes the first iteration of the Grid of the Future Plan (the Plan) and documents the methods, approaches to, and results of the work conducted as part of Phase 2 of the Grid of the Future proceeding as defined in the Instituting Order. Below, DNV provides background on the proceeding, describes the objectives of the first iteration of the Plan, and presents the organization of the report.

2.1 Background

In April of 2024, the Public Service Commission (Commission) initiated the Grid of the Future proceeding. The proceeding aims to develop a comprehensive plan to build on the investments made to-date and deliver a more reliable, affordable, and decarbonized grid for all New Yorkers. The objective of the Grid of the Future proceeding, as described in the Instituting Order, is "to unlock innovation and investment to deploy flexible resources—such as DERs and virtual power plants (VPPs)—to achieve our clean energy goals at a manageable cost and at the highest levels of reliability."[7]

A Distributed System Platform (DSP), in the words of the Commission, is "an intelligent network platform that will provide safe, reliable and efficient electric services by integrating diverse resources to meet customers' and society's evolving needs. The DSP fosters broad market activity that monetizes system and social values, by enabling active customer and third-party engagement that is aligned with the wholesale market and bulk power system."[8]

As laid out in the Instituting Order, the work supporting the Grid of the Future proceeding is organized in three phases:

- Phase 1, led by the Brattle Group, produced the New York State Grid Flexibility Potential Study (the Study), Volumes I and II of which were filed on January 31, 2025.[9]
- Phase 2, led by DNV and described in this report, applied insights from the Study and stakeholder interactions to develop recommendations for a more expansive Distributed System Implementation Plan (DSIP) process that aligns with the goals of the Grid of the Future proceeding. DSIPs are biannual utility filings which report on the utilities' implementation of Distributed System Platforms (DSPs) to enable widespread deployment and effective use of Distributed Energy Resource (DER) capabilities in the electric system. This report constitutes the first iteration of the Plan.
- Phase 3 will produce a comprehensive second iteration of the Grid of the Future Plan, to be filed by December 31, 2025.

The three phases are summarized in Figure 2-1.

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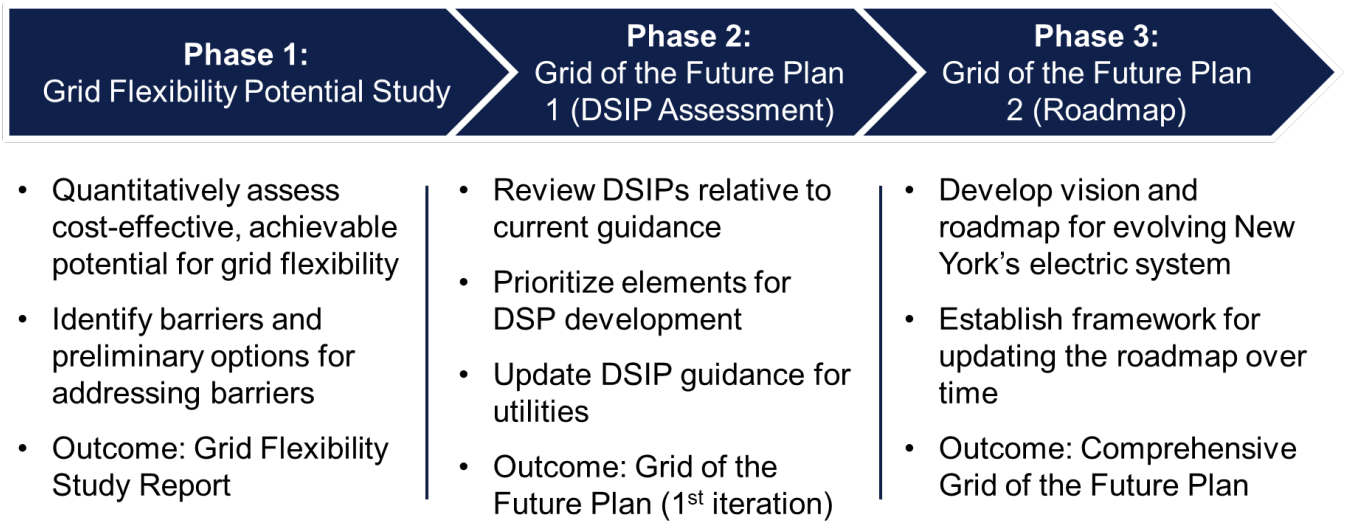
7 Case 24-E-0165, Instituting Order, p. 3.

8 Case 15-M-0180, Uniform Business Practices for Distributed Energy Resource Suppliers, Appendix A, p. 2.

9 Case 24-E-0165, Grid Flexibility Study.

Figure 2-1. Overview of the Phases of Work Supporting the Grid of the Future Proceeding



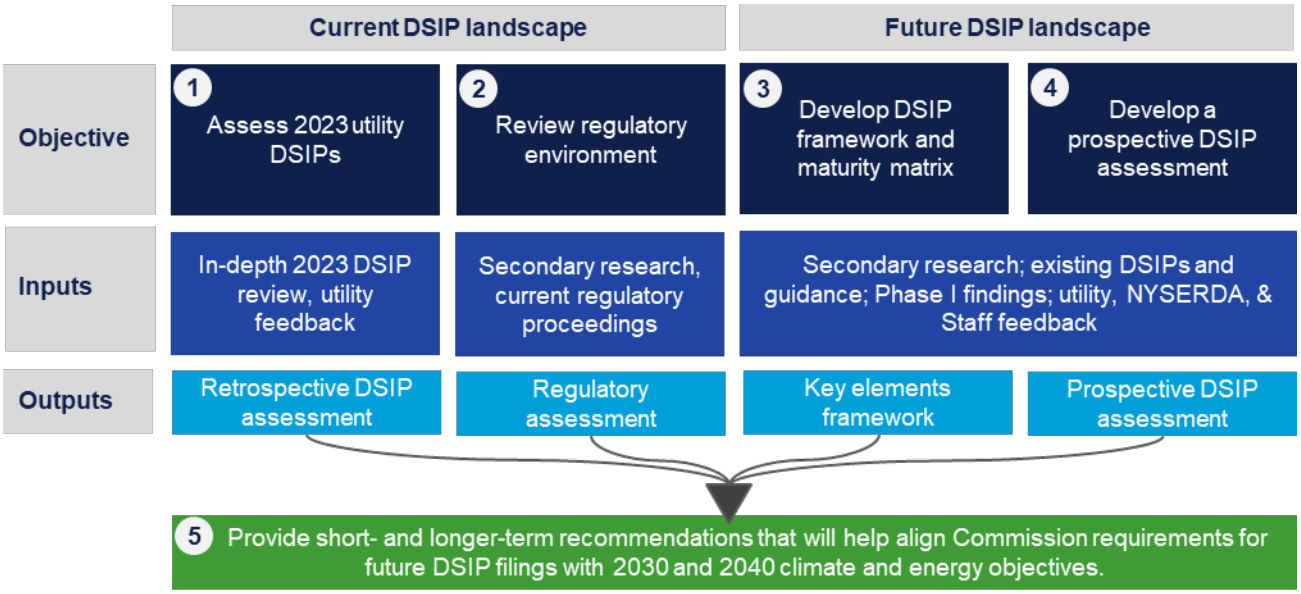
2.2 Objectives of the First Iteration of the Grid of the Future Plan

As noted above, Phase 2 focuses on the development of a more expansive DSIP process aligned with the goals of the Grid of the Future proceeding. As determined by Staff in response to the Instituting Order, DNV's work supporting Phase 2 includes the following five tasks:

1. Assess the 2023 utility DSIP updates to determine how well each DSIP is aligned with the Department of Public Service (Staff) recommended guidance for the 2023 DSIP updates. This assessment focuses on compliance and the quality of responses rather than the maturity of the utilities' DSP plans and activities.
2. Identify headwinds and tailwinds affecting those DSP activities that support 2030 and 2040 State climate and energy goals.
3. Develop a framework that identifies those critical elements and capabilities that could support the creation of a DSP aligned with State climate and energy goals, including the Climate Leadership and Community Protection Act (CLCPA).
4. Perform a Prospective DSIP Assessment, consistently assessing the maturity of each utility's DSIP, with a particular focus on the critical capabilities needed to achieve a DSP.
5. Provide short- and long-term recommendations for Commission requirements of future DSIP filings to ensure alignment with 2030 and 2040 State climate and energy objectives.

A summary of the objectives, inputs, and outputs is presented in Figure 2-2.

Figure 2-2. Phase 2 Research Objectives, Inputs, and Outputs



The first two objectives survey the current landscape and describe the state of the DSIPs and existing regulation with respect to future goals. These objectives are critical to understanding the usefulness, audience, and purpose of the current DSIPs and to identifying existing regulatory barriers to the implementation of DSP capabilities. Key inputs to the work included the 2023 DSIPs themselves, secondary research, and direct utility feedback. The output includes two assessments: a Retrospective Assessment of the DSIPs focused on compliance (see Section 3.1) and a Regulatory Assessment focused on headwinds and tailwinds (see Section 3.2).

The second two objectives are forward-looking, establishing a way to assess each utility's progress toward implementing a mature DSP that supports the State's climate and energy goals. As part of this work, we reviewed the utilities' 2023 DSIPs, Staff's 2023 DSIP guidance, and regulation and incorporated findings from the Phase 1 study, as well as feedback from the New York State Energy Research and Development Authority (NYSERDA) and Staff. The output includes the key elements of a DSP Framework (see Section 4.1) and a Prospective Assessment of each utility's DSIP (see Section 4.3). Both the Framework and Prospective Assessments lay the groundwork for Phase 3 and contain essential building blocks for the comprehensive Plan.

Finally, we used the results of the four objectives to create a set of recommendations that can help align Commission requirements for future DSIP filings with 2030 and 2040 State climate and energy objectives and anticipated elements of the comprehensive Plan to be produced in Phase 3.

2.3 Organization of this Report

The remainder of this report is organized around the five objectives described above.

- Section 3 – Retrospective DSIP Assessments: This section presents the context, methodology, and results of both the retrospective assessments of the utilities' 2023 DSIP updates and the assessment of the current regulatory landscape.

- Section 4 – Preparing for Future DSIPs: This section presents the conclusions and learnings from Phase 1 that we considered in our work supporting Phase 2; it identifies and characterizes the key DSP elements that should be addressed in future DSIP updates; and it ends with the results of the Prospective DSIP Assessments.
- Section 5 – Recommendations for Future DSIPs: This section presents and explains our near- and longer-term recommendations.
- Appendix A – Retrospective DSIP Assessments
- Appendix B – Regulatory Assessment
- Appendix C – DSP Framework & Prospective DSIP Assessments

3 RETROSPECTIVE DSIP ASSESSMENTS

The Distributed System Implementation Plans (DSIPs) were developed as part of the Reforming the Energy Vision (REV) initiative to "provide detailed, up-to-date information about progress and plans related to the implementation of a Distributed System Platform (DSP) featuring operational and market capabilities that will enable a market for products and services provided by the Distributed Energy Resources (DER) that are connected to the utility's distribution systems."[10] Since inception of the DSIP process in 2015, the Commission has adopted DSIP directives in subsequent orders and Department of Public Service Staff (Staff) have provided guidance for DSIP organization and content through two whitepapers, as shown below.

Figure 3-1. DSIP Process Timeline

The DSIP process was first developed in the 2015 REV Track One Order.[11] The subsequent 2016 and 2017 Guidance Orders provide additional guidance for the utilities regarding the process to develop and file DSIPs.[12] Additionally, these orders establish the DSIP filing cadence and direct the Joint Utilities of New York (Joint Utilities) to file a DSIP biannually.

After the Guidance Orders, Staff provided recommendations for updated Commission guidance regarding future DSIPs through two whitepapers (2018 and 2023).[13] [14] This recommended guidance has been provided to the utilities via the whitepapers but is not required by the Commission in the form of an Order.

In the 2018 Whitepaper, Staff provided detailed recommendations for the contents and organization of future DSIPs, including the specification of 14 technical topics and a request for both general and

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10 Case 16-M-0411, In the Matter of Distributed System Implementation Plans Proposed Commission Guidance for the Electric Utilities' DSIP Update Filings (issued January 10, 2023) (2023 Whitepaper).

11 Case 14-M-0101, Proceeding on Motion of the Commission in Regard to Reforming the Energy Vision (REV Proceeding), Order Adopting Regulatory Policy Framework and Implementation Plan (issued February 26, 2015) (REV Track One Order).

12 Case 14-M-0101, REV Proceeding, Order Adopting Distributed System Implementation Plan Guidance (issued April 20, 2016) (2016 Guidance Order); Case 16-M-0411, In the Matter of Distributed System Implementation Plans, Order on Distributed System Implementation Plan Filings (issued March 9, 2017) (2017 Guidance Order).

13 16-M-0411, DPS Whitepaper, Guidance for 2018 DSIP Updates (filed May 29, 2018) (2018 Whitepaper).

14 16-M-0411, Proposed Commission Guidance for the Electric Utilities' 2023 DSIP Update Filings (filed January 10, 2023) (2023 Whitepaper).

topic-specific information within the filings. The 2018 Whitepaper also made recommendations about stakeholder resource availability and DSIP governance.

In the 2023 whitepaper, Staff provided an updated list of 13 technical topics and focused on aligning the DSIPs with the new Coordinated Grid Planning Process (CGPP),[15] the Climate Leadership and Community Protection Act (CLCPA),[16] and the Accelerated Renewable Energy Growth and Community Benefit Act (AREGCBA).[17] Following, are the technical topics recommended by Staff for inclusion in the utilities' 2023 DSIP updates:

- Integrated planning
- Advanced forecasting
- Grid operations
- Energy storage integration
- Electric vehicle (EV) integration
- Clean heat integration
- Energy efficiency (EE) integration and innovation
- Data sharing
- Hosting capacity
- Billing and compensation
- DER interconnections
- Automated metering infrastructure
- Beneficial location of DERs and non-wires alternatives (NWAs)

In addition to the DSIP filings, a larger ecosystem of information sharing and interaction surrounds the development and implementation of the DSIPs. Critical elements of this ecosystem include:

The Joint Utilities work together to advance state policy goals and respond to Commission proceedings, including but not limited to REV and Grid of the Future.[18] The Joint Utilities provide various stakeholder resources including the DSIPs, distribution system investment plans, quarterly DSP enablement newsletters, and biannual stakeholder webinars, as well as other distributed generation, NWA, and utility resources, including hosting capacity data and maps.

Working Groups. Over the last decade, the DSIP process has been supported by a variety of working groups dedicated to related technical topics and issues. Active working groups include: the Billing and Compensation Working Group; the Advanced Forecasting Working Group; the Advanced Technologies Working Group (ATWG); the Interconnection Technology Working Group (ITWG); and the Interconnection Policy Working Group (IPWG). The Market Design and Integration Working Group (MDIWG), although no longer active, was instrumental in developing information used to initiate and support the Grid of the Future proceeding.

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15 Case 20-E-0197, Proceeding on Motion of the Commission to Implement Transmission Planning Pursuant to the Accelerated Renewable Energy Growth and Community Benefit Act (Issued May 14, 2020) (Coordinated Grid Planning Process).

16 Approved on July 18, 2019, the CLCPA established a set of aggressive climate goals focused on decarbonizing energy production and use in New York State by 2050. Climate Leadership and Community Protection Act, L.2019, c. 106. More information on the CLCPA can be found at https://climate.ny.gov/.

17 Approved on April 3, 2020, the AREGCBA directs the Commission to develop and implement plans for future investments in the State's electric grid to ensure the grid will support the State's aggressive climate goals.

18 More information about the Joint Utilities can be found at https://jointutilitiesofny.org/.

Other initiatives. The Integrated Energy Data Resource (IEDR) platform hosted by the NYSERDA is "a centralized state-wide platform that provides access to energy data and information from New York's electric, gas, and steam utilities, and other sources, to support new and innovative clean energy business models that serve to benefit New York energy customers."[19] The Coordinated Grid Planning Process (CGPP) is a collaboration between the Joint Utilities, Staff, NYSERDA, and the New York Independent System Operator (NYISO) to coordinate statewide planning of generation, transmission, and distribution investments to efficiently enable the grid growth and evolution needed to achieve New York's clean energy goals.

Important legislation. The CLCPA was broadly designed to protect the state's natural resources, create economic opportunities, develop innovative technologies and build a brighter future for all New Yorkers. In particular, the CLCPA sets specific goals for the power sector to achieve by 2030, 2040, and 2050, with an objective of decarbonizing energy production and use in New York state by 2050. The AREGCBA aims to ensure that renewable generation is sited in a timely and cost-effective manner. AREGCBA also directs the Commission to develop and implement plans for future investments in New York's electric grid to ensure that the grid will support the State's aggressive climate goals.

The remainder of this section presents the Phase 2 work that assessed current or past DSIP activities in New York.

3.1 Retrospective Assessment of the Utilities' 2023 DSIP Updates[20]

The Instituting Order states that "while the DSIPs have become more informative with each update, an in-depth review of them is necessary at this time to determine if they adequately identify, characterize, and plan for the full range of DSP capabilities that will be foundational to supporting the State's clean energy and electrification goals."[21] As outlined in Figure 2-2, to achieve this goal, DNV conducted two separate assessments of the DSIPs: a Retrospective Assessment and a Prospective Assessment. This section includes the objectives, methodology, and results of our Retrospective Assessment, a foundational piece of the Phase 2 work.

3.1.1 DSIP Overview

In its 2023 whitepaper, Staff provided the following recommended guidance and suggested contents for utility DSIPs—hereafter referred to simply as guidance.

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19 NYSERDA, Integrated Energy Data (IEDR) Program, https://www.nyserda.ny.gov/All-Programs/Integrated-Energy-Data-Resource-Program

20 Case 16-M-0411, In the Matter of Distributed System Implementation Plans, Central Hudson Gas and Electric DSIP Update 2023; National Grid 2023 DSIP Update; Consolidated Edison Company of New York 2023 DSIP; New York State Electric &Gas Corporation Rochester Gas Corporation 2023 DSIP Report; Orange and Rockland Utilities 2023 DSIP (filed June 30, 2023).

21 Case 24-E-0165, Instituting Order, p. 10.

While not an element of the guidance, each of the utilities includes an **executive summary** focused on the most important current activities related to DSP implementation and included an overall five-year timeline.

Within each of the 13 technical topic areas (shown to the right) there are two sets of guidance. The **general guidance** includes prompts on the following topics.

- Context and background
- Implementation plan, schedule, and investments
  - Current progress
  - Future implementation and planning
  - Integrated implementation timeline
- Risks and mitigation
- Stakeholder engagement

The **topic-area-specific guidance** includes anywhere from four to 17 specific prompts related to the topic area.

In addition to the technical topic areas, Staff guidance recommends three additional sections: **DSIP governance**, links to the utility's most recent **marginal cost of service study**, and the utility's **BCA handbook** and calculations.

Staff also provided guidance regarding clarity, presentation, and other aspects of reporting.

3.1.2 Objective

This Retrospective DSIP Assessment focuses solely on the 2023 DSIPs and their level of alignment with the guidance provided in Staff's 2023 DSIP Guidance Whitepaper. Because the guidance itself focuses on timely dissemination of information rather than the achievement of specific outcomes, this assessment does not address the maturity or quality of the utilities' DSP implementation plans or their ability to deliver outcomes that would help to achieve statewide goals.

The main purpose of the DSIPs is to describe the progress and plans for implementing a DSP that will enable a transition to the grid of the future and communicate the location of various resources to stakeholders and other interested parties. The DSIPs are meant to be a useful resource for a variety of stakeholders, including DER developers, technology developers, industry organizations, federal/state/local government entities (including Staff), and community advocates. The objective of Staff's recommended guidance is to ensure consistency in the DSIP filings and to elicit specific information across the thirteen technical topic areas.

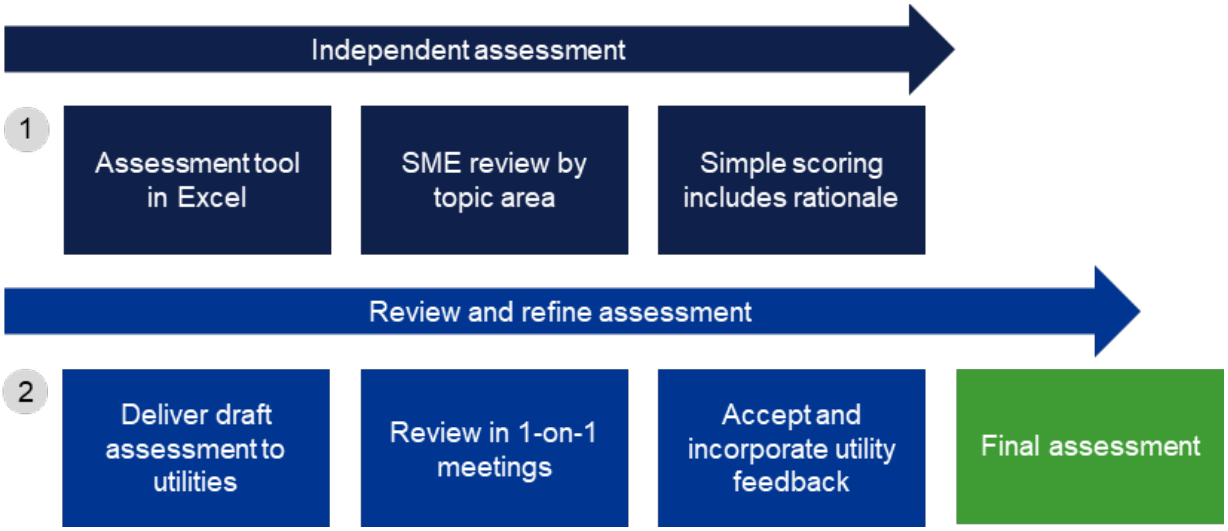
Retrospective Assessment objectives include:

- Review the utilities' 2023 DSIP updates for alignment with Staff guidance
- Review Staff DSIP guidance (organization, prompts, etc.) to identify areas where it can be improved
- Gather feedback from the utilities regarding their experience with the 2023 (and prior) DSIP filing processes
- Develop actionable and useful feedback for improving future DSIPs and the process including:
  - Effective communication from Staff to elicit more consistent reporting from the utilities
  - Effective communication for stakeholders in terms of resources that can support them

3.1.3 Methodology

Figure 3-2 summarizes our approach to the Retrospective DSIP Assessment. A discussion of our approach follows the figure.

Figure 3-2. Retrospective DSIP Assessment Approach



There were two phases of the Retrospective DSIP Assessment. The first phase was an independent assessment, with DNV and Staff working alone to plan and perform the assessment. The second phase was collaborative, sharing the first phase results with the utilities and collecting their feedback.

3.1.3.1 Independent Assessment

We started with a review of both Staff guidance and the DSIPs themselves, using those resources to develop an assessment tool in Excel. Each Excel workbook represents an assessment of one utility's DSIP. The assessment workbooks are organized into an introduction/summary worksheet and thirteen additional worksheets for each technical topic included in Staff's recommended guidance. The rating rubric is presented in Figure 3-3.

Figure 3-3. Retrospective DSIP Assessment Ratings Key

Key					
	Not answered	OS	Answered outside the topic area section	N/A	Not applicable
-	Not asked				
	Some evidence indicating that that DSIP aligns with the DPS guidance.				
	Sufficient evidence that DSIP aligns with the DPS guidance				
	Satisfies all elements of the DPS guidance in a robust and comprehensive manner.				

Next, we gathered a group of subject matter experts (SMEs) from across DNV, working in areas that align with the 13 technical topics. Each SME reviewed guidance alignment for one or more topic areas across the five utility DSIPs. The SMEs then entered their ratings and rationale into the assessment tool. An example of a scored topic area is presented in Figure 3-4.

Figure 3-4. Example of Scored Topic Area

Energy Efficiency Integration & Innovation Specific Prompts	Check	Rating	Rationale
1. The resources and capabilities used for integrating energy efficiency within system and utility business planning.	X		A summary and links to other sections for more detail were provided.
2. The locations and amounts of current energy and peak load reductions attributable to energy efficiency and how the utility determines these.	X		A summary of the detail the utility collects was provided.
3. A high-level description of how the utility's accomplishments and plans are aligned with New York State climate and energy policies and incorporate innovative approaches for accelerating progress to ultimately align with the CLCPA.	X		Very little detail was provided.
4. Summary information on energy efficiency programs offered by the utility, with direction to annual filings for more detailed information on energy efficiency programs.	X		Details on multiple programs as well as links to annual reports were provided.
5. Describe how the utility is coordinating and partnering with NYSERDA's related ongoing statewide efforts to facilitate energy efficiency market development and growth.	X		Description of three market-stimulating partnerships was provided.

3.1.3.2 Collaborative Refinement

After our independent assessment of each DSIP, the completed assessment tool, including scoring and rationale, was delivered to each utility for review. The DNV team conducted two meetings with each utility to discuss a) their general feedback on the DSIP process and b) their detailed feedback on the Retrospective DSIP Assessment. We then accepted written feedback from each utility on their individual assessment, which was in turn reviewed by DNV SMEs and incorporated as appropriate to generate the final assessment.

3.1.4 Results and Findings

The results of the Retrospective DSIP Assessment are presented below in three sections. The first set of findings are focused on the recommended guidance presented by Staff in the 2023 whitepaper; key areas of improvement include streamlining and improving communication. Second, we present findings related to the information in the 2023 DSIP updates, including areas found to be either strong or weak across all or most of the filings. Finally, we present summary assessments for each utility.

3.1.4.1 Guidance Focused Findings

During our review of Staff's 2023 whitepaper guidance for the 2023 DSIP updates, we observed the following:

- **Focus on plans vs. outcomes.** The guidance is designed to elicit descriptions of progress made since the previous DSIP update, current status, and future plans, not outcomes or objectives. Without clearly defined goals and metrics, it was difficult to assess the progress of each utility. As such, our Retrospective DSIP Assessment focused on clarity, communication, comprehensiveness, and efficiency.
- **Mix of stakeholder resources and Staff information.** The 2023 DSIP updates provide links to specific data, reports, or other information that would be useful to stakeholders. However, this stakeholder information is distributed throughout the DSIP in various sections, making it difficult to locate. Centralizing these stakeholder resources in a single location could increase their usefulness and accessibility.
- **Opportunities to streamline**. The prompts in Staff's recommended guidance often ask for the same information in different sections. This is most apparent between the context and background questions and the first few topic-area-specific questions. Streamlined prompts that combine similar questions between the general context and background and topic area questions could make the guidance easier to follow and the DSIPs easier to comprehend.
- **Compound prompts difficult to answer**. Many of the prompts request highly detailed information in multipart questions, asking, for example, for "means and methods" or "when and how" various activities will support the needs of utilities and stakeholders. In effect, two different questions are packed into one, and as a result, utilities often did not provide complete answers.
- **Opportunity to guide level of detail.** We observed varying levels of detail across responses, with some utilities offering copious amounts of information while others simply referenced another filing or appendix. Staff has an opportunity to provide more guidance for Commission consideration on the expected level of detail in the main body of the DSIP as well as how to appropriately incorporate resources. A prescriptive table could provide one way to collect specific, detailed information from all utilities.
- **How to answer prompts in various situations.** Throughout the DSIPs, we found opportunities to provide more guidance on how to answer questions when data is unavailable, answers are provided in other sections, or responses are complicated because activities have not started, are in flight, are changing rapidly, or are not applicable.

3.1.4.2 DSIP Focused Findings

In general, we found that the utility DSIPs follow the format and spirit of the guidance. We also want to acknowledge that the utilities spent a lot of time developing the filings (most cited approximately six months) and see them as an important avenue for communicating progress with Staff and stakeholders. Below we present our observations and findings for the general and topic-specific sections.

Our findings for the general requirements section include the following.

- **Low scores in the stakeholder engagement section.** Across all utilities, the stakeholder engagement questions received low scores. However, based on utility interviews, stakeholder engagement activities are quite high and include bi-annual stakeholder meetings, quarterly newsletters, various working groups, and, for some areas, dedicated meetings and workshops with specific stakeholder groups. This suggests that Staff recommended guidance may need to be adjusted to elicit more accurate reporting on stakeholder activities. The Joint Utilities' stakeholder survey, conducted at the end of 2021, provided additional context, finding that nearly 70% of the

respondents use the DSIP as a guide on utility plans and timelines while less than 20% use it for detailed information.[22] Results also showed that the Executive Summary is the most often read section.

- **Incomplete answers were the most common reason for low scores**. Answers with little or incomplete detail often resulted in low assessment scores. Examples included very brief responses with links to other sections or outside sources, responses with a lack of detail because projects had not started or were in flight, and very minimal responses with no other explanation.
- **Inconsistent reporting made the DSIPs difficult to review.** Utilities often used different structures or repeatedly referenced other sections or appendices within the report or even pointed to outside sources, all of which made it challenging to determine the extent to which various prompts were answered. As such, our review primarily focused on the responses provided directly in response to the prompts.
- **Working groups improved response.** Topic areas with clear working groups or other defined regulatory activities provided higher quality information across the board. However, it was often difficult to distinguish collective action from the individual action of each utility.

Our findings for the topic-area-specific sections are summarized below. Detailed utility-specific assessments are available in Appendix A.

Integrated Planning

Staff guidance calls for DSIPs to focus on integration of the increasing number and variety of DERs, while maintaining or improving safety, reliability, quality, and affordability of service. DSIPs should also describe implementation plans and timelines and advances in planning functionalities that enhance the DSP.

Status

All utilities have started the process of transitioning to probabilistic forecasting and have begun incorporating DER impacts into their planning process. One utility discussed the impacts of the gas and bulk system on the distribution system, while others focused on improved forecasting data and granularity.

Findings

- Each utility took a slightly different approach to its discussion of integrated planning, focusing on different areas, including DER integration, NWAs, hosting capacity, software, and new data. Many sections pointed the reader to additional topic areas for more information.
- Many utilities discussed broader Joint Utility efforts. More targeted questions for this topic area could elicit more specific information about the efforts and investments each individual utility is making to improve their planning efforts.
- Because Integrated Planning encompasses many other technical topics, this section of the DSIP often overlapped with other sections.

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22 We note that different stakeholders have different interests and the per-instance impact from different stakeholder use cases varies greatly. Hence, the aggregate impact resulting from use by the 20% who use the filings for detailed information may be greater than that of the 70% who use the filings lightly.

Advanced Forecasting

Staff guidance calls for DSIPs to describe the means and methods for current advanced distribution system forecasting activities, along with the plans needed for future advanced forecasting activities.

Status

Most utilities are using a top-down approach and allocating system load to the feeder level. Most have not yet incorporated AMI or other granular data into the forecasting process. All have made their granular (feeder/system) level forecasts available at an hourly level. While all utilities have started the transition to probabilistic forecasting, most have not fully transitioned.

Findings

- There was substantial overlap between the responses to the general guidance and the guidance for this topic area, with utilities often cross-referencing to previous answers.
- Many utilities pointed to appendices or other outside sources, providing limited information in response to the prompt.
- Many respondents did not answer the question regarding how the DSIP relates to the Coordinated Grid Planning Process (CGPP).

Grid Operations

Staff guidance calls for DSIPs to address components such as operating policies and processes, advanced information systems, data communications infrastructure, sensors and control devices, switches, power flow controllers, and solid-state transformers.

Status

Many of the DSIPs focus on enhancing substation and distribution automation, operations technology (OT) systems (e.g., ADMS, SCADA systems, and DERMS), and communication infrastructure. Every utility provided information that focused on integrating and managing DERs and their impact on network capacity.

Findings

- The prompts and information provided by the utilities could be more explicit regarding business processes, enterprise architecture, and dependencies among technical topics, IT/OT integrations, and data management.
- The recommended guidance includes a number of questions about specific platforms for grid operations (DERMS and ADMS). In the future, detailed questions could be expanded to include a broader discussion of the utilities' system architecture and strategies as they enhance, integrate, and acquire new grid operation platforms.
- While not exclusive to Grid Operations, market design and implementation for distribution grid services was missing from the discussion in this section of the DSIPs. There is an opportunity to request information on how the utilities provide grid services.

Energy Storage Integration

Staff guidance calls for DSIPs to describe existing storage resources, planned projects, a five-year forecast of deployments, potential storage locations, and those resources and functions needed for integration with utility grid operations and billing and compensation functions.

Status

A good deal of DSIP content reflected regulatory activities and the importance of storage to the utilities' future. DSIPs also provided lengthy discussions of process improvements to get more storage on the grid and under management. Bulk storage procurements do not seem to have much success, with DSIPs providing extensive briefs on why bulk storage system RFPs have not been successful.

Findings

- This topic covers several regulatory mandates for distribution battery energy storage systems (BESS). It may be possible to simplify updates on the mandated goals and avenues for procurement, focusing instead on the progress of each utility.
- The primary focus was on front-of-the-meter (FTM) storage, with little discussion of customer programs. It was unclear where in the DSIP utilities should place discussion of behind-the-meter (BTM) storage.
- Many DSIPs discussed working group or Joint Utilities-led initiatives.

EV Integration

Staff guidance calls for DSIPs to describe utilities' means and methods for planning EV integration at the distribution level. The DSIPs should also provide the current status of EV integration and planned next steps, including an anticipated timeframe.

Status

The high-level implementation plan of all utilities is similar, driven by policies, processes, and standards (e.g., Market-Ready Order).[23] The utilities all provided minimal information on stakeholders' needs and engagement.

Findings

- There was substantial overlap between the responses to the general guidance and the guidance for this topic area, with utilities often cross-referencing to previous answers.
- Although all utilities are following the same implementation plan, they provided varying levels of detail, making an assessment challenging. The status of each of their program offerings varies from in-development to deployed, including EV-specific rates, heavy duty market programs, etc.

[23] Case 18-E-0138, Proceeding on Motion of the Commission Regarding Electric Vehicle Supply Equipment and Infrastructure, Order Establishing Electric Vehicle Infrastructure Make-Ready Program and Other Programs (issued July 2020) (EV Make-Ready Order).

Clean Heat Integration

Staff guidance calls for DSIPs to describe utilities' means and methods for planning clean heat integration at the distribution level.

Status

The high-level implementation plans of all utilities are similar and driven by state mandate.[24] As such, all programs are very similar, with strategy collectively defined by the Joint Utilities and NYSERDA via Joint Management Committee. The utilities expect to see continued engagement and aim to increase the participation of low- and moderate-income (LMI) customers, as well as those in disadvantaged communities.

Findings

- Although the utilities' high-level approach is the same due to mandate, they provided varying levels of detail, making an assessment challenging.
- The Clean Heat and Energy Efficiency (EE) topic areas have, and will continue to have, a lot of overlap. Acknowledgement of this is inconsistent across utilities.

EE Integration and Innovation

Staff guidance calls for DSIPs to discuss how utilities are integrating current and expanded EE efforts into their system planning and to describe how new tools and approaches support the growth of a dynamic market of EE service providers.

Status

Overall, the utilities show a strong commitment to EE and an awareness of its critical role in energy reduction, and EE offerings have expanded into new technologies and customer segments. Utilities continue to engage and increase the participation of LMI customers and customers in disadvantaged communities.

Findings

- The phrase "innovative approaches" is used throughout all the DSIPs but is not described or defined and so has no consistent meaning.
- The Clean Heat and EE topic areas have, and will continue to have, a lot of overlap. Acknowledgement of this is inconsistent across utilities.

Data Sharing

Staff guidance calls for DSIPs to describe the utilities' existing and planned capabilities that enable sharing of system and customer data with customers and authorized third parties. Of particular importance is NYSERDA's development of a new Integrated Energy Data Resource (IEDR).

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[24] SB 2023-2016A, NY HEAT Act, Home Energy Affordable Transition Act: https://www.nysenate.gov/legislation/bills/2023/S2016/amendment/A#:~:text=This%20bill%20provides%20the%20Public,decarbonization%20and%20right%2Dsizing%20of

Status

Utilities expressed concerns about data sharing agreements. For customer specific data, utilities are focused on ensuring data sharing agreements are signed between the customer and any third parties. They would like this process to be easier to understand. For aggregated data, there is an order for 4/50 privacy screen, but this privacy screen can be adjusted based on application and with little detail, creating confusion around sharing aggregated data.

Findings

- Utilities struggled to answer prompt eight, which asks them to describe "when data begins, increases, or improves." We recommend updating this prompt to collect more specific information.
- The utilities are all engaged with the IEDR process, but their responses on data sharing and compliance are vague, with many describing the requirements as in flight.

Hosting Capacity

Staff guidance calls for DSIPs to focus on the following three areas: plans for sharing hosting capacity forecasts, sharing of more real-time hosting capacity data, and plans to increase hosting capacity at locations where DERs would be particularly valuable on their distribution systems.

Status

Utilities have created a joint "Hosting Capacity Roadmap."[25] Their implementation plans align with the roadmap. All utilities are on track, and stakeholder engagement is well developed for this topic by all utilities. However, responses generally do not identify which efforts are funded.

Findings

- There was substantial overlap between the responses to the general guidance and the guidance for this topic, with utilities often cross-referencing to previous answers.
- The data provided by utilities was not consistent. Instead of open-ended questions, which each utility approaches differently, the guidance could supply structured templates for the utilities to fill in.

Billing and Compensation

Staff guidance calls for DSIPs to discuss how billing and compensation functions—including billing efficiency—supports and enables DERs through implementation of various tariffs.

Status

Utilities are working to implement automated billing for the various DER compensation structures, but they all must complete complex and customized alterations to their billing systems (two utilities are implementing new billing systems) in order to handle the billing structures. Most of these alterations are nearly complete, but utilities still need to prepare for further changes in wholesale markets.

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25 Joint Utilities of New York, Hosting Capacity, https://jointutilitiesofny.org/utility-specific-pages/system-data/hosting-capacity.

Findings

- There was substantial overlap between the responses to the general guidance and the guidance for this topic area, with utilities often cross-referencing to previous answers.

DER Interconnections

Staff guidance calls for DSIPs to describe the implementation of utility resources and capabilities that enable DER interconnections to the distribution system, including known requirements for standard resources, processes, specifications, and policies that foster efficient, timely, safe, and reliable DER interconnections.

Status

Digitalization is progressing at a different pace across the utilities, despite standardized requirements in some areas (e.g., interconnection online application portal [IOAP]). All utilities mentioned industry working groups, which are driving productive, standardized change across the sector (e.g., through the development of Cost Sharing 2.0).[26] In other areas, where working groups are not established, progress is much more variable (e.g., in Distributed Communications).

Findings

- Reporting was inconsistent, making comparisons across utilities difficult. Requiring quantified reporting on levels of DERs, number of DER interconnection requests, and progress toward sector-wide goals would enable comparison.
- There is overlap between this topic area and several others, including Energy Storage Integration, Electric Vehicle Integration, and Energy Efficiency Integration.

AMI

Staff guidance calls for DSIPs to describe the status of AMI deployment and how the data collected provides grid-edge measurement, data acquisition, and control capabilities, which are either essential or beneficial to a modern distribution system.

Status

The utilities provided minimal information on stakeholder engagement. Indeed, many of the cited use cases focus on enhancing customer experience or operational management; few focus on supporting DER developers.

Findings

- There was substantial overlap between the responses to the general guidance and the guidance for this topic area, with utilities often cross-referencing to previous answers.
- More guidance is recommended on the use cases that are priorities for customers, operations, and developers. The use cases vary from utility to utility, making it hard to assess which use cases support progress towards a DSP.
- Based on current implementation, some questions were not relevant for each utility.

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[26] Cases 20-E-0543, et. al., Order Approving Compliance Filings, with Clarifications (issued April 14, 2022) (Cost Sharing 2.0 Implementation Order).

Beneficial Location of DERs and NWAs

Staff guidance calls for DSIPs to provide a cohesive discussion of beneficial location identification, NWA suitability assessment, and procurement processes.

Status

All utilities are working together through the Joint Utilities to improve solicitation processes and contracting for NWAs. They are, however, taking different approaches to identifying beneficial locations, some using their own avoided T&D and marginal cost of service (MCOS) studies and others through outputs of integrated planning. Only one utility discussed developing measurement and verification (M&V) approaches for NWAs. Each utility has deployed an NWA, though the technologies used vary. Most utilities have begun exploring how to utilize internal customer programs as part of an NWA.

Findings

- Much of the discussion here overlapped with the discussion in Integrated Planning. Specifying where information should appear could reduce this overlap and make the DSIPs easier to compare.

3.2 Review of Regulatory Proceedings

The review of regulatory proceedings supports the in-depth review required by the Instituting Order. As outlined in Figure 2-2, to achieve this goal, DNV conducted a review of New York State's regulatory environment by performing secondary research and reviewing regulatory proceedings which provided input into this task. This section includes the methodology and results of our review, a foundational piece of the Phase 2 work.

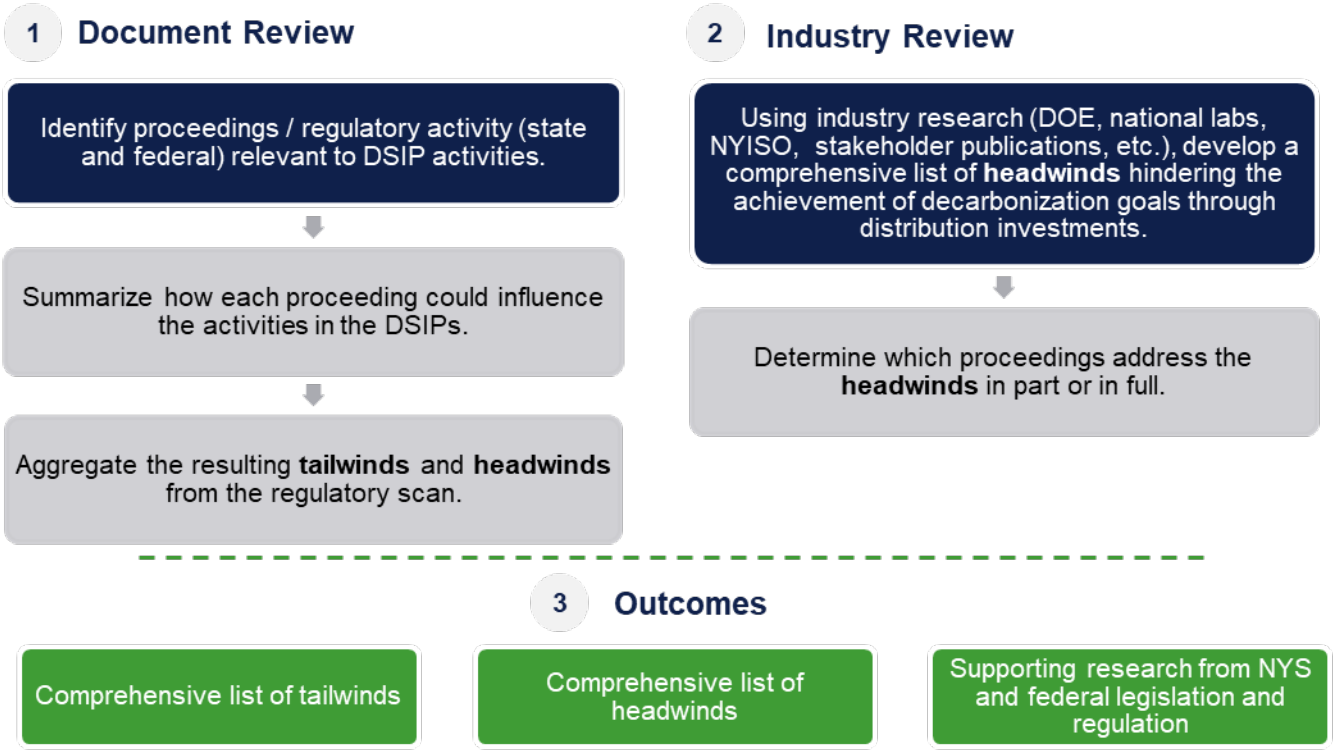
The regulatory review has three main objectives:

- Determine how the regulatory environment is supporting or hindering the activities covered within the DSIPs—or activities the Joint Utilities are pursuing more broadly as they develop a DSP.
- Understand the scale and impact of those regulatory effects on the execution of DSIP and/or DSP activities.
- Allow Staff and NYSERDA to see where policy is supporting New York State's grid modernization objectives and where policy is not aligned with objectives.

3.2.1 Methodology

DNV's methodology included two distinct reviews. During the **document review**, we developed, in conjunction with Staff, a list of 96 relevant documents, including orders, rulings, proceedings, and state policies. We rated (high, medium, or low) the relevance of each document to the DSIP process. We then focused our review on 18 proceedings or orders and 32 documents identified as highly relevant. The **industry review** leveraged secondary research and industry experience (including the interviews conducted as part of Phase 1 and discussed in the next section) to develop a list of barriers to DSP development. Our Regulatory Assessment also included some insights from Phase 1. The overall assessment approach is summarized in Figure 3-5 below.

Figure 3-5. Regulatory Assessment Approach



Using our comprehensive lists of industry, proceeding, policy, and statutory headwinds and tailwinds, we created a framework to define and rate the impact of each headwind or tailwind on those DSP activities that support CLCPA goals, determining whether each one provided minor, moderate, or significant headwinds/tailwinds. Each headwind and tailwind were then assigned into one of the following categories: cost, data, markets, grid operations & planning, and technology. Our framework also provides a rationale for each ranking.

Table 3-1 explains the headwind/tailwind impact ratings.

Appendix B provides a more detailed explanation of each framework component, including:

- Relevant context (i.e., headwind/tailwind category, topic area, definition, and description)
- Analysis (i.e., impact rating and rationale)
- Supporting information
- Resources and technical topics

Table 3-1. Regulatory Impact Ratings

Regulatory Impact Rating	Explanation
Minor Tailwinds	The tailwind has modest or little impact on some DSP activities that support CLCPA goals.
Moderate Tailwinds	The tailwind has measurable impact on some DSP activities that support CLCPA goals but does not completely address those activities.
Significant Tailwinds	The tailwind dynamically changes the ability to implement some DSP activities that support CLCPA goals.
Minor Headwinds	The headwind has modest or little impact on some DSP activities that support CLCPA goals.
Moderate Headwinds	The headwind has measurable impact on some DSP activities that support CLCPA goals but does not completely hinder those activities.
Significant Headwinds	The headwind completely hinders some DSP activities that support CLCPA goals.

The bullets below provide some additional clarification and explanation regarding the assessment approach.

- In some instances, the industry, proceeding, policy, and statutory elements within a category were identified as a headwind and a tailwind. Data requirements (within the data category) is one example of a topic where there was enough activity in New York to justify separate discussions of the topic as a tailwind and a headwind.
- Tailwind and headwind impact ratings were assigned based on regulatory research; technical or commercial barriers were not considered if outside the regulator's jurisdiction.
- To describe the regulatory landscape more clearly, we grouped the tailwinds and headwinds into five broad categories: costs, data, markets, operations and planning, and technology.
- Headwind/tailwind impact ratings are subjective and relative to other topics in the category.

3.2.2 Results and Findings

We include here the high-level findings of our analysis of the 23 headwinds/tailwinds. The full Regulatory Assessment framework is detailed in Appendix B.

3.2.2.1 Headwinds and Tailwinds Related to Costs

Grid modernization requires capital expenditures to fund the expansion and improvement of distribution infrastructure and to accelerate the growth of renewable energy projects. Cost recovery mechanisms support utilities' investment in grid improvements, enabling them to recover (rate base) prudent costs through customer distribution rates and tariffs. Table 3-2 identifies the topics included in the cost category and provides the headwind/tailwind impact rating for each. After the table, we provide an overall headwind/tailwind assessment summary.

Table 3-2. Summary of Cost Related Impact Assessment

Topic	Rating
Cost recovery mechanisms	Minor Tailwinds
Grid investment costs	Significant Headwinds
Non-ratepayer funding	Moderate Tailwinds
On-bill surcharges	Minor Tailwinds
Project cost allocation	Moderate Headwinds

Headwinds. Significant financial investments are needed. The cost of developing and implementing grid modernization technologies, systems, and processes will be significant. Additionally, the growing costs of replacing aging infrastructure and supporting new energy storage targets also materially affect DSIP activities and create strong headwinds to progress. New or increased surcharges (e.g., system benefit charge) on customer bills can fund necessary investments to the electricity grid and generation mix. However, these surcharges place a financial burden on ratepayers and can limit the regulator's ability to implement change quickly. Ratepayer funding remains a critical factor affecting the pace of grid modernization and the clean energy transition.

Tailwinds. Proven cost recovery mechanisms exist, as do potential sources of non-ratepayer funds. Although cost recovery mechanisms exist, there is a limit to how much rates can increase. Innovative approaches like the Index Storage Credit will be necessary.[27] Utilities may also access non-ratepayer funding sources for renewable energy projects and DER deployment, reducing the burden on the state budget and reliance on ratepayer funding. Possible sources include state and federal grants, private sector partnerships, green bonds, and NYSERDA or potential Inflation Reduction Act (IRA) programs. The Inflation Reduction Act (IRA) has enhanced federal support for clean energy projects, providing tax credits and grants for renewable energy and energy storage technologies, which New York has actively pursued. State programs such as NY Green Bank, NY-Sun, Clean Energy Fund (CEF), and the Regional Greenhouse Gas Initiative (RGGI) can provide funds to scale clean energy projects and grid modernization. All these approaches aim to diversify funding while balancing ratepayer impacts.

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[27] Case 18-E-0130, In the Matter of Energy Storage Deployment Program, Order Approving Bulk Implementation Plan With Modifications (issued March 31, 2025).

3.2.2.2 Headwinds and Tailwinds Related to Data

New York shows progress and strength in the data category, especially around data access. However, there remains a need for increased data availability (e.g., AMI), data standardization, and a centralized data repository. A unified data platform and centralized repository would standardize data collection processes, improving forecasting accuracy. Table 3-3 identifies the topics included in the data category and the impact rating for each headwind/tailwind. After the table, we provide an overall headwind/tailwind assessment summary.

Table 3-3. Summary of Data Related Impact Assessment

Topic	Rating
Data access	Significant Tailwinds
Data requirements	Moderate Tailwinds
Data requirements	Moderate Headwinds
Modeling	Moderate Headwinds

Headwinds. Data availability, collection, storage, and sharing practices are inconsistent across utilities. Grid modernization and the implementation of AMI meters is at different stages across utilities, leading to inconsistencies and variations in data availability and granularity, complicating the coordination of DER resources and hindering grid modernization. Differences in data availability and granularity also lead to inconsistent approaches to modelling, which negatively impacts coordination of DER resources, evaluation of customer needs, and development of services.

Tailwinds. Commission-directed data sharing initiatives and working groups are making progress in area of data access. The Integrated Energy Data Resource (IEDR) Order[28] designated the NYSERDA as the IEDR Program Sponsor responsible for defining, initiating, overseeing, and facilitating the IEDR program which establishes a statewide platform for collecting and sharing data, providing a centralized repository for stakeholders to access standardized, granular data. Other initiatives include the Utility Energy Registry, which aggregates data to support local energy planning and policy development; the Community Choice Aggregation program, which facilitates standardized data-sharing agreements between municipalities and utilities; and the Interconnection Technical Working Group and Interconnection Process Working Group, which are addressing challenges in DER interconnection data, reducing barriers, and enabling smoother coordination. These regulatory actions demonstrate ongoing efforts to establish a standardized data framework that will enable efficient grid operations, facilitate DER valuation, and support broader energy market objectives.

[28] Case 20-M-0082, Proceeding on Motion of the Commission Regarding Strategic Use of Energy Related Data, Order implementing an integrated Energy Data Resource (issued February 11, 2021).

3.2.2.3 Headwinds and Tailwinds Related to Markets

New York's regulated electric utilities work within an established, restructured market, providing the market knowledge and operational experience to support and develop new or expanded market-driven solutions. However, the regulatory framework as it exists today may not allow the market to drive some solutions that will be needed going forward. Table 3-4 identifies the topics included in the markets category and the impact rating for each headwind/tailwind. After the table, we provide an overall headwind/tailwind assessment summary.

Table 3-4. Summary of Markets Related Impact Assessment

Topic	Rating
Competitive energy markets	Moderate Tailwinds
Market design	Significant Headwinds
Market-driven solutions	Minor Tailwinds

Headwinds. Existing market design hinders efficiency and slows adoption. Current market design efforts focus on reducing risk, but this approach slows down the adoption of DERs and renewable resources. Potential advancements, such as the co-located storage model and DER aggregation proposals, have faced implementation delays. This slow market evolution restricts efficiency gains and may lock in suboptimal infrastructure investments, limiting the ability to integrate cleaner, more flexible energy solutions.

Tailwinds. New York operates in a restructured energy market. To capitalize on DER resources and optimize the distribution platform, the regulatory process needs to be more adaptive to market opportunities. One notable success at the distribution level is the Commission's Value of Distributed Energy Resources (VDER) proceeding which resulted in statewide implementation of a "value stack" compensation mechanism which combines the values of bulk- and distribution-level benefits. VDER is widely credited with driving a large amount of DER development that would not have happened without VDER. Meanwhile, the NYISO's implementation of new market rules to integrate DERs is progressing, allowing aggregations of DERs over 10 kilowatts (kW) to participate in the wholesale electricity market; however, the NYISO's 10 kW minimum DER capacity and telemetering requirements are a barrier for smaller behind-the-meter resources such as EVs and residential batteries, is limiting widespread adoption. Despite these challenges, the ongoing development of this market under FERC Order 2222 [29] is advancing the integration of DERs into the wholesale electricity market, albeit more slowly than needed. Initiatives such as large-scale renewable energy projects and private capital mobilization through entities like the NY Green Bank are promising, but the overall scale of investment remains insufficient.

[29] FERC Docket No. RM18-9-000; Order No. 2222, Participation of Distributed Energy Resource Aggregations in Markets Operated by Regional Transmission Organizations and Independent System Operators (Issued September 17, 2020), https://www.ferc.gov/sites/default/files/2020-09/E-1_0.pdf.

3.2.2.4 Headwinds and Tailwinds Related to Grid Operations and Planning

At the distribution level, standardized interconnection requirements have accelerated the pace of DER deployments. Regulatory frameworks like REV and VDER aim to optimize DER integration through reforms, introducing DSP functions and ratemaking changes. The operations and planning category has more tailwinds than headwinds, and the headwinds that do exist are moderate. Table 3-5 identifies the topics included in the operations and planning category and the impact rating for each headwind/tailwind. After the table, we provide an overall headwind/tailwind assessment summary.

Table 3-5. Summary of Grid Operations and Planning Related Impact Assessment

Topic	Rating
Coordinated grid planning	Moderate Tailwinds
Energy planning	Minor Tailwinds
Interconnection (distribution system)	Significant Tailwinds
Operation of distributed energy resources (DERs)	Moderate Headwinds
Stakeholder engagement	Significant Tailwinds
System assessment	Moderate Tailwinds
Workforce development	Moderate Headwinds

Headwinds. Grid operations face regulatory barriers and potential intermittency and reliability challenges as DER integration increases. A skilled workforce is also in short supply. The operation of DERs in New York faces regulatory barriers, as highlighted in the REV and VDER proceedings. Efficient integration of DERs requires consistent treatment of market dynamics and values across all grid segments. Track Two of the REV proceeding identifies ratemaking reforms as essential to support the economic expansion of DERs. As DER share increases, balancing intermittent generation with grid reliability presents another challenge.[30]

Operationally, utilities face challenges in managing a much more complex and dynamic grid. The introduction of DERs and intelligent grid technologies requires utilities to adapt without compromising reliability. However, most utilities lack experience operating an integrated grid at scale, leaving them uncertain about the availability and reliability of DERs as operational assets. This operational resistance is a barrier to broader adoption.

Workforce development is critical to alleviate the shortage of local skilled workers, which is hindering the scalability of energy transition programs.

Tailwinds. Electric system planning is in place and stakeholders are engaged. With New York's enactment of the AREGCBA, electric utilities have had to develop and propose to the Commission a new Coordinated Grid Planning Process (CGPP) to help ensure a consistent, transparent, and coordinated approach to the transmission and distribution planning processes. This coordination helps identify critical investments, such as those supporting renewable energy zones, but does not fully eliminate challenges like project siting delays or stakeholder alignment. The Commission's REV directives require utilities to assess and modernize the grid to accommodate DERs, and the DSIP

[30] Case 14-M-0101, REV Track One Order.

process helps stakeholders and regulators understand how and when the utilities have developed, or plan to develop, DSP capabilities, such as advanced forecasting, hosting capacity analyses, and real-time system monitoring. This directive therefore supports a smooth transition to a decentralized energy model, enabling utilities to effectively meet both regulatory targets and customer needs.

Additionally, standardized interconnection requirements streamline DER integration, increasing efficiency and reducing lead times and delays, which should accelerate the pace of interconnections that can support state objectives.

Stakeholder engagement is an integral part of the regulatory process and is essential to ensuring a balanced approach to grid modernization and clean energy integration, as well as to fostering transparency, trust, and adaptability.

3.2.2.5 Headwinds and Tailwinds Related to Technology

Technological growth presents opportunities to improve efficiency in operations and to enable the installation and implementation of advanced technologies like smart inverters, electrified transportation infrastructure, and automated control systems that can enhance DER integration and grid flexibility. However, differing stages of technology transformation across utilities could hinder the achievement of CLCPA goals. Table 3-6 identifies the topics included in the technology category and the impact rating for each headwind/tailwind. After the table, we provide an overall headwind/tailwind assessment summary.

Table 3-6. Summary of Technology Related Impact Assessment

Topic	Rating
Advanced grid technologies	Moderate Tailwinds
Technology Innovation	Moderate Tailwinds
Technology requirements	Moderate Headwinds
Transportation electrification	Minor Tailwinds

Headwinds. Statewide standards are needed to ensure interoperability of technologies needed for effective grid operations and essential for broader DER participation. Limited industry standards and gaps in long-duration storage technologies must be addressed. To ensure the state's long-term resource adequacy needs are met, the 2024 Energy Storage Order, echoing Staff's recommendation in New York's 6 GW Energy Storage Roadmap Update, calls for efforts to begin now to develop, test, and demonstrate long-duration energy storage technologies that are capable of providing reliable power for ten or more hours at a time with zero emissions.[31] Balancing safety and reliability of technology, without incurring unnecessary costs, presents a challenge.

Tailwinds. Ongoing efforts are making incremental progress. Collaborative efforts through the Interconnection Technology Working Group (ITWG) and Interconnection Policy Working Group (IPWG), which are part of the Commission's Interconnection Process Improvement process and Case

[31] Case 18-E-0130, Order Establishing Updated Energy Storage Goal and Deployment Policy (issued June 20, 2024) (2024 Energy Storage Order), p. 84.

20-E-0543 proceeding,[32] have established protocols that align advanced technologies with grid requirements. For example, the ITWG developed testing protocols for smart inverter functionalities, enabling advanced voltage and frequency regulation technologies.

NYSERDA's Clean Energy Fund Compiled Investment Plan highlights the need for statewide standards to ensure the interoperability of technologies across utilities, which is essential for broader DER participation.[33] The Clean Energy Fund supports intervention strategies, including grid visualization, communication, and control systems associated with the interoperability of DER and other grid-enhancing or grid-edge technologies in a manner that can be commonly applied across the investor-owned utilities and promote consumer-based third-party engagement in the energy system. The CEF Grid Modernization Focus Area initiative seeks to enable interoperability with investor-owned utilities' software and hardware assets at the substation or feeder level at the edge of the grid.

While initiatives like the EV Make-Ready Order and related pilot projects play a pivotal role in advancing EV infrastructure, some challenges associated with large-scale EV fleet deployment remain, particularly in urban areas constrained by limited space and aging electrical systems.[34] Still, these initiatives are instrumental in advancing the state's electrification goals as they enhance overall EV infrastructure, including public charging and fleet electrification.

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32 Case 20-E-0543, Proceeding on Motion of the Commission to Examine Certain Programs and Potential Amendments to the New York State Standardized Interconnection Requirements.

33 NYSERDA Clean Energy Fund Compiled Invest Plan, November 1, 2024, https://www.nyserda.ny.gov/About/Funding/Clean-Energy-Fund.

34 Case 18-E-0138, EV Make-Ready Order.

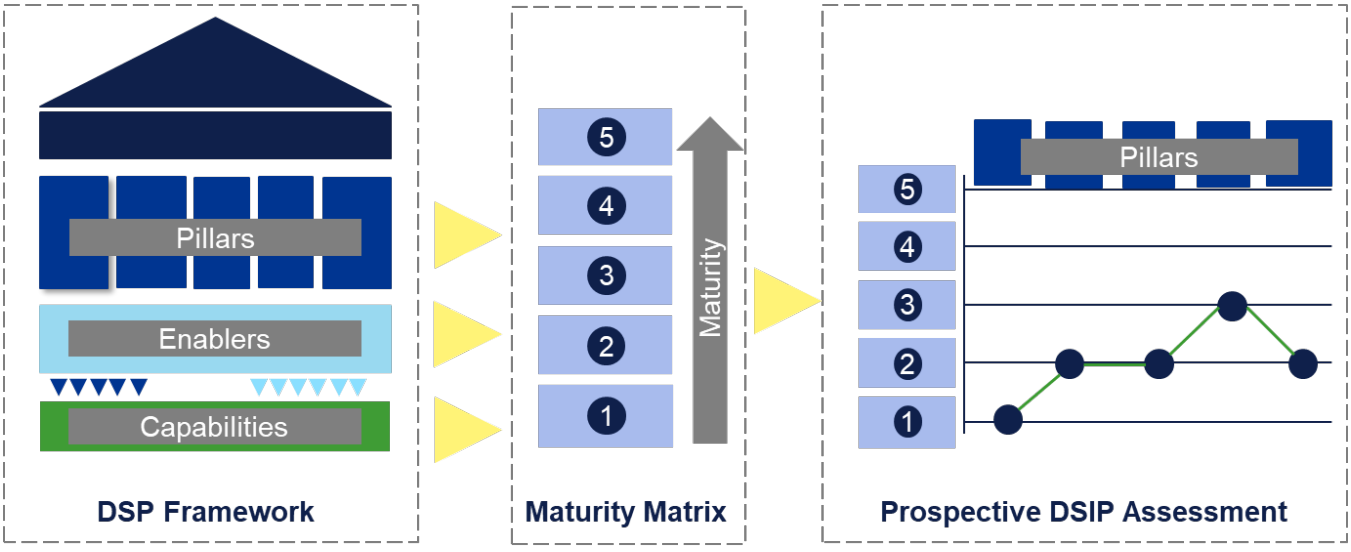
4 PREPARING FOR FUTURE DSIPS

The Department of Public Service Staff (Staff) guidance for 2023 Distributed System Implementation Plan (DSIP) updates recommends that each utility report its current and planned activities in 13 technical topic areas. This paradigm, while useful for understanding each utility's activities, has not been successful in fully addressing the objectives established in the Instituting Order: "to adequately identify, characterize, and plan for the full range of Distributed System Platform (DSP) capabilities that will be foundational to supporting the State's clean energy and electrification goals." To better align with the Instituting Order, we believe future DSIPs should include an increased focus on outcomes and metrics that track progress toward established goals.

In this section, we present three tools that can help ensure future DSIPs focus on outcomes. Together, the tools identify the critical factors for driving successful outcomes and determine how the utilities are maturing based on the information reported. We want to acknowledge these tools are the first step; we expect that Phase 3 of the work supporting the Grid of the Future proceeding will build upon our work to reimagine and refine the DSIP process further. The tools are described below and presented in Figure 4-1.

- The **DSP Framework** identifies the core needs of future DSPs through a set of pillars, enablers, and capabilities that align with best practices in distribution planning, grid modernization, and the State's clean energy goals.
- The **Maturity Matrix** is a model that defines five levels of maturity, from initiating to pioneering, and ties them to the DSP Framework's components.
- The **Prospective DSIP Assessment** applies the Maturity Matrix model to each utility's 2023 DSIP update to determine the utility's maturity level for each pillar in the DSP Framework.

Figure 4-1. Approach to the DSP Framework, Maturity Matrix, and Prospective DSIP Assessment



The outcomes, and limitations, of the DSP Framework, Maturity Matrix, and Prospective DSIP Assessment include:

Outcomes

- An assessment of each utility's maturity-level in planning and implementing an effective DSP

- Insights that can promote faster and better progress toward each utility's DSP implementation
- Gaps or barriers that are critical to timely DSP implementation are identified and characterized
- Recommendations the Commission can consider to improve the DSIP process

Limitations

- Lacking established goals and capabilities that clearly describe a fully functional DSP,[35] the Prospective DSIP Assessments rely solely on DNV's expertise and the information provided in the DSIPs to determine each utility's general maturity level for each pillar in the DSP Framework.
- Some topics or elements that merit evaluation were not included in the guidance for the 2023 DSIP updates. Consequently, the 2023 DSIP updates generally did not explicitly provide the information needed to properly evaluate those topics and elements.
- The DSP Framework is not fully customized to the New York context. We expect Phase 3 to complete in-depth baselining to set priorities. While the DSP Framework identifies all the key elements, Phase 3 will determine the importance of certain capabilities over others.

4.1 DSP Framework

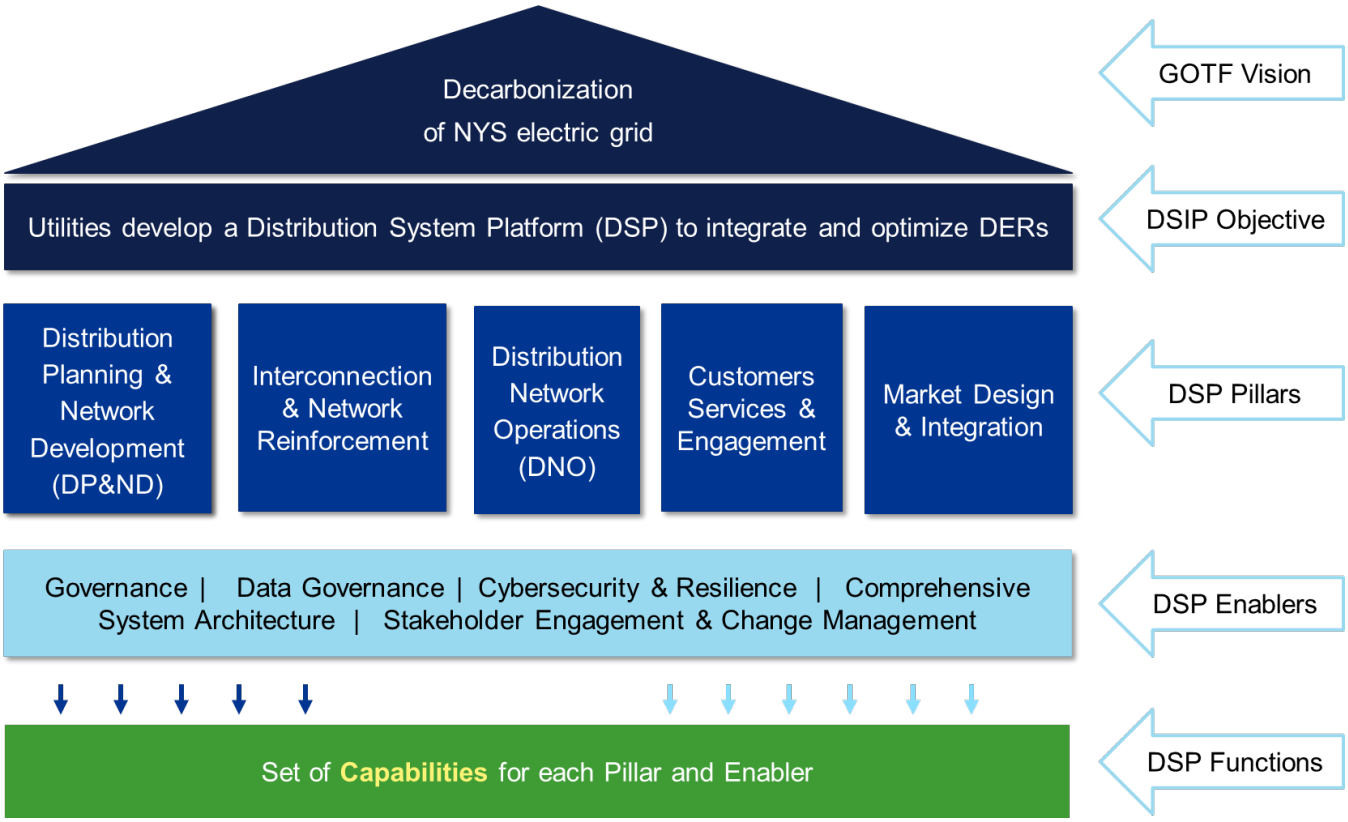
The Commission defines a DSP as "an intelligent network platform that will provide safe, reliable, and efficient electric services by integrating diverse resources to meet customers' and society's evolving needs. The goal of the DSP is to foster broad market activity that enables active customer and third-party engagement with the wholesale market and bulk power system needs at the bulk distribution and grid edge levels, thereby monetizing system and social values."[36]

DNV developed an approachable DSP Framework to organize complex systems and processes. The Framework aligns with the typical verticals seen in distribution planning and distribution system operator (DSO) models internationally and allows for multiple approaches to implementing a DSP. The Framework applies five pillars of DSP development that align with the Commission's Grid of the Future objectives. These DSP Framework Pillars represent the core functions of a distribution operator. In addition to the pillars, we include enablers that support each of the pillars in a cross-cutting manner. Finally, for each of the pillars and enablers, we characterized a set of capabilities that support a fully functional DSP. Figure 4-2 presents the overarching DSP Framework.

[35] Clearly defined goals and capabilities that describe a fully functional DSP are planned as an outcome of Phase 3 of the work supporting the Grid of the Future proceeding.

[36] Case 15-M-0180, Uniform Business Practices for Distributed Energy Resource Suppliers, p. 2.

Figure 4-2. DSP Framework



4.1.1 DSP Framework Development

The DSP Framework was developed through a deep review of existing models and resources and insights from throughout North America and the United Kingdom. Figure 4-3 summarizes our main categories and sources.

Figure 4-3. Best Practice Research

Table 4-1 presents the research questions, inputs, and outcomes that generated the DSP Framework.

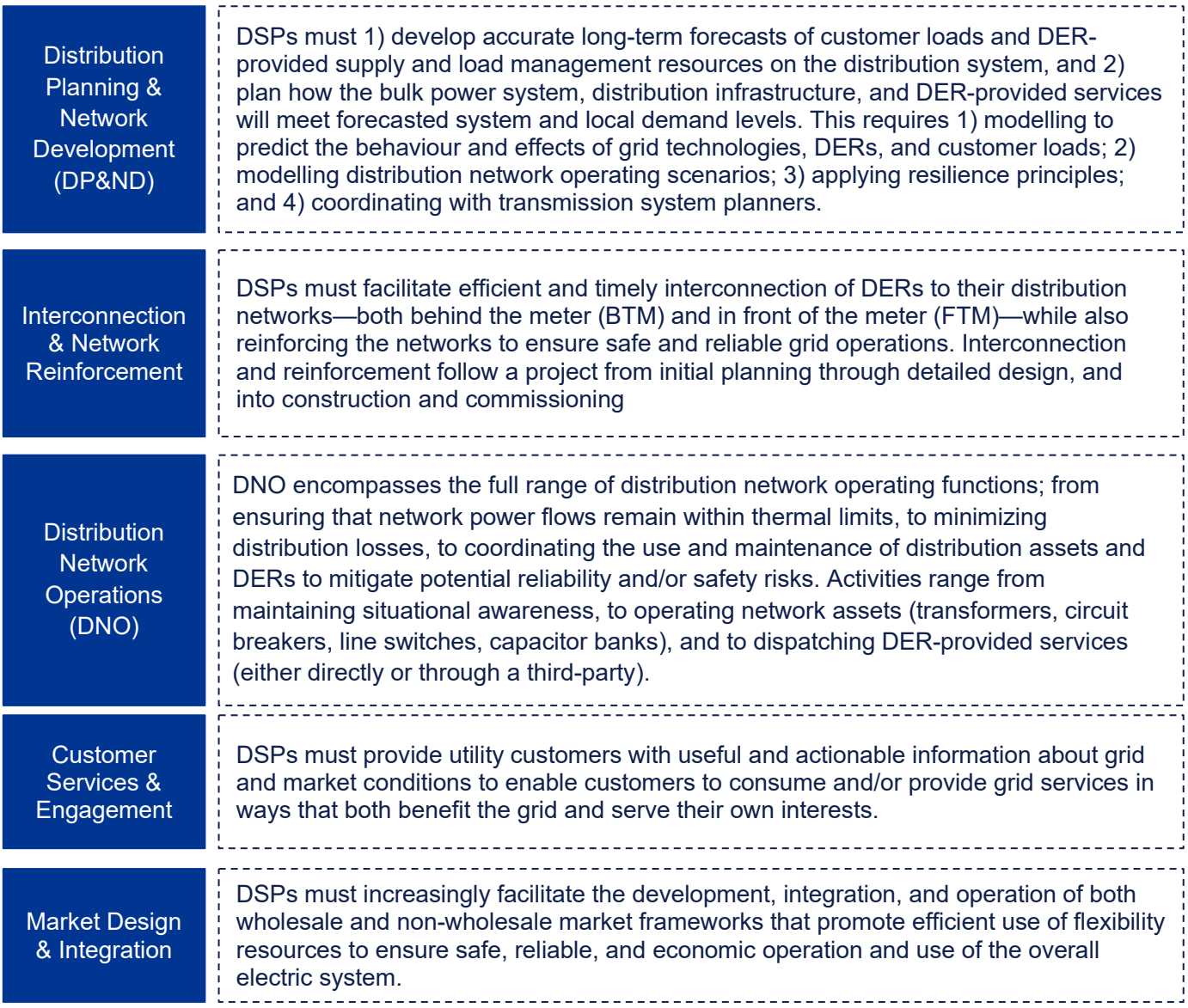
Table 4-1. Framework Development Research Questions

Research question(s)	Inputs	Example outcomes
What are the ingredients for a high-functioning, efficient DSP?	Best practices & secondary research	Grid modernization and industry frameworks provide useful guidance on developing DSP capabilities.
What are the priorities of the CLCLPA and other relevant legislation?	Legislative/state requirements	Legislation emphasizes decarbonizing the State's electric power sources, ensuring adequate electricity supply, electrifying buildings and transportation, energy efficiency, and managing peak loads in the bulk power system and distribution grids.
What do recent proceedings suggest supports NY's goals? What acts as a barrier?	Regulatory proceedings	Shows where and when proactive grid infrastructure planning is needed to support the growth of electrification (Case 24-E-0364).
Where is the untapped potential? What is working? What needs to be enhanced?	Grid Flexibility Study (Phase 1)	The report identified pricing as an effective tool, therefore, the Framework should include those capabilities needed to implement effective pricing.
What did industry stakeholders (including the IOUs) say is important?	Industry interviews (Phase 1)	These interviews identified a number of technical barriers such as, lack of visibility and control at the grid edge, long interconnection timelines, cybersecurity, and interoperability and connectivity that can be supported by the Framework.
What elements of the guiding principles from the Grid of the Future (GOTF) Proceeding Instituting Order, the 2023 DSIP guidance, and Joint Utilities' inputs are important to incorporate?	Current Context & Work	The DSP Framework is informed by the Staff-provided guiding principles and cross cutting factors described in the Phase 2 scope of work. Those principles and factors are aligned with the guiding principles laid out in the GOTF Instituting Order. For example, "Prioritize cyber-physical security" which was incorporated by the Cybersecurity and Resilience enabler.

4.1.2 DSP Framework Pillars

The Pillars are the first layer of the DSP Framework. They represent elements that a modern DSP must have to operate a safe, reliable, affordable, and decarbonized distribution system. Figure 4-4 presents descriptions of the five DSP Pillars.

Figure 4-4. Five DSP Pillars



4.1.3 DSP Framework Enablers

The second layer of the DSP Framework comprises the DSP Enablers. These cross-cutting elements support each of the pillars as follows:

- **Governance.** Appropriate Commission governance to ensure that DSIPs are completed to the required standard, on time, and with the correct data. This includes being able to show that investments are worthwhile against the relevant checks and balances (e.g., with BCAs, implementation plan).
- **Data Governance.** Appropriate policies and tools covering the collection, storage, processing, and sharing of data is key to ensuring efficient operations within business capabilities. Systems and technologies should enable this by ensuring that data is available to those who need it and of sufficient quality and granularity to fulfil its role.

- **Cybersecurity and Resilience**. Security of systems and data should underpin everything that the utility does along with a consideration of business resilience. Greater integration of DERs potentially presents an increased threat surface and so policies and processes should be updated to reflect this. Cybersecurity also needs to consider business continuity and resilience in the event of a cybersecurity breach.
- **Comprehensive System Architecture (CSA)**
  - **Electric Infrastructure** includes the physical grid resources that meet the operational needs of grid operators, grid service providers, utility business managers, and customers to implement DSP capabilities (DER integration, grid control and monitoring, etc.). Components of the electric infrastructure include transmission-distribution interfaces, distribution substations, protection equipment, distribution lines, line switches, capacitors, distribution transformers, service transformers, smart inverters, EVs/EVSE, grid-scale solar and batteries, residential solar and batteries, dispatchable load and supply resources, etc.
  - **Digital Infrastructure** includes both the business information systems (IT) and operations management systems (OT) that enable the utility to implement and advance essential DSP capabilities (i.e., market operations, DER integration, and flexible grid operations). Components of a utility's digital infrastructure include Meter Data Management System (MDMS), DERMS, ADMS, SCADA systems, cybersecurity systems/devices, communication networks (wide area, field area, and local), geographic information systems (GIS), grid modelling and simulation tools, outage management systems, work management systems, asset management systems, data management systems, customer information/billing systems, data lakes, integration service platforms, customer web portals, intelligent customer-owned assets, etc.
  - **Commercial Framework** includes an integrated set of standards that are applied to design, implement, and operate the commercial mechanisms that enable the utility's business and grid operations. Utility commercial mechanisms generally take the form of rates, tariffs, programs, and contracts; however, the need for other mechanisms could emerge as utility grid and business operations evolve. Each commercial mechanism also includes a distinct set of structural, technical, and procedural components which comply with the standards to enable effective integration of the overall commercial framework.
- **Stakeholder Engagement and Change Management.** Modern utilities are likely to undergo process and system transformation to deliver the required functionalities. These transformations should be managed by experienced teams who understand how to make change happen within (and not just to) an organization.

4.1.4 DSP Framework Capabilities

Within each Framework Pillar and Enabler, we defined core capabilities, informed by a detailed understanding of best practices and the 13 technical topics. By way of example, Table 4-2 summarizes the capabilities contained within the Distribution Planning and Network Development pillar. These capabilities, many of which might be required regardless of the creation of a DSP, are the indicators for assessing a utility's maturity level. For the full set of capabilities for each pillar and enabler, please see Appendix C.

Table 4-2. DSP capabilities for Distribution Planning and Network Development

Capability	Definition	Example solutions
Advanced forecasting (load and DERs)	Use of advanced systems, techniques, and models to forecast future electricity demand and the output of distributed energy resources (DERs)	Load/DER forecasting software like EPRI's LoadSEER
Integrated system planning processes	Development of an integrated planning framework that combines transmission and distribution needs to ensure efficient and reliable energy delivery	Generation-distribution coordination framework, planning criteria
Power system modelling and network design	Detailed analysis of the impact of anticipated demand and generation growth on the network, guiding decisions on whether to reinforce existing infrastructure or adopt flexible solutions	Non-wire solutions (NWS) planning, network model management systems, beneficial locations for DERs and NWS
Asset management strategy	The creation of appropriate strategies and policies to manage asset health and network development in a cost-efficient, safe, and reliable way	Long term viability indexing (Asset Health indexing), Asset Investment Planning (AIP)
Outage planning	Coordinating and communicating with relevant parties to ensure necessary system access is provided with minimal disruption, while maintaining network resilience and efficiency through careful scheduling, risk assessment, and resource allocation	Policies and procedure according to ISO 55000
Tariff planning and submission	Engagement with relevant regulations and regulatory processes to ensure that planning is compliant and can be implemented	Rate case templates, benefit cost modeling
Transmission network engagement	Engagement with transmission owners to understand transmission network development plans and to communicate distribution network requirements	Joint planning meetings, shared databases, coordination protocols
Emergency response planning	Developing strategies to ensure the network is resilient to emergency situations (e.g., storms, equipment failures) and can respond quickly and efficiently to minimize disruption	Storm response protocols, mutual aid agreements, mobile dispatch

We also mapped the 13 technical topics to capabilities across pillars and enablers to ensure that critical activities were included. We determined, for example, that the Beneficial Locations for DERs, Non-Wires Alternatives, Energy Storage Integration, Advanced Forecasting and Integrated Planning technical topics overlapped with the Framework's Distribution Planning and Network Development pillar.

4.2 Maturity Matrix

The objective behind developing a DSP is to add new capabilities that support the achievement of the State's energy goals. Without utility specific goals, metrics, or prescribed capabilities, we opted to assign a maturity level to DSP components as a consistent way to track progress. Once we decided to use a maturity spectrum, we looked to the industry, finding a wealth of similar approaches (e.g., the Smart Grid Maturity Model) for support.[37] To assess the utilities using the DSP Framework, we defined the maturity levels with several objectives in mind.

1. Keep the levels thematic (vs. detailed) for two reasons. First, the 2023 DSIP updates were not written to speak to the DSP Framework, and second, flexible thematic levels would require less rework in Phase 3.
2. Include enough detail to tease out how and where progress can be made.
3. Identify ways to shift from reporting on activities to outcome-focused reporting.
4. Accommodate the differences between small and large utilities and upstate and downstate utilities.

4.2.1 Maturity Levels

The Maturity Matrix rates maturity for each of the five DSP Framework Pillars using five levels. Again, the levels were designed to be thematic and provide concrete examples from a process, systems, data, or resource perspective. The five levels of maturity were based on the Smart Grid Maturity Model. They provide a progression that is flexible but also rooted in distribution planning.

- **Level 1: Initiating** is characterized by exploring options, identifying needs or issues, and developing business plans or BCAs.
- **Level 2: Enabling** is characterized as testing concepts, launching pilots or proofs of concepts, and investing in strategy.
- **Level 3: Integrating** is characterized as integrating systems, processes, teams, and strategy. It also includes enterprise-wide deployment.
- **Level 4: Optimizing** is characterized as optimizing benefits through the organization, increased automation and integration, and facilitating effective collaboration with external parties.
- **Level 5: Pioneering** is characterized as breaking new ground, leading the industry, innovation.

4.3 Prospective DSIP Assessment

This Prospective DSIP Assessment reviews the maturity of the capabilities presented in the 2023 DSIPs in relation to our definition of a fully functional DSP. Because the 2023 DSIPs align with Staff's guidance, not our DSP Framework, this assessment required mapping the DSIP capabilities to the DSP capabilities.

4.3.1 Objective

Below, we summarize the goals of this assessment and its value to future phases.

Prospective Assessment objectives include:

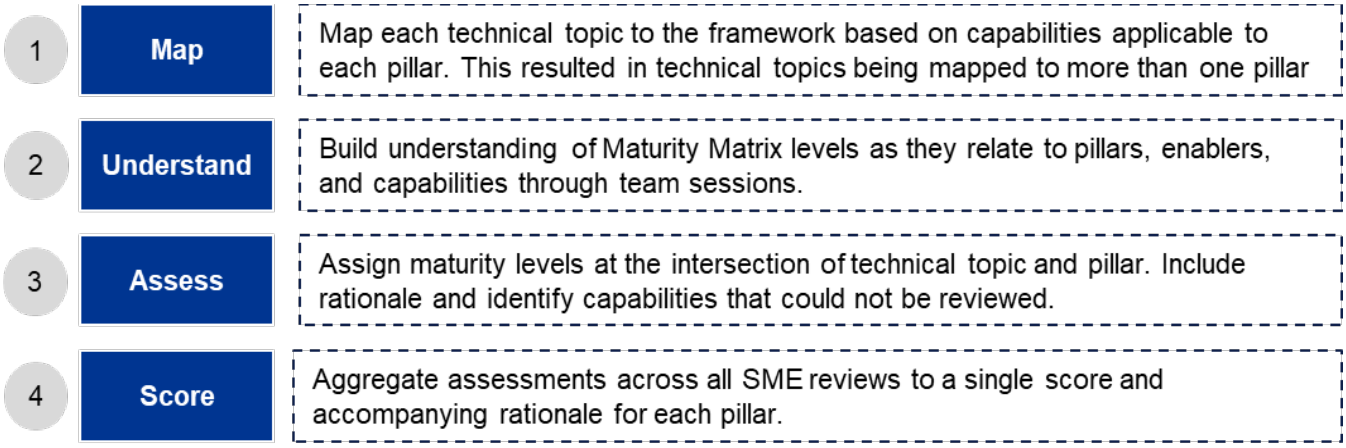
[37] The Smart Grid Maturity Model was developed by Carnegie Mellon's Software Engineering Institute. https://sei.cmu.edu/our-work/projects/display.cfm?customel_datapageid_4050=48925,48925

- Review 2023 DSIPs for capabilities outlined by the DSP Framework.
- Determine the maturity level of the utilities' DSP using the Maturity Matrix.
- Provide rationale for maturity levels that indicates both the status of the DSIP and a pathway for progress.
- Develop actionable and useful feedback for improving future DSIPs through Commission adoption of recommended guidance updates.

4.3.2 Methodology

The subject matter experts (SMEs) from our Retrospective DSIP Assessment also formed the prospective review team since they were familiar with the DSIPs and the DSP Framework. DNV completed the Prospective DSIP Assessments in four steps, presented in Figure 4-5.

Figure 4-5. Prospective Assessment Approach



Note that there were several areas where we chose not to assign a score due to lack of information in the DSIPs. These include the Market Design and Integration Pillar, and the Implementation Governance and Change Management, Cybersecurity and Resilience, and Comprehensive System Architecture Enablers.

- **Pillar: Market Design and Implementation.** Since the 2023 DSIP guidance did not specifically request information related to the topic of market design and integration,[38] the utilities' 2023 DSIP updates generally did not provide much information on the topic. Consequently, we did not attempt to assign a score for this pillar. In addition, distribution markets are not currently active or initiated in New York. However, many utilities are running demand response programs, exploring design of new markets, and/or participating in NYISO programs. Many of the capabilities required to run those offerings will contribute to further market design and implementation. In summary,

[38] Prior to initiation of the Grid of the Future proceeding, the guiding principles, concepts, issues, and potential solutions related to market design and integration were being actively developed by the Market Design and Integration Working Group (MDIWG), a multi-year collaboration between subject matter experts from the utilities, the NYISO, NYSERDA, DPS, national laboratories, DER developers/owners/operators, industry consultants, and various electric power industry stakeholders. The MDIWG was organized and administered by Staff as a component of the DSIP process that required an extensive, ongoing effort to jointly produce recommendations that would inform the Commission's consideration of possible regulatory directives related to market mechanisms and industry structure. That work is now being addressed as an important part of the work supporting the Grid of the Future proceeding. The knowledge and insights developed by the MDIWG provided a foundation of principles, assumptions, and cross-cutting considerations that are now being applied in all phases of the work supporting the proceeding,

while New York has activity around market design, there was not enough information in the DSIPs to assign a score.

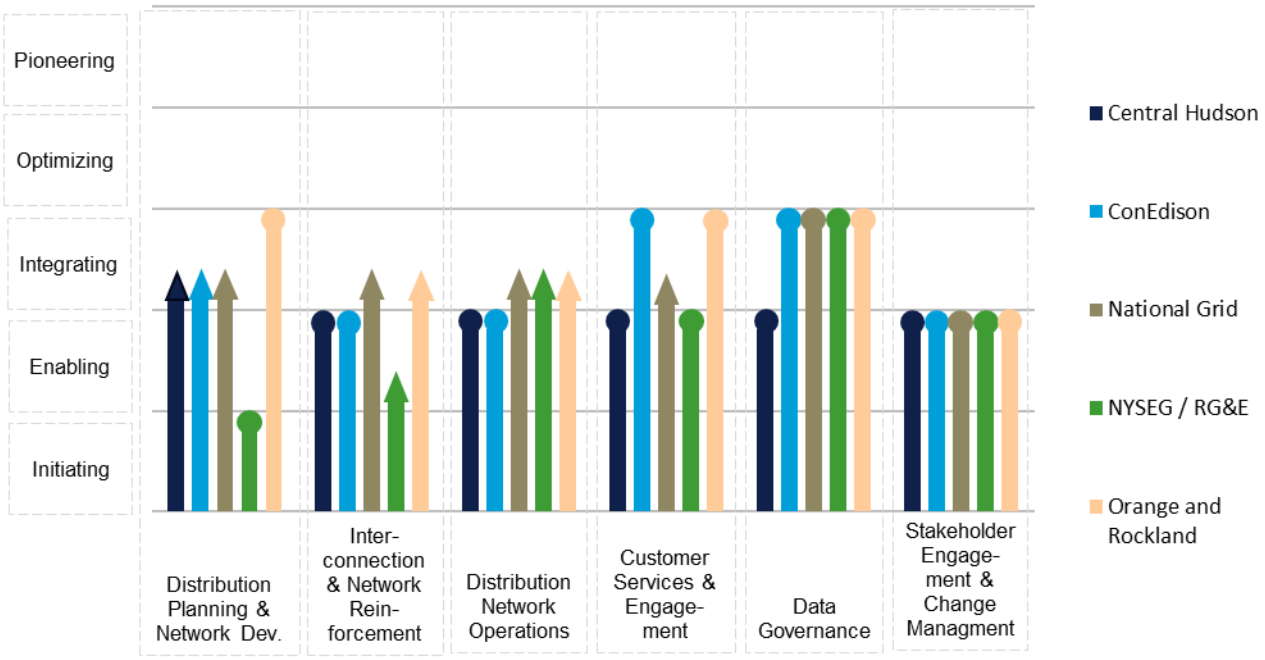
- **Enabler: Governance.** While Staff guidance does ask the utilities to describe the organizations that are responsible for developing and maintaining the DSIP, it does not specifically request information on utility organization or re-organization to support future development of the DSP. Therefore, there was not enough information to assign a score. The recommended guidance does request information on how the utilities manage and deliver the filing, but questions do not focus on the structure and staffing required to enable the DSP. For this enabler, understanding how teams are structured, collaborating, and integrated into the company strategy are important capabilities for enabling an effective DSP.
- **Enabler: Cybersecurity and Resilience**. The DSIPs did not explicitly request cybersecurity strategy and measures. While information cybersecurity is mentioned intermittently throughout the DSIPs, there is not enough information to assign a score.
- **Enabler: Comprehensive System Architecture.** There are no questions that explicitly ask utilities how timely evolution of their business and grid operations will be enabled by an integrated DSP architecture comprising grid assets (physical layer), IT/OT (digital layer), and commercial mechanisms. The technical topic Grid Operations does have the ability to touch on both the IT/OT architecture and the physical grid architecture but currently focuses on specific platforms like ADMS and DERMS. Therefore, we do not have enough information to accurately assess the utilities maturity level.

For the other DSP Framework Pillars and Enablers, most of the capabilities were present in the DSIPs. However, we identified some gaps, for example, among outage planning, tariff planning and submission, and grid operational services. Each of the capabilities, including those identified as gaps, are detailed in the full Framework in Appendix C.

4.3.3 Results and Findings

Figure 4-6 presents the overall results of the Prospective Assessments. Each utility received a maturity rating (y axis) for each of the pillars and enablers (x axis) where the DSIPs provided enough information. When the individual bar ends with a circle, the utility is wholly within the indicated level of maturity. For example, for Distribution Planning and Network Development, Orange and Rockland was rated “integrating.” When the bar ends in an arrow, the utility is moving into the next level of maturity. Again, for Distribution Planning and Network Development, Central Hudson was ranked as “enabling, moving into integrating.” We included these half-step ratings because many of the utilities demonstrated some, but not all, of the next level of maturity. Utility specific Prospective Assessments are presented in Appendix C.

Figure 4-6. Prospective DSIP Assessment Results



Please note that a maturity ranking of "integrating" is a solid ranking. Further, not every utility should be reaching the "optimizing" or "pioneering" levels across all pillars. Instead, they should strive to reach the highest level that is cost-effective and achieves the desired DSP outcomes. Some general observations on the assessment include:

- **Maturity levels.** Many of the categories were assessed as "enabling, moving into integrating." This level indicates that some capabilities were fully deployed and integrated, demonstrating that the utility was well on their way to an "Integrating" maturity level. However, many of the capabilities for each pillar had not been automated, were not well integrated, or were not deployed enterprise wide.
- **Working groups/Joint Utilities initiatives.** Where a working group or mandates existed, we saw similar capabilities between the utilities. For example, there are two working groups for interconnection; therefore, the utilities have similar application management processes, cost sharing allocations, and capabilities in their published hosting capacity maps.

In addition to our general comments, we provide insights by DSP Framework Pillar and Enabler below.

- **Distribution Planning and Network Development.** As noted in the 2023 DSIP filings, several utilities have plans to develop more granular, bottom-up forecasting capabilities but most are still forecasting at the system level. NWA planning is strong across the utilities especially compared to the market, but there are reported barriers to soliciting proposals, awarding contracts, and implementing NWA projects. We also observed varying levels of data integration and minimal discussion of integrated planning from the CGPP perspective.

- **Interconnection and Network Reinforcement.** The utilities actively participate in two working groups that support the development and standardization of many core DER interconnection technologies, practices, and policies. Therefore, the interconnection-related resources and practices across the 5 utilities were fairly similar. In general, the utilities should aim to increase the granularity and publication frequency of hosting capacity maps, include a forecast of hosting capacity, increase the granularity of their forecasts, and share a broader range of data through a state-wide platform.
- **Distribution Network Operations.** Most utilities implemented an ADMS and DERMS platform, however, there was limited information on the integration of systems for grid operations. For most utilities to move to "integrating" maturity level we need to understand how core platforms like AMI, SCADA systems, ADMS, Distribution Management System (DMS), Outage Management System (OMS) and DERMS are being integrated to provide efficient business practices.
- **Customer Services and Engagement.** There are distinct differences in customers' access to their energy consumption data through the utilities' customer portals. There are also distinct differences in how the utilities use AMI data and capabilities to enable customer programs and tariffs. While all utilities participate in NYSERDA led customer programs (e.g., NYSERDA Clean Heat Program), the quality of the programs and the level of modernity/innovation in those offerings varies widely.
- **Data Governance.** The requirements for utility system and customer data to support the IEDR's initial use cases were firmly established and clearly communicated to the utilities in time for inclusion in their 2023 DSIP updates. During that same period, the requirements for data needed to support a significant number of additional IEDR use cases were not fully identified and finalized. Therefore, due to that uncertainty around the data requirements for those additional use cases, the utilities were not in a position to include details related to those requirements in their 2023 DSIP updates and, as a consequence, there is insufficient information to form a basis for Prospective Assessment of this enabler in the utilities' 2023 DSIP updates. Nonetheless, the information provided in the 2023 DSIP updates shows that some of the utilities are further along in planning and implementing more advanced capabilities for generating and sharing data that is useful to a variety of stakeholders. There are also distinct differences in the utilities' ability to generate, analyse, and use system and customer data to improve operational efficiencies or develop new capabilities.
- **Stakeholder Engagement and Change Management.** For this enabler, we have assessed all the utilities as "enabling." This rating reflects the utilities' collaboration with stakeholders to standardize key processes, share knowledge, and accelerated the achievement of DSP goals. The utilities have regular engagement opportunities to solicit stakeholder input, with transparent reporting demonstrating how feedback shapes planning and implementation efforts. To move to "integrating," the utilities need to demonstrate comprehensive change management practices that guide enterprise-wide initiatives with proactive engagement planning, ensuring consistent stakeholder interaction. The utilities should provide measurable outcomes, validate stakeholder engagement effectiveness, and show continuous improvement of their approach to outreach. We qualify this rating by noting that DSIP prompts asking about stakeholder engagement were often unanswered or minimally answered. We recommend that the utilities provide more information in future DSIPs.

5 RECOMMENDATIONS FOR FUTURE DSIPS

In the subsections that follow, DNV presents recommendations based on our Phase 2 work. More specifically, our recommendations were informed by:

- Subject matter expert (SME) comments and suggestions during the Retrospective Distributed System Implementation Plan (DSIP) Assessment
- Interviews with utilities conducted during the collaborative phase of the Retrospective DSIP Assessment (Interviews focused on the process for creating the DSIPs, how DSIPs are used internally, and suggestions for improving the filing or the process.)
- The Grid Flexibility Study, paying special attention to key barriers or untapped potential to ensure that guidance is in alignment with or addressing these issues
- The development of the Distributed System Platform (DSP) Framework (During development we identified key capabilities for enabling the DSP, which could then be used to identify gaps in the DSIP guidance.)

Phase 3 of the work supporting the Grid of the Future proceeding will develop recommendations for evolving the utilities' DSP capabilities to successfully support achievement of the State's decarbonization goals. The resulting recommendations will be informed by all applicable technical, commercial, and regulatory considerations. The work will ultimately produce a detailed roadmap that lays out key steps and critical capabilities needed for timely grid evolution. That roadmap will strongly influence future changes and enhancements to the DSIP process.

Meanwhile, the utilities are required to file their 2025 DSIP updates by June 30, 2025. Because of the short period of time between that date and the March 31, 2025, filing deadline for this report, Department of Public Service Staff (Staff) asked the utilities to use the 2023 DSIP guidance as the basis for preparing their 2025 DSIP updates. Furthermore, Staff encouraged the utilities to enhance their 2025 DSIP updates by applying—where possible within the available time—the findings and recommendations of this report. Therefore, the following recommendations are meant to apply to the development of future DSIP guidance while recognizing that it may be possible for some of the utilities to incorporate some of the recommendations in their 2025 DSIP updates.

Below, we present 11 topic-specific recommendations and 14 general recommendations that should be considered for Commission guidance concerning the organization and contents of future DSIP updates.

5.1 Topic-Specific Recommendations

1. Integrated Planning Section

We believe that future DSIP guidance should promote strong alignment of this section's structure and content across the DSIPs. For sensitivity analyses that support integrated planning, we recommend that the Joint Utilities develop consistent reporting standards. For example, the utilities' planning analyses could apply the same sensitivities (i.e. high/medium/low levels of DER penetration and electrification) so that planning by all the utilities is well-aligned.

2. Electric Vehicle Integration Section

The Grid Flexibility Potential Study produced in Phase 1 shows that EVs are expected to be a major source of grid flexibility services. Currently, the utilities all report on the same five Commission-mandated programs, but the information provided through that reporting is not consistent. In addition, the current information does not describe progress towards the State's electrification goals in terms of number or management of EVs. To address these issues, we recommend a review and modification of the guidance for this section once the required elements of the utilities' EV integration plans are clarified in Phase 3 of the work supporting the Grid of the Future Proceeding.

3. Clean Heat Integration Section

Meeting the State's objectives for electrification of space and water heating in buildings will require large-scale deployment of heat pumps (both air- and water-sourced). Along with improving the energy efficiency of buildings, those heat pumps have the potential to be significant sources of grid flexibility services; consequently, we recommend that future versions of guidance for this topic-specific section include prompts that focus on the utility capabilities needed to enable heat pump-provided grid flexibility services.

In addition, as with the Integrated Planning section, we recommend that the utilities jointly develop and separately apply standards for analyzing sensitivities and scenarios related to Clean Heat. Each scenario profile should identify and characterize the DSP capabilities needed to support the scenario.

4. DER Interconnection Section

The current version of guidance for this section is mostly focused on information about the utilities' implementation of processes and resources for receiving and acting on DER interconnection requests. What we believe is missing from that guidance are prompts that adequately define and seek useful metrics that would more clearly portray the performance impacts of those processes and resources (i.e. are the queue waits lessening, etc.). At a minimum, the utilities DSIP updates should provide the metrics that are tracked by the interconnection working groups.

5. Data Sharing Section

Both within and among the utilities, there are significant differences in the availability, granularity, consistency, and quality of the system and customer data that the utilities share through the IEDR and other channels. Those differences can lead to inconsistent and/or inaccurate data analyses which negatively impact utility and stakeholder activities related to coordination of DER installations/operations, evaluation of customer needs, evaluation of grid needs, development of grid services, etc. We therefore believe that future DSIP guidance for this section should describe the Commission's requirements for joint utility development and application of a comprehensive data dictionary which clearly and fully defines standards for the meaning, structure, and attributes of the system and customer data that the utilities share with external recipients.

6. Advanced Metering Infrastructure (AMI) Section

Future versions of DSIP guidance for this section should put a much stronger emphasis on identifying and characterizing the existing and planned capabilities (and limitations) of the utilities' metering infrastructures. For example, some of the new prompts in this section should seek details that fully and clearly describe 1) the make, model, firmware version, and number of each meter type; 2) the measurement and event data that can be collected and stored by each meter type; 3) the control logic

and outputs available for each meter type; and 4) the field-area and local-area communication technologies and capabilities of each meter type. Providing a template in the guidance for organizing and presenting the desired details would help ensure the quality and consistency of the information delivered by the utilities.

7. Hosting Capacity Section

While the introduction to the current version of guidance for this section establishes three areas of focus, future versions of guidance for this section could include more clarity on the desired outcomes for each of those focus areas. The guidance should also include new prompts that seek details related to the current and predicted local load and supply data needed to support timely progress in those focus areas.

Along with the three focus areas established in the current guidance, future versions of the guidance should establish a fourth focus area concerning the utility's production and sharing of its hosting capacity data. In particular, prompts developed for this focus area should seek information that describes how and when the utility plans to fully enable analysis and presentment of all its hosting capacity information through the statewide Integrated Energy Data Resource (IEDR), thereby obviating the need to maintain a separate web portal for accessing utility-specific hosting capacity information.

In addition to DNV's recommendations, Staff recommends that utilities address the following topics in future versions of the DSIPs. These topics could be addressed with new topic area section or could be addressed through new prompts within current sections.

8. New Electrical Architecture

Future versions of DSIP guidance should solicit information regarding the grid's electrical architecture. A utility's electrical architecture applies to the physical characteristics, interconnection, and planned operating behavior of the grid's electrical components.[39] As such, the grid's electrical architecture is critical to successful DSP implementation and should guide the utility's distribution planning. Future guidance should include details that describe 1) how standards (structural, electrical, and procedural) are rigorously applied to promote safe, reliable, and efficient grid operations; 2) how effective management and application of the electrical architecture is supported by the utility's planned digital and commercial architectures (see below); and 3) whether and how implementation of the planned electrical architecture will affect, or be affected by, the resources and processes described in the other topic-specific sections.

9. New Digital Architecture

Future versions of DSIP guidance should solicit information related to digital architecture. As with its electrical architecture, a utility's digital architecture is critical to successful DSP implementation. Digital architecture establishes an integrated set of standards (structural, technical, and procedural) which should be consistently applied to the information technologies that enable the utility's business functions (IT) and grid operating functions (OT). Future guidance should include prompts that seek

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[39] The electrical components of a grid architecture include transmission-distribution interfaces, distribution substations, distribution lines, distribution transformers, capacitors, power flow controllers, service transformers, smart inverters, grid-scale solar and batteries, residential solar and batteries, EVs/EVSE, dispatchable load and supply resources, etc.

details describing 1) how resources and processes that abide by the utility's digital architecture will enable the high levels of technical and commercial interoperability needed for successful DSP implementation; 2) whether and how the digital architecture will incorporate the implementation and use of artificial intelligence; 3) how the digital architecture incorporates features that contribute to high levels of cybersecurity; 4) whether and how implementation of the planned grid architecture will affect, or be affected by, the resources and processes described in the other topic-specific sections; and 5) how the utility's digital architecture is or will be integrated with the utility's planned electrical and commercial architectures.

10. New Commercial Architecture

Future versions of DSIP guidance should solicit information related to commercial architecture. A utility's commercial architecture establishes an integrated set of standards (structural, technical, and procedural) which should be consistently applied throughout the utility's commercial framework. Future guidance should include prompts which seek details that 1) describe how resources and processes that abide by the utility's commercial architecture will enable high levels of consistency and interoperability across the utility's commercial functions;[40] 2) describe how the commercial architecture is/will-be integrated with the utility's planned electrical and digital architectures; 3) describe how the commercial architecture enables efficient and effective use of third-party-provided grid flexibility capabilities that serve the operational needs of both the bulk electric system and the utility's distribution systems; and 4) describe the utility's progress and plans related to implementing planned additions and changes to the utility's commercial capabilities.

11. New Load Serving Capacity

Future guidance should seek details concerning the production, use, and sharing of location-specific information about the current and future abilities of the utility's distribution system to serve new loads resulting from large scale electrification of transportation and buildings. To promote consistency across the different utility DSIPs, the guidance should identify the key focus areas for the topic and establish clear expectations for information related to the outcomes in those focus areas. One of those focus areas should seek information that describes how and when the utility plans to fully enable analysis and presentment of all its load-serving capacity information through the statewide Integrated Energy Data Resource (IEDR), thereby obviating the need to maintain a separate web portal for accessing utility-specific load-serving capacity information. The guidance should also include prompts that seek details related to the current and predicted load and supply data needed to support timely progress toward understanding and managing the load serving capacity of the utility's distribution system.

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[40] For example: rate design/implementation, program design/implementation/operations, market development/integration/operations, customer accounting & services, and customer engagement.

5.2 General Recommendations

1. Clearly describe the purpose of the DSIPs

The main purpose of the DSIPs should be to provide useful information about the progress and plans for implementing a DSP that will enable a timely transition to the Grid of the Future. In so doing, the DSIPs should integrate and present information that serves the needs of a variety of stakeholders, including DER developers, technology developers, industry organizations, federal/state/local government entities (including NYSERDA and Staff), and community advocates. As a result of our Retrospective Assessments of the utilities' 2023 DSIP updates, we believe that there are opportunities to improve DSIP usefulness. We therefore recommend that future DSIP guidance from the Commission should more clearly describe and explain the objectives and intended uses of the DSIPs.

2. Consistent organization, terminology, and metrics

Considering that most stakeholder categories have needs across multiple DSIPs, future DSIP guidance should steer the utilities to apply highly consistent organization, terminology, and metrics across all of the DSIPs. In so doing, readers could more clearly understand and compare each utility's planning and strategies for DSP implementation. For example, it would be useful to standardize metrics around DER interconnection so that DER developers can more efficiently interpret and compare the utilities' practices, resources, and performance related to DER interconnections (e.g., queue lengths, volumes of DERs connected, etc.)

In addition, there are several places in the guidance where we believe that providing standard tables, graphics, and other information templates would materially improve the consistency of information presentment in the DSIPs. We therefore recommend including such standards in future versions of the DSIP guidance. New DSIP guidance that includes those standards should be developed once the comprehensive grid evolution plan is completed at the end of Phase 3.

3. Consistent quality and thoroughness

We found that the quality and thoroughness of information in the utilities' 2023 DSIP updates was inconsistent—both within and among the DSIPs—and in many cases we believe the degree of inconsistency made some DSIPs less useful and harder to follow. We therefore recommend future guidance describe as clearly as possible the Commission's expectations for the quality and thoroughness of DSIP content. For example, future guidance should give explicit instructions that 1) address cases where a utility is unable to fully provide information requested in the guidance; 2) provide additional guidance on how to report planning and implementation activities that are underway but not completed; and 3) set criteria for when it is appropriate to provide web links to outside information sources.

4. Topic-specific priorities

In the guidance for the 2023 DSIP updates, the introduction to the topic-specific section concerning hosting capacity asks the utilities to focus on three key priorities to meaningfully advance their ability to produce, analyze, share, and apply hosting capacity information. We recommend that similar priorities be described in the introduction for each of the other topic-specific sections. We expect that the comprehensive plan developed in Phase 3 will identify and characterize those priorities.

5. DSIP guidance regarding stakeholder engagement

The utilities' responses to stakeholder-related prompts in the 2023 DSIP guidance were often very brief, conflated, or simply not provided. We believe that in some cases this outcome is probably due to insufficient utility engagement with stakeholders on a particular topic. In other cases, stakeholder-related prompts in the guidance for a topic-specific section could be simplified and consolidated into one part of the section guidance. In addition, we recommend removing stakeholder-related prompts from the General Requirements section of the guidance and incorporating those prompts into the stakeholder-related part of the guidance for each topic-specific section. Doing this should help reduce redundant DSIP content and enable more tailored stakeholder-related prompts for each topic-specific section.

6. Prompts with multiple parts

We found that the utilities often did not respond to all parts of a multi-part prompt. We recommend reviewing those prompts for clarity and making changes where necessary. One possible approach to would be to provide guidance that prescribes specific formats or tables where appropriate. For example, the prompt for risks and mitigations could be supported by a simple table structure.

7. Clarity of prompts

Some of the longer and more complex prompts in the 2023 DSIP guidance yielded low-quality and incomplete answers. We therefore recommend examining those prompts to determine where and how they could be rephrased to be clearer about the desired information. Reviewing the Retrospective Assessments will help to identify prompts that should be streamlined.

8. Collective vs. individual utility actions and outcomes

We often found it hard to distinguish between information that was developed and applied collectively as opposed to individually. We therefore recommend that future DSIP guidance be explicit about distinguishing between individual and collective utility actions.

9. Summary of stakeholder resources

Section 3.2 of the 2023 DSIP guidance calls for a DSIP section that inventories all stakeholder resources referenced throughout a DSIP. However, we believe that more guidance should have been given for the types of resource information desired. For each resource listed, the inventory should: 1) identify the source/administrator of the resource; 2) describe the utility's primary purpose—and secondary purpose(s) when applicable—for citing the resource in the DSIP; 3) identify the DSIP topic-specific section(s) where the resource is referenced; and 4) describe how to access the resource. Through this section, a stakeholder who does not want to navigate through the topic-specific sections could find useful external information sources that are relevant to the stakeholder's interests.

10. Relevant proceedings, regulations, and laws

We recommend that future versions of DSIP guidance call for information in the DSIPs that identifies relevant proceedings, regulations, and laws and describes how they can either influence or be influenced by DSP implementation. This information might best be presented in a tabular format that maps and characterizes the relationships between the utilities' topic-specific activities and the proceedings, regulations, and laws that are deemed to be relevant.

11. Maturity of DSP integration and automation

Generally, the information provided in the utilities' 2023 DSIP updates was not adequate for assessing the maturity of integration and automation capabilities that are essential for successful DSP implementation. What are the required capabilities and when/where are they needed? Are those capabilities at a proof of concept, pilot, or mass market stage of development? What are the required functions, characteristics, and configurations of the resources that provide those capabilities? Are they implemented or planned as companywide or siloed capabilities?

The information needed to assess current and planned integration and automation of DSP capabilities is partly addressed in the above recommendations for new topic-specific sections regarding Grid Architecture, Digital Architecture, and Commercial Architecture (see section 5.1). To ensure that the utilities' DSIP updates provide a complete view of DSP integration and automation, we recommend that future versions of DSIP guidance also call for information in each topic-specific section that identifies and characterizes the current and planned capabilities that are relevant to the topic. The guidance should establish those capabilities as a priority for most topics (see #2 above) and should include templates for tables and/or graphics that can be used to effectively map and describe integration capabilities (see #4 above).

12. Seek more information about outcomes

While previous DSIP guidance has focused mostly on the utilities' progress and plans toward DSP implementation, we believe the guidance for future DSIPs should seek more information about the scale and value of planned and achieved outcomes resulting from the utilities' investments and efforts. For example, prompts that call for standard metrics would encourage DSIPs that more clearly articulate the timing, status, and value of key activities.

13. Revisit technical topics organization and structure

We recommend combining technical topics with heavy overlap (Interconnection and Hosting Capacity) but retain explicit questions for core functions. We also recommend breaking down technical topics like Grid Operations that are multifaceted. The guidance prompts focus on implementation of ADMS and DERMS platform. Future prompts should investigate the integration of core platforms like AMI, SCADA systems, ADMS, DMS, OMS, and DERMS to provide efficient business practices.

14. Change from a flat hierarchy to prioritizing efforts

Currently the 13 technical topics are listed as equals in creating the DSP platform. We recommend grouping, organizing, or integrating the technical topics into the DSP Framework Pillars so that the utilities can provide a cohesive approach to developing a DSP. For example, technical topics Integrated Planning, Advanced Forecasting, Hosting Capacity, Beneficial Locations for DERs and Non-Wires Alternatives demonstrate functions related to Distribution Network Planning. By considering them as components of that pillar, the utilities can provide information on company strategy and vision for advancing their networking panning. In Phase 3, we also suggest using the baselining activity of maturity levels to develop utility-specific priorities for furthering their various capabilities. Each utilities' pathway to a DSP will look different and the DSIP guidance can reflect that difference.

APPENDIX A. RETROSPECTIVE DSIP ASSESSMENTS

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How to Use the Assessment

Purpose of DSIPs The purpose of the DSIPs is to provide detailed, up-to-date information about progress and plans related to the implementation of a Distributed System Platform (DSP) featuring operational and market capabilities that will enable a market for products and services provided by the Distributed Energy Resources (DER) that are connected to the utility's distribution systems

Purpose of Assessmer The purpose of this assessment is to determine the alignment of each DSIP with the guidance provided in the 2023 DPS Staff Whitepaper.

Format of Assessment This assessment represents a review of one utility's DSIP. It is organized into 13 tabs/charts for each technical topic described in DPS guidance.

Review Approach

Checkbox — The "checkbox" column is a quick check/reference to see if the DSIP responded to each component of the guidance.

Color Assessment — The color assessment is a visual indicator of how well the DSIP response aligns with the prompts outlined in the DPS guidance.

- Some evidence indicating that that DSIP aligns with the DPS guidance.
- Sufficient evidence that DSIP aligns with the DPS guidance
- Satisfies all elements of the DPS guidance in a robust and comprehensive manner.

Cumulative Assessment

	4.1 Integrated Planning	4.2 Advanced Fore-casting	4.3 Grid Operations	4.4 Energy Storage Integration	4.5 Electric Vehicle Integration	4.6 Clean Heat Integration	4.7 EE Integration and Innovation	4.8 Data Sharing	4.9 Hosting Capacity	4.1 Billing and Comp-ensation	4.11 DER Interconn-ections	4.12 Advanced Metering Infra-structure	4.13 Beneficial Locations for DERs and NWA
1. Context/Background													
2. Implementation Plan													
3. Risks/Mitigation													
4. Stakeholder Engmt.													
Prompt 1													
Prompt 2													
Prompt 3													
Prompt 4													
Prompt 5													
Prompt 6			-				-						
Prompt 7			-				-					-	-
Prompt 8			-			-	-		-		-	-	-
Prompt 9	-		-		-	-	-		-		-	-	-
Prompt 10	-		-		-	-	-	-	-	-	-	-	-
Prompt 11	-		-	-	-	-	-	-	-	-	-	-	-
Prompt 12	-		-	-	-	-	-	-	-	-	-	-	-
Prompt 13	-		-	-	-	-	-	-	-	-	-	-	-
Prompt 14	-		-	-	-	-	-	-	-	-	-	-	-
Prompt 15	-		-	-	-	-	-	-	-	-	-	-	-
Prompt 16	-		-	-	-	-	-	-	-	-	-	-	-
Prompt 17	-		-	-	-	-	-	-	-	-	-	-	-

	5.1 DSIP Governance	5.2 MCOS	5.3 BCA
Included (Y/N)	Y	Y	Y
Color Assessment			

Key					
	Not answered	OS	Answered outside the topic area section	N/A	Not applicable
-	Not asked				
	Some evidence indicating that that DSIP aligns with the DPS guidance.				
	Sufficient evidence that DSIP aligns with the DPS guidance				
	Satisfies all elements of the DPS guidance in a robust and comprehensive manner.				

Integrated Planning							
	Prompt						**Rationale**
	DPS Rationale						
		DPS Staff recommends that the utility's electric system plan should position the utility to integrate an increasing number and variety of DERs while maintaining or improving safety, reliability, quality, and affordability of service. While stakeholders will now be able to reference the CGPP for a detailed understanding of how integrated planning will evolve to meet system needs aligned with the CLCPA, the DSIP should leverage the outputs of CGPP scenario planning and filed capital investment plans as inputs, and describe overall implementation plans and timelines as well as advances in specific planning functionalities that enhance the DSP. Along with satisfying the general guidelines for information related to each topical area (see Section 3.1), DPS Staff suggests that the DSIP Update should provide the following additional details which are specific to the utility resources and capabilities which support integrated electric system planning:						
1.	Context and Background						
		a. Describe how topic-related policies, processes, resources, standards, and capabilities have evolved since the 2020 DSIP Update filing.		X				
2.	Implementation Plan, Schedule, and Investments						
	a.	Current Progress						
		i. Describe the current implementation as of June 30, 2023; and		X				
		ii. Describe how the current implementation supports stakeholders' current and future needs.		X				Moderate discussion of stakeholders engaged on best practices and improving hosting capacity maps to support developers.
	b.	Future Implementation and Planning						
		i. Describe the future implementation that is planned to be deployed by 2028, identifying planned efforts and funded efforts.		X				Good discussion of planned efforts but did not explicitly note what is funded, though many activities look to be in progress or continuation of previous efforts.
		ii. Describe how the future implementation will support stakeholders' needs in 2028 and beyond.		X				
		iii. Identify and characterize the work and investments needed to progress from the current implementation to the planned future implementation.		X				Discussion of changes to distribution planning and design criteria but not robust on investments needed.
		iv. Describe and explain the planned timing and sequence of the work and investments needed to progress from the current implementation to the planned future implementation.		X				Discussion of changes to distribution planning and design criteria but not robust on sequence of events.
		v. Describe where and how plans for topic-related work and investments affect the CGPP.		X				
		vi. Describe where and how investment plans developed through the CGPP affect the topic-related work and investments presented in the DSIP update.		X				A bit more difficult to discern in the write up how the CGPP will impact integrated planning vs. how integrated planning will be incorporated into the CGPP work.
	c.	Integrated Implementation Timeline						
		i. Using a common format developed jointly with the other utilities, provide a high-level implementation timeline that combines the key milestones for all topic-related work and investments planned over the five-year period ending in 2028. Along with the milestones, the timeline should show significant dependencies among the work and investments related to all topics.		X				Does not clearly identify any dependencies between activities.
3.	Risks and Mitigation							

Integrated Planning								
		Prompt						**Rationale**
		a. Identify and characterize any potential risk(s) and/or actual issue(s) that could affect timely implementation and describe the measures taken, or to be taken, to mitigate the risk(s) and/or resolve the issue(s).		X				Section does not clearly identify the risk and the mitigation activities. There is discussion of considerations the company is making but the risk & mitigation.
4.	Stakeholder Engagement							
		a. Identify and characterize the categories of stakeholders engaged in DSIP development and use.		X				
		b. Describe when and how the goals and needs of each stakeholder category are identified and incorporated into the DSIP.		X				Points to another section of the DSIP (forecasting), mentions technical conferences that have occurred that provided stakeholder input.
		c. Describe when and how each stakeholder category's needs will be met over time.		X				Points to another section of the DSIP (forecasting).
		d. Describe and explain the utility's needs for stakeholder-provided information, capabilities, and actions supporting specific implementation and operational outcomes.		X				Points to another section of the DSIP (forecasting).
		e. Describe the means and methods for effectively informing and engaging associated stakeholders as planning, design, and implementation progress so that the outputs effectively address, as much as feasible, the needs of the utility, DER developers, and stakeholders.		X				Points to another section of the DSIP (forecasting).
		f. Describe how the utility will ensure that the information, tools, and engagement opportunities provided to stakeholders effectively deliver the intended support and do not lead to unintended problems.		X				Points to another section of the DSIP (forecasting).
4.1	Integrated Planning							
		1. The means and methods used for integrated distribution system planning.		X				
		2. How the utility's means and methods enable probabilistic planning which effectively anticipates the inter related effects of distributed generation, energy storage, electric vehicles, beneficial electrification, and energy efficiency.		X				
		3. How the utility ensures that the information needed for integrated system planning is timely acquired and properly evaluated.		X				
		4. The types of sensitivity analyses performed and how those analyses are applied as part of the integrated planning process.		X				Notes the company is developing internal capabilities for this.
		5. How the utility will timely adjust its integrated system plan if future trends differ significantly with predictions, both in the short term and in the long term beyond the DSIP timeline.		X				Not clear how they plan to assess the accuracy of their predictions and incorporate this in their future forecast.
		6. The factors unrelated to DERs such as aging infrastructure, electric vehicles, and beneficial electrification which significantly affect the utility's integrated plan and describe how the utility's planning process addresses each of those factors.		X				
		7. How the means and methods for integrated electric system planning evaluate the effects of potential energy efficiency measures.		X				
		8. How the utility will inform the development of its integrated planning through best practices and lessons learned from other jurisdictions.		X				Refers to stakeholder discussion about on working with industry developers but discussion is very high-level, one sentence.

Advanced Forecasting								
	Prompt							Rationale
	DPS Rationale							
	Utility planners and operators, DER developers and operators, and other stakeholders all require load and supply forecasts which are timely, accurate, and detailed enough to support both short term and long term planning. Such forecasts are an important factor in predicting the hosting capacity available at existing and potential DER locations and are necessary for efficient development and use of grid resources. As the variety of methods for using DERs to address electric system needs expands, DPS Staff recommends that utilities should perform advanced forecasting analyses which integrate an increasing number and variety of DERs into their load and supply forecasts. Therefore, DPS Staff proposes that the methods for using advanced distribution system forecasting, along with plans for implementing the means and methods needed for advanced forecasting should continue to be described by the utilities in their DSIPs. Along with satisfying the general guidelines for information related to each topic (see Section 3.1), DPS Staff recommends that the DSIP Update should provide the following additional details that are specific to the utility resources and capabilities and which enable advanced electric system forecasting and provide the most current forecast results:							
1.	Context and Background							
	a. Describe how topic-related policies, processes, resources, standards, and capabilities have evolved since the 2020 DSIP Update filing.		X					Describes inclusion of additional load modifiers but focused on system level changes.
2.	Implementation Plan, Schedule, and Investments							
	a. Current Progress							
	i. Describe the current implementation as of June 30, 2023; and		X					Nice description of current methods and improvements. Focus on winter peak forecasts.
	ii. Describe how the current implementation supports stakeholders' current and future needs.		X					Could provide more direct tie to how stakeholders might benefit from recent updates.
	b. Future Implementation and Planning							
	i. Describe the future implementation that is planned to be deployed by 2028, identifying planned efforts and funded efforts.		X					Timelines are not well defined.
	ii. Describe how the future implementation will support stakeholders' needs in 2028 and beyond.		X					Minimal mention of stakeholders and no specific timing referenced.
	iii. Identify and characterize the work and investments needed to progress from the current implementation to the planned future implementation.		X					Various new tools and techniques were discussed.
	iv. Describe and explain the planned timing and sequence of the work and investments needed to progress from the current implementation to the planned future implementation.		\					Timing not discussed in this section.
	v. Describe where and how plans for topic-related work and investments affect the CGPP.		\					CGPP not mentioned in this section.
	vi. Describe where and how investment plans developed through the CGPP affect the topic-related work and investments presented in the DSIP update.		\					CGPP not mentioned in this section.
	c. Integrated Implementation Timeline							
	i. Using a common format developed jointly with the other utilities, provide a high-level implementation timeline that combines the key milestones for all topic-related work and investments planned over the five-year period ending in 2028. Along with the milestones, the timeline should show significant dependencies among the work and investments related to all topics.		X					Reference provided to Integrated Planning Section timeline which includes all elements.
3.	Risks and Mitigation							
	a. Identify and characterize any potential risk(s) and/or actual issue(s) that could affect timely implementation and describe the measures taken, or to be taken, to mitigate the risk(s) and/or resolve the issue(s).		X					Discussion of additional scenario analysis, more granular data, and validation of model assumptions.
4.	Stakeholder Engagement							

Advanced Forecasting								
		Prompt						**Rationale**
		a. Identify and characterize the categories of stakeholders engaged in DSIP development and use.		X				No formal definitions, but stakeholder groups are mentioned.
		b. Describe when and how the goals and needs of each stakeholder category are identified and incorporated into the DSIP.		X				Not explicit in this section - but pieces available in introduction and more detailed Advanced Forecasting questions.
		c. Describe when and how each stakeholder category's needs will be met over time.		\				Not provided.
		d. Describe and explain the utility's needs for stakeholder-provided information, capabilities, and actions supporting specific implementation and operational outcomes.		\				Not provided.
		e. Describe the means and methods for effectively informing and engaging associated stakeholders as planning, design, and implementation progress so that the outputs effectively address, as much as feasible, the needs of the utility, DER developers, and stakeholders.		\				Not provided.
		f. Describe how the utility will ensure that the information, tools, and engagement opportunities provided to stakeholders effectively deliver the intended support and do not lead to unintended problems.		\				Not provided.
4.2 Advanced Forecasting								
		1. Identify where and how DER developers and other stakeholders can readily access, navigate, view, sort, filter, and download up to date load and supply forecasts.		X				
		2. Identify and characterize each load and supply forecasting requirement identified from stakeholder inputs.		X				Described various enhancements and forecasts that resulted from input provided by stakeholders during engagement sessions.
		3. Describe in detail the existing and/or planned forecasts produced for third-party use and explain how those forecasts fulfill each identified stakeholder requirement for load and supply forecasts.		X				References above question, but does not really describe how the forecast fulfills the stakeholder requirement.
		4. Describe the spatial and temporal granularity of the system level and local level load and supply forecasts produced.		X				Temporal and spatial granularity described.
		5. Describe the forecasts provided separately for key areas including but not limited to photovoltaics, energy storage, electric vehicles, and energy efficiency.		X				Comprehensive description provided in appendix A.
		6. Describe the advanced forecasting capabilities which are/will be implemented to enable effective probabilistic planning methods.		X				Not clear how they plan to assess the accuracy of their predictions and incorporate this in their future forecast.
		7. Describe how the utility's existing/planned advanced forecasting capabilities anticipate the inter related effects of distributed generation, energy storage, electric vehicles, beneficial electrification, and energy efficiency. In particular, describe how electric vehicle and energy efficiency forecasts are reflected in utility forecasts.		X				Comprehensive details provided in appendix A.
		8. Describe in detail the forecasts produced for utility use and explain how those forecasts fulfill the evolving utility requirements for load and supply forecasts		X				Could provide more detail on how the forecast fulfills the requirements.
		9. Describe the utility's specific objectives, means, and methods for acquiring and managing the data needed for its advanced forecasting methodologies.		X				Limited discussion of data management and acquisition.
		10. Describe the means and methods used to produce substation level load and supply forecasts.		X				Description provided with details in Appendix A.
		11. Describe the levels of accuracy achieved in the substation level forecasts produced to date for load and supply.		X				Accuracy levels presented.

Advanced Forecasting								
		Prompt						**Rationale**
		12. Describe the substation level load forecasts provided to support analyses by DER developers and operators and explain why the forecasts are sufficient for supporting those analyses.		X				Limited explanation of why the forecasts are sufficient other than meeting the request of DER developers.
		13. Provide sensitivity analyses which explain how the accuracy of substation level forecasts is affected by distributed generation, energy storage, electric vehicles, beneficial electrification, and energy efficiency measures		\				Did not discuss sensitivities or analyses. Only state that they will update assumptions and refine methods as appropriate.
		14. Identify and characterize the tools and methods the utility is using/will use to acquire and apply useful forecast input data from DER developers and other third-parties.		X				Additional detail on external sources of information/assumptions could be provided.
		15. Describe how the utility will inform its forecasting processes through best practices and lessons learned from other jurisdictions.		X				Only NYISO identified, inclusion of review from other jurisdictions could be useful.
		16. Describe new methodologies to improve overall accuracy of forecasts for demand and energy reductions that derive from EE programs and increased penetration of DER. In particular, discuss how the increased potential for inaccurate load and energy forecasts associated with out of model EE and DER adjustments will be minimized or eliminated.		X				No specific discussion of out-of-model adjustments provided.
		17. Describe where CGPP forecast information can be found.		X				The response indicates that the CGPP information is not yet approved, and does not provide information on location of information.

Grid Operations							
	Prompt						**Rationale**
	DPS Rationale						
	It is the opinion of DPS Staff that each utility must enable a much more dynamic, data driven, multi party mode of grid operations where DERs effectively generate customer value by increasing efficiency, stability, and reliability in both the distribution system and the bulk electric system. To achieve this outcome, DPS Staff recommends that each utility should develop and/or substantially modify a wide range of components encompassing operating policies and processes, advanced information systems, extensive data communications infrastructure, widely distributed sensors and control devices, and grid components such as switches, power flow controllers, and solid state transformers. Along with satisfying the general guidelines for information related to each topical area (see Section 3.1), DPS Staff suggests that the DSIP Update should provide the following additional details which are specific to the utility resources and capabilities needed to transform grid operations in both the distribution system and the bulk electric system:						
1. Context and Background							
	a. Describe how topic-related policies, processes, resources, standards, and capabilities have evolved since the 2020 DSIP Update filing.		X				Discussed impact of policies on grid operations and rationale behind GO projects, highlighted achievement.
2. Implementation Plan, Schedule, and Investments							
	a. Current Progress						
	i. Describe the current implementation as of June 30, 2023; and		X				Detailed implementation of projects, updated progress and benefits realized.
	ii. Describe how the current implementation supports stakeholders' current and future needs.		X				Stakeholders referenced sometimes part of the previous section (requires more information).
	b. Future Implementation and Planning						Overall section includes future planned implementation work however doesn't not follow explicitly the guidance.
	i. Describe the future implementation that is planned to be deployed by 2028, identifying planned efforts and funded efforts.		\				Info missing.
	ii. Describe how the future implementation will support stakeholders' needs in 2028 and beyond.		X				Good description missing more details related to some projects.
	iii. Identify and characterize the work and investments needed to progress from the current implementation to the planned future implementation.		X				Good description missing more details related to some projects.
	iv. Describe and explain the planned timing and sequence of the work and investments needed to progress from the current implementation to the planned future implementation.		\				Info missing.
	v. Describe where and how plans for topic-related work and investments affect the CGPP.		\				Info missing.
	vi. Describe where and how investment plans developed through the CGPP affect the topic-related work and investments presented in the DSIP update.		\				Info missing.
	c. Integrated Implementation Timeline						
	i. Using a common format developed jointly with the other utilities, provide a high-level implementation timeline that combines the key milestones for all topic-related work and investments planned over the five-year period ending in 2028. Along with the milestones, the timeline should show significant dependencies among the work and investments related to all topics.		X				Fig 13 shows activities on a timeline however doesn't consider key milestones, and dependencies among the work and investments related to all topics.
3. Risks and Mitigation							
	a. Identify and characterize any potential risk(s) and/or actual issue(s) that could affect timely implementation and describe the measures taken, or to be taken, to mitigate the risk(s) and/or resolve the issue(s).		X				List of top risks and relevant mitigation.

Grid Operations								
		Prompt						**Rationale**
4. Stakeholder Engagement				X				limited discussion on stakeholders engagement, Lacks specifics required in the guideline.
		a. Identify and characterize the categories of stakeholders engaged in DSIP development and use.		X				High level, lacking details as per the guidance.
		b. Describe when and how the goals and needs of each stakeholder category are identified and incorporated into the DSIP.		\				High level, lacking details.
		c. Describe when and how each stakeholder category's needs will be met over time.		\				High level, lacking details.
		d. Describe and explain the utility's needs for stakeholder-provided information, capabilities, and actions supporting specific implementation and operational outcomes.		\				High level, lacking details.
		e. Describe the means and methods for effectively informing and engaging associated stakeholders as planning, design, and implementation progress so that the outputs effectively address, as much as feasible, the needs of the utility, DER developers, and stakeholders.		\				High level, lacking details.
		f. Describe how the utility will ensure that the information, tools, and engagement opportunities provided to stakeholders effectively deliver the intended support and do not lead to unintended problems.		\				High level, lacking details.
4.3 Grid Operations								
		1. Describe in detail the roles and responsibilities of the utility and other parties involved in planning and executing grid operations which accommodate and productively employ DERs.		X				Roles currently focuses on DSO (O&R) roles and departments.
		2. Describe other role and responsibility models considered and explain the reasons for choosing the planned model		X				No mention of other role/responsibility model.
		3. Describe how roles and responsibilities have been/will be developed, documented, and managed for each party involved in the planning and execution of grid operations.		X				Roles defined in contractual agreement.
		4. Describe in detail how the utilities and other parties will provide processes, resources, and standards to support planning and execution of advanced grid operations which accommodate and extensively employ DER services. The information provided should address:						
		a. organizations;		X				Not clear how they plan to assess the accuracy of their predictions and incorporate this in their future forecast.
		b. operating policies and processes;		X				Outlined in standard operation procedures.
		c. information systems for system modeling, data acquisition and management, situational awareness, resource optimization, dispatch and control, etc. ;		X				List systems in DSIP.
		d. data communications infrastructure;		X				Work on communication infrastructure is undergoing.
		e. grid sensors and control devices; and,		X				Provide list of sensors and control devices.
		f. grid infrastructure components such as switches, power flow controllers, and solid state transformers.		X				Good discussion on switches, other technologies are in the R&D phase.
		5. Describe the utility's approach and ability to implement advanced capabilities.						
		a. Identify the existing level of system monitoring and distribution automation.		X				85% automation in distribution network.
		b. Identify areas to be enhanced through additional monitoring and/or distribution automation.		X				
		c. Describe the means and methods used for deploying additional monitoring and/or distribution automation in the utility's system.		X				High level info.
		d. Identify the benefits to be obtained from deploying additional monitoring and/or distribution automation in the utility's system.		X				Some benefits discussed.

Grid Operations								
		Prompt						**Rationale**
		e. Identify the capabilities currently provided by Advanced Distribution Management Systems (ADMS).		X				FLISR and VVO
		f. Describe how ADMS capabilities will increase and improve over time.		X				Reference to DERMS integration.
		g. Identify the capabilities currently provided by DER Management Systems (DERMS).		X				No DERMS in place.
		h. Describe how DERMS capabilities will increase and improve over time.		X				DERMS expected in phase 3 to monitor, control and dispatch DERs.
		i. Identify other approaches or functionalities used to better manage grid performance and describe how they are/will be integrated into daily operations.		X				Ongoing R&D work on P/Q sensor, missing details.

Energy Storage Integration								
	Prompt							Rationale
	DPS Rationale							
		As outlined in the recently issued "New York's 6 GW Energy Storage Roadmap Policy Options for Continued Growth in Energy Storage" significant energy storage integration will be needed within the five year planning horizon of the DSIP Update filing. Meanwhile, evolving initiatives for achieving New York State's energy storage goals will likely require corresponding adjustments to utility deployment plans, use cases, and forecasts. Areas of particular interest to DPS Staff related to energy storage include: • Existing energy storage resources in the distribution system; • The utility's planned energy storage projects; • A five year forecast of energy storage deployments by the utility and/or third-parties; • Potential energy storage locations and applications that could benefit customers and/or the electric system; • Resources and functions needed for integrating energy storage with utility grid operations; • Resources and functions needed for integrating energy storage with utility billing and compensation functions; and • The utility's alignment with New York State's energy storage goals and initiatives. Along with satisfying the general guidelines for information related to each topic (see Section 3.1), DPS Staff recommends that the DSIP Update should provide the following details for the areas of interest listed above, especially the means and methods to plan for energy storage deployment in the distribution system:						
1. Context and Background								
	a. Describe how topic-related policies, processes, resources, standards, and capabilities have evolved since the 2020 DSIP Update filing.		X					Discussed commission storage order, FERC orders, CLCPA.
2. Implementation Plan, Schedule, and Investments								
	a. Current Progress							
	i. Describe the current implementation as of June 30, 2023; and		X					Discussed demonstration projects, direct procurement, NWA, bulk solicitation.
	ii. Describe how the current implementation supports stakeholders' current and future needs.		X					Calls out stakeholder needs benefits and interactions within each subsection.
	b. Future Implementation and Planning							
	i. Describe the future implementation that is planned to be deployed by 2028, identifying planned efforts and funded efforts.		X					Describes planned and expected VPP and NWA project with additional details in detailed responses below.
	ii. Describe how the future implementation will support stakeholders' needs in 2028 and beyond.		X					Described in Education and Outreach subsection and in the current progress section above.
	iii. Identify and characterize the work and investments needed to progress from the current implementation to the planned future implementation.		X					Phased approaches presented for demonstration project and optimization of use and dispatch of assets.
	iv. Describe and explain the planned timing and sequence of the work and investments needed to progress from the current implementation to the planned future implementation.		X					Detailed sequence and timing was not clear.
	v. Describe where and how plans for topic-related work and investments affect the CGPP.		\					Not provided in this section.
	vi. Describe where and how investment plans developed through the CGPP affect the topic-related work and investments presented in the DSIP update.		\					Not provided in this section.
	c. Integrated Implementation Timeline							

Energy Storage Integration								
		Prompt						**Rationale**
		i. Using a common format developed jointly with the other utilities, provide a high-level implementation timeline that combines the key milestones for all topic-related work and investments planned over the five-year period ending in 2028. Along with the milestones, the timeline should show significant dependencies among the work and investments related to all topics.		X				Clear timeline with milestones included.
3.	Risks and Mitigation							
		a. Identify and characterize any potential risk(s) and/or actual issue(s) that could affect timely implementation and describe the measures taken, or to be taken, to mitigate the risk(s) and/or resolve the issue(s).		X				Detailed discussion of permit, safety, and supply chain, and wholesale markets presented.
4.	Stakeholder Engagement							
		a. Identify and characterize the categories of stakeholders engaged in DSIP development and use.		X				Discussed various methods of stakeholder engagement.
		b. Describe when and how the goals and needs of each stakeholder category are identified and incorporated into the DSIP.		X				Limited discussion of goals and needs incorporated into the DSIP.
		c. Describe when and how each stakeholder category's needs will be met over time.		X				General discussion of engagement, but not how needs are met over time.
		d. Describe and explain the utility's needs for stakeholder-provided information, capabilities, and actions supporting specific implementation and operational outcomes.		X				Lacks discussion on outcome.
		e. Describe the means and methods for effectively informing and engaging associated stakeholders as planning, design, and implementation progress so that the outputs effectively address, as much as feasible, the needs of the utility, DER developers, and stakeholders.		X				Discussion of frequent meetings, conference, and outreach.
		f. Describe how the utility will ensure that the information, tools, and engagement opportunities provided to stakeholders effectively deliver the intended support and do not lead to unintended problems.		X				Lacks the information on 'do not lead to unintended problems.'
4.4	Energy Storage Integration							
		1. Provide the locations, types, capacities (power and energy), configurations (i.e., standalone or co located with load and/or generation), and functions of existing energy storage resources in the distribution system.		X				Detailed description provided.
		2. Describe the utility's current efforts to plan, implement, and operate beneficial energy storage applications. Information provided should include:						
		a. a detailed description of each project, existing and planned, with an explanation of how the project fits into the utility's long range energy storage plans;		X				Detailed description provided in previous sections.
		b. the original project schedule;		X				Presented in table.
		c. the current project status;		X				Not clear how they plan to assess the accuracy of their predictions and incorporate this in their future forecast.
		d. lessons learned to date;		X				Note the need for earlier stakeholder engagement.
		e. project adjustments and improvement opportunities identified to date; and		X				Addressing siting risks.
		f. next steps with clear timelines and deliverables.		X				Timeline presented above, lacks deliverables.
		3. Provide a five year forecast of energy storage assets deployed and operated by third-parties. Where possible, include the likely locations, types, capacities, configurations, and functions of those assets.		X				Forecast only include company planned projects.

Energy Storage Integration										
		Prompt								**Rationale**
		4. Identify, describe, and prioritize the current and future opportunities for beneficial use of energy storage located in the distribution system. Uses considered should encompass functions which benefit utility customers, the distribution system, and/or the bulk power system. Each opportunity identified should be characterized by:								
		a. location;		X						Table presents relevant info that varied by project.
		b. energy storage capacity (power and energy);		X						Table presents relevant info that varied by project.
		c. function(s) performed;		X						Table presents relevant info that varied by project.
		d. period(s) of time when the function(s) would be performed; and		X						Table presents relevant info that varied by project.
		e. the nature and estimated economic value of each benefit derived from the energy storage resource.		X						Table presents relevant info that varied by project.
		5. Identify and describe all significant resources and functions that the utility and stakeholders use for planning, implementing, monitoring, and managing energy storage at multiple levels in the distribution system.								
		a. Explain how each of those resources and functions supports the utility's needs;		X						Reference integrated planning process, battery discharge protocols, and ADMS.
		b. Explain how each of those resources and functions supports the stakeholders' needs.		X						Monitor and manage with ADMS and DERMS.
		6. Describe the means and methods for determining the real time status, behavior, and effect of energy storage resources currently deployed in the distribution system. Information produced by those means and methods could include:								
		a. the amount of energy currently stored (state of charge);		X						Detailed answers not provided as these functionalities continue to be developed through SCADA, ADMS, DERMS.
		b. the time, size, duration, energy source (grid and/or local generation), and purpose of charging events;		X						See above.
		c. the time, size, duration, consumer (grid and/or local load), and purpose of energy storage discharges;		X						See above.
		d. the net effect (amount and duration of supply or demand) on the distribution system of charge/discharge events (considering any co located load and/or generation); and		X						See above.
		e. the capacity of the distribution system to deliver or receive power at a given location and time.		X						See above.
		7. Describe the means and methods for forecasting the status, behavior, and effect of energy storage resources in the distribution system at future times. Forecasts produced by the utility could include:								
		a. the amount of energy stored (state of charge);		X						Detailed storage forecast provided in appendix A, although it state of charge is not explicitly forecasted.
		b. the time, size, duration, energy source (grid and/or local generation), and purpose of charging events;		X						General description on time, duration, no specific forecast.
		c. the time, size, duration, consumer (grid and/or local load), and purpose of energy storage discharges;		X						General description on time, duration, no specific forecast.

Energy Storage Integration								
		Prompt						**Rationale**
		d. the net effect on the distribution system of each charge/discharge event (considering any co located load and/or generation);		X				General description on time, duration, no specific forecast.
		e. the capacity of the distribution system to deliver or receive power at a given location and time.		\				No reactive power discussion.
		8. Describe the resources and functions needed to support billing and compensation of energy storage owners/operators.		X				Depends on tariffs.
		9. Identify the types of customer and system data that are necessary for planning, implementing, and managing energy storage and describe how the utility provides those data to developers and other stakeholders; and		X				Examples such as data portals, hosting capacity maps, RFP, CESIR.
		10. By citing specific objectives, means, and methods, describe in detail how the utility's accomplishments and plans are aligned with the objectives established in the CLCPA.		X				References above sections for details on how O&R is contributing to the CLCPA goals.

EV Integation								
	Prompt							**Rationale**
	DPS Rationale							
	It is DPS Staff's position that utility resources and capabilities which support electric vehicle (EV) integration at all levels in the distribution system will be needed within the five year planning horizon of the DSIP Update filing. While plans for integrating EVs at the bulk, local transmission, and distribution levels will now be reflected in the CGPP, DPS Staff suggests that the DSIP should continue to describe means and methods for planning EV integration at the distribution level. Along with satisfying the general guidelines for information related to each topic (see Section 3.1), DPS Staff recommends that the DSIP Update should provide the following additional details which are specific to electric vehicle integration. Where not yet fully developed or fluid due to ongoing policy development, DPS Staff suggests that the DSIP Update should provide current status and planned next steps, including an anticipated timeframe, to continue making progress.							
1.	Context and Background							
	a. Describe how topic-related policies, processes, resources, standards, and capabilities have evolved since the 2020 DSIP Update filing.		X					Good overview of policies and market developments.
2.	Implementation Plan, Schedule, and Investments							
	a. Current Progress							
	i. Describe the current implementation as of June 30, 2023; and		X					Sufficient amount of initiatives are described. They are all well explained and provide sufficient detail on what each initiative is doing.
	ii. Describe how the current implementation supports stakeholders' current and future needs.		X					There is clear impact of each initiative on the communities and relevant stakeholders. The report discusses stakeholder engagement activities, and for each initiative they explain the benefits to the stakeholders.
	b. Future Implementation and Planning							
	i. Describe the future implementation that is planned to be deployed by 2028, identifying planned efforts and funded efforts.		X					Sufficient explanation on the future plans is provided.
	ii. Describe how the future implementation will support stakeholders' needs in 2028 and beyond.							There is discussion of several stakeholders' needs including disadvantaged communities, users of micromobility, commercial fleets. More evidence is required on how stakeholders are supported in future - post 2028.
	iii. Identify and characterize the work and investments needed to progress from the current implementation to the planned future implementation.		X					
	iv. Describe and explain the planned timing and sequence of the work and investments needed to progress from the current implementation to the planned future implementation.		X					A timeline is provided but the link between current and future implementation is missing.
	v. Describe where and how plans for topic-related work and investments affect the CGPP.		\					
	vi. Describe where and how investment plans developed through the CGPP affect the topic-related work and investments presented in the DSIP update.		\					

EV Integation								
		Prompt						**Rationale**
	c.	Integrated Implementation Timeline						
		i. Using a common format developed jointly with the other utilities, provide a high-level implementation timeline that combines the key milestones for all topic-related work and investments planned over the five-year period ending in 2028. Along with the milestones, the timeline should show significant dependencies among the work and investments related to all topics.		X				All the relevant information is included, except for significant dependences.
3.	Risks and Mitigation							
		a. Identify and characterize any potential risk(s) and/or actual issue(s) that could affect timely implementation and describe the measures taken, or to be taken, to mitigate the risk(s) and/or resolve the issue(s).		X				Mitigation measures are discussed sufficiently for the first risk. Both risks are too vague. Mitigation for second risk are high level. However the requirement is met.
4.	Stakeholder Engagement							
		a. Identify and characterize the categories of stakeholders engaged in DSIP development and use.		X				limited groups of stakeholders are mentioned in this section. Blue is given due to extensive reference to stakeholders in previous sections.
		b. Describe when and how the goals and needs of each stakeholder category are identified and incorporated into the DSIP.		\				
		c. Describe when and how each stakeholder category's needs will be met over time.		\				
		d. Describe and explain the utility's needs for stakeholder-provided information, capabilities, and actions supporting specific implementation and operational outcomes.		\				
		e. Describe the means and methods for effectively informing and engaging associated stakeholders as planning, design, and implementation progress so that the outputs effectively address, as much as feasible, the needs of the utility, DER developers, and stakeholders.		X				Short summary of means and methods of engagement. Limited discussion of how engagement changes as the process progresses.
		f. Describe how the utility will ensure that the information, tools, and engagement opportunities provided to stakeholders effectively deliver the intended support and do not lead to unintended problems.		\				
4.5	Electric Vehicle Integration							
		1. Using a common framework (organization, format, semantics, definitions, etc.) developed jointly with the other utilities, identify and characterize the existing and anticipated EV charging scenarios in the utility's service territory. Each scenario identified should be characterized by:		\				There is no common framework across utilities, no scenarios are laid out.
		a. the type of location (home, apartment complex, store, workplace, public parking site, rest stop, etc.);		X				Very high level summary of locations. High level summary of next steps.
		b. the number and spatial distribution of existing instances of the scenario;		X				Number is available. Spatial distribution is not.
		c. the forecast number and spatial distribution of anticipated instances of the scenario over the next five years;		\				No numbers, no concrete next steps to forecast the numbers.

EV Integation									
		Prompt							**Rationale**
		d. the type(s) of vehicles charged at a typical location (commuter car, bus, delivery truck, taxi, ride share, etc.);		X					Not clear how they plan to assess the accuracy of their predictions and incorporate this in their future forecast.
		e. the number of vehicles charged at a typical location, by vehicle type;		\					No information provided. Just 1 sentence about next steps which is very vague.
		f. the charging pattern by vehicle type (frequency, times of day, days of week, energy per charge, duration per charge, demand per charge);		\					No information is provided . Although there is a device which records relevant information, the company does not provide this information and does not explain how to use this information in the future.
		g. the number(s) of charging ports at a typical location, by type;		X					Limited and Vague information is provided by the utility.
		h. the energy storage capacity (if any) supporting EV charging at a typical location;		X					On the basis that there is no energy storage capacity in the area, the reports provide sufficient information for future plans.
		i. an hourly profile of a typical location's aggregated charging load over a one year period;		\					The company does not produce hourly profiles but intends to use some third party data.
		j. the type and size of the existing utility service at a typical location; and		\					Very vague information is provided.
		k. the type and size of utility service needed to support the EV charging use case.		X					Some information about residential EV chargers is provided.
		2. Describe and explain the utility's priorities for supporting implementation of the EV charging use cases anticipated in its service territory.		X					Sufficient explanation is provided alongside a good summary table.
		3. Identify and describe all significant resources and functions that the utility and stakeholders use for planning, implementing, monitoring, and managing EV charging at multiple levels in the distribution system.		X					High level description of resources and functions. Limited resources and functions are available to stakeholders and to the utility.
		a. Explain how each of those resources and functions supports the utility's needs.		X					Vague and high level description of the how these resources and functions support the utility
		b. Explain how each of those resources and functions supports the stakeholders' needs.		X					Vague and high level description of the how these resources and functions support the stakeholders.
		4. Identify the types of customer and system data that are necessary for planning, implementing, and managing EV charging infrastructure and services and describe how the utility provides this data to interested third parties.		X					Short explanation. The type of data is not well specified. Sufficient information on sharing methods with 3rd parties.

EV Integation								
		Prompt						**Rationale**
		5. Describe the resources and functions needed to support billing and compensation of EV and EVSE owners/operators.		X				The company explains how EV customers are billed under the existing systems and highlights that this may need to change in the future. However the description does not include metering requirements.
		6. By citing specific objectives, means, and methods describe in detail how the utility's accomplishments and plans are aligned with New York State policy, including its established goals for EV adoption.		X				Examples are provided but the State's goals are not well articulated.
		7. Describe the utility's current efforts to plan, implement, and manage EV related projects. Information provided should include:		X				The company provides a table with all the EV related projects. Although some fields are not available, sufficient information is provided. Fields which are not available will be confirmed later in the processes.
		a. a detailed description of each project, existing and planned, with an explanation of how the project fits into the utility's long-range EV integration plans;		X				The company provides a table with all the EV related projects. Although some fields are not available, sufficient information is provided. Fields which are not available will be confirmed later in the processes.
		b. the original project schedule;		X				The company provides a table with all the EV related projects. Although some fields are not available, sufficient information is provided. Fields which are not available will be confirmed later in the processes.
		c. the current project status;		X				The company provides a table with all the EV related projects. Although some fields are not available, sufficient information is provided. Fields which are not available will be confirmed later in the processes.
		d. lessons learned to date;		X				The company provides a table with all the EV related projects. Although some fields are not available, sufficient information is provided. Fields which are not available will be confirmed later in the processes.

EV Integation								
		Prompt						**Rationale**
		e. project adjustments and improvement opportunities identified to date; and		X				The company provides a table with all the EV related projects. Although some fields are not available, sufficient information is provided. Fields which are not available will be confirmed later in the processes.
		f. next steps with clear timelines and deliverables.		X				The company provides a table with all the EV related projects. Although some fields are not available, sufficient information is provided. Fields which are not available will be confirmed later in the processes.
		8. Describe how the utility is coordinating with the efforts of the New York State Energy Research and Development Authority (NYSERDA), the New York Power Authority (NYPA), New York Department of Environmental Conservation (DEC), and DPS Staff to facilitate statewide EV market development and growth.		X				Good description of initiatives and coordination developments.

Clean Heat Integration							
	Prompt						Rationale
	DPS Rationale						
	The NYS Clean Heat program encourages residents, small businesses, and commercial and multifamily building owners to install cold climate air source heat pumps (ASHP) and energy efficient ground source heat pumps (GSHP) and heat pump water heaters (HPWH). DPS Staff believes that utility resources and capabilities which support Clean Heat integration at all levels in the distribution system will be needed within the five year planning horizon of the DSIP Update filing. Therefore, DPS Staff recommends that the DSIP should describe means and methods for planning Clean Heat integration at the distribution level. Along with satisfying the general guidelines for information related to each topic (see Section 3.1), DPS Staff recommends that the DSIP Update should provide the following additional details which are specific to clean heat integration. DPS Staff further recommends that where not yet fully developed or fluid due to ongoing policy development, the DSIP Update should provide current status and planned next steps, including an anticipated timeframe, to continue making progress.						
1. Context and Background							
	a. Describe how topic-related policies, processes, resources, standards, and capabilities have evolved since the 2020 DSIP Update filing.		X				
2. Implementation Plan, Schedule, and Investments							
	a. Current Progress						
	i. Describe the current implementation as of June 30, 2023; and		X				
	ii. Describe how the current implementation supports stakeholders' current and future needs.		X				
	b. Future Implementation and Planning						
	i. Describe the future implementation that is planned to be deployed by 2028, identifying planned efforts and funded efforts.		X				
	ii. Describe how the future implementation will support stakeholders' needs in 2028 and beyond.		X				
	iii. Identify and characterize the work and investments needed to progress from the current implementation to the planned future implementation.		X				
	iv. Describe and explain the planned timing and sequence of the work and investments needed to progress from the current implementation to the planned future implementation.		X				
	v. Describe where and how plans for topic-related work and investments affect the CGPP.		X				
	vi. Describe where and how investment plans developed through the CGPP affect the topic-related work and investments presented in the DSIP update.		X				
	c. Integrated Implementation Timeline						
	i. Using a common format developed jointly with the other utilities, provide a high-level implementation timeline that combines the key milestones for all topic-related work and investments planned over the five-year period ending in 2028. Along with the milestones, the timeline should show significant dependencies among the work and investments related to all topics.		X				
3. Risks and Mitigation							
	a. Identify and characterize any potential risk(s) and/or actual issue(s) that could affect timely implementation and describe the measures taken, or to be taken, to mitigate the risk(s) and/or resolve the issue(s).		X				
4. Stakeholder Engagement							
	a. Identify and characterize the categories of stakeholders engaged in DSIP development and use.		X				Stakeholders not identified beyond JEPs and anonymous "third parties".
	b. Describe when and how the goals and needs of each stakeholder category are identified and incorporated into the DSIP.		\				Not provided.
	c. Describe when and how each stakeholder category's needs will be met over time.		\				Not provided.

Clean Heat Integration								
		Prompt						**Rationale**
		d. Describe and explain the utility's needs for stakeholder-provided information, capabilities, and actions supporting specific implementation and operational outcomes.		\				Not provided.
		e. Describe the means and methods for effectively informing and engaging associated stakeholders as planning, design, and implementation progress so that the outputs effectively address, as much as feasible, the needs of the utility, DER developers, and stakeholders.		\				Not provided.
		f. Describe how the utility will ensure that the information, tools, and engagement opportunities provided to stakeholders effectively deliver the intended support and do not lead to unintended problems.		\				Not provided.
4.6 Clean Heat Integration								
		1. Using a common framework (organization, format, semantics, definitions, etc.) developed jointly with the other utilities, identify and characterize the existing and clean heat installation scenarios in the utility's service territory. Each scenario identified should be characterized by:						
		a. the type of location (single family residence, multifamily residence, commercial space, office space, school, hospital, etc.);		X				
		b. the number and spatial distribution of existing instances of the scenario;		X				
		c. the forecast number and spatial distribution of anticipated instances of the scenario over the next five years;		\				States that O&R does not have this. Also states that here is a new load modifier, but that does not satisfy this element.
		d. the type(s) of clean heat solution installed at a typical location (ASHP, GSHP, HPWH, etc.);		X				Not clear how they plan to assess the accuracy of their predictions and incorporate this in their future forecast.
		e. an hourly profile of a typical location's aggregated clean heating load over a one year period;		\				Statement that company does not have this.
		f. the type and size of the existing utility service at a typical location; and		X				Statement of variance based on location.
		g. the type and size of utility service needed to support the clean heating use case.		X				Statement of variance based on location.
		2. Describe and explain the utility's priorities for supporting implementation of the clean heating use cases anticipated in its service territory.		X				Statement present, could include greater detail.
		3. Identify and describe all significant resources and functions that the utility and stakeholders use for planning, implementing, monitoring, and managing clean heating at multiple levels in the distribution system.						
		a. Explain how each of those resources and functions supports the utility's needs.		X				Lack of detail.
		b. Explain how each of those resources and functions supports the stakeholders' needs.		X				Limited, anecdotal detail.
		4. Identify the types of customer and system data that are necessary for planning, implementing, and managing clean heating infrastructure and services and describe how the utility provides this data to interested third parties.		X				Limited.
		5. By citing specific objectives, means, and methods describe in detail how the utility's accomplishments and plans are aligned with New York State policy, including its established goals for clean heat adoption.		X				Limited.
		6. Describe the utility's current efforts to plan, implement, and manage clean heat related projects. Information provided should include:						
		a. a detailed description of each project, existing and planned, with an explanation of how the project fits into the utility's long-range clean heat integration plans;		X				Lacks detail of projects of any kind, only high level description of methods.
		b. the original project schedule;		X				Lacks detail of projects of any kind, only high level description of methods.

Clean Heat Integration								
		Prompt						**Rationale**
		c. the current project status;		X				Lacks detail of projects of any kind, only high level description of methods.
		d. lessons learned to date;		\				Does not respond to question.
		e. project adjustments and improvement opportunities identified to date; and		X				Acknowledges adjustments exist, without detail of what or when.
		f. next steps with clear timelines and deliverables.		X				Potential milestones listed without explanation, detail, or timeline.
		7. Describe how the utility is coordinating with the efforts of the New York State Energy Research and Development Authority (NYSERDA), the New York Power Authority (NYPA), New York Department of Environmental Conservation (DEC), DPS Staff, or other governmental entities to facilitate statewide clean heat market development and growth.		X				Could use significantly more detail.

EE Integration and Innovation								
		Prompt						**Rationale**
	DPS Rationale							
		Energy Efficiency integration, with a focus on innovative market enabling tools and approaches, is an essential utility function that DPS Staff suggests should be thoroughly addressed within the five year planning horizon of the DSIP filing. It also affects the CGPP integrated system analysis, as energy efficiency efforts act as load modifiers in distribution planning. This load impact is then incorporated into the CGPP as part of its analysis for local transmission and distribution projects. DPS Staff recommends that the utilities should provide the information specified below to show how their joint and individual efforts are fully integrating current and expanded energy efficiency efforts into their system planning. DPS Staff further recommends that the utilities should also describe how new tools and approaches are being used to support the growth of a more dynamic market of service providers that deliver energy efficiency at a reduced cost by leveraging private capital and financing to deliver greater customer value while optimizing the grid value of these services. Each utility has evolved its Efficiency Transition Implementation Plans (ETIPs) into System Energy Efficiency Plans (SEEPs) that describe the entirety of the utility's expanded reliance on and use of cost-effective energy efficiency to support their distribution system and customer needs. ETIPs / SEEPs will continue to be filed separately in accordance with DPS Staff issued ETIP / SEEP Content Guidance, but DPS Staff recommends that the DSIP must incorporate and plan for the integration and reliance on these expanded energy efficiency resources and should include a link to the most recent ETIP/SEEP filing. Along with satisfying the general guidelines for information related to each topic (see Section 3.1), DPS Staff recommends that the DSIP Update should provide the following additional details which are specific to energy efficiency:						
1. Context and Background								
		a. Describe how topic-related policies, processes, resources, standards, and capabilities have evolved since the 2020 DSIP Update filing.		X				One page of detailed narrative provided and additional detail was provided on Page 133.
2. Implementation Plan, Schedule, and Investments								
	a. Current Progress							
		i. Describe the current implementation as of June 30, 2023; and		X				Great detail provided in narrative and as a table.
		ii. Describe how the current implementation supports stakeholders' current and future needs.		X				Description focused on mainly on customers and not other stakeholders.
	b. Future Implementation and Planning							
		i. Describe the future implementation that is planned to be deployed by 2028, identifying planned efforts and funded efforts.		X				Details on future programs provided but not funding efforts.
		ii. Describe how the future implementation will support stakeholders' needs in 2028 and beyond.		X				Minimal detail was provided.
		iii. Identify and characterize the work and investments needed to progress from the current implementation to the planned future implementation.		X				No detail on the investments was provided beyond the program information.
		iv. Describe and explain the planned timing and sequence of the work and investments needed to progress from the current implementation to the planned future implementation.		X				Only broad timing was provided.
		v. Describe where and how plans for topic-related work and investments affect the CGPP.		X				Specifics on the where and how were not provided.
		vi. Describe where and how investment plans developed through the CGPP affect the topic-related work and investments presented in the DSIP update.		X				Minimal detail was provided.
	c. Integrated Implementation Timeline							
		i. Using a common format developed jointly with the other utilities, provide a high-level implementation timeline that combines the key milestones for all topic-related work and investments planned over the five-year period ending in 2028. Along with the milestones, the timeline should show significant dependencies among the work and investments related to all topics.		X				A detailed Figure 30: Five-Year Plan for EE Integration and Innovation was provided.
3. Risks and Mitigation								

EE Integration and Innovation								
		Prompt						**Rationale**
		a. Identify and characterize any potential risk(s) and/or actual issue(s) that could affect timely implementation and describe the measures taken, or to be taken, to mitigate the risk(s) and/or resolve the issue(s).		X				Only a vague narrative on risks was provided.
4. Stakeholder Engagement								
		a. Identify and characterize the categories of stakeholders engaged in DSIP development and use.		X				Minimal information on stakeholders was provided.
		b. Describe when and how the goals and needs of each stakeholder category are identified and incorporated into the DSIP.		\				No detail was provided.
		c. Describe when and how each stakeholder category's needs will be met over time.		\				No detail was provided.
		d. Describe and explain the utility's needs for stakeholder-provided information, capabilities, and actions supporting specific implementation and operational outcomes.		X				Minimal information on stakeholders was provided.
		e. Describe the means and methods for effectively informing and engaging associated stakeholders as planning, design, and implementation progress so that the outputs effectively address, as much as feasible, the needs of the utility, DER developers, and stakeholders.		X				Minimal information on stakeholders was provided.
		f. Describe how the utility will ensure that the information, tools, and engagement opportunities provided to stakeholders effectively deliver the intended support and do not lead to unintended problems.		X				Minimal information was provided.
4.7 Energy Efficiency Integration and Innovation								
		1. The resources and capabilities used for integrating energy efficiency within system and utility business planning.		X				Minimal information was provided.
		2. The locations and amounts of current energy and peak load reductions attributable to energy efficiency and how the utility determines these.		X				Information provided on how tracking happens but no detail on actuals locations or amount of energy reduced was included.
		3. A high-level description of how the utility's accomplishments and plans are aligned with New York State climate and energy policies and incorporate innovative approaches for accelerating progress to ultimately align with the CLCPA.		X				A high-level description was provided.
		4. Summary information on energy efficiency programs offered by the utility, with direction to annual filings for more detailed information on energy efficiency programs.		X				Direction to other sections was provided.
		5. Describe how the utility is coordinating and partnering with NYSERDA's related ongoing statewide efforts to facilitate energy efficiency market development and growth.		X				Not clear how they plan to assess the accuracy of their predictions and incorporate this in their future forecast.

Data Sharing								
	Prompt							Rationale
	DPS Rationale							
		DPS Staff recommends that the DSIP Update should describe the utility's existing and planned capabilities that enable timely and effective sharing of system and customer data with customers and authorized third-parties. Shared system data should enable DER developers/operators and other third-parties to timely and effectively perform the analyses (engineering, operations, and business) needed to support well-informed decisions. Shared customer data should enable both short-term and long-term analyses and decisions affecting many investments and behaviors which can materially improve customer value by reducing costs and/or improving service. Of particular importance to this topic is NYSERDA's development of a new Integrated Energy Data Resource (IEDR). Most utility data sharing is expected to transition to the IEDR within the five-year time horizon for the DSIP update. Along with satisfying the general guidelines for information related to each topic (see Section 3.1), DPS Staff recommends that the DSIP Update should:						
1.	Context and Background							
		a. Describe how topic-related policies, processes, resources, standards, and capabilities have evolved since the 2020 DSIP Update filing.		X				Utility describes in detail all the data they offer, where it's available and capabilities, but don't offer the timeline and demonstrate the evolution from the 2020 DSIP Update filing.
2.	Implementation Plan, Schedule, and Investments							
	a.	Current Progress						
		i. Describe the current implementation as of June 30, 2023; and		X				Details on customer data implementations, hosting capacity implementations and the platforms where they are located (Green Button Share My Data, Utility Energy Registry, My Account Portal).
		ii. Describe how the current implementation supports stakeholders' current and future needs.		X				Notes: support for EV hosting capacity maps for stakeholders to see where integrated cost of service for electric charging is low, highlights customer current needs on bills and alerts as well as tailored recommendations per household.
	b.	Future Implementation and Planning						
		i. Describe the future implementation that is planned to be deployed by 2028, identifying planned efforts and funded efforts.		X				Timeline graphic and details on focus areas on web portal, benchmarking.
		ii. Describe how the future implementation will support stakeholders' needs in 2028 and beyond.		X				Future stakeholder needs aren't specifically mentioned, but can infer the utility is forward looking in their current implementations in how they add new implementations like (Showing subzones on Hosting capacity to support 3rd party participation in wholesale market).
		iii. Identify and characterize the work and investments needed to progress from the current implementation to the planned future implementation.		X				Could include more details on specific work and milestones in each implementation area.

Data Sharing								
		Prompt						**Rationale**
		iv. Describe and explain the planned timing and sequence of the work and investments needed to progress from the current implementation to the planned future implementation.		X				Sequence of work is explained well for IEDR and EEB, but could use better milestones for Hosting Capacity Maps, Green Button Connect, Data Privacy and Utility Energy Registry implementations.
		v. Describe where and how plans for topic-related work and investments affect the CGPP.		X				Highlighted data privacy standards on customer data vs aggregated data impacting the Joint Utilities and Commission.
		vi. Describe where and how investment plans developed through the CGPP affect the topic-related work and investments presented in the DSIP update.		X				Indicated as a result of the data privacy standards required visa, that Data Security Agreements were developed with Joint utilities to get customer data via EDI or Share My Data. They are exploring data sharing needs as data expands to more System Data.
	c.	Integrated Implementation Timeline						
		i. Using a common format developed jointly with the other utilities, provide a high-level implementation timeline that combines the key milestones for all topic-related work and investments planned over the five-year period ending in 2028. Along with the milestones, the timeline should show significant dependencies among the work and investments related to all topics.		X				Timeline included, missing dependencies and milestones for 4 implementation areas.
3.	Risks and Mitigation							
		a. Identify and characterize any potential risk(s) and/or actual issue(s) that could affect timely implementation and describe the measures taken, or to be taken, to mitigate the risk(s) and/or resolve the issue(s).		X				Highlighted multiple data security risks and mitigation strategies through Privacy framework, data sharing agreements, and leveraging company planners for system data reference.
4.	Stakeholder Engagement							
		a. Identify and characterize the categories of stakeholders engaged in DSIP development and use.		X				Stakeholders are not characterized and categorized, but utility indicates the impact and efforts as a result of stakeholder engagement.
		b. Describe when and how the goals and needs of each stakeholder category are identified and incorporated into the DSIP.						Efforts and goals are highlighted, but not tied to specific stakeholder groups.
		c. Describe when and how each stakeholder category's needs will be met over time.		X				No timeline on goals, but efforts are stated.
		d. Describe and explain the utility's needs for stakeholder-provided information, capabilities, and actions supporting specific implementation and operational outcomes.		X				No strong tie between stakeholder feedback and goals and progress, although goals and progress are all listed.
		e. Describe the means and methods for effectively informing and engaging associated stakeholders as planning, design, and implementation progress so that the outputs effectively address, as much as feasible, the needs of the utility, DER developers, and stakeholders.		X				Engagement through working groups and won award for ReliabilityOne Outstanding Customer Engagement Award.

Data Sharing								
		Prompt						**Rationale**
		f. Describe how the utility will ensure that the information, tools, and engagement opportunities provided to stakeholders effectively deliver the intended support and do not lead to unintended problems.		X				Working groups * EE proceeding, * Storage proceeding *UER proceeding *VDER proceeding, *Market design and integration working group * IEDR
4.8	Data Sharing							
		1. provide a functional overview of the planned IEDR;		X				Standard description of IEDR.
		2. provide an overview of NYSERDA's IEDR implementation program, including information pertaining to stakeholder engagement;		X				Describes timeline, priorities identified from stakeholder engagement and implementation team.
		3. provide the web link to NYSERDA's IEDR home page along with a summary of the information provided therein;		X				Provided link to homepage with description of what can be found, no separate links for each page of information.
		4. describe the utility's role in supporting IEDR design, implementation, and operation;		X				Timeline of each step of utility in IEDR design, implementation and operation.
		5. describe the utility's progress, plans, and investments for generating and delivering its system and customer data to the IEDR;		X				Not clear how they plan to assess the accuracy of their predictions and incorporate this in their future forecast.
		6. identify and characterize each type of data to be delivered to the IEDR;		X				Concise, includes customer data, system data fields and potential fields that can be provided.
		7. describe the resource(s) and method(s) used to deliver each type of data to the IEDR;		X				Generic data specification per dataset, but could expand on detail by resource and method for each dataset.
		8. describe how and when each type of data provided to the IEDR will begin, increase, and improve as IEDR implementation progresses; and,		X				Generic, could use more detail in what the new use cases will entail in terms of data type.
		9. identify and characterize any existing and future utility efforts to share system and customer data with customers and third parties through means that are separate from the IEDR.		X				Lists all non-IEDR ways to access customer and system data.

Hosting Capacity								
	Prompt							**Rationale**
	DPS Rationale							
	Providing an electric distribution system with the capacity to host large scale DER integration is a key part of New York's energy vision. To achieve that outcome, DPS Staff suggests that the utilities should perform several functions to ensure that large amounts of DER can access and utilize hosting capacity in ways that are affordable, effective, efficient, and timely. The utilities have made significant progress in producing and sharing information about the hosting capacity of their current systems. DER developers and other stakeholders value the new information as a significant improvement to the information which was previously available to them; however, more is needed in three areas. First, while DER developers and other stakeholders already access and use the utilities' hosting capacity information, there are opportunities to enhance the information provided beyond the Joint Utilities' current development roadmap. For example, DER developers and the utilities could both be better informed by hosting capacity forecasts which look ahead three to five years. Once available, such forecasts would likely become the preferred resource for planning DER development. Second, as grid operations evolve to accommodate and optimize significant DER development, some of those operations will come to rely on the availability of hosting capacity as a managed system resource. Such operations will continually require very current information about available hosting capacity throughout the distribution system. This means that the utilities should be prepared to timely increase the rate at which they produce and share their information about currently available hosting capacity. And third, the availability of ample hosting capacity at a given location on the grid does not necessarily mean that other factors (i.e., space, accessibility, safety, zoning, customer interest, etc.) will also favor deploying a DER at that location. At the same time, there are many locations where circumstances strongly favor DER development; however, the amount of hosting capacity available at those locations is limited. This could mean that utilities may need to take measures to increase hosting capacity at attractive DER development sites in order to support the State's goals for integrating renewable energy resources. Considering these points, DPS Staff suggests that the utilities should be prepared to timely increase hosting capacity in their distribution systems. DPS Staff recommends that the DSIP Update should address the three areas addressed above and provide detailed information related to assessing current hosting capacity, forecasting hosting capacity, and increasing hosting capacity to show that the utility is timely developing – either individually or jointly with one or more of the other utilities – the necessary information resources and capabilities associated with hosting capacity. Along with satisfying the general guidelines for information related to each topic (see Section 3.1), DPS Staff recommends that the DSIP Update should provide the following additional details which are specific to hosting capacity:							
1.	Context and Background							
	a. Describe how topic-related policies, processes, resources, standards, and capabilities have evolved since the 2020 DSIP Update filing.		X					Sufficient description on developments to date.
2.	Implementation Plan, Schedule, and Investments							
	a. Current Progress							
	i. Describe the current implementation as of June 30, 2023; and		X					The utility has provided a very good HC Map, detailed development progress, also extra EV capacity map, storage map.
	ii. Describe how the current implementation supports stakeholders' current and future needs.		X					Evidence of stakeholder feedback result in actual functionality.
	b. Future Implementation and Planning							
	i. Describe the future implementation that is planned to be deployed by 2028, identifying planned efforts and funded efforts.		X					Good description of next steps an implementation plan are provided.
	ii. Describe how the future implementation will support stakeholders' needs in 2028 and beyond.		\					No reference to stakeholders.
	iii. Identify and characterize the work and investments needed to progress from the current implementation to the planned future implementation.		X					In Question 5 of the HC section the company refers to information around planned investments which are included in the hosting capacity maps.
	iv. Describe and explain the planned timing and sequence of the work and investments needed to progress from the current implementation to the planned future implementation.		X					Figure 34 includes some sequency of works but the information is limited.
	v. Describe where and how plans for topic-related work and investments affect the CGPP.		\					No CGPP reference.
	vi. Describe where and how investment plans developed through the CGPP affect the topic-related work and investments presented in the DSIP update.		\					No CGPP reference.
	c. Integrated Implementation Timeline							

Hosting Capacity								
		Prompt						**Rationale**
		i. Using a common format developed jointly with the other utilities, provide a high-level implementation timeline that combines the key milestones for all topic-related work and investments planned over the five-year period ending in 2028. Along with the milestones, the timeline should show significant dependencies among the work and investments related to all topics.		X				Timeline is provided but lacks details.
3.	Risks and Mitigation							
		a. Identify and characterize any potential risk(s) and/or actual issue(s) that could affect timely implementation and describe the measures taken, or to be taken, to mitigate the risk(s) and/or resolve the issue(s).		X				List of risks and mitigation.
4.	Stakeholder Engagement							
		a. Identify and characterize the categories of stakeholders engaged in DSIP development and use.		X				Not well defined in the "Stakeholder Interface" section but various stakeholders are mentioned across the HC chapter.
		b. Describe when and how the goals and needs of each stakeholder category are identified and incorporated into the DSIP.		X				This information is missing from "Stakeholder Interface" section but SKH needs are discussed across the HC section.
		c. Describe when and how each stakeholder category's needs will be met over time.		X				This information is missing from "Stakeholder Interface" section but SKH needs are discussed across the HC section.
		d. Describe and explain the utility's needs for stakeholder-provided information, capabilities, and actions supporting specific implementation and operational outcomes.		X				Very high-level summary (e.g., inform the next iteration of HC Maps and provide guidance on further functionality).
		e. Describe the means and methods for effectively informing and engaging associated stakeholders as planning, design, and implementation progress so that the outputs effectively address, as much as feasible, the needs of the utility, DER developers, and stakeholders.		X				Webinars and emails.
		f. Describe how the utility will ensure that the information, tools, and engagement opportunities provided to stakeholders effectively deliver the intended support and do not lead to unintended problems.		\				This information is missing.
4.9	Hosting Capacity							
		1. Describe the utility's current efforts to plan, implement, and manage projects related to hosting capacity. Information provided should include:						
		a. detailed description of each project, existing and planned, with an explanation of how the project fits into the utility's long range hosting capacity plans;		X				Short , high level description of initiatives undertaken by the utility.
		b. the original project schedule;		X				The utility has provided the high level original roadmap of hosting capacity developments.
		c. the current project status;		X				The utility refers to the overall HC roadmap focusing on the maps.
		d. lessons learned to date;		X				Not clear how they plan to assess the accuracy of their predictions and incorporate this in their future forecast.

Hosting Capacity								
		Prompt						**Rationale**
		e. project adjustments and improvement opportunities identified to date; and		X				Project adjustments are discussed. We would expect that they utility should talk about adjustments to specific projects mentioned in answer 1a.
		f. next steps with clear timelines and deliverables.		X				Not clear timelines.
		2. Describe where and how DER developers/operators and other third parties can currently access the utility's hosting capacity information.		X				
		3. Describe how and when the existing hosting capacity assessment information provided to DER developers/operators and other third parties will increase and improve as work progresses. This should include discussion of the transition of hosting capacity information access from the utility's current hosting capacity information portal to the statewide hosting capacity solution in development on the IEDR.		X				The "How" is explained but the "when" is missing.
		4. Describe the means and methods used for determining the hosting capacity currently available at each location in the distribution system.		X				This is well explained.
		5. Describe the means and methods used for forecasting the future hosting capacity available at each location in the distribution system.		X				This is well explained.
		6. Describe how and when the future hosting capacity forecast information provided to DER developers/operators and other third parties will begin, increase, and improve as work progresses.		X				There is not a well established plan for sharing information on future capacity forecasts.
		7. Summarize the utility's specific objectives and methods for:						
		a. identifying and characterizing locations in the utility's service area where limited hosting capacity is a barrier to productive DER development, directing users to the CGPP filing for further information; and		X				Part of this question is answered in Q4. The utility explained the role of SGPP to support the developers when capacity is limited.
		b. timely increasing hosting capacity to enable productive DER development at those locations, directing users to the IEDR platform when applicable for more information.		X				Sufficient explanation increasing hosting capacity is provided.

Billing and Compensation								
	Prompt							Rationale
	DPS Rationale							
		A monthly bill is often the only method of engagement and communication between a utility and its customers. Because of this, customer billing and compensation are vital components of a utility's core business and, therefore, must be accurate, timely, and transparent. It is DPS Staff's position that billing that is consistent, accurate, and well explained will lead to increased customer satisfaction and reduced inquiries to the utility's call center and/or reduced customer complaints to the Commission, on social media, or to the press. Along with satisfying the general guidelines for information related to each topic (see Section 3.1), DPS Staff recommends that the DSIP Update should provide the following additional details pertaining to customer billing and compensation:						
1.	Context and Background							
		a. Describe how topic-related policies, processes, resources, standards, and capabilities have evolved since the 2020 DSIP Update filing.		X				Discussion is very general - limited discussion of specific actions, enhancements or timelines.
2.	Implementation Plan, Schedule, and Investments							
	a.	Current Progress						
		i. Describe the current implementation as of June 30, 2023; and		X				Describes automated processes for various compensation methods.
		ii. Describe how the current implementation supports stakeholders' current and future needs.		X				Describes stakeholder engagement process.
	b.	Future Implementation and Planning						
		i. Describe the future implementation that is planned to be deployed by 2028, identifying planned efforts and funded efforts.		X				Discusses new CIS system upgrade.
		ii. Describe how the future implementation will support stakeholders' needs in 2028 and beyond.		X				Section specific timeline provided.
		iii. Identify and characterize the work and investments needed to progress from the current implementation to the planned future implementation.		X				Addresses both new system and wholesale market developments.
		iv. Describe and explain the planned timing and sequence of the work and investments needed to progress from the current implementation to the planned future implementation.		X				Explains timing of work.
		v. Describe where and how plans for topic-related work and investments affect the CGPP.		\				Not provided.
		vi. Describe where and how investment plans developed through the CGPP affect the topic-related work and investments presented in the DSIP update.		\				Not provided.
	c.	Integrated Implementation Timeline						
		i. Using a common format developed jointly with the other utilities, provide a high-level implementation timeline that combines the key milestones for all topic-related work and investments planned over the five-year period ending in 2028. Along with the milestones, the timeline should show significant dependencies among the work and investments related to all topics.		X				Section specific timeline provided.
3.	Risks and Mitigation							
		a. Identify and characterize any potential risk(s) and/or actual issue(s) that could affect timely implementation and describe the measures taken, or to be taken, to mitigate the risk(s) and/or resolve the issue(s).		X				Discussion of risks and mitigation.
4.	Stakeholder Engagement							
		a. Identify and characterize the categories of stakeholders engaged in DSIP development and use.		X				Comprehensive list of stakeholders and engagement cadence along with information shared.
		b. Describe when and how the goals and needs of each stakeholder category are identified and incorporated into the DSIP.		X				Describes how they identify needs but not how they are incorporated into the DSIP.

Billing and Compensation								
		Prompt						**Rationale**
		c. Describe when and how each stakeholder category's needs will be met over time.		X				Limited/general discussion on meeting stakeholder needs.
		d. Describe and explain the utility's needs for stakeholder-provided information, capabilities, and actions supporting specific implementation and operational outcomes.		\				Did not address this element specifically in the section.
		e. Describe the means and methods for effectively informing and engaging associated stakeholders as planning, design, and implementation progress so that the outputs effectively address, as much as feasible, the needs of the utility, DER developers, and stakeholders.		X				Describes how information is shared and engagement efforts.
		f. Describe how the utility will ensure that the information, tools, and engagement opportunities provided to stakeholders effectively deliver the intended support and do not lead to unintended problems.		\				Did not address this element specifically in the section.
4.10 Billing and Compensation								
		1. Describe the various DER-related billing and compensation programs (including demand response) implemented or revised by the utility since the last update. For this first inclusion in the DSIP, describe developments that have occurred since the beginning of NEM, RNM, CDG, and VDER.		X				
		2. Describe the customer billing/compensation functions and data generally needed to expand deployment and use of DERs in the utility's service area. Include descriptions of the existing and planned components (processes, resources, and data exchanges) that will support those needs. For planned components, provide the sequence and timing of key investments and activities required for component implementation.		X				Billing functions adequately described. Could provide more details on planned functions and associated timing.
		3. Describe the customer billing/compensation functions and data needed to enable DER participation in the NYISO's wholesale markets for energy, capacity, and ancillary services. This should include information regarding the utility's implementation of its Wholesale Distribution Service (WDS), Wholesale Value Stack (WVS), and related non-wholesale value stack (VDER without wholesale energy and capacity components). Also include descriptions of the existing and planned components (processes, resources, and data exchanges) that will support those needs. For planned components, provide the sequence and timing of key investments and activities required for component implementation.		X				Billing functions adequately described. Could provide more details on planned functions and associated timing.
		4. Describe the utility's plans to implement or modify DER-related billing and compensation capabilities, including automation, to address the Community Distributed Generation (CDG) billing and crediting problems that were the focus of the Commission's September 15, 2022, Order in Cases 19-M-0463, et. al.13		X				Simply stated compliance.
		5. For each type of DER billing and compensation, including for CDG and wholesale market participation, describe the current information system constraints preventing full automation of DER billing and compensation.		X				As wholesale market participation is still being considered constraints are not known at this time.
		6. Describe how DER billing and compensation affects other programs such as budget billing, time of use rates, and consolidated billing for Energy Service Companies (ESCOs).		X				Not clear how they plan to assess the accuracy of their predictions and incorporate this in their future forecast.
		7. Describe the utility's means and methods - existing and planned – for monitoring and testing new or modified customer billing and compensation functions.		X				Described monitoring and testing methods, could provide more detail on planned activities.

Billing and Compensation								
		Prompt						**Rationale**
		8. Describe the utility's means and methods – existing and planned - for supporting customer outreach and education, including where and how customers, DER developers/operators and other third-parties can readily access information on the utility's billing and compensation procedures.		X				Could provide a bit more information on planned activities.
		9. Describe the utility's means and methods - existing and planned – for receiving, investigating, and monitoring customer complaints and/or inquiries regarding billing and compensation issues related to DERs.		X				Good discussion of current practice, could include more on planned activities.

DER Interconnections							
		Prompt					**Rationale**
	DPS Rationale						
		Implementing the utility resources and capabilities that enable DER interconnections to the distribution system is a critical early objective. Many of the details which identify and characterize those resources and capabilities are being worked out by the Interconnection Technology Working Group (ITWG) and the Interconnection Policy Working Group (IPWG), which are stakeholder collaboratives led jointly by DPS Staff and NYSERDA. The goal of both working groups is to establish the requirements for standard resources, processes, specifications, and policies which foster efficient, timely, safe, and reliable DER interconnections. Along with satisfying the general guidelines for information related to each topic (see Section 3.1), DPS Staff recommends that the DSIP Update should provide the following additional details, which are specific to DER interconnections:					
1.	Context and Background						
		a. Describe how topic-related policies, processes, resources, standards, and capabilities have evolved since the 2020 DSIP Update filing.		X			Good level of detail on changes that have come in and O&R's involvement in them.
2.	Implementation Plan, Schedule, and Investments						
	a.	Current Progress					
		i. Describe the current implementation as of June 30, 2023; and		X			Well structured and clear discussion.
		ii. Describe how the current implementation supports stakeholders' current and future needs.		X			Discussion of needs of various stakeholder groups.
	b.	Future Implementation and Planning					
		i. Describe the future implementation that is planned to be deployed by 2028, identifying planned efforts and funded efforts.		X			Good discussion of work that is needed with some indication of what is funded and what is planned.
		ii. Describe how the future implementation will support stakeholders' needs in 2028 and beyond.		X			Minimal discussion of stakeholder needs in 2028 or beyond.
		iii. Identify and characterize the work and investments needed to progress from the current implementation to the planned future implementation.		X			A reasonable breakdown of initiatives .
		iv. Describe and explain the planned timing and sequence of the work and investments needed to progress from the current implementation to the planned future implementation.		X			A high-level visual plan is given but limited discussion of timelines.
		v. Describe where and how plans for topic-related work and investments affect the CGPP.		/			No discussion of CGPP.
		vi. Describe where and how investment plans developed through the CGPP affect the topic-related work and investments presented in the DSIP update.		/			No discussion of CGPP.
	c.	Integrated Implementation Timeline					
		i. Using a common format developed jointly with the other utilities, provide a high-level implementation timeline that combines the key milestones for all topic-related work and investments planned over the five-year period ending in 2028. Along with the milestones, the timeline should show significant dependencies among the work and investments related to all topics.		X			There is no common format or dependencies shown.
3.	Risks and Mitigation						
		a. Identify and characterize any potential risk(s) and/or actual issue(s) that could affect timely implementation and describe the measures taken, or to be taken, to mitigate the risk(s) and/or resolve the issue(s).		X			A very generic and high level assessment of risks is given with generic mitigations.
4.	Stakeholder Engagement						
		a. Identify and characterize the categories of stakeholders engaged in DSIP development and use.		X			Identified during initial discussion but not characterized in much detail.

DER Interconnections								
		Prompt						**Rationale**
		b. Describe when and how the goals and needs of each stakeholder category are identified and incorporated into the DSIP.		X				Heavily reliant on existing working groups.
		c. Describe when and how each stakeholder category's needs will be met over time.		X				Shows how some needs are met, but limited discussion of timeline.
		d. Describe and explain the utility's needs for stakeholder-provided information, capabilities, and actions supporting specific implementation and operational outcomes.		X				Some discussion of which stakeholders input to which projects but very high-level.
		e. Describe the means and methods for effectively informing and engaging associated stakeholders as planning, design, and implementation progress so that the outputs effectively address, as much as feasible, the needs of the utility, DER developers, and stakeholders.		X				Minimal discussion.
		f. Describe how the utility will ensure that the information, tools, and engagement opportunities provided to stakeholders effectively deliver the intended support and do not lead to unintended problems.		/				Not discussed.
4.11	DER Interconnections							
		1. Describe in detail (including the web URL) the web portal that provides efficient and timely support for DER developers' interconnection applications.		X				Some limited discussion.
		2. Describe where, how, and when the utility will implement and maintain a resource where DER developers and other stakeholders with appropriate access controls can readily access, navigate, view, sort, filter, and download up to date information about all DER interconnections in the utility's system. The resource should provide the following information for each DER interconnection:						
		a. DER type, size, and location;		X				Highly limited information given on which of these data points is available, stating that 'much of the information is available in SIR reports'. Does make it clear that some information is not publicly available, but without actually clarifying which data that covers.
		b. DER developer;		X				
		c. DER owner;		X				Not clear how they plan to assess the accuracy of their predictions and incorporate this in their future forecast.
		d. DER operator;		X				
		e. the connected substation, circuit, phase, and tap;		X				
		f. the DER's remote monitoring, measurement, and control capabilities; and		X				
		g. the DER's primary and secondary (where applicable) purposes; and,		X				
		h. the DER's current interconnection status (operational, construction in progress, construction scheduled, or interconnection requested) and its actual/planned in service date.		X				
		3. Describe the utility's means and methods for tracking and managing its DER interconnection application process and explain how those means and methods ensure achievement of the performance timelines established in New York State's Standardized Interconnection Requirements.		X				Refers to Power Clerk but without stating what capabilities the platform provides.

DER Interconnections								
		Prompt						**Rationale**
		4. Describe where, how, and when the utility will provide a resource to applicants and other appropriate stakeholders for accessing up to date information concerning application status and process workflows.		X				Describes a multi-layered approach to providing information to applicants through people and a platform.
		5. Describe the utility's processes, resources, and standards used for constructing approved DER interconnections.		X				Provides a visual summary of the process as well as a good narrative description. Process is in-line with standard industry practice.
		6. Describe the utility's means and methods used for tracking and managing construction of approved DER interconnections to ensure achievement of required performance levels.		X				There is functionality in the Power Clerk tool which helps project managers tracks project progress and regular meetings with relevant stakeholders to provide and receive updates.
		7. Describe how and when the utility will deliver and maintain its DER interconnection information to the IEDR.		/				Inadequate statement confirming that information will be provided at agreed schedule.

AMI							
	Prompt						Rationale
	DPS Rationale						
	Advanced Metering Infrastructure (AMI) provides grid edge measurement, data acquisition, and control capabilities which are either essential or beneficial to a number of important functions in a modern distribution system. Granular time series data from smart meters and other intelligent devices at customers' premises enables advanced analyses, innovative rate designs, and customer engagement strategies which benefit both the customers and the grid. Voltage sensing and measurement functions support increased system efficiency and enable improved outage detection and restoration processes. Capabilities supporting DER measurement, monitoring, and control are essential for DER integration. Along with satisfying the general guidelines for information related to each topic (see Section 3.1), DPS Staff recommends that the DSIP Update should provide the following additional details which are specific to AMI:						
1.	Context and Background						
	a. Describe how topic-related policies, processes, resources, standards, and capabilities have evolved since the 2020 DSIP Update filing.		X				Deployed 380,000 meters Nov 2020. Very clear who has AMI and who does not and why. Current activities.
2.	Implementation Plan, Schedule, and Investments						
	a. Current Progress						
	i. Describe the current implementation as of June 30, 2023; and		X				Outlines how many smart meters are installed and when they were installed by. Overview of customer and operational benefits resulting from deployment. The list is comprehensive and advanced but unclear if they are actually measuring the benefits or taking advantage of the opp (rate design). Several "can" statements vs "is doing". Would be nice to say, "we updated our rate design based on x" or we have seen access to energy use has encourage new customer behavior.
	ii. Describe how the current implementation supports stakeholders' current and future needs.		X				Discussion of the benefits that this brings to the customer and the company but more could be done to link these to clearly defined needs. Also, very limited discussion of other stakeholder needs (e.g. aggregators / DER providers).
	b. Future Implementation and Planning						
	i. Describe the future implementation that is planned to be deployed by 2028, identifying planned efforts and funded efforts.		X				The future implementation is very high level and there is no discussion of planned and funded efforts. Continuation of many current uses; new uses include AMI-OMS automate ticket closing; AMI Business Analytics for customer load profiles and system planning process; and new billing system - go live in sept 2023.
	ii. Describe how the future implementation will support stakeholders' needs in 2028 and beyond.		/				
	iii. Identify and characterize the work and investments needed to progress from the current implementation to the planned future implementation.		X				
	iv. Describe and explain the planned timing and sequence of the work and investments needed to progress from the current implementation to the planned future implementation.		/				
	v. Describe where and how plans for topic-related work and investments affect the CGPP.		/				

AMI								
		Prompt						**Rationale**
		vi. Describe where and how investment plans developed through the CGPP affect the topic-related work and investments presented in the DSIP update.		/				
	c.	Integrated Implementation Timeline						
		i. Using a common format developed jointly with the other utilities, provide a high-level implementation timeline that combines the key milestones for all topic-related work and investments planned over the five-year period ending in 2028. Along with the milestones, the timeline should show significant dependencies among the work and investments related to all topics.		X				"The Company's AMI system is completely deployed." Recommend timeline that shows use case deployment.
3.	Risks and Mitigation							
		a. Identify and characterize any potential risk(s) and/or actual issue(s) that could affect timely implementation and describe the measures taken, or to be taken, to mitigate the risk(s) and/or resolve the issue(s).		X				Data sharing section covers some risks around data sharing, but there is no wider discussion of risks around supply chain, funding, resources, etc.
4.	Stakeholder Engagement							
		a. Identify and characterize the categories of stakeholders engaged in DSIP development and use.		X				Engaged with customers during roll out and informing them about ways to access their data. No engagement with other stakeholders.
		b. Describe when and how the goals and needs of each stakeholder category are identified and incorporated into the DSIP.		/				
		c. Describe when and how each stakeholder category's needs will be met over time.		/				
		d. Describe and explain the utility's needs for stakeholder-provided information, capabilities, and actions supporting specific implementation and operational outcomes.		/				
		e. Describe the means and methods for effectively informing and engaging associated stakeholders as planning, design, and implementation progress so that the outputs effectively address, as much as feasible, the needs of the utility, DER developers, and stakeholders.		/				
		f. Describe how the utility will ensure that the information, tools, and engagement opportunities provided to stakeholders effectively deliver the intended support and do not lead to unintended problems.		/				
4.12	Advanced Metering Infrastructure							
		1. Provide a summary of the most up to date AMI implementation plans, including where AMI has been deployed to date.		X				Current progress sections addresses this prompt including Table 13.
		2. Provide a summary of all new capabilities that AMI has enabled to date, and how these capabilities benefit customers, including, as applicable, customer engagement, energy efficiency, and innovative rates.		X				Outage and restoration capabilities. Several values under that category. Nothing on the customer side.
		3. Describe the AMI-acquired data and information that is planned to be available through the IEDR.		X				Note that commission response is required to JU petition and subject to company data sharing protocols. Two barriers that seem outstanding to sharing 15 min energy consumption data, daily consumption and historic data.
		4. Describe where and how DER developers, customers, and other stakeholders can access up to date information about the locations and capabilities of existing and planned smart meters.		X				Mentions engagement with hard to reach customers. No efforts for DER developers or other stakeholders. Focus of content is on the deployment of the physical infrastructure and not on the use of the data.

AMI								
		Prompt						**Rationale**
		5. Provide a summary of plans and timelines for future expansion and/or enhancement of AMI functions.		X				Not clear how they plan to assess the accuracy of their predictions and incorporate this in their future forecast.
		6. Describe where and how each type of AMI-acquired data is stored, managed, and shared with, and used by other utility information systems such as those used for billing/compensation, customer service, work management, asset management, grid planning, and grid operations.		X				Data is stored in MDMS; integrated with billing system, OMS and WMS. Little detail on how managed, exchanged or used.

Beneficial Location of DERs and NWA							
	Prompt						Rationale
	DPS Rationale						
	To help promote productive DER development, DPS Staff suggests that it is essential that the utility identify, characterize, and publicly present the locations in its service area where DERs and/or energy efficiency might provide significant benefits to the distribution system and/or to the bulk electric system. Based on its criteria for evaluating opportunities for non wires alternatives (NWA), the utility then selects some of those locations for NWA procurements and/or energy efficiency measures that will benefit the distribution system. In their previous DSIP filings, the utilities have separately described their processes for identifying beneficial locations, evaluating NWA suitability, and procuring non-wires solutions. However, as the utilities have evolved their planning processes to perform these functions, they have become part of a continuous process that begins with integrated planning. Therefore, DPS Staff recommends that the utility's 2023 DSIP update, and all future updates, should reflect this updated process by combining the topics of identification of beneficial locations, NWA suitability assessment, and procurement processes into one cohesive discussion. Along with satisfying the general guidelines for information related to each topic (see Section 3.1), DPS Staff recommends that the DSIP Update should provide the following additional details:						
1. Context and Background							
	a. Describe how topic-related policies, processes, resources, standards, and capabilities have evolved since the 2020 DSIP Update filing.		X				
2. Implementation Plan, Schedule, and Investments							
	a. Current Progress						
	i. Describe the current implementation as of June 30, 2023; and		X				
	ii. Describe how the current implementation supports stakeholders' current and future needs.		X				
	b. Future Implementation and Planning						
	i. Describe the future implementation that is planned to be deployed by 2028, identifying planned efforts and funded efforts.		X				Good discussion of planned efforts but did not explicitly note what is funded, though many activities look to be in progress or continuation of previous efforts.
	ii. Describe how the future implementation will support stakeholders' needs in 2028 and beyond.		X				Good discussion of working to support DACs which was not explicitly noted in other DSIPs among other stakeholder topics included.
	iii. Identify and characterize the work and investments needed to progress from the current implementation to the planned future implementation.		X				Discussion provided on future NWA candidates, engaging DACs, and hybrid NWAs but light on discussion of how they will go from current to future state.
	iv. Describe and explain the planned timing and sequence of the work and investments needed to progress from the current implementation to the planned future implementation.		\				Not provided.
	v. Describe where and how plans for topic-related work and investments affect the CGPP.						
	vi. Describe where and how investment plans developed through the CGPP affect the topic-related work and investments presented in the DSIP update.		X				Noted that potential projects could be identified through the CGPP.
	c. Integrated Implementation Timeline						
	i. Using a common format developed jointly with the other utilities, provide a high-level implementation timeline that combines the key milestones for all topic-related work and investments planned over the five-year period ending in 2028. Along with the milestones, the timeline should show significant dependencies among the work and investments related to all topics.		X				Points to the Energy Storage section of the DSIP.
3. Risks and Mitigation							

Beneficial Location of DERs and NWA								
		Prompt						**Rationale**
		a. Identify and characterize any potential risk(s) and/or actual issue(s) that could affect timely implementation and describe the measures taken, or to be taken, to mitigate the risk(s) and/or resolve the issue(s).		X				Discussion of 3 risks but mitigations focus on working to understand best practices and not planned mitigation strategies.
4. Stakeholder Engagement								
		a. Identify and characterize the categories of stakeholders engaged in DSIP development and use.		X				
		b. Describe when and how the goals and needs of each stakeholder category are identified and incorporated into the DSIP.		X				Provided discussion on post-mortem interviews with developers to provide and receive feedback, working with JU DER/NWA team, and helping vendors understand best fit NWA options.
		c. Describe when and how each stakeholder category's needs will be met over time.		X				Discussion of post-mortems to gather feedback on the NWA process but not how the feedback is being incorporated into the process.
		d. Describe and explain the utility's needs for stakeholder-provided information, capabilities, and actions supporting specific implementation and operational outcomes.		X				Discussion of post-mortems to gather feedback on the NWA process but not how the feedback is being incorporated into the process.
		e. Describe the means and methods for effectively informing and engaging associated stakeholders as planning, design, and implementation progress so that the outputs effectively address, as much as feasible, the needs of the utility, DER developers, and stakeholders.		X				Discussion of post-mortems to gather feedback on the NWA process but not how the feedback is being incorporated into the process.
		f. Describe how the utility will ensure that the information, tools, and engagement opportunities provided to stakeholders effectively deliver the intended support and do not lead to unintended problems.		\				Not provided.
4.13 Beneficial Locations for DERs and Non Wires Alternatives								
		1. Describe where and how developers and other stakeholders can access resources for:						
		a. accessing up to date information about beneficial locations for DERs and/or energy efficiency measures; and		X				
		b. efficiently sorting and filtering locations by the type(s) of capability needed, the timing and amount of each needed capability, the type(s) and value of desired benefit, the serving substation, the circuit, and the geographic area.		X				Focuses on hosting capacity map capabilities but not on searching through NWA opportunities.
		2. Describe the means and methods for identifying and evaluating locations in the distribution system where:						
		a. an NWA comprising one or more DERs and/or energy efficiency measures could timely reduce, delay, or eliminate the need for upgrading distribution infrastructure and/or materially benefit distribution system reliability, efficiency, and/or operations; and/or		X				Not clear how they plan to assess the accuracy of their predictions and incorporate this in their future forecast.
		b. one or more DERs and/or energy efficiency measures including increased value based customer incentives could reduce, delay, or eliminate the need for upgrading bulk electric system resources and/or materially benefit bulk electric system reliability, efficiency, and/or operations.		X				
		3. Describe how the NWA procurement process works within utility time constraints while enabling DER developers to properly prepare and propose NWA solutions which can be implemented in time to serve the system need. Details should include:						
		a. how utility and DER developer time and expense are minimized for each procurement transaction;		X				

Beneficial Location of DERs and NWA								
		Prompt						**Rationale**
		b. how standardized contracts and procurement methods are used across the utilities.		X				Discusses how the JU are sharing best practices but does not discuss lessons learned/changes made.
		4. Describe where and how DER developers and other stakeholders can access up to date information about current NWA project opportunities.		X				
		5. Describe how the utility considers all aspects of operational criteria and public policy goals when deciding what to procure as part of a NWA solution.		X				
		6. Describe where, how, and when the utility will provide DER developers and other stakeholders with a resource for accessing up to date information about all completed and in progress NWA projects. The information provided for each project should:						
		a. describe the location, type, size, and timing of the system need addressed by the project;		X				
		b. provide the amount of traditional solution cost that was/will be avoided;		X				Notes they do not provide the cost.
		c. explain how the selected NWA solution enables the savings; and		X				Points to BCA approach and handbook.
		d. describe the structure and functional characteristics of the procurement transaction between the utility and the solution provider(s).		X				Notes that the structure and transaction information is confidential with the bidders.

How to Use the Assessment

Purpose of DSIPs The purpose of the DSIPs is to provide detailed, up-to-date information about progress and plans related to the implementation of a Distributed System Platform (DSP) featuring operational and market capabilities that will enable a market for products and services provided by the Distributed Energy Resources (DER) that are connected to the utility's distribution systems

Purpose of Assessmen The purpose of this assessment is to determine the alignment of each DSIP with the guidance provided in the 2023 DPS Staff Whitepaper.

Format of Assessment This assessment represents a review of one utility's DSIP. It is organized into 13 tabs/charts for each technical topic described in DPS guidance.

Review Approach

Checkbox The "checkbox" column is a quick check/reference to see if the DSIP responded to each component of the guidance.

Color Assessment The color assessment is a visual indicator of how well the DSIP response aligns with the prompts outlined in the DPS guidance.

Some evidence indicating that that DSIP aligns with the DPS guidance.

Sufficient evidence that DSIP aligns with the DPS guidance

Satisfies all elements of the DPS guidance in a robust and comprehensive manner.

Cumulative Assessment

	4.1 Integrated Planning	4.2 Advanced Fore-casting	4.3 Grid Operations	4.4 Energy Storage Integration	4.5 Electric Vehicle Integration	4.6 Clean Heat Integration	4.7 EE Integration and Innovation	4.8 Data Sharing	4.9 Hosting Capacity	4.1 Billing and Comp-ensation	4.11 DER Interconn-ections	4.12 Advanced Metering Infra-structure	4.13 Beneficial Locations for DERs and NWA
1. Context/Background													
2. Implementation Plan													
3. Risks/Mitigation													
4. Stakeholder Engmt.													
Prompt 1													
Prompt 2													
Prompt 3													
Prompt 4													
Prompt 5													
Prompt 6			-				-					-	-
Prompt 7			-				-					-	-
Prompt 8			-			-	-		-		-	-	-
Prompt 9	-		-		-	-	-		-		-	-	-
Prompt 10	-		-		-	-	-	-	-	-	-	-	-
Prompt 11	-		-	-	-	-	-	-	-	-	-	-	-
Prompt 12	-		-	-	-	-	-	-	-	-	-	-	-
Prompt 13	-		-	-	-	-	-	-	-	-	-	-	-
Prompt 14	-		-	-	-	-	-	-	-	-	-	-	-
Prompt 15	-		-	-	-	-	-	-	-	-	-	-	-
Prompt 16	-		-	-	-	-	-	-	-	-	-	-	-
Prompt 17	-		-	-	-	-	-	-	-	-	-	-	-

	5.1 DSIP Gover-nance	5.2 MCOS	5.3 BCA
Included (Y/N)	Y	Y	Y
Color Assessment			

Key					
	Not answered	OS	Answered outside the topic area section	N/A	Not applicable
-	Not asked				
	Some evidence indicating that that DSIP aligns with the DPS guidance.				
	Sufficient evidence that DSIP aligns with the DPS guidance				
	Satisfies all elements of the DPS guidance in a robust and comprehensive manner.				

Integrated Planning							
	Prompt						Rationale
	DPS Rationale						
	DPS Staff recommends that the utility's electric system plan should position the utility to integrate an increasing number and variety of DERs while maintaining or improving safety, reliability, quality, and affordability of service. While stakeholders will now be able to reference the CGPP for a detailed understanding of how integrated planning will evolve to meet system needs aligned with the CLCPA, the DSIP should leverage the outputs of CGPP scenario planning and filed capital investment plans as inputs, and describe overall implementation plans and timelines as well as advances in specific planning functionalities that enhance the DSP. Along with satisfying the general guidelines for information related to each topical area (see Section 3.1), DPS Staff suggests that the DSIP Update should provide the following additional details which are specific to the utility resources and capabilities which support integrated electric system planning:						
1.	Context and Background						
	a. Describe how topic-related policies, processes, resources, standards, and capabilities have evolved since the 2020 DSIP Update filing.		X				Basic discussion of evolution since 2020 but not much detail or specificity.
2.	Implementation Plan, Schedule, and Investments						
	a. Current Progress						
	i. Describe the current implementation as of June 30, 2023; and		X				Lots of good information and detail but it gets a bit muddled because of all the details provided. Makes it hard to assess whether they are addressing implementation of their plans from the 2020 DSIP or listing other achievements/plans as there is no reference to the 2020 DSIP. Lots of repetition with future planning section and hard to tell from this write up what is officially complete, if anything, or in progress.
	ii. Describe how the current implementation supports stakeholders' current and future needs.		X				Detailed discussion of implementation of data accessibility and system modeling improvements facilitates a good understanding of the value of these efforts.
	b. Future Implementation and Planning						
	i. Describe the future implementation that is planned to be deployed by 2028, identifying planned efforts and funded efforts.		X				Lots of updates provided but no concrete dates of implementation within next 5 years.
	ii. Describe how the future implementation will support stakeholders' needs in 2028 and beyond.		X				Detailed discussion of implementation of data accessibility and system modeling improvements facilitates a good understanding of the value of these efforts in longer term.
	iii. Identify and characterize the work and investments needed to progress from the current implementation to the planned future implementation.		X				Some future needs discussed in individual sections but little detail on concrete next steps or any additional funding or investment needs.
	iv. Describe and explain the planned timing and sequence of the work and investments needed to progress from the current implementation to the planned future implementation.		X				Some future needs discussed in individual sections but little detail on concrete next steps or sequence of steps more broadly.

Integrated Planning								
		Prompt						**Rationale**
		v. Describe where and how plans for topic-related work and investments affect the CGPP.		X				Describes how integrated planning can impact the CGPP process even though that focuses on renewables primarily.
		vi. Describe where and how investment plans developed through the CGPP affect the topic-related work and investments presented in the DSIP update.		X				Section focuses more on how localized forecasting from integrated planning and CGPP efforts could coordinate but no detailed discussion on impact to or benefit of investments in data efficiencies, integrated models, and ADMS discussed in this section.
	c.	Integrated Implementation Timeline						
		i. Using a common format developed jointly with the other utilities, provide a high-level implementation timeline that combines the key milestones for all topic-related work and investments planned over the five-year period ending in 2028. Along with the milestones, the timeline should show significant dependencies among the work and investments related to all topics.		X				Timeline provided through 2028 but includes limited milestones (rate case, DSIPs) and no data on dependencies.
3.	Risks and Mitigation							
		a. Identify and characterize any potential risk(s) and/or actual issue(s) that could affect timely implementation and describe the measures taken, or to be taken, to mitigate the risk(s) and/or resolve the issue(s).		X				Only three risks identified with mitigations. Mitigations are sufficient but not robust and do not identify whether an alternative option is available should the risk come to fruition or how the Risk could impact the effort.
4.	Stakeholder Engagement							
		a. Identify and characterize the categories of stakeholders engaged in DSIP development and use.		X				Most focus is on JU working groups as the stakeholders. Not clear if there are others that should be included such as internal stakeholders in electric and gas planning.
		b. Describe when and how the goals and needs of each stakeholder category are identified and incorporated into the DSIP.		X				Only mention of how and when is through an iterative cycle of gathering input, developing plans, and getting stakeholder feedback again.
		c. Describe when and how each stakeholder category's needs will be met over time.		X				Only mention of how and when is through an iterative cycle of gathering input, developing plans, and getting stakeholder feedback again.
		d. Describe and explain the utility's needs for stakeholder-provided information, capabilities, and actions supporting specific implementation and operational outcomes.		X				Notes that robust study results through better data enables more holistic planning but no discussion of specific information or capabilities the stakeholders provide.
		e. Describe the means and methods for effectively informing and engaging associated stakeholders as planning, design, and implementation progress so that the outputs effectively address, as much as feasible, the needs of the utility, DER developers, and stakeholders.		X				Only mention of communication is working with JU working groups and utilizing an iterative cycle of gathering input, developing plans, and getting stakeholder feedback again.
		f. Describe how the utility will ensure that the information, tools, and engagement opportunities provided to stakeholders effectively deliver the intended support and do not lead to unintended problems.		X				Only mention of communication is working with JU working groups and utilizing an iterative cycle of gathering input, developing plans, and getting stakeholder feedback again.

Integrated Planning								
		Prompt						**Rationale**
4.1 Integrated Planning								
		1. The means and methods used for integrated distribution system planning.		X				
		2. How the utility's means and methods enable probabilistic planning which effectively anticipates the inter related effects of distributed generation, energy storage, electric vehicles, beneficial electrification, and energy efficiency.		X				
		3. How the utility ensures that the information needed for integrated system planning is timely acquired and properly evaluated.		X				
		4. The types of sensitivity analyses performed and how those analyses are applied as part of the integrated planning process.		X				Includes list of types of sensitivities but not how they are applied in the integrated planning process.
		5. How the utility will timely adjust its integrated system plan if future trends differ significantly with predictions, both in the short term and in the long term beyond the DSIP timeline.		X				
		6. The factors unrelated to DERs such as aging infrastructure, electric vehicles, and beneficial electrification which significantly affect the utility's integrated plan and describe how the utility's planning process addresses each of those factors.		X				Discusses EVs and electrification but not other infrastructure related issues like asset condition and aging assets.
		7. How the means and methods for integrated electric system planning evaluate the effects of potential energy efficiency measures.		X				
		8. How the utility will inform the development of its integrated planning through best practices and lessons learned from other jurisdictions.		X				

Advanced Forecasting								
		Prompt						**Rationale**
	DPS Rationale							
		Utility planners and operators, DER developers and operators, and other stakeholders all require load and supply forecasts which are timely, accurate, and detailed enough to support both short term and long term planning. Such forecasts are an important factor in predicting the hosting capacity available at existing and potential DER locations and are necessary for efficient development and use of grid resources. As the variety of methods for using DERs to address electric system needs expands, DPS Staff recommends that utilities should perform advanced forecasting analyses which integrate an increasing number and variety of DERs into their load and supply forecasts. Therefore, DPS Staff proposes that the methods for using advanced distribution system forecasting, along with plans for implementing the means and methods needed for advanced forecasting should continue to be described by the utilities in their DSIPs. Along with satisfying the general guidelines for information related to each topic (see Section 3.1), DPS Staff recommends that the DSIP Update should provide the following additional details that are specific to the utility resources and capabilities and which enable advanced electric system forecasting and provide the most current forecast results:						
1.	Context and Background							
		a. Describe how topic-related policies, processes, resources, standards, and capabilities have evolved since the 2020 DSIP Update filing.		X				Detailed description of changes and enhancements. Included a table of the forecasting enhancements at the system and feeder level.
2.	Implementation Plan, Schedule, and Investments							
	a.	Current Progress						
		i. Describe the current implementation as of June 30, 2023; and		X				Current progress described.
		ii. Describe how the current implementation supports stakeholders' current and future needs.		X				Outside stakeholders not specifically addressed.
	b.	Future Implementation and Planning						
		i. Describe the future implementation that is planned to be deployed by 2028, identifying planned efforts and funded efforts.		X				Clear timeline presented.
		ii. Describe how the future implementation will support stakeholders' needs in 2028 and beyond.		X				Continued participation in JU workshops.
		iii. Identify and characterize the work and investments needed to progress from the current implementation to the planned future implementation.		X				Limited discussion of investments.
		iv. Describe and explain the planned timing and sequence of the work and investments needed to progress from the current implementation to the planned future implementation.		X				Limited discussion of investments.
		v. Describe where and how plans for topic-related work and investments affect the CGPP.		\				Not provided in this section.
		vi. Describe where and how investment plans developed through the CGPP affect the topic-related work and investments presented in the DSIP update.		\				Not provided in this section.
	c.	Integrated Implementation Timeline						
		i. Using a common format developed jointly with the other utilities, provide a high-level implementation timeline that combines the key milestones for all topic-related work and investments planned over the five-year period ending in 2028. Along with the milestones, the timeline should show significant dependencies among the work and investments related to all topics.		X				Clear timeline presented.
3.	Risks and Mitigation							
		a. Identify and characterize any potential risk(s) and/or actual issue(s) that could affect timely implementation and describe the measures taken, or to be taken, to mitigate the risk(s) and/or resolve the issue(s).		X				Clear table of risks and mitigations including robust discussion.
4.	Stakeholder Engagement							

Advanced Forecasting								
		Prompt						**Rationale**
		a. Identify and characterize the categories of stakeholders engaged in DSIP development and use.		X				Stakeholder inputs mentioned.
		b. Describe when and how the goals and needs of each stakeholder category are identified and incorporated into the DSIP.		\				Not provided in this section.
		c. Describe when and how each stakeholder category's needs will be met over time.		\				Not provided in this section.
		d. Describe and explain the utility's needs for stakeholder-provided information, capabilities, and actions supporting specific implementation and operational outcomes.		\				Not provided in this section.
		e. Describe the means and methods for effectively informing and engaging associated stakeholders as planning, design, and implementation progress so that the outputs effectively address, as much as feasible, the needs of the utility, DER developers, and stakeholders.		X				Does not explicitly mention stakeholder engagement, only that results are shared.
		f. Describe how the utility will ensure that the information, tools, and engagement opportunities provided to stakeholders effectively deliver the intended support and do not lead to unintended problems.		\				Not provided in this section.
4.2 Advanced Forecasting								
		1. Identify where and how DER developers and other stakeholders can readily access, navigate, view, sort, filter, and download up to date load and supply forecasts.		X				Data Portal provides access to all publicly available information.
		2. Identify and characterize each load and supply forecasting requirement identified from stakeholder inputs.		X				Requirements described.
		3. Describe in detail the existing and/or planned forecasts produced for third-party use and explain how those forecasts fulfill each identified stakeholder requirement for load and supply forecasts.		X				Limited discussion of stakeholder requirements.
		4. Describe the spatial and temporal granularity of the system level and local level load and supply forecasts produced.		X				Spatial and temporal granularity described.
		5. Describe the forecasts provided separately for key areas including but not limited to photovoltaics, energy storage, electric vehicles, and energy efficiency.		X				Brief description with direction to System Report for details.
		6. Describe the advanced forecasting capabilities which are/will be implemented to enable effective probabilistic planning methods.		X				Clear and comprehensive discussion of current efforts.
		7. Describe how the utility's existing/planned advanced forecasting capabilities anticipate the inter related effects of distributed generation, energy storage, electric vehicles, beneficial electrification, and energy efficiency. In particular, describe how electric vehicle and energy efficiency forecasts are reflected in utility forecasts.		X				Brief description with direction to System Report for details.
		8. Describe in detail the forecasts produced for utility use and explain how those forecasts fulfill the evolving utility requirements for load and supply forecasts		X				Forecasts and uses described.
		9. Describe the utility's specific objectives, means, and methods for acquiring and managing the data needed for its advanced forecasting methodologies.		X				Brief description with direction to System and Feeder Report for details.
		10. Describe the means and methods used to produce substation level load and supply forecasts.		X				Brief but complete description.
		11. Describe the levels of accuracy achieved in the substation level forecasts produced to date for load and supply.		X				Included graph and discussion at the system level. Substation and Feeder level results were not discussed.
		12. Describe the substation level load forecasts provided to support analyses by DER developers and operators and explain why the forecasts are sufficient for supporting those analyses.		X				Describes how they are used but not explicitly why they are sufficient.
		13. Provide sensitivity analyses which explain how the accuracy of substation level forecasts is affected by distributed generation, energy storage, electric vehicles, beneficial electrification, and energy efficiency measures		X				Limited response points directly to System report.

Advanced Forecasting								
		Prompt						**Rationale**
		14. Identify and characterize the tools and methods the utility is using/will use to acquire and apply useful forecast input data from DER developers and other third-parties.		X				Lists information and discusses acquisition of data but not how it will be applied.
		15. Describe how the utility will inform its forecasting processes through best practices and lessons learned from other jurisdictions.		X				Reference to state , regional and national sources.
		16. Describe new methodologies to improve overall accuracy of forecasts for demand and energy reductions that derive from EE programs and increased penetration of DER. In particular, discuss how the increased potential for inaccurate load and energy forecasts associated with out of model EE and DER adjustments will be minimized or eliminated.		X				Methodologies described.
		17. Describe where CGPP forecast information can be found.		X				Description provided.

Grid Operations							
		Prompt					**Rationale**
	DPS Rationale			X			
		It is the opinion of DPS Staff that each utility must enable a much more dynamic, data driven, multi party mode of grid operations where DERs effectively generate customer value by increasing efficiency, stability, and reliability in both the distribution system and the bulk electric system. To achieve this outcome, DPS Staff recommends that each utility should develop and/or substantially modify a wide range of components encompassing operating policies and processes, advanced information systems, extensive data communications infrastructure, widely distributed sensors and control devices, and grid components such as switches, power flow controllers, and solid state transformers. Along with satisfying the general guidelines for information related to each topical area (see Section 3.1), DPS Staff suggests that the DSIP Update should provide the following additional details which are specific to the utility resources and capabilities needed to transform grid operations in both the distribution system and the bulk electric system:					
1.	Context and Background						
		a. Describe how topic-related policies, processes, resources, standards, and capabilities have evolved since the 2020 DSIP Update filing.		X			No link to policies changes , expected time and overall DERs volume expected to connect to the grid, and prioritization of the vulnerable communities.
2.	Implementation Plan, Schedule, and Investments						
	a. Current Progress						
		i. Describe the current implementation as of June 30, 2023; and		X			Overview and update on projects. Could provide more details on expected milestones and dates, functionalities, progress, numbers of technology devices installed, achievements and benefits realized.
		ii. Describe how the current implementation supports stakeholders' current and future needs.		\			
	b. Future Implementation and Planning						
		i. Describe the future implementation that is planned to be deployed by 2028, identifying planned efforts and funded efforts.		X			Overall projects explained with some numbers provided, timeline.
		ii. Describe how the future implementation will support stakeholders' needs in 2028 and beyond.		\			Not provided for all projects.
		iii. Identify and characterize the work and investments needed to progress from the current implementation to the planned future implementation.		X			Not fully described for all projects.
		iv. Describe and explain the planned timing and sequence of the work and investments needed to progress from the current implementation to the planned future implementation.		X			Not fully described for all projects.
		v. Describe where and how plans for topic-related work and investments affect the CGPP.		X			Only a high level description was provided. More information is required on how the planning phase will affect grid ops, reinforcement vs. flexibility, and DSO market services.
		vi. Describe where and how investment plans developed through the CGPP affect the topic-related work and investments presented in the DSIP update.		X			Only a high level description was provided. More information is required on how the planning phase will affect grid ops, reinforcement vs. flexibility, and DSO market services.
	c. Integrated Implementation Timeline						
		i. Using a common format developed jointly with the other utilities, provide a high-level implementation timeline that combines the key milestones for all topic-related work and investments planned over the five-year period ending in 2028. Along with the milestones, the timeline should show significant dependencies among the work and investments related to all topics.		X			No specific figure in section found however used Figure 1 as input to assessment, figure lack independencies between projects.
3.	Risks and Mitigation						

Grid Operations								
		Prompt						**Rationale**
		a. Identify and characterize any potential risk(s) and/or actual issue(s) that could affect timely implementation and describe the measures taken, or to be taken, to mitigate the risk(s) and/or resolve the issue(s).		X				High level risks with no mitigation.
4. Stakeholder Engagement								
		a. Identify and characterize the categories of stakeholders engaged in DSIP development and use.		X				Limited discussion on stakeholders engagement, lacks specifics requested in the guidance
		b. Describe when and how the goals and needs of each stakeholder category are identified and incorporated into the DSIP.		\				
		c. Describe when and how each stakeholder category's needs will be met over time.		\				
		d. Describe and explain the utility's needs for stakeholder-provided information, capabilities, and actions supporting specific implementation and operational outcomes.		\				
		e. Describe the means and methods for effectively informing and engaging associated stakeholders as planning, design, and implementation progress so that the outputs effectively address, as much as feasible, the needs of the utility, DER developers, and stakeholders.		\				
		f. Describe how the utility will ensure that the information, tools, and engagement opportunities provided to stakeholders effectively deliver the intended support and do not lead to unintended problems.		\				
4.3 Grid Operations								
		1. Describe in detail the roles and responsibilities of the utility and other parties involved in planning and executing grid operations which accommodate and productively employ DERs.		X				Roles defined in contractual agreement and DSP Communications and Coordination Manual.
		2. Describe other role and responsibility models considered and explain the reasons for choosing the planned model		X				A previous work has been undertaken but no info of other role/responsibility model.
		3. Describe how roles and responsibilities have been/will be developed, documented, and managed for each party involved in the planning and execution of grid operations.		X				SMEs will be responsible however no clear plan or info on how the roles & responsibilities will be developed and managed by all parties involved.
		4. Describe in detail how the utilities and other parties will provide processes, resources, and standards to support planning and execution of advanced grid operations which accommodate and extensively employ DER services. The information provided should address:						
		a. organizations;		X				High level information was provided.
		b. operating policies and processes;		X				High level information was provided, more information on sequencing and business processes would be useful.
		c. information systems for system modeling, data acquisition and management, situational awareness, resource optimization, dispatch and control, etc. ;		X				Use cases discussed, but there was limited details.
		d. data communications infrastructure;		X				Ongoing work, high level info provided.
		e. grid sensors and control devices; and,		X				Ongoing work, high level info provided.
		f. grid infrastructure components such as switches, power flow controllers, and solid state transformers.		X				Ongoing work, high level info provided.
		5. Describe the utility's approach and ability to implement advanced capabilities.						
		a. Identify the existing level of system monitoring and distribution automation.		X				Overview on DA provided.
		b. Identify areas to be enhanced through additional monitoring and/or distribution automation.		X				Overview on DA provided.
		c. Describe the means and methods used for deploying additional monitoring and/or distribution automation in the utility's system.		X				Good overview on deployment methods.

Grid Operations								
		Prompt						**Rationale**
		d. Identify the benefits to be obtained from deploying additional monitoring and/or distribution automation in the utility's system.		X				Overall benefits presented.
		e. Identify the capabilities currently provided by Advanced Distribution Management Systems (ADMS).		X				Clear ADMS capability described.
		f. Describe how ADMS capabilities will increase and improve over time.		X				Clear ADMS future capability described.
		g. Identify the capabilities currently provided by DER Management Systems (DERMS).		X				DERMS use cases mainly focusing on energy.
		h. Describe how DERMS capabilities will increase and improve over time.		X				DERMS expected to commence in 2025.
		i. Identify other approaches or functionalities used to better manage grid performance and describe how they are/will be integrated into daily operations.		X				Focus on cyber security and communication infrastructure.

Energy Storage Integration								
	Prompt							Rationale
	DPS Rationale							
		As outlined in the recently issued "New York's 6 GW Energy Storage Roadmap Policy Options for Continued Growth in Energy Storage" significant energy storage integration will be needed within the five year planning horizon of the DSIP Update filing. Meanwhile, evolving initiatives for achieving New York State's energy storage goals will likely require corresponding adjustments to utility deployment plans, use cases, and forecasts. Areas of particular interest to DPS Staff related to energy storage include: • Existing energy storage resources in the distribution system; • The utility's planned energy storage projects; • A five year forecast of energy storage deployments by the utility and/or third-parties; • Potential energy storage locations and applications that could benefit customers and/or the electric system; • Resources and functions needed for integrating energy storage with utility grid operations; • Resources and functions needed for integrating energy storage with utility billing and compensation functions; and • The utility's alignment with New York State's energy storage goals and initiatives. Along with satisfying the general guidelines for information related to each topic (see Section 3.1), DPS Staff recommends that the DSIP Update should provide the following details for the areas of interest listed above, especially the means and methods to plan for energy storage deployment in the distribution system:						
1.	Context and Background							
	a. Describe how topic-related policies, processes, resources, standards, and capabilities have evolved since the 2020 DSIP Update filing.		X					Good description and discussed policy changes such as Storage Roadmap.
2.	Implementation Plan, Schedule, and Investments							
	a. Current Progress							
	i. Describe the current implementation as of June 30, 2023; and		X					Provided details on current implementation projects.
	ii. Describe how the current implementation supports stakeholders' current and future needs.		X					Indirect stakeholder benefit, stakeholder current/future need not explicitly discussed.
	b. Future Implementation and Planning							
	i. Describe the future implementation that is planned to be deployed by 2028, identifying planned efforts and funded efforts.		X					Narrative description of plans including, energy efficiency, demand response, NWA etc.
	ii. Describe how the future implementation will support stakeholders' needs in 2028 and beyond.		X					Included in narrative description.
	iii. Identify and characterize the work and investments needed to progress from the current implementation to the planned future implementation.		X					Included in narrative description.
	iv. Describe and explain the planned timing and sequence of the work and investments needed to progress from the current implementation to the planned future implementation.		X					Lacks timing and detailed sequence of work, milestones.
	v. Describe where and how plans for topic-related work and investments affect the CGPP.		X					Some mention of storage to support transmission need.
	vi. Describe where and how investment plans developed through the CGPP affect the topic-related work and investments presented in the DSIP update.		\					Not included in this section.
	c. Integrated Implementation Timeline							
	i. Using a common format developed jointly with the other utilities, provide a high-level implementation timeline that combines the key milestones for all topic-related work and investments planned over the five-year period ending in 2028. Along with the milestones, the timeline should show significant dependencies among the work and investments related to all topics.		X					High level timeline provided.
3.	Risks and Mitigation							

Energy Storage Integration								
		Prompt						**Rationale**
		a. Identify and characterize any potential risk(s) and/or actual issue(s) that could affect timely implementation and describe the measures taken, or to be taken, to mitigate the risk(s) and/or resolve the issue(s).		X				Table format listing various high level risk and mitigation.
4. Stakeholder Engagement								
		a. Identify and characterize the categories of stakeholders engaged in DSIP development and use.		X				Listed out various opportunities of stakeholder engagement.
		b. Describe when and how the goals and needs of each stakeholder category are identified and incorporated into the DSIP.		\				Not provided.
		c. Describe when and how each stakeholder category's needs will be met over time.		\				Not provided.
		d. Describe and explain the utility's needs for stakeholder-provided information, capabilities, and actions supporting specific implementation and operational outcomes.		\				Not provided.
		e. Describe the means and methods for effectively informing and engaging associated stakeholders as planning, design, and implementation progress so that the outputs effectively address, as much as feasible, the needs of the utility, DER developers, and stakeholders.		\				Not provided.
		f. Describe how the utility will ensure that the information, tools, and engagement opportunities provided to stakeholders effectively deliver the intended support and do not lead to unintended problems.		\				Not provided.
4.4 Energy Storage Integration								
		1. Provide the locations, types, capacities (power and energy), configurations (i.e., standalone or co located with load and/or generation), and functions of existing energy storage resources in the distribution system.		\				Not provided.
		2. Describe the utility's current efforts to plan, implement, and operate beneficial energy storage applications. Information provided should include:						
		a. a detailed description of each project, existing and planned, with an explanation of how the project fits into the utility's long range energy storage plans;		X				Some description on use cases but no project specifics are provided.
		b. the original project schedule;		X				Some description on use cases but no project specifics are provided.
		c. the current project status;		X				Some description on use cases but no project specifics are provided.
		d. lessons learned to date;		X				Lacks lessons learned info.
		e. project adjustments and improvement opportunities identified to date; and		X				Some description on use cases but no project specifics are provided.
		f. next steps with clear timelines and deliverables.		\				No clear timeline or deliverables provided.
		3. Provide a five year forecast of energy storage assets deployed and operated by third-parties. Where possible, include the likely locations, types, capacities, configurations, and functions of those assets.		\				Not provided.
		4. Identify, describe, and prioritize the current and future opportunities for beneficial use of energy storage located in the distribution system. Uses considered should encompass functions which benefit utility customers, the distribution system, and/or the bulk power system. Each opportunity identified should be characterized by:						
		a. location;		X				Only high level conceptual info provided, no project specifics such as size, timing, operation.

Energy Storage Integration								
		Prompt						**Rationale**
		b. energy storage capacity (power and energy);		\				Only high level conceptual info provided, no project specifics such as size, timing, operation.
		c. function(s) performed;		X				Only high level conceptual info provided, no project specifics such as size, timing, operation.
		d. period(s) of time when the function(s) would be performed; and		\				Only high level conceptual info provided, no project specifics such as size, timing, operation.
		e. the nature and estimated economic value of each benefit derived from the energy storage resource.		\				Only high level conceptual info provided, no project specifics such as size, timing, operation.
		5. Identify and describe all significant resources and functions that the utility and stakeholders use for planning, implementing, monitoring, and managing energy storage at multiple levels in the distribution system.						
		a. Explain how each of those resources and functions supports the utility's needs;		X				Mention of system study software, cost estimate calculator, value estimation tool, hosting cap map data portal .
		b. Explain how each of those resources and functions supports the stakeholders' needs.		X				Limited information on resource support and stakeholder needs.
		6. Describe the means and methods for determining the real time status, behavior, and effect of energy storage resources currently deployed in the distribution system. Information produced by those means and methods could include:		\				Not provided.
		a. the amount of energy currently stored (state of charge);		\				Not provided.
		b. the time, size, duration, energy source (grid and/or local generation), and purpose of charging events;		\				Not provided.
		c. the time, size, duration, consumer (grid and/or local load), and purpose of energy storage discharges;		\				Not provided.
		d. the net effect (amount and duration of supply or demand) on the distribution system of charge/discharge events (considering any co located load and/or generation); and		\				Not provided.
		e. the capacity of the distribution system to deliver or receive power at a given location and time.		\				Not provided.
		7. Describe the means and methods for forecasting the status, behavior, and effect of energy storage resources in the distribution system at future times. Forecasts produced by the utility could include:						Very high level info on tools for storage forecast, no specific forecasting results provided.
		a. the amount of energy stored (state of charge);		\				Not provided.
		b. the time, size, duration, energy source (grid and/or local generation), and purpose of charging events;		\				Not provided.
		c. the time, size, duration, consumer (grid and/or local load), and purpose of energy storage discharges;		\				Not provided.
		d. the net effect on the distribution system of each charge/discharge event (considering any co located load and/or generation);		\				Not provided.
		e. the capacity of the distribution system to deliver or receive power at a given location and time.		\				Not provided.
		8. Describe the resources and functions needed to support billing and compensation of energy storage owners/operators.		\				Not provided.
		9. Identify the types of customer and system data that are necessary for planning, implementing, and managing energy storage and describe how the utility provides those data to developers and other stakeholders; and		X				Mentions of system study software, cost estimate calculator, value estimation tool, hosting cap map data portal .

Energy Storage Integration							
		Prompt					**Rationale**
		10. By citing specific objectives, means, and methods, describe in detail how the utility's accomplishments and plans are aligned with the objectives established in the CLCPA.		X			Dedicated section discussing CLCPA goal alignment.

EV Integation								
	Prompt							Rationale
	DPS Rationale							
		It is DPS Staff's position that utility resources and capabilities which support electric vehicle (EV) integration at all levels in the distribution system will be needed within the five year planning horizon of the DSIP Update filing. While plans for integrating EVs at the bulk, local transmission, and distribution levels will now be reflected in the CGPP, DPS Staff suggests that the DSIP should continue to describe means and methods for planning EV integration at the distribution level. Along with satisfying the general guidelines for information related to each topic (see Section 3.1), DPS Staff recommends that the DSIP Update should provide the following additional details which are specific to electric vehicle integration. Where not yet fully developed or fluid due to ongoing policy development, DPS Staff suggests that the DSIP Update should provide current status and planned next steps, including an anticipated timeframe, to continue making progress.						
1.	Context and Background							
		a. Describe how topic-related policies, processes, resources, standards, and capabilities have evolved since the 2020 DSIP Update filing.		X				Good overview of implemented policies.
2.	Implementation Plan, Schedule, and Investments							
	a.	Current Progress						
		i. Describe the current implementation as of June 30, 2023; and		X				Overview of current implementation with key figures and impacts. However, lacks the same level of detail as other submissions.
		ii. Describe how the current implementation supports stakeholders' current and future needs.		X				Limited information on how the current implementation supports SKH current and future needs.
	b.	Future Implementation and Planning						
		i. Describe the future implementation that is planned to be deployed by 2028, identifying planned efforts and funded efforts.		X				Short summary of future plans. Limited number of actions are planned for 2028 implementation. Planned and funded efforts are not explained.
		ii. Describe how the future implementation will support stakeholders' needs in 2028 and beyond.		\				Not provided.
		iii. Identify and characterize the work and investments needed to progress from the current implementation to the planned future implementation.		\				Not provided.
		iv. Describe and explain the planned timing and sequence of the work and investments needed to progress from the current implementation to the planned future implementation.		\				Not provided.
		v. Describe where and how plans for topic-related work and investments affect the CGPP.		\				Not provided.
		vi. Describe where and how investment plans developed through the CGPP affect the topic-related work and investments presented in the DSIP update.		\				Not provided.
	c.	Integrated Implementation Timeline						Not provided.
		i. Using a common format developed jointly with the other utilities, provide a high-level implementation timeline that combines the key milestones for all topic-related work and investments planned over the five-year period ending in 2028. Along with the milestones, the timeline should show significant dependencies among the work and investments related to all topics.		\				Not provided.
3.	Risks and Mitigation							
		a. Identify and characterize any potential risk(s) and/or actual issue(s) that could affect timely implementation and describe the measures taken, or to be taken, to mitigate the risk(s) and/or resolve the issue(s).		X				Good summary table with concrete risks and direct mitigation measures. However this is a summary.
4.	Stakeholder Engagement							

EV Integation								
		Prompt						**Rationale**
		a. Identify and characterize the categories of stakeholders engaged in DSIP development and use.		X				Limited groups of stakeholders are mentioned.
		b. Describe when and how the goals and needs of each stakeholder category are identified and incorporated into the DSIP.		\				Not provided.
		c. Describe when and how each stakeholder category's needs will be met over time.		\				Not provided.
		d. Describe and explain the utility's needs for stakeholder-provided information, capabilities, and actions supporting specific implementation and operational outcomes.		\				Not provided.
		e. Describe the means and methods for effectively informing and engaging associated stakeholders as planning, design, and implementation progress so that the outputs effectively address, as much as feasible, the needs of the utility, DER developers, and stakeholders.		X				The reports summarized some programs which will enable stakeholder engagement. The link between programs and individual stakeholder groups is not clear.
		f. Describe how the utility will ensure that the information, tools, and engagement opportunities provided to stakeholders effectively deliver the intended support and do not lead to unintended problems.		\				Not provided.
4.5 Electric Vehicle Integration								
		1. Using a common framework (organization, format, semantics, definitions, etc.) developed jointly with the other utilities, identify and characterize the existing and anticipated EV charging scenarios in the utility's service territory. Each scenario identified should be characterized by:		\				There is no common framework across utilities.
		a. the type of location (home, apartment complex, store, workplace, public parking site, rest stop, etc.);		\				The company does not provide any information requested, although they do describe some of their models that could provide requested information.
		b. the number and spatial distribution of existing instances of the scenario;		\				The company does not provide any information requested, although they do describe some of their models that could provide requested information.
		c. the forecast number and spatial distribution of anticipated instances of the scenario over the next five years;		\				The company does not provide any information requested, although they do describe some of their models that could provide requested information.
		d. the type(s) of vehicles charged at a typical location (commuter car, bus, delivery truck, taxi, ride share, etc.);		\				The company does not provide any information requested, although they do describe some of their models that could provide requested information.
		e. the number of vehicles charged at a typical location, by vehicle type;		\				The company does not provide any information requested, although they do describe some of their models that could provide requested information.
		f. the charging pattern by vehicle type (frequency, times of day, days of week, energy per charge, duration per charge, demand per charge);		\				The company does not provide any information requested, although they do describe some of their models that could provide requested information.

EV Integation								
		Prompt						**Rationale**
		g. the number(s) of charging ports at a typical location, by type;		\				The company does not provide any information requested, although they do describe some of their models that could provide requested information.
		h. the energy storage capacity (if any) supporting EV charging at a typical location;		\				The company does not provide any information requested, although they do describe some of their models that could provide requested information.
		i. an hourly profile of a typical location's aggregated charging load over a one year period;		\				The company does not provide any information requested, although they do describe some of their models that could provide requested information.
		j. the type and size of the existing utility service at a typical location; and		\				The company does not provide any information requested, although they do describe some of their models that could provide requested information.
		k. the type and size of utility service needed to support the EV charging use case.		\				The company does not provide any information requested, although they do describe some of their models that could provide requested information.
		2. Describe and explain the utility's priorities for supporting implementation of the EV charging use cases anticipated in its service territory.		X				Summary of priorities is provided.
		3. Identify and describe all significant resources and functions that the utility and stakeholders use for planning, implementing, monitoring, and managing EV charging at multiple levels in the distribution system.		X				Considering the lack of maturity on EV integration, the company has progressed their thinking in identifying resources and functions required for EV integration.
		a. Explain how each of those resources and functions supports the utility's needs.		X				Good thoughts and justification on what the utility needs from these resources.
		b. Explain how each of those resources and functions supports the stakeholders' needs.		X				Good thoughts and justification on what stakeholders need from these resources.
		4. Identify the types of customer and system data that are necessary for planning, implementing, and managing EV charging infrastructure and services and describe how the utility provides this data to interested third parties.		X				Sufficient description of data and clear process on how the company shares the data with 3rd parties.
		5. Describe the resources and functions needed to support billing and compensation of EV and EVSE owners/operators.		X				The company explains how EV customers are billed under the existing systems and highlights that this may need to change in the future. However the description does not include metering requirements, functions / capabilities that enable these processes. E.g. what teams are there? What system? What people?
		6. By citing specific objectives, means, and methods describe in detail how the utility's accomplishments and plans are aligned with New York State policy, including its established goals for EV adoption.		X				Good summary table on future plans, providing also information on how these plans meet State's policy targets.

EV Integation								
		Prompt						**Rationale**
		7. Describe the utility's current efforts to plan, implement, and manage EV related projects. Information provided should include:						
		a. a detailed description of each project, existing and planned, with an explanation of how the project fits into the utility's long-range EV integration plans;		X				Only 1 project is mentioned. 1 project seems limited compared to other initiatives from other utilities.
		b. the original project schedule;		X				Original schedule is provided.
		c. the current project status;		X				Sufficient information is provided. Good structure of the table.
		d. lessons learned to date;		X				Sufficient information is provided. Good structure of the table.
		e. project adjustments and improvement opportunities identified to date; and		X				Sufficient information is provided. Good structure of the table.
		f. next steps with clear timelines and deliverables.		X				Sufficient information is provided. Good structure of the table.
		8. Describe how the utility is coordinating with the efforts of the New York State Energy Research and Development Authority (NYSERDA), the New York Power Authority (NYPA), New York Department of Environmental Conservation (DEC), and DPS Staff to facilitate statewide EV market development and growth.		X				Good description of initiatives and coordination developments.

Clean Heat Integration								
		Prompt						**Rationale**
	DPS Rationale							
		The NYS Clean Heat program encourages residents, small businesses, and commercial and multifamily building owners to install cold climate air source heat pumps (ASHP) and energy efficient ground source heat pumps (GSHP) and heat pump water heaters (HPWH). DPS Staff believes that utility resources and capabilities which support Clean Heat integration at all levels in the distribution system will be needed within the five year planning horizon of the DSIP Update filing. Therefore, DPS Staff recommends that the DSIP should describe means and methods for planning Clean Heat integration at the distribution level. Along with satisfying the general guidelines for information related to each topic (see Section 3.1), DPS Staff recommends that the DSIP Update should provide the following additional details which are specific to clean heat integration. DPS Staff further recommends that where not yet fully developed or fluid due to ongoing policy development, the DSIP Update should provide current status and planned next steps, including an anticipated timeframe, to continue making progress.						
1. Context and Background								
		a. Describe how topic-related policies, processes, resources, standards, and capabilities have evolved since the 2020 DSIP Update filing.		X				Fully cited and supported overview of situation.
2. Implementation Plan, Schedule, and Investments								
	a. Current Progress							
		i. Describe the current implementation as of June 30, 2023; and		X				Listing of all offers with description and incentive.
		ii. Describe how the current implementation supports stakeholders' current and future needs.		X				
	b. Future Implementation and Planning			X				
		i. Describe the future implementation that is planned to be deployed by 2028, identifying planned efforts and funded efforts.		X				
		ii. Describe how the future implementation will support stakeholders' needs in 2028 and beyond.		X				
		iii. Identify and characterize the work and investments needed to progress from the current implementation to the planned future implementation.		X				General areas mentioned.
		iv. Describe and explain the planned timing and sequence of the work and investments needed to progress from the current implementation to the planned future implementation.		X				Timeline included.
		v. Describe where and how plans for topic-related work and investments affect the CGPP.		\				Not included.
		vi. Describe where and how investment plans developed through the CGPP affect the topic-related work and investments presented in the DSIP update.		\				Not included.
	c. Integrated Implementation Timeline							
		i. Using a common format developed jointly with the other utilities, provide a high-level implementation timeline that combines the key milestones for all topic-related work and investments planned over the five-year period ending in 2028. Along with the milestones, the timeline should show significant dependencies among the work and investments related to all topics.		X				Timeline included.
3. Risks and Mitigation								
		a. Identify and characterize any potential risk(s) and/or actual issue(s) that could affect timely implementation and describe the measures taken, or to be taken, to mitigate the risk(s) and/or resolve the issue(s).		X				
4. Stakeholder Engagement								
		a. Identify and characterize the categories of stakeholders engaged in DSIP development and use.		\				Not included.
		b. Describe when and how the goals and needs of each stakeholder category are identified and incorporated into the DSIP.		\				Not included.
		c. Describe when and how each stakeholder category's needs will be met over time.		\				Not included.
		d. Describe and explain the utility's needs for stakeholder-provided information, capabilities, and actions supporting specific implementation and operational outcomes.		\				Not included.

Clean Heat Integration								
		Prompt						**Rationale**
		e. Describe the means and methods for effectively informing and engaging associated stakeholders as planning, design, and implementation progress so that the outputs effectively address, as much as feasible, the needs of the utility, DER developers, and stakeholders.		X				Vague mentions of stakeholder interaction.
		f. Describe how the utility will ensure that the information, tools, and engagement opportunities provided to stakeholders effectively deliver the intended support and do not lead to unintended problems.		\				Not included.
4.6 C	lean Heat Integration							
		1. Using a common framework (organization, format, semantics, definitions, etc.) developed jointly with the other utilities, identify and characterize the existing and clean heat installation scenarios in the utility's service territory. Each scenario identified should be characterized by:						
		a. the type of location (single family residence, multifamily residence, commercial space, office space, school, hospital, etc.);		X				
		b. the number and spatial distribution of existing instances of the scenario;		X				
		c. the forecast number and spatial distribution of anticipated instances of the scenario over the next five years;		X				Included count of applications, but not aligned with scenario distribution across response subsections.
		d. the type(s) of clean heat solution installed at a typical location (ASHP, GSHP, HPWH, etc.);		X				
		e. an hourly profile of a typical location's aggregated clean heating load over a one year period;		\				"Data is not collected."
		f. the type and size of the existing utility service at a typical location; and		\				No typical location type.
		g. the type and size of utility service needed to support the clean heating use case.		X				
		2. Describe and explain the utility's priorities for supporting implementation of the clean heating use cases anticipated in its service territory.		X				Describes meeting with the JMC and numerous vendors, but does not describe or explain priorities.
		3. Identify and describe all significant resources and functions that the utility and stakeholders use for planning, implementing, monitoring, and managing clean heating at multiple levels in the distribution system.		X				
		a. Explain how each of those resources and functions supports the utility's needs.		X				Lists numerous groups, calls, and meetings.
		b. Explain how each of those resources and functions supports the stakeholders' needs.		X				Lists numerous groups, calls, and meetings.
		4. Identify the types of customer and system data that are necessary for planning, implementing, and managing clean heating infrastructure and services and describe how the utility provides this data to interested third parties.		X				Description of data types, but no mention how utilized with interested third parties.
		5. By citing specific objectives, means, and methods describe in detail how the utility's accomplishments and plans are aligned with New York State policy, including its established goals for clean heat adoption.		X				Mention of expanding contractor network.
		6. Describe the utility's current efforts to plan, implement, and manage clean heat related projects. Information provided should include:						
		a. a detailed description of each project, existing and planned, with an explanation of how the project fits into the utility's long-range clean heat integration plans;		X				No detailed description of projects provided, only mention of manual J or equivalent.
		b. the original project schedule;		X				General mention of single day for ASHP, multiple days for GSHP.
		c. the current project status;		X				Concedes goal not met in 2022, improvements made from 2021.
		d. lessons learned to date;		X				Single lesson learned.
		e. project adjustments and improvement opportunities identified to date; and		X				Single item.

Clean Heat Integration								
		Prompt						**Rationale**
		f. next steps with clear timelines and deliverables.		\				
		7. Describe how the utility is coordinating with the efforts of the New York State Energy Research and Development Authority (NYSERDA), the New York Power Authority (NYPA), New York Department of Environmental Conservation (DEC), DPS Staff, or other governmental entities to facilitate statewide clean heat market development and growth.		X				Biweekly meeting, monthly meeting.

EE Integration and Innovation								
		Prompt						**Rationale**
	DPS Rationale							
		Energy Efficiency integration, with a focus on innovative market enabling tools and approaches, is an essential utility function that DPS Staff suggests should be thoroughly addressed within the five year planning horizon of the DSIP filing. It also affects the CGPP integrated system analysis, as energy efficiency efforts act as load modifiers in distribution planning. This load impact is then incorporated into the CGPP as part of its analysis for local transmission and distribution projects. DPS Staff recommends that the utilities should provide the information specified below to show how their joint and individual efforts are fully integrating current and expanded energy efficiency efforts into their system planning. DPS Staff further recommends that the utilities should also describe how new tools and approaches are being used to support the growth of a more dynamic market of service providers that deliver energy efficiency at a reduced cost by leveraging private capital and financing to deliver greater customer value while optimizing the grid value of these services. Each utility has evolved its Efficiency Transition Implementation Plans (ETIPs) into System Energy Efficiency Plans (SEEPs) that describe the entirety of the utility's expanded reliance on and use of cost-effective energy efficiency to support their distribution system and customer needs. ETIPs / SEEPs will continue to be filed separately in accordance with DPS Staff issued ETIP / SEEP Content Guidance, but DPS Staff recommends that the DSIP must incorporate and plan for the integration and reliance on these expanded energy efficiency resources and should include a link to the most recent ETIP/SEEP filing. Along with satisfying the general guidelines for information related to each topic (see Section 3.1), DPS Staff recommends that the DSIP Update should provide the following additional details which are specific to energy efficiency:						
1. Context and Background								
		a. Describe how topic-related policies, processes, resources, standards, and capabilities have evolved since the 2020 DSIP Update filing.		X				Provided two pages of narrative on the evolution since the 2020 DSIP Update filing.
2. Implementation Plan, Schedule, and Investments								
	a. Current Progress							
		i. Describe the current implementation as of June 30, 2023; and		X				Provided extensive narrative on current implementation as well as tables.
		ii. Describe how the current implementation supports stakeholders' current and future needs.		X				Details provided on stakeholders was a bit buried and limited to program participation.
	b. Future Implementation and Planning							
		i. Describe the future implementation that is planned to be deployed by 2028, identifying planned efforts and funded efforts.		X				Some narrative provided but more detail on the efforts as well as funding would be helpful.
		ii. Describe how the future implementation will support stakeholders' needs in 2028 and beyond.		X				Some narrative was provided but more detail on how the future implementation will support stakeholders would be helpful.
		iii. Identify and characterize the work and investments needed to progress from the current implementation to the planned future implementation.		X				Some narrative was provided but more detail and a table of the information would be helpful.
		iv. Describe and explain the planned timing and sequence of the work and investments needed to progress from the current implementation to the planned future implementation.		X				Figure 2.7.1 EE Integration and Innovation Integrated Implementation Timeline was provided but more narrative around the figure would be helpful.
		v. Describe where and how plans for topic-related work and investments affect the CGPP.		X				Not enough detail on location and investments was provided.
		vi. Describe where and how investment plans developed through the CGPP affect the topic-related work and investments presented in the DSIP update.		X				Not enough detail on the where and how of the investments was provided.
	c. Integrated Implementation Timeline							

EE Integration and Innovation								
		Prompt						**Rationale**
		i. Using a common format developed jointly with the other utilities, provide a high-level implementation timeline that combines the key milestones for all topic-related work and investments planned over the five-year period ending in 2028. Along with the milestones, the timeline should show significant dependencies among the work and investments related to all topics.		X				Detailed timeline was provided.
3. Risks and Mitigation								
		a. Identify and characterize any potential risk(s) and/or actual issue(s) that could affect timely implementation and describe the measures taken, or to be taken, to mitigate the risk(s) and/or resolve the issue(s).		X				Provided Table 2.7.4: Risks and Mitigations for EE Integration and Innovation with significant detail.
4. Stakeholder Engagement								
		a. Identify and characterize the categories of stakeholders engaged in DSIP development and use.		X				Stakeholder section is one paragraph and provided little detail. Additional stakeholder characterization was provided in the program descriptions but was limited to participants.
		b. Describe when and how the goals and needs of each stakeholder category are identified and incorporated into the DSIP.		\				Not provided.
		c. Describe when and how each stakeholder category's needs will be met over time.		X				Minimal and very high-level detail was provided.
		d. Describe and explain the utility's needs for stakeholder-provided information, capabilities, and actions supporting specific implementation and operational outcomes.		X				A short description and very little detail was provided.
		e. Describe the means and methods for effectively informing and engaging associated stakeholders as planning, design, and implementation progress so that the outputs effectively address, as much as feasible, the needs of the utility, DER developers, and stakeholders.		\				Not provided.
		f. Describe how the utility will ensure that the information, tools, and engagement opportunities provided to stakeholders effectively deliver the intended support and do not lead to unintended problems.		X				A short description and very little detail was provided.
4.7 Energy Efficiency Integration and Innovation								
		1. The resources and capabilities used for integrating energy efficiency within system and utility business planning.		X				Minimal detail provided.
		2. The locations and amounts of current energy and peak load reductions attributable to energy efficiency and how the utility determines these.		\				No detail provided.
		3. A high-level description of how the utility's accomplishments and plans are aligned with New York State climate and energy policies and incorporate innovative approaches for accelerating progress to ultimately align with the CLCPA.		X				Provided at a high-level.
		4. Summary information on energy efficiency programs offered by the utility, with direction to annual filings for more detailed information on energy efficiency programs.		X				Table 2.7.2: National Grid's Electric EE Programs and links with further detail provided.
		5. Describe how the utility is coordinating and partnering with NYSERDA's related ongoing statewide efforts to facilitate energy efficiency market development and growth.		X				Minimal detail provided.

Data Sharing								
		Prompt						**Rationale**
	DPS Rationale							
		DPS Staff recommends that the DSIP Update should describe the utility's existing and planned capabilities that enable timely and effective sharing of system and customer data with customers and authorized third-parties. Shared system data should enable DER developers/operators and other third-parties to timely and effectively perform the analyses (engineering, operations, and business) needed to support well-informed decisions. Shared customer data should enable both short-term and long-term analyses and decisions affecting many investments and behaviors which can materially improve customer value by reducing costs and/or improving service. Of particular importance to this topic is NYSERDA's development of a new Integrated Energy Data Resource (IEDR). Most utility data sharing is expected to transition to the IEDR within the five-year time horizon for the DSIP update. Along with satisfying the general guidelines for information related to each topic (see Section 3.1), DPS Staff recommends that the DSIP Update should:						
1. Context and Background								
		a. Describe how topic-related policies, processes, resources, standards, and capabilities have evolved since the 2020 DSIP Update filing.		X				Utility describes existing data sharing platforms they have (New York System Data Portal), but doesn't talk through the evolution of processes, resources, standards since 2020.
2. Implementation Plan, Schedule, and Investments								
	a. Current Progress							
		i. Describe the current implementation as of June 30, 2023; and		X				Table 2.8.1 - describing each piece of data available currently on New York State Data Portal and IEDR.
		ii. Describe how the current implementation supports stakeholders' current and future needs.		X				Table 2.8.1 - describing stakeholder needs of the piece of information on New York State Data Portal and IEDR.
	b. Future Implementation and Planning							
		i. Describe the future implementation that is planned to be deployed by 2028, identifying planned efforts and funded efforts.		X				Timeline of activities from System Data Portal, IEDR, and Electric/Gas/Customer Data platforms through 2028, though, no activity in 2027 and 2028.
		ii. Describe how the future implementation will support stakeholders' needs in 2028 and beyond.		\				No mention of how timeline will support stakeholders needs in 2028 and beyond.
		iii. Identify and characterize the work and investments needed to progress from the current implementation to the planned future implementation.		X				Timeline for each activity is included but details are not included for system data portal enhancements, electric/gas/customer data platforms.
		iv. Describe and explain the planned timing and sequence of the work and investments needed to progress from the current implementation to the planned future implementation.		X				Timing and sequence is clear on IEDR (which occur in yearly steps) and less so on the Electric/Gas/Customer data Platform (which span 3 years).
		v. Describe where and how plans for topic-related work and investments affect the CGPP.		\				No mention of CGPP in section, but CLCPA is mentioned later on in different section with impact of the System Data portal implementation.
		vi. Describe where and how investment plans developed through the CGPP affect the topic-related work and investments presented in the DSIP update.		\				No mention of CGPP in section, but CLCPA is mentioned later on in different section with impact of the System Data portal implementation.

Data Sharing								
		Prompt						**Rationale**
	c.	Integrated Implementation Timeline						
		i. Using a common format developed jointly with the other utilities, provide a high-level implementation timeline that combines the key milestones for all topic-related work and investments planned over the five-year period ending in 2028. Along with the milestones, the timeline should show significant dependencies among the work and investments related to all topics.		X				Timeline, milestones are included. Could use more milestones per data sharing platforms. Only IEDR has specific breakouts for deliverables.
3.	Risks and Mitigation							
		a. Identify and characterize any potential risk(s) and/or actual issue(s) that could affect timely implementation and describe the measures taken, or to be taken, to mitigate the risk(s) and/or resolve the issue(s).		X				Risks are highlighted with mitigations on Table 2.8.3. The Mitigation could use further clarification on what cyber certification is required and what improved data management capabilities are being worked on.
4.	Stakeholder Engagement							
		a. Identify and characterize the categories of stakeholders engaged in DSIP development and use.		X				Stake holders are spelled out and categorized.
		b. Describe when and how the goals and needs of each stakeholder category are identified and incorporated into the DSIP.		\				No mention of goals that tie to each stakeholder category, one example need noted for NY Best interesting hosting capacity map demonstration.
		c. Describe when and how each stakeholder category's needs will be met over time.		\				No mention of timing or mention of stakeholder category needs and how they will be met.
		d. Describe and explain the utility's needs for stakeholder-provided information, capabilities, and actions supporting specific implementation and operational outcomes.		X				Limited mention of how utility uses stakeholder provided information on their implementation outcomes. Just a mention of adding improvements to a roadmap and running training sessions.
		e. Describe the means and methods for effectively informing and engaging associated stakeholders as planning, design, and implementation progress so that the outputs effectively address, as much as feasible, the needs of the utility, DER developers, and stakeholders.		X				Period stakeholder sessions for NY System Data. Stakeholder sessions as part of Joint Utilities for new features. Improvements going into a roadmap.
		f. Describe how the utility will ensure that the information, tools, and engagement opportunities provided to stakeholders effectively deliver the intended support and do not lead to unintended problems.		\				No direct indication of how feedback from stakeholders on user testing for errors, but no description of means to ensure outputs address needs.
4.8	Data Sharing							
		1. provide a functional overview of the planned IEDR;		X				Standard description for IEDR.
		2. provide an overview of NYSERDA's IEDR implementation program, including information pertaining to stakeholder engagement;		X				Stakeholder engagement at onset, leading to priority of use cases and current implementation team.
		3. provide the web link to NYSERDA's IEDR home page along with a summary of the information provided therein;		X				Link provided with short description. Could have provided separate links for each set of materials.
		4. describe the utility's role in supporting IEDR design, implementation, and operation;		X				Described timeline and reoccurrence of UCG monthly meetings to determine implementation, raise concerns and provide test data for hosting capacity maps.

Data Sharing								
		Prompt						**Rationale**
		5. describe the utility's progress, plans, and investments for generating and delivering its system and customer data to the IEDR;		X				Utility describes well plans for a Grid lake and investment in area as well as potential benefits, needs to expand more on existing progress.
		6. identify and characterize each type of data to be delivered to the IEDR;		X				Table 5.8.3 - data by electric/gas system and customer.
		7. describe the resource(s) and method(s) used to deliver each type of data to the IEDR;		X				Resource, method (via SFTP with csv or gdb files) and cadence indicated (monthly or bi-annual).
		8. describe how and when each type of data provided to the IEDR will begin, increase, and improve as IEDR implementation progresses; and,		X				Could use a timeline describing the Phase 1 and Phase 2 needs in relation to data types and expected increased data amounts.
		9. identify and characterize any existing and future utility efforts to share system and customer data with customers and third parties through means that are separate from the IEDR.		X				Existing Green Button Connect highlighted, but no mention of future efforts on sharing system or customer data.

Hosting Capacity							
	Prompt						Rationale
	DPS Rationale						
		Providing an electric distribution system with the capacity to host large scale DER integration is a key part of New York's energy vision. To achieve that outcome, DPS Staff suggests that the utilities should perform several functions to ensure that large amounts of DER can access and utilize hosting capacity in ways that are affordable, effective, efficient, and timely. The utilities have made significant progress in producing and sharing information about the hosting capacity of their current systems. DER developers and other stakeholders value the new information as a significant improvement to the information which was previously available to them; however, more is needed in three areas. First, while DER developers and other stakeholders already access and use the utilities' hosting capacity information, there are opportunities to enhance the information provided beyond the Joint Utilities' current development roadmap. For example, DER developers and the utilities could both be better informed by hosting capacity forecasts which look ahead three to five years. Once available, such forecasts would likely become the preferred resource for planning DER development. Second, as grid operations evolve to accommodate and optimize significant DER development, some of those operations will come to rely on the availability of hosting capacity as a managed system resource. Such operations will continually require very current information about available hosting capacity throughout the distribution system. This means that the utilities should be prepared to timely increase the rate at which they produce and share their information about currently available hosting capacity. And third, the availability of ample hosting capacity at a given location on the grid does not necessarily mean that other factors (i.e., space, accessibility, safety, zoning, customer interest, etc.) will also favor deploying a DER at that location. At the same time, there are many locations where circumstances strongly favor DER development; however, the amount of hosting capacity available at those locations is limited. This could mean that utilities may need to take measures to increase hosting capacity at attractive DER development sites in order to support the State's goals for integrating renewable energy resources. Considering these points, DPS Staff suggests that the utilities should be prepared to timely increase hosting capacity in their distribution systems. DPS Staff recommends that the DSIP Update should address the three areas addressed above and provide detailed information related to assessing current hosting capacity, forecasting hosting capacity, and increasing hosting capacity to show that the utility is timely developing – either individually or jointly with one or more of the other utilities – the necessary information resources and capabilities associated with hosting capacity. Along with satisfying the general guidelines for information related to each topic (see Section 3.1), DPS Staff recommends that the DSIP Update should provide the following additional details which are specific to hosting capacity:						
1. Context and Background							
	a. Describe how topic-related policies, processes, resources, standards, and capabilities have evolved since the 2020 DSIP Update filing.		X				The company provides some information on high level changes in their HC capabilities. The company does not explain evolution since 2020 DSIP.
2. Implementation Plan, Schedule, and Investments							
	a. Current Progress						
	i. Describe the current implementation as of June 30, 2023; and		X				Detailed development progress with maps, tables and examples.
	ii. Describe how the current implementation supports stakeholders' current and future needs.		X				The company explains what HC developments are offered to the stakeholders but it does not always link the justification with their needs.
	b. Future Implementation and Planning						
	i. Describe the future implementation that is planned to be deployed by 2028, identifying planned efforts and funded efforts.		X				Future implementation plans are described, providing sufficient information on what the team is doing.
	ii. Describe how the future implementation will support stakeholders' needs in 2028 and beyond.		X				The company implicitly explains the impact on stakeholders.
	iii. Identify and characterize the work and investments needed to progress from the current implementation to the planned future implementation.		X				Required work is described. Required investment is missing.

Hosting Capacity								
		Prompt						**Rationale**
		iv. Describe and explain the planned timing and sequence of the work and investments needed to progress from the current implementation to the planned future implementation.		X				The company explains that future implementation is about enhancing hosting capacity maps but this is very short and it does not show interactions with current status and next steps.
		v. Describe where and how plans for topic-related work and investments affect the CGPP.		\				No information on CGPP.
		vi. Describe where and how investment plans developed through the CGPP affect the topic-related work and investments presented in the DSIP update.		\				No information on CGPP.
	c. Integrated Implementation Timeline							
		i. Using a common format developed jointly with the other utilities, provide a high-level implementation timeline that combines the key milestones for all topic-related work and investments planned over the five-year period ending in 2028. Along with the milestones, the timeline should show significant dependencies among the work and investments related to all topics.		X				Planned investments are missing.
3. Risks and Mitigation								
		a. Identify and characterize any potential risk(s) and/or actual issue(s) that could affect timely implementation and describe the measures taken, or to be taken, to mitigate the risk(s) and/or resolve the issue(s).		X				Risks are mentioned but some more details on the risk itself would be beneficial. Mitigation measures are well described.
4. Stakeholder Engagement								
		a. Identify and characterize the categories of stakeholders engaged in DSIP development and use.		X				Only developers are mentioned . Limited number of stakeholders have been identified.
		b. Describe when and how the goals and needs of each stakeholder category are identified and incorporated into the DSIP.		X				Needs and goals are not well described. Across the section, the reader can identify some of the stakeholder's drivers but these are not very well described.
		c. Describe when and how each stakeholder category's needs will be met over time.		X				The information is not included in the "Stakeholder Interface" section but across the HC chapter we can identify some of their needs which will be met over time.
		d. Describe and explain the utility's needs for stakeholder-provided information, capabilities, and actions supporting specific implementation and operational outcomes.		\				This information is missing.
		e. Describe the means and methods for effectively informing and engaging associated stakeholders as planning, design, and implementation progress so that the outputs effectively address, as much as feasible, the needs of the utility, DER developers, and stakeholders.		X				Light description of the webinars as a means of engagement.
		f. Describe how the utility will ensure that the information, tools, and engagement opportunities provided to stakeholders effectively deliver the intended support and do not lead to unintended problems.		\				This information is missing.
4.9 Hosting Capacity								
		1. Describe the utility's current efforts to plan, implement, and manage projects related to hosting capacity. Information provided should include:						

Hosting Capacity								
		Prompt						**Rationale**
		a. detailed description of each project, existing and planned, with an explanation of how the project fits into the utility's long range hosting capacity plans;		X				The company describes in detail the HC map evolutions but has not responded to the requirements. The company has only responded to area 1 of DSP rationale (and requirements). The company does not explain how to increase hosting capacity and how will increase the rate at which the produce and share information.
		b. the original project schedule;		X				This information is provided.
		c. the current project status;		X				This information is provided.
		d. lessons learned to date;		X				Lessons learned of the development of hosting capacity maps are provided.
		e. project adjustments and improvement opportunities identified to date; and		X				Limited info.
		f. next steps with clear timelines and deliverables.		X				Information is provided in other section.
		2. Describe where and how DER developers/operators and other third parties can currently access the utility's hosting capacity information.		X				Sufficient information.
		3. Describe how and when the existing hosting capacity assessment information provided to DER developers/operators and other third parties will increase and improve as work progresses. This should include discussion of the transition of hosting capacity information access from the utility's current hosting capacity information portal to the statewide hosting capacity solution in development on the IEDR.		X				Sufficient information and description of the transition to IEDR platform.
		4. Describe the means and methods used for determining the hosting capacity currently available at each location in the distribution system.		X				Information is provided in other sections of the report.
		5. Describe the means and methods used for forecasting the future hosting capacity available at each location in the distribution system.		X				Forecasting future hosting capacity is not in the priority of this (and other) utilities. Limited information is provided.
		6. Describe how and when the future hosting capacity forecast information provided to DER developers/operators and other third parties will begin, increase, and improve as work progresses.		X				Only the initiation of forecasting future capacity is available.
		7. Summarize the utility's specific objectives and methods for:						
		a. identifying and characterizing locations in the utility's service area where limited hosting capacity is a barrier to productive DER development, directing users to the CGPP filing for further information; and		X				The company explains where this information is available but it does not explain methods for identifying and characterizing locations with limited capacity.
		b. timely increasing hosting capacity to enable productive DER development at those locations, directing users to the IEDR platform when applicable for more information.		X				

Billing and Compensation								
		Prompt						**Rationale**
	DPS Rationale							
		A monthly bill is often the only method of engagement and communication between a utility and its customers. Because of this, customer billing and compensation are vital components of a utility's core business and, therefore, must be accurate, timely, and transparent. It is DPS Staff's position that billing that is consistent, accurate, and well explained will lead to increased customer satisfaction and reduced inquiries to the utility's call center and/or reduced customer complaints to the Commission, on social media, or to the press. Along with satisfying the general guidelines for information related to each topic (see Section 3.1), DPS Staff recommends that the DSIP Update should provide the following additional details pertaining to customer billing and compensation:						
1.	Context and Background							
		a. Describe how topic-related policies, processes, resources, standards, and capabilities have evolved since the 2020 DSIP Update filing.		X				Comprehensive discussion and graph that illustrates adoption of VDER over time.
2.	Implementation Plan, Schedule, and Investments							
	a.	Current Progress						
		i. Describe the current implementation as of June 30, 2023; and		X				Described current implementation.
		ii. Describe how the current implementation supports stakeholders' current and future needs.		X				No clear mention of stakeholders needs although there is discussion of customer portal.
	b.	Future Implementation and Planning						
		i. Describe the future implementation that is planned to be deployed by 2028, identifying planned efforts and funded efforts.		X				All elements addressed in narrative.
		ii. Describe how the future implementation will support stakeholders' needs in 2028 and beyond.		X				Limited discussion of stakeholders.
		iii. Identify and characterize the work and investments needed to progress from the current implementation to the planned future implementation.		X				All elements addressed in narrative.
		iv. Describe and explain the planned timing and sequence of the work and investments needed to progress from the current implementation to the planned future implementation.		X				All elements addressed in narrative.
		v. Describe where and how plans for topic-related work and investments affect the CGPP.		\				CGPP not addressed.
		vi. Describe where and how investment plans developed through the CGPP affect the topic-related work and investments presented in the DSIP update.		\				CGPP not addressed.
	c.	Integrated Implementation Timeline						
		i. Using a common format developed jointly with the other utilities, provide a high-level implementation timeline that combines the key milestones for all topic-related work and investments planned over the five-year period ending in 2028. Along with the milestones, the timeline should show significant dependencies among the work and investments related to all topics.		X				Clear section specific timeline included.
3.	Risks and Mitigation							
		a. Identify and characterize any potential risk(s) and/or actual issue(s) that could affect timely implementation and describe the measures taken, or to be taken, to mitigate the risk(s) and/or resolve the issue(s).		X				Clear narrative and accompanying table.
4.	Stakeholder Engagement							
		a. Identify and characterize the categories of stakeholders engaged in DSIP development and use.		X				Various categories of stakeholders described.
		b. Describe when and how the goals and needs of each stakeholder category are identified and incorporated into the DSIP.		\				Not included in this section.
		c. Describe when and how each stakeholder category's needs will be met over time.		X				Some discussion of incorporation of needs / requests.

Billing and Compensation								
		Prompt						**Rationale**
		d. Describe and explain the utility's needs for stakeholder-provided information, capabilities, and actions supporting specific implementation and operational outcomes.		\				Not included in this section.
		e. Describe the means and methods for effectively informing and engaging associated stakeholders as planning, design, and implementation progress so that the outputs effectively address, as much as feasible, the needs of the utility, DER developers, and stakeholders.		X				
		f. Describe how the utility will ensure that the information, tools, and engagement opportunities provided to stakeholders effectively deliver the intended support and do not lead to unintended problems.		\				Not included in this section.
4.10 Billing and Compensation								
		1. Describe the various DER-related billing and compensation programs (including demand response) implemented or revised by the utility since the last update. For this first inclusion in the DSIP, describe developments that have occurred since the beginning of NEM, RNM, CDG, and VDER.		X				Description and table of workstreams and completion dates.
		2. Describe the customer billing/compensation functions and data generally needed to expand deployment and use of DERs in the utility's service area. Include descriptions of the existing and planned components (processes, resources, and data exchanges) that will support those needs. For planned components, provide the sequence and timing of key investments and activities required for component implementation.		X				Clearly discusses new resources / processes include new hires, and development of a renewable energy billing department to support DG billing. References other questions for descriptions.
		3. Describe the customer billing/compensation functions and data needed to enable DER participation in the NYISO's wholesale markets for energy, capacity, and ancillary services. This should include information regarding the utility's implementation of its Wholesale Distribution Service (WDS), Wholesale Value Stack (WVS), and related non-wholesale value stack (VDER without wholesale energy and capacity components). Also include descriptions of the existing and planned components (processes, resources, and data exchanges) that will support those needs. For planned components, provide the sequence and timing of key investments and activities required for component implementation.		X				Complete with the exception of timing sequence but a lot of narrative to follow.
		4. Describe the utility's plans to implement or modify DER-related billing and compensation capabilities, including automation, to address the Community Distributed Generation (CDG) billing and crediting problems that were the focus of the Commission's September 15, 2022, Order in Cases 19-M-0463, et. al.13		X				Limited discussion, referenced question 1.
		5. For each type of DER billing and compensation, including for CDG and wholesale market participation, describe the current information system constraints preventing full automation of DER billing and compensation.		X				Describes constraints briefly for CDG, Solar for all, and VDER.
		6. Describe how DER billing and compensation affects other programs such as budget billing, time of use rates, and consolidated billing for Energy Service Companies (ESCOs).		X				Clear matrix that lays out the interaction between programs.
		7. Describe the utility's means and methods - existing and planned – for monitoring and testing new or modified customer billing and compensation functions.		X				Existing methods described in text.
		8. Describe the utility's means and methods – existing and planned - for supporting customer outreach and education, including where and how customers, DER developers/operators and other third-parties can readily access information on the utility's billing and compensation procedures.		X				New Solar Hub information sharing section of website described.
		9. Describe the utility's means and methods - existing and planned – for receiving, investigating, and monitoring customer complaints and/or inquiries regarding billing and compensation issues related to DERs.		X				Described methods for managing customer complaints.

DER Interconnections								
		Prompt						**Rationale**
	DPS Rationale							
		Implementing the utility resources and capabilities that enable DER interconnections to the distribution system is a critical early objective. Many of the details which identify and characterize those resources and capabilities are being worked out by the Interconnection Technology Working Group (ITWG) and the Interconnection Policy Working Group (IPWG), which are stakeholder collaboratives led jointly by DPS Staff and NYSERDA. The goal of both working groups is to establish the requirements for standard resources, processes, specifications, and policies which foster efficient, timely, safe, and reliable DER interconnections. Along with satisfying the general guidelines for information related to each topic (see Section 3.1), DPS Staff recommends that the DSIP Update should provide the following additional details, which are specific to DER interconnections:						
1.	Context and Background							
		a. Describe how topic-related policies, processes, resources, standards, and capabilities have evolved since the 2020 DSIP Update filing.		X				Good discussion of general development and NGET-specific developments. Developments include demonstration of innovation in cost sharing.
2.	Implementation Plan, Schedule, and Investments							
	a.	Current Progress						
		i. Describe the current implementation as of June 30, 2023; and		X				Good description.
		ii. Describe how the current implementation supports stakeholders' current and future needs.		X				Description of meeting current needs, but limited description of future needs.
	b.	Future Implementation and Planning						
		i. Describe the future implementation that is planned to be deployed by 2028, identifying planned efforts and funded efforts.		X				There is a high-level table and some identification of projects, but no qualification of what is planned and what is funded.
		ii. Describe how the future implementation will support stakeholders' needs in 2028 and beyond.		X				Identification of core needs and systems or changes that will meet these needs, but little mention of how this will support needs beyond 2028.
		iii. Identify and characterize the work and investments needed to progress from the current implementation to the planned future implementation.		X				Some characterization of work and investments to implement future investments. Particularly strong around clean innovation projects but other areas could be more explicit.
		iv. Describe and explain the planned timing and sequence of the work and investments needed to progress from the current implementation to the planned future implementation.		X				Some timings are given and explanation is strong for clean innovation projects, but other areas lack the same level of detail.
		v. Describe where and how plans for topic-related work and investments affect the CGPP.		\				Not provided.
		vi. Describe where and how investment plans developed through the CGPP affect the topic-related work and investments presented in the DSIP update.		\				Not provided.
	c.	Integrated Implementation Timeline						
		i. Using a common format developed jointly with the other utilities, provide a high-level implementation timeline that combines the key milestones for all topic-related work and investments planned over the five-year period ending in 2028. Along with the milestones, the timeline should show significant dependencies among the work and investments related to all topics.		X				A high-level implementation plan is shown but there is no demonstration of dependencies and the plan lacks detail.
3.	Risks and Mitigation							

DER Interconnections								
		Prompt						**Rationale**
		a. Identify and characterize any potential risk(s) and/or actual issue(s) that could affect timely implementation and describe the measures taken, or to be taken, to mitigate the risk(s) and/or resolve the issue(s).		X				There is a single high-level risk identified with a comparably high level mitigation.
4. Stakeholder Engagement								
		a. Identify and characterize the categories of stakeholders engaged in DSIP development and use.		X				High level identification of stakeholders largely limited to IPWG and ITWG forums.
		b. Describe when and how the goals and needs of each stakeholder category are identified and incorporated into the DSIP.		X				Explanation that working groups and meetings are held, but limited discussion of how often these are held and the process for incorporating outputs.
		c. Describe when and how each stakeholder category's needs will be met over time.		X				Limited explanation of when needs will be met over time.
		d. Describe and explain the utility's needs for stakeholder-provided information, capabilities, and actions supporting specific implementation and operational outcomes.		X				High-level statement that DER interconnection is a collaborative process necessitating a review of each interconnection, but no details provided on specific outcomes.
		e. Describe the means and methods for effectively informing and engaging associated stakeholders as planning, design, and implementation progress so that the outputs effectively address, as much as feasible, the needs of the utility, DER developers, and stakeholders.		X				No detailed explanation of how engagement with stakeholders changes as projects go through planning design and implementation.
		f. Describe how the utility will ensure that the information, tools, and engagement opportunities provided to stakeholders effectively deliver the intended support and do not lead to unintended problems.		X				There is a high-level statement about an escalation process when stakeholders have concerns, but no detail on what this process is.
4.11 DER Interconnections								
		1. Describe in detail (including the web URL) the web portal that provides efficient and timely support for DER developers' interconnection applications.		X				A reasonable explanation of the system is given. The description details a mature level of functionality and automation in the system.
		2. Describe where, how, and when the utility will implement and maintain a resource where DER developers and other stakeholders with appropriate access controls can readily access, navigate, view, sort, filter, and download up to date information about all DER interconnections in the utility's system. The resource should provide the following information for each DER interconnection:						
		a. DER type, size, and location;		X				Generalized information is publicly available while specific information is restricted to those with the right permissions.
		b. DER developer;		X				Available in excel.
		c. DER owner;		X				The portal tracks the owner. This is only visible to those with appropriate permissions.
		d. DER operator;		\				Not tracked.
		e. the connected substation, circuit, phase, and tap;		X				Tracks circuit, substation, 1 or 3-phase, but not individual phase or tap.
		f. the DER's remote monitoring, measurement, and control capabilities; and		X				Details that DERs with monitoring and control capability are integrated into EMS, but not publicly available. M&C requirements published.
		g. the DER's primary and secondary (where applicable) purposes; and,		\				Not tracked.

DER Interconnections								
		Prompt						**Rationale**
		h. the DER's current interconnection status (operational, construction in progress, construction scheduled, or interconnection requested) and its actual/planned in service date.		X				All data tracked.
		3. Describe the utility's means and methods for tracking and managing its DER interconnection application process and explain how those means and methods ensure achievement of the performance timelines established in New York State's Standardized Interconnection Requirements.		\				Not described.
		4. Describe where, how, and when the utility will provide a resource to applicants and other appropriate stakeholders for accessing up to date information concerning application status and process workflows.		X				Detailed in the portal description section.
		5. Describe the utility's processes, resources, and standards used for constructing approved DER interconnections.		\				Not described.
		6. Describe the utility's means and methods used for tracking and managing construction of approved DER interconnections to ensure achievement of required performance levels.		\				Not described.
		7. Describe how and when the utility will deliver and maintain its DER interconnection information to the IEDR.		\				Not described.

AMI							
	Prompt						Rationale
	DPS Rationale						
	Advanced Metering Infrastructure (AMI) provides grid edge measurement, data acquisition, and control capabilities which are either essential or beneficial to a number of important functions in a modern distribution system. Granular time series data from smart meters and other intelligent devices at customers' premises enables advanced analyses, innovative rate designs, and customer engagement strategies which benefit both the customers and the grid. Voltage sensing and measurement functions support increased system efficiency and enable improved outage detection and restoration processes. Capabilities supporting DER measurement, monitoring, and control are essential for DER integration. Along with satisfying the general guidelines for information related to each topic (see Section 3.1), DPS Staff recommends that the DSIP Update should provide the following additional details which are specific to AMI:						
1. Context and Background							
	a. Describe how topic-related policies, processes, resources, standards, and capabilities have evolved since the 2020 DSIP Update filing.		X				
2. Implementation Plan, Schedule, and Investments							
	a. Current Progress						
	i. Describe the current implementation as of June 30, 2023; and		X				Very detailed history of steps taken for the approval and implementation of AMI. Does not indicate their actual status with the schedule.
	ii. Describe how the current implementation supports stakeholders' current and future needs.		X				Town halls, customer research, interactive showcase house. Plus plans for engagement and offerings.
	b. Future Implementation and Planning						
	i. Describe the future implementation that is planned to be deployed by 2028, identifying planned efforts and funded efforts.		X				List of future values/use cases, but described as more theoretic than planned likely because deployment is first priority. Looking at VVO and FLISR capabilities. Includes the % split of when meters will be deployed by year. Funding discussed in risk table.
	ii. Describe how the future implementation will support stakeholders' needs in 2028 and beyond.		X				Clear discussion of how national grid will engage customers to understand their needs on page 125. Very limited discussion of supporting other stakeholders needs.
	iii. Identify and characterize the work and investments needed to progress from the current implementation to the planned future implementation.		X				Page 124 - 127 give a clear indication of the efforts that will be made to progress from current implementation to future implementation including: systems work, customer engagement and key challenges to overcome (table 2.12.1). No discussion of funding required.
	iv. Describe and explain the planned timing and sequence of the work and investments needed to progress from the current implementation to the planned future implementation.		X				Figure 2.12.4 - no discussion of investments needed.
	v. Describe where and how plans for topic-related work and investments affect the CGPP.		\				
	vi. Describe where and how investment plans developed through the CGPP affect the topic-related work and investments presented in the DSIP update.		\				
	c. Integrated Implementation Timeline						

AMI							
		Prompt					**Rationale**
		i. Using a common format developed jointly with the other utilities, provide a high-level implementation timeline that combines the key milestones for all topic-related work and investments planned over the five-year period ending in 2028. Along with the milestones, the timeline should show significant dependencies among the work and investments related to all topics.		X			Figure 2.12.4 provides a timeline but does not show key dependencies or common format.
3. Risks and Mitigation							
		a. Identify and characterize any potential risk(s) and/or actual issue(s) that could affect timely implementation and describe the measures taken, or to be taken, to mitigate the risk(s) and/or resolve the issue(s).		X			Risk and mitigation table that captures the AMI deployment.
4. Stakeholder Engagement							
		a. Identify and characterize the categories of stakeholders engaged in DSIP development and use.		X			MVP process to understand customers. Sufficient approach.
		b. Describe when and how the goals and needs of each stakeholder category are identified and incorporated into the DSIP.		X			Only describes engagement and awareness with customers and possible capabilities it unlocks.
		c. Describe when and how each stakeholder category's needs will be met over time.		X			No specific timeline detailed.
		d. Describe and explain the utility's needs for stakeholder-provided information, capabilities, and actions supporting specific implementation and operational outcomes.		\			
		e. Describe the means and methods for effectively informing and engaging associated stakeholders as planning, design, and implementation progress so that the outputs effectively address, as much as feasible, the needs of the utility, DER developers, and stakeholders.		X			High level description of outreach to engage customers. Could use more details to fully answer the prompt.
		f. Describe how the utility will ensure that the information, tools, and engagement opportunities provided to stakeholders effectively deliver the intended support and do not lead to unintended problems.		\			
4.12 Advanced Metering Infrastructure							
		1. Provide a summary of the most up to date AMI implementation plans, including where AMI has been deployed to date.		X			Indicated repeat of section 2.12. Figure 2.12.3 provides timeline overview but unclear on planned vs actuals and where.
		2. Provide a summary of all new capabilities that AMI has enabled to date, and how these capabilities benefit customers, including, as applicable, customer engagement, energy efficiency, and innovative rates.		X			Page 124-125 details use cases but hard to determine what is enabled vs planned.
		3. Describe the AMI-acquired data and information that is planned to be available through the IEDR.		X			Table 5.12.1 - billing data available; indicates exchange is in the planning phase.
		4. Describe where and how DER developers, customers, and other stakeholders can access up to date information about the locations and capabilities of existing and planned smart meters.		X			Plan to use IDER and their website, as well as direct marketing to new services.
		5. Provide a summary of plans and timelines for future expansion and/or enhancement of AMI functions.		X			Detailed description of near-term plans in section 2 and longer-term plans are described in detail on pages 211-213.
		6. Describe where and how each type of AMI-acquired data is stored, managed, and shared with, and used by other utility information systems such as those used for billing/compensation, customer service, work management, asset management, grid planning, and grid operations.		X			Detailed description of near-term plans in section 2 and longer-term plans are described in detail on pages 211-213.

Beneficial Location of DERs and NWA							
	Prompt						Rationale
	DPS Rationale						
	To help promote productive DER development, DPS Staff suggests that it is essential that the utility identify, characterize, and publicly present the locations in its service area where DERs and/or energy efficiency might provide significant benefits to the distribution system and/or to the bulk electric system. Based on its criteria for evaluating opportunities for non wires alternatives (NWA), the utility then selects some of those locations for NWA procurements and/or energy efficiency measures that will benefit the distribution system. In their previous DSIP filings, the utilities have separately described their processes for identifying beneficial locations, evaluating NWA suitability, and procuring non-wires solutions. However, as the utilities have evolved their planning processes to perform these functions, they have become part of a continuous process that begins with integrated planning. Therefore, DPS Staff recommends that the utility's 2023 DSIP update, and all future updates, should reflect this updated process by combining the topics of identification of beneficial locations, NWA suitability assessment, and procurement processes into one cohesive discussion. Along with satisfying the general guidelines for information related to each topic (see Section 3.1), DPS Staff recommends that the DSIP Update should provide the following additional details:						
1.	Context and Background						
	a. Describe how topic-related policies, processes, resources, standards, and capabilities have evolved since the 2020 DSIP Update filing.		X				Robust discussion of the NWA process including identification, procurement process, and BCA.
2.	Implementation Plan, Schedule, and Investments						
	a. Current Progress						
	i. Describe the current implementation as of June 30, 2023; and		X				Robust description of NWA evaluations, process improvements and internal coordination efforts.
	ii. Describe how the current implementation supports stakeholders' current and future needs.		X				Robust discussion of RFP and procurement process improvements and their benefit/purpose and use of EE/DR to improve cost-effectiveness
	b. Future Implementation and Planning						
	i. Describe the future implementation that is planned to be deployed by 2028, identifying planned efforts and funded efforts.		X				Provides more detail on the NWA being pursued but lack concrete information on the RFP and contracting improvements or planning improvements to be pursued. I note that these improvements may not be fleshed out yet so recognizing the need to make these continual improvements is a good step.
	ii. Describe how the future implementation will support stakeholders' needs in 2028 and beyond.		X				Not much discussion on how the future improvements will impact stakeholders though can be implied based on discussion in preceding section as most future plans are continuation of efforts that have already been started.
	iii. Identify and characterize the work and investments needed to progress from the current implementation to the planned future implementation.		X				It notes the need for further study of resources for voltage support NWAs. Less concrete on needs for improving RFPs but notes consultant efforts for contracting improvements.
	iv. Describe and explain the planned timing and sequence of the work and investments needed to progress from the current implementation to the planned future implementation.		X				Provides a discussion on timing for NWA solicitation and a note on the current contracting improvements consulting effort.

Beneficial Location of DERs and NWA								
		Prompt						**Rationale**
		v. Describe where and how plans for topic-related work and investments affect the CGPP.		X				Notes identifying beneficial locations for DERs can help support clean energy goals, specifically cost.
		vi. Describe where and how investment plans developed through the CGPP affect the topic-related work and investments presented in the DSIP update.		X				The section on alignment with CLCPA goals does not indicate if/how the CLCPA will support NWAs/beneficial locations.
	c.	Integrated Implementation Timeline						
		i. Using a common format developed jointly with the other utilities, provide a high-level implementation timeline that combines the key milestones for all topic-related work and investments planned over the five-year period ending in 2028. Along with the milestones, the timeline should show significant dependencies among the work and investments related to all topics.		X				Timeline provided through 2028 but includes limited milestones (rate case, DSIPs) and no data on dependencies.
3.	Risks and Mitigation							
		a. Identify and characterize any potential risk(s) and/or actual issue(s) that could affect timely implementation and describe the measures taken, or to be taken, to mitigate the risk(s) and/or resolve the issue(s).		X				Only three risks identified with mitigations. Mitigations are sufficient but not robust and do not identify whether an alternative option is available should the risk come to fruition or how the Risk could impact the effort.
4.	Stakeholder Engagement							
		a. Identify and characterize the categories of stakeholders engaged in DSIP development and use.		\				Not provided.
		b. Describe when and how the goals and needs of each stakeholder category are identified and incorporated into the DSIP.		\				Not provided.
		c. Describe when and how each stakeholder category's needs will be met over time.		\				Not provided.
		d. Describe and explain the utility's needs for stakeholder-provided information, capabilities, and actions supporting specific implementation and operational outcomes.		\				Not provided.
		e. Describe the means and methods for effectively informing and engaging associated stakeholders as planning, design, and implementation progress so that the outputs effectively address, as much as feasible, the needs of the utility, DER developers, and stakeholders.		X				Not included in stakeholder section but current progress section includes information on how stakeholders are informed (screenshot of website etc.).
		f. Describe how the utility will ensure that the information, tools, and engagement opportunities provided to stakeholders effectively deliver the intended support and do not lead to unintended problems.		\				Not provided.
4.13	Beneficial Locations for DERs and Non Wires Alternatives							
		1. Describe where and how developers and other stakeholders can access resources for:						
		a. accessing up to date information about beneficial locations for DERs and/or energy efficiency measures; and		X				
		b. efficiently sorting and filtering locations by the type(s) of capability needed, the timing and amount of each needed capability, the type(s) and value of desired benefit, the serving substation, the circuit, and the geographic area.		X				Notes that the ability to query and filter is available in their system portal but they are working to expand the capability.

Beneficial Location of DERs and NWA							
		Prompt					**Rationale**
		2. Describe the means and methods for identifying and evaluating locations in the distribution system where:					
		a. an NWA comprising one or more DERs and/or energy efficiency measures could timely reduce, delay, or eliminate the need for upgrading distribution infrastructure and/or materially benefit distribution system reliability, efficiency, and/or operations; and/or		X			
		b. one or more DERs and/or energy efficiency measures including increased value based customer incentives could reduce, delay, or eliminate the need for upgrading bulk electric system resources and/or materially benefit bulk electric system reliability, efficiency, and/or operations.		X			
		3. Describe how the NWA procurement process works within utility time constraints while enabling DER developers to properly prepare and propose NWA solutions which can be implemented in time to serve the system need. Details should include:					
		a. how utility and DER developer time and expense are minimized for each procurement transaction;		X			
		b. how standardized contracts and procurement methods are used across the utilities.		X			
		4. Describe where and how DER developers and other stakeholders can access up to date information about current NWA project opportunities.		X			Points to question 1 in this section but the questions are very similar so this makes sense in this case.
		5. Describe how the utility considers all aspects of operational criteria and public policy goals when deciding what to procure as part of a NWA solution.		X			
		6. Describe where, how, and when the utility will provide DER developers and other stakeholders with a resource for accessing up to date information about all completed and in progress NWA projects. The information provided for each project should:					
		a. describe the location, type, size, and timing of the system need addressed by the project;		X			
		b. provide the amount of traditional solution cost that was/will be avoided;		X			Section discusses where to find information on NWA opportunities and projects but does not explicitly state whether the traditional solution cost is included.
		c. explain how the selected NWA solution enables the savings; and		X			Notes that National Grid files available reports and will file its first BCA in 2023 but is not clear if a discussion on how a selected NWA results in savings is included.
		d. describe the structure and functional characteristics of the procurement transaction between the utility and the solution provider(s).		X			Section does not discuss how the procurement process is done, but does note project info is filed.

How to Use the Assessment

Purpose of DSIPs The purpose of the DSIPs is to provide detailed, up-to-date information about progress and plans related to the implementation of a Distributed System Platform (DSP) featuring operational and market capabilities that will enable a market for products and services provided by the Distributed Energy Resources (DER) that are connected to the utility's distribution systems

Purpose of Assessmen The purpose of this assessment is to determine the alignment of each DSIP with the guidance provided in the 2023 DPS Staff Whitepaper.

Format of Assessment This assessment represents a review of one utility's DSIP. It is organized into 13 tabs/charts for each technical topic described in DPS guidance.

Review Approach

Checkbox The "checkbox" column is a quick check/reference to see if the DSIP responded to each component of the guidance.

Color Assessment The color assessment is a visual indicator of how well the DSIP response aligns with the prompts outlined in the DPS guidance.

Some evidence indicating that that DSIP aligns with the DPS guidance.

Sufficient evidence that DSIP aligns with the DPS guidance

Satisfies all elements of the DPS guidance in a robust and comprehensive manner.

Cumulative Assessment

	4.1 Integrated Planning	4.2 Advanced Fore-casting	4.3 Grid Operations	4.4 Energy Storage Integration	4.5 Electric Vehicle Integration	4.6 Clean Heat Integration	4.7 EE Integration and Innovation	4.8 Data Sharing	4.9 Hosting Capacity	4.1 Billing and Comp-ensation	4.11 DER Interconn-ections	4.12 Advanced Metering Infra-structure	4.13 Beneficial Locations for DERs and NWA
1. Context/Background													
2. Implementation Plan													
3. Risks/Mitigation													
4. Stakeholder Engmt.												N/A	
Prompt 1									N/A				
Prompt 2													
Prompt 3													
Prompt 4													
Prompt 5													
Prompt 6			-			N/A	-						
Prompt 7			-				-					-	-
Prompt 8			-			-	-		-		-	-	-
Prompt 9	-		-		-	-	-		-		-	-	-
Prompt 10	-		-		-	-	-	-	-	-	-	-	-
Prompt 11	-		-	-	-	-	-	-	-	-	-	-	-
Prompt 12	-		-	-	-	-	-	-	-	-	-	-	-
Prompt 13	-		-	-	-	-	-	-	-	-	-	-	-
Prompt 14	-		-	-	-	-	-	-	-	-	-	-	-
Prompt 15	-		-	-	-	-	-	-	-	-	-	-	-
Prompt 16	-		-	-	-	-	-	-	-	-	-	-	-
Prompt 17	-		-	-	-	-	-	-	-	-	-	-	-

	5.1 DSIP Governance	5.2 MCOS	5.3 BCA
Included (Y/N)	Y	N	Y
Color Assessment			

Key

	Not answered	OS	Answered outside the topic area section	N/A	Not applicable
-	Not asked				
	Some evidence indicating that that DSIP aligns with the DPS guidance.				
	Sufficient evidence that DSIP aligns with the DPS guidance				
	Satisfies all elements of the DPS guidance in a robust and comprehensive manner.				

Integrated Planning							
	Prompt						**Rationale**
	DPS Rationale						
	DPS Staff recommends that the utility's electric system plan should position the utility to integrate an increasing number and variety of DERs while maintaining or improving safety, reliability, quality, and affordability of service. While stakeholders will now be able to reference the CGPP for a detailed understanding of how integrated planning will evolve to meet system needs aligned with the CLCPA, the DSIP should leverage the outputs of CGPP scenario planning and filed capital investment plans as inputs, and describe overall implementation plans and timelines as well as advances in specific planning functionalities that enhance the DSP. Along with satisfying the general guidelines for information related to each topical area (see Section 3.1), DPS Staff suggests that the DSIP Update should provide the following additional details which are specific to the utility resources and capabilities which support integrated electric system planning:						
1.	Context and Background						
	a. Describe how topic-related policies, processes, resources, standards, and capabilities have evolved since the 2020 DSIP Update filing.		X				Very comprehensive and gives the good reader a detailed overview of what Central Hudson has been working on and accomplished.
2.	Implementation Plan, Schedule, and Investments						
	a. Current Progress						
	i. Describe the current implementation as of June 30, 2023; and		X				While it does point readers to other sections, including the preceding context section it does highlight what they are currently doing to allow the reader to understand where they have been focusing. However discussion is high-level and does not include discussion on specific accomplishments to date, though some is contained in other sections.
	ii. Describe how the current implementation supports stakeholders' current and future needs.		X				Most discussion on parties impacted focuses on internal engineers. Section points reader to stakeholder section to learn more about access to 8760 data for other stakeholders.
	b. Future Implementation and Planning						
	i. Describe the future implementation that is planned to be deployed by 2028, identifying planned efforts and funded efforts.		X				Table 1 outlines steps well but checkmark not fully explained (no checks under storage) and does not identify what is funded and thus likely to occur.
	ii. Describe how the future implementation will support stakeholders' needs in 2028 and beyond.		X				Mentions stakeholder and customer needs once but does not provide details on how these efforts will impact them or incorporate their needs. Impact to internal engineers discussed at times.

Integrated Planning								
		Prompt						**Rationale**
		iii. Identify and characterize the work and investments needed to progress from the current implementation to the planned future implementation.		X				Focused on improving the forecasting process and mentions improvements to data, DA and DMS investments (discussed elsewhere) and need for new technical resources within Central Hudson. Not enough information for readers to understand what specific investments are needed and how much they might cost (no magnitude of cost provided either) .
		iv. Describe and explain the planned timing and sequence of the work and investments needed to progress from the current implementation to the planned future implementation.		X				Same notes as row 9- detailed table (Table 1) but hard to make sense of and determine what is expected to happen vs. a gap.
		v. Describe where and how plans for topic-related work and investments affect the CGPP.		X				Discussion of overlap between what is in the DSIP and CGPP included though focuses on how the DSIP is broader and the CGPP is focused on meeting CLCPA goals.
		vi. Describe where and how investment plans developed through the CGPP affect the topic-related work and investments presented in the DSIP update.		X				While not a lot of information is provided it seems to sufficiently answer the question about how materials developed for the CGPP will be incorporated into the DSIP process and where they are trying to align.
	c.	Integrated Implementation Timeline						
		i. Using a common format developed jointly with the other utilities, provide a high-level implementation timeline that combines the key milestones for all topic-related work and investments planned over the five-year period ending in 2028. Along with the milestones, the timeline should show significant dependencies among the work and investments related to all topics.		X				Refers reader to Figure 8 under Grid Modernization
3.	Risks and Mitigation							
		a. Identify and characterize any potential risk(s) and/or actual issue(s) that could affect timely implementation and describe the measures taken, or to be taken, to mitigate the risk(s) and/or resolve the issue(s).		X				Logical risks identified, discussion of mitigation of some of the risks (how they will manage insights into DER operations. Mitigation did not seem to cover root cause risks like changes in policies, prices, and wholesale market participation so more could be done to identify how Central Hudson is thinking about how to incorporate the impact of those risks (not clear if their forecasting methodology for DERs includes scenarios based on these specific impacts).
4.	Stakeholder Engagement							
		a. Identify and characterize the categories of stakeholders engaged in DSIP development and use.		X				Includes discussion of some stakeholders and how they contribute to the process through data or other plans. Blue because section points to other sections of the plan for more information.

Integrated Planning								
		Prompt						**Rationale**
		b. Describe when and how the goals and needs of each stakeholder category are identified and incorporated into the DSIP.		X				See above
		c. Describe when and how each stakeholder category's needs will be met over time.		X				Little discussion of stakeholders needs, more focus on data that they get from stakeholders to support the process. Does include discussion of output from the plan going into NWA procurement, hence orange instead of no check. Points to other sections for more information on stakeholders.
		d. Describe and explain the utility's needs for stakeholder-provided information, capabilities, and actions supporting specific implementation and operational outcomes.		X				Mentions inputs from other stakeholders but does not get into details about what data or information is used from these stakeholder outputs.
		e. Describe the means and methods for effectively informing and engaging associated stakeholders as planning, design, and implementation progress so that the outputs effectively address, as much as feasible, the needs of the utility, DER developers, and stakeholders.		X				Points to other sections for more information.
		f. Describe how the utility will ensure that the information, tools, and engagement opportunities provided to stakeholders effectively deliver the intended support and do not lead to unintended problems.		X				No discussion identified other than notes that stakeholders engage in inputs and outputs, not the process but does not identify how stakeholders will be effectively engaged.
4.1 Integrated Planning								
		1. The means and methods used for integrated distribution system planning.		X				Points to other sections and the Electric System Planning Guides.
		2. How the utility's means and methods enable probabilistic planning which effectively anticipates the inter related effects of distributed generation, energy storage, electric vehicles, beneficial electrification, and energy efficiency.		X				Good discussion but refers to other sections for more information.
		3. How the utility ensures that the information needed for integrated system planning is timely acquired and properly evaluated.		X				Good discussion on source of data and timing and includes relevant graphic from other materials cited
		4. The types of sensitivity analyses performed and how those analyses are applied as part of the integrated planning process.		X				While they do not discuss the types of sensitivities run, they discuss why they do not need to run these analyses based on their probabilistic analysis approach and how they do develop some sensitivities when incorporating new tech.
		5. How the utility will timely adjust its integrated system plan if future trends differ significantly with predictions, both in the short term and in the long term beyond the DSIP timeline.		X				
		6. The factors unrelated to DERs such as aging infrastructure, electric vehicles, and beneficial electrification which significantly affect the utility's integrated plan and describe how the utility's planning process addresses each of those factors.		X				
		7. How the means and methods for integrated electric system planning evaluate the effects of potential energy efficiency measures.		X				Notes that a corporate level forecast is developed and allocated to substations but does not discuss how. Points to another section.
		8. How the utility will inform the development of its integrated planning through best practices and lessons learned from other jurisdictions.		X				Discussion of EPRI working groups and NY focused groups.

Advanced Forecasting							
	Prompt						Rationale
	DPS Rationale						
		Utility planners and operators, DER developers and operators, and other stakeholders all require load and supply forecasts which are timely, accurate, and detailed enough to support both short term and long term planning. Such forecasts are an important factor in predicting the hosting capacity available at existing and potential DER locations and are necessary for efficient development and use of grid resources. As the variety of methods for using DERs to address electric system needs expands, DPS Staff recommends that utilities should perform advanced forecasting analyses which integrate an increasing number and variety of DERs into their load and supply forecasts. Therefore, DPS Staff proposes that the methods for using advanced distribution system forecasting, along with plans for implementing the means and methods needed for advanced forecasting should continue to be described by the utilities in their DSIPs. Along with satisfying the general guidelines for information related to each topic (see Section 3.1), DPS Staff recommends that the DSIP Update should provide the following additional details that are specific to the utility resources and capabilities and which enable advanced electric system forecasting and provide the most current forecast results:					
1. Context and Background							
	a. Describe how topic-related policies, processes, resources, standards, and capabilities have evolved since the 2020 DSIP Update filing.		X				Very comprehensive description of the current forecasting methodology.
2. Implementation Plan, Schedule, and Investments							
	a. Current Progress						
	i. Describe the current implementation as of June 30, 2023; and		X				Clear graphic showing the current progress.
	ii. Describe how the current implementation supports stakeholders' current and future needs.		X				No explicit mention of stakeholders except that the forecasts will be publicly available in August 2023.
	b. Future Implementation and Planning						
	i. Describe the future implementation that is planned to be deployed by 2028, identifying planned efforts and funded efforts.		X				Discussion of the work is planned to start in 2024 but do not provide details on what will be complete by 2028.
	ii. Describe how the future implementation will support stakeholders' needs in 2028 and beyond.		\				No mention of stakeholders.
	iii. Identify and characterize the work and investments needed to progress from the current implementation to the planned future implementation.		X				Limited characterization of work and planned investments.
	iv. Describe and explain the planned timing and sequence of the work and investments needed to progress from the current implementation to the planned future implementation.		X				No mention of timing other than starting in 2024.
	v. Describe where and how plans for topic-related work and investments affect the CGPP.		\				No mention of CGPP.
	vi. Describe where and how investment plans developed through the CGPP affect the topic-related work and investments presented in the DSIP update.		\				No mention of CGPP.
	c. Integrated Implementation Timeline						
	i. Using a common format developed jointly with the other utilities, provide a high-level implementation timeline that combines the key milestones for all topic-related work and investments planned over the five-year period ending in 2028. Along with the milestones, the timeline should show significant dependencies among the work and investments related to all topics.		\				No section specific timeline. Updated to "Not Applicable" based on Justification from Central Hudson.
3. Risks and Mitigation							
	a. Identify and characterize any potential risk(s) and/or actual issue(s) that could affect timely implementation and describe the measures taken, or to be taken, to mitigate the risk(s) and/or resolve the issue(s).		X				Nice discussion of risks and clear mitigation approaches.
4. Stakeholder Engagement							
	a. Identify and characterize the categories of stakeholders engaged in DSIP development and use.		\				No mention of stakeholders except the interface.

Advanced Forecasting								
		Prompt						**Rationale**
		b. Describe when and how the goals and needs of each stakeholder category are identified and incorporated into the DSIP.		\				No mention of stakeholders except the interface.
		c. Describe when and how each stakeholder category's needs will be met over time.		\				No mention of stakeholders except the interface.
		d. Describe and explain the utility's needs for stakeholder-provided information, capabilities, and actions supporting specific implementation and operational outcomes.		\				No mention of stakeholders except the interface.
		e. Describe the means and methods for effectively informing and engaging associated stakeholders as planning, design, and implementation progress so that the outputs effectively address, as much as feasible, the needs of the utility, DER developers, and stakeholders.		X				Description map-based tool to share load forecasting data plus historical and forecasted 8760 profiles.
		f. Describe how the utility will ensure that the information, tools, and engagement opportunities provided to stakeholders effectively deliver the intended support and do not lead to unintended problems.		X				Description map-based tool to share load forecasting data plus historical and forecasted 8760 profiles.
4.2 Advanced Forecasting								
		1. Identify where and how DER developers and other stakeholders can readily access, navigate, view, sort, filter, and download up to date load and supply forecasts.		X				Clear descriptions provided in the current progress section.
		2. Identify and characterize each load and supply forecasting requirement identified from stakeholder inputs.		X				Reference requirement from JU Load Forecasting and System Data working groups.
		3. Describe in detail the existing and/or planned forecasts produced for third-party use and explain how those forecasts fulfill each identified stakeholder requirement for load and supply forecasts.		X				5-year forecasts at the substation level, aligns with requirements from item 2.
		4. Describe the spatial and temporal granularity of the system level and local level load and supply forecasts produced.		X				Spatial and temporal granularity described.
		5. Describe the forecasts provided separately for key areas including but not limited to photovoltaics, energy storage, electric vehicles, and energy efficiency.		X				Key areas described.
		6. Describe the advanced forecasting capabilities which are/will be implemented to enable effective probabilistic planning methods.		X				Have completed their probabilistic forecasts.
		7. Describe how the utility's existing/planned advanced forecasting capabilities anticipate the inter related effects of distributed generation, energy storage, electric vehicles, beneficial electrification, and energy efficiency. In particular, describe how electric vehicle and energy efficiency forecasts are reflected in utility forecasts.		X				Probabilistic forecasts incorporate the impacts of variability, codependence, and accurately at an 8760 level.
		8. Describe in detail the forecasts produced for utility use and explain how those forecasts fulfill the evolving utility requirements for load and supply forecasts		X				Fewer details here, but see context section for details.
		9. Describe the utility's specific objectives, means, and methods for acquiring and managing the data needed for its advanced forecasting methodologies.		X				Forecasts leverage internal data and end-use load shapes.
		10. Describe the means and methods used to produce substation level load and supply forecasts.		X				Additional detail provided in context section and appendices.
		11. Describe the levels of accuracy achieved in the substation level forecasts produced to date for load and supply.		X				Additional detail provided in context section and appendices.
		12. Describe the substation level load forecasts provided to support analyses by DER developers and operators and explain why the forecasts are sufficient for supporting those analyses.		X				5 years of 8760 substation level forecasts are provided.
		13. Provide sensitivity analyses which explain how the accuracy of substation level forecasts is affected by distributed generation, energy storage, electric vehicles, beneficial electrification, and energy efficiency measures		X				Using probabilistic forecasts to address sensitivity.
		14. Identify and characterize the tools and methods the utility is using/will use to acquire and apply useful forecast input data from DER developers and other third-parties.		X				They do not use DER developer data, but leverage internal or public datasets.
		15. Describe how the utility will inform its forecasting processes through best practices and lessons learned from other jurisdictions.		X				Lessons learned are limited to JU and in state sources, no mention of other jurisdictions.

Advanced Forecasting							
		Prompt					**Rationale**
		16. Describe new methodologies to improve overall accuracy of forecasts for demand and energy reductions that derive from EE programs and increased penetration of DER. In particular, discuss how the increased potential for inaccurate load and energy forecasts associated with out of model EE and DER adjustments will be minimized or eliminated.		X			Currently forecast each load modifier separately and plan to continue to refine approaches.
		17. Describe where CGPP forecast information can be found.		\			Information not provided.

Grid Operations							
	Prompt						Rationale
	DPS Rationale						
	It is the opinion of DPS Staff that each utility must enable a much more dynamic, data driven, multi party mode of grid operations where DERs effectively generate customer value by increasing efficiency, stability, and reliability in both the distribution system and the bulk electric system. To achieve this outcome, DPS Staff recommends that each utility should develop and/or substantially modify a wide range of components encompassing operating policies and processes, advanced information systems, extensive data communications infrastructure, widely distributed sensors and control devices, and grid components such as switches, power flow controllers, and solid state transformers. Along with satisfying the general guidelines for information related to each topical area (see Section 3.1), DPS Staff suggests that the DSIP Update should provide the following additional details which are specific to the utility resources and capabilities needed to transform grid operations in both the distribution system and the bulk electric system:						
1. Context and Background							
	a. Describe how topic-related policies, processes, resources, standards, and capabilities have evolved since the 2020 DSIP Update filing.		X				No link to policies changes , expected time and overall DERs volume expected to connect to the grid, and prioritization of the vulnerable communities
2. Implementation Plan, Schedule, and Investments							
	a. Current Progress						
	i. Describe the current implementation as of June 30, 2023; and		X				Overall description of ongoing projects.
	ii. Describe how the current implementation supports stakeholders' current and future needs.		X				High level description.
	b. Future Implementation and Planning						
	i. Describe the future implementation that is planned to be deployed by 2028, identifying planned efforts and funded efforts.		X				All info are bundled in one section, more details is required about future efforts and funds needed to realize projects and their impact on stakeholders. CGPP is discussed however unclear how CGPP will interact with GO.
	ii. Describe how the future implementation will support stakeholders' needs in 2028 and beyond.		X				
	iii. Identify and characterize the work and investments needed to progress from the current implementation to the planned future implementation.		X				
	iv. Describe and explain the planned timing and sequence of the work and investments needed to progress from the current implementation to the planned future implementation.		X				
	v. Describe where and how plans for topic-related work and investments affect the CGPP.		X				
	vi. Describe where and how investment plans developed through the CGPP affect the topic-related work and investments presented in the DSIP update.		X				
	c. Integrated Implementation Timeline						
	i. Using a common format developed jointly with the other utilities, provide a high-level implementation timeline that combines the key milestones for all topic-related work and investments planned over the five-year period ending in 2028. Along with the milestones, the timeline should show significant dependencies among the work and investments related to all topics.		X				Schedule available part of the initial action, shows planned projects in all areas.
3. Risks and Mitigation							
	a. Identify and characterize any potential risk(s) and/or actual issue(s) that could affect timely implementation and describe the measures taken, or to be taken, to mitigate the risk(s) and/or resolve the issue(s).		X				List of top risks and relevant mitigation.
4. Stakeholder Engagement							
	a. Identify and characterize the categories of stakeholders engaged in DSIP development and use.		X				Limited discussion on stakeholders engagement, Lacks specifics required in the guidelines.

Grid Operations								
		Prompt						**Rationale**
		b. Describe when and how the goals and needs of each stakeholder category are identified and incorporated into the DSIP.		\				
		c. Describe when and how each stakeholder category's needs will be met over time.		\				
		d. Describe and explain the utility's needs for stakeholder-provided information, capabilities, and actions supporting specific implementation and operational outcomes.		\				
		e. Describe the means and methods for effectively informing and engaging associated stakeholders as planning, design, and implementation progress so that the outputs effectively address, as much as feasible, the needs of the utility, DER developers, and stakeholders.		\				
		f. Describe how the utility will ensure that the information, tools, and engagement opportunities provided to stakeholders effectively deliver the intended support and do not lead to unintended problems.		\				
4.3 Grid Operations								
		1. Describe in detail the roles and responsibilities of the utility and other parties involved in planning and executing grid operations which accommodate and productively employ DERs.		X				Role defined in contractual agreement and DSP Communications and Coordination Manual.
		2. Describe other role and responsibility models considered and explain the reasons for choosing the planned model		X				No mention of other role/responsibility models.
		3. Describe how roles and responsibilities have been/will be developed, documented, and managed for each party involved in the planning and execution of grid operations.		X				Roles defined in contractual agreement and DSP Communications and Coordination Manual, it is expected more clarity will come with the deployment of ADMS and DERMS.
		4. Describe in detail how the utilities and other parties will provide processes, resources, and standards to support planning and execution of advanced grid operations which accommodate and extensively employ DER services. The information provided should address:						Limited discussion, lacks specifics required in the guideline for a-f below.
		a. organizations;		X				
		b. operating policies and processes;		X				
		c. information systems for system modeling, data acquisition and management, situational awareness, resource optimization, dispatch and control, etc. ;		X				
		d. data communications infrastructure;		\				
		e. grid sensors and control devices; and,		\				
		f. grid infrastructure components such as switches, power flow controllers, and solid state transformers.		\				
		5. Describe the utility's approach and ability to implement advanced capabilities.						
		a. Identify the existing level of system monitoring and distribution automation.		X				
		b. Identify areas to be enhanced through additional monitoring and/or distribution automation.		X				
		c. Describe the means and methods used for deploying additional monitoring and/or distribution automation in the utility's system.		X				No specific info as per the guidance provided.
		d. Identify the benefits to be obtained from deploying additional monitoring and/or distribution automation in the utility's system.		X				No specific info as per the guidance provided.
		e. Identify the capabilities currently provided by Advanced Distribution Management Systems (ADMS).		X				
		f. Describe how ADMS capabilities will increase and improve over time.		X				
		g. Identify the capabilities currently provided by DER Management Systems (DERMS).		X				No report on DERMS, can use PoC although in place in 2021.
		h. Describe how DERMS capabilities will increase and improve over time.		X				

Grid Operations							
	Prompt						Rationale
	i. Identify other approaches or functionalities used to better manage grid performance and describe how they are/will be integrated into daily operations.		X				Leveraging DERMS to increase hosting capacity.

Energy Storage Integration								
	Prompt							Rationale
	DPS Rationale							
		As outlined in the recently issued "New York's 6 GW Energy Storage Roadmap Policy Options for Continued Growth in Energy Storage" significant energy storage integration will be needed within the five year planning horizon of the DSIP Update filing. Meanwhile, evolving initiatives for achieving New York State's energy storage goals will likely require corresponding adjustments to utility deployment plans, use cases, and forecasts. Areas of particular interest to DPS Staff related to energy storage include: • Existing energy storage resources in the distribution system; • The utility's planned energy storage projects; • A five year forecast of energy storage deployments by the utility and/or third-parties; • Potential energy storage locations and applications that could benefit customers and/or the electric system; • Resources and functions needed for integrating energy storage with utility grid operations; • Resources and functions needed for integrating energy storage with utility billing and compensation functions; and • The utility's alignment with New York State's energy storage goals and initiatives. Along with satisfying the general guidelines for information related to each topic (see Section 3.1), DPS Staff recommends that the DSIP Update should provide the following details for the areas of interest listed above, especially the means and methods to plan for energy storage deployment in the distribution system:						
1. Context and Background								
		a. Describe how topic-related policies, processes, resources, standards, and capabilities have evolved since the 2020 DSIP Update filing.		X				Detailed discussion past RFP and storage cost effectiveness trend.
2. Implementation Plan, Schedule, and Investments								
	a. Current Progress							
		i. Describe the current implementation as of June 30, 2023; and		X				Detailed project descriptions provided.
		ii. Describe how the current implementation supports stakeholders' current and future needs.		X				Building technical understanding to improve future implementation.
	b. Future Implementation and Planning							
		i. Describe the future implementation that is planned to be deployed by 2028, identifying planned efforts and funded efforts.		X				Currently issuing multiple RFPs for BESS dispatch rights. Evaluation for use in NWAs.
		ii. Describe how the future implementation will support stakeholders' needs in 2028 and beyond.		X				Currently building technical understanding to improve future implementation.
		iii. Identify and characterize the work and investments needed to progress from the current implementation to the planned future implementation.		X				Building technical expertise through current implementation and cost tracking to better progress to future implementation.
		iv. Describe and explain the planned timing and sequence of the work and investments needed to progress from the current implementation to the planned future implementation.		X				Referenced hosting capacity and grid op sections for sequence of work, investments, timing.
		v. Describe where and how plans for topic-related work and investments affect the CGPP.		X				Good description on CGPP and DSIP relationship and integration .
		vi. Describe where and how investment plans developed through the CGPP affect the topic-related work and investments presented in the DSIP update.		X				Good description on CGPP and DSIP relationship and integration.
	c. Integrated Implementation Timeline							
		i. Using a common format developed jointly with the other utilities, provide a high-level implementation timeline that combines the key milestones for all topic-related work and investments planned over the five-year period ending in 2028. Along with the milestones, the timeline should show significant dependencies among the work and investments related to all topics.		X				Detailed timeline with milestones in the Grid Modernization section.
3. Risks and Mitigation								

Energy Storage Integration								
		Prompt						**Rationale**
		a. Identify and characterize any potential risk(s) and/or actual issue(s) that could affect timely implementation and describe the measures taken, or to be taken, to mitigate the risk(s) and/or resolve the issue(s).		X				Good discussion on technology maturity BESS operation and cost.
4. Stakeholder Engagement								
		a. Identify and characterize the categories of stakeholders engaged in DSIP development and use.		X				Good list of various engagement methods.
		b. Describe when and how the goals and needs of each stakeholder category are identified and incorporated into the DSIP.		X				Generic description of stakeholder needs.
		c. Describe when and how each stakeholder category's needs will be met over time.		X				Limited discussion on stakeholder needs over time.
		d. Describe and explain the utility's needs for stakeholder-provided information, capabilities, and actions supporting specific implementation and operational outcomes.		X				Some discussion on working group influencing utility practice.
		e. Describe the means and methods for effectively informing and engaging associated stakeholders as planning, design, and implementation progress so that the outputs effectively address, as much as feasible, the needs of the utility, DER developers, and stakeholders.		X				Hosting capacity map, working groups.
		f. Describe how the utility will ensure that the information, tools, and engagement opportunities provided to stakeholders effectively deliver the intended support and do not lead to unintended problems.		X				Some response highlighted in other sections such as DER interconnection , hosting capacity map.
4.4 Energy Storage Integration								
		1. Provide the locations, types, capacities (power and energy), configurations (i.e., standalone or co located with load and/or generation), and functions of existing energy storage resources in the distribution system.		X				Detailed list provided.
		2. Describe the utility's current efforts to plan, implement, and operate beneficial energy storage applications. Information provided should include:		X				Detailed list provided.
		a. a detailed description of each project, existing and planned, with an explanation of how the project fits into the utility's long range energy storage plans;		X				List of multiple initiatives, but some are studies and not actual BESS installations.
		b. the original project schedule;		X				Provided detailed schedule.
		c. the current project status;		X				Provided detailed schedule.
		d. lessons learned to date;		X				Provided detailed lessons learned to date.
		e. project adjustments and improvement opportunities identified to date; and		X				Some improvements discussed, most projects are on-going.
		f. next steps with clear timelines and deliverables.		X				
		3. Provide a five year forecast of energy storage assets deployed and operated by third-parties. Where possible, include the likely locations, types, capacities, configurations, and functions of those assets.		X				Good forecast with description on methodology , assumptions.
		4. Identify, describe, and prioritize the current and future opportunities for beneficial use of energy storage located in the distribution system. Uses considered should encompass functions which benefit utility customers, the distribution system, and/or the bulk power system. Each opportunity identified should be characterized by:						
		a. location;		X				Provided description of each element for proposed projects.
		b. energy storage capacity (power and energy);		X				Provided description of each element for proposed projects.
		c. function(s) performed;		X				Provided description of each element for proposed projects.
		d. period(s) of time when the function(s) would be performed; and		X				Provided description of each element for proposed projects.
		e. the nature and estimated economic value of each benefit derived from the energy storage resource.		X				Primary economic benefits was identified as bill reduction.

Energy Storage Integration									
		Prompt							**Rationale**
		5. Identify and describe all significant resources and functions that the utility and stakeholders use for planning, implementing, monitoring, and managing energy storage at multiple levels in the distribution system.							
		a. Explain how each of those resources and functions supports the utility's needs;		X					Resources include hosting cap map, 8760 profile load, interconnection process, DERM .
		b. Explain how each of those resources and functions supports the stakeholders' needs.		X					Some discussion on stakeholder needs supported.
		6. Describe the means and methods for determining the real time status, behavior, and effect of energy storage resources currently deployed in the distribution system. Information produced by those means and methods could include:							
		a. the amount of energy currently stored (state of charge);		X					No current storage assets, new projects some have dedicated RTU for direct monitor/control.
		b. the time, size, duration, energy source (grid and/or local generation), and purpose of charging events;		X					No current storage assets, new projects some have dedicated RTU for direct monitor/control.
		c. the time, size, duration, consumer (grid and/or local load), and purpose of energy storage discharges;		X					No current storage assets, new projects some have dedicated RTU for direct monitor/control.
		d. the net effect (amount and duration of supply or demand) on the distribution system of charge/discharge events (considering any co located load and/or generation); and		X					No current storage assets, new projects some have dedicated RTU for direct monitor/control.
		e. the capacity of the distribution system to deliver or receive power at a given location and time.		X					Using ADMS for improved visibility.
		7. Describe the means and methods for forecasting the status, behavior, and effect of energy storage resources in the distribution system at future times. Forecasts produced by the utility could include:							
		a. the amount of energy stored (state of charge);		X					Limited storage currently, ADMS plays key role in evaluate storage forecast.
		b. the time, size, duration, energy source (grid and/or local generation), and purpose of charging events;		X					Limited storage currently, ADMS plays key role in evaluate storage forecast.
		c. the time, size, duration, consumer (grid and/or local load), and purpose of energy storage discharges;		X					Limited storage currently, ADMS plays key role in evaluate storage forecast.
		d. the net effect on the distribution system of each charge/discharge event (considering any co located load and/or generation);		X					Limited storage currently, ADMS plays key role in evaluate storage forecast.
		e. the capacity of the distribution system to deliver or receive power at a given location and time.		X					Limited storage currently, ADMS plays key role in evaluate storage forecast.
		8. Describe the resources and functions needed to support billing and compensation of energy storage owners/operators.		X					No additional billing system required currently.
		9. Identify the types of customer and system data that are necessary for planning, implementing, and managing energy storage and describe how the utility provides those data to developers and other stakeholders; and		X					Multiple data categories are publicly available and in data portal.
		10. By citing specific objectives, means, and methods, describe in detail how the utility's accomplishments and plans are aligned with the objectives established in the CLCPA.		X					Discussed multiple initiatives to align with CLCPA.

EV Integation							
	Prompt						Rationale
	DPS Rationale						
	It is DPS Staff's position that utility resources and capabilities which support electric vehicle (EV) integration at all levels in the distribution system will be needed within the five year planning horizon of the DSIP Update filing. While plans for integrating EVs at the bulk, local transmission, and distribution levels will now be reflected in the CGPP, DPS Staff suggests that the DSIP should continue to describe means and methods for planning EV integration at the distribution level. Along with satisfying the general guidelines for information related to each topic (see Section 3.1), DPS Staff recommends that the DSIP Update should provide the following additional details which are specific to electric vehicle integration. Where not yet fully developed or fluid due to ongoing policy development, DPS Staff suggests that the DSIP Update should provide current status and planned next steps, including an anticipated timeframe, to continue making progress.						
1. Context and Background							
	a. Describe how topic-related policies, processes, resources, standards, and capabilities have evolved since the 2020 DSIP Update filing.		X				Good overview of policies and market developments. The section provides a good summary of what Central Hudson has been performing in terms of market program etc.
2. Implementation Plan, Schedule, and Investments							
	a. Current Progress						
	i. Describe the current implementation as of June 30, 2023; and		X				Sufficient amount of initiatives is described. They are all well explained and provide sufficient detail on what each initiative is doing.
	ii. Describe how the current implementation supports stakeholders' current and future needs.		X				Limited information is provided on how the current implementation supports SKH current and future needs
	b. Future Implementation and Planning						
	i. Describe the future implementation that is planned to be deployed by 2028, identifying planned efforts and funded efforts.		X				There is only a summary of the future plans but nothing else. The section is very limited in evidence and it does not describe future implementation plan sufficiently.
	ii. Describe how the future implementation will support stakeholders' needs in 2028 and beyond.		\				All these sections are missing
	iii. Identify and characterize the work and investments needed to progress from the current implementation to the planned future implementation.		\				All these sections are missing
	iv. Describe and explain the planned timing and sequence of the work and investments needed to progress from the current implementation to the planned future implementation.		\				All these sections are missing
	v. Describe where and how plans for topic-related work and investments affect the CGPP.		\				All these sections are missing
	vi. Describe where and how investment plans developed through the CGPP affect the topic-related work and investments presented in the DSIP update.		\				All these sections are missing
	c. Integrated Implementation Timeline						
	i. Using a common format developed jointly with the other utilities, provide a high-level implementation timeline that combines the key milestones for all topic-related work and investments planned over the five-year period ending in 2028. Along with the milestones, the timeline should show significant dependencies among the work and investments related to all topics.		X				Very limited information with regard to future EV plans is provided. Figure 8 (which is referenced by the utility) is not very clear. The reader cannot zoom in. It does not distinguish between work and related investments. It does not indicate significant dependencies
3. Risks and Mitigation							
	a. Identify and characterize any potential risk(s) and/or actual issue(s) that could affect timely implementation and describe the measures taken, or to be taken, to mitigate the risk(s) and/or resolve the issue(s).		X				High level risks are discussed. Mitigation measures for each risk are mentioned
4. Stakeholder Engagement							
	a. Identify and characterize the categories of stakeholders engaged in DSIP development and use.		X				limited groups of stakeholders are mentioned
	b. Describe when and how the goals and needs of each stakeholder category are identified and incorporated into the DSIP.		\				

EV Integation								
		Prompt						**Rationale**
		c. Describe when and how each stakeholder category's needs will be met over time.		\				
		d. Describe and explain the utility's needs for stakeholder-provided information, capabilities, and actions supporting specific implementation and operational outcomes.		\				
		e. Describe the means and methods for effectively informing and engaging associated stakeholders as planning, design, and implementation progress so that the outputs effectively address, as much as feasible, the needs of the utility, DER developers, and stakeholders.		X				Short summary is provided
		f. Describe how the utility will ensure that the information, tools, and engagement opportunities provided to stakeholders effectively deliver the intended support and do not lead to unintended problems.		\				
4.5 Electric Vehicle Integration								
		1. Using a common framework (organization, format, semantics, definitions, etc.) developed jointly with the other utilities, identify and characterize the existing and anticipated EV charging scenarios in the utility's service territory. Each scenario identified should be characterized by:						There is no common framework across utilities.
		a. the type of location (home, apartment complex, store, workplace, public parking site, rest stop, etc.);		X				There is some good evidence on type of location.
		b. the number and spatial distribution of existing instances of the scenario;		X				Light Duty Vehicle Adoption, DCFC and Public Charging, Known Bus Depots and Garages are shown.
		c. the forecast number and spatial distribution of anticipated instances of the scenario over the next five years;		X				Spatial distribution of 2028 and 2033 is shown. The number is not provided in the report , but we assume that it is available for the maps to be produced.
		d. the type(s) of vehicles charged at a typical location (commuter car, bus, delivery truck, taxi, ride share, etc.);		X				Information is not available. Potential next steps are mentioned.
		e. the number of vehicles charged at a typical location, by vehicle type;		X				Information is not available. Potential next steps are mentioned.
		f. the charging pattern by vehicle type (frequency, times of day, days of week, energy per charge, duration per charge, demand per charge);		X				The utility provides information on demand patterns for the summer or winter peak day across all substations in the Central Hudson territory for light-duty vehicles, medium and heavy duty vehicles, and buses.
		g. the number(s) of charging ports at a typical location, by type;		X				Forecast is provided but does not give a comprehensive view of types of charger or location. Missing information: L1 chargers, level 3, home distribution? What about at work? Depots? Bus stops? Etc.
		h. the energy storage capacity (if any) supporting EV charging at a typical location;		\				
		i. an hourly profile of a typical location's aggregated charging load over a one year period;		\				
		j. the type and size of the existing utility service at a typical location; and		\				
		k. the type and size of utility service needed to support the EV charging use case.		\				
		2. Describe and explain the utility's priorities for supporting implementation of the EV charging use cases anticipated in its service territory.		X				The priorities are listed. More details could have been provided on how they are going to support these priorities.
		3. Identify and describe all significant resources and functions that the utility and stakeholders use for planning, implementing, monitoring, and managing EV charging at multiple levels in the distribution system.		X				A summary of functions is provided.
		a. Explain how each of those resources and functions supports the utility's needs.		X				Vague and high level description of the how these resources and functions support the utility is provided.

EV Integation								
		Prompt						**Rationale**
		b. Explain how each of those resources and functions supports the stakeholders' needs.		X				Vague and high level description of the how these resources and functions support the stakeholders is provided.
		4. Identify the types of customer and system data that are necessary for planning, implementing, and managing EV charging infrastructure and services and describe how the utility provides this data to interested third parties.		X				Sufficient description of the data is included in the section. However the utility suggests that data cannot be shared with 3rd parties.
		5. Describe the resources and functions needed to support billing and compensation of EV and EVSE owners/operators.		X				The company explains how EV customers are billed under the existing systems and highlights that this may need to change in the future. However the description does not include metering requirements.
		6. By citing specific objectives, means, and methods describe in detail how the utility's accomplishments and plans are aligned with New York State policy, including its established goals for EV adoption.		X				The section is not well articulated in providing specific objectives and plans that align with State's targets. There are a lot of activities mentioned in the section, but their alignment with State's targets is not clear.
		7. Describe the utility's current efforts to plan, implement, and manage EV related projects. Information provided should include:		X				Only 2 initiatives are mentioned.
		a. a detailed description of each project, existing and planned, with an explanation of how the project fits into the utility's long-range EV integration plans;		X				Description not sufficiently detailed.
		b. the original project schedule;		X				Detailed project schedule is missing. Some projects were completed in the past.
		c. the current project status;		X				
		d. lessons learned to date;		X				Lessons learned are mentioned.
		e. project adjustments and improvement opportunities identified to date; and		X				Project adjustments are not described.
		f. next steps with clear timelines and deliverables.		X				Next steps are not included.
		8. Describe how the utility is coordinating with the efforts of the New York State Energy Research and Development Authority (NYSERDA), the New York Power Authority (NYPA), New York Department of Environmental Conservation (DEC), and DPS Staff to facilitate statewide EV market development and growth.		X				Good description of initiatives and coordination developments.

Clean Heat Integration								
	Prompt							Rationale
	DPS Rationale							
		The NYS Clean Heat program encourages residents, small businesses, and commercial and multifamily building owners to install cold climate air source heat pumps (ASHP) and energy efficient ground source heat pumps (GSHP) and heat pump water heaters (HPWH). DPS Staff believes that utility resources and capabilities which support Clean Heat integration at all levels in the distribution system will be needed within the five year planning horizon of the DSIP Update filing. Therefore, DPS Staff recommends that the DSIP should describe means and methods for planning Clean Heat integration at the distribution level. Along with satisfying the general guidelines for information related to each topic (see Section 3.1), DPS Staff recommends that the DSIP Update should provide the following additional details which are specific to clean heat integration. DPS Staff further recommends that where not yet fully developed or fluid due to ongoing policy development, the DSIP Update should provide current status and planned next steps, including an anticipated timeframe, to continue making progress.						
1. Context and Background								
		a. Describe how topic-related policies, processes, resources, standards, and capabilities have evolved since the 2020 DSIP Update filing.		X				Explains that the case was passed, but nothing about an changes or evolutions since the 2020 update.
2. Implementation Plan, Schedule, and Investments								
	a. Current Progress							
		i. Describe the current implementation as of June 30, 2023; and		X				Some detail provided, minimal description of program details.
		ii. Describe how the current implementation supports stakeholders' current and future needs.		X				Provides description of funds and estimated savings, but little else.
	b. Future Implementation and Planning							
		i. Describe the future implementation that is planned to be deployed by 2028, identifying planned efforts and funded efforts.		\				No mention of anything beyond 2024.
		ii. Describe how the future implementation will support stakeholders' needs in 2028 and beyond.		\				No mention of anything beyond 2024.
		iii. Identify and characterize the work and investments needed to progress from the current implementation to the planned future implementation.		\				No future investments identified.
		iv. Describe and explain the planned timing and sequence of the work and investments needed to progress from the current implementation to the planned future implementation.		\				No future investments identified.
		v. Describe where and how plans for topic-related work and investments affect the CGPP.		\				Not included.
		vi. Describe where and how investment plans developed through the CGPP affect the topic-related work and investments presented in the DSIP update.		\				Not included.
	c. Integrated Implementation Timeline							
		i. Using a common format developed jointly with the other utilities, provide a high-level implementation timeline that combines the key milestones for all topic-related work and investments planned over the five-year period ending in 2028. Along with the milestones, the timeline should show significant dependencies among the work and investments related to all topics.		\				No timeline identified. Updated to "Not Applicable" based on Justification from Central Hudson.
3. Risks and Mitigation								
		a. Identify and characterize any potential risk(s) and/or actual issue(s) that could affect timely implementation and describe the measures taken, or to be taken, to mitigate the risk(s) and/or resolve the issue(s).		X				Some listing of limited set of risks and associated mitigation strategies. Not exceedingly comprehensive.
4. Stakeholder Engagement								
		a. Identify and characterize the categories of stakeholders engaged in DSIP development and use.		X				Generic list of stakeholders presented.
		b. Describe when and how the goals and needs of each stakeholder category are identified and incorporated into the DSIP.		X				Mention of standard monthly call, no specifics relating to individual stakeholder categories.
		c. Describe when and how each stakeholder category's needs will be met over time.		\				Not present.

Clean Heat Integration								
		Prompt						**Rationale**
		d. Describe and explain the utility's needs for stakeholder-provided information, capabilities, and actions supporting specific implementation and operational outcomes.		\				Not present.
		e. Describe the means and methods for effectively informing and engaging associated stakeholders as planning, design, and implementation progress so that the outputs effectively address, as much as feasible, the needs of the utility, DER developers, and stakeholders.		X				Generic mention of posting comments on a website.
		f. Describe how the utility will ensure that the information, tools, and engagement opportunities provided to stakeholders effectively deliver the intended support and do not lead to unintended problems.		\				Not present.
4.6 Clean Heat Integration								
		1. Using a common framework (organization, format, semantics, definitions, etc.) developed jointly with the other utilities, identify and characterize the existing and clean heat installation scenarios in the utility's service territory. Each scenario identified should be characterized by:						
		a. the type of location (single family residence, multifamily residence, commercial space, office space, school, hospital, etc.);		X				Identification of categories as defined here, but of total installation and total energy savings. Unclear if these are complete installations or forecast, or other, for the 9 scenarios.
		b. the number and spatial distribution of existing instances of the scenario;		X				Maps showing adoption of heat pumps in 3 periods. No specifics/types/distinctions.
		c. the forecast number and spatial distribution of anticipated instances of the scenario over the next five years;		X				Two maps showing generic building electrification in 2023 and 2028.
		d. the type(s) of clean heat solution installed at a typical location (ASHP, GSHP, HPWH, etc.);		X				Table 31 displays mix of heat pump types installed per year, from 2019-22.
		e. an hourly profile of a typical location's aggregated clean heating load over a one year period;		X				Figures 45 and 46 show whole heat pump and mini split profiles.
		f. the type and size of the existing utility service at a typical location; and		X				Utility proportions of heating types.
		g. the type and size of utility service needed to support the clean heating use case.		X				
		2. Describe and explain the utility's priorities for supporting implementation of the clean heating use cases anticipated in its service territory.		X				Very light mention that efforts exist, no details or explanation.
		3. Identify and describe all significant resources and functions that the utility and stakeholders use for planning, implementing, monitoring, and managing clean heating at multiple levels in the distribution system.		X				Very light mention that efforts exist, no details or explanation.
		a. Explain how each of those resources and functions supports the utility's needs.		X				Referred to "Central Hudson website"
		b. Explain how each of those resources and functions supports the stakeholders' needs.		X				Referred to "Central Hudson website"
		4. Identify the types of customer and system data that are necessary for planning, implementing, and managing clean heating infrastructure and services and describe how the utility provides this data to interested third parties.		X				Referred to "Central Hudson website"
		5. By citing specific objectives, means, and methods describe in detail how the utility's accomplishments and plans are aligned with New York State policy, including its established goals for clean heat adoption.		X				Vague description of achieved targets, no specifics or details.
		6. Describe the utility's current efforts to plan, implement, and manage clean heat related projects. Information provided should include:						

Clean Heat Integration								
		Prompt						**Rationale**
		a. a detailed description of each project, existing and planned, with an explanation of how the project fits into the utility's long-range clean heat integration plans;		X				Some information about forecasted winter peaks
		b. the original project schedule;		\				Not included. Updated to "Not Applicable" based on Justification from Central Hudson.
		c. the current project status;		\				Not included. Updated to "Not Applicable" based on Justification from Central Hudson.
		d. lessons learned to date;		\				Not included. Updated to "Not Applicable" based on Justification from Central Hudson.
		e. project adjustments and improvement opportunities identified to date; and		\				Not included. Updated to "Not Applicable" based on Justification from Central Hudson.
		f. next steps with clear timelines and deliverables.		\				Not included. Updated to "Not Applicable" based on Justification from Central Hudson.
		7. Describe how the utility is coordinating with the efforts of the New York State Energy Research and Development Authority (NYSERDA), the New York Power Authority (NYPA), New York Department of Environmental Conservation (DEC), DPS Staff, or other governmental entities to facilitate statewide clean heat market development and growth.		X				Names "recurring discussions" with several groups.

EE Integration and Innovation							
	Prompt						Rationale
	DPS Rationale						
		Energy Efficiency integration, with a focus on innovative market enabling tools and approaches, is an essential utility function that DPS Staff suggests should be thoroughly addressed within the five year planning horizon of the DSIP filing. It also affects the CGPP integrated system analysis, as energy efficiency efforts act as load modifiers in distribution planning. This load impact is then incorporated into the CGPP as part of its analysis for local transmission and distribution projects. DPS Staff recommends that the utilities should provide the information specified below to show how their joint and individual efforts are fully integrating current and expanded energy efficiency efforts into their system planning. DPS Staff further recommends that the utilities should also describe how new tools and approaches are being used to support the growth of a more dynamic market of service providers that deliver energy efficiency at a reduced cost by leveraging private capital and financing to deliver greater customer value while optimizing the grid value of these services. Each utility has evolved its Efficiency Transition Implementation Plans (ETIPs) into System Energy Efficiency Plans (SEEPs) that describe the entirety of the utility's expanded reliance on and use of cost-effective energy efficiency to support their distribution system and customer needs. ETIPs / SEEPs will continue to be filed separately in accordance with DPS Staff issued ETIP / SEEP Content Guidance, but DPS Staff recommends that the DSIP must incorporate and plan for the integration and reliance on these expanded energy efficiency resources and should include a link to the most recent ETIP/SEEP filing. Along with satisfying the general guidelines for information related to each topic (see Section 3.1), DPS Staff recommends that the DSIP Update should provide the following additional details which are specific to energy efficiency:						
1.	Context and Background						
	a. Describe how topic-related policies, processes, resources, standards, and capabilities have evolved since the 2020 DSIP Update filing.		X				Substantial narrative provided including EE related policies and a description of program offerings.
2.	Implementation Plan, Schedule, and Investments						
	a. Current Progress						
	i. Describe the current implementation as of June 30, 2023; and		X				Table provided is helpful but only goes through 2022. Not entirely clear what's been implemented since June 30, 2023.
	ii. Describe how the current implementation supports stakeholders' current and future needs.		X				Engagement with stakeholders is provided but there is no description on how the current implementation supports stakeholder needs.
	b. Future Implementation and Planning						
	i. Describe the future implementation that is planned to be deployed by 2028, identifying planned efforts and funded efforts.		X				Minimal detail provided. Narrative focused on balancing EE and Clean Heat activities and evaluation.
	ii. Describe how the future implementation will support stakeholders' needs in 2028 and beyond.		X				Minimal detail provided. Narrative focused on balancing EE and Clean Heat activities and evaluation.
	iii. Identify and characterize the work and investments needed to progress from the current implementation to the planned future implementation.		X				Minimal detail provided. Narrative focused on balancing EE and Clean Heat activities and evaluation.
	iv. Describe and explain the planned timing and sequence of the work and investments needed to progress from the current implementation to the planned future implementation.		\				No detail provided
	v. Describe where and how plans for topic-related work and investments affect the CGPP.		\				No detail provided
	vi. Describe where and how investment plans developed through the CGPP affect the topic-related work and investments presented in the DSIP update.		X				Evaluation activities table through 2024 was provided but it didn't speak to implementation through 2028.
	c. Integrated Implementation Timeline						
	i. Using a common format developed jointly with the other utilities, provide a high-level implementation timeline that combines the key milestones for all topic-related work and investments planned over the five-year period ending in 2028. Along with the milestones, the timeline should show significant dependencies among the work and investments related to all topics.		\				Section not provided.
3.	Risks and Mitigation						
	a. Identify and characterize any potential risk(s) and/or actual issue(s) that could affect timely implementation and describe the measures taken, or to be taken, to mitigate the risk(s) and/or resolve the issue(s).		X				Provided as narrative.

EE Integration and Innovation								
		Prompt						**Rationale**
4. Stakeholder Engagement								
		a. Identify and characterize the categories of stakeholders engaged in DSIP development and use.		X				Various types of stakeholders descriptions were provided.
		b. Describe when and how the goals and needs of each stakeholder category are identified and incorporated into the DSIP.		\				Missing this information.
		c. Describe when and how each stakeholder category's needs will be met over time.		\				Missing this information.
		d. Describe and explain the utility's needs for stakeholder-provided information, capabilities, and actions supporting specific implementation and operational outcomes.		X				Specific information was not provided.
		e. Describe the means and methods for effectively informing and engaging associated stakeholders as planning, design, and implementation progress so that the outputs effectively address, as much as feasible, the needs of the utility, DER developers, and stakeholders.		X				Some means and methods were provided but slim details beyond.
		f. Describe how the utility will ensure that the information, tools, and engagement opportunities provided to stakeholders effectively deliver the intended support and do not lead to unintended problems.		X				Mention of coordination but missing information on the effect.
4.7 Energy Efficiency Integration and Innovation								
		1. The resources and capabilities used for integrating energy efficiency within system and utility business planning.		X				Minimal detail was provided but perhaps it was not available. It was noted, "Central Hudson's NWA solicitations are technology agnostic, so energy efficiency may be utilized as a part of a solution if it's determined to be a good fit for a particular project."
		2. The locations and amounts of current energy and peak load reductions attributable to energy efficiency and how the utility determines these.		X				Very limited information was given. "For most energy efficiency projects, the Company tracks the location of each participant and can readily identify the overall impacts on the local system at the circuit or substation level. Load reductions are assessed using the New York State Technical Resource Manual, where applicable. In some cases, custom computations are used to calculate the impacts of certain measures on peak load. Within the Company's upstream and midstream delivery programs, aggregate participation data is obtained, such as by vendor or local store, as opposed to individual end-user. Geographic distribution estimates may be developed based on the available data."
		3. A high-level description of how the utility's accomplishments and plans are aligned with New York State climate and energy policies and incorporate innovative approaches for accelerating progress to ultimately align with the CLCPA.		X				Provided detail on two specific programs (Clean Heat and EV Adoption). Some detail was provided on how to accelerate progress and align with CLCPA.
		4. Summary information on energy efficiency programs offered by the utility, with direction to annual filings for more detailed information on energy efficiency programs.		X				Provided two tables with EE program information as well as footnotes with link to EE plans.

EE Integration and Innovation					
	Prompt				Rationale
	5. Describe how the utility is coordinating and partnering with NYSERDA's related ongoing statewide efforts to facilitate energy efficiency market development and growth.		X		Focus was mainly on LMI and did not describe overall efforts to facilitate EE market development and growth. "As described in the Statewide Low- to Moderate Portfolio Implementation Plan ("LMI IP")33, in response to the January 2020 Order, Central Hudson is collaborating with Joint Utilities (JU) across New York State and NYSERDA to deliver coordinated statewide efficiency initiatives targeting LMI customers. Specifically, Central Hudson has taken an active role in the development of each of the initiatives presented in the LMI IP participating in stakeholder engagement, requesting transparency of data assumptions and inputs to be used in the development of savings projections and budget development. Central Hudson also seeks to ensure all LMI customers have equal access to all programs regardless of the funding source for the full duration of the LMI IP."

Data Sharing							
Prompt							Rationale
	DPS Rationale						
		DPS Staff recommends that the DSIP Update should describe the utility's existing and planned capabilities that enable timely and effective sharing of system and customer data with customers and authorized third-parties. Shared system data should enable DER developers/operators and other third-parties to timely and effectively perform the analyses (engineering, operations, and business) needed to support well-informed decisions. Shared customer data should enable both short-term and long-term analyses and decisions affecting many investments and behaviors which can materially improve customer value by reducing costs and/or improving service. Of particular importance to this topic is NYSERDA's development of a new Integrated Energy Data Resource (IEDR). Most utility data sharing is expected to transition to the IEDR within the five-year time horizon for the DSIP update. Along with satisfying the general guidelines for information related to each topic (see Section 3.1), DPS Staff recommends that the DSIP Update should:					
1. Context and Background							
		a. Describe how topic-related policies, processes, resources, standards, and capabilities have evolved since the 2020 DSIP Update filing.		X			Well described timeline from 2020 through 2021.
2. Implementation Plan, Schedule, and Investments							
	a. Current Progress						
		i. Describe the current implementation as of June 30, 2023; and		X			Full list of all available implementations
		ii. Describe how the current implementation supports stakeholders' current and future needs.		X			Stakeholders current needs are well described and how that aligns with implementation Could use mention of future stakeholder needs.
	b. Future Implementation and Planning						
		i. Describe the future implementation that is planned to be deployed by 2028, identifying planned efforts and funded efforts.		X			No detail on future implementation efforts, mentions increasing consistency of data portal.
		ii. Describe how the future implementation will support stakeholders' needs in 2028 and beyond.		\			Does not indicate how consistency in utility data portals will support future stakeholder needs.
		iii. Identify and characterize the work and investments needed to progress from the current implementation to the planned future implementation.		\			No mention of work needed to help make energy data accessible.
		iv. Describe and explain the planned timing and sequence of the work and investments needed to progress from the current implementation to the planned future implementation.		\			No mention of timing or sequence of work.
		v. Describe where and how plans for topic-related work and investments affect the CGPP.		X			There is a mention that existing fragmented framework will not work, and notes complexities in IEDR development but no clarity of what plans are included.
		vi. Describe where and how investment plans developed through the CGPP affect the topic-related work and investments presented in the DSIP update.		\			Prompt not answered, no mention of plans via CGPP affecting topic-related work.
	c. Integrated Implementation Timeline						
		i. Using a common format developed jointly with the other utilities, provide a high-level implementation timeline that combines the key milestones for all topic-related work and investments planned over the five-year period ending in 2028. Along with the milestones, the timeline should show significant dependencies among the work and investments related to all topics.		\			No timeline identified and could not find Figure 8 in Data and analytics that is referenced as an answer to this prompt.
3. Risks and Mitigation							

Data Sharing								
		Prompt						**Rationale**
		a. Identify and characterize any potential risk(s) and/or actual issue(s) that could affect timely implementation and describe the measures taken, or to be taken, to mitigate the risk(s) and/or resolve the issue(s).		X				Risk and mitigation on customer privacy and critical energy infrastructure information (CEII) noted. On risk of sharing data from Case 20-M-0082, Central Hudson shares guiding principles, but no details on measures to mitigate risk.
4. Stakeholder Engagement								
		a. Identify and characterize the categories of stakeholders engaged in DSIP development and use.		\				No stakeholders identified or characterized into categories.
		b. Describe when and how the goals and needs of each stakeholder category are identified and incorporated into the DSIP.		\				No mention of goals and needs of each stakeholder category.
		c. Describe when and how each stakeholder category's needs will be met over time.		\				No mention of when stakeholder's need are meant over time.
		d. Describe and explain the utility's needs for stakeholder-provided information, capabilities, and actions supporting specific implementation and operational outcomes.		\				No tie of stakeholder needs to specific implementation outcomes.
		e. Describe the means and methods for effectively informing and engaging associated stakeholders as planning, design, and implementation progress so that the outputs effectively address, as much as feasible, the needs of the utility, DER developers, and stakeholders.		X				Joint Utility Information working group and twice a year Joint Utilities Webinar.
		f. Describe how the utility will ensure that the information, tools, and engagement opportunities provided to stakeholders effectively deliver the intended support and do not lead to unintended problems.		\				No mention of gaining stakeholder feedback for issues from implementation.
4.8 Data Sharing								
		1. provide a functional overview of the planned IEDR;		X				Describes timeline and goals of IEDR.
		2. provide an overview of NYSERDA's IEDR implementation program, including information pertaining to stakeholder engagement;		X				IEDR implementation providers indicated as well as dates of stakeholder engagement for use case prioritization and the 4 use cases identified.
		3. provide the web link to NYSERDA's IEDR home page along with a summary of the information provided therein;		X				Links seem to be provided, but I'm unable to click them.
		4. describe the utility's role in supporting IEDR design, implementation, and operation;		X				Timeline and dates of utility's role to date provided in help of IEDR program.
		5. describe the utility's progress, plans, and investments for generating and delivering its system and customer data to the IEDR;		X				Specifics on progress and plans are provided Progress on 3 use cases are mentioned, but progress on the 4th "use case machine readable tariffs" is missing.
		6. identify and characterize each type of data to be delivered to the IEDR;		X				Publicly available data is easily provided Unclear on timeline of how data with more sensitive information is shared.
		7. describe the resource(s) and method(s) used to deliver each type of data to the IEDR;		X				Resources are mentioned (Netezza platform), but could use more detail. No details on methods or why utility has not been able to use Azure yet.
		8. describe how and when each type of data provided to the IEDR will begin, increase, and improve as IEDR implementation progresses; and,		X				Indicated that utility will have production platform ready by Q3 2024, but no detail on timing of each dataset, and not mentioned of expected data will increase or improve.
		9. identify and characterize any existing and future utility efforts to share system and customer data with customers and third parties through means that are separate from the IEDR.		X				Links and screenshots of all currently available resources to customers and developers to download data, but no mention of future utility efforts.

Hosting Capacity							
Prompt							Rationale
	DPS Rationale						
		Providing an electric distribution system with the capacity to host large scale DER integration is a key part of New York's energy vision. To achieve that outcome, DPS Staff suggests that the utilities should perform several functions to ensure that large amounts of DER can access and utilize hosting capacity in ways that are affordable, effective, efficient, and timely. The utilities have made significant progress in producing and sharing information about the hosting capacity of their current systems. DER developers and other stakeholders value the new information as a significant improvement to the information which was previously available to them; however, more is needed in three areas. First, while DER developers and other stakeholders already access and use the utilities' hosting capacity information, there are opportunities to enhance the information provided beyond the Joint Utilities' current development roadmap. For example, DER developers and the utilities could both be better informed by hosting capacity forecasts which look ahead three to five years. Once available, such forecasts would likely become the preferred resource for planning DER development. Second, as grid operations evolve to accommodate and optimize significant DER development, some of those operations will come to rely on the availability of hosting capacity as a managed system resource. Such operations will continually require very current information about available hosting capacity throughout the distribution system. This means that the utilities should be prepared to timely increase the rate at which they produce and share their information about currently available hosting capacity. And third, the availability of ample hosting capacity at a given location on the grid does not necessarily mean that other factors (i.e., space, accessibility, safety, zoning, customer interest, etc.) will also favor deploying a DER at that location. At the same time, there are many locations where circumstances strongly favor DER development; however, the amount of hosting capacity available at those locations is limited. This could mean that utilities may need to take measures to increase hosting capacity at attractive DER development sites in order to support the State's goals for integrating renewable energy resources. Considering these points, DPS Staff suggests that the utilities should be prepared to timely increase hosting capacity in their distribution systems. DPS Staff recommends that the DSIP Update should address the three areas addressed above and provide detailed information related to assessing current hosting capacity, forecasting hosting capacity, and increasing hosting capacity to show that the utility is timely developing – either individually or jointly with one or more of the other utilities – the necessary information resources and capabilities associated with hosting capacity. Along with satisfying the general guidelines for information related to each topic (see Section 3.1), DPS Staff recommends that the DSIP Update should provide the following additional details which are specific to hosting capacity:						
1. Context and Background							
		a. Describe how topic-related policies, processes, resources, standards, and capabilities have evolved since the 2020 DSIP Update filing.		X			The company has explained well the evolutions of the HC tool in the last 3 years. The company has not referred to evolvements of policies, standards and processes.
2. Implementation Plan, Schedule, and Investments							
	a. Current Progress						
		i. Describe the current implementation as of June 30, 2023; and		X			The company could have explained in more details the current status. Existing level of information is sufficient to meet guidance requirements.
		ii. Describe how the current implementation supports stakeholders' current and future needs.		X			The company explains how current implementation support stakeholders' need and future requests.
	b. Future Implementation and Planning						
		i. Describe the future implementation that is planned to be deployed by 2028, identifying planned efforts and funded efforts.		X			Future implementation plan is mentioned but there is no clear timeline to 2028 and there is no identification of planned and funded efforts.
		ii. Describe how the future implementation will support stakeholders' needs in 2028 and beyond.		X			The company explains how future plans are meeting stakeholder needs.
		iii. Identify and characterize the work and investments needed to progress from the current implementation to the planned future implementation.		X			Work and investment requirements are mentioned in the last paragraphs. However it is not clear what is required for the future implementation plan.
		iv. Describe and explain the planned timing and sequence of the work and investments needed to progress from the current implementation to the planned future implementation.		X			No timing and sequence of work and investments. Figure 8 provides grid investments in relation to grid functions but it is unclear how these are links to Hosting Capacity.

Hosting Capacity								
Prompt								Rationale
		v. Describe where and how plans for topic-related work and investments affect the CGPP.		X				This is not well described. The company provides an overview of how CGPP and DSIP scope of work are different, but there is no mention how DSIP could affect CGPP.
		vi. Describe where and how investment plans developed through the CGPP affect the topic-related work and investments presented in the DSIP update.		X				CGPP outputs are discussed with a short explanation on how some outputs could inform DSIP. However interactions are not well defined.
	c. Integrated Implementation Timeline							
		i. Using a common format developed jointly with the other utilities, provide a high-level implementation timeline that combines the key milestones for all topic-related work and investments planned over the five-year period ending in 2028. Along with the milestones, the timeline should show significant dependencies among the work and investments related to all topics.		X				Figure 8 provides grid investments in relation to grid functions but it is unclear how these are links to Hosting Capacity .
3. Risks and Mitigation								
		a. Identify and characterize any potential risk(s) and/or actual issue(s) that could affect timely implementation and describe the measures taken, or to be taken, to mitigate the risk(s) and/or resolve the issue(s).		X				List of risks and mitigation is provided and well described.
4. Stakeholder Engagement								
		a. Identify and characterize the categories of stakeholders engaged in DSIP development and use.		X				2 groups of stakeholders are mentioned (DER developers and non-profit organizations).
		b. Describe when and how the goals and needs of each stakeholder category are identified and incorporated into the DSIP.		X				1 goal is mentioned : accelerate adoption of clean energy and DERs. Stakeholders needs are not well described.
		c. Describe when and how each stakeholder category's needs will be met over time.		X				Future plans are mentioned but it is not clear how these plans meet stakeholders' needs. The needs of the stakeholders are not well defined.
		d. Describe and explain the utility's needs for stakeholder-provided information, capabilities, and actions supporting specific implementation and operational outcomes.		X				This is well described, focusing on required inputs from stakeholders and how the utility will used them.
		e. Describe the means and methods for effectively informing and engaging associated stakeholders as planning, design, and implementation progress so that the outputs effectively address, as much as feasible, the needs of the utility, DER developers, and stakeholders.		X				Well described section explaining that the utility undertakes 2 sessions / year and future plans.
		f. Describe how the utility will ensure that the information, tools, and engagement opportunities provided to stakeholders effectively deliver the intended support and do not lead to unintended problems.		X				Short description on information, tools and engagement opportunities but no mention to how to solved unintended problems.
4.9 Hosting Capacity								
		1. Describe the utility's current efforts to plan, implement, and manage projects related to hosting capacity. Information provided should include:						
		a. detailed description of each project, existing and planned, with an explanation of how the project fits into the utility's long range hosting capacity plans;		X				This section refers to other sections in the report and projects under Energy Storage integration and EV integration. We acknowledge that these projects should add the benefit of increasing hosting capacity but this information is not well articulated in the relevant sections.

Hosting Capacity								
		Prompt						**Rationale**
		b. the original project schedule;		\				All the information in b-f is missing. Even looking into other sections (e.g., EV integration and Energy Storage integration) it is not clear which projects benefit increased hosting capacity so we cannot find the relevant information. Updated to "Not Applicable" based on Justification from Central Hudson.
		c. the current project status;		\				Updated to "Not Applicable" based on Justification from Central Hudson.
		d. lessons learned to date;		\				Updated to "Not Applicable" based on Justification from Central Hudson.
		e. project adjustments and improvement opportunities identified to date; and		\				Updated to "Not Applicable" based on Justification from Central Hudson.
		f. next steps with clear timelines and deliverables.		\				Updated to "Not Applicable" based on Justification from Central Hudson.
		2. Describe where and how DER developers/operators and other third parties can currently access the utility's hosting capacity information.		X				Sufficient information is provided.
		3. Describe how and when the existing hosting capacity assessment information provided to DER developers/operators and other third parties will increase and improve as work progresses. This should include discussion of the transition of hosting capacity information access from the utility's current hosting capacity information portal to the statewide hosting capacity solution in development on the IEDR.		X				Sufficient information is provided with reference to other sections of the Hosting Capacity chapter. Transition to state wide platform is also described
		4. Describe the means and methods used for determining the hosting capacity currently available at each location in the distribution system.		X				Detailed information and useful maps are included in this section.
		5. Describe the means and methods used for forecasting the future hosting capacity available at each location in the distribution system.		X				Limited information is available. Forecasting capabilities for future capacity need to evolve.
		6. Describe how and when the future hosting capacity forecast information provided to DER developers/operators and other third parties will begin, increase, and improve as work progresses.		X				Limited information on how the forecast information will increase and improve.
		7. Summarize the utility's specific objectives and methods for:						
		a. identifying and characterizing locations in the utility's service area where limited hosting capacity is a barrier to productive DER development, directing users to the CGPP filing for further information; and		X				Sufficient information on additional work for identifying locations.
		b. timely increasing hosting capacity to enable productive DER development at those locations, directing users to the IEDR platform when applicable for more information.		X				The company has partially responded to the question.

Billing and Compensation							
Prompt							Rationale
DPS Rationale							
		A monthly bill is often the only method of engagement and communication between a utility and its customers. Because of this, customer billing and compensation are vital components of a utility's core business and, therefore, must be accurate, timely, and transparent. It is DPS Staff's position that billing that is consistent, accurate, and well explained will lead to increased customer satisfaction and reduced inquiries to the utility's call center and/or reduced customer complaints to the Commission, on social media, or to the press. Along with satisfying the general guidelines for information related to each topic (see Section 3.1), DPS Staff recommends that the DSIP Update should provide the following additional details pertaining to customer billing and compensation:					
1. Context and Background							
		a. Describe how topic-related policies, processes, resources, standards, and capabilities have evolved since the 2020 DSIP Update filing.		X			Complete description of updates.
2. Implementation Plan, Schedule, and Investments							
	a. Current Progress						
		i. Describe the current implementation as of June 30, 2023; and		X			Reference quarterly updates and describe current initiatives.
		ii. Describe how the current implementation supports stakeholders' current and future needs.		X			Discusses benefits of accurate billing to stakeholders and customers.
	b. Future Implementation and Planning						
		i. Describe the future implementation that is planned to be deployed by 2028, identifying planned efforts and funded efforts.		X			Description of updates pertaining to appropriate programs and wholesale market developments.
		ii. Describe how the future implementation will support stakeholders' needs in 2028 and beyond.		X			Limited description of these topics, there was more emphasis on describing existing programs / offerings.
		iii. Identify and characterize the work and investments needed to progress from the current implementation to the planned future implementation.		X			
		iv. Describe and explain the planned timing and sequence of the work and investments needed to progress from the current implementation to the planned future implementation.		X			
		v. Describe where and how plans for topic-related work and investments affect the CGPP.		\			No mention of CGPP.
		vi. Describe where and how investment plans developed through the CGPP affect the topic-related work and investments presented in the DSIP update.		\			No mention of CGPP.
	c. Integrated Implementation Timeline						
		i. Using a common format developed jointly with the other utilities, provide a high-level implementation timeline that combines the key milestones for all topic-related work and investments planned over the five-year period ending in 2028. Along with the milestones, the timeline should show significant dependencies among the work and investments related to all topics.		\			No timeline provided in this section.
3. Risks and Mitigation							
		a. Identify and characterize any potential risk(s) and/or actual issue(s) that could affect timely implementation and describe the measures taken, or to be taken, to mitigate the risk(s) and/or resolve the issue(s).		X			Nice examples of the complexity and risks but very little discussion of mitigation.
4. Stakeholder Engagement							
		a. Identify and characterize the categories of stakeholders engaged in DSIP development and use.		X			Some limited description of stakeholders.
		b. Describe when and how the goals and needs of each stakeholder category are identified and incorporated into the DSIP.		\			Not provided.
		c. Describe when and how each stakeholder category's needs will be met over time.		\			Not Provided.

Billing and Compensation								
		Prompt						Rationale
		d. Describe and explain the utility's needs for stakeholder-provided information, capabilities, and actions supporting specific implementation and operational outcomes.		X				General discussion of the stakeholders and meetings attended, but specific information requested was not provided in the section.
		e. Describe the means and methods for effectively informing and engaging associated stakeholders as planning, design, and implementation progress so that the outputs effectively address, as much as feasible, the needs of the utility, DER developers, and stakeholders.		X				
		f. Describe how the utility will ensure that the information, tools, and engagement opportunities provided to stakeholders effectively deliver the intended support and do not lead to unintended problems.		\				Not provided.
4.10 Billing and Compensation								
		1. Describe the various DER-related billing and compensation programs (including demand response) implemented or revised by the utility since the last update. For this first inclusion in the DSIP, describe developments that have occurred since the beginning of NEM, RNM, CDG, and VDER.		X				Clear descriptions provided in the current progress section.
		2. Describe the customer billing/compensation functions and data generally needed to expand deployment and use of DERs in the utility's service area. Include descriptions of the existing and planned components (processes, resources, and data exchanges) that will support those needs. For planned components, provide the sequence and timing of key investments and activities required for component implementation.		X				Timing of planned components was noted as contingent on commission orders from two active cases with final requirements. 15-E-0751 & 20 - E 0249.
		3. Describe the customer billing/compensation functions and data needed to enable DER participation in the NYISO's wholesale markets for energy, capacity, and ancillary services. This should include information regarding the utility's implementation of its Wholesale Distribution Service (WDS), Wholesale Value Stack (WVS), and related non-wholesale value stack (VDER without wholesale energy and capacity components). Also include descriptions of the existing and planned components (processes, resources, and data exchanges) that will support those needs. For planned components, provide the sequence and timing of key investments and activities required for component implementation.		X				Timing of planned components was noted as contingent on commission orders from an active cases with final requirements. 15-E-0751 .
		4. Describe the utility's plans to implement or modify DER-related billing and compensation capabilities, including automation, to address the Community Distributed Generation (CDG) billing and crediting problems that were the focus of the Commission's September 15, 2022, Order in Cases 19-M-0463, et. al.13		X				Plan to address issues clearly described.
		5. For each type of DER billing and compensation, including for CDG and wholesale market participation, describe the current information system constraints preventing full automation of DER billing and compensation.		X				Noted further design changes and awaiting of final order from commission in case 15-E-0751.
		6. Describe how DER billing and compensation affects other programs such as budget billing, time of use rates, and consolidated billing for Energy Service Companies (ESCOs).		X				Interactions between programs described.
		7. Describe the utility's means and methods - existing and planned – for monitoring and testing new or modified customer billing and compensation functions.		X				Method for monitoring and testing described.
		8. Describe the utility's means and methods – existing and planned - for supporting customer outreach and education, including where and how customers, DER developers/operators and other third-parties can readily access information on the utility's billing and compensation procedures.		X				Continue to participate in various workshops and engagement efforts.
		9. Describe the utility's means and methods - existing and planned – for receiving, investigating, and monitoring customer complaints and/or inquiries regarding billing and compensation issues related to DERs.		X				Methods and contacts provided.

DER Interconnections							
Prompt							Rationale
	DPS Rationale		-				
		Implementing the utility resources and capabilities that enable DER interconnections to the distribution system is a critical early objective. Many of the details which identify and characterize those resources and capabilities are being worked out by the Interconnection Technology Working Group (ITWG) and the Interconnection Policy Working Group (IPWG), which are stakeholder collaboratives led jointly by DPS Staff and NYSERDA. The goal of both working groups is to establish the requirements for standard resources, processes, specifications, and policies which foster efficient, timely, safe, and reliable DER interconnections. Along with satisfying the general guidelines for information related to each topic (see Section 3.1), DPS Staff recommends that the DSIP Update should provide the following additional details, which are specific to DER interconnections:					
1. Context and Background							
	a. Describe how topic-related policies, processes, resources, standards, and capabilities have evolved since the 2020 DSIP Update filing.		X				Good discussion of general development and Central Hudson-specific developments.
2. Implementation Plan, Schedule, and Investments							
	a. Current Progress						
	i. Describe the current implementation as of June 30, 2023; and		X				Detailed description.
	ii. Describe how the current implementation supports stakeholders' current and future needs.		X				Refers to key stakeholders and how they meet needs, but not well-structured.
	b. Future Implementation and Planning						
	i. Describe the future implementation that is planned to be deployed by 2028, identifying planned efforts and funded efforts.		X				Some dates and systems provided but not a comprehensive description.
	ii. Describe how the future implementation will support stakeholders' needs in 2028 and beyond.		X				Identification of core needs and systems or changes that will meet these needs, but few dates included.
	iii. Identify and characterize the work and investments needed to progress from the current implementation to the planned future implementation.		X				Details high-level required system changes, but no investments and lacking detail.
	iv. Describe and explain the planned timing and sequence of the work and investments needed to progress from the current implementation to the planned future implementation.		X				Some projects have timelines, others do not.
	v. Describe where and how plans for topic-related work and investments affect the CGPP.		X				Says that execution of projects will inform CGPP but no details given.
	vi. Describe where and how investment plans developed through the CGPP affect the topic-related work and investments presented in the DSIP update.		X				Outlines that CGPP could identify new projects, but does not give specifics of these projects.
	c. Integrated Implementation Timeline						
	i. Using a common format developed jointly with the other utilities, provide a high-level implementation timeline that combines the key milestones for all topic-related work and investments planned over the five-year period ending in 2028. Along with the milestones, the timeline should show significant dependencies among the work and investments related to all topics.		X				The timeline shows 4 high-level projects with no dependencies or investments.
3. Risks and Mitigation							
	a. Identify and characterize any potential risk(s) and/or actual issue(s) that could affect timely implementation and describe the measures taken, or to be taken, to mitigate the risk(s) and/or resolve the issue(s).		X				Identifies some risks and mitigations but feels light.
4. Stakeholder Engagement							
	a. Identify and characterize the categories of stakeholders engaged in DSIP development and use.		X				Some stakeholders identified but not clearly linked to DSIP development and use.

DER Interconnections								
		Prompt						**Rationale**
		b. Describe when and how the goals and needs of each stakeholder category are identified and incorporated into the DSIP.		X				Clear summary of when meetings are held and with whom.
		c. Describe when and how each stakeholder category's needs will be met over time.		X				Acknowledgement that needs must be sought on an ongoing basis but no plan for meeting needs over time is given.
		d. Describe and explain the utility's needs for stakeholder-provided information, capabilities, and actions supporting specific implementation and operational outcomes.		X				Acknowledgement of input from stakeholders.
		e. Describe the means and methods for effectively informing and engaging associated stakeholders as planning, design, and implementation progress so that the outputs effectively address, as much as feasible, the needs of the utility, DER developers, and stakeholders.		X				Description of engagement with stakeholders, but not how this changes throughout project phases.
		f. Describe how the utility will ensure that the information, tools, and engagement opportunities provided to stakeholders effectively deliver the intended support and do not lead to unintended problems.		X				States that regular meetings are held with stakeholders to manage risks and that reviews are undertaken after implementation, but very high-level and light on detail.
4.11	DER Interconnections							
		1. Describe in detail (including the web URL) the web portal that provides efficient and timely support for DER developers' interconnection applications.		X				Detailed description of portal including updates since 2020.
		2. Describe where, how, and when the utility will implement and maintain a resource where DER developers and other stakeholders with appropriate access controls can readily access, navigate, view, sort, filter, and download up to date information about all DER interconnections in the utility's system. The resource should provide the following information for each DER interconnection:						
		a. DER type, size, and location;		X				The information is provided in the Interconnection Online Application Portal (IOAP) with appropriate access controls to ensure it is visible only to relevant people.
		b. DER developer;		X				The information is provided in the Interconnection Online Application Portal (IOAP) with appropriate access controls to ensure it is visible only to relevant people.
		c. DER owner;		/				Not covered as the Utility has assumed it not to be material information.
		d. DER operator;		/				Not covered as the Utility has assumed it not to be material information.
		e. the connected substation, circuit, phase, and tap;		X				Confirms substation and circuit availability, but not phase and tap.
		f. the DER's remote monitoring, measurement, and control capabilities; and		/				States that this is not publicly available information.
		g. the DER's primary and secondary (where applicable) purposes; and,		/				Not provided as publicly available information as majority of applications are for offsetting load and receiving compensation.
		h. the DER's current interconnection status (operational, construction in progress, construction scheduled, or interconnection requested) and its actual/planned in service date.		X				Confirms that it is covered, but does not give available options.
		3. Describe the utility's means and methods for tracking and managing its DER interconnection application process and explain how those means and methods ensure achievement of the performance timelines established in New York State's Standardized Interconnection Requirements.		X				Describes platforms and automation.

DER Interconnections								
		Prompt						Rationale
		4. Describe where, how, and when the utility will provide a resource to applicants and other appropriate stakeholders for accessing up to date information concerning application status and process workflows.		X				Describes platforms and automation.
		5. Describe the utility's processes, resources, and standards used for constructing approved DER interconnections.		X				Doesn't go into detail on processes but references where they can be found in public.
		6. Describe the utility's means and methods used for tracking and managing construction of approved DER interconnections to ensure achievement of required performance levels.		X				
		7. Describe how and when the utility will deliver and maintain its DER interconnection information to the IEDR.		X				Provides a list of information sent to IEDR but not how often the information is sent or a timeline for ongoing developments.

AMI							
Prompt							Rationale
	DPS Rationale						
		Advanced Metering Infrastructure (AMI) provides grid edge measurement, data acquisition, and control capabilities which are either essential or beneficial to a number of important functions in a modern distribution system. Granular time series data from smart meters and other intelligent devices at customers' premises enables advanced analyses, innovative rate designs, and customer engagement strategies which benefit both the customers and the grid. Voltage sensing and measurement functions support increased system efficiency and enable improved outage detection and restoration processes. Capabilities supporting DER measurement, monitoring, and control are essential for DER integration. Along with satisfying the general guidelines for information related to each topic (see Section 3.1), DPS Staff recommends that the DSIP Update should provide the following additional details which are specific to AMI:					
1. Context and Background							
		a. Describe how topic-related policies, processes, resources, standards, and capabilities have evolved since the 2020 DSIP Update filing.		X			Discusses the history of their BCA process for AMI including full or partial deployment. Indicates that factors have not changed therefore, AMI is still not cost effective.
2. Implementation Plan, Schedule, and Investments							
	a. Current Progress						
		i. Describe the current implementation as of June 30, 2023; and		X			New BCA underway and will be completed March 2025. There have been no changes to 'characteristics or significant changes in deployment costs' therefore pessimistic about roll out. In section 2 it says 'technical and economic considerations' may have changed and is now doing a BCA. This seems inconsistent.
		ii. Describe how the current implementation supports stakeholders' current and future needs.		/			No mention of stakeholder needs in timeline presented for BCA work.
	b. Future Implementation and Planning						
		i. Describe the future implementation that is planned to be deployed by 2028, identifying planned efforts and funded efforts.		X			Same content as 2.a. New BCA underway and will be completed March 2025; readiness stage is still in "initiation" or studying phase.
		ii. Describe how the future implementation will support stakeholders' needs in 2028 and beyond.		/			
		iii. Identify and characterize the work and investments needed to progress from the current implementation to the planned future implementation.		/			
		iv. Describe and explain the planned timing and sequence of the work and investments needed to progress from the current implementation to the planned future implementation.		/			
		v. Describe where and how plans for topic-related work and investments affect the CGPP.		/			
		vi. Describe where and how investment plans developed through the CGPP affect the topic-related work and investments presented in the DSIP update.		/			
	c. Integrated Implementation Timeline						
		i. Using a common format developed jointly with the other utilities, provide a high-level implementation timeline that combines the key milestones for all topic-related work and investments planned over the five-year period ending in 2028. Along with the milestones, the timeline should show significant dependencies among the work and investments related to all topics.		/			
3. Risks and Mitigation							
		a. Identify and characterize any potential risk(s) and/or actual issue(s) that could affect timely implementation and describe the measures taken, or to be taken, to mitigate the risk(s) and/or resolve the issue(s).		X			Risks are: assigning staff to this project away from other projects; field services safety; customer resistance; and cybersecurity. Focuses on risks of doing AMI deployment vs risks of not doing AMI.

AMI									
Prompt									Rationale
4. Stakeholder Engagement									
		a. Identify and characterize the categories of stakeholders engaged in DSIP development and use.		X					Need to engage customers and stakeholders who would be interested in data usage. Have not done so to date.
		b. Describe when and how the goals and needs of each stakeholder category are identified and incorporated into the DSIP.		/					Updated to "Not Applicable" based on Justification from Central Hudson.
		c. Describe when and how each stakeholder category's needs will be met over time.		/					Updated to "Not Applicable" based on Justification from Central Hudson.
		d. Describe and explain the utility's needs for stakeholder-provided information, capabilities, and actions supporting specific implementation and operational outcomes.		/					Updated to "Not Applicable" based on Justification from Central Hudson.
		e. Describe the means and methods for effectively informing and engaging associated stakeholders as planning, design, and implementation progress so that the outputs effectively address, as much as feasible, the needs of the utility, DER developers, and stakeholders.		/					Updated to "Not Applicable" based on Justification from Central Hudson.
		f. Describe how the utility will ensure that the information, tools, and engagement opportunities provided to stakeholders effectively deliver the intended support and do not lead to unintended problems.		/					Updated to "Not Applicable" based on Justification from Central Hudson.
4.12 Advanced Metering Infrastructure									
		- - 1. Provide a summary of the most up to date AMI implementation plans, including where AMI has been deployed to date.		X					Documented current AMI installs for Rev demonstration project 66. Mentioned in intro other efforts to accomplish the benefits of AMI - would be nice to hear how they are still unlocking benefits without AMI.
		2. Provide a summary of all new capabilities that AMI has enabled to date, and how these capabilities benefit customers, including, as applicable, customer engagement, energy efficiency, and innovative rates.		X					Use cases provided: M&V with Itron for TDM/NWA; load research; value stack; res TOU. Provides limited/narrow use cases due to limited data set.
		3. Describe the AMI-acquired data and information that is planned to be available through the IEDR.		X					Does not indicate intention to add their AMI data to IEDR due to limited deployment of AMI.
		4. Describe where and how DER developers, customers, and other stakeholders can access up to date information about the locations and capabilities of existing and planned smart meters.		X					No plans for AMI rollout or additional use cases with current AMI.
		5. Provide a summary of plans and timelines for future expansion and/or enhancement of AMI functions.		X					No plans for AMI rollout or additional use cases with current AMI.
		6. Describe where and how each type of AMI-acquired data is stored, managed, and shared with, and used by other utility information systems such as those used for billing/compensation, customer service, work management, asset management, grid planning, and grid operations.		X					The text clearly describes the integration with the MDM and customer billing system. Does not use AMI data for asset management, grid planning or grid ops. Uses AMI for billing and load research.

Beneficial Location of DERs and NWA						
Prompt						Rationale
DPS Rationale						
To help promote productive DER development, DPS Staff suggests that it is essential that the utility identify, characterize, and publicly present the locations in its service area where DERs and/or energy efficiency might provide significant benefits to the distribution system and/or to the bulk electric system. Based on its criteria for evaluating opportunities for non wires alternatives (NWA), the utility then selects some of those locations for NWA procurements and/or energy efficiency measures that will benefit the distribution system. In their previous DSIP filings, the utilities have separately described their processes for identifying beneficial locations, evaluating NWA suitability, and procuring non-wires solutions. However, as the utilities have evolved their planning processes to perform these functions, they have become part of a continuous process that begins with integrated planning. Therefore, DPS Staff recommends that the utility's 2023 DSIP update, and all future updates, should reflect this updated process by combining the topics of identification of beneficial locations, NWA suitability assessment, and procurement processes into one cohesive discussion. Along with satisfying the general guidelines for information related to each topic (see Section 3.1), DPS Staff recommends that the DSIP Update should provide the following additional details:						
1. Context and Background						
a. Describe how topic-related policies, processes, resources, standards, and capabilities have evolved since the 2020 DSIP Update filing.		X				
2. Implementation Plan, Schedule, and Investments						
a. Current Progress						
i. Describe the current implementation as of June 30, 2023; and		X				
ii. Describe how the current implementation supports stakeholders' current and future needs.		X				
b. Future Implementation and Planning						
i. Describe the future implementation that is planned to be deployed by 2028, identifying planned efforts and funded efforts.		X				Mentions some impact of state regulations and funding but does not provide detail on what activities are funded. Given most activities are ongoing or internal to Central Hudson it could be assumed the activities are funded but is not clear.
ii. Describe how the future implementation will support stakeholders' needs in 2028 and beyond.		X				Lists opportunities to gather stakeholder feedback and how they will create pathways to address needs at lowest cost to reduce ratepayer pressure and how pathways will prioritize specific stakeholder needs.
iii. Identify and characterize the work and investments needed to progress from the current implementation to the planned future implementation.		X				Does not appear that a lot of changes in the process are expected so marked green because there is a decently robust discussion of what they anticipate working on through 2028 to tweak the current process.
iv. Describe and explain the planned timing and sequence of the work and investments needed to progress from the current implementation to the planned future implementation.		/				No timeline or sequence provided however given minor changes discussed I did not think the lack of timeline is a large nonconformity.
v. Describe where and how plans for topic-related work and investments affect the CGPP.		X				Discussion of overlap between what is in the DSIP and CGPP was included though it focused on how the DSIP is broader and the CGPP is focused on meeting CLCPA goals. Does include a reference to NWAs.
vi. Describe where and how investment plans developed through the CGPP affect the topic-related work and investments presented in the DSIP update.		X				Looks to be a repeat of what is included in other topic areas and includes no specific mention for NWAs and beneficial locations.
c. Integrated Implementation Timeline						

Beneficial Location of DERs and NWA							
		Prompt					Rationale
		i. Using a common format developed jointly with the other utilities, provide a high-level implementation timeline that combines the key milestones for all topic-related work and investments planned over the five-year period ending in 2028. Along with the milestones, the timeline should show significant dependencies among the work and investments related to all topics.		X			Refers reader to Figure 8 under Grid Modernization.
3.	Risks and Mitigation						
		a. Identify and characterize any potential risk(s) and/or actual issue(s) that could affect timely implementation and describe the measures taken, or to be taken, to mitigate the risk(s) and/or resolve the issue(s).		X			Discussion focuses on probabilistic forecasting and diversification of DERs to mitigate DER reliability. Only two risks specific to NWAs.
4.	Stakeholder Engagement						
		a. Identify and characterize the categories of stakeholders engaged in DSIP development and use.		X			
		b. Describe when and how the goals and needs of each stakeholder category are identified and incorporated into the DSIP.		X			No specific schedule or timing of feedback opportunities provided but good detail on when stakeholders are engaged and how they are informed of the NWA process through various sources of information.
		c. Describe when and how each stakeholder category's needs will be met over time.		X			
		d. Describe and explain the utility's needs for stakeholder-provided information, capabilities, and actions supporting specific implementation and operational outcomes.		X			
		e. Describe the means and methods for effectively informing and engaging associated stakeholders as planning, design, and implementation progress so that the outputs effectively address, as much as feasible, the needs of the utility, DER developers, and stakeholders.		X			
		f. Describe how the utility will ensure that the information, tools, and engagement opportunities provided to stakeholders effectively deliver the intended support and do not lead to unintended problems.		X			
4.13	Beneficial Locations for DERs and Non Wires Alternatives						
		1. Describe where and how developers and other stakeholders can access resources for:					
		a. accessing up to date information about beneficial locations for DERs and/or energy efficiency measures; and		X			Focused on methodology and study results, not how stakeholders can access information on beneficial locations for DERs.
		b. efficiently sorting and filtering locations by the type(s) of capability needed, the timing and amount of each needed capability, the type(s) and value of desired benefit, the serving substation, the circuit, and the geographic area.		X			Sufficiently explains why advanced searching does not exist.
		2. Describe the means and methods for identifying and evaluating locations in the distribution system where:					
		a. an NWA comprising one or more DERs and/or energy efficiency measures could timely reduce, delay, or eliminate the need for upgrading distribution infrastructure and/or materially benefit distribution system reliability, efficiency, and/or operations; and/or		X			
		b. one or more DERs and/or energy efficiency measures including increased value based customer incentives could reduce, delay, or eliminate the need for upgrading bulk electric system resources and/or materially benefit bulk electric system reliability, efficiency, and/or operations.		X			
		3. Describe how the NWA procurement process works within utility time constraints while enabling DER developers to properly prepare and propose NWA solutions which can be implemented in time to serve the system need. Details should include:					

Beneficial Location of DERs and NWA							
		Prompt					**Rationale**
		a. how utility and DER developer time and expense are minimized for each procurement transaction;		X			There is a small paragraph in next section about starting the solicitation process as soon as possible but it does not really address this requirement.
		b. how standardized contracts and procurement methods are used across the utilities.		X			
		4. Describe where and how DER developers and other stakeholders can access up to date information about current NWA project opportunities.		X			
		5. Describe how the utility considers all aspects of operational criteria and public policy goals when deciding what to procure as part of a NWA solution.		X			Provides a detailed list of what is considered when they review proposals but the policy section does not include specific or types of policies they consider just high-level reference to looking at whether the solution helps meet policy objectives.
		6. Describe where, how, and when the utility will provide DER developers and other stakeholders with a resource for accessing up to date information about all completed and in progress NWA projects. The information provided for each project should:					
		a. describe the location, type, size, and timing of the system need addressed by the project;		X			
		b. provide the amount of traditional solution cost that was/will be avoided;		X			Central Hudson explains why they do not provide this data, noting the traditional solution competes with DER solutions and thus the cost is not provided in the solicitation.
		c. explain how the selected NWA solution enables the savings; and		X			Central Hudson notes this information is confidential.
		d. describe the structure and functional characteristics of the procurement transaction between the utility and the solution provider(s).		X			

How to Use the Assessment

Purpose of DSIPs enable a market for products and services provided by the Distributed Energy Resources (DER) that are connected to the utility's distribution systems

Purpose of Assessment The purpose of this assessment is to determine the alignment of each DSIP with the guidance provided in the 2023 DPS Staff Whitepaper.

Format of Assessment This assessment represents a review of one utility's DSIP. It is organized into 13 tabs/charts for each technical topic described in DPS guidance.

Review Approach

Checkbox The "checkbox" column is a quick check/reference to see if the DSIP responded to each component of the guidance.

Color Assessment The color assessment is a visual indicator of how well the DSIP response aligns with the prompts outlined in the DPS guidance.

- Some evidence indicating that that DSIP aligns with the DPS guidance.
- Sufficient evidence that DSIP aligns with the DPS guidance
- Satisfies all elements of the DPS guidance in a robust and comprehensive manner.

Cumulative Assessment

	4.1 Integrated Planning	4.2 Advanced Fore-casting	4.3 Grid Operations	4.4 Energy Storage Integration	4.5 Electric Vehicle Integration	4.6 Clean Heat Integration	4.7 EE Integration and Innovation	4.8 Data Sharing	4.9 Hosting Capacity	4.1 Billing and Comp-ensation	4.11 DER Interconn-ections	4.12 Advanced Metering Infra-structure	4.13 Beneficial Locations for DERs and NWA
1. Context/Background													
2. Implementation Plan													
3. Risks/Mitigation													
4. Stakeholder Engmt.													
Prompt 1													
Prompt 2													
Prompt 3													
Prompt 4													
Prompt 5													
Prompt 6			-				-						
Prompt 7			-				-					-	-
Prompt 8			-	-		-	-		-		-	-	-
Prompt 9	-		-	-	-	-	-		-		-	-	-
Prompt 10	-		-	-	-	-	-	-	-	-	-	-	-
Prompt 11	-		-	-	-	-	-	-	-	-	-	-	-
Prompt 12	-		-	-	-	-	-	-	-	-	-	-	-
Prompt 13	-		-	-	-	-	-	-	-	-	-	-	-
Prompt 14	-		-	-	-	-	-	-	-	-	-	-	-
Prompt 15	-		-	-	-	-	-	-	-	-	-	-	-
Prompt 16	-		-	-	-	-	-	-	-	-	-	-	-
Prompt 17	-		-	-	-	-	-	-	-	-	-	-	-

	5.1 DSIP Governance	5.2 MCOS	5.3 BCA
Included (Y/N)	Y	Y	Y
Color Assessment			

Key			
	Not answered	OS	Answered outside the topic area section
-	Not asked	N/A	Not applicable
	Some evidence indicating that that DSIP aligns with the DPS guidance.		
	Sufficient evidence that DSIP aligns with the DPS guidance		
	Satisfies all elements of the DPS guidance in a robust and comprehensive manner.		

Integrated Planning						
	Prompt					Rationale
	DPS Rationale					
	DPS Staff recommends that the utility's electric system plan should position the utility to integrate an increasing number and variety of DERs while maintaining or improving safety, reliability, quality, and affordability of service. While stakeholders will now be able to reference the CGPP for a detailed understanding of how integrated planning will evolve to meet system needs aligned with the CLCPA, the DSIP should leverage the outputs of CGPP scenario planning and filed capital investment plans as inputs, and describe overall implementation plans and timelines as well as advances in specific planning functionalities that enhance the DSP. Along with satisfying the general guidelines for information related to each topical area (see Section 3.1), DPS Staff suggests that the DSIP Update should provide the following additional details which are specific to the utility resources and capabilities which support integrated electric system planning:					
1.	Context and Background					
	a. Describe how topic-related policies, processes, resources, standards, and capabilities have evolved since the 2020 DSIP Update filing.		X			Provides a good description of various ISP initiatives but not a lot of information to inform what they have done since the 2020 DSIP. Some of the discussion is defining what they are working on. Hosting capacity and interconnections discussion more robust that forecasting and NWA with regard to what they have been working on but is still incomplete.
2.	Implementation Plan, Schedule, and Investments					
	a. Current Progress					
	i. Describe the current implementation as of June 30, 2023; and		X			Very robust discussion on what they have done to date.
	ii. Describe how the current implementation supports stakeholders' current and future needs.		X			Some discussion of information to support developers in intro paragraph but no discussion in individual sections (forecasting, NWA, hosting capacity) except the interconnection section which again talks about benefits to developers.
	b. Future Implementation and Planning					
	i. Describe the future implementation that is planned to be deployed by 2028, identifying planned efforts and funded efforts.		X			Detailed table with achievements, short term and long term efforts and discussion of efforts in preceding text. Blue due to lack of identifying what is funded.
	ii. Describe how the future implementation will support stakeholders' needs in 2028 and beyond.		\			
	iii. Identify and characterize the work and investments needed to progress from the current implementation to the planned future implementation.		X			
	iv. Describe and explain the planned timing and sequence of the work and investments needed to progress from the current implementation to the planned future implementation.		X			Detailed table with achievements, short term and long term efforts.
	v. Describe where and how plans for topic-related work and investments affect the CGPP.					Moderate discussion of impact of DSIP on CGPP and vice versa but remains high-level.
	vi. Describe where and how investment plans developed through the CGPP affect the topic-related work and investments presented in the DSIP update.		X			Moderate discussion of impact of DSIP on CGPP and vice versa but remains high-level.
	c. Integrated Implementation Timeline					

Integrated Planning							
		Prompt					**Rationale**
		i. Using a common format developed jointly with the other utilities, provide a high-level implementation timeline that combines the key milestones for all topic-related work and investments planned over the five-year period ending in 2028. Along with the milestones, the timeline should show significant dependencies among the work and investments related to all topics.		X			On its own schedule is very high level and does not identify dependencies or relation of tasks.
3.	Risks and Mitigation						
		a. Identify and characterize any potential risk(s) and/or actual issue(s) that could affect timely implementation and describe the measures taken, or to be taken, to mitigate the risk(s) and/or resolve the issue(s).		X			Two risks identified with robust list of mitigation options for the first. Second notes external limitations in mitigation.
4.	Stakeholder Engagement						
		a. Identify and characterize the categories of stakeholders engaged in DSIP development and use.		X			Identify DER developers as key stakeholder. Do not discuss other categories of stakeholders.
		b. Describe when and how the goals and needs of each stakeholder category are identified and incorporated into the DSIP.		X			High-level discussion of methods of collecting feedback but only note that some improvements can be made easily.
		c. Describe when and how each stakeholder category's needs will be met over time.		\			
		d. Describe and explain the utility's needs for stakeholder-provided information, capabilities, and actions supporting specific implementation and operational outcomes.		\			
		e. Describe the means and methods for effectively informing and engaging associated stakeholders as planning, design, and implementation progress so that the outputs effectively address, as much as feasible, the needs of the utility, DER developers, and stakeholders.		X			Provides some information on when stakeholders are engaged and ways the JU provides information such as a newsletter and webinars.
4.1	Integrated Planning						
		1. The means and methods used for integrated distribution system planning.		X			Pointed to other section within Integrated planning rather than a different topic so marked Blue.
		2. How the utility's means and methods enable probabilistic planning which effectively anticipates the inter related effects of distributed generation, energy storage, electric vehicles, beneficial electrification, and energy efficiency.		X			High-level overview of improving future forecasting but not detailed plans on what they will be doing or when.
		3. How the utility ensures that the information needed for integrated system planning is timely acquired and properly evaluated.		X			Discusses importance of accurate data but not how they ensure quality or timeliness beyond mention of the GMEP project.
		4. The types of sensitivity analyses performed and how those analyses are applied as part of the integrated planning process.		X			Defines and discusses types of sensitivity analyses they could run but does not identify if there are plans to do this.
		5. How the utility will timely adjust its integrated system plan if future trends differ significantly with predictions, both in the short term and in the long term beyond the DSIP timeline.		X			Begins to discuss their planning cycle but discussion of impacts of electrification and asset management is high-level and repeated in next section.
		6. The factors unrelated to DERs such as aging infrastructure, electric vehicles, and beneficial electrification which significantly affect the utility's integrated plan and describe how the utility's planning process addresses each of those factors.		X			Repeated from previous section but does a high-level overview of potential electrification impacts and asset planning options.

Integrated Planning							
		Prompt					**Rationale**
		7. How the means and methods for integrated electric system planning evaluate the effects of potential energy efficiency measures.		X			Notes that historical EE is included in load forecasts but no detail on how they plan to improve locational forecasting for NWAs other than applying new data analytics to AMI and other data.
		8. How the utility will inform the development of its integrated planning through best practices and lessons learned from other jurisdictions.		X			

Advanced Forecasting							
	Prompt						Rationale
	DPS Rationale						
		Utility planners and operators, DER developers and operators, and other stakeholders all require load and supply forecasts which are timely, accurate, and detailed enough to support both short term and long term planning. Such forecasts are an important factor in predicting the hosting capacity available at existing and potential DER locations and are necessary for efficient development and use of grid resources. As the variety of methods for using DERs to address electric system needs expands, DPS Staff recommends that utilities should perform advanced forecasting analyses which integrate an increasing number and variety of DERs into their load and supply forecasts. Therefore, DPS Staff proposes that the methods for using advanced distribution system forecasting, along with plans for implementing the means and methods needed for advanced forecasting should continue to be described by the utilities in their DSIPs. Along with satisfying the general guidelines for information related to each topic (see Section 3.1), DPS Staff recommends that the DSIP Update should provide the following additional details that are specific to the utility resources and capabilities and which enable advanced electric system forecasting and provide the most current forecast results:					
1.	Context and Background						
		a. Describe how topic-related policies, processes, resources, standards, and capabilities have evolved since the 2020 DSIP Update filing.		X			States that the companies have focused on foundational technologies, but the discussion is very brief.
2.	Implementation Plan, Schedule, and Investments						
	a. Current Progress						
		i. Describe the current implementation as of June 30, 2023; and		X			They are working to transition from the top down approach, but the data to support bottom up forecasting is not available from current projects yet. Also participating in and implementing GEMP and Line Sensors pilot programs.
		ii. Describe how the current implementation supports stakeholders' current and future needs.		X			Discussion of interactions with some stakeholders like NYSERDA and JU, but did not address stakeholder needs.
	b. Future Implementation and Planning						
		i. Describe the future implementation that is planned to be deployed by 2028, identifying planned efforts and funded efforts.		X			Nice clear table laying out achievements, short term and long term initiatives.
		ii. Describe how the future implementation will support stakeholders' needs in 2028 and beyond.		\			Not addressed in this section.
		iii. Identify and characterize the work and investments needed to progress from the current implementation to the planned future implementation.		X			Included in table.
		iv. Describe and explain the planned timing and sequence of the work and investments needed to progress from the current implementation to the planned future implementation.		X			Included in table.
		v. Describe where and how plans for topic-related work and investments affect the CGPP.		\			Not addressed in this section.
		vi. Describe where and how investment plans developed through the CGPP affect the topic-related work and investments presented in the DSIP update.		\			Not addressed in this section.
	c. Integrated Implementation Timeline						
		i. Using a common format developed jointly with the other utilities, provide a high-level implementation timeline that combines the key milestones for all topic-related work and investments planned over the five-year period ending in 2028. Along with the milestones, the timeline should show significant dependencies among the work and investments related to all topics.		X			Clear timeline provided.
3.	Risks and Mitigation						

Advanced Forecasting								
		Prompt						**Rationale**
		a. Identify and characterize any potential risk(s) and/or actual issue(s) that could affect timely implementation and describe the measures taken, or to be taken, to mitigate the risk(s) and/or resolve the issue(s).		X				Clear table with robust description of risks and mitigation measures provided.
4. Stakeholder Engagement								
		a. Identify and characterize the categories of stakeholders engaged in DSIP development and use.		X				Very limited discussion focused only on the integrated planning working group and advanced forecasting subgroup.
		b. Describe when and how the goals and needs of each stakeholder category are identified and incorporated into the DSIP.		\				Not provided in this section.
		c. Describe when and how each stakeholder category's needs will be met over time.		X				Some mention of timing related to working group discussions.
		d. Describe and explain the utility's needs for stakeholder-provided information, capabilities, and actions supporting specific implementation and operational outcomes.		\				Not provided in this section.
		e. Describe the means and methods for effectively informing and engaging associated stakeholders as planning, design, and implementation progress so that the outputs effectively address, as much as feasible, the needs of the utility, DER developers, and stakeholders.		\				Not provided in this section.
		f. Describe how the utility will ensure that the information, tools, and engagement opportunities provided to stakeholders effectively deliver the intended support and do not lead to unintended problems.		\				Not provided in this section.
4.2 Advanced Forecasting								
		1. Identify where and how DER developers and other stakeholders can readily access, navigate, view, sort, filter, and download up to date load and supply forecasts.		X				
		2. Identify and characterize each load and supply forecasting requirement identified from stakeholder inputs.		X				Clearly characterizes requirements.
		3. Describe in detail the existing and/or planned forecasts produced for third-party use and explain how those forecasts fulfill each identified stakeholder requirement for load and supply forecasts.		X				Clear description of forecasts for third party use provided.
		4. Describe the spatial and temporal granularity of the system level and local level load and supply forecasts produced.		X				Does not currently do local level forecasting, but uses a top-down approach.
		5. Describe the forecasts provided separately for key areas including but not limited to photovoltaics, energy storage, electric vehicles, and energy efficiency.		X				Discusses the top-level forecasts, but doesn't provide much detail.
		6. Describe the advanced forecasting capabilities which are/will be implemented to enable effective probabilistic planning methods.		X				Roadmap section above addresses this item.
		7. Describe how the utility's existing/planned advanced forecasting capabilities anticipate the inter related effects of distributed generation, energy storage, electric vehicles, beneficial electrification, and energy efficiency. In particular, describe how electric vehicle and energy efficiency forecasts are reflected in utility forecasts.		X				Focuses mostly on the current integrated planning processes and building systems that will support more advanced forecasting methods.
		8. Describe in detail the forecasts produced for utility use and explain how those forecasts fulfill the evolving utility requirements for load and supply forecasts		X				References previous response, could have more detail on how the evolving requirements and how the systems fulfill them.
		9. Describe the utility's specific objectives, means, and methods for acquiring and managing the data needed for its advanced forecasting methodologies.		X				Details in Appendix A.1.
		10. Describe the means and methods used to produce substation level load and supply forecasts.		X				Not currently producing substation level forecasts.

Advanced Forecasting								
		Prompt						**Rationale**
		11. Describe the levels of accuracy achieved in the substation level forecasts produced to date for load and supply.		X				Provided only a qualitative response without actual estimates.
		12. Describe the substation level load forecasts provided to support analyses by DER developers and operators and explain why the forecasts are sufficient for supporting those analyses.		X				Currently does not supply forecasts to DER developers but is moving toward systems that can be provided.
		13. Provide sensitivity analyses which explain how the accuracy of substation level forecasts is affected by distributed generation, energy storage, electric vehicles, beneficial electrification, and energy efficiency measures		X				Not currently doing sensitives at this level, but working toward systems that support granular forecasting.
		14. Identify and characterize the tools and methods the utility is using/will use to acquire and apply useful forecast input data from DER developers and other third-parties.		X				Currently do not supply forecasts to DER developers but are moving toward systems that can be provided.
		15. Describe how the utility will inform its forecasting processes through best practices and lessons learned from other jurisdictions.		X				Only cited JU and Avangrid sources, but did not look to others within the industry.
		16. Describe new methodologies to improve overall accuracy of forecasts for demand and energy reductions that derive from EE programs and increased penetration of DER. In particular, discuss how the increased potential for inaccurate load and energy forecasts associated with out of model EE and DER adjustments will be minimized or eliminated.		X				Improvements discussed in general, however, increased potential for inaccuracies was not addressed.
		17. Describe where CGPP forecast information can be found.		X				Information provided.

Grid Operations								
		Prompt						**Rationale**
	DPS Rationale							
		As outlined in the recently issued "New York's 6 GW Energy Storage Roadmap Policy Options for Continued Growth in Energy Storage" significant energy storage integration will be needed within the five year planning horizon of the DSIP Update filing. Meanwhile, evolving initiatives for achieving New York State's energy storage goals will likely require corresponding adjustments to utility deployment plans, use cases, and forecasts. Areas of particular interest to DPS Staff related to energy storage include: •existing energy storage resources in the distribution system; •the utility's planned energy storage projects; •a five year forecast of energy storage deployments by the utility and/or third-parties; •potential energy storage locations and applications that could benefit customers and/or the electric system; •resources and functions needed for integrating energy storage with utility grid operations; •resources and functions needed for integrating energy storage with utility billing and compensation functions; and •the utility's alignment with New York State's energy storage goals and initiatives. Along with satisfying the general guidelines for information related to each topic (see Section 3.1), DPS Staff recommends that the DSIP Update should provide the following details for the areas of interest listed above, especially the means and methods to plan for energy storage deployment in the distribution system:						
1.	Context and Background							
		a. Describe how topic-related policies, processes, resources, standards, and capabilities have evolved since the 2020 DSIP Update filing.		X				Discussed impact of policies on grid operations and rationale behind GO projects, highlighted achievement.
2.	Implementation Plan, Schedule, and Investments							
	a.	Current Progress						
		i. Describe the current implementation as of June 30, 2023; and		X				Overview and update on projects. Could provide more details on expected milestones and dates, functionalities, progress, numbers of technology devices installed, achievements and benefits realized.
		ii. Describe how the current implementation supports stakeholders' current and future needs.		X				Included sometimes part of the previous section.
	b.	Future Implementation and Planning						
		i. Describe the future implementation that is planned to be deployed by 2028, identifying planned efforts and funded efforts.		X				More details on funding and planned effort.
		ii. Describe how the future implementation will support stakeholders' needs in 2028 and beyond.		X				
		iii. Identify and characterize the work and investments needed to progress from the current implementation to the planned future implementation.		X				
		iv. Describe and explain the planned timing and sequence of the work and investments needed to progress from the current implementation to the planned future implementation.		X				
		v. Describe where and how plans for topic-related work and investments affect the CGPP.		\				More info required how the planning phase will affect grid operations, reinforcement vs flexible connection and DSO market services.
		vi. Describe where and how investment plans developed through the CGPP affect the topic-related work and investments presented in the DSIP update.		\				More info required how the planning phase will affect grid operations, reinforcement vs flexible connection and DSO market services.
	c.	Integrated Implementation Timeline						

Grid Operations								
		Prompt						**Rationale**
		i. Using a common format developed jointly with the other utilities, provide a high-level implementation timeline that combines the key milestones for all topic-related work and investments planned over the five-year period ending in 2028. Along with the milestones, the timeline should show significant dependencies among the work and investments related to all topics.		X				Exhibit IV-1 shows activities on a timeline. Missing milestones for all project and work dependencies.
3. Risks and Mitigation								
		a. Identify and characterize any potential risk(s) and/or actual issue(s) that could affect timely implementation and describe the measures taken, or to be taken, to mitigate the risk(s) and/or resolve the issue(s).		X				High level risks and mitigation (missing impact of risks).
4. Stakeholder Engagement								
		a. Identify and characterize the categories of stakeholders engaged in DSIP development and use.		X				Stakeholders were identified. Scoring has been updated based on utility comments.
		b. Describe when and how the goals and needs of each stakeholder category are identified and incorporated into the DSIP.		X				Stakeholders goals were identified. Scoring has been updated based on utility comments.
		c. Describe when and how each stakeholder category's needs will be met over time.		\				Information outside of the Grid Ops section and not specific to Grid Ops.
		d. Describe and explain the utility's needs for stakeholder-provided information, capabilities, and actions supporting specific implementation and operational outcomes.		X				
		e. Describe the means and methods for effectively informing and engaging associated stakeholders as planning, design, and implementation progress so that the outputs effectively address, as much as feasible, the needs of the utility, DER developers, and stakeholders.		X				
		f. Describe how the utility will ensure that the information, tools, and engagement opportunities provided to stakeholders effectively deliver the intended support and do not lead to unintended problems.		X				
4.3 Grid Operations								
		1. Describe in detail the roles and responsibilities of the utility and other parties involved in planning and executing grid operations which accommodate and productively employ DERs.						Includes parties and responsibilities.
		2. Describe other role and responsibility models considered and explain the reasons for choosing the planned model		X				No mention of other role/responsibility model.
		3. Describe how roles and responsibilities have been/will be developed, documented, and managed for each party involved in the planning and execution of grid operations.		X				Overview of capabilities required however lacks info on documentation. Grid operations processes and standards in development.
		4. Describe in detail how the utilities and other parties will provide processes, resources, and standards to support planning and execution of advanced grid operations which accommodate and extensively employ DER services. The information provided should address:						
		a. organizations;		X				Engagement with many stakeholders on development of processes and standards however lacks detailed info.

Grid Operations								
		Prompt						**Rationale**
		b. operating policies and processes;		X				Ongoing work, high level info.
		c. information systems for system modeling, data acquisition and management, situational awareness, resource optimization, dispatch and control, etc. ;		X				Ongoing work, high level info.
		d. data communications infrastructure;		X				Ongoing work, high level info.
		e. grid sensors and control devices; and,		X				Ongoing work, high level info.
		f. grid infrastructure components such as switches, power flow controllers, and solid state transformers.		X				Ongoing work, high level info.
		5. Describe the utility's approach and ability to implement advanced capabilities.						
		a. Identify the existing level of system monitoring and distribution automation.		X				EXHIBIT A.3-2, p34 EXHIBIT A.3-3: GRID OPERATIONS ROADMAP
		b. Identify areas to be enhanced through additional monitoring and/or distribution automation.		X				EXHIBIT A.3-2, p34 EXHIBIT A.3-3: GRID OPERATIONS ROADMAP
		c. Describe the means and methods used for deploying additional monitoring and/or distribution automation in the utility's system.		X				EXHIBIT A.3-2, p34 EXHIBIT A.3-3: GRID OPERATIONS ROADMAP
		d. Identify the benefits to be obtained from deploying additional monitoring and/or distribution automation in the utility's system.		X				
		e. Identify the capabilities currently provided by Advanced Distribution Management Systems (ADMS).		X				
		f. Describe how ADMS capabilities will increase and improve over time.		X				
		g. Identify the capabilities currently provided by DER Management Systems (DERMS).		X				
		h. Describe how DERMS capabilities will increase and improve over time.		X				
		i. Identify other approaches or functionalities used to better manage grid performance and describe how they are/will be integrated into daily operations.		X				

Energy Storage Integration							
	Prompt						Rationale
	DPS Rationale						
	As outlined in the recently issued "New York's 6 GW Energy Storage Roadmap Policy Options for Continued Growth in Energy Storage" significant energy storage integration will be needed within the five year planning horizon of the DSIP Update filing. Meanwhile, evolving initiatives for achieving New York State's energy storage goals will likely require corresponding adjustments to utility deployment plans, use cases, and forecasts. Areas of particular interest to DPS Staff related to energy storage include: •Existing energy storage resources in the distribution system; •The utility's planned energy storage projects; •A five year forecast of energy storage deployments by the utility and/or third-parties; •Potential energy storage locations and applications that could benefit customers and/or the electric system; •Resources and functions needed for integrating energy storage with utility grid operations; •Resources and functions needed for integrating energy storage with utility billing and compensation functions; and •The utility's alignment with New York State's energy storage goals and initiatives. Along with satisfying the general guidelines for information related to each topic (see Section 3.1), DPS Staff recommends that the DSIP Update should provide the following details for the areas of interest listed above, especially the means and methods to plan for energy storage deployment in the distribution system:						
1. Context and Background							
	a. Describe how topic-related policies, processes, resources, standards, and capabilities have evolved since the 2020 DSIP Update filing.		X				Described storage benefit and high level goals, presented a roadmap.
2. Implementation Plan, Schedule, and Investments							
	a. Current Progress						
	i. Describe the current implementation as of June 30, 2023; and		X				Provided a detailed list of project implementation.
	ii. Describe how the current implementation supports stakeholders' current and future needs.		X				Stakeholder/project benefits are listed, but stakeholder current and future need is not explicitly discussed.
	b. Future Implementation and Planning						
	i. Describe the future implementation that is planned to be deployed by 2028, identifying planned efforts and funded efforts.		X				Provided detailed future implementation plan with specific steps.
	ii. Describe how the future implementation will support stakeholders' needs in 2028 and beyond.		X				Provided detailed future implementation plan with specific steps.
	iii. Identify and characterize the work and investments needed to progress from the current implementation to the planned future implementation.		X				Provided detailed future implementation plan with specific steps.
	iv. Describe and explain the planned timing and sequence of the work and investments needed to progress from the current implementation to the planned future implementation.		X				Provided detailed future implementation plan with specific steps.
	v. Describe where and how plans for topic-related work and investments affect the CGPP.		\				Not provided.
	vi. Describe where and how investment plans developed through the CGPP affect the topic-related work and investments presented in the DSIP update.		\				Not provided.
	c. Integrated Implementation Timeline						

Energy Storage Integration								
		Prompt						**Rationale**
		1. Using a common format developed jointly with the other utilities, provide a high-level implementation timeline that combines the key milestones for all topic-related work and investments planned over the five-year period ending in 2028. Along with the milestones, the timeline should show significant dependencies among the work and investments related to all topics.		X				Timeline provided as part of future implementation plan section above, not in common format.
3.	Risks and Mitigation							
		a. Identify and characterize any potential risk(s) and/or actual issue(s) that could affect timely implementation and describe the measures taken, or to be taken, to mitigate the risk(s) and/or resolve the issue(s).		X				Table format outlining risk and mitigation.
4.	Stakeholder Engagement							
		a. Identify and characterize the categories of stakeholders engaged in DSIP development and use.		X				Joint utilities working group, project specific direct developer engagement discussed.
		b. Describe when and how the goals and needs of each stakeholder category are identified and incorporated into the DSIP.		\				No information on stakeholder goals/needs and DSIP incorporation.
		c. Describe when and how each stakeholder category's needs will be met over time.		\				Not provided.
		d. Describe and explain the utility's needs for stakeholder-provided information, capabilities, and actions supporting specific implementation and operational outcomes.		\				Not provided.
		e. Describe the means and methods for effectively informing and engaging associated stakeholders as planning, design, and implementation progress so that the outputs effectively address, as much as feasible, the needs of the utility, DER developers, and stakeholders.		X				Limited example such as direct engagement with developers on competitive direct procurement.
		f. Describe how the utility will ensure that the information, tools, and engagement opportunities provided to stakeholders effectively deliver the intended support and do not lead to unintended problems.		\				Not provided.
4.4	Energy Storage Integration							
		1. Provide the locations, types, capacities (power and energy), configurations (i.e., standalone or co located with load and/or generation), and functions of existing energy storage resources in the distribution system.		X				Detailed table provided in current implementation section.
		2. Describe the utility's current efforts to plan, implement, and operate beneficial energy storage applications. Information provided should include:						
		a. a detailed description of each project, existing and planned, with an explanation of how the project fits into the utility's long range energy storage plans;		X				Reference detailed table in current implementation schedule.
		b. the original project schedule;		X				Not all projects include original schedule.
		c. the current project status;		X				Information provided.
		d. lessons learned to date;		X				Some lesson learned discussion.
		e. project adjustments and improvement opportunities identified to date; and		X				Some adjustments and opportunities identified.
		f. next steps with clear timelines and deliverables.		X				Information provided.

Energy Storage Integration								
		Prompt						**Rationale**
		3. Provide a five year forecast of energy storage assets deployed and operated by third-parties. Where possible, include the likely locations, types, capacities, configurations, and functions of those assets.		X				Discussed that the forecast capability is currently not available. Through current implementation and lesson learned, forecast would be possible in the future.
		4. Identify, describe, and prioritize the current and future opportunities for beneficial use of energy storage located in the distribution system. Uses considered should encompass functions which benefit utility customers, the distribution system, and/or the bulk power system. Each opportunity identified						
		a. location;		X				Because they are in the planning stage, no specific location info is available.
		b. energy storage capacity (power and energy);		X				Provided a high level range of size.
		c. function(s) performed;		X				Information provided.
		d. period(s) of time when the function(s) would be performed; and		X				In planning stage, no operation specifics.
		e. the nature and estimated economic value of each benefit derived from the energy storage resource.		X				NWA, defer traditional upgrade.
		5. Identify and describe all significant resources and functions that the utility and stakeholders use for planning, implementing, monitoring, and managing energy storage at multiple levels in the distribution system.						
		a. Explain how each of those resources and functions supports the utility's needs;		X				Included a table listing multiple lesson learned, data is being reviewed to support future scaling.
		b. Explain how each of those resources and functions supports the stakeholders' needs.		X				Indirect stakeholder impact, no specifics.
		6. Describe the means and methods for determining the real time status, behavior, and effect of energy storage resources currently deployed in the distribution system. Information produced by those means and methods could include:						
		a. the amount of energy currently stored (state of charge);		X				Third party software and API tool for status and output, figure plan to incorporate into SCADA and DERM.
		b. the time, size, duration, energy source (grid and/or local generation), and purpose of charging events;		X				Third party software and API tool for status and output, figure plan to incorporate into SCADA and DERM.
		c. the time, size, duration, consumer (grid and/or local load), and purpose of energy storage discharges;		X				Third party software and API tool for status and output, figure plan to incorporate into SCADA and DERM.
		d. the net effect (amount and duration of supply or demand) on the distribution system of charge/discharge events (considering any co located load and/or generation); and		X				Third party software and API tool for status and output, figure plan to incorporate into SCADA and DERM.

Energy Storage Integration								
		Prompt						**Rationale**
		e. the capacity of the distribution system to deliver or receive power at a given location and time.		X				Third party software and API tool for status and output, figure plan to incorporate into SCADA and DERM.
		7. Describe the means and methods for forecasting the status, behavior, and effect of energy storage resources in the distribution system at future times. Forecasts produced by the utility could include:						
		a. the amount of energy stored (state of charge);		X				Forecasting capabilities current not mature, but company is evaluating tools to achieve.
		b. the time, size, duration, energy source (grid and/or local generation), and purpose of charging events;		X				Forecasting capabilities current not mature, but company is evaluating tools to achieve.
		c. the time, size, duration, consumer (grid and/or local load), and purpose of energy storage discharges;		X				Forecasting capabilities current not mature, but company is evaluating tools to achieve.
		d. the net effect on the distribution system of each charge/discharge event (considering any co located load and/or generation);		X				Forecasting capabilities current not mature, but company is evaluating tools to achieve.
		e. the capacity of the distribution system to deliver or receive power at a given location and time.		X				Forecasting capabilities current not mature, but company is evaluating tools to achieve.
		8. Describe the resources and functions needed to support billing and compensation of energy storage owners/operators.		X				Combination of manual billing and system billing. Some not participating in markets.
		9. Identify the types of customer and system data that are necessary for planning, implementing, and managing energy storage and describe how the utility provides those data to developers and other stakeholders; and		X				Includes hosting cap map and project portal.
		10. By citing specific objectives, means, and methods, describe in detail how the utility's accomplishments and plans are aligned with the objectives established in the CLCPA.		X				Description of alignment with CLCPA.

EV Integation								
		Prompt						Rationale
	DPS Rationale							
		It is DPS Staff's position that utility resources and capabilities which support electric vehicle (EV) integration at all levels in the distribution system will be needed within the five year planning horizon of the DSIP Update filing. While plans for integrating EVs at the bulk, local transmission, and distribution levels will now be reflected in the CGPP, DPS Staff suggests that the DSIP should continue to describe means and methods for planning EV integration at the distribution level. Along with satisfying the general guidelines for information related to each topic (see Section 3.1), DPS Staff recommends that the DSIP Update should provide the following additional details which are specific to electric vehicle integration. Where not yet fully developed or fluid due to ongoing policy development, DPS Staff suggests that the DSIP Update should provide current status and planned next steps, including an anticipated timeframe, to continue making progress.						
1. Context and Background								
		a. Describe how topic-related policies, processes, resources, standards, and capabilities have evolved since the 2020 DSIP Update filing.		X				Good overview of policies and market developments is provided.
2. Implementation Plan, Schedule, and Investments								
	a. Current Progress							
		i. Describe the current implementation as of June 30, 2023; and		X				The utility provides a Short summary / list of actions without sufficient details and information.
		ii. Describe how the current implementation supports stakeholders' current and future needs.		X				Although impact on stakeholders is described, the information is limited and the utility does not articulate clearly the impact.
	b. Future Implementation and Planning							
		i. Describe the future implementation that is planned to be deployed by 2028, identifying planned efforts and funded efforts.		X				The report provides clear next steps for future implementation. (EXHIBIT A.5-2: EV ROADMAP).
		ii. Describe how the future implementation will support stakeholders' needs in 2028 and beyond.		\				This information was not provided.
		iii. Identify and characterize the work and investments needed to progress from the current implementation to the planned future implementation.		\				This information was not provided.
		iv. Describe and explain the planned timing and sequence of the work and investments needed to progress from the current implementation to the planned future implementation.		X				EXHIBIT A.5-2: EV ROADMAP summarizes well the sequency between current implementation and future work.
		v. Describe where and how plans for topic-related work and investments affect the CGPP.		\				This information was not provided.
		vi. Describe where and how investment plans developed through the CGPP affect the topic-related work and investments presented in the DSIP update.		\				This information was not provided.
	c. Integrated Implementation Timeline							
		i. Using a common format developed jointly with the other utilities, provide a high-level implementation timeline that combines the key milestones for all topic-related work and investments planned over the five-year period ending in 2028. Along with the milestones, the timeline should show significant dependencies among the work and investments related to all topics.		X				Timeline given (though not consistent format with other utilities). Milestones and investments listed, but no dependencies flagged.
3. Risks and Mitigation								
		a. Identify and characterize any potential risk(s) and/or actual issue(s) that could affect timely implementation and describe the measures taken, or to be taken, to mitigate the risk(s) and/or resolve the issue(s).		X				Good summary table with concrete risks and direct mitigation measures. However this is a summary and the utility does not sufficiently describes risks and mitigation measures.
4. Stakeholder Engagement								

EV Integation								
		Prompt						**Rationale**
		a. Identify and characterize the categories of stakeholders engaged in DSIP development and use.		X				Numerous groups of stakeholders are mentioned.
		b. Describe when and how the goals and needs of each stakeholder category are identified and incorporated into the DSIP.		\				Information not available.
		c. Describe when and how each stakeholder category's needs will be met over time.		X				Short summary of the needs of a few stakeholders is provided.
		d. Describe and explain the utility's needs for stakeholder-provided information, capabilities, and actions supporting specific implementation and operational outcomes.		\				Information is not available.
		e. Describe the means and methods for effectively informing and engaging associated stakeholders as planning, design, and implementation progress so that the outputs effectively address, as much as feasible, the needs of the utility, DER developers, and stakeholders.		X				There is not a clear engagement plan with timelines which is linked to implementation process.
		f. Describe how the utility will ensure that the information, tools, and engagement opportunities provided to stakeholders effectively deliver the intended support and do not lead to unintended problems.		X				The utility has provided a very high level summary of the benefits of this engagement but there is a lot of information missing.
4.5 Electric Vehicle Integration								
		1. Using a common framework (organization, format, semantics, definitions, etc.) developed jointly with the other utilities, identify and characterize the existing and anticipated EV charging scenarios in the utility's service territory. Each scenario identified should be characterized by:						
		a. the type of location (home, apartment complex, store, workplace, public parking site, rest stop, etc.);		X				Good summary. Information and source of information is available.
		b. the number and spatial distribution of existing instances of the scenario;		X				Good summary. Information and source of information is available.
		c. the forecast number and spatial distribution of anticipated instances of the scenario over the next five years;		X				Forecast is not available but the company explains next steps to produce the forecast.
		d. the type(s) of vehicles charged at a typical location (commuter car, bus, delivery truck, taxi, ride share, etc.);		\				
		e. the number of vehicles charged at a typical location, by vehicle type;		\				
		f. the charging pattern by vehicle type (frequency, times of day, days of week, energy per charge, duration per charge, demand per charge);		\				
		g. the number(s) of charging ports at a typical location, by type;		X				Information is not provided in the report but at least the company provides source of information.
		h. the energy storage capacity (if any) supporting EV charging at a typical location;		X				The information is available: 'we are aware of one EV charging site that has added energy storage within our NYSEG service territory. The site consists of two – 150 kW chargers and two – 350 kW chargers installed in late 2020 and has added 210 kW of storage in 2022' In addition, they have explained clearly the testing and possible scenarios that they anticipate to be used in future.

EV Integation								
		Prompt						**Rationale**
		i. an hourly profile of a typical location's aggregated charging load over a one year period;		X				The company does not provide the information in the report but explains where this information can be found.
		j. the type and size of the existing utility service at a typical location; and		X				They provide a breakdown of the required service at each identified location according to Federal guidelines. They have not validated this with their own data but they have provided at least some indication.
		k. the type and size of utility service needed to support the EV charging use case.		X				The company does not provide sufficient information but some estimates based on their current insights. The explain how they can improve their insights in the future.
		2. Describe and explain the utility's priorities for supporting implementation of the EV charging use cases anticipated in its service territory.		X				The company refers to previous sections of the report where they explain their current and future implementation status. Priorities are not clearly stated.
		3. Identify and describe all significant resources and functions that the utility and stakeholders use for planning, implementing, monitoring, and managing EV charging at multiple levels in the distribution system.		X				Considering the lack of maturity on EV integration, the company has progressed their thinking in identifying resources and functions required for EV integration.
		a. Explain how each of those resources and functions supports the utility's needs.		X				Good thoughts and justification on what the utility needs from these resources.
		b. Explain how each of those resources and functions supports the stakeholders' needs.		X				Good thoughts and justification on what stakeholders need from these resources.
		4. Identify the types of customer and system data that are necessary for planning, implementing, and managing EV charging infrastructure and services and describe how the utility provides this data to interested third parties.		X				The description focuses on data to be shared with 3rd parties but it does not explain what data the company requires.
		5. Describe the resources and functions needed to support billing and compensation of EV and EVSE owners/operators.		X				The company explains how EV customers are billed under the existing systems and highlights that this may need to change in the future. However the description does not include metering requirements.
		6. By citing specific objectives, means, and methods describe in detail how the utility's accomplishments and plans are aligned with New York State policy, including its established goals for EV adoption.		X				Clear goals that align with State's policy are well presented in Background section.
		7. Describe the utility's current efforts to plan, implement, and manage EV related projects. Information provided should include:		X				The section refers back to previous section in the report where different activities and initiatives are mentioned. It would be nice if the company could have clarified specific EV related projects.
		a. a detailed description of each project, existing and planned, with an explanation of how the project fits into the utility's long-range EV integration plans;		X				In the current and future implementation there is sufficient information on the timeline.
		b. the original project schedule;		X				In the current and future implementation there is sufficient information on the timeline.

EV Integation								
		Prompt						**Rationale**
		c. the current project status;		X				In the current and future implementation there is sufficient information on the timeline.
		d. lessons learned to date;		X				Lessons learned are not well articulated.
		e. project adjustments and improvement opportunities identified to date; and		X				Improvements and adjustments are not sufficiently described.
		f. next steps with clear timelines and deliverables.		X				Next steps are not sufficiently described for every initiative, developments.
		8. Describe how the utility is coordinating with the efforts of the New York State Energy Research and Development Authority (NYSERDA), the New York Power Authority (NYPA), New York Department of Environmental Conservation (DEC), and DPS Staff to facilitate statewide EV market development and growth.		X				Good description of initiatives and coordination developments.

Clean Heat Integration								
		Prompt						**Rationale**
	DPS Rationale							
		The NYS Clean Heat program encourages residents, small businesses, and commercial and multifamily building owners to install cold climate air source heat pumps (ASHP) and energy efficient ground						
1. Context and Background								
		a. Describe how topic-related policies, processes, resources, standards, and capabilities have evolved since the 2020 DSIP Update filing.		X				Well laid out summary.
2. Implementation Plan, Schedule, and Investments								
	a. Current Progress							
		i. Describe the current implementation as of June 30, 2023; and		X				Describes what general technologies are available, provides citations to implementation plans, marketing efforts, etc.
		ii. Describe how the current implementation supports stakeholders' current and future needs.		X				
	b. Future Implementation and Planning							
		i. Describe the future implementation that is planned to be deployed by 2028, identifying planned efforts and funded efforts.		\				Single table identifying annual targets by year.
		ii. Describe how the future implementation will support stakeholders' needs in 2028 and beyond.		\				
		iii. Identify and characterize the work and investments needed to progress from the current implementation to the planned future implementation.		\				
		iv. Describe and explain the planned timing and sequence of the work and investments needed to progress from the current implementation to the planned future implementation.		\				
		v. Describe where and how plans for topic-related work and investments affect the CGPP.		\				
		vi. Describe where and how investment plans developed through the CGPP affect the topic-related work and investments presented in the DSIP update.		\				
	c. Integrated Implementation Timeline							
		i. Using a common format developed jointly with the other utilities, provide a high-level implementation timeline that combines the key milestones for all topic-related work and investments planned over the five-year period ending in 2028. Along with the milestones, the timeline should show significant dependencies among the work and investments related to all topics.		X				Reference to annual target table.
3. Risks and Mitigation								
		a. Identify and characterize any potential risk(s) and/or actual issue(s) that could affect timely implementation and describe the measures taken, or to be taken, to mitigate the risk(s) and/or resolve the issue(s).		X				Table with single issue identified.
4. Stakeholder Engagement								
		a. Identify and characterize the categories of stakeholders engaged in DSIP development and use.		X				Some stakeholders named, no classification or characterization.
		b. Describe when and how the goals and needs of each stakeholder category are identified and incorporated into the DSIP.		\				Not included, might be in documents generally referenced.
		c. Describe when and how each stakeholder category's needs will be met over time.		\				Not included, might be in documents generally referenced.
		d. Describe and explain the utility's needs for stakeholder-provided information, capabilities, and actions supporting specific implementation and operational outcomes.		\				Not included, might be in documents generally referenced.
		e. Describe the means and methods for effectively informing and engaging associated stakeholders as planning, design, and implementation progress so that the outputs effectively address, as much as feasible, the needs of the utility, DER developers, and stakeholders.		X				Some stakeholders named, no classification or characterization.

Clean Heat Integration								
		Prompt						**Rationale**
		f. Describe how the utility will ensure that the information, tools, and engagement opportunities provided to stakeholders effectively deliver the intended support and do not lead to unintended problems.		\				Not included, might be in documents generally referenced.
4.6 ©	Clean Heat Integration							
		1. Using a common framework (organization, format, semantics, definitions, etc.) developed jointly with the other utilities, identify and characterize the existing and clean heat installation scenarios in the utility's service territory. Each scenario identified should be characterized by:						
		a. the type of location (single family residence, multifamily residence, commercial space, office space, school, hospital, etc.);		X				
		b. the number and spatial distribution of existing instances of the scenario;		\				Not included, reference to separate Annual filing.
		c. the forecast number and spatial distribution of anticipated instances of the scenario over the next five years;		\				States that companies do not forecast at a granular level.
		d. the type(s) of clean heat solution installed at a typical location (ASHP, GSHP, HPWH, etc.);		X				References original table in section (a).
		e. an hourly profile of a typical location's aggregated clean heating load over a one year period;		\				Not included.
		f. the type and size of the existing utility service at a typical location; and		\				Not included.
		g. the type and size of utility service needed to support the clean heating use case.		\				Not included.
		2. Describe and explain the utility's priorities for supporting implementation of the clean heating use cases anticipated in its service territory.		X				
		3. Identify and describe all significant resources and functions that the utility and stakeholders use for planning, implementing, monitoring, and managing clean heating at multiple levels in the distribution system.						
		a. Explain how each of those resources and functions supports the utility's needs.		X				
		b. Explain how each of those resources and functions supports the stakeholders' needs.		X				
		4. Identify the types of customer and system data that are necessary for planning, implementing, and managing clean heating infrastructure and services and describe how the utility provides this data to interested third parties.		X				Simply states that data is not kept.
		5. By citing specific objectives, means, and methods describe in detail how the utility's accomplishments and plans are aligned with New York State policy, including its established goals for clean heat adoption.		X				Cites achieved targets.
		6. Describe the utility's current efforts to plan, implement, and manage clean heat related projects. Information provided should include:		X				General discussion of high level plans.
		a. a detailed description of each project, existing and planned, with an explanation of how the project fits into the utility's long-range clean heat integration plans;		\				Not included.
		b. the original project schedule;		\				Not included.
		c. the current project status;		\				Not included.
		d. lessons learned to date;		\				Not included.
		e. project adjustments and improvement opportunities identified to date; and		\				Not included.
		f. next steps with clear timelines and deliverables.		\				Not included.
		7. Describe how the utility is coordinating with the efforts of the New York State Energy Research and Development Authority (NYSERDA), the New York Power Authority (NYPA), New York Department of Environmental Conservation (DEC), DPS Staff, or other governmental entities to facilitate statewide clean heat market development and growth.		X				Overview of some coordination items delivered at a high level. No details provided.

EE Integration and Innovation							
		Prompt					**Rationale**
	DPS Rationale			-			
		Energy Efficiency integration, with a focus on innovative market enabling tools and approaches, is an essential utility function that DPS Staff suggests should be thoroughly addressed within the five year planning horizon of the DSIP filing. It also affects the CGPP integrated system analysis, as energy efficiency efforts act as load modifiers in distribution planning. This load impact is then incorporated into the CGPP as part of its analysis for local transmission and distribution projects. DPS Staff recommends that the utilities should provide the information specified below to show how their joint and individual efforts are fully integrating current and expanded energy efficiency efforts into their system planning. DPS Staff further recommends that the utilities should also describe how new tools and approaches are being used to support the growth of a more dynamic market of service providers that deliver energy efficiency at a reduced cost by leveraging private capital and financing to deliver greater customer value while optimizing the grid value of these services. Each utility has evolved its Efficiency Transition Implementation Plans (ETIPs) into System Energy Efficiency Plans (SEEPs) that describe the entirety of the utility's expanded reliance on and use of cost-effective energy efficiency to support their distribution system and customer needs. ETIPs / SEEPs will continue to be filed separately in accordance with DPS Staff issued ETIP / SEEP Content Guidance, but DPS Staff recommends that the DSIP must incorporate and plan for the integration and reliance on these expanded energy efficiency resources and should include a link to the most recent ETIP/SEEP filing. Along with satisfying the general guidelines for information related to each topic (see Section 3.1), DPS Staff recommends that the DSIP Update should provide the following additional details which are specific to energy efficiency:						
1.	Context and Background						
		a. Describe how topic-related policies, processes, resources, standards, and capabilities have evolved since the 2020 DSIP Update filing.		X			A high-level description was provided.
2.	Implementation Plan, Schedule, and Investments						
	a.	Current Progress					
		i. Describe the current implementation as of June 30, 2023; and		X			Program descriptions were provided.
		ii. Describe how the current implementation supports stakeholders' current and future needs.		X			A description on current needs was provided but there was little detail on future needs.
	b.	Future Implementation and Planning					
		i. Describe the future implementation that is planned to be deployed by 2028, identifying planned efforts and funded efforts.		X			The description was minimal and lacked information on funding.
		ii. Describe how the future implementation will support stakeholders' needs in 2028 and beyond.		X			A high-level description was provided.
		iii. Identify and characterize the work and investments needed to progress from the current implementation to the planned future implementation.		X			A high-level description was provided.
		iv. Describe and explain the planned timing and sequence of the work and investments needed to progress from the current implementation to the planned future implementation.		X			EXHIBIT A.7-2: ENERGY EFFICIENCY ROADMAP provided detail on timing but not on investments.
		v. Describe where and how plans for topic-related work and investments affect the CGPP.		X			Minimal description was provided.
		vi. Describe where and how investment plans developed through the CGPP affect the topic-related work and investments presented in the DSIP update.		X			Minimal description was provided.
	c.	Integrated Implementation Timeline					
		i. Using a common format developed jointly with the other utilities, provide a high-level implementation timeline that combines the key milestones for all topic-related work and investments planned over the five-year period ending in 2028. Along with the milestones, the timeline should show significant dependencies among the work and investments related to all topics.		X			EXHIBIT A.7-2: ENERGY EFFICIENCY ROADMAP provided detail on timing but not an actual timeline.
3.	Risks and Mitigation						
		a. Identify and characterize any potential risk(s) and/or actual issue(s) that could affect timely implementation and describe the measures taken, or to be taken, to mitigate the risk(s) and/or resolve the issue(s).		X			EXHIBIT A.7-3: ENERGY EFFICIENCY RISKS AND MITIGATION MEASURES provided great detail.
4.	Stakeholder Engagement						

EE Integration and Innovation								
		Prompt						**Rationale**
		a. Identify and characterize the categories of stakeholders engaged in DSIP development and use.		X				Stakeholders engagement activities were detailed.
		b. Describe when and how the goals and needs of each stakeholder category are identified and incorporated into the DSIP.		X				Minimal detail was provided.
		c. Describe when and how each stakeholder category's needs will be met over time.		X				Minimal detail was provided.
		d. Describe and explain the utility's needs for stakeholder-provided information, capabilities, and actions supporting specific implementation and operational outcomes.		X				Minimal detail was provided.
		e. Describe the means and methods for effectively informing and engaging associated stakeholders as planning, design, and implementation progress so that the outputs effectively address, as much as feasible, the needs of the utility, DER developers, and stakeholders.		X				Minimal detail was provided.
		f. Describe how the utility will ensure that the information, tools, and engagement opportunities provided to stakeholders effectively deliver the intended support and do not lead to unintended problems.		X				Minimal detail was provided.
4.7 Energy Efficiency Integration and Innovation								
		1. The resources and capabilities used for integrating energy efficiency within system and utility business planning.						Details were provided under "Current Progress and Future Implementation and Planning."
		2. The locations and amounts of current energy and peak load reductions attributable to energy efficiency and how the utility determines these.		\				Not provided because it is not available, explanation provided; "We do not currently have an automated way to track the location of savings from energy efficiency programs, other than for identified NWA opportunities. NYSEG and RG&E estimate the location and amounts of anticipated energy and peak load reductions when they are associated with an NWA."
		3. A high-level description of how the utility's accomplishments and plans are aligned with New York State climate and energy policies and incorporate innovative approaches for accelerating progress to ultimately align with the CLCPA.		X				Minimal detail provided, "On an annual basis we develop an updated System Energy Efficiency Plan (SEEP) which aligns with approved funding in our rate case. Adjustments are made as we compare the dollars approved to the targeted expenditures in our January 2020 Orders."
		4. Summary information on energy efficiency programs offered by the utility, with direction to annual filings for more detailed information on energy efficiency programs.		X				Referred to Current Progress section where there was some information.
		5. Describe how the utility is coordinating and partnering with NYSERDA's related ongoing statewide efforts to facilitate energy efficiency market development and growth.		X				Narrative description provided but not in great detail.

Data Sharing							
	Prompt						Rationale
	DPS Rationale						
	DPS Staff recommends that the DSIP Update should describe the utility's existing and planned capabilities that enable timely and effective sharing of system and customer data with customers and authorized third-parties. Shared system data should enable DER developers/operators and other third-parties to timely and effectively perform the analyses (engineering, operations, and business) needed to support well-informed decisions. Shared customer data should enable both short-term and long-term analyses and decisions affecting many investments and behaviors which can materially improve customer value by reducing costs and/or improving service. Of particular importance to this topic is NYSERDA's development of a new Integrated Energy Data Resource (IEDR). Most utility data sharing is expected to transition to the IEDR within the five-year time horizon for the DSIP update. Along with satisfying the general guidelines for information related to each topic (see Section 3.1), DPS Staff recommends that the DSIP Update should:						
1.	Context and Background						
	a. Describe how topic-related policies, processes, resources, standards, and capabilities have evolved since the 2020 DSIP Update filing.		X				Detailed timeline description of IEDR since 2020 DSIP update. Lacking in detailing updates since 2020 on their Grid Model Enhancement Project (GMEP).
2.	Implementation Plan, Schedule, and Investments						
	a. Current Progress						
	i. Describe the current implementation as of June 30, 2023; and		X				IEDR - indicates current implementation progress. Indicated current available data on installed, queued DERS and their hosting capacity. GMEP - lacking in describing current and future needs and is early in implementation - only in stage of completing asset survey.
	ii. Describe how the current implementation supports stakeholders' current and future needs.		X				For IEDR and GMEP - lacking information in describing current and future stakeholder needs.
	b. Future Implementation and Planning						
	i. Describe the future implementation that is planned to be deployed by 2028, identifying planned efforts and funded efforts.		X				Timeline and planned work for IEDR, GMEP, and Greenbutton Connect provided through 2028.
	ii. Describe how the future implementation will support stakeholders' needs in 2028 and beyond.		X				IEDR - does not indicate benefit of work development into 2028 or stakeholder needs GMEP - benefits are stated, but not stakeholder needs. Greenbutton Connect - benefits described and impacted stakeholders, but no mentioned of stakeholder needs.
	iii. Identify and characterize the work and investments needed to progress from the current implementation to the planned future implementation.		X				Timeline and planned work listed in Table.
	iv. Describe and explain the planned timing and sequence of the work and investments needed to progress from the current implementation to the planned future implementation.		X				Timeline and planned work described. There could be more explanation of each work step.
	v. Describe where and how plans for topic-related work and investments affect the CGPP.		\				No mention of impact to CGPP.
	vi. Describe where and how investment plans developed through the CGPP affect the topic-related work and investments presented in the DSIP update.		\				No mention of CGPP plans.
	c. Integrated Implementation Timeline						

Data Sharing								
		Prompt						**Rationale**
		i. Using a common format developed jointly with the other utilities, provide a high-level implementation timeline that combines the key milestones for all topic-related work and investments planned over the five-year period ending in 2028. Along with the milestones, the timeline should show significant dependencies among the work and investments related to all topics.		X				Timeline and sequence of work provided, but no indication of significant dependencies.
3.	Risks and Mitigation							
		a. Identify and characterize any potential risk(s) and/or actual issue(s) that could affect timely implementation and describe the measures taken, or to be taken, to mitigate the risk(s) and/or resolve the issue(s).		X				Risks and mitigations are identified. For cybersecurity risk and mitigation, the utility could have included their referenced cyber security policy as appendix.
4.	Stakeholder Engagement							
		a. Identify and characterize the categories of stakeholders engaged in DSIP development and use.		X				Utility interacts with stakeholders through a Webinar and working groups, but they are not identified or characterized.
		b. Describe when and how the goals and needs of each stakeholder category are identified and incorporated into the DSIP.		X				Needs acquired during Joint Utilities webinar twice a year and working group sessions No mention of any goals or needs.
		c. Describe when and how each stakeholder category's needs will be met over time.		\				No mention of how needs will be met over time.
		d. Describe and explain the utility's needs for stakeholder-provided information, capabilities, and actions supporting specific implementation and operational outcomes.		\				No mention of stakeholder provided information informing specific implementation or operational outcomes.
		e. Describe the means and methods for effectively informing and engaging associated stakeholders as planning, design, and implementation progress so that the outputs effectively address, as much as feasible, the needs of the utility, DER developers, and stakeholders.		X				Joint Utilities webinar twice a year and working groups. No mention if this is an effective means of engagement.
		f. Describe how the utility will ensure that the information, tools, and engagement opportunities provided to stakeholders effectively deliver the intended support and do not lead to unintended problems.		\				No mention on feedback from stakeholders to ensure no issues arise.
4.8	Data Sharing							
		1. provide a functional overview of the planned IEDR;		X				Indicated where, how and what type of data is stored.
		2. provide an overview of NYSERDA's IEDR implementation program, including information pertaining to stakeholder engagement;		X				Indicated timeline of IEDR and stakeholder engagement was used to prioritize use cases.
		3. provide the web link to NYSERDA's IEDR home page along with a summary of the information provided therein;		X				Provided links and labeled links with intuitive description for user.
		4. describe the utility's role in supporting IEDR design, implementation, and operation;		X				Utility provides gas and electric usage data. Could have gone into more specifics on the different data specifications for the use cases.

Data Sharing								
		Prompt						**Rationale**
		5. describe the utility's progress, plans, and investments for generating and delivering its system and customer data to the IEDR;		X				Indicated current progress on generating and delivering data. Odd that they mention transferring data manually to IEDR and then talk about how critical cybersecurity is in data transferring. Emphasizes agreeing on privacy and legal agreements to the customer data.
		6. identify and characterize each type of data to be delivered to the IEDR;		X				Utility could expand more on 'relevant data' for DER developers.
		7. describe the resource(s) and method(s) used to deliver each type of data to the IEDR;		X				Resources are mentioned. No mention of methods to combine data Note: Utility mentioned needing a data assessment tool as their process to upload data is currently costly and complex, due to variety of systems they need to provide data that has been acquired.
		8. describe how and when each type of data provided to the IEDR will begin, increase, and improve as IEDR implementation progresses; and,		X				No mention of how data will increase or improve. Only mention that data will be shared a frequency required by specification of use case.
		9. identify and characterize any existing and future utility efforts to share system and customer data with customers and third parties through means that are separate from the IEDR.		X				Green Button - Download my data for customers. Green Button - Connect for 3rd parties Additional data on DER facilities, and information from capital investment plan for future upgrades.

Hosting Capacity								
		Prompt						**Rationale**
	DPS Rationale							
		Providing an electric distribution system with the capacity to host large scale DER integration is a key part of New York's energy vision. To achieve that outcome, DPS Staff suggests that the utilities should perform several functions to ensure that large amounts of DER can access and utilize hosting capacity in ways that are affordable, effective, efficient, and timely. The utilities have made significant progress in producing and sharing information about the hosting capacity of their current systems. DER developers and other stakeholders value the new information as a significant improvement to the information which was previously available to them; however, more is needed in three areas. First, while DER developers and other stakeholders already access and use the utilities' hosting capacity information, there are opportunities to enhance the information provided beyond the Joint Utilities' current development roadmap. For example, DER developers and the utilities could both be better informed by hosting capacity forecasts which look ahead three to five years. Once available, such forecasts would likely become the preferred resource for planning DER development. Second, as grid operations evolve to accommodate and optimize significant DER development, some of those operations will come to rely on the availability of hosting capacity as a managed system resource. Such operations will continually require very current information about available hosting capacity throughout the distribution system. This means that the utilities should be prepared to timely increase the rate at which they produce and share their information about currently available hosting capacity. And third, the availability of ample hosting capacity at a given location on the grid does not necessarily mean that other factors (i.e., space, accessibility, safety, zoning, customer interest, etc.) will also favor deploying a DER at that location. At the same time, there are many locations where circumstances strongly favor DER development; however, the amount of hosting capacity available at those locations is limited. This could mean that utilities may need to take measures to increase hosting capacity at attractive DER development sites in order to support the State's goals for integrating renewable energy resources. Considering these points, DPS Staff suggests that the utilities should be prepared to timely increase hosting capacity in their distribution systems. DPS Staff recommends that the DSIP Update should address the three areas addressed above and provide detailed information related to assessing current hosting capacity, forecasting hosting capacity, and increasing hosting capacity to show that the utility is timely developing – either individually or jointly with one or more of the other utilities – the necessary information resources and capabilities associated with hosting capacity. Along with satisfying the general guidelines for information related to each topic (see Section 3.1), DPS Staff recommends that the DSIP Update should provide the following additional details which are specific to hosting capacity:						
1.	Context and Background							
		a. Describe how topic-related policies, processes, resources, standards, and capabilities have evolved since the 2020 DSIP Update filing.		X				The utility provides some information on high level changes in their HC capabilities, and they show progress but not specifically against 2020 DSIP.
2.	Implementation Plan, Schedule, and Investments							
	a.	Current Progress						
		i. Describe the current implementation as of June 30, 2023; and		X				Short summary of implementation status.
		ii. Describe how the current implementation supports stakeholders' current and future needs.		\				The company does not mention the stakeholders, neither their current or future needs.
	b.	Future Implementation and Planning						
		i. Describe the future implementation that is planned to be deployed by 2028, identifying planned efforts and funded efforts.		X				Future implementation is discussed providing sufficient information on what the team is doing.
		ii. Describe how the future implementation will support stakeholders' needs in 2028 and beyond.		X				Stakeholders needs are mentioned in the Integrated Implementation Timeline.
		iii. Identify and characterize the work and investments needed to progress from the current implementation to the planned future implementation.		\				This section does not refer to planned work and investments which are required as part of the implementation plan.
		iv. Describe and explain the planned timing and sequence of the work and investments needed to progress from the current implementation to the planned future implementation.		\				This section does not refer to planned work and investments which are required as part of the implementation plan.
		v. Describe where and how plans for topic-related work and investments affect the CGPP.		\				No CGPP reference.
		vi. Describe where and how investment plans developed through the CGPP affect the topic-related work and investments presented in the DSIP update.		\				No CGPP reference.

Hosting Capacity								
		Prompt						**Rationale**
	c. Integrated Implementation Timeline							
		i. Using a common format developed jointly with the other utilities, provide a high-level implementation timeline that combines the key milestones for all topic-related work and investments planned over the five-year period ending in 2028. Along with the milestones, the timeline should show significant dependencies among the work and investments related to all topics.		X				Timeline is provided but lacks details.
3. Risks and Mitigation								
		a. Identify and characterize any potential risk(s) and/or actual issue(s) that could affect timely implementation and describe the measures taken, or to be taken, to mitigate the risk(s) and/or resolve the issue(s).		X				Risks are mentioned but some more details on the risk itself would be beneficial. Mitigation measures are well described.
4. Stakeholder Engagement								
		a. Identify and characterize the categories of stakeholders engaged in DSIP development and use.		X				2 groups of stakeholders are mentioned (DER developers and non-profits).
		b. Describe when and how the goals and needs of each stakeholder category are identified and incorporated into the DSIP.		X				1 goal is mentioned : accelerate adoption of clean energy and DERs. Stakeholders needs are high level described (e.g., make more informed business decisions).
		c. Describe when and how each stakeholder category's needs will be met over time.		X				Overall description of how the plan meets needs.
		d. Describe and explain the utility's needs for stakeholder-provided information, capabilities, and actions supporting specific implementation and operational outcomes.		X				The company explains that stakeholders' input is used to improve the maps, in designing the multi stage approach to hosting capacity, improvements to BESS maps in 2023.
		e. Describe the means and methods for effectively informing and engaging associated stakeholders as planning, design, and implementation progress so that the outputs effectively address, as much as feasible, the needs of the utility, DER developers, and stakeholders.		X				Stakeholders sessions and extensive consultations are mentioned.
		f. Describe how the utility will ensure that the information, tools, and engagement opportunities provided to stakeholders effectively deliver the intended support and do not lead to unintended problems.		X				Short description on information, tools and engagement opportunities but no mention to how to solved unintended problems.
4.9 Hosting Capacity								
		1. Describe the utility's current efforts to plan, implement, and manage projects related to hosting capacity. Information provided should include:						
		a. detailed description of each project, existing and planned, with an explanation of how the project fits into the utility's long range hosting capacity plans;		X				The company describes the HC map evolutions but has not fully responded to the requirements. The company has only responded to area 1 of DSP rationale (and requirements). The company does not explain how to increase hosting capacity and how will increase the rate at which the produce and share information.
		b. the original project schedule;		X				The company does not provide the original project schedule.
		c. the current project status;		X				Short description.
		d. lessons learned to date;		X				Short description and light content.
		e. project adjustments and improvement opportunities identified to date; and		X				Short description and light content.
		f. next steps with clear timelines and deliverables.		X				Clear deliverables are included but no timelines.

Hosting Capacity								
		Prompt						**Rationale**
		2. Describe where and how DER developers/operators and other third parties can currently access the utility's hosting capacity information.		X				Sufficient information is included.
		3. Describe how and when the existing hosting capacity assessment information provided to DER developers/operators and other third parties will increase and improve as work progresses. This should include discussion of the transition of hosting capacity information access from the utility's current hosting capacity information portal to the statewide hosting capacity solution in development on the IEDR.		X				Improvements are described but we are missing: 1) timelines 2) transition to IEDR.
		4. Describe the means and methods used for determining the hosting capacity currently available at each location in the distribution system.		X				Sufficient information is included.
		5. Describe the means and methods used for forecasting the future hosting capacity available at each location in the distribution system.		X				The utilities (collectively) have not sufficiently progressed their thinking for forecasting future capacity. More work is required.
		6. Describe how and when the future hosting capacity forecast information provided to DER developers/operators and other third parties will begin, increase, and improve as work progresses.		X				Short description and light content is provided by the utility.
		7. Summarize the utility's specific objectives and methods for:						
		a. identifying and characterizing locations in the utility's service area where limited hosting capacity is a barrier to productive DER development, directing users to the CGPP filing for further information; and		X				The company explains where this information is available but it does not explain methods for identifying and characterizing locations with limited capacity.
		b. timely increasing hosting capacity to enable productive DER development at those locations, directing users to the IEDR platform when applicable for more information.		X				High level approach is described. There is no clarity on means and methods.

Billing and Compensation							
		Prompt					**Rationale**
	DPS Rationale			-			
		A monthly bill is often the only method of engagement and communication between a utility and its customers. Because of this, customer billing and compensation are vital components of a utility's core business and, therefore, must be accurate, timely, and transparent. It is DPS Staff's position that billing that is consistent, accurate, and well explained will lead to increased customer satisfaction and reduced inquiries to the utility's call center and/or reduced customer complaints to the Commission, on social media, or to the press. Along with satisfying the general guidelines for information related to each topic (see Section 3.1), DPS Staff recommends that the DSIP Update should provide the following additional details pertaining to customer billing and compensation:					
1.	Context and Background						
		a. Describe how topic-related policies, processes, resources, standards, and capabilities have evolved since the 2020 DSIP Update filing.		X			Comprehensive list of all relevant polices and processes.
2.	Implementation Plan, Schedule, and Investments						
	a.	Current Progress					
		i. Describe the current implementation as of June 30, 2023; and		X			Comprehensive description of current state including issues and barriers to completion.
		ii. Describe how the current implementation supports stakeholders' current and future needs.		X			
	b.	Future Implementation and Planning					
		i. Describe the future implementation that is planned to be deployed by 2028, identifying planned efforts and funded efforts.		X			Complete description and clear presentation in the billing and compensation roadmap.
		ii. Describe how the future implementation will support stakeholders' needs in 2028 and beyond.		X			Note explicitly described - but is part of narrative.
		iii. Identify and characterize the work and investments needed to progress from the current implementation to the planned future implementation.		X			Complete description and clear presentation in the billing and compensation roadmap.
		iv. Describe and explain the planned timing and sequence of the work and investments needed to progress from the current implementation to the planned future implementation.		X			Complete description and clear presentation in the billing and compensation roadmap.
		v. Describe where and how plans for topic-related work and investments affect the CGPP.		\			No mention of CGPP - not relevant.
		vi. Describe where and how investment plans developed through the CGPP affect the topic-related work and investments presented in the DSIP update.		\			See above.
	c.	Integrated Implementation Timeline					
		i. Using a common format developed jointly with the other utilities, provide a high-level implementation timeline that combines the key milestones for all topic-related work and investments planned over the five-year period ending in 2028. Along with the milestones, the timeline should show significant dependencies among the work and investments related to all topics.		X			Complete description and clear presentation in the billing and compensation roadmap.
3.	Risks and Mitigation						
		a. Identify and characterize any potential risk(s) and/or actual issue(s) that could affect timely implementation and describe the measures taken, or to be taken, to mitigate the risk(s) and/or resolve the issue(s).		X			Clear table with robust description of risks and mitigation measures provided.
4.	Stakeholder Engagement						
		a. Identify and characterize the categories of stakeholders engaged in DSIP development and use.		X			Light description of critical stakeholders and regular engagement approaches.
		b. Describe when and how the goals and needs of each stakeholder category are identified and incorporated into the DSIP.		\			Not provided.
		c. Describe when and how each stakeholder category's needs will be met over time.		\			Not provided.
		d. Describe and explain the utility's needs for stakeholder-provided information, capabilities, and actions supporting specific implementation and operational outcomes.		\			Not provided.

Billing and Compensation								
		Prompt						**Rationale**
		e. Describe the means and methods for effectively informing and engaging associated stakeholders as planning, design, and implementation progress so that the outputs effectively address, as much as feasible, the needs of the utility, DER developers, and stakeholders.		X				
		f. Describe how the utility will ensure that the information, tools, and engagement opportunities provided to stakeholders effectively deliver the intended support and do not lead to unintended problems.		\				Not provided.
4.10 Billing and Compensation								
		1. Describe the various DER-related billing and compensation programs (including demand response) implemented or revised by the utility since the last update. For this first inclusion in the DSIP, describe developments that have occurred since the beginning of NEM, RNM, CDG, and VDER.		X				
		2. Describe the customer billing/compensation functions and data generally needed to expand deployment and use of DERs in the utility's service area. Include descriptions of the existing and planned components (processes, resources, and data exchanges) that will support those needs. For planned components, provide the sequence and timing of key investments and activities required for component implementation.		X				State that each DER is unique and requires new processes also impacts the system in unique ways.
		3. Describe the customer billing/compensation functions and data needed to enable DER participation in the NYISO's wholesale markets for energy, capacity, and ancillary services. This should include information regarding the utility's implementation of its Wholesale Distribution Service (WDS), Wholesale Value Stack (WVS), and related non-wholesale value stack (VDER without wholesale energy and capacity components). Also include descriptions of the existing and planned components (processes, resources, and data exchanges) that will support those needs. For planned components, provide the sequence and timing of key investments and activities required for component implementation.		X				Refences question #2 above and states that each program is different and requires an assessment.
		4. Describe the utility's plans to implement or modify DER-related billing and compensation capabilities, including automation, to address the Community Distributed Generation (CDG) billing and crediting problems that were the focus of the Commission's September 15, 2022, Order in Cases 19-M-0463, et. al.13		X				References description in above Future implementation and Planning section.
		5. For each type of DER billing and compensation, including for CDG and wholesale market participation, describe the current information system constraints preventing full automation of DER billing and compensation.		X				Describes the constraints for the CDG program.
		6. Describe how DER billing and compensation affects other programs such as budget billing, time of use rates, and consolidated billing for Energy Service Companies (ESCOs).		X				Separate discussion of each program.
		7. Describe the utility's means and methods - existing and planned – for monitoring and testing new or modified customer billing and compensation functions.		X				Methods clearly described.
		8. Describe the utility's means and methods – existing and planned - for supporting customer outreach and education, including where and how customers, DER developers/operators and other third-parties can readily access information on the utility's billing and compensation procedures.		X				Describes information available on the utility's website.
		9. Describe the utility's means and methods - existing and planned – for receiving, investigating, and monitoring customer complaints and/or inquiries regarding billing and compensation issues related to DERs.		X				Described the approach for monitoring and investigating customer complaints.

DER Interconnections							
		Prompt					**Rationale**
	DPS Rationale			-			
		Implementing the utility resources and capabilities that enable DER interconnections to the distribution system is a critical early objective. Many of the details which identify and characterize those resources and capabilities are being worked out by the Interconnection Technology Working Group (ITWG) and the Interconnection Policy Working Group (IPWG), which are stakeholder collaboratives led jointly by DPS Staff and NYSERDA. The goal of both working groups is to establish the requirements for standard resources, processes, specifications, and policies which foster efficient, timely, safe, and reliable DER interconnections. Along with satisfying the general guidelines for information related to each topic (see Section 3.1), DPS Staff recommends that the DSIP Update should provide the following additional details, which are specific to DER interconnections:					
1.	Context and Background						
		a. Describe how topic-related policies, processes, resources, standards, and capabilities have evolved since the 2020 DSIP Update filing.		/			No description of changes given - gives only a very high level description of the 2020 requirements.
2.	Implementation Plan, Schedule, and Investments						
	a.	Current Progress					
		i. Describe the current implementation as of June 30, 2023; and		X			Very high-level and unstructured summary of current implementation.
		ii. Describe how the current implementation supports stakeholders' current and future needs.		X			Some discussion of portal functionality and working group initiatives, but very limited description of how stakeholder needs are met.
	b.	Future Implementation and Planning					
		i. Describe the future implementation that is planned to be deployed by 2028, identifying planned efforts and funded efforts.					Reasonable discussion of future implementations, but no indication of whether projects are planned vs funded.
		ii. Describe how the future implementation will support stakeholders' needs in 2028 and beyond.		/			No discussion of stakeholder needs in 2028 and beyond.
		iii. Identify and characterize the work and investments needed to progress from the current implementation to the planned future implementation.		X			A high-level summary of initiatives is given but limited discussion of individual initiatives / investments.
		iv. Describe and explain the planned timing and sequence of the work and investments needed to progress from the current implementation to the planned future implementation.		X			High-level work plan is given but with minimal detail.
		v. Describe where and how plans for topic-related work and investments affect the CGPP.		/			No reference to CGPP.
		vi. Describe where and how investment plans developed through the CGPP affect the topic-related work and investments presented in the DSIP update.		/			No reference to CGPP.
	c.	Integrated Implementation Timeline					
		i. Using a common format developed jointly with the other utilities, provide a high-level implementation timeline that combines the key milestones for all topic-related work and investments planned over the five-year period ending in 2028. Along with the milestones, the timeline should show significant dependencies among the work and investments related to all topics.		X			No common format used, no dependencies and timeline runs only until 2025.
3.	Risks and Mitigation						
		a. Identify and characterize any potential risk(s) and/or actual issue(s) that could affect timely implementation and describe the measures taken, or to be taken, to mitigate the risk(s) and/or resolve the issue(s).		X			A clear risk and mitigations table is given with appropriate mitigations.
4.	Stakeholder Engagement						

DER Interconnections								
		Prompt						**Rationale**
		a. Identify and characterize the categories of stakeholders engaged in DSIP development and use.		X				Clear description of working group stakeholders.
		b. Describe when and how the goals and needs of each stakeholder category are identified and incorporated into the DSIP.		X				Describes process for working with the working groups for focus.
		c. Describe when and how each stakeholder category's needs will be met over time.		X				Discussion of how often working groups meet, but not about time it will take to address needs.
		d. Describe and explain the utility's needs for stakeholder-provided information, capabilities, and actions supporting specific implementation and operational outcomes.		X				Discussion of which topic areas where working groups contribute.
		e. Describe the means and methods for effectively informing and engaging associated stakeholders as planning, design, and implementation progress so that the outputs effectively address, as much as feasible, the needs of the utility, DER developers, and stakeholders.		X				Discussion of engagement methods, but not how these change with the different stages of implementation.
		f. Describe how the utility will ensure that the information, tools, and engagement opportunities provided to stakeholders effectively deliver the intended support and do not lead to unintended problems.		X				Some discussion of how engagement with stakeholders will continue but no discussion of providing tools and unintended problems.
4.11	DER Interconnections							
		1. Describe in detail (including the web URL) the web portal that provides efficient and timely support for DER developers' interconnection applications.		X				No description provided, just links.
		2. Describe where, how, and when the utility will implement and maintain a resource where DER developers and other stakeholders with appropriate access controls can readily access, navigate, view, sort, filter, and download up to date information about all DER interconnections in the utility's system. The resource should provide the following information for each DER interconnection:						
		a. DER type, size, and location;		X				
		b. DER developer;		X				
		c. DER owner;		/				Not identified due to confidentiality requirements.
		d. DER operator;		/				Not identified due to confidentiality requirements.
		e. the connected substation, circuit, phase, and tap;		X				The phase and tap are not included in the reported information, but phase could be identified from location. GIS ID can be provided for "tap" identification if the value to developers exceeds the costs to provide it.
		f. the DER's remote monitoring, measurement, and control capabilities; and		/				Information not publicly available.
		g. the DER's primary and secondary (where applicable) purposes; and,		X				Information not publicly available. Only made available if requested by PSC.
		h. the DER's current interconnection status (operational, construction in progress, construction scheduled, or interconnection requested) and its actual/planned in service date.		X				Status and other information provided but not actual / planned in-service date.
		3. Describe the utility's means and methods for tracking and managing its DER interconnection application process and explain how those means and methods ensure achievement of the performance timelines established in New York State's Standardized Interconnection Requirements.		X				Adequate process is in place but it is not as automated as others nor does it make use of the platform.

DER Interconnections								
		Prompt						**Rationale**
		4. Describe where, how, and when the utility will provide a resource to applicants and other appropriate stakeholders for accessing up to date information concerning application status and process workflows.		X				States that information is available for developers' own projects, but not how they can access it. Do not currently provide it for other projects.
		5. Describe the utility's processes, resources, and standards used for constructing approved DER interconnections.		X				A summary of the process is provided as well as the supporting documents with more detail. Relevant detail included in next section too.
		6. Describe the utility's means and methods used for tracking and managing construction of approved DER interconnections to ensure achievement of required performance levels.		X				Current description sounds very decentralized and hard to understand / monitor at a portfolio level.
		7. Describe how and when the utility will deliver and maintain its DER interconnection information to the IEDR.		X				A high-level description is given but with limited information on how the process will be maintained.

AMI							
	Prompt						Rationale
	DPS Rationale						
		Advanced Metering Infrastructure (AMI) provides grid edge measurement, data acquisition, and control capabilities which are either essential or beneficial to a number of important functions in a modern distribution system. Granular time series data from smart meters and other intelligent devices at customers' premises enables advanced analyses, innovative rate designs, and customer engagement strategies which benefit both the customers and the grid. Voltage sensing and measurement functions support increased system efficiency and enable improved outage detection and restoration processes. Capabilities supporting DER measurement, monitoring, and control are essential for DER integration. Along with satisfying the general guidelines for information related to each topic (see Section 3.1), DPS Staff recommends that the DSIP Update should provide the following additional details which are specific to AMI:						
1.	Context and Background						
		a. Describe how topic-related policies, processes, resources, standards, and capabilities have evolved since the 2020 DSIP Update filing.		X			Appendix is required for evaluation but a separate document from DSIP and could be integrated. Focused on values/benefits of AMI but lack of details on current implementation.
2.	Implementation Plan, Schedule, and Investments						
	a.	Current Progress					
		i. Describe the current implementation as of June 30, 2023; and		X			Would benefit from a timeline that shows AMI deployment achievements to date and what is in the future. Hard to understand current implementation status vs the planned timeline but details are available.
		ii. Describe how the current implementation supports stakeholders' current and future needs.		X			Some high-level discussion of how implementation will support some needs, but mainly focused on 'the Companies'.
	b.	Future Implementation and Planning					
		i. Describe the future implementation that is planned to be deployed by 2028, identifying planned efforts and funded efforts.		X			Future plans are the same items details in Current Progress with mention of additional features or programs. Exhibit A 12-4 shows requested details - recommend clearly define if "Achievements" have been achieved. Option to discuss funded vs unfunded.
		ii. Describe how the future implementation will support stakeholders' needs in 2028 and beyond.		X			Discusses how data will be used for customers (energy usage control options and customer segmentation programs for rate design; time varying rates, EV charging programs longer term); no discussion of how they will meet stakeholder needs directly.
		iii. Identify and characterize the work and investments needed to progress from the current implementation to the planned future implementation.		X			High level future implementations is described on pages 154 - 155 (customer data and billing, analytics, outage notification, and grid automation).
		iv. Describe and explain the planned timing and sequence of the work and investments needed to progress from the current implementation to the planned future implementation.		X			Table A 12-4 shows the programmed of work that are planned and the individual projects that are required to implement these programmed (e.g. IT refresh, deploy MDMS).

AMI							
		Prompt					**Rationale**
		v. Describe where and how plans for topic-related work and investments affect the CGPP.		\			
		vi. Describe where and how investment plans developed through the CGPP affect the topic-related work and investments presented in the DSIP update.		\			
	c.	Integrated Implementation Timeline					
		i. Using a common format developed jointly with the other utilities, provide a high-level implementation timeline that combines the key milestones for all topic-related work and investments planned over the five-year period ending in 2028. Along with the milestones, the timeline should show significant dependencies among the work and investments related to all topics.		X			Unclear if they followed the common format developed. Table shows years requested but missing milestones and detailed implementation plan. No reference to a plan elsewhere.
3.	Risks and Mitigation						
		a. Identify and characterize any potential risk(s) and/or actual issue(s) that could affect timely implementation and describe the measures taken, or to be taken, to mitigate the risk(s) and/or resolve the issue(s).		X			Customer engagement plan is not detailed so it is hard to understand if its an effective mitigation measure. Same with security plan.
4.	Stakeholder Engagement						
		a. Identify and characterize the categories of stakeholders engaged in DSIP development and use.		X			Unclear how AMI data will be shared with developers. Customer engagement plan seems focused on end-use customers not developers/3rd party access.
		b. Describe when and how the goals and needs of each stakeholder category are identified and incorporated into the DSIP.		\			Not directly addressed.
		c. Describe when and how each stakeholder category's needs will be met over time.		\			Not directly addressed.
		d. Describe and explain the utility's needs for stakeholder-provided information, capabilities, and actions supporting specific implementation and operational outcomes.		\			Not directly addressed.
		e. Describe the means and methods for effectively informing and engaging associated stakeholders as planning, design, and implementation progress so that the outputs effectively address, as much as feasible, the needs of the utility, DER developers, and stakeholders.		X			Exhibit A 12-7 discusses engagement during different stages of roll-out. Mention of data availability to DERS developers but not much detail.
		f. Describe how the utility will ensure that the information, tools, and engagement opportunities provided to stakeholders effectively deliver the intended support and do not lead to unintended problems.		\			Not directly addressed.
4.12	Advanced Metering Infrastructure						
		- - 1. Provide a summary of the most up to date AMI implementation plans, including where AMI has been deployed to date.		X			Unclear why actual numbers are not being reported on since roll out started in 2020. Language is written as "plans" not actuals. It does not describe locations where AMI has been installed to date.
		2. Provide a summary of all new capabilities that AMI has enabled to date, and how these capabilities benefit customers, including, as applicable, customer engagement, energy efficiency, and innovative rates.		X			Detailed use cases for their various team members to use, but unclear what has 'enabled to date' for NYSEG.

AMI								
		Prompt						**Rationale**
		3. Describe the AMI-acquired data and information that is planned to be available through the IEDR.		X				"This approach is under discussion, as significant enhancements will be required to interface AMI data to support IEDR." Indicate that they can't provide plans without decisions/direction on IDER imitative.
		4. Describe where and how DER developers, customers, and other stakeholders can access up to date information about the locations and capabilities of existing and planned smart meters.		X				Will add links to their websites that will show maps of deployment activity, FAQs and how to get AMI benefits. Little detail on how that will support stakeholder needs.
		5. Provide a summary of plans and timelines for future expansion and/or enhancement of AMI functions.		X				Repeat question so they reference to previous section.
		6. Describe where and how each type of AMI-acquired data is stored, managed, and shared with, and used by other utility information systems such as those used for billing/compensation, customer service, work management, asset management, grid planning, and grid operations.		X				Indicate stored in MDMS but no other detail on how its managed, exchanged, etc. Indicate they have teams working to figure out the requirements.

Beneficial Location of DERs and NWA

Prompt						Rationale
DPS Rationale						
To help promote productive DER development, DPS Staff suggests that it is essential that the utility identify, characterize, and publicly present the locations in its service area where DERs and/or energy efficiency might provide significant benefits to the distribution system and/or to the bulk electric system. Based on its criteria for evaluating opportunities for non wires alternatives (NWA), the utility then selects some of those locations for NWA procurements and/or energy efficiency measures that will benefit the distribution system. In their previous DSIP filings, the utilities have separately described their processes for identifying beneficial locations, evaluating NWA suitability, and procuring non-wires solutions. However, as the utilities have evolved their planning processes to perform these functions, they have become part of a continuous process that begins with integrated planning. Therefore, DPS Staff recommends that the utility's 2023 DSIP update, and all future updates, should reflect this updated process by combining the topics of identification of beneficial locations, NWA suitability assessment, and procurement processes into one cohesive discussion. Along with satisfying the general guidelines for information related to each topic (see Section 3.1), DPS Staff recommends that the DSIP Update should provide the following additional details:						
1. Context and Background						
a. Describe how topic-related policies, processes, resources, standards, and capabilities have evolved since the 2020 DSIP Update filing.		X				Defines NWAs but does not provide detail on NYSEG/RGE's efforts.
2. Implementation Plan, Schedule, and Investments						
a. Current Progress						
i. Describe the current implementation as of June 30, 2023; and		X				Provides a high-level review of actions to date but little specific information on what they have been doing other than noting status of a specific NWA deployment.
ii. Describe how the current implementation supports stakeholders' current and future needs.		\				Not provided.
b. Future Implementation and Planning						
i. Describe the future implementation that is planned to be deployed by 2028, identifying planned efforts and funded efforts.		X				Provided a detailed table with achievements, short term and long term efforts and discussion of efforts in preceding text. Blue due to lack of identifying what is funded.
ii. Describe how the future implementation will support stakeholders' needs in 2028 and beyond.		\				Not provided.
iii. Identify and characterize the work and investments needed to progress from the current implementation to the planned future implementation.		X				
iv. Describe and explain the planned timing and sequence of the work and investments needed to progress from the current implementation to the planned future implementation.		X				Detailed table with achievements, short term and long term efforts provided.
v. Describe where and how plans for topic-related work and investments affect the CGPP.		\				Not provided.
vi. Describe where and how investment plans developed through the CGPP affect the topic-related work and investments presented in the DSIP update.		\				Not provided.
c. Integrated Implementation Timeline						
i. Using a common format developed jointly with the other utilities, provide a high-level implementation timeline that combines the key milestones for all topic-related work and investments planned over the five-year period ending in 2028. Along with the milestones, the timeline should show significant dependencies among the work and investments related to all topics.		X				No timeline but reference to short and long term table above. Blue for some discussion of dependencies and lessons learned.
3. Risks and Mitigation						

Beneficial Location of DERs and NWA							
		Prompt					**Rationale**
		a. Identify and characterize any potential risk(s) and/or actual issue(s) that could affect timely implementation and describe the measures taken, or to be taken, to mitigate the risk(s) and/or resolve the issue(s).		X			
4.		Stakeholder Engagement					
		a. Identify and characterize the categories of stakeholders engaged in DSIP development and use.		X			
		b. Describe when and how the goals and needs of each stakeholder category are identified and incorporated into the DSIP.		X			Lists ways stakeholder feedback is captured but does not provide any information on a process to incorporate feedback into the DSIP.
		c. Describe when and how each stakeholder category's needs will be met over time.		X			
		d. Describe and explain the utility's needs for stakeholder-provided information, capabilities, and actions supporting specific implementation and operational outcomes.		\			Not provided.
		e. Describe the means and methods for effectively informing and engaging associated stakeholders as planning, design, and implementation progress so that the outputs effectively address, as much as feasible, the needs of the utility, DER developers, and stakeholders.		X			Notes various forums for stakeholder feedback.
		f. Describe how the utility will ensure that the information, tools, and engagement opportunities provided to stakeholders effectively deliver the intended support and do not lead to unintended problems.		X			Mentions improvements to RFPs to reduce barriers and create clarity around utility goals. No other discussion of how communication will improve stakeholder information.
4.13	B	eneficial Locations for DERs and Non Wires Alternatives					
		1. Describe where and how developers and other stakeholders can access resources for:					
		a. accessing up to date information about beneficial locations for DERs and/or energy efficiency measures; and		X			
		b. efficiently sorting and filtering locations by the type(s) of capability needed, the timing and amount of each needed capability, the type(s) and value of desired benefit, the serving substation, the circuit, and the geographic area.		X			
		2. Describe the means and methods for identifying and evaluating locations in the distribution system where:					
		a. an NWA comprising one or more DERs and/or energy efficiency measures could timely reduce, delay, or eliminate the need for upgrading distribution infrastructure and/or materially benefit distribution system reliability, efficiency, and/or operations; and/or		X			
		b. one or more DERs and/or energy efficiency measures including increased value based customer incentives could reduce, delay, or eliminate the need for upgrading bulk electric system resources and/or materially benefit bulk electric system reliability, efficiency, and/or operations.		X			Looks to be answering the wrong question and focusing on estimating EE savings and not identifying NWAs for the bulk system.
		3. Describe how the NWA procurement process works within utility time constraints while enabling DER developers to properly prepare and propose NWA solutions which can be implemented in time to serve the system need. Details should include:		X			
		a. how utility and DER developer time and expense are minimized for each procurement transaction;		X			
		b. how standardized contracts and procurement methods are used across the utilities.		X			

Beneficial Location of DERs and NWA							
		Prompt					**Rationale**
		4. Describe where and how DER developers and other stakeholders can access up to date information about current NWA project opportunities.		X			
		5. Describe how the utility considers all aspects of operational criteria and public policy goals when deciding what to procure as part of a NWA solution.		X			Identifies some operational and policy aspects via noting the BCA considers societal costs and benefits and BCA includes cost of carbon but does not include any information about how they consider other aspects in reviewing bids outside the BCA.
		6. Describe where, how, and when the utility will provide DER developers and other stakeholders with a resource for accessing up to date information about all completed and in progress NWA projects. The information provided for each project should:					
		a. describe the location, type, size, and timing of the system need addressed by the project;		X			NYSEG/RGE notes this information is confidential.
		b. provide the amount of traditional solution cost that was/will be avoided;		X			NYSEG/RGE notes this information is confidential.
		c. explain how the selected NWA solution enables the savings; and		X			NYSEG/RGE notes this information is confidential.
		d. describe the structure and functional characteristics of the procurement transaction between the utility and the solution provider(s).		X			NYSEG/RGE notes this information is confidential.

How to Use the Assessment

Purpose of DSIPs The purpose of the DSIPs is to provide detailed, up-to-date information about progress and plans related to the implementation of a Distributed System Platform (DSP) featuring operational and market capabilities that will enable a market for products and services provided by the Distributed Energy Resources (DER) that are connected to the utility's distribution systems

Purpose of Assessme The purpose of this assessment is to determine the alignment of each DSIP with the guidance provided in the 2023 DPS Staff Whitepaper.

Format of Assessmen This assessment represents a review of one utility's DSIP. It is organized into 13 tabs/charts for each technical topic described in DPS guidance.

Review Approach

Checkbox The "checkbox" column is a quick check/reference to see if the DSIP responded to each component of the guidance.

Color Assessment The color assessment is a visual indicator of how well the DSIP response aligns with the prompts outlined in the DPS guidance.

Some evidence indicating that that DSIP aligns with the DPS guidance.

Sufficient evidence that DSIP aligns with the DPS guidance

Satisfies all elements of the DPS guidance in a robust and comprehensive manner.

Cumulative Assessment

	4.1 Integrated Planning	4.2 Advanced Fore-casting	4.3 Grid Operations	4.4 Energy Storage Integration	4.5 Electric Vehicle Integration	4.6 Clean Heat Integration	4.7 EE Integration and Innovation	4.8 Data Sharing	4.9 Hosting Capacity	4.1 Billing and Comp-ensation	4.11 DER Interconn-ections	4.12 Advanced Metering Infra-structure	4.13 Beneficial Locations for DERs and NWA
1. Context/Background													
2. Implementation Plan													
3. Risks/Mitigation													
4. Stakeholder Engmt.													
Prompt 1													
Prompt 2													
Prompt 3													
Prompt 4													
Prompt 5													
Prompt 6			-				-					-	
Prompt 7			-				-					-	-
Prompt 8			-	-		-	-		-		-	-	-
Prompt 9	-		-	-	-	-	-		-		-	-	-
Prompt 10	-		-	-	-	-	-	-	-	-	-	-	-
Prompt 11	-		-	-	-	-	-	-	-	-	-	-	-
Prompt 12	-		-	-	-	-	-	-	-	-	-	-	-
Prompt 13	-		-	-	-	-	-	-	-	-	-	-	-
Prompt 14	-		-	-	-	-	-	-	-	-	-	-	-
Prompt 15	-		-	-	-	-	-	-	-	-	-	-	-
Prompt 16	-		-	-	-	-	-	-	-	-	-	-	-
Prompt 17	-		-	-	-	-	-	-	-	-	-	-	-

	5.1 DSIP Gover-nance	5.2 MCOS	5.3 BCA
Included (Y/N)	Y	Y	Y
Color Assessment			

Key					
	Not answered	OS	Answered outside the topic area section	N/A	Not applicable
-	Not asked				
	Some evidence indicating that that DSIP aligns with the DPS guidance.				
	Sufficient evidence that DSIP aligns with the DPS guidance				
	Satisfies all elements of the DPS guidance in a robust and comprehensive manner.				

Integrated Planning									
	Prompt								Rationale
	DPS Rationale								
		DPS Staff recommends that the utility's electric system plan should position the utility to integrate an increasing number and variety of DERs while maintaining or improving safety, reliability, quality, and affordability of service. While stakeholders will now be able to reference the CGPP for a detailed understanding of how integrated planning will evolve to meet system needs aligned with the CLCPA, the DSIP should leverage the outputs of CGPP scenario planning and filed capital investment plans as inputs, and describe overall implementation plans and timelines as well as advances in specific planning functionalities that enhance the DSP. Along with satisfying the general guidelines for information related to each topical area (see Section 3.1), DPS Staff suggests that the DSIP Update should provide the following additional details which are specific to the utility resources and capabilities which support integrated electric system planning:							
1.	Context and Background								
		a. Describe how topic-related policies, processes, resources, standards, and capabilities have evolved since the 2020 DSIP Update filing.		X					
2.	Implementation Plan, Schedule, and Investments								
	a.	Current Progress							
		i. Describe the current implementation as of June 30, 2023; and		X					
		ii. Describe how the current implementation supports stakeholders' current and future needs.		X					Only explicitly mentions stakeholders once but detailed descriptions of current state does identify achievements that support stakeholders like streamlining the interconnection process to increase speed and transparency and data sharing improvements.
	b.	Future Implementation and Planning							
		i. Describe the future implementation that is planned to be deployed by 2028, identifying planned efforts and funded efforts.		X					Includes list of future actions but does not identify what is or is not funded.
		ii. Describe how the future implementation will support stakeholders' needs in 2028 and beyond.		\					Not answered.
		iii. Identify and characterize the work and investments needed to progress from the current implementation to the planned future implementation.		X					Section primarily focuses on supporting the CGPP and what is involved in Stage 1 with some information on what ConEd will do beyond (integrating DER into utility planning, expand NWS etc.).
		iv. Describe and explain the planned timing and sequence of the work and investments needed to progress from the current implementation to the planned future implementation.		X					Detailed schedule of the CGPP timeline but not additional efforts (see cell above).

Integrated Planning									
		Prompt							Rationale
		v. Describe where and how plans for topic-related work and investments affect the CGPP.		X					Some discussion of how Stage 1 of the CGPP will involve reviewing results of past studies but not clear how much will come from DSIP related work.
		vi. Describe where and how investment plans developed through the CGPP affect the topic-related work and investments presented in the DSIP update.		X					
	c.	Integrated Implementation Timeline							
		i. Using a common format developed jointly with the other utilities, provide a high-level implementation timeline that combines the key milestones for all topic-related work and investments planned over the five-year period ending in 2028. Along with the milestones, the timeline should show significant dependencies among the work and investments related to all topics.		X					Detailed schedule of the CGPP timeline but not additional efforts (see cell above). Only goes through 2026 but does identify touch points for distribution planning- that sort of information was not seen on other utility schedules for this topic area.
3.	Risks and Mitigation								
		a. Identify and characterize any potential risk(s) and/or actual issue(s) that could affect timely implementation and describe the measures taken, or to be taken, to mitigate the risk(s) and/or resolve the issue(s).		X					Section does not identify specific risks or mitigation strategies, instead has high level discussion of investment in enabling technologies based on available funding and using lessons learned for process enhancements.
4.	Stakeholder Engagement								
		a. Identify and characterize the categories of stakeholders engaged in DSIP development and use.		X					Provides list of stakeholders they will engage in future CGPP cycles but list is not comprehensive.
		b. Describe when and how the goals and needs of each stakeholder category are identified and incorporated into the DSIP.		\					Not answered.
		c. Describe when and how each stakeholder category's needs will be met over time.		X					Notes some stakeholders that will be engaged in future CGPP cycles but does not elaborate on timing or other efforts.
		d. Describe and explain the utility's needs for stakeholder-provided information, capabilities, and actions supporting specific implementation and operational outcomes.		X					Notes the CGPP framework has benefited from inputs of stakeholders but does not elaborate or include other efforts.
		e. Describe the means and methods for effectively informing and engaging associated stakeholders as planning, design, and implementation progress so that the outputs effectively address, as much as feasible, the needs of the utility, DER developers, and stakeholders.		X					Mentions some resources such as sharing system data and hosting capacity analysis but points to those sections for more information.
		f. Describe how the utility will ensure that the information, tools, and engagement opportunities provided to stakeholders effectively deliver the intended support and do not lead to unintended problems.		\					Not answered.
4.1	Integrated Planning								
		1. The means and methods used for integrated distribution system planning.		X					
		2. How the utility's means and methods enable probabilistic planning which effectively anticipates the inter related effects of distributed generation, energy storage, electric vehicles, beneficial electrification, and energy efficiency.		X					

Integrated Planning									
		Prompt							**Rationale**
		3. How the utility ensures that the information needed for integrated system planning is timely acquired and properly evaluated.		X					
		4. The types of sensitivity analyses performed and how those analyses are applied as part of the integrated planning process.		X					
		5. How the utility will timely adjust its integrated system plan if future trends differ significantly with predictions, both in the short term and in the long term beyond the DSIP timeline.		X					
		6. The factors unrelated to DERs such as aging infrastructure, electric vehicles, and beneficial electrification which significantly affect the utility's integrated plan and describe how the utility's planning process addresses each of those factors.		X					
		7. How the means and methods for integrated electric system planning evaluate the effects of potential energy efficiency measures.		X					Discussion not as robust as other items, points reader to appendix for more information on the process.
		8. How the utility will inform the development of its integrated planning through best practices and lessons learned from other jurisdictions.		X					List sources for best practices and modifications to planning procedures they are evaluating but does not discuss how they will incorporate best practices into their processes more broadly.

Advanced Forecasting							
Prompt							Rationale
	DPS Rationale						
		Utility planners and operators, DER developers and operators, and other stakeholders all require load and supply forecasts which are timely, accurate, and detailed enough to support both short term and long term planning. Such forecasts are an important factor in predicting the hosting capacity available at existing and potential DER locations and are necessary for efficient development and use of grid resources. As the variety of methods for using DERs to address electric system needs expands, DPS Staff recommends that utilities should perform advanced forecasting analyses which integrate an increasing number and variety of DERs into their load and supply forecasts. Therefore, DPS Staff proposes that the methods for using advanced distribution system forecasting, along with plans for implementing the means and methods needed for advanced forecasting should continue to be described by the utilities in their DSIPs. Along with satisfying the general guidelines for information related to each topic (see Section 3.1), DPS Staff recommends that the DSIP Update should provide the following additional details that are specific to the utility resources and capabilities and which enable advanced electric system forecasting and provide the most current forecast results:					
1. Context and Background							
		a. Describe how topic-related policies, processes, resources, standards, and capabilities have evolved since the 2020 DSIP Update filing.		X			Discussion is focused on system forecasting vs. DER/EE/DSM forecasting.
2. Implementation Plan, Schedule, and Investments							
	a. Current Progress						
		i. Describe the current implementation as of June 30, 2023; and		X			Summary of achievements provides details on individual technologies, modules, improvements, etc.
		ii. Describe how the current implementation supports stakeholders' current and future needs.		X			Could provide more direct tie to how stakeholders might benefit from recent updates.
	b. Future Implementation and Planning						
		i. Describe the future implementation that is planned to be deployed by 2028, identifying planned efforts and funded efforts.		X			Timelines not well defined.
		ii. Describe how the future implementation will support stakeholders' needs in 2028 and beyond.		X			Timelines not well defined.
		iii. Identify and characterize the work and investments needed to progress from the current implementation to the planned future implementation.		X			Some detail provided here, more provided in introduction section - more explicit information could be provided here.
		iv. Describe and explain the planned timing and sequence of the work and investments needed to progress from the current implementation to the planned future implementation.		X			Some detail provided here, more provided in introduction section - more explicit information could be provided here.
		v. Describe where and how plans for topic-related work and investments affect the CGPP.		\			Not answered.
		vi. Describe where and how investment plans developed through the CGPP affect the topic-related work and investments presented in the DSIP update.		\			Not answered.
	c. Integrated Implementation Timeline						
		i. Using a common format developed jointly with the other utilities, provide a high-level implementation timeline that combines the key milestones for all topic-related work and investments planned over the five-year period ending in 2028. Along with the milestones, the timeline should show significant dependencies among the work and investments related to all topics.		\			Answered outside the topic area section. Information included in introduction section but does not address advanced forecasting specifically.
3. Risks and Mitigation							

Advanced Forecasting								
		Prompt						Rationale
		a. Identify and characterize any potential risk(s) and/or actual issue(s) that could affect timely implementation and describe the measures taken, or to be taken, to mitigate the risk(s) and/or resolve the issue(s).		X				Very limited description - "the Company will require additional resources as the demand for more granular forecasts increase".
4. Stakeholder Engagement								
		a. Identify and characterize the categories of stakeholders engaged in DSIP development and use.		\				Not answered.
		b. Describe when and how the goals and needs of each stakeholder category are identified and incorporated into the DSIP.		\				Not answered.
		c. Describe when and how each stakeholder category's needs will be met over time.		\				Not answered.
		d. Describe and explain the utility's needs for stakeholder-provided information, capabilities, and actions supporting specific implementation and operational outcomes.		\				Not answered.
		e. Describe the means and methods for effectively informing and engaging associated stakeholders as planning, design, and implementation progress so that the outputs effectively address, as much as feasible, the needs of the utility, DER developers, and stakeholders.		\				Not answered.
		f. Describe how the utility will ensure that the information, tools, and engagement opportunities provided to stakeholders effectively deliver the intended support and do not lead to unintended problems.		\				Not answered.
4.2 Advanced Forecasting								
		1. Identify where and how DER developers and other stakeholders can readily access, navigate, view, sort, filter, and download up to date load and supply forecasts.		X				Hosting capacity platform and Appendix provided.
		2. Identify and characterize each load and supply forecasting requirement identified from stakeholder inputs.		X				Could be more explicit in text, in addition to referring to hosting capacity maps.
		3. Describe in detail the existing and/or planned forecasts produced for third-party use and explain how those forecasts fulfill each identified stakeholder requirement for load and supply forecasts.		X				Same as prompt 2.
		4. Describe the spatial and temporal granularity of the system level and local level load and supply forecasts produced.		X				Spatial and temporal granularity described.
		5. Describe the forecasts provided separately for key areas including but not limited to photovoltaics, energy storage, electric vehicles, and energy efficiency.		X				Describes comprehensive list of modifiers with detail provided in Appendix A.
		6. Describe the advanced forecasting capabilities which are/will be implemented to enable effective probabilistic planning methods.		X				Describes capabilities to be implemented and general proposed process.
		7. Describe how the utility's existing/planned advanced forecasting capabilities anticipate the inter related effects of distributed generation, energy storage, electric vehicles, beneficial electrification, and energy efficiency. In particular, describe how electric vehicle and energy efficiency forecasts are reflected in utility forecasts.		X				Includes only a reference to #5 although details are provided in Appendix A.
		8. Describe in detail the forecasts produced for utility use and explain how those forecasts fulfill the evolving utility requirements for load and supply forecasts		X				Could include more detail on how the forecasts fulfill requirements vs. why the forecasts are developed using the current methods.
		9. Describe the utility's specific objectives, means, and methods for acquiring and managing the data needed for its advanced forecasting methodologies.		X				Nice discussion of data from AMI system.

Advanced Forecasting								
		Prompt						Rationale
		10. Describe the means and methods used to produce substation level load and supply forecasts.		X				Appendix A provides details, could provide a timeline for updating network load shapes from 2019 base-year data.
		11. Describe the levels of accuracy achieved in the substation level forecasts produced to date for load and supply.		X				Provided error rates. Could provide a timeline for updating network load shapes from 2019 base-year data given that's the likely cause of a significant amount of error.
		12. Describe the substation level load forecasts provided to support analyses by DER developers and operators and explain why the forecasts are sufficient for supporting those analyses.		X				Limited explanation of how these are helpful other than identifying peak and off-peak periods
		13. Provide sensitivity analyses which explain how the accuracy of substation level forecasts is affected by distributed generation, energy storage, electric vehicles, beneficial electrification, and energy efficiency measures		X				Discussed error but did not provide any additional analyses (aside from saying they introduced sensitivities) or tie the accuracy to anything except COVID.
		14. Identify and characterize the tools and methods the utility is using/will use to acquire and apply useful forecast input data from DER developers and other third-parties.		X				Additional detail on external sources of information/assumptions could be provided.
		15. Describe how the utility will inform its forecasting processes through best practices and lessons learned from other jurisdictions.		X				Only NYISO identified, but there could be a broader commitment to review and apply learnings from other jurisdictions.
		16. Describe new methodologies to improve overall accuracy of forecasts for demand and energy reductions that derive from EE programs and increased penetration of DER. In particular, discuss how the increased potential for inaccurate load and energy forecasts associated with out of model EE and DER adjustments will be minimized or eliminated.		X				General summary of recent projects.
		17. Describe where CGPP forecast information can be found.		X				The response indicates that the CGPP information is not yet approved, and does not provide information on location of information.

Grid Operations								
Prompt								Rationale
	DPS Rationale							
		It is the opinion of DPS Staff that each utility must enable a much more dynamic, data driven, multi party mode of grid operations where DERs effectively generate customer value by increasing efficiency, stability, and reliability in both the distribution system and the bulk electric system. To achieve this outcome, DPS Staff recommends that each utility should develop and/or substantially modify a wide range of components encompassing operating policies and processes, advanced information systems, extensive data communications infrastructure, widely distributed sensors and control devices, and grid components such as switches, power flow controllers, and solid state transformers. Along with satisfying the general guidelines for information related to each topical area (see Section 3.1), DPS Staff suggests that the DSIP Update should provide the following additional details which are specific to the utility resources and capabilities needed to transform grid operations in both the distribution system and the bulk electric system:						
1. Context and Background								
		a. Describe how topic-related policies, processes, resources, standards, and capabilities have evolved since the 2020 DSIP Update filing.		X				Discussed both policy changes such as FERC order 841, 2222 and internal Vulnerability Study.
2. Implementation Plan, Schedule, and Investments								
	a. Current Progress							
		i. Describe the current implementation as of June 30, 2023; and		X				Detailed implementation of projects that improves grid operations e.g. GIS, MNRPs, DERMS and DRMS.
		ii. Describe how the current implementation supports stakeholders' current and future needs.		X				
	b. Future Implementation and Planning							
		i. Describe the future implementation that is planned to be deployed by 2028, identifying planned efforts and funded efforts.		X				No timeline provided past 2025.
		ii. Describe how the future implementation will support stakeholders' needs in 2028 and beyond.		X				No timeline provided past 2025.
		iii. Identify and characterize the work and investments needed to progress from the current implementation to the planned future implementation.		X				
		iv. Describe and explain the planned timing and sequence of the work and investments needed to progress from the current implementation to the planned future implementation.		X				Good discussion on phased deployment.
		v. Describe where and how plans for topic-related work and investments affect the CGPP.		\				Not answered.
		vi. Describe where and how investment plans developed through the CGPP affect the topic-related work and investments presented in the DSIP update.		\				Not answered.
	c. Integrated Implementation Timeline							
		i. Using a common format developed jointly with the other utilities, provide a high-level implementation timeline that combines the key milestones for all topic-related work and investments planned over the five-year period ending in 2028. Along with the milestones, the timeline should show significant dependencies among the work and investments related to all topics.		X				Response included in Figure 3.
3. Risks and Mitigation								
		a. Identify and characterize any potential risk(s) and/or actual issue(s) that could affect timely implementation and describe the measures taken, or to be taken, to mitigate the risk(s) and/or resolve the issue(s).		X				Limited discussion on risk and mitigation.
4. Stakeholder Engagement								
		a. Identify and characterize the categories of stakeholders engaged in DSIP development and use.		X				Some discussion on role of DER developers with respect to monitoring & control and smart inverters voltage regulation. Some discussion on participation on various working group. Lacks specifics in the guideline.

Grid Operations									
		Prompt							**Rationale**
		b. Describe when and how the goals and needs of each stakeholder category are identified and incorporated into the DSIP.		X					
		c. Describe when and how each stakeholder category's needs will be met over time.		X					
		d. Describe and explain the utility's needs for stakeholder-provided information, capabilities, and actions supporting specific implementation and operational outcomes.		X					
		e. Describe the means and methods for effectively informing and engaging associated stakeholders as planning, design, and implementation progress so that the outputs effectively address, as much as feasible, the needs of the utility, DER developers, and stakeholders.		X					
		f. Describe how the utility will ensure that the information, tools, and engagement opportunities provided to stakeholders effectively deliver the intended support and do not lead to unintended problems.		X					
4.3.6	Grid Operations								
		1. Describe in detail the roles and responsibilities of the utility and other parties involved in planning and executing grid operations which accommodate and productively employ DERs.		X					Roles defined in contractual agreement and DSP Communications and Coordination Manual.
		2. Describe other role and responsibility models considered and explain the reasons for choosing the planned model		X					No mention of other role/responsibility model.
		3. Describe how roles and responsibilities have been/will be developed, documented, and managed for each party involved in the planning and execution of grid operations.		X					Roles defined in contractual agreement and DSP Communications and Coordination Manual.
		4. Describe in detail how the utilities and other parties will provide processes, resources, and standards to support planning and execution of advanced grid operations which accommodate and extensively employ DER services. The information provided should address:							
		a. organizations;		X					Outlined in standard operation procedures.
		b. operating policies and processes;		X					Outlined in standard operation procedures.
		c. information systems for system modeling, data acquisition and management, situational awareness, resource optimization, dispatch and control, etc. ;		X					Good inclusion of GIS DERM and CIM.
		d. data communications infrastructure;		X					
		e. grid sensors and control devices; and,		X					
		f. grid infrastructure components such as switches, power flow controllers, and solid state transformers.		X					Good network protector automation.
		5. Describe the utility's approach and ability to implement advanced capabilities.							
		a. Identify the existing level of system monitoring and distribution automation.		X					
		b. Identify areas to be enhanced through additional monitoring and/or distribution automation.		X					
		c. Describe the means and methods used for deploying additional monitoring and/or distribution automation in the utility's system.		X					
		d. Identify the benefits to be obtained from deploying additional monitoring and/or distribution automation in the utility's system.		X					
		e. Identify the capabilities currently provided by Advanced Distribution Management Systems (ADMS).		X					More discussion on in-house ADMS features vs off the shelf ADMS solutions.
		f. Describe how ADMS capabilities will increase and improve over time.		X					
		g. Identify the capabilities currently provided by DER Management Systems (DERMS).		X					
		h. Describe how DERMS capabilities will increase and improve over time.		X					Phased deployment.
		i. Identify other approaches or functionalities used to better manage grid performance and describe how they are/will be integrated into daily operations.		X					

Energy Storage Integration							
Prompt							**Rationale**
DPS Rationale							
		As outlined in the recently issued "New York's 6 GW Energy Storage Roadmap Policy Options for Continued Growth in Energy Storage" significant energy storage integration will be needed within the five year planning horizon of the DSIP Update filing. Meanwhile, evolving initiatives for achieving New York State's energy storage goals will likely require corresponding adjustments to utility deployment plans, use cases, and forecasts. Areas of particular interest to DPS Staff related to energy storage include: • Existing energy storage resources in the distribution system; • The utility's planned energy storage projects; • A five year forecast of energy storage deployments by the utility and/or third-parties; • Potential energy storage locations and applications that could benefit customers and/or the electric system; • Resources and functions needed for integrating energy storage with utility grid operations; • Resources and functions needed for integrating energy storage with utility billing and compensation functions; and • The utility's alignment with New York State's energy storage goals and initiatives. Along with satisfying the general guidelines for information related to each topic (see Section 3.1), DPS Staff recommends that the DSIP Update should provide the following details for the areas of interest listed above, especially the means and methods to plan for energy storage deployment in the distribution system:						
1. Context and Background							
		a. Describe how topic-related policies, processes, resources, standards, and capabilities have evolved since the 2020 DSIP Update filing.		X			Detailed description of storage integration in the context of regulation and evolving policies.
2. Implementation Plan, Schedule, and Investments							
	a. Current Progress						
		i. Describe the current implementation as of June 30, 2023; and		X			Detailed description of multiple current implementations.
		ii. Describe how the current implementation supports stakeholders' current and future needs.		X			Good discussion on peak shaving, non-wire solution, reducing interconnection barrier, tariff change.
	b. Future Implementation and Planning						
		i. Describe the future implementation that is planned to be deployed by 2028, identifying planned efforts and funded efforts.		X			Provided very specific future installation plans.
		ii. Describe how the future implementation will support stakeholders' needs in 2028 and beyond.		X			Lacks information on 2028 and beyond.
		iii. Identify and characterize the work and investments needed to progress from the current implementation to the planned future implementation.		X			Discussed clear goals.
		iv. Describe and explain the planned timing and sequence of the work and investments needed to progress from the current implementation to the planned future implementation.		X			Sequence and timing not clear.
		v. Describe where and how plans for topic-related work and investments affect the CGPP.		\			Not answered. Mentions storage as transmission asset.
		vi. Describe where and how investment plans developed through the CGPP affect the topic-related work and investments presented in the DSIP update.		\			Not answered. Mentions storage as transmission asset.
	c. Integrated Implementation Timeline						
		i. Using a common format developed jointly with the other utilities, provide a high-level implementation timeline that combines the key milestones for all topic-related work and investments planned over the five-year period ending in 2028. Along with the milestones, the timeline should show significant dependencies among the work and investments related to all topics.		X			Future plans are qualitative, high-level timeline was included in the overall intro section.
3. Risks and Mitigation							

Energy Storage Integration								
		Prompt						**Rationale**
		a. Identify and characterize any potential risk(s) and/or actual issue(s) that could affect timely implementation and describe the measures taken, or to be taken, to mitigate the risk(s) and/or resolve the issue(s).		X				Adequate discussion of risks and mitigations.
4. Stakeholder Engagement								
		a. Identify and characterize the categories of stakeholders engaged in DSIP development and use.		X				Evidence of stakeholder engagement in accelerating storage integration through workshop.
		b. Describe when and how the goals and needs of each stakeholder category are identified and incorporated into the DSIP.		X				High level information on stakeholder need identification and DSIP incorporation.
		c. Describe when and how each stakeholder category's needs will be met over time.		X				Very high level information provided.
		d. Describe and explain the utility's needs for stakeholder-provided information, capabilities, and actions supporting specific implementation and operational outcomes.		X				Very high level information provided.
		e. Describe the means and methods for effectively informing and engaging associated stakeholders as planning, design, and implementation progress so that the outputs effectively address, as much as feasible, the needs of the utility, DER developers, and stakeholders.		X				
		f. Describe how the utility will ensure that the information, tools, and engagement opportunities provided to stakeholders effectively deliver the intended support and do not lead to unintended problems.		X				
4.4 Energy Storage Integration								
		1. Provide the locations, types, capacities (power and energy), configurations (i.e., standalone or co located with load and/or generation), and functions of existing energy storage resources in the distribution system.		X				General summary provided detailed list in Appendix B.
		2. Describe the utility's current efforts to plan, implement, and operate beneficial energy storage applications. Information provided should include:						
		a. a detailed description of each project, existing and planned, with an explanation of how the project fits into the utility's long range energy storage plans;		X				Detailed project table provided.
		b. the original project schedule;		X				Detailed project table provided.
		c. the current project status;		X				Detailed project table provided.
		d. lessons learned to date;		X				Discussion provided focusing on permitting and vendor warranty.
		e. project adjustments and improvement opportunities identified to date; and		X				Limited discussion on adjustments other than in d. lessons learned.
		f. next steps with clear timelines and deliverables.		X				Timelines presented in table 4, including next steps.
		3. Provide a five year forecast of energy storage assets deployed and operated by third-parties. Where possible, include the likely locations, types, capacities, configurations, and functions of those assets.		X				Detailed forecast in appendix A.
		4. Identify, describe, and prioritize the current and future opportunities for beneficial use of energy storage located in the distribution system. Uses considered should encompass functions which benefit utility customers, the distribution system, and/or the bulk power system. Each opportunity identified should be characterized by:						

Energy Storage Integration								
		Prompt						**Rationale**
		a. location;		X				Discussed multiple storage plans, description is generic.
		b. energy storage capacity (power and energy);		X				Discussed multiple storage plans, description is generic.
		c. function(s) performed;		X				Discussed multiple storage plans, description is generic.
		d. period(s) of time when the function(s) would be performed; and		X				Discussed multiple storage plans, description is generic.
		e. the nature and estimated economic value of each benefit derived from the energy storage resource.		X				Discussed multiple storage plans, description is generic.
		5. Identify and describe all significant resources and functions that the utility and stakeholders use for planning, implementing, monitoring, and managing energy storage at multiple levels in the distribution system.						
		a. Explain how each of those resources and functions supports the utility's needs;		X				Discussed integration of GIS, DERMS.
		b. Explain how each of those resources and functions supports the stakeholders' needs.		X				Indirect stakeholder benefits.
		6. Describe the means and methods for determining the real time status, behavior, and effect of energy storage resources currently deployed in the distribution system. Information produced by those means and methods could include:						
		a. the amount of energy currently stored (state of charge);		X				eGIS and DERMS as discussed in number 5.
		b. the time, size, duration, energy source (grid and/or local generation), and purpose of charging events;		X				eGIS and DERMS as discussed in number 5.
		c. the time, size, duration, consumer (grid and/or local load), and purpose of energy storage discharges;		X				eGIS and DERMS as discussed in number 5.
		d. the net effect (amount and duration of supply or demand) on the distribution system of charge/discharge events (considering any co located load and/or generation); and		X				eGIS and DERMS as discussed in number 5.
		e. the capacity of the distribution system to deliver or receive power at a given location and time.		X				eGIS and DERMS as discussed in number 5.
		7. Describe the means and methods for forecasting the status, behavior, and effect of energy storage resources in the distribution system at future times. Forecasts produced by the utility could include:						
		a. the amount of energy stored (state of charge);		X				Good discussion of charge/discharge strategy and separate appendix for forecast.
		b. the time, size, duration, energy source (grid and/or local generation), and purpose of charging events;		X				Good discussion of charge/discharge strategy and separate appendix for forecast.

Energy Storage Integration								
		Prompt						**Rationale**
		c. the time, size, duration, consumer (grid and/or local load), and purpose of energy storage discharges;		X				Good discussion of charge/discharge strategy and separate appendix for forecast.
		d. the net effect on the distribution system of each charge/discharge event (considering any co located load and/or generation);		X				Good discussion of charge/discharge strategy and separate appendix for forecast.
		e. the capacity of the distribution system to deliver or receive power at a given location and time.		X				Good discussion of charge/discharge strategy and separate appendix for forecast.
		8. Describe the resources and functions needed to support billing and compensation of energy storage owners/operators.		X				Complete response.
		9. Identify the types of customer and system data that are necessary for planning, implementing, and managing energy storage and describe how the utility provides those data to developers and other stakeholders; and		X				Combination of data sharing platform and hosting capacity map.
		10. By citing specific objectives, means, and methods, describe in detail how the utility's accomplishments and plans are aligned with the objectives established in the CLCPA.		X				NWS, Permitting, Tariffs.

EV Integration							
Prompt							Rationale
	DPS Rationale						
		It is DPS Staff's position that utility resources and capabilities which support electric vehicle (EV) integration at all levels in the distribution system will be needed within the five year planning horizon of the DSIP Update filing. While plans for integrating EVs at the bulk, local transmission, and distribution levels will now be reflected in the CGPP, DPS Staff suggests that the DSIP should continue to describe means and methods for planning EV integration at the distribution level. Along with satisfying the general guidelines for information related to each topic (see Section 3.1), DPS Staff recommends that the DSIP Update should provide the following additional details which are specific to electric vehicle integration. Where not yet fully developed or fluid due to ongoing policy development, DPS Staff suggests that the DSIP Update should provide current status and planned next steps, including an anticipated timeframe, to continue making progress.					
1. Context and Background							
		a. Describe how topic-related policies, processes, resources, standards, and capabilities have evolved since the 2020 DSIP Update filing.		X			Good overview of policies and market developments. The section provides a good summary of what ConEd has been performing in terms of market program etc.
2. Implementation Plan, Schedule, and Investments							
	a. Current Progress						
		ii. Describe how the current implementation supports stakeholders' current and future needs.		X			Sufficient amount of initiatives is provided. They are all well explained and provide sufficient detail on what each initiative is doing.
				X			Not all initiatives discuss the impact on stakeholders and how they support current and future needs
	b. Future Implementation and Planning						
		i. Describe the future implementation that is planned to be deployed by 2028, identifying planned efforts and funded efforts.		X			This section includes only a summary of the future plans but nothing else. The section is very limited in evidence.
		ii. Describe how the future implementation will support stakeholders' needs in 2028 and beyond.		\			All these sections are missing. Poor analysis of future implementation and planning.
		iii. Identify and characterize the work and investments needed to progress from the current implementation to the planned future implementation.		\			All these sections are missing. Poor analysis of future implementation and planning.
		iv. Describe and explain the planned timing and sequence of the work and investments needed to progress from the current implementation to the planned future implementation.		\			All these sections are missing. Poor analysis of future implementation and planning.
		v. Describe where and how plans for topic-related work and investments affect the CGPP.		\			All these sections are missing. Poor analysis of future implementation and planning.

EV Integration								
Prompt								**Rationale**
		vi. Describe where and how investment plans developed through the CGPP affect the topic-related work and investments presented in the DSIP update.		\				All these sections are missing. Poor analysis of future implementation and planning.
	c. Integrated Implementation Timeline							
		i. Using a common format developed jointly with the other utilities, provide a high-level implementation timeline that combines the key milestones for all topic-related work and investments planned over the five-year period ending in 2028. Along with the milestones, the timeline should show significant dependencies among the work and investments related to all topics.		\				A high-level timeline was provided in the intro section.
3. Risks and Mitigation								
		a. Identify and characterize any potential risk(s) and/or actual issue(s) that could affect timely implementation and describe the measures taken, or to be taken, to mitigate the risk(s) and/or resolve the issue(s).		X				High level risks are discussed. Mitigation measures are mentioned. More information could be provided on the nature of risks and mitigation measures.
4. Stakeholder Engagement								
		a. Identify and characterize the categories of stakeholders engaged in DSIP development and use.		X				Limited groups of stakeholders are mentioned.
		b. Describe when and how the goals and needs of each stakeholder category are identified and incorporated into the DSIP.		\				
		c. Describe when and how each stakeholder category's needs will be met over time.		\				
		d. Describe and explain the utility's needs for stakeholder-provided information, capabilities, and actions supporting specific implementation and operational outcomes.		\				
		e. Describe the means and methods for effectively informing and engaging associated stakeholders as planning, design, and implementation progress so that the outputs effectively address, as much as feasible, the needs of the utility, DER developers, and stakeholders.		X				There is a good summary of past activities but not sufficient information on future activities. In addition, there is no mention of the needs of stakeholders.
		f. Describe how the utility will ensure that the information, tools, and engagement opportunities provided to stakeholders effectively deliver the intended support and do not lead to unintended problems.		\				
4.5 Electric Vehicle Integration								
		1. Using a common framework (organization, format, semantics, definitions, etc.) developed jointly with the other utilities, identify and characterize the existing and anticipated EV charging scenarios in the utility's service territory. Each scenario identified should be characterized by:						
		a. the type of location (home, apartment complex, store, workplace, public parking site, rest stop, etc.);						The locations are laid out in table 5.
		b. the number and spatial distribution of existing instances of the scenario;		\				The company explains where this information can be obtained via an external website. The company should follow guidance providing concrete information, data, graphs and maps where possible.

EV Integration								
		Prompt						**Rationale**
		c. the forecast number and spatial distribution of anticipated instances of the scenario over the next five years;		X				The information is not available but the company refers to a model that could potentially provide this information. The company should follow guidance providing concrete information, data, graphs and maps where possible.
		d. the type(s) of vehicles charged at a typical location (commuter car, bus, delivery truck, taxi, ride share, etc.);		X				Very vague information is provided and it does not include type of vehicle at a typical location.
		e. the number of vehicles charged at a typical location, by vehicle type;		\				The information is not provided.
		f. the charging pattern by vehicle type (frequency, times of day, days of week, energy per charge, duration per charge, demand per charge);		\				The information is not provided although some potential sources of information are mentioned.
		g. the number(s) of charging ports at a typical location, by type;		\				The information is not provided.
		h. the energy storage capacity (if any) supporting EV charging at a typical location;		\				The information is not provided.
		i. an hourly profile of a typical location's aggregated charging load over a one year period;		\				The information is not provided.
		j. the type and size of the existing utility service at a typical location; and		\				The information is not provided.
		k. the type and size of utility service needed to support the EV charging use case.		X				Vague information is available.
		2. Describe and explain the utility's priorities for supporting implementation of the EV charging use cases anticipated in its service territory.		X				Summary of priorities is provided.
		3. Identify and describe all significant resources and functions that the utility and stakeholders use for planning, implementing, monitoring, and managing EV charging at multiple levels in the distribution system.		X				Considering the lack of maturity on EV integration, the company has progressed their thinking in identifying resources and functions required for EV integration.
		a. Explain how each of those resources and functions supports the utility's needs.		X				Summary provided. Not a lot of detail on how each of the resources support utility needs.
		b. Explain how each of those resources and functions supports the stakeholders' needs.		\				
		4. Identify the types of customer and system data that are necessary for planning, implementing, and managing EV charging infrastructure and services and describe how the utility provides this data to interested third parties.		X				Sufficient description of data and clear process on how the company shares the data with 3rd parties.
		5. Describe the resources and functions needed to support billing and compensation of EV and EVSE owners/operators.		X				The company explains how EV customers are billed under the existing systems and highlights that this may need to change in the future. However the description does not include metering requirements .
		6. By citing specific objectives, means, and methods describe in detail how the utility's accomplishments and plans are aligned with New York State policy, including its established goals for EV adoption.		X				Examples are provided but the State's goals are not well articulated.
		7. Describe the utility's current efforts to plan, implement, and manage EV related projects. Information provided should include:		X				The company provides a table with all the EV related projects. Although some fields are not available, sufficient information is provided. Fields which are not available will be confirmed later in the processes.

EV Integration								
		Prompt						**Rationale**
		a. a detailed description of each project, existing and planned, with an explanation of how the project fits into the utility's long-range EV integration plans;		X				The company provides a table with all the EV related projects. Although some fields are not available, sufficient information is provided. Fields which are not available will be confirmed later in the processes.
		b. the original project schedule;		X				The company provides a table with all the EV related projects. Although some fields are not available, sufficient information is provided. Fields which are not available will be confirmed later in the processes.
		c. the current project status;		X				The company provides a table with all the EV related projects. Although some fields are not available, sufficient information is provided. Fields which are not available will be confirmed later in the processes.
		d. lessons learned to date;		X				The company provides a table with all the EV related projects. Although some fields are not available, sufficient information is provided. Fields which are not available will be confirmed later in the processes.
		e. project adjustments and improvement opportunities identified to date; and		X				The company provides a table with all the EV related projects. Although some fields are not available, sufficient information is provided. Fields which are not available will be confirmed later in the processes.
		f. next steps with clear timelines and deliverables.		X				The company provides a table with all the EV related projects. Although some fields are not available, sufficient information is provided. Fields which are not available will be confirmed later in the processes.
		8. Describe how the utility is coordinating with the efforts of the New York State Energy Research and Development Authority (NYSERDA), the New York Power Authority (NYPA), New York Department of Environmental Conservation (DEC), and DPS Staff to facilitate statewide EV market development and growth.		X				Good description of initiatives and coordination developments.

Clean Heat Integration								
Prompt								Rationale
	DPS Rationale							
		The NYS Clean Heat program encourages residents, small businesses, and commercial and multifamily building owners to install cold climate air source heat pumps (ASHP) and energy efficient ground source heat pumps (GSHP) and heat pump water heaters (HPWH). DPS Staff believes that utility resources and capabilities which support Clean Heat integration at all levels in the distribution system will be needed within the five year planning horizon of the DSIP Update filing. Therefore, DPS Staff recommends that the DSIP should describe means and methods for planning Clean Heat integration at the distribution level. Along with satisfying the general guidelines for information related to each topic (see Section 3.1), DPS Staff recommends that the DSIP Update should provide the following additional details which are specific to clean heat integration. DPS Staff further recommends that where not yet fully developed or fluid due to ongoing policy development, the DSIP Update should provide current status and planned next steps, including an anticipated timeframe, to continue making progress.						
1. Context and Background								
		a. Describe how topic-related policies, processes, resources, standards, and capabilities have evolved since the 2020 DSIP Update filing.		X				
2. Implementation Plan, Schedule, and Investments								
	a. Current Progress							
		i. Describe the current implementation as of June 30, 2023; and		X				
		ii. Describe how the current implementation supports stakeholders' current and future needs.		X				
	b. Future Implementation and Planning							
		i. Describe the future implementation that is planned to be deployed by 2028, identifying planned efforts and funded efforts.		X				
		ii. Describe how the future implementation will support stakeholders' needs in 2028 and beyond.		X				
		iii. Identify and characterize the work and investments needed to progress from the current implementation to the planned future implementation.		X				
		iv. Describe and explain the planned timing and sequence of the work and investments needed to progress from the current implementation to the planned future implementation.		X				
		v. Describe where and how plans for topic-related work and investments affect the CGPP.		X				
		vi. Describe where and how investment plans developed through the CGPP affect the topic-related work and investments presented in the DSIP update.		X				Reference to sections 2.1 and 2.2
	c. Integrated Implementation Timeline							
		i. Using a common format developed jointly with the other utilities, provide a high-level implementation timeline that combines the key milestones for all topic-related work and investments planned over the five-year period ending in 2028. Along with the milestones, the timeline should show significant dependencies among the work and investments related to all topics.		\				A high-level timeline was provided in the intro section.
3. Risks and Mitigation								
		a. Identify and characterize any potential risk(s) and/or actual issue(s) that could affect timely implementation and describe the measures taken, or to be taken, to mitigate the risk(s) and/or resolve the issue(s).		X				
4. Stakeholder Engagement								
		a. Identify and characterize the categories of stakeholders engaged in DSIP development and use.		X				Mention of some stakeholders. Does not appear to be exhaustive summary.

Clean Heat Integration								
		Prompt						**Rationale**
		b. Describe when and how the goals and needs of each stakeholder category are identified and incorporated into the DSIP.		\				Not provided.
		c. Describe when and how each stakeholder category's needs will be met over time.		\				Not provided.
		d. Describe and explain the utility's needs for stakeholder-provided information, capabilities, and actions supporting specific implementation and operational outcomes.		\				Not provided.
		e. Describe the means and methods for effectively informing and engaging associated stakeholders as planning, design, and implementation progress so that the outputs effectively address, as much as feasible, the needs of the utility, DER developers, and stakeholders.		X				Mention of collaboration and vague descriptions, with complete lack of specificity.
		f. Describe how the utility will ensure that the information, tools, and engagement opportunities provided to stakeholders effectively deliver the intended support and do not lead to unintended problems.		X				Mention of collaboration and vague descriptions, with complete lack of specificity.
4.6	Clean Heat Integration							
		1. Using a common framework (organization, format, semantics, definitions, etc.) developed jointly with the other utilities, identify and characterize the existing and clean heat installation scenarios in the utility's service territory. Each scenario identified should be characterized by:						
		a. the type of location (single family residence, multifamily residence, commercial space, office space, school, hospital, etc.);		X				
		b. the number and spatial distribution of existing instances of the scenario;		X				Response implies no existing installations in SMB or C&I, without definitive statement.
		c. the forecast number and spatial distribution of anticipated instances of the scenario over the next five years;		X				No forecast at a granular level (or any level provided).
		d. the type(s) of clean heat solution installed at a typical location (ASHP, GSHP, HPWH, etc.);		X				Ten categories provided, no conversation of which are typical, only that these are offered combinations of location/type.
		e. an hourly profile of a typical location's aggregated clean heating load over a one year period;		\				Does not provide a forecast.
		f. the type and size of the existing utility service at a typical location; and		\				Not provided only note that size and location "varies".
		g. the type and size of utility service needed to support the clean heating use case.		X				Not provided.
		2. Describe and explain the utility's priorities for supporting implementation of the clean heating use cases anticipated in its service territory.		X				Statement of NENY order. Lack of implementation priority specifics.
		3. Identify and describe all significant resources and functions that the utility and stakeholders use for planning, implementing, monitoring, and managing clean heating at multiple levels in the distribution system.						
		a. Explain how each of those resources and functions supports the utility's needs.		X				Lack of specificity or detail, vague statements and lists only.
		b. Explain how each of those resources and functions supports the stakeholders' needs.		X				Greater lack of detail.
		4. Identify the types of customer and system data that are necessary for planning, implementing, and managing clean heating infrastructure and services and describe how the utility provides this data to interested third parties.		X				Statement that company does not utilize.

Clean Heat Integration								
		Prompt						**Rationale**
		5. By citing specific objectives, means, and methods describe in detail how the utility's accomplishments and plans are aligned with New York State policy, including its established goals for clean heat adoption.		X				General statement of alignment with NY State goals. Only specifics mentioned are overall btu target and dwelling count.
		6. Describe the utility's current efforts to plan, implement, and manage clean heat related projects. Information provided should include:						
		a. a detailed description of each project, existing and planned, with an explanation of how the project fits into the utility's long-range clean heat integration plans;		X				Lack of detailed descriptions, statement that each project varies only.
		b. the original project schedule;		X				Lack of project schedules, only statement of 1 Tbtu by 2025.
		c. the current project status;		X				Statement of 2.15 Tbtu and 34k installations to date.
		d. lessons learned to date;		X				Specific lessons not included.
		e. project adjustments and improvement opportunities identified to date; and		X				High level program funding adjustment cited from 2022.
		f. next steps with clear timelines and deliverables.		X				Lack of details.
		7. Describe how the utility is coordinating with the efforts of the New York State Energy Research and Development Authority (NYSERDA), the New York Power Authority (NYPA), New York Department of Environmental Conservation (DEC), DPS Staff, or other governmental entities to facilitate statewide clean heat market development and growth.		X				

EE Integration and Innovation							
Prompt							Rationale
	DPS Rationale		-				
		Energy Efficiency integration, with a focus on innovative market enabling tools and approaches, is an essential utility function that DPS Staff suggests should be thoroughly addressed within the five year planning horizon of the DSIP filing. It also affects the CGPP integrated system analysis, as energy efficiency efforts act as load modifiers in distribution planning. This load impact is then incorporated into the CGPP as part of its analysis for local transmission and distribution projects. DPS Staff recommends that the utilities should provide the information specified below to show how their joint and individual efforts are fully integrating current and expanded energy efficiency efforts into their system planning. DPS Staff further recommends that the utilities should also describe how new tools and approaches are being used to support the growth of a more dynamic market of service providers that deliver energy efficiency at a reduced cost by leveraging private capital and financing to deliver greater customer value while optimizing the grid value of these services. Each utility has evolved its Efficiency Transition Implementation Plans (ETIPs) into System Energy Efficiency Plans (SEEPs) that describe the entirety of the utility's expanded reliance on and use of cost-effective energy efficiency to support their distribution system and customer needs. ETIPs / SEEPs will continue to be filed separately in accordance with DPS Staff issued ETIP / SEEP Content Guidance, but DPS Staff recommends that the DSIP must incorporate and plan for the integration and reliance on these expanded energy efficiency resources and should include a link to the most recent ETIP/SEEP filing. Along with satisfying the general guidelines for information related to each topic (see Section 3.1), DPS Staff recommends that the DSIP Update should provide the following additional details which are specific to energy efficiency:						-
1. Context and Background							
		a. Describe how topic-related policies, processes, resources, standards, and capabilities have evolved since the 2020 DSIP Update filing.		X				Half page overview with footnotes was provided.
2. Implementation Plan, Schedule, and Investments							
	a. Current Progress						
		i. Describe the current implementation as of June 30, 2023; and		X				Great table showing programs, highlights and savings.
		ii. Describe how the current implementation supports stakeholders' current and future needs.		X				The provided description focuses mainly on customers current and future needs but doesn't provide detail on other stakeholders.
	b. Future Implementation and Planning						
		i. Describe the future implementation that is planned to be deployed by 2028, identifying planned efforts and funded efforts.						Contains a "Summary of Future Actions" as bullet points.
		ii. Describe how the future implementation will support stakeholders' needs in 2028 and beyond.		X				Stakeholders are mentioned but clear detail on how the plan supports stakeholder needs was not provided.
		iii. Identify and characterize the work and investments needed to progress from the current implementation to the planned future implementation.		X				Focus was mainly on AMI, SEP, and UTEN without a clear explanation as to why.
		iv. Describe and explain the planned timing and sequence of the work and investments needed to progress from the current implementation to the planned future implementation.		\				Missing a description and explanation on the timing and sequence of work and investments.
		v. Describe where and how plans for topic-related work and investments affect the CGPP.		X				Focused mainly on Utility Thermal Energy Network (UTEN).
		vi. Describe where and how investment plans developed through the CGPP affect the topic-related work and investments presented in the DSIP update.		X				Focused mainly on Utility Thermal Energy Network (UTEN).
	c. Integrated Implementation Timeline						

EE Integration and Innovation								
		Prompt						**Rationale**
		i. Using a common format developed jointly with the other utilities, provide a high-level implementation timeline that combines the key milestones for all topic-related work and investments planned over the five-year period ending in 2028. Along with the milestones, the timeline should show significant dependencies among the work and investments related to all topics.		X				Timeline was in a different section (page 12) but was well done.
3. Risks and Mitigation								
		a. Identify and characterize any potential risk(s) and/or actual issue(s) that could affect timely implementation and describe the measures taken, or to be taken, to mitigate the risk(s) and/or resolve the issue(s).		X				Minimal detail on risks and their affects were provided.
4. Stakeholder Engagement								
		a. Identify and characterize the categories of stakeholders engaged in DSIP development and use.		X				Stakeholder section was minimal and limited to the following language; "The Company coordinates with the Joint Utilities, and – in the case of the statewide LMI EE portfolio of programs, with NYSERDA – to exchange lessons learned and best practices. Further, the Company engages with and seeks feedback from customers across sectors to implement program changes as appropriate."
		b. Describe when and how the goals and needs of each stakeholder category are identified and incorporated into the DSIP.		\				No detail provided.
		c. Describe when and how each stakeholder category's needs will be met over time.		\				No detail provided.
		d. Describe and explain the utility's needs for stakeholder-provided information, capabilities, and actions supporting specific implementation and operational outcomes.		\				No detail provided.
		e. Describe the means and methods for effectively informing and engaging associated stakeholders as planning, design, and implementation progress so that the outputs effectively address, as much as feasible, the needs of the utility, DER developers, and stakeholders.		\				No detail provided.
		f. Describe how the utility will ensure that the information, tools, and engagement opportunities provided to stakeholders effectively deliver the intended support and do not lead to unintended problems.		\				No detail provided.
4.7 Energy Efficiency Integration and Innovation								
		1. The resources and capabilities used for integrating energy efficiency within system and utility business planning.		X				A summary and links to other sections for more detail were provided.
		2. The locations and amounts of current energy and peak load reductions attributable to energy efficiency and how the utility determines these.		X				A summary of the detail ConEd collects was provided.
		3. A high-level description of how the utility's accomplishments and plans are aligned with New York State climate and energy policies and incorporate innovative approaches for accelerating progress to ultimately align with the CLCPA.		X				Very little detail was provided.
		4. Summary information on energy efficiency programs offered by the utility, with direction to annual filings for more detailed information on energy efficiency programs.		X				Details on multiple programs as well as links to annual reports were provided.
		5. Describe how the utility is coordinating and partnering with NYSERDA's related ongoing statewide efforts to facilitate energy efficiency market development and growth.		X				Description of three market-stimulating partnerships was provided.

Data Sharing							
Prompt							Rationale
	DPS Rationale						
		DPS Staff recommends that the DSIP Update should describe the utility's existing and planned capabilities that enable timely and effective sharing of system and customer data with customers and authorized third-parties. Shared system data should enable DER developers/operators and other third-parties to timely and effectively perform the analyses (engineering, operations, and business) needed to support well-informed decisions. Shared customer data should enable both short-term and long-term analyses and decisions affecting many investments and behaviors which can materially improve customer value by reducing costs and/or improving service. Of particular importance to this topic is NYSERDA's development of a new Integrated Energy Data Resource (IEDR). Most utility data sharing is expected to transition to the IEDR within the five-year time horizon for the DSIP update. Along with satisfying the general guidelines for information related to each topic (see Section 3.1), DPS Staff recommends that the DSIP Update should:						
1. Context and Background							
		a. Describe how topic-related policies, processes, resources, standards, and capabilities have evolved since the 2020 DSIP Update filing.		X			Well written background on changes through 2021. And good expansion on segmented data types between customer (aggregated and non-aggregated) and distribution system data and changes since deployment of AMI.
2. Implementation Plan, Schedule, and Investments							
	a. Current Progress						
		i. Describe the current implementation as of June 30, 2023; and		X			Describes each data sharing platform and details in data fields shared: Green Button Share My Data Energy STAR Portfolio Manager NYSERDA UER Platform.
		ii. Describe how the current implementation supports stakeholders' current and future needs.		X			Ties each implementation to customer's needs in compliance LL84 and LL133 and how their data can be used.
	b. Future Implementation and Planning						
		i. Describe the future implementation that is planned to be deployed by 2028, identifying planned efforts and funded efforts.		X			Lays out future planned efforts through 2024, but unclear of plans for 2025 through 2028.
		ii. Describe how the future implementation will support stakeholders' needs in 2028 and beyond.		X			Mentions a need for stakeholders who need hourly aggregated consumption details for LL97, that they are provided for, but nothing beyond 2024.
		iii. Identify and characterize the work and investments needed to progress from the current implementation to the planned future implementation.		X			Leverages the IEDR timeline for use as utility's time line, but could use more detail in achieving each IEDR use case. Detail provided on critical path item on data sharing agreements as a dependency.

Data Sharing								
Prompt								Rationale
		iv. Describe and explain the planned timing and sequence of the work and investments needed to progress from the current implementation to the planned future implementation.		X				Describes sequencing of work needed to be tackled for IEDR by Year-quarter, but less clarity on timing of Share My Data and EEB Portal enhancements which are 2024 and beyond.
		v. Describe where and how plans for topic-related work and investments affect the CGPP.		\				No mention or tie into CGPP.
		vi. Describe where and how investment plans developed through the CGPP affect the topic-related work and investments presented in the DSIP update.		\				No mention or tie into CGPP.
	c.	Integrated Implementation Timeline						
		i. Using a common format developed jointly with the other utilities, provide a high-level implementation timeline that combines the key milestones for all topic-related work and investments planned over the five-year period ending in 2028. Along with the milestones, the timeline should show significant dependencies among the work and investments related to all topics.		X				Timeline for IEDR use cases is shown, through 2023, but no milestones included in 2024 to 2028.
3.	Risks and Mitigation							
		a. Identify and characterize any potential risk(s) and/or actual issue(s) that could affect timely implementation and describe the measures taken, or to be taken, to mitigate the risk(s) and/or resolve the issue(s).						Described each risk and mitigation strategy well. Most risks pertain to cybersecurity and privacy risks.
4.	Stakeholder Engagement							
		a. Identify and characterize the categories of stakeholders engaged in DSIP development and use.		X				Identifies IEDR platform vendors, utilities as two stakeholders. Utility could characterize more stakeholders.
		b. Describe when and how the goals and needs of each stakeholder category are identified and incorporated into the DSIP.		X				Mention of monthly Joint Utilities IEDR Technical Working Group meetings to create legal agreement and data transferring processes for utilities. Stakeholder goals and needs are not mentioned in general.
		c. Describe when and how each stakeholder category's needs will be met over time.		X				No mention of timeline in relation to needs Just one mention of need for legal agreement.
		d. Describe and explain the utility's needs for stakeholder-provided information, capabilities, and actions supporting specific implementation and operational outcomes.		\				Not mentioned how stakeholder feedback ties to operational outcomes.
		e. Describe the means and methods for effectively informing and engaging associated stakeholders as planning, design, and implementation progress so that the outputs effectively address, as much as feasible, the needs of the utility, DER developers, and stakeholders.		X				Indicated how the utility gather stakeholder feedback and share information. Monthly joint utilities' IEDR Technical working Group meetings. Additional meetings with stakeholders, webinars, technical conferences.

Data Sharing								
		Prompt						**Rationale**
		f. Describe how the utility will ensure that the information, tools, and engagement opportunities provided to stakeholders effectively deliver the intended support and do not lead to unintended problems.		\				No mentioned how stakeholder feedback is taken to see if issues arise.
4.8	Data Sharing							
		1. provide a functional overview of the planned IEDR;		X				Standard background overview of IEDR.
		2. provide an overview of NYSERDA's IEDR implementation program, including information pertaining to stakeholder engagement;		X				Good description of initial stakeholder engagement and how priorities were set and the current implementation team.
		3. provide the web link to NYSERDA's IEDR home page along with a summary of the information provided therein;		X				Web links working and provided with labels in Table 17.
		4. describe the utility's role in supporting IEDR design, implementation, and operation;		X				Great description of timeline of utility's interaction in IEDR progress, implementation and operation.
		5. describe the utility's progress, plans, and investments for generating and delivering its system and customer data to the IEDR;		X				Describes progress, but could expand on detail of how customer data is generated like in an earlier section.
		6. identify and characterize each type of data to be delivered to the IEDR;		X				Indicated data provided (I think could be even more detailed). And highlights additional fields that can be provided to IEDR.
		7. describe the resource(s) and method(s) used to deliver each type of data to the IEDR;		X				General note of data specification created, but could expand with more detail each resource and method.
		8. describe how and when each type of data provided to the IEDR will begin, increase, and improve as IEDR implementation progresses; and,		X				Explained how IEDR use cases are currently progressing and what work needs to be done to get additional use cases online that rely on non-public data that will require data sharing agreements.
		9. identify and characterize any existing and future utility efforts to share system and customer data with customers and third parties through means that are separate from the IEDR.		X				Highlighted all ways for stakeholders to access data * Share My Data * EDI * EEB Portal * Hosting Capacity Map

Hosting Capacity							
Prompt							Rationale
	DPS Rationale						
		Providing an electric distribution system with the capacity to host large scale DER integration is a key part of New York's energy vision. To achieve that outcome, DPS Staff suggests that the utilities should perform several functions to ensure that large amounts of DER can access and utilize hosting capacity in ways that are affordable, effective, efficient, and timely. The utilities have made significant progress in producing and sharing information about the hosting capacity of their current systems. DER developers and other stakeholders value the new information as a significant improvement to the information which was previously available to them; however, more is needed in three areas. First, while DER developers and other stakeholders already access and use the utilities' hosting capacity information, there are opportunities to enhance the information provided beyond the Joint Utilities' current development roadmap. For example, DER developers and the utilities could both be better informed by hosting capacity forecasts which look ahead three to five years. Once available, such forecasts would likely become the preferred resource for planning DER development. Second, as grid operations evolve to accommodate and optimize significant DER development, some of those operations will come to rely on the availability of hosting capacity as a managed system resource. Such operations will continually require very current information about available hosting capacity throughout the distribution system. This means that the utilities should be prepared to timely increase the rate at which they produce and share their information about currently available hosting capacity. And third, the availability of ample hosting capacity at a given location on the grid does not necessarily mean that other factors (i.e., space, accessibility, safety, zoning, customer interest, etc.) will also favor deploying a DER at that location. At the same time, there are many locations where circumstances strongly favor DER development; however, the amount of hosting capacity available at those locations is limited. This could mean that utilities may need to take measures to increase hosting capacity at attractive DER development sites in order to support the State's goals for integrating renewable energy resources. Considering these points, DPS Staff suggests that the utilities should be prepared to timely increase hosting capacity in their distribution systems. DPS Staff recommends that the DSIP Update should address the three areas addressed above and provide detailed information related to assessing current hosting capacity, forecasting hosting capacity, and increasing hosting capacity to show that the utility is timely developing – either individually or jointly with one or more of the other utilities – the necessary information resources and capabilities associated with hosting capacity. Along with satisfying the general guidelines for information related to each topic (see Section 3.1), DPS Staff recommends that the DSIP Update should provide the following additional details which are specific to hosting capacity:						
1. Context and Background							
		a. Describe how topic-related policies, processes, resources, standards, and capabilities have evolved since the 2020 DSIP Update filing.		X			Provided progress, but not explicit on comparison with 2020 DSIP.
2. Implementation Plan, Schedule, and Investments							
	a. Current Progress						
		i. Describe the current implementation as of June 30, 2023; and		X			Very good HC Map, detailed development progress, also extra EV capacity map, storage map .
		ii. Describe how the current implementation supports stakeholders' current and future needs.		X			Evidence of stakeholder feedback result in actual functionality.
	b. Future Implementation and Planning						
		i. Describe the future implementation that is planned to be deployed by 2028, identifying planned efforts and funded efforts.		X			High-level timeline provided in Introduction Figure 3.
		ii. Describe how the future implementation will support stakeholders' needs in 2028 and beyond.		X			
		iii. Identify and characterize the work and investments needed to progress from the current implementation to the planned future implementation.		X			Discussion on evolving parameters.
		iv. Describe and explain the planned timing and sequence of the work and investments needed to progress from the current implementation to the planned future implementation.		X			Discussed variables that impact HC map.
		v. Describe where and how plans for topic-related work and investments affect the CGPP.		\			Some mention of how CGPP affect HC, but not the other direction.
		vi. Describe where and how investment plans developed through the CGPP affect the topic-related work and investments presented in the DSIP update.		\			Some mention of CGPP in question 7.a
	c. Integrated Implementation Timeline						

Hosting Capacity									
		Prompt							**Rationale**
		i. Using a common format developed jointly with the other utilities, provide a high-level implementation timeline that combines the key milestones for all topic-related work and investments planned over the five-year period ending in 2028. Along with the milestones, the timeline should show significant dependencies among the work and investments related to all topics.		X					Timeline provided in introduction Figure 3, lacks details.
3. Risks and Mitigation									
		a. Identify and characterize any potential risk(s) and/or actual issue(s) that could affect timely implementation and describe the measures taken, or to be taken, to mitigate the risk(s) and/or resolve the issue(s).		X					Limited discussion on risk.
4. Stakeholder Engagement									
		a. Identify and characterize the categories of stakeholders engaged in DSIP development and use.		X					Evidence of stakeholder engagement throughout the development process.
		b. Describe when and how the goals and needs of each stakeholder category are identified and incorporated into the DSIP.		X					Stakeholder input reflected in product functionality.
		c. Describe when and how each stakeholder category's needs will be met over time.		X					Regular stakeholder meetings.
		d. Describe and explain the utility's needs for stakeholder-provided information, capabilities, and actions supporting specific implementation and operational outcomes.		X					The HC map purpose is for users, so the development is user driven.
		e. Describe the means and methods for effectively informing and engaging associated stakeholders as planning, design, and implementation progress so that the outputs effectively address, as much as feasible, the needs of the utility, DER developers, and stakeholders.		X					Discussed frequent stakeholder meetings.
		f. Describe how the utility will ensure that the information, tools, and engagement opportunities provided to stakeholders effectively deliver the intended support and do not lead to unintended problems.		X					Description only.
4.9 Hosting Capacity									
		1. Describe the utility's current efforts to plan, implement, and manage projects related to hosting capacity. Information provided should include:							
		a. detailed description of each project, existing and planned, with an explanation of how the project fits into the utility's long range hosting capacity plans;		X					Very good description of current progress.
		b. the original project schedule;		X					Description only.
		c. the current project status;		X					
		d. lessons learned to date;		X					Good discussion on stakeholder feedback and cross functional value with DERMS.
		e. project adjustments and improvement opportunities identified to date; and		X					Evidence of stakeholder feedback.
		f. next steps with clear timelines and deliverables.							
		2. Describe where and how DER developers/operators and other third parties can currently access the utility's hosting capacity information.		X					Provided link to website.
		3. Describe how and when the existing hosting capacity assessment information provided to DER developers/operators and other third parties will increase and improve as work progresses. This should include discussion of the transition of hosting capacity information access from the utility's current hosting capacity information portal to the statewide hosting capacity solution in development on the IEDR.		X					
		4. Describe the means and methods used for determining the hosting capacity currently available at each location in the distribution system.		X					Good description on current methodology specific to OH radial and UG network system.

Hosting Capacity								
		Prompt						**Rationale**
		5. Describe the means and methods used for forecasting the future hosting capacity available at each location in the distribution system.		X				Limited response to the forecasting question.
		6. Describe how and when the future hosting capacity forecast information provided to DER developers/operators and other third parties will begin, increase, and improve as work progresses.		X				Limited description.
		7. Summarize the utility's specific objectives and methods for:						
		a. identifying and characterizing locations in the utility's service area where limited hosting capacity is a barrier to productive DER development, directing users to the CGPP filing for further information; and		X				Detailed HC limitation explanation.
		b. timely increasing hosting capacity to enable productive DER development at those locations, directing users to the IEDR platform when applicable for more information.		X				Mitigation options are effective ways to increase HC.

Billing and Compensation							
Prompt							Rationale
DPS Rationale							
A monthly bill is often the only method of engagement and communication between a utility and its customers. Because of this, customer billing and compensation are vital components of a utility's core business and, therefore, must be accurate, timely, and transparent. It is DPS Staff's position that billing that is consistent, accurate, and well explained will lead to increased customer satisfaction and reduced inquiries to the utility's call center and/or reduced customer complaints to the Commission, on social media, or to the press. Along with satisfying the general guidelines for information related to each topic (see Section 3.1), DPS Staff recommends that the DSIP Update should provide the following additional details pertaining to customer billing and compensation:							
1. Context and Background							
	a. Describe how topic-related policies, processes, resources, standards, and capabilities have evolved since the 2020 DSIP Update filing.		X				Provided list of relevant filings including VDER "Value Stack" as an alternative to NEM and Consolidated Billing for DER to streamline billing for Community Distributed Generation (CDR).
2. Implementation Plan, Schedule, and Investments							
	a. Current Progress						
	i. Describe the current implementation as of June 30, 2023; and		X				Included summary of achievements, list of current compensation programs and the CSS timeline.
	ii. Describe how the current implementation supports stakeholders' current and future needs.		X				The discussion is there within the context of the description, but could be more clearly presented.
	b. Future Implementation and Planning						
	i. Describe the future implementation that is planned to be deployed by 2028, identifying planned efforts and funded efforts.		X				Explicitly describes each element including infrastructure to support new developments.
	ii. Describe how the future implementation will support stakeholders' needs in 2028 and beyond.		X				Stakeholders discussed in each program specific section.
	iii. Identify and characterize the work and investments needed to progress from the current implementation to the planned future implementation.		X				Tied specific CSS system updates and current CIS limitations to each element.
	iv. Describe and explain the planned timing and sequence of the work and investments needed to progress from the current implementation to the planned future implementation.		X				Discussed within each program specific section.
	v. Describe where and how plans for topic-related work and investments affect the CGPP.		\				No mention of CGPP perhaps not relevant.
	vi. Describe where and how investment plans developed through the CGPP affect the topic-related work and investments presented in the DSIP update.		\				No mention of CGPP perhaps not relevant.
	c. Integrated Implementation Timeline						
	i. Using a common format developed jointly with the other utilities, provide a high-level implementation timeline that combines the key milestones for all topic-related work and investments planned over the five-year period ending in 2028. Along with the milestones, the timeline should show significant dependencies among the work and investments related to all topics.		\				No timeline provided in section. There is an overarching timeline on page 12 but it does not include Billing and Compensation.
3. Risks and Mitigation							
	a. Identify and characterize any potential risk(s) and/or actual issue(s) that could affect timely implementation and describe the measures taken, or to be taken, to mitigate the risk(s) and/or resolve the issue(s).		X				Description of mitigation approaches was limited.
4. Stakeholder Engagement							

Billing and Compensation								
		Prompt						**Rationale**
		a. Identify and characterize the categories of stakeholders engaged in DSIP development and use.		X				Limited discussion on stakeholder engagement.
		b. Describe when and how the goals and needs of each stakeholder category are identified and incorporated into the DSIP.		X				Limited discussion on stakeholder engagement.
		c. Describe when and how each stakeholder category's needs will be met over time.		X				Limited discussion on stakeholder engagement.
		d. Describe and explain the utility's needs for stakeholder-provided information, capabilities, and actions supporting specific implementation and operational outcomes.		\				Not provided.
		e. Describe the means and methods for effectively informing and engaging associated stakeholders as planning, design, and implementation progress so that the outputs effectively address, as much as feasible, the needs of the utility, DER developers, and stakeholders.		\				Not provided.
		f. Describe how the utility will ensure that the information, tools, and engagement opportunities provided to stakeholders effectively deliver the intended support and do not lead to unintended problems.		\				Not provided.
4.10 Billing and Compensation								
		1. Describe the various DER-related billing and compensation programs (including demand response) implemented or revised by the utility since the last update. For this first inclusion in the DSIP, describe developments that have occurred since the beginning of NEM, RNM, CDG, and VDER.		X				Clear descriptions provided in the current progress section.
		2. Describe the customer billing/compensation functions and data generally needed to expand deployment and use of DERs in the utility's service area. Include descriptions of the existing and planned components (processes, resources, and data exchanges) that will support those needs. For planned components, provide the sequence and timing of key investments and activities required for component implementation.		X				The graphic presents this information nicely if in summarized form.
		3. Describe the customer billing/compensation functions and data needed to enable DER participation in the NYISO's wholesale markets for energy, capacity, and ancillary services. This should include information regarding the utility's implementation of its Wholesale Distribution Service (WDS), Wholesale Value Stack (WVS), and related non-wholesale value stack (VDER without wholesale energy and capacity components). Also include descriptions of the existing and planned components (processes, resources, and data exchanges) that will support those needs. For planned components, provide the sequence and timing of key investments and activities required for component implementation.		X				Discussion was thin as the new functions will be handled within the new CSS so are not developed yet.
		4. Describe the utility's plans to implement or modify DER-related billing and compensation capabilities, including automation, to address the Community Distributed Generation (CDG) billing and crediting problems that were the focus of the Commission's September 15, 2022, Order in Cases 19-M-0463, et. al.13		X				This section includes only inks to the filings that were already filed.
		5. For each type of DER billing and compensation, including for CDG and wholesale market participation, describe the current information system constraints preventing full automation of DER billing and compensation.		X				Information constraints currently being addressed.
		6. Describe how DER billing and compensation affects other programs such as budget billing, time of use rates, and consolidated billing for Energy Service Companies (ESCOs).		X				Interactions described.
		7. Describe the utility's means and methods - existing and planned – for monitoring and testing new or modified customer billing and compensation functions.		X				CC&B system described.

Billing and Compensation								
		Prompt						Rationale
		8. Describe the utility's means and methods – existing and planned - for supporting customer outreach and education, including where and how customers, DER developers/operators and other third-parties can readily access information on the utility's billing and compensation procedures.		X				Section is just links to webpages that have their marketing and education.
		9. Describe the utility's means and methods - existing and planned – for receiving, investigating, and monitoring customer complaints and/or inquiries regarding billing and compensation issues related to DERs.		X				Section only describes current practices, does not address planned.

DER Interconnections							
Prompt							Rationale
	DPS Rationale						
		Implementing the utility resources and capabilities that enable DER interconnections to the distribution system is a critical early objective. Many of the details which identify and characterize those resources and capabilities are being worked out by the Interconnection Technology Working Group (ITWG) and the Interconnection Policy Working Group (IPWG), which are stakeholder collaboratives led jointly by DPS Staff and NYSERDA. The goal of both working groups is to establish the requirements for standard resources, processes, specifications, and policies which foster efficient, timely, safe, and reliable DER interconnections. Along with satisfying the general guidelines for information related to each topic (see Section 3.1), DPS Staff recommends that the DSIP Update should provide the following additional details, which are specific to DER interconnections:						
1. Context and Background							
		a. Describe how topic-related policies, processes, resources, standards, and capabilities have evolved since the 2020 DSIP Update filing.		X			Detailed description on standard/policy changes since 2020 filing. Description of capabilities is given in section below.
2. Implementation Plan, Schedule, and Investments							
	a. Current Progress						
		i. Describe the current implementation as of June 30, 2023; and		X			Detailed interconnection process and progress.
		ii. Describe how the current implementation supports stakeholders' current and future needs.		X			Discussion of working group needs and those of developers, but not a highly structured / clear response.
	b. Future Implementation and Planning						
		i. Describe the future implementation that is planned to be deployed by 2028, identifying planned efforts and funded efforts.		X			Some discussion on future plan. No timeline given toward 2028.
		ii. Describe how the future implementation will support stakeholders' needs in 2028 and beyond.		X			Good discussion on automating connection application process, but no timeline given.
		iii. Identify and characterize the work and investments needed to progress from the current implementation to the planned future implementation.		X			No investment given, only high level summary of changes to platform.
		iv. Describe and explain the planned timing and sequence of the work and investments needed to progress from the current implementation to the planned future implementation.		X			Sequence and timing not discussed.
		v. Describe where and how plans for topic-related work and investments affect the CGPP.		\			No mention of CGPP.
		vi. Describe where and how investment plans developed through the CGPP affect the topic-related work and investments presented in the DSIP update.		\			No mention of CGPP.
	c. Integrated Implementation Timeline						
		i. Using a common format developed jointly with the other utilities, provide a high-level implementation timeline that combines the key milestones for all topic-related work and investments planned over the five-year period ending in 2028. Along with the milestones, the timeline should show significant dependencies among the work and investments related to all topics.		\			No clear timeline provided.
3. Risks and Mitigation							
		a. Identify and characterize any potential risk(s) and/or actual issue(s) that could affect timely implementation and describe the measures taken, or to be taken, to mitigate the risk(s) and/or resolve the issue(s).		X			Limited discussion on risk and mitigation.
4. Stakeholder Engagement							
		a. Identify and characterize the categories of stakeholders engaged in DSIP development and use.		X			Interconnection process is very user driven, good evidence on regular workshops and feedback sessions.

DER Interconnections								
		Prompt						**Rationale**
		b. Describe when and how the goals and needs of each stakeholder category are identified and incorporated into the DSIP.		X				Evidence of process change made from developer feedback.
		c. Describe when and how each stakeholder category's needs will be met over time.		\				
		d. Describe and explain the utility's needs for stakeholder-provided information, capabilities, and actions supporting specific implementation and operational outcomes.		X				Gives a high-level description of how feedback from different stakeholder groups enables improvements of different services such as Cost Sharing 2.0 and interconnection processes.
		e. Describe the means and methods for effectively informing and engaging associated stakeholders as planning, design, and implementation progress so that the outputs effectively address, as much as feasible, the needs of the utility, DER developers, and stakeholders.		X				Gives a high-level summary of the working groups and stakeholder sessions that are run to solicit input / feedback from stakeholders.
		f. Describe how the utility will ensure that the information, tools, and engagement opportunities provided to stakeholders effectively deliver the intended support and do not lead to unintended problems.		X				Partly answered through the other sections and describing the feedback process. Does not explicitly describe how unintended consequences will be avoided.
4.11	DER Interconnections							
		1. Describe in detail (including the web URL) the web portal that provides efficient and timely support for DER developers' interconnection applications.		X				A high-level description of web portal capabilities.
		2. Describe where, how, and when the utility will implement and maintain a resource where DER developers and other stakeholders with appropriate access controls can readily access, navigate, view, sort, filter, and download up to date information about all DER interconnections in the utility's system. The resource should provide the following information for each DER interconnection:						
		a. DER type, size, and location;		X				Available on commission's website.
		b. DER developer;		X				Available on commission's website.
		c. DER owner;		X				Provided in SIR inventory report, but not posted online.
		d. DER operator;		X				Provided in SIR inventory report, but not posted online.
		e. the connected substation, circuit, phase, and tap;		X				The phase and tap are not included in the information reported on the ConEdison website.
		f. the DER's remote monitoring, measurement, and control capabilities; and		\				States that this information is not collected.
		g. the DER's primary and secondary (where applicable) purposes; and,		\				States that this information is not collected.
		h. the DER's current interconnection status (operational, construction in progress, construction scheduled, or interconnection requested) and its actual/planned in service date.		X				Available on commission's website.
		3. Describe the utility's means and methods for tracking and managing its DER interconnection application process and explain how those means and methods ensure achievement of the performance timelines established in New York State's Standardized Interconnection Requirements.		X				Automated timers and reminders on applications with dashboard to track stats.
		4. Describe where, how, and when the utility will provide a resource to applicants and other appropriate stakeholders for accessing up to date information concerning application status and process workflows.		X				Provided through IOAP and PowerClerk.
		5. Describe the utility's processes, resources, and standards used for constructing approved DER interconnections.		X				Explained with a flow chart.

DER Interconnections								
		Prompt						**Rationale**
		6. Describe the utility's means and methods used for tracking and managing construction of approved DER interconnections to ensure achievement of required performance levels.		X				Identified as an emerging need.
		7. Describe how and when the utility will deliver and maintain its DER interconnection information to the IEDR.		X				States that information from Power Clerk is shared with IEDR, but does not say how or how often.

AMI							
Prompt							Rationale
	DPS Rationale						
		Advanced Metering Infrastructure (AMI) provides grid edge measurement, data acquisition, and control capabilities which are either essential or beneficial to a number of important functions in a modern distribution system. Granular time series data from smart meters and other intelligent devices at customers' premises enables advanced analyses, innovative rate designs, and customer engagement strategies which benefit both the customers and the grid. Voltage sensing and measurement functions support increased system efficiency and enable improved outage detection and restoration processes. Capabilities supporting DER measurement, monitoring, and control are essential for DER integration. Along with satisfying the general guidelines for information related to each topic (see Section 3.1), DPS Staff recommends that the DSIP Update should provide the following additional details which are specific to AMI:						
1. Context and Background							
		a. Describe how topic-related policies, processes, resources, standards, and capabilities have evolved since the 2020 DSIP Update filing.		X			Explanation of history of AMI roll out.
2. Implementation Plan, Schedule, and Investments							
	a. Current Progress						
		i. Describe the current implementation as of June 30, 2023; and		X			Completed deployment minus hard to reach customers. AMI current Use Cases: Improvement of MyAccount for customer access. System conditions awareness. Voltage regulation. Sensors. Outage management.
		ii. Describe how the current implementation supports stakeholders' current and future needs.		X			Some description of how the integration supports customer and company needs. E.g., description of how customers are given access to an AMI account to track energy use and identify opportunities to save. Also, company needs are discussed - e.g. the avoidance of 44,000 truck movements by using automated outage monitoring.
	b. Future Implementation and Planning						
		i. Describe the future implementation that is planned to be deployed by 2028, identifying planned efforts and funded efforts.		X			4 additional enhancements or use cases for AMI data. Business and analytics and auto ticket closing same as O&R efforts (assuming same initiative). No discussion of planned v funded efforts.
		ii. Describe how the future implementation will support stakeholders' needs in 2028 and beyond.		\			
		iii. Identify and characterize the work and investments needed to progress from the current implementation to the planned future implementation.		\			
		iv. Describe and explain the planned timing and sequence of the work and investments needed to progress from the current implementation to the planned future implementation.		\			
		v. Describe where and how plans for topic-related work and investments affect the CGPP.		\			
		vi. Describe where and how investment plans developed through the CGPP affect the topic-related work and investments presented in the DSIP update.		\			

AMI								
Prompt								Rationale
	c. Integrated Implementation Timeline							
		i. Using a common format developed jointly with the other utilities, provide a high-level implementation timeline that combines the key milestones for all topic-related work and investments planned over the five-year period ending in 2028. Along with the milestones, the timeline should show significant dependencies among the work and investments related to all topics.		\				A high-level timeline was provided in the intro section.
3. Risks and Mitigation								
		a. Identify and characterize any potential risk(s) and/or actual issue(s) that could affect timely implementation and describe the measures taken, or to be taken, to mitigate the risk(s) and/or resolve the issue(s).		X				Discussion of risks is very high level and mitigations are almost non-existent.
4. Stakeholder Engagement								
		a. Identify and characterize the categories of stakeholders engaged in DSIP development and use.		X				Asks reader to reference "Customer Engagement Plan" as filed but does not detail the efforts or any success metrics. Shares data with developers via GBC (Green Button) and increase in DR participation. Unclear if GBC is meeting stakeholder needs.
		b. Describe when and how the goals and needs of each stakeholder category are identified and incorporated into the DSIP.		\				
		c. Describe when and how each stakeholder category's needs will be met over time.		\				
		d. Describe and explain the utility's needs for stakeholder-provided information, capabilities, and actions supporting specific implementation and operational outcomes.		\				
		e. Describe the means and methods for effectively informing and engaging associated stakeholders as planning, design, and implementation progress so that the outputs effectively address, as much as feasible, the needs of the utility, DER developers, and stakeholders.		\				
		f. Describe how the utility will ensure that the information, tools, and engagement opportunities provided to stakeholders effectively deliver the intended support and do not lead to unintended problems.		\				
4.12 Advanced Metering Infrastructure								
		1. Provide a summary of the most up to date AMI implementation plans, including where AMI has been deployed to date.		X				Work has been completed so meets prompt but doesn't elaborate.
		2. Provide a summary of all new capabilities that AMI has enabled to date, and how these capabilities benefit customers, including, as applicable, customer engagement, energy efficiency, and innovative rates.		X				Highlights My Accounts and load shed capabilities, but does not detail how AMI is being used to improve customer engagement, EE, or rates.
		3. Describe the AMI-acquired data and information that is planned to be available through the IEDR.		X				"Pending the results of the Commission's petition on data sharing and a Memorandum of Understanding ("MOU") with the IEDR Developer." Response outlines steps but is early stages.

AMI								
		Prompt						**Rationale**
		4. Describe where and how DER developers, customers, and other stakeholders can access up to date information about the locations and capabilities of existing and planned smart meters.		X				Generic answer - reference our Plan on AMI rollout. The link no longer works.
		5. Provide a summary of plans and timelines for future expansion and/or enhancement of AMI functions.		X				Generic answer - reference our Plan on AMI rollout. The link no longer works.
		6. Describe where and how each type of AMI-acquired data is stored, managed, and shared with, and used by other utility information systems such as those used for billing/compensation, customer service, work management, asset management, grid planning, and grid operations.		X				Clear explanation of data handling and storing.

Beneficial Location of DERs and NWA							
Prompt							Rationale
	DPS Rationale						
		To help promote productive DER development, DPS Staff suggests that it is essential that the utility identify, characterize, and publicly present the locations in its service area where DERs and/or energy efficiency might provide significant benefits to the distribution system and/or to the bulk electric system. Based on its criteria for evaluating opportunities for non wires alternatives (NWA), the utility then selects some of those locations for NWA procurements and/or energy efficiency measures that will benefit the distribution system. In their previous DSIP filings, the utilities have separately described their processes for identifying beneficial locations, evaluating NWA suitability, and procuring non-wires solutions. However, as the utilities have evolved their planning processes to perform these functions, they have become part of a continuous process that begins with integrated planning. Therefore, DPS Staff recommends that the utility's 2023 DSIP update, and all future updates, should reflect this updated process by combining the topics of identification of beneficial locations, NWA suitability assessment, and procurement processes into one cohesive discussion. Along with satisfying the general guidelines for information related to each topic (see Section 3.1), DPS Staff recommends that the DSIP Update should provide the following additional details:					
1. Context and Background							
		a. Describe how topic-related policies, processes, resources, standards, and capabilities have evolved since the 2020 DSIP Update filing.		X			
2. Implementation Plan, Schedule, and Investments							
	a. Current Progress						
		i. Describe the current implementation as of June 30, 2023; and		X			
		ii. Describe how the current implementation supports stakeholders' current and future needs.		X			Limited discussion of improvements to the procurement process for developers and third parties.
	b. Future Implementation and Planning						
		i. Describe the future implementation that is planned to be deployed by 2028, identifying planned efforts and funded efforts.		X			List of future actions but does not identify specific funded efforts or provide robust discussion on what will occur to support these future efforts.
		ii. Describe how the future implementation will support stakeholders' needs in 2028 and beyond.		X			The discussion of stakeholders focuses on improving the solicitation process.
		iii. Identify and characterize the work and investments needed to progress from the current implementation to the planned future implementation.		X			There is a list of future actions but it does not identify specific funded efforts or provide robust discussion on what will occur to support these future efforts.
		iv. Describe and explain the planned timing and sequence of the work and investments needed to progress from the current implementation to the planned future implementation.		\			Not provided.
		v. Describe where and how plans for topic-related work and investments affect the CGPP.		\			Not provided.
		vi. Describe where and how investment plans developed through the CGPP affect the topic-related work and investments presented in the DSIP update.		\			Not provided.
	c. Integrated Implementation Timeline						
		i. Using a common format developed jointly with the other utilities, provide a high-level implementation timeline that combines the key milestones for all topic-related work and investments planned over the five-year period ending in 2028. Along with the milestones, the timeline should show significant dependencies among the work and investments related to all topics.		\			No timeline provided.
3. Risks and Mitigation							

Beneficial Location of DERs and NWA								
		Prompt						**Rationale**
		a. Identify and characterize any potential risk(s) and/or actual issue(s) that could affect timely implementation and describe the measures taken, or to be taken, to mitigate the risk(s) and/or resolve the issue(s).		X				
4. Stakeholder Engagement								
		a. Identify and characterize the categories of stakeholders engaged in DSIP development and use.		X				
		b. Describe when and how the goals and needs of each stakeholder category are identified and incorporated into the DSIP.		X				Limited discussion about workshops to gather feedback and one-on-one and group communications with bidders was provided.
		c. Describe when and how each stakeholder category's needs will be met over time.		X				No robust discussion on utilizing stakeholder feedback.
		d. Describe and explain the utility's needs for stakeholder-provided information, capabilities, and actions supporting specific implementation and operational outcomes.		X				No robust discussion on utilizing stakeholder feedback.
		e. Describe the means and methods for effectively informing and engaging associated stakeholders as planning, design, and implementation progress so that the outputs effectively address, as much as feasible, the needs of the utility, DER developers, and stakeholders.		X				Discussion of outreach, working groups, and quarterly updates.
		f. Describe how the utility will ensure that the information, tools, and engagement opportunities provided to stakeholders effectively deliver the intended support and do not lead to unintended problems.		X				Provides information on stakeholder interactions but does not explain how this communication avoids problems.
4.13 Beneficial Locations for DERs and Non Wires Alternatives								
		1. Describe where and how developers and other stakeholders can access resources for:						
		a. accessing up to date information about beneficial locations for DERs and/or energy efficiency measures; and		X				
		b. efficiently sorting and filtering locations by the type(s) of capability needed, the timing and amount of each needed capability, the type(s) and value of desired benefit, the serving substation, the circuit, and the geographic area.		X				
		2. Describe the means and methods for identifying and evaluating locations in the distribution system where:						
		a. an NWA comprising one or more DERs and/or energy efficiency measures could timely reduce, delay, or eliminate the need for upgrading distribution infrastructure and/or materially benefit distribution system reliability, efficiency, and/or operations; and/or		X				
		b. one or more DERs and/or energy efficiency measures including increased value based customer incentives could reduce, delay, or eliminate the need for upgrading bulk electric system resources and/or materially benefit bulk electric system reliability, efficiency, and/or operations.		X				
		3. Describe how the NWA procurement process works within utility time constraints while enabling DER developers to properly prepare and propose NWA solutions which can be implemented in time to serve the system need. Details should include:						
		a. how utility and DER developer time and expense are minimized for each procurement transaction;		X				
		b. how standardized contracts and procurement methods are used across the utilities.		X				Only notes the JU share best practices with no additional detail provided.
		4. Describe where and how DER developers and other stakeholders can access up to date information about current NWA project opportunities.		X				

Beneficial Location of DERs and NWA								
		Prompt						Rationale
		5. Describe how the utility considers all aspects of operational criteria and public policy goals when deciding what to procure as part of a NWA solution.		X				
		6. Describe where, how, and when the utility will provide DER developers and other stakeholders with a resource for accessing up to date information about all completed and in progress NWA projects. The information provided for each project should:						
		a. describe the location, type, size, and timing of the system need addressed by the project;		X				
		b. provide the amount of traditional solution cost that was/will be avoided;		X				Notes they do not provide the cost.
		c. explain how the selected NWA solution enables the savings; and		X				Identifies that expected load reduction is provided in the annual implementation plan.
		d. describe the structure and functional characteristics of the procurement transaction between the utility and the solution provider(s).		X				

APPENDIX B. REGULATORY ASSESSMENT

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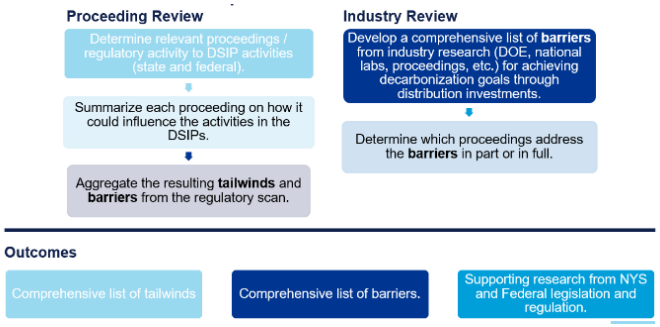
Regulatory Assessment - Summary: How to Read

Regulatory Assessment

Objectives	(1) Determine how the regulatory environment is supporting or hindering the activities in the DSIPs or more broadly the utilities developing a Distributed System Platform (DSP) (2) Understand the scale of impact that those barriers / support have for executing DSIP activities. (3) Allow DPS/NYSERDA to see where policy is supporting New York State's objectives and where policy is not aligned.
Approach	

How to read Detailed Assessment tab

Item	Category	Topic	Definition	Description	Direct/Indirect	Impact Rating	Rationale	Supporting Info	Tech Topics Impacted	Proceeding Names
Navigation #1	We identify the broader regulatory category under which the topic falls to structure the assessment by groupings that influence DSIP implementation.	Industry topic that relates to grid modernization/ and DSP creation.	To level set on the term, we have provided a quick definition of the tailwind or barrier.	We have provided an overview of how the industry topic is a tailwind or barrier. Essentially, what we are assessing against.	We indicate if the impact is direct on DSIP activities or indirect because the impacts happen upstream.	See tailwinds and barriers below.	We have provided the justification for the impact rating based on our regulatory research.	We have provided citation or research that support the rationale.	13 technical topics from the DPS guidance to support filtering of tailwinds and barriers.	Quick reference to the proceedings cited for this topic.
Context Information					Analysis				Resource & Navigation	

Few Tailwinds	The support has modest / little impact on the activities described in that technical topic.
Moderate Tailwinds	The support has measurable impact on the activities described in that technical topic but does not completely address the issue.
Significant Tailwinds	The support dynamically changes the ability for the activities described in that technical topic to be implemented.

Few Barriers	The barrier has modest / little impact on the activities described in that technical topic.
Moderate Barriers	The barrier has measurable impact on the activities described in that technical topic but does not completely hinder the issue.
Substantial Barriers	The barrier completely hinders the ability for the activities described in that technical topic to be implemented.

#	Regulatory Proceeding	Proceeding Name
1	00-E-1380	The Provision by The New York Independent System Operator, Inc. of Information and Data to Department Staff, Order Directing Provision of Data and Information
2	00-E-1380	The Provision by The New York Independent System Operator, Inc. of Information and Data to Department Staff, Order Clarifying Information and Data to be Provided and Measures Regarding Protection of Confidential Information
3	14-M-0094	Proceeding on Motion of the Commission to Consider a Clean Energy Fund, Order Commencing Proceeding
4	14-M-0094	Proceeding on Motion of the Commission to Consider a Clean Energy Fund, Order Authorizing the Clean Energy Fund Framework
5	14-M-0094	Proceeding on Motion of the Commission to Consider a Clean Energy Fund, Order Initiating the New Efficiency: New York Interim Review and Clean Energy Fund Review
6	14-M-0101	Proceeding on Motion of the Commission in Regard to Reforming the Energy Vision, Con Edison REV Demonstration Project: Electric School Bus V2G Q1 2022 Quarterly Progress Report
7	07-M-0548	Proceeding on Motion of the Commission Regarding an Energy Efficiency Portfolio, Order on Rehearing Granting Petition for Rehearing
8	08-E-0539	Proceeding on Motion of the Commission as to the Rates, Changes, Rules and Regulations of Consolidated Edison Company of New York, Inc. for Electric Service, Case 08-E-0539, P.S.C. No. 10 Electricity, Housekeeping Changes
9	14-E-0302	Petition of Consolidated Edison Company of New York, Inc. for Approval of Brooklyn Queens Demand Management Program ("BQDM Petition Proceeding"), Order Establishing Brooklyn/Queens Demand Management Program
10	14-E-0302	Petition of Consolidated Edison Company of New York, Inc. for Implementation of Projects and Programs that Support Reforming the Energy Vision, Order Implementing With Modification the Targeted Demand Management Program, Cost Recovery, and Incentives
11	14-E-0423	Proceeding on Motion of the Commission to Develop Dynamic Load Management Programs ("DLM Programs Proceeding"), Order Adopting Dynamic Load Management Filings with Modifications
12	14-M-0094	Proceeding on Motion of the Commission to Consider a Clean Energy Fund, Order Commencing Proceeding
13	14-M-0101	Proceeding on Motion of the Commission in Regard to Reforming the Energy Vision (REV Proceeding), Order Adopting Regulatory Policy Framework and Implementation Plan
14	14-M-0101	Reforming the Energy Vision, Order Adopting Regulatory Policy Framework and Implementation Plan (issued February 26, 2015) ("Track One Order"); Order Adopting a Ratemaking and Utility Revenue Model Policy Framework ("Track Two Order")
15	14-M-0101	Proceeding on Motion of the Commission in Regard to Reforming the Energy Vision, Order Adopting Distributed System Implementation Plan Guidance, issued April 20, 2016
16	14-M-0101	Proceeding on Motion of the Commission in Regard to Reforming the Energy Vision, Order Establishing the Benefit Cost Analysis Framework
17	14-M-0224	Proceeding on Motion of the Commission to Enable Community Choice Aggregation Programs, Order Approving Community Choice Aggregation and Utility Data Security Agreement with Modifications
18	14-M-0224	Proceeding on Motion of the Commission to Enable Community Choice Aggregation Programs, Statewide Expanded Solar For All Proposal
19	15-E-0302	Proceeding on Motion of the Commission to Implement a Large-Scale Renewable Program and a Clean Energy Standard, Order Adopting Clean Energy Standard

#	Regulatory Proceeding	Proceeding Name
20	15-E-0050	Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of Consolidated Edison Company of New York, Inc. for Electric Service ("Con Edison 2015 Electric Rate Case"), Order Approving Advanced Metering Infrastructure Business Plan Subject to Conditions ("AMI Order")
21	15-E-0082	Proceeding on a Motion of the Commission as to the Policies, Requirements and Conditions for Implementing a Community Net Metering Program, Order Establishing a Community Distributed Generation Program and Making Other Findings
22	15-E-0751	In the Matter of the Value of Distributed Resources ("VDER Proceeding"), Order on Phase One Value of Distributed Energy Resources Implementation Proposals, Cost Mitigation Issues, and Related Matters
23	15-E-0751	Order on Phase One Value of Distributed Energy Resources Implementation Proposals, Cost Mitigation Issues, and Related Matters
24	15-E-0751	VDER Proceeding, Order Establishing an Allocated Cost of Service Methodology for Standby and Buyback Service Rates and Energy Storage Contract Demand Charge Exemptions and Order Directing Standby and Buyback Service Tariff Filings
25	15-E-0751	In the Matter of the Value of Distributed Energy Resources ("VDER Proceeding"), Order on Net Energy Metering Transition, Phase One of Value of Distributed Energy Resources, and Related Matters ("VDER Transition Order")
26	15-E-0751	In the Matter of the Value of Distributed Energy Resources (VDER Proceeding), Order on Net Energy Metering Transition, Phase One of Value of Distributed Energy Resources, and Related Matters
27	15-M-0180	In the Matter of Regulation and Oversight of Distributed Energy Resource Providers and Products ("DER Oversight Proceeding"), Order Establishing Oversight Framework and Uniform Business Practices for Distributed Energy Resource Suppliers ("UBP-DERS Order")
28	15-M-0501	In the Matter of a review of Utility Codes of Conduct as Impacted by Reforming the Energy Vision, Order Setting Standards for Codes of Conduct
29	16-M-0411	Joint Utilities' Supplemental Information on the Now-Wires Alternatives Identification and Sourcing Process and Notification Practices
30		Joint Utilities' Supplemental Information on the Now-Wires Alternatives Identification and Sourcing Process and Notification Practices
31	16-M-0411	In the Matter of Distributed System Implementation Plans, Order on Distributed System Implementation Plan Filings
32	16-M-0411	In the Matter of Distributed System Implementation Plans ("DSIP Proceeding"), DPS Staff Whitepaper: Proposed Commission Guidance for the Electric Utilities' 2023 DSIP Update Filings ("2023 DSIP Guidance")
33	17-E-0238 & 17-G-0239	Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of Niagara Mohawk Power Corporation d/b/a National Grid for Electric and Gas Service ("National Grid Electric and Gas 2017 Rate Case Proceeding"), Report of Niagara Mohawk Power Corporation d/b/a National Grid on the Proposed Implementation of Advanced Metering Infrastructure (filed November 15, 2018) ("AMI Report").
34	17-M-0315	In the Matter of the Utility Energy Registry ("UER Proceeding"), Order Adopting Utility Energy Registry ("UER Order") (issued April 20, 2018).
35	18-E-0130	In the Matter of the Deployment of Energy Storage Deployment Program ("Energy Storage Proceeding"), Order Establishing Energy Storage Goal and Deployment Policy ("2018 Energy Storage Order").

#	Regulatory Proceeding	Proceeding Name
36	18-E-0130	Energy Storage Proceeding, New York State Department of Public Service and the New York State Energy Research and Development Authority New York's 6 GW Energy Storage Roadmap: Policy Options for Continued Growth in Energy Storage ("Energy Storage Roadmap").
37	18-E-0130	In the Matter of Energy Storage Deployment Program, National Grid RFP for Resource Participation in Term-DLM and Auto-DLM Programs
38	18-E-0130	In the Matter of Energy Storage Deployment Program, New York's 6 GW energy Storage Roadmap 2024 Update
39	18-E-0138	Staff Whitepaper Regarding Electric Vehicle Supply Equipment and Infrastructure Deployment
40	18-E-0138	Proceeding on Motion of the Commission Regarding Electric Vehicle Supply Equipment and Infrastructure (EV Proceeding), EV Proceeding Instituting Order
41	18-E-0138	EVSE and Infrastructure Proceeding, Order Establishing Electric Vehicle Infrastructure Make-Ready Program and Other Programs ("EV Make-Ready Order").
42	18-E-0206	Tariff Filings to Effectuate the Provisions of Public Service Law Section 66-o ("Residential Electric Vehicle Charging Tariff"), Order Rejecting Tariff Filings and Directing Tariff Revisions (EV TOU Rates Order).
43	18-M-0084	In the Matter of a Comprehensive Energy Efficiency Initiative ("New Efficiency: New York Proceeding" or "NE:NY Proceeding"), NYS Clean Heat: Statewide Heat Pump Program Implementation Plan ("Implementation Plan") The Joint Efficiency Providers' work in coordinating development of the NYS Clean Heat Program began in 2019, following the issuance of the Commission's Order Authorizing Accelerated Energy Efficiency Targets (issued December 13, 2018).
44	18-M-0084	In the Matter of a Comprehensive Energy Efficiency Initiative ("NE:NY Proceeding") New Efficiency: New York Whitepaper
45	18-M-0084	NYS Clean Heat: Statewide Heat Pump Program implementation Plan
46	18-M-0084	Order Initiating The New Efficiency: New York Interim Review and Clean Energy Fund Review
47	18-M-0084	Order Adopting Accelerated Energy Efficiency Targets
48	18-M-0084	New York Utilities Report Regarding Energy Efficiency Budgets and Targets, Collaboration, Heat Pump Technology and Low- and Moderate-Income Customers
49	18-M-0084	Order Approving Clean Energy Fund Modifications
50	18-M-0084	NYS Clean Heat: Statewide Heat Pump Program Manual ("Clean Heat Program Manual" or "Program Manual") (initially filed by the Joint Efficiency Providers on March 16, 2020 and most recently filed as Version 2 by the Designated Utilities and NYSERDA on March 1, 2023); NYS Clean Heat Con Edison Heat Pump Program Manual.
51	18-M-0084	Order Authorizing Utility Energy Efficiency and Building Electrification Portfolios through 2025 ("NE:NY Order").
52	18-M-0084	In the Matter of a Comprehensive Energy Efficiency Initiative ("NENY Proceeding"), Order Adopting Accelerated Energy Efficiency Targets ("Accelerated Efficiency Order")
53	18-M-0376	Proceeding on Motion of the Commission Regarding Cyber Security Protocols and Protections in the Energy Market Place
54	19-E-0065	Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of Consolidated Edison Company of New York, Inc. for Electric Service, Con Edison AMI Metrics Report
55	19-E-0065 & 19-G-0066	Con Edison's Climate Change Implementation Plan
56	19-E-0283	Proceeding on Motion of the Commission to Examine Utilities' Marginal Cost of Service Studies, Department of Public Service Staff Whitepaper Regarding Marginal Cost of Service Studies.

#	Regulatory Proceeding	Proceeding Name
57	19-E-0283	Proceeding on Motion of the Commission to Examine Utilities' Marginal Cost of Service Studies, Staff MCOS Whitepaper
58	19-E-0735	Petition of New York State Energy Research and Development Authority Requesting Additional NY-Sun Program Funding and Extension of Program Through 2025, Department of Public Service Staff Proposal on a Statewide Solar for All Program
59	19-M-0463	In the Matter of Consolidated Billing for Distributed Energy Resources, Order Establishing Process Regarding Community Distributed Generation Billing
60	19-M-0463	In the Matter of Consolidated Billing for Distributed Energy Resources (Consolidated Billing Proceeding), Order Regarding Consolidated Billing for Community Distributed Generation (Consolidated Billing Order) (issued December 12, 2019).
61	19-M-0463	In the Matter of Consolidated Billing for Distributed Energy Resources ("Consolidated Billing for DER").
62	20-E-0197	Proceeding on Motion of the Commission to Implement Transmission Planning Pursuant to the Accelerated Renewable Energy Growth and Community Benefit Act ("Transmission Planning Proceeding"), Order on Transmission Planning Pursuant to the Accelerated Renewable Energy Growth and Community Benefit Act ("Transmission Planning Order").
63	20-E-0197	Proceeding on Motion of the Commission to Implement Transmission Planning Pursuant to the Accelerated Renewable Energy Growth and Community Benefit Act, Order Approving a Coordinated Grid Planning Process
64	20-E-0249	In the Matter of a Renewable Energy Facility Host Community Benefit Program, Order Adopting a Host Community Benefit Program (issued February 11, 2021).
65	20-E-0380	Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of Niagara Mohawk Power Corporation d/b/a National Grid for Electric Service ("National Grid Electric and Gas 2020 Rate Case Proceeding"), Order Adopting Terms of Joint Proposal and Establishing Electric and Gas Rate Plans (issued January 20, 2022) ("Three-Year Rate Plan Order").
66	20-E-0453	Petition of the IPWG Members Seeking a Cost-Sharing Amendment to the New York State Standardized Interconnection Requirements for New Distributed Generators and Energy Storage Systems 5 MW or Less Connected in Parallel with Utility Distribution Systems
67	20-E-0543	Petition of Interconnection Policy Working Group Seeking a Cost-Sharing Amendment to the New York State Standardized Interconnection Requirements ("IPWG Petition Seeking a Cost-Sharing Amendment to the NY-SIR"), Order Approving Cost-Sharing Mechanism and Making Other Findings
68	20-E-0543 & 19-E-0566	Order Approving Cost-Sharing Mechanism and Making Other Findings
69	20-E-0543 & 19-E-0566	Order Approving Compliance Filings, with Clarifications
70	20-M-0082	Proceeding on Motion of the Commission Regarding Strategic Use of Energy Related Data, Order implementing an integrated Energy Data Resource ("IEDR Proceeding")

#	Regulatory Proceeding	Proceeding Name
71	20-M-0082	Proceeding on Motion of the Commission Regarding Strategic Use of Energy Related Data, include, among others: The Joint Utilities' Inventory of Available Data Points Omitted from Appendix A of the Data Access Framework Order (filed July 14, 2021); The Joint Utilities' Proposal for an Alternate Method of Account Identification (filed July 14, 2021); The Joint Utilities' Green Button Connect User Agreement and Onboarding Process (filed August 13, 2021); The Joint Utilities' Consent Process Assessment and Customer Consent Engagement Plan (filed September 20, 2021); and The Joint Utilities' Data Access Implementation Plan ("DAIP") (filed September 20, 2021).
72	20-M-0082	Proceeding on Motion of the Commission Regarding Strategic Use of Energy Related Data, Joint Utility Petition to Modify Self Attestation
73	21-E-0629	In the Matter of the Advancement of Distributed Solar, Order Expanding NY-SUN Program
74	22-E-0173	Petition of the IPWG/ITWG Members Seeking Certain Minor Amendments to the New York State Standardized Interconnection Requirements, Order Modifying Standardized Interconnection Requirements ("NY-SIR Modification Order").
75	22-E-0222	Proceeding on Motion of the Commission Concerning Electric Utility Climate Vulnerability Studies and Plans, Order Initiating Proceeding
76	22-E-0236	Proceeding to Establish Alternatives to Traditional Demand-Based Rate Structures for Commercial Electric Vehicle Charging
77	22-E-0236	Proceeding to Establish Alternatives to Traditional Demand-Based Rate Structures for Commercial Electric Vehicle Charging, Order Establishing Framework for Alternatives to Traditional Demand-Based Rate Structures ("EV Rate Design Order").
78	22-E-0549	In the Matter of the Federal Energy Regulatory Commission (FERC) Order Nos. 2222 and 841, to Modify Rules Related to Distributed Energy Resources, Order Approving Tariff Modifications
79	22-M-0149	Proceeding on Motion of the Commission Assessing Implementation of and Compliance with the Requirements and Targets of the Climate Leadership and Community Protection Act, Order on Implementation of the Climate Leadership and Community Protection Act
80	22-M-0149	Proceeding on Motion of the Commission Assessing Implementation of and Compliance with the Requirements and Targets of the Climate Leadership and Community Protection Act, First Annual Informational Report on Overall Implementation of the Climate Leadership and Community Protection Act
81	22-M-0429	Proceeding on Motion of the Commission to Implement the Requirements of the Utility Thermal Energy Network and Jobs Act ("Thermal Energy Network Proceeding"), Order on Developing Thermal Energy Networks Pursuant to the Utility Thermal Energy Networks and Jobs Act ("Thermal Energy Networks Order").
82	22-M-0429	Proceeding on Motion of the Commission to Implement the Requirements of the Utility Thermal Energy Network and Jobs Act, Order Providing Guidance on Development of Utility Thermal Energy Network Pilot Projects
83	23-E-0070	Proceeding on Motion of the Commission to Address Barriers to Medium- and Heavy-Duty Electric Vehicle Charging Infrastructure, Order Instituting Proceeding and Soliciting Comments
84	24-E-0165	Proceeding on Motion of the Commission Regarding the Grid of the Future, Order Instituting Proceeding
85	24-E-0364	Proactive Planning for Upgraded Electric Grid Infrastructure
86	94-E-0952	In the Matter of Competitive Opportunities Regarding Electric Service, Opinion and Order Regarding Competitive Opportunities for Electric Service, Opinion 96-12

#	Regulatory Proceeding	Proceeding Name
87	NY Senate Bill S2758	Provides that one hundred percent of in-state sales of new passenger cars and trucks shall be zero-emissions by 2035.
88	NY State Bill A4302	Provides that one hundred percent of in-state sales of new passenger cars and trucks shall be zero-emissions by two thousand thirty-five.
89	Order 1920	FERC order - Building for the Future Through Electric Regional Transmission Planning and Cost Allocation
90	Order 2023	Improvements to Generator Interconnection Procedures and Agreements
91	Order 2222	FERC Order 2222 ("FERC 2222") requires Regional Transmission Operators ("RTOs") and Independent System Operators ("ISOs") to allow DER aggregators to participate directly in wholesale markets, thereby establishing a new category of market participants. The New York Independent System Operator ("NYISO") will be implementing their FERC approved 2020 DER Participation Model in Q3 2023 with expectations to implement all of FERC 2222 by Q4 2026.
92	Order 2222	Participation of Distributed Energy Resource Aggregations in Markets Operated by Regional Transmission Organizations and Independent System Operators
93	Order 745	Demand Response Compensation in Organized Wholesale Energy Markets
94	Order 841	FERC Order 841 amends FERC's regulations to facilitate the participation of energy storage systems sized at 100 kW or larger in the capacity, energy, and ancillary service markets operated by RTOs and ISOs. FERC Order 841 is a necessary precursor order for FERC Order 2222. FERC Order 841 allows storage resources to operate in wholesale markets.
95		Climate Leadership and Community Protection Act
96		New York State Energy Plan - Amendment
97	NY Senate Bill 4824A	Distribution system storm hardening

Regulatory Assessment - High Level View

Category	Topic	Rating	Item #
Costs	Cost recovery mechanisms	Few Tailwinds	1
Costs	Grid investment costs	Substantial Barriers	2
Costs	Non-ratepayer funding	Moderate Tailwinds	3
Costs	On-bill surcharges	Few Tailwinds	4
Costs	Project cost allocation	Moderate Barriers	5
Data	Data access	Significant Tailwinds	6
Data	Data requirements	Moderate Tailwinds	7
Data	Data requirements	Moderate Barriers	8
Data	Modeling	Moderate Barriers	9
Markets	Competitive energy markets	Moderate Tailwinds	10
Markets	Market design	Substantial Barriers	11
Markets	Market-driven solutions	Few Tailwinds	12
Operation & Planning	Inter-connection (distribution system)	Moderate Tailwinds	13
Operation & Planning	Energy planning	Few Tailwinds	14
Operation & Planning	Interconnection (distribution system)	Significant Tailwinds	15
Operation & Planning	Operation of distributed energy resources (DERs)	Moderate Barriers	16
Operation & Planning	Stakeholder engagement	Significant Tailwinds	17
Operation & Planning	System assessment	Moderate Tailwinds	18
Operation & Planning	Workforce development	Moderate Barriers	19
Technology	Advanced grid technologies	Moderate Tailwinds	20
Technology	Technology Innovation	Moderate Tailwinds	21
Technology	Technology requirements	Moderate Barriers	22
Technology	Transportation electrification	Few Tailwinds	23

Regulatory Assessment -		
Category	**Topic**	**Takeaways**
Costs	Cost recovery mechanisms	Overall, the cost category has more tailwinds than barriers, but the barriers are more significant. The DSIP process lays the foundation for a modernized, integrated grid to support achievement of New York's statewide energy goals. Significant financial commitments are needed for developing and implementing grid modernization technologies, systems, and processes. Although proven cost recovery and cost allocations mechanisms exist, innovative approaches such as the Index Storage Credit will be necessary in the future as there is there is a limit to the extent to which rates can increase. The use of non-ratepayer funding sources such as the IRA and NY Green Bank exist, but they do not fully cover grid modernization investments; public-private partnerships, green bonds, and private financing offer additional opportunities but require regulatory alignment.
	Grid investment costs	
	Non-ratepayer funding	
	On-bill surcharges	
	Project cost allocation	

Regulatory Assessment -

Category	Topic	Takeaways
Data	Data access	Overall, New York shows progress and strength in the data category; especially around data access. However, there remains a need for increased data standardization and a centralized data repository. Data access achievements include the Utility Energy Registry which aggregates data to support local energy planning and policy development, the Community Choice Aggregation program which facilitates standardized data-sharing agreements between municipalities and utilities, and the Interconnection Technical Working Group and Interconnection Process Working Group (IPWG) that are addressing challenges in DER interconnection data, reducing barriers and enabling smoother coordination. Despite these efforts, grid modernization is at different stages across utilities, leading to inconsistencies in data collection, storage, and sharing practices. These variations in data availability and granularity complicate the coordination of DER resources and hinder progress in grid modernization. AMI meters are providing granular data, although some utilities are further ahead in their implementation causing inconsistent data across the utilities. Ongoing regulatory efforts such as the Value of DER and Grid of the Future proceedings focus on enhancing data collection and use, with the Integrated Energy Data Resource (IEDR) facilitating standardized data sharing among stakeholders. A unified data platform and centralized repository could standardize data collection processes, improving forecasting accuracy, as seen in Case 20-E-0197 and Case 18-M-0084.
	Data requirements	
	Data requirements	

Regulatory Assessment -		
Category	**Topic**	**Takeaways**
Markets	Modeling	The markets category has more tailwinds than barriers, but the barrier is substantial. New York's regulated electric utilities work within an established restructured market providing a solid foundation along with market knowledge and operational experience which will support developing new or expanded market driven solutions. However, this regulatory framework as it exists today may not allow the market to drive some solutions that will be needed going forward. For example, NYISO's 2024 market rule changes allow DERs with a minimum size of 10 kW to participate in the wholesale electricity market through aggregation. This is a positive step; however, the 10 kW minimum size requirement excludes smaller resources, limiting participation and slowing DER adoption. Although New York and market participants have experience with developing and operating in restructured energy markets, the speed of transformation will institute a steep learning curve. To capitalize on DER resources and optimize the distribution platform, the regulatory process needs to be more adaptive to market opportunities. For example, delays in market design implementations, like co-located storage models and DER aggregation proposals, restrict efficiency and DER adoption.
	Competitive energy markets	
	Market design	

Regulatory Assessment -		
Category	**Topic**	**Takeaways**
Operation & Planning	Market-driven solutions	The operations and planning category has more tailwinds than barriers, and the barriers are moderate. At the distribution level, the standardized interconnection requirements streamline DER integration. Regulatory frameworks like REV and VDER aim to optimize DER integration through reforms, such as Distributed System Platform functions and ratemaking changes. Stakeholder engagement is essential for ensuring a balanced approach to grid modernization and clean energy integration, fostering transparency, trust, and adaptability. Distribution system planning at the individual utility level is a known process. DPS directed utilities to propose a new Coordinated Grid Planning Process that integrates distribution considerations and DSIPs further enhancing the planning process. Stakeholders support efforts that are necessary to implement the DSIP. The moderate barriers include workforce development and DER operations. The operation of DERs face challenges in balancing intermittent generation with grid reliability as DER share increases. Although outside of the DPS jurisdiction, workforce development is critical to alleviate the shortage of skilled workers which is hindering the scalability of energy transition programs, such as thermal energy networks.
	Inter-connection (distribution system)	
	Energy planning	
	Interconnection (distribution system)	
	Operation of distributed energy resources (DERs)	
	Stakeholder engagement	
	System assessment	

Regulatory Assessment -

Category	Topic	Takeaways
Technology	Workforce development	The technology category has more tailwinds than barriers, and the barrier is moderate. Installation and implementation of advanced technologies like smart inverters and automated control systems enhance DER integration. Technological growth presents opportunities to improve efficiency in operations, but differing stages of technology transformation across utilities could be a limiting factor. Collaborative efforts through the Interconnection Technology Working Group (ITWG) and Interconnection Policy Working Group have established protocols to align advanced technologies with grid requirements. For example, the ITWG developed testing protocols for smart inverter functionalities, enabling advanced voltage and frequency regulation technologies. The Clean Energy Fund supports innovation, including streamlined regulatory processes and testing frameworks to accelerate deployment, de-risk investments, and remove adoption barriers. The Clean Energy Fund supports technology innovation and derisking investments. As technology capabilities change, requirements for connectivity, statewide standards and interoperability across utilities may increase the cost to participants, which may put limits on growth. The limited industry standards and gaps in long-duration storage technologies for DERs/storage must also be addressed.
	Advanced grid technologies	
	Technology Innovation	
	Technology requirements	

Item	Category	Topic	Topic Definition	Description	Direct/ Indirect	Rating	Rationale
1	**Costs**	**Cost recovery mechanisms**	Regulatory frameworks that allow regulated utilities to recoup costs through the rate base.	Cost recovery mechanisms support utilities investment in grid improvements to pursue energy targets by enabling utilities to recover (rate base) prudent costs through customer distribution rates and tariffs.	Direct	Few Tailwinds	Cost recovery mechanisms can provide the financial stability and incentives needed for utilities to invest in grid modernization. In New York, cost recovery mechanisms for utilities' investments in grid improvements can take several years to implement. For example, the cost recovery period for projects funded under the Grid Resilience State and Tribal Formula Grant and the Competitive Grid Modernization Program typically span over 3 years. These programs require significant time for implementation, and the approval process for rate cases - including public hearings and detailed reviews - can extend over several years, delaying cost recovery and dampening momentum for new investments. Cost recovery mechanisms are not directly addressed within the DSIP process and are instead handled through separate rate cases and REV-related proceedings. This separation means that activities listed in the DSIP filing may not get approved in the rate-case. Additionally, DSIPs are filed every two years and rate cases are every 3 years. These factors collectively create few tailwinds, as the extended timeframes and procedural complexities dilute the mechanisms' ability to incentivize timely investment and innovation in grid modernization.
2	**Costs**	**Grid investment costs**	Capital expenditures committed to expanding and improving the distribution infrastructure and accelerating the growth of renewable energy projects.	Investments needed to modernize and decarbonize the distribution system to support meeting statewide energy goals in the desired timeline (not focused on the mechanism, but the scale and timing).	Direct	Substantial Barriers	Grid investment costs warrant a high DSIP impact rating because they directly influence the ability to modernize and decarbonize the distribution system. This creates challenges in achieving the technical objectives outlined in DSIP, as higher costs can delay or limit the implementation of critical infrastructure upgrades and renewable energy integration. The scale of the required investments, as outlined in the 2015 REV Proceeding and the 2024 Energy Storage Deployment Program Order, underscores the magnitude of this barrier. Both highlight the growing financial demands to replace aging infrastructure and support new energy storage targets, dynamically impacting DSIP activities and creating strong headwinds to progress.

Item	Category	Topic	Supporting Info	Technical Topics	Relevant Proceeding
1	**Costs**	**Cost recovery mechanisms**	The DSIP process itself does not include the approval of cost recovery mechanisms. Instead, these issues are handled through separate rate cases and other REV-related proceedings; this includes Non-Wires Alternatives (NWA) and Non-Pipes Alternatives (NPA). The REV helps utilities recover their costs associated with implementing new business models and technologies that facilitate the growth of DERs. The REV framework includes mechanisms for utilities to recover the costs associated with distribution system investments, advanced forecasting, and DER integration. Cost recovery mechanisms remain a barrier. In the past it has been addressed in separate rate cases rather than within the DSIP process itself.	Billing and Compensation Integrated Planning Advanced forecasting Advanced Metering Infrastructure	08-E-0539 - 4/2012 Proceeding on Motion of the Commission as to the Rates, Changes, Rules and Regulations of Consolidated Edison Company of New York, Inc. for Electric Service, Case 08-E-0539, P.S.C. No. 10 Electricity, Housekeeping Changes
2	**Costs**	**Grid investment costs**	The 2015 REV Proceeding highlighted that New York's power generation and delivery systems were facing challenges as much of the infrastructure had reached or exceeded its optimal service life. At that time, REV revealed that planning reports from state utilities and the New York Independent System Operator (NYISO) estimated a need for $30 billion in investments over the subsequent decade to maintain existing capabilities - a significant increase compared to the $17 billion spent over the prior ten years. This surge in investment requirements placed pressure on utility rates, with the costs of replacing aging infrastructure significantly exceeding those of ongoing maintenance. Moreover, declining energy sales and a low load factor led REV to warn that costs might need to be distributed across a smaller consumer base, potentially resulting in higher customer bills. More recently, the Energy Storage Deployment Program Order, issued by the New York Public Service Commission (PSC) on June 20, 2024, underscored the state's commitment to achieving 6,000 MW of energy storage capacity by 2030. This ambitious target demands significant investment in energy storage infrastructure. The order notes that the enactment of the CLCPA and the new energy storage goal only further accentuate the need for increased development of energy storage in New York.	Integrated Planning Grid operations	14-M-0101 - 2/2015 - Proceeding on Motion of the Commission in Regard to Reforming the Energy Vision (REV Proceeding), Order Adopting Regulatory Policy Framework and Implementation Plan 18-E-0130 - 12/2022 - Energy Storage Proceeding, New York State Department of Public Service and the New York State Energy Research and Development Authority New York's 6 GW Energy Storage Roadmap: Policy Options for Continued Growth in Energy Storage ("Energy Storage Roadmap")

Item	Category	Topic	Topic Definition	Description	Direct/ Indirect	Rating	Rationale
3	**Costs**	**Non-ratepayer funding**	Strategic use of financial resources to support clean energy projects and grid modernization that are not collected through utility fees or rate base.	Leveraging of funding from federal and state initiatives for renewable energy projects and DER deployment that support state implementation; these funds support the attainment of goals and reduce burden on state budget and ratepayers.	Direct	Moderate Tailwinds	Non-ratepayer funding plays a role in advancing Distributed System Implementation Plans (DSIPs), allowing utilities to deploy renewable energy and distributed energy resources (DERs) while reducing reliance on ratepayer funding. The Inflation Reduction Act (IRA) has enhanced federal support for clean energy projects by providing tax credits and grants for renewable energy and energy storage technologies, which New York has actively pursued. State programs like NY Green Bank, NY-Sun, and Clean Energy Fund (CEF) also leverage federal IRA funds, along with other sources like the Regional Greenhouse Gas Initiative (RGGI), to help utilities scale clean energy projects. While these external funds provide valuable support, they do not fully cover the entire cost of energy transition and grid modernization, meaning ratepayer contributions remain necessary for complete implementation. Utilities may also access non-ratepayer funding sources like state and federal grants, private sector partnerships, green bonds, and programs under NYSERDA or the Inflation Reduction Act. These approaches aim to diversify funding while balancing ratepayer impacts.

Item	Category	Topic	Supporting Info	Technical Topics	Relevant Proceeding
3	**Costs**	**Non-ratepayer funding**	New York utilities have access to several funding sources, including the Regional Greenhouse Gas Initiative (RGGI), federal grants and loans from agencies like the IRA, DOE and EPA, and state grants from NYSERDA. Additionally, private financing through bonds and Public-Private Partnerships (PPPs) help utilities fund large-scale projects without relying solely on ratepayer funds. The Clean Energy Fund (CEF) exemplifies the use of non-ratepayer funding by prioritizing market-based solutions and leveraging external funding, such as federal grants, to scale renewable energy projects. Programs like NY Green Bank and Reforming the Energy Vision (REV) further promote the integration of DERs and energy efficiency while reducing ratepayer costs. State initiatives such as the Clean Energy Communities and New York Sun Initiative provide utilities with valuable models for managing DERs and modernizing the grid, helping to align state and utility efforts towards decarbonization and clean energy goals.	Integrated Planning	14-M-0094 - 9/2022 Proceeding on Motion of the Commission to Consider a Clean Energy Fund, Order Initiating the New Efficiency: New York Interim Review and Clean Energy Fund Review

Item	Category	Topic	Topic Definition	Description	Direct/ Indirect	Rating	Rationale
4	**Costs**	**On-bill surcharges**	Financial resources to support clean energy projects and grid modernization that are collected through on-bill charges	New or increased surcharges (e.g., system benefit charge) on customer bills help to pay for the changes to the electricity grid and generation mix to meet statewide goals.	Direct	Few Tailwinds	Electric bill surcharges may have an impact on the approval of activities outlined in the DSIP. While that funding clean energy projects and grid modernization through ratepayer charges places a financial burden on consumers and can limit the regulator's ability to implement changes quickly, this impact is partially mitigated by strategies such as those included in the Energy Storage Deployment Program (Case 18-E-0130) and the payment structure for Index Storage Credits. These measures are designed to reduce ratepayer costs by spreading out purchases and adjusting payments based on energy market prices, thus helping to manage costs over time. However, the cost of grid investments are so large, it may be unreasonable to recoup investments through surcharges. Mechanisms outside the traditional three-year rate filings, such as reconciliation mechanisms, deferral accounting, and specific surcharge programs, help utilities efficiently recover costs with greater flexibly. Reliance on ratepayer funding is still a critical factor that affects the pacing of grid modernization and clean energy transitions as increasing ratepayer bills through new or increased surcharges may not be an option for the DPS. This reflects the fact that while there are efforts in place to reduce the impact on ratepayers, the fundamental reliance on surcharges remains a constraint that can influence the timeline and cost structure of the DSIP.
5	**Costs**	**Project cost allocation**	Mechanisms and approaches to determine how investments are made and value allocated when they serve multiple purposes.	Complexity in determining who should pay for necessary upgrades when adding DERs to the systems. The system needs will also determine the types of services needed and drive the locational benefits of DERs. This complexity is leading to slower integration, unclear signals for system needs to support optimal DER integration.	Direct	Moderate Barriers	Project cost allocation remains a barrier despite the implementation of the Cost Sharing 2.0 Plan because it does not fully resolve the underlying complexity of how costs should be distributed among stakeholders. While the plan introduces a pro-rata cost-sharing mechanism to make cost distribution more equitable, it does not eliminate the uncertainty around how to value DERs. This complexity affects decision-making and planning, slowing DER integration and delaying grid modernization efforts.

Item	Category	Topic	Supporting Info	Technical Topics	Relevant Proceeding
4	**Costs**	**On-bill surcharges**	Surcharges on New York electric bills include Systems Benefits Charge (SBC), Renewable Portfolio Standard Charge, Temporary State Assessment Surcharge, Clean Energy Standard Delivery Surcharge and Gross Receipts. Clean energy programs like the RPS and energy efficiency have historically been funded through surcharges on electricity bills. NYSERDA Innovation and Research activities, which receive funding through the SBC, provides funding to utilities for grid modernization. To reduce utility bill impacts, the Energy Storage Deployment Program (Case 18-E-0130) proposes spreading the purchase of large energy storage systems over three years, starting in 2024. This phased approach allows for early project deployment to meet 2030 renewable energy goals while taking advantage of expected declines in battery and equipment prices later in the decade, helping to manage program costs for ratepayers. Under the same case, the proposed payment structure for Index Storage Credits adjusts payments based on energy market prices to minimize ratepayer impacts. When prices are high, projects pay the difference to NYSERDA, lowering program costs. When prices are low, NYSERDA pays more to projects, increasing program costs but offsetting this with lower overall energy bills for ratepayers. By not imposing caps or limits on payments, the structure reduces project financing costs in low-price scenarios and avoids unnecessary payments in high-price scenarios, balancing risks and stabilizing ratepayer costs over time.	Integrated Planning Billing and Compensation	15-E-0302 - 8/2016 - Proceeding on Motion of the Commission to Implement a Large-Scale Renewable Program and a Clean Energy Standard, Order Adopting Clean Energy Standard 18-E-0130 - 12/2022 - Energy Storage Proceeding, New York State Department of Public Service and the New York State Energy Research and Development Authority New York's 6 GW Energy Storage Roadmap: Policy Options for Continued Growth in Energy Storage ("Energy Storage Roadmap") 18-E-0130 - 12/2023 - In the Matter of Energy Storage Deployment Program, National Grid RFP for Resource Participation in Term-DLM and Auto-DLM Programs
5	**Costs**	**Project cost allocation**	In New York, project cost allocation presents a regulatory barrier to the integration of Distributed Energy Resources (DERs). The challenge lies in determining who should bear the costs of grid upgrades when DERs are added to the system. According to the VDER Phase One tariff, compensation for DERs is collected from the same customer group that benefits from the savings associated with the DER. If the value of the compensation has not been identified or calculated, such as with the Market Transition Credit (MTC), the recovery comes from customers within the same service class as the beneficiaries. To address these challenges, the Public Service Commission (PSC) introduced the Cost Sharing 2.0 Plan, which implements a pro-rata cost-sharing mechanism. This approach allows subsequent projects to share the costs of grid upgrades, spreading financial responsibility more equitably among developers. Building on this, the Distributed Energy Resource Interconnection Roadmap emphasizes pro-rata cost sharing to reduce uncertainty and disputes regarding grid upgrades required for DER interconnections. While these initiatives establish a pro-rata cost-sharing mechanism, it does not fully address how the value of DERs, including their long-term benefits and contributions to grid modernization, should be calculated.	Integrated Planning DER Interconnection	15-E-0751 - 03/2017 - In the Matter of the Value of Distributed Energy Resource Comments on the Staff Report in the Value of Distributed Energy Resources Proceeding

Item	Category	Topic	Topic Definition	Description	Direct/ Indirect	Rating	Rationale
6	**Data**	**Data access**	User friendly processes providing stakeholders access to accurate, granular, and actionable data.	Establishing processes for providing stakeholders access to data through the development of tools and information sources fosters productive DER deployment by facilitating the understanding of needs and the development of solutions.	Direct	Significant Tailwinds	Access to accurate, granular, and actionable data supports the implementation of key activities for DER integration and local energy planning. Tools like NYSERDA's Integrated Energy Data Resource (IEDR) and processes established in the DSIP provide stakeholders with the data needed for effective planning and decision-making. NYISO's provision of real-time operational data to the DPS enhances regulatory oversight and transparency, enabling more informed and timely decisions. The Community Choice Aggregation (CCA) program establishes standardized data-sharing agreements, allowing municipalities to access necessary information while ensuring data security. Similarly, the Utility Energy Registry (UER) provides aggregated energy usage data to support local energy planning and policy development. Working groups like the ITWG and IPWG address specific challenges in data access for DER interconnection, facilitating smoother coordination and reducing barriers for utilities, third parties, and regulators. These processes collectively ensure that the necessary data is available to implement technical activities and advance DER deployment.

Item	Category	Topic	Supporting Info	Technical Topics	Relevant Proceeding
6	**Data**	**Data access**	Provision of information and data mandates the New York Independent System Operator (NYISO) provide the Department of Public Service (DPS) with access to operational data. It ensures regulators have real-time access to operational metrics for oversight and planning, and promotes collaboration by improving visibility into grid performance. According to the 00-E-1380 proceeding, access to NYISO data supports effective regulatory decision-making, enhances transparency, and fosters stakeholder confidence in grid operations. The Community Choice Aggregation (CCA) standardizes data-sharing agreements between utilities and municipalities. It mandates data security agreements to safeguard customer data while enabling aggregation programs, and provides municipalities with the information needed to design effective CCA initiatives. According to the proceeding, Utility-municipality data-sharing frameworks are vital for empowering communities to participate in energy markets. Also, The Utility Energy Registry (UER) is a public database for aggregated energy usage data. It provides community-level energy data to support local energy planning and policy development, and ensures privacy while enabling actionable insights for stakeholders. The Interconnection Technical Working Group (ITWG) and the Interconnection Policy Working Group (IPWG) play crucial roles in addressing data access for third parties. The ITWG focuses on resolving technical barriers and challenges associated with the DER interconnection process, while the IPWG addresses policy issues. Both groups work to ensure that data access is streamlined and efficient, facilitating smoother integration of DERs and enhancing collaboration between utilities, regulators, and third-party stakeholders.	Integrated Planning Energy Efficiency Integration and Innovation DERs Interconnections Billing and Compensation Grid Operations	00-E-1380 - 8/2000 The Provision by The New York Independent System Operator, Inc. of Information and Data to Department Staff, Order Directing Provision of Data and Information 14-M-0224 - 10/2017 Proceeding on Motion of the Commission to Enable Community Choice Aggregation Programs, Order Approving Community Choice Aggregation and Utility Data Security Agreement with Modifications 17-M-0315 - 4/2018 In the Matter of the Utility Energy Registry (“UER Proceeding”), Order Adopting Utility Energy Registry (“UER Order”) (issued April 20, 2018).

Item	Category	Topic	Topic Definition	Description	Direct/ Indirect	Rating	Rationale
7	**Data**	**Data requirements**	Equipment/meters and standardization of processes to collect, store, and process granular data.	Established framework with protocols and procedures to provide, collect and store standardized, granular data to be used by market participants to identify system and customer needs, and the development of solutions, if data access is provided.	Direct	Moderate Tailwinds	The Commission's approval of Con Edison's Advanced Metering Infrastructure (AMI) in 2016 highlighted the critical role of granular data in enabling efficient grid management, empowering consumers with detailed energy usage insights, and facilitating customized solutions. Similarly, the 2017 Phase One Value of Distributed Energy Resources (VDER) Order established the use of locational and temporal data to ensure fair compensation for DERs based on their actual grid contributions. The transition from Net Energy Metering to the Value Stack methodology further emphasized the need for robust data collection to optimize DER deployment and align incentives with grid needs. In addition, the Integrated Energy Data Resource (IEDR) also establishes a statewide platform for collecting and sharing data, providing a centralized repository for stakeholders to access standardized, granular data. These regulatory actions demonstrate the Commission's ongoing efforts to establish a standardized data framework that enables efficient grid operations, facilitates DER valuation, and supports broader energy market objectives.
8	**Data**	**Data requirements**	Equipment/meters and standardization of processes to collect, store, and process granular data.	Varying stages of grid modernization across the utilities limits the ability to implement consistent data requirements and protocols to efficiently, securely, and reliably capture, process, store, and share data across platforms and entities.	Direct	Moderate Barriers	Data requirements are considered a moderate barrier because they directly influence the ability to efficiently and reliably assess energy needs and plan for grid modernization. While utilities like Con Edison have made significant progress with AMI deployment and online portals, actively rolling out AMI across their service area and enabling customers to view detailed energy usage data, receive alerts, and access various energy management tools, inconsistencies in data interoperability and granularity present major challenges. For example, Con Edison found complexity when integrating diverse data sources such as distributed energy resources (DERs), demand response (DR) programs, and traditional grid operations. These challenges hinder seamless data integration and compromise the accuracy and uniformity of forecasting and analysis. Initiatives like Case 20-E-0197, which advocates for a unified data platform, and Case 18-M-0084, which proposes a centralized data repository, have been designed to address gaps.

Item	Category	Topic	Supporting Info	Technical Topics	Relevant Proceeding
7	**Data**	**Data requirements**	In the 2015 Electric Rate Case and its associated AMI Order, the Commission approved Con Edison's plan to deploy Advanced Metering Infrastructure (AMI), which collects detailed data on electricity usage. The deployment of these smart meters is framed as a foundational step towards enabling a more efficient and customer-responsive energy system. The Commission stated, the deployment of Advanced Metering Infrastructure (AMI) is a critical step in transforming the utility's ability to manage energy use and deliver customized solutions to its customers (AMI Order, 2016). This data empowers consumers to make informed decisions about their energy usage, facilitates dynamic pricing models, and helps utilities balance supply and demand more effectively. Furthermore, by integrating AMI data with broader system planning, the Order allows for more efficient grid management. Order on Phase One Value of Distributed Energy Resources Implementation Proposals establishes the framework for valuing distributed energy resources (DERs), including the use of granular data to assess their contributions to the electric grid. It emphasizes data-driven approaches to ensure fair and accurate compensation for DERs. For example, the order notes, Phase One of the VDER tariff seeks to use locational and temporal data to provide compensation based on the actual value DERs provide to the grid at specific times and places. Order on Net Energy Metering Transition further elaborates on the transition from net energy metering (NEM) to the Value Stack methodology, a compensation mechanism that uses performance and locational data to value DERs comprehensively. It highlights the need for robust data collection, stating the Value Stack methodology requires utilities to collect and provide data on locational grid needs, renewable generation output, and other key metrics to ensure fair compensation and encourage DER deployment where it is most beneficial.	Advanced Metering Infrastructure Energy Efficiency Integration and Innovation Billing and Compensation Data Sharing	15-E-0050 - 3/2016 Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of Consolidated Edison Company of New York, Inc. for Electric Service ("Con Edison 2015 Electric Rate Case"), Order Approving Advanced Metering Infrastructure Business Plan Subject to Conditions ("AMI Order") 15-E-0751 - Order on Phase One Value of Distributed Energy Resources Implementation Proposals, Cost Mitigation Issues, and Related Matters 15-E-0751 - 3/2017 In the Matter of the Value of Distributed Energy Resources ("VDER Proceeding"), Order on Net Energy Metering Transition, Phase One of Value of Distributed Energy Resources, and Related Matters ("VDER Transition Order")
8	**Data**	**Data requirements**	Utilities have deployed AMI to provide real-time data on energy usage and enhance the accuracy and consistency of data collection. AMI implementation includes standardized protocols for data collection, storage, and processing, and promotes uniformity across utilities. Online portals have also been established to provide stakeholders with access to detailed energy usage data, system performance metrics, and DER integration information. However, some utilities, such as Central Hudson are still in the process of deploying AMI or have not fully implemented it across their service areas. Despite the progress made with AMI deployment and online portals, data requirements remain a barrier due to interoperability issues (different utilities using varying technologies and systems), data granularity variation (some utilities do not collect data at the same level of detail, affecting the consistency and reliability of forecasting and planning). Case 20-E-0197 emphasizes the need for a unified data platform that integrates data from all utilities, DERs, and other stakeholders. This platform would standardize data collection and processing, reducing inconsistencies. In addition, Case 18-M-0084 includes the development of a centralized data repository where all relevant data can be stored and accessed by authorized parties. This would streamline data management and improve forecasting accuracy.	Advanced Metering Infrastructure Energy Efficiency Integration and Innovation Billing and Compensation Data Sharing	Case 20-E-0197: Proceeding on Motion of the Commission to Implement Transmission Planning Pursuant to the Accelerated Renewable Energy Growth and Community Benefit Act ("Transmission Planning Proceeding") Case 18-M-0084: In the Matter of a Comprehensive Energy Efficiency Initiative ("NENY Proceeding"), Order Adopting Accelerated Energy Efficiency Targets ("Accelerated Efficiency Order")

Item	Category	Topic	Topic Definition	Description	Direct/ Indirect	Rating	Rationale
9	**Data**	**Modeling**	Standardization of methodology/approaches to consistently use available data and create assumptions required as input into models to forecast load, energy, and demand.	Differences in data availability and granularity, at the utility level due to different stages of grid modernization, creates inconsistency in modeling approaches which negatively impacts coordination of DER resources, evaluation of customer needs, and develop services.	Direct	Moderate Barriers	The moderate barrier rating reflects the challenges caused by the lack of standardized modeling methodologies and inconsistent use of model inputs, such as data granularity, frequency, and assumptions about growth. These variations arise because utilities are at different stages of grid modernization, resulting in differences in how they collect and process data. This inconsistency in modeling practices complicates the coordination of Distributed Energy Resources (DERs) and grid modernization efforts. For instance, the use of varying assumptions and data inputs can lead to inefficiencies in evaluating customer needs, planning for DER integration, and developing appropriate services. It can also result in inequities in how DERs are valued and compensated, even when they provide similar benefits to the grid. Despite these challenges, the barrier does not completely hinder progress. Ongoing initiatives, such as the Value of DER and Grid of the Future proceedings, aim to address the lack of standardization by recommending improvements to the modeling frameworks and data inputs used by utilities. These efforts suggest that, while the current inconsistency creates challenges, it is being addressed through regulatory guidance and stakeholder collaboration.

Item	Category	Topic	Supporting Info	Technical Topics	Relevant Proceeding
9	**Data**	**Modeling**	The Reforming the Energy Vision (REV) initiative emphasizes the need for a regulatory and business model that supports innovation and competition while moving beyond the traditional, static model of utility service. REV outlines the opportunity to create a more customer-friendly, efficient, and sustainable energy system to address modern challenges. However, achieving this vision requires overcoming barriers associated with integrating new technologies and practices, including those tied to distributed energy resources (DERs) and grid modernization. In addition, the AMI Order highlights specific challenges related to integrating Advanced Metering Infrastructure (AMI) data into utility planning. While AMI systems generate substantial real-time data, utilities must develop new modeling frameworks capable of leveraging this data effectively. Without such advancements, inconsistencies in modeling capabilities among utilities hinder efforts to coordinate distribution system planning and DER integration at the state level. In the filing In the Matter of the Value of Distributed Energy Resource Comments on the Staff Report in the Value of Distributed Energy Resources Proceeding, stakeholders expressed concerns about the potential for inconsistent application of forecasting methods, which could lead to disparities in DER valuations. The Joint Utilities (JU) noted that varying forecasting approaches might result in unequal compensation for DERs, despite them providing similar benefits to the grid. They advocated for standardized forecasting methodologies to ensure fair and consistent valuation of DER. See Case 15-E-0751: Value of Distributed Energy Resources (VDER): Demand response is valued as part of the broader Value Stack methodology, which assigns specific values to different components of DER contributions, including energy, capacity, environmental, and distribution system values. The proceeding states, in future filings, each of the Joint Utilities should include in their MCOS study filings a discussion of the robustness of their forecasting methods over the 10-year planning horizon to be used for the studies. The Joint Utilities shall include a discussion of how longer-term projections for electrification, rising temperatures, and extreme weather events are incorporated into their load forecasts. Since then, the Grid of the Future Proceeding (Case 24-E-0165), launched in April 2024, has focused on the need for more granular and localized load forecasting to better predict energy demand from electric vehicles (EVs) and other electrification efforts. Stemming from this, the New York PSC recently directed utilities to adopt more granular, localized load forecasting processes to better predict energy demand from EVs and other electrification efforts. This approach will complement broader statewide forecasts developed through the Coordinated Grid Planning Process (CGPP), creating a more integrated and efficient resource plan for the state's distribution systems. Utilities have been instructed to explore at least two options for load forecast development: relying on existing forecasts from other proceedings, like the CGPP, or developing their own bottom-up forecasts that provide detailed insights into specific service territories.	Advanced forecasting DER Interconnection	14-M-0101 - 2/2015 Proceeding on Motion of the Commission in Regard to Reforming the Energy Vision (REV Proceeding), Order Adopting Regulatory Policy Framework and Implementation Plan 15-E-0751 - 3/2016 Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of Consolidated Edison Company of New York, Inc. for Electric Service – Advanced Metering Infrastructure Business Plan

Item	Category	Topic	Topic Definition	Description	Direct/ Indirect	Rating	Rationale
10	**Markets**	**Competitive energy markets**	Established regulatory mechanism in which consumers can procure energy products and services outside of their regulated electricity provider. Competitive energy markets operate under established rules.	Competitive energy markets and energy services provide consumer choice and enable market participants to develop and expand services which support clean energy and DERs.	Direct	Moderate Tailwinds	The Reforming the Energy Vision (REV) initiative builds on NYISO's wholesale market to develop retail-level Distributed Energy Resources (DER) markets, facilitating services like demand response and energy storage. While this encourages investment in DERs and supports energy transition, it's a work in progress, as market mechanisms and stakeholder participation are still evolving to ensure comprehensive market access and coordination. In 2024, NYISO's implementation of new market rules to integrate DERs is a step forward, allowing aggregations of DERs over 10 kilowatts (kW) to participate in the wholesale electricity market. However, the 10 kW minimum size requirement has posed a barrier for smaller resources, potentially limiting widespread adoption. Despite these challenges, the ongoing development of this market under FERC's Order 2222 is seen as a positive step in advancing the integration of DERs into the grid.

Item	Category	Topic	Supporting Info	Technical Topics	Relevant Proceeding
10	**Markets**	**Competitive energy markets**	The Reforming the Energy Vision (REV) endeavors to transform the energy market by integrating DERs and enhancing customer participation. It builds on New York's established wholesale energy market managed by NYISO to inform DER market mechanisms by developing retail-level markets to facilitate energy services, like demand response, energy storage, and community energy programs. It also emphasizes stakeholder participation in shaping markets based on existing expertise. NYISO's new DER integration program is a significant step toward aligning with FERC's Order 2222, enabling aggregated DERs to participate in wholesale markets. However, the 10 kW minimum size requirement for DERs has raised concerns about limiting participation from smaller resources, including residential solar arrays and electric vehicles, which could slow New York's progress toward its renewable energy goals. Despite this, NYISO's approach is still viewed as a positive development, helping to move the state closer to its clean energy targets while advancing DER integration on a larger scale.	Integrated Planning Grid Operations DER Interconnections Billing and Compensation	14-M-0101 - 2/2015 Proceeding on Motion of the Commission in Regard to Reforming the Energy Vision (REV Proceeding), Order Adopting Regulatory Policy Framework and Implementation Plan FERC Order 2222

Item	Category	Topic	Topic Definition	Description	Direct/ Indirect	Rating	Rationale
11	**Markets**	**Market design**	Structure of the market including the rules, roles of different market participants, process for connecting, procuring, dispatching, types of services available, and information sharing.	Development of distribution markets to facilitate transactions and deliver services require timely implementation to capitalize on opportunities. Processes for developing markets, currently, are focused on reducing risk which can limit efficiency and effectiveness of DER integration.	Indirect	Substantial Barriers	Market design in New York presents a high impact due to delays in updating market structures and processes via regulatory approval, which hinder the efficient integration of Distributed Energy Resources (DERs). Current market design efforts focus on reducing risk, but this approach slows down the adoption of DERs and renewable resources. Despite some advancements, such as the co-located storage model and DER aggregation proposals, these efforts have faced implementation delays. This slow market evolution restricts efficiency gains and may lock in suboptimal infrastructure investments, limiting the system's ability to integrate cleaner, more flexible energy solutions.

Item	Category	Topic	Supporting Info	Technical Topics	Relevant Proceeding
11	**Markets**	**Market design**	Market design in New York presents a regulatory barrier to the efficient integration of distributed energy resources (DERs) due to the complex nature of electricity systems and the slow pace of market development. The electricity grid requires continuous balance between supply and demand, with generation and consumption occurring almost simultaneously. This inherent characteristic of electricity, coupled with the physical limitations of the grid and the lack of large-scale energy storage solutions, necessitates a regulatory framework focused on maintaining system reliability. Historically, this framework favored centralized power generation, leading to the development of a system that prioritized economies of scale and limited the use of DERs. The regulatory framework in place was designed to ensure utilities did not charge monopolistic rents and could secure low-cost capital. Over time, as demand grew and the economics of energy generation shifted, the system was restructured to support competition in power generation, while distribution remained under traditional regulation. However, the transition to incorporating DERs has faced challenges due to the slow pace of market design updates and implementation. These delays are particularly evident in the development of participation models for energy storage resources (ESRs) and hybrid storage resources (HSRs). In 2021, the New York Independent System Operator (NYISO) implemented a co-located storage (CSR) model, allowing energy storage resources to pair with intermittent renewable generation sources like solar or wind. This model was designed to improve performance and reduce development costs by sharing interconnection facilities. While the CSR model was an important step, the NYISO has also been working on expanding these models to include other resource types, such as landfill gas and combustion turbines. However, these efforts are still under development and are subject to delays. The creation of a distributed energy resource (DER) aggregation model was proposed in 2020 and was accepted by the Federal Energy Regulatory Commission (FERC). However, full implementation has not yet occurred, with the target date for implementation set for 2023. This delay, along with the ongoing development of the aggregation model, highlights the slow pace at which market designs are being updated to facilitate DER integration. The delayed implementation of these market designs presents risks of locking in inefficient investments and limits the ability to optimize the use of cleaner and more efficient generation technologies. As market designs are focused on reducing risks, they may inadvertently slow down the adoption of DERs and hinder the integration of renewable resources.	Integrated Planning Energy Efficiency Integration and Innovation Beneficial Locations of DERs and NWA Hosting Capacity	18-E-0130 - 12/2022 Energy Storage Proceeding, New York State Department of Public Service and the New York State Energy Research and Development Authority New York's 6 GW Energy Storage Roadmap: Policy Options for Continued Growth in Energy Storage ("Energy Storage Roadmap"). 14-M-0101 - 2/2015 Proceeding on Motion of the Commission in Regard to Reforming the Energy Vision (REV Proceeding), Order Adopting Regulatory Policy Framework and Implementation Plan

Item	Category	Topic	Topic Definition	Description	Direct/ Indirect	Rating	Rationale
12	**Markets**	**Market-driven solutions**	Solutions developed through market forces (interactions of market participants) to solve market issues.	Energy services that utilize private investment in DERS and the distribution infrastructure to address customer and system needs.	Direct	Few Tailwinds	Initiatives such as large-scale renewable energy projects and private capital mobilization through entities like the NY Green Bank are promising, but the overall scale of investment remains insufficient. Bulk Non-Wires Alternatives (NWA) RFPs have yet to result in any selected projects, highlighting the challenges of scaling NWAs for bulk system needs. These RFPs aim to identify market-driven alternatives to grid investments that align with state policy goals, such as the CLCPA. However, New York's Bulk NWA procurements have faced challenges in meeting the scale and reliability requirements of bulk system needs.
13	**Operation & Planning**	**Coordinated grid planning**	Planning activities that span the distribution systems, and include various stakeholders such as utilities and system operators, State regulators and energy offices.	An established, coordinated, grid planning process across the distribution systems increases the efficiency of DER deployment to meet the state energy targets by aligning efforts among stakeholders.	Direct	Moderate Tailwinds	Since the enactment of the Accelerated Renewables Act, the Commission has directed electric utilities to develop and propose a new Coordinated Grid Planning Process to help ensure a transparent approach that integrates distribution considerations. This coordination helps identify critical investments, such as those supporting renewable energy zones, but does not fully eliminate challenges like project siting delays or stakeholder alignment. Thus, while impactful, the support does not completely transform the implementation of these activities.

Item	Category	Topic	Supporting Info	Technical Topics	Relevant Proceeding
12	**Markets**	**Market-driven solutions**	The DSIP Order explicitly aims to create a marketplace for DER integration by enhancing transparency and access to grid data. By encouraging coordinated planning and stakeholder engagement, the Order facilitates the development of market-driven strategies that incentivize utilities to attract private investment in grid modernization and DER deployment. In 2024, New York executed contracts for 23 large-scale land-based renewable energy projects, expected to generate over $4.7 billion in private investment and provide 2.3 gigawatts of clean energy. The NY Green Bank leverages public capital to mobilize private sector investment and accelerate the deployment of clean energy and renewable infrastructure. To meet the Climate Leadership and Community Protection Act (CLCPA) goals, New York needs tens of billions of dollars in additional investments by 2030. The Brattle Group's 2020 New York Electric Grid Evolution Study estimated that over $50 billion would be required for grid modernization and renewable energy deployment. While private investment is progressing, it remains below the level necessary to meet the CLCPA targets.	Integrated Planning Energy Efficiency Integration and Innovation Beneficial Locations of DERs and NWA	16-M-0411 - 3/2017 In the Matter of Distributed System Implementation Plans, Order on Distributed System Implementation Plan Filings
13	**Operation & Planning**	**Coordinated grid planning**	Planning to accelerate renewable energy implements the Accelerated Renewable Energy Growth and Community Benefit Act to modernize distribution systems and ensure renewable energy integration. It requires utilities to develop and propose a coordinated grid planning process, integrating distribution considerations. It also requires DPS Staff, NYISO, and utilities work together to identify beneficial investments for renewable energy zones.	Integrated Planning Grid Operations DER Interconnections Energy Storage Integration Hosting Capacity Beneficial Locations of DERs and NWAs	CASE 20-E-0197--Proceeding on Motion of the Commission to Implement Transmission Planning Pursuant to the Accelerated Renewable Energy Growth and Community Benefit Act

Item	Category	Topic	Topic Definition	Description	Direct/ Indirect	Rating	Rationale
14	**Operation & Planning**	**Energy planning**	Distribution and management of energy resources to support the attainment of state energy mandates.	Framework that assesses future energy and infrastructure needs on the distribution system across different utilities--including current resources, current infrastructure, and energy targets-- to determine the locations, types, and quantities of resources that will efficiently meet system needs and facilitate achievement of energy goals.	Indirect	Few Tailwinds	Planning plays a role in enabling New York to meet its renewable energy and decarbonization targets by ensuring the efficient deployment of resources. However, while utilities are increasingly aligning investments with state mandates, planning is complicated by conflicting priorities, necessary grid upgrades, DER integration, or large-scale infrastructure changes required for full transition.
15	**Operation & Planning**	**Inter-connection (distribution system)**	Processes and rules by which energy projects connect to the electrical grid to ensure regulatory compliance, enhance certainty across providers, facilitate the integration of new technologies, and prohibit preferential treatment.	Streamlined processes, specifications, and policies foster efficient, timely, safe, and reliable DER interconnections.	Direct	Significant Tailwinds	The standardized interconnection requirements (SIR) help to streamline DER integration, increasing efficiency, reducing lead times and delays which increase and speed interconnections supporting state objectives. New York's utilities are required to adopt transparent interconnection procedures aligned with state DER goals, which enhances certainty and eliminates preferential treatment. These efforts directly address the challenge of integrating renewable energy into the grid, improving the efficiency of energy project development and accelerating the state's transition to clean energy. The state-specific regulatory efforts thus have a high impact, as they directly affect the successful deployment of DERs and the overall functioning of the energy grid.

Item	Category	Topic	Supporting Info	Technical Topics	Relevant Proceeding
14	**Operation & Planning**	**Energy planning**	In the DSIP Order, utilities assess their current state of operations to identify gaps between existing infrastructure and the future needs of a renewable energy-driven grid. The Order notes that the assessment of current operations provides utilities with a baseline for identifying gaps in meeting state energy and emissions targets, allowing for targeted investment to build the necessary infrastructure to support distributed energy resources (DERs) and renewable energy facilities. This assessment sets the foundation for integrated planning, enabling the efficient procurement and deployment of resources to meet system and customer demands.	Integrated Planning Energy Efficiency Integration and Innovation Hosting Capacity Beneficial Locations of DERs and NWA	16-M-0411 - 4/2016 Initial Guidance Order for Distributed System Implementation Plans
15	**Operation & Planning**	**Inter-connection (distribution system)**	The DSIP Order supports DER integration through efficient system planning and standardized processes. It establishes requirements for utilities to adopt transparent interconnection procedures that align with state DER goals, and encourages the development of streamlined interconnection processes to facilitate quicker adoption of renewable energy projects. The New York State Standardized Interconnection Requirements (SIR), established in 1999 and updated in 2016, explain the process and information required for submitting interconnection applications to utilities. Equipment tested and certified by a Nationally Recognized Testing Laboratory (NRTL) is no longer required to be submitted to the PSC for certification. Instead, equipment testing & certification information can be submitted to the utilities by the applicant.	DER Interconnections Hosting Capacity Grid Operations Beneficial Locations for DERs and NWAs Integrated Planning	Order 2023 - 7/2023 Improvements to Generator Interconnection Procedures and Agreements 16-M-0411 - 3/2017 In the Matter of Distributed System Implementation Plans, Order on Distributed System Implementation Plan Filings

Item	Category	Topic	Topic Definition	Description	Direct/ Indirect	Rating	Rationale
16	**Operation & Planning**	**Operation of distributed energy resources (DERs)**	The process of efficiently and reliably ensuring uninterrupted power when distributed resources are interconnected into the distribution system.	Achieving decarbonization and renewable goals are supported by increased DERs as they provide clean energy, decentralization, and locational benefits; however, intermittent DERs present a challenge for reliability. As DERs provide a greater percent of electricity, the planning process will need to evolve with the types and capabilities of the resources on the distribution system to optimize operation.	Direct	Moderate Barriers	The operation of Distributed Energy Resources (DERs) is assigned a medium DSIP impact rating because managing intermittent DERs requires balancing supply and demand to maintain grid reliability as their share of electricity generation increases. Utilities face limitations in operational experience and infrastructure to handle the complexities of an integrated grid at scale. Regulatory frameworks, such as the REV proceeding, propose solutions like Distributed System Platform (DSP) functions and ratemaking reforms to address these issues.

Item	Category	Topic	Supporting Info	Technical Topics	Relevant Proceeding
16	**Operation & Planning**	**Operation of distributed energy resources (DERs)**	The operation of Distributed Energy Resources (DERs) in New York faces regulatory barriers, as highlighted in the Reforming the Energy Vision (REV) and Value of Distributed Energy Resources (VDER) proceedings. Efficient integration of DERs requires consistent treatment of market dynamics and values across all grid segments. Track Two of the REV proceeding identifies ratemaking reforms as essential to support the economic expansion of DERs. Operationally, utilities face challenges in managing a more distributed and dynamic grid. The introduction of DERs and intelligent grid technologies requires utilities to respond rapidly to changes in system topology without compromising reliability. However, most utilities lack experience operating an integrated grid at scale, resulting in skepticism about the reliability of DERs as a resource. This operational resistance is a barrier to broader adoption. The REV framework suggests that utilities should take on Distributed System Platform (DSP) functions to optimize DER use. This integration would align utilities' regulatory obligations, operational capabilities, and economic incentives. Separating DSP functions into distinct entities would undermine this alignment, reinforcing skepticism and resistance among utilities. Additionally, the New York Public Service Commission (NYPSC) has highlighted the need for consumer protections in the DER market. Establishing Uniform Business Practices for DER providers and considering DER performance bonds are proposed measures to ensure consumer interests are safeguarded.	Integrated Planning Grid Operations DER Interconnections	14-M-0101 - 2/2015 - Proceeding on Motion of the Commission in Regard to Reforming the Energy Vision (REV Proceeding), Order Adopting Regulatory Policy Framework and Implementation Plan 15-E-0751 - 03/2017 - In the Matter of the Value of Distributed Energy Resources ("VDER Proceeding"), Order on Net Energy Metering Transition, Phase One of Value of Distributed Energy Resources, and Related Matters ("VDER Transition Order")

Item	Category	Topic	Topic Definition	Description	Direct/ Indirect	Rating	Rationale
17	**Operation & Planning**	**Stakeholder engagement**	Processes that support improvements by encouraging engagement, input, and feedback from stakeholders.	Collaborative process that solicits stakeholder feedback to promote a balanced approach to assessment of past performance and proposed plans developed to pursue state energy goals.	Indirect	Significant Tailwinds	Stakeholder engagement plays a pivotal role in New York's energy transition, as it enables utilities, regulators, and community members to collaborate effectively to align clean energy initiatives with state goals. Through proceedings like the DSIP filings and UBP-DERS, stakeholders provide critical input that helps shape policies and programs, enhancing transparency, trust, and adaptability. This engagement fosters a more inclusive, balanced approach to grid modernization and clean energy integration, which directly supports the achievement of New York's REV goals. As such, stakeholder engagement significantly impacts the state's ability to implement and refine its energy strategies.
18	**Operation & Planning**	**System assessment**	Review of current system conditions and capabilities and state of operation.	A structured process that routinely evaluates current conditions to ensure efficiency and keep track of changes necessary to maintain safety and reliability. System assessments identify and evaluate grid limitations and plan necessary upgrades for the integration of DERs. These assessments are essential for utilities to understand existing system conditions and the changes required to meet future energy goals.	Direct	Moderate Tailwinds	New York's REV directives require utilities to assess and modernize the grid to accommodate DERs and the DSIP process ensures utilities develop necessary capabilities such as hosting capacity analysis and real-time system monitoring. This directive therefore supports a smooth transition to a decentralized energy model, enabling utilities to meet both regulatory targets and customer needs effectively. Some barriers may include the complexity of coordinating assessments across utilities, lack of standardized methodologies, and data-sharing limitations.

Item	Category	Topic	Supporting Info	Technical Topics	Relevant Proceeding
17	**Operation & Planning**	**Stakeholder engagement**	The REV emphasizes the need for inclusive stakeholder participation to achieve REV's goals of grid modernization, energy efficiency, and clean energy integration. As noted in the Framework Order, engaging stakeholders, including utilities, developers, consumer advocates, and community groups, is essential to achieving transparency and ensuring that all voices are heard during the transformation process. In the DER Oversight Proceeding, stakeholder engagement is fundamental to developing a robust oversight framework for Distributed Energy Resource (DER) providers and products. The Uniform Business Practices for Distributed Energy Resource Suppliers (UBP-DERS Order) emphasized that stakeholder input is critical to balancing consumer protection, market innovation, and the equitable integration of DERs into New York's energy system. The Thermal Energy Network Proceeding also highlights stakeholder engagement as essential for implementing pilot projects under the Utility Thermal Energy Network and Jobs Act. The Order Providing Guidance on Development of Utility Thermal Energy Network Pilot Projects noted, stakeholder engagement ensures that pilot designs address community needs, environmental goals, and economic development opportunities, fostering support for this transformative infrastructure initiative.	Integrated Planning Grid operations	15-M-0180 - 10/2017 In the Matter of Regulation and Oversight of Distributed Energy Resource Providers and Products ("DER Oversight Proceeding"), Order Establishing Oversight Framework and Uniform Business Practices for Distributed Energy Resource Suppliers ("UBP-DERS Order") 22-M-0429 - 9/2023 Proceeding on Motion of the Commission to Implement the Requirements of the Utility Thermal Energy Network and Jobs Act, Order Providing Guidance on Development of Utility Thermal Energy Network Pilot Projects 14-M-0101 (21-Jan-2016): Proceeding on Motion of the Commission in Regard to Reforming the Energy Vision, Order Establishing the Benefit Cost Analysis Framework
18	**Operation & Planning**	**System assessment**	REV is foundational for the integration of DERs and includes directives for utilities to conduct system assessments to identify necessary upgrades and changes. It emphasizes the importance of understanding current system conditions to facilitate the transition to a more distributed and resilient energy system. Regulation and Oversight of Distributed Energy Resource Providers and Products (15-M-0180) discusses the regulation and oversight of DER providers and products. It includes requirements for utilities to assess their systems to ensure they can support the integration of DERs and protect consumers from potential issues.	Grid Operations Hosting Capacity Advanced Metering Infrastructure Data Sharing	14-M-0101 (29-Apr-2015): In the Matter of Regulation and Oversight of Distributed Energy Resource Providers and Products 15-M-0180 (19-Oct-2017): In the Matter of Regulation and Oversight of Distributed Energy Resource Providers and Products ("DER Oversight Proceeding"), Order Establishing Oversight Framework and Uniform Business Practices for Distributed Energy Resource Suppliers ("UBP-DERS Order")

Item	Category	Topic	Topic Definition	Description	Direct/ Indirect	Rating	Rationale
19	**Operation & Planning**	**Workforce development**	An adequately trained workforce that has the necessary skills to meet the demands of technology and market changes.	Limited supply of knowledgeable and skilled workforce required to support the energy transition.	Indirect	Moderate Barriers	Workforce development is a medium headwind due to its impact on the implementation of DSIP activities without entirely obstructing progress. While workforce shortages hinder the scalability of critical programs, such as thermal energy networks, ongoing efforts by entities like NYSERDA mitigate these challenges. Initiatives such as targeted training programs and funding solicitations help address labor shortages, but persistent gaps in skilled labor availability and delays in program execution remain barriers. This combination of progress and ongoing challenges justifies a medium impact rating, as the issue slows but does not fully halt energy transition efforts.
20	**Technology**	**Advanced grid technologies**	Equipment with multi-functional capability which enhance DER integration and improve grid efficiency/operational capabilities.	Installation and implementation of advanced technologies like smart inverters and automated control systems measurably enhance DER integration by improving grid efficiency and enabling advanced voltage and frequency regulation.	Direct	Moderate Tailwinds	Collaborative efforts through the Interconnection Technology Working Group (ITWG) and Interconnection Policy Working Group (IPWG) have established protocols to align advanced technologies like smart inverters and automated control systems with grid requirements. DSIP proceedings emphasize using advanced forecasting tools to predict DER growth and guide system planning. Despite these efforts, the impact in New York remains medium due to ongoing challenges in aligning policies and managing costs, limiting their ability to fully transform DER integration activities.

Item	Category	Topic	Supporting Info	Technical Topics	Relevant Proceeding
19	**Operation & Planning**	**Workforce development**	Workforce development presents a regulatory barrier to New York's energy transition due to a limited supply of adequately trained and skilled workers. For example, the clean heating and cooling (CH&C) industry faced a widening talent gap, which was exacerbated by anticipated growth in the sector and the retirement of experienced HVAC workers. The workforce shortfall impeded the development and deployment of CH&C technologies, critical components of the state's energy transition strategy. In response to this issue, NYSERDA initiated efforts in 2018 to develop a comprehensive Workforce Development strategy tailored to the state's CH&C industry. However, workforce shortages persisted, limiting the scalability and implementation of key programs. To address these gaps, NYSERDA has released three Clean Energy Workforce Development solicitations, totaling over $27 million, to support pipeline development, on-the-job training, and internships. These funds target the heat pump supply chain and aim to mitigate labor shortages in high-growth regions. However, staffing shortages, exacerbated by hiring freezes, retirements, and high turnover rates, continue to delay the implementation of critical programs, such as the thermal energy networks pilot (See Case 18-M-0084).	Integrated Planning	18-M-0084 - 4/2019 New York Utilities Report Regarding Energy Efficiency Budgets and Targets, Collaboration, Heat Pump Technology and Low- and Moderate-Income Customers
20	**Technology**	**Advanced grid technologies**	The Interconnection Process Improvement speaks to the Interconnection Technology Working Group (ITWG) and Interconnection Policy Working Group's (IPWG) work in enabling advanced DER technologies, including smart inverters, grid-edge devices, and automated control systems. Their efforts ensure the integration of these technologies aligns with grid requirements and supports automation in interconnection workflows. The ITWG developed testing protocols for smart inverter functionalities, enabling advanced voltage and frequency regulation technologies. The proceeding states advanced technology integration, such as smart inverters, has been enabled through the collaborative work of the ITWG, ensuring the reliability and functionality of interconnected resources. The DSIP proceeding explicitly focuses on advanced forecasting methodologies to predict DER growth, load variations, and grid impacts. Both the IPWG and ITWG contribute by refining interconnection processes and data collection to support accurate forecasting. It states utilities will use advanced forecasting tools to anticipate the effects of increasing DER penetration and guide system planning decisions.	Advanced forecasting Advanced Metering Infrastructure Grid operations Integrated planning Beneficial Locations of DERs and NWA	16-M-0411 - In the Matter of Distributed System Implementation Plans. 20-E-0543 - Proceeding on Motion of the Commission to Examine Certain Programs and Potential Amendments to the New York State Standardized Interconnection Requirements.

Item	Category	Topic	Topic Definition	Description	Direct/ Indirect	Rating	Rationale
21	**Technology**	**Technology Innovation**	Development of ideas and deployment of new technologies and solutions to facilitate attainment of energy goals.	Initiatives and working groups that bring stakeholders together to discuss, develop, and test new concepts and technologies that promote faster learning, deployment, and de-risking investments.	Indirect	Moderate Tailwinds	The Clean Energy Fund (CEF) provides programs and funding to enable stakeholders to test and scale new technologies. Support for innovation also includes streamlined regulatory processes and testing frameworks which accelerate deployment, de-risk investments, and remove barriers to the adoption of clean technologies. By fostering innovation, the CEF aids in advancing grid modernization, energy efficiency, and renewable energy integration, all essential for meeting New York's ambitious climate goals under the NE:NY initiative and CLCPA.
22	**Technology**	**Technology requirements**	Standards that outline interoperability and capabilities of technology, and filling gaps in technology across utilities.	Rapid changes in technology capabilities can lead to higher costs as equipment and devices become obsolete prematurely (stranded assets, early retirement). Balancing safety and reliability of technology without unnecessary costs is a challenge that needs to be addressed to promote broader integration of DERs and facilitate participation across customers.	Direct	Moderate Barriers	The Clean Energy Fund Proceeding highlights the need for statewide standards to ensure the interoperability of technologies across utilities, which is essential for broader DER participation. Similarly, the Energy Storage Roadmap points to significant gaps in long-duration energy storage technologies as a barrier to achieving the state's 6 GW energy storage target by 2030. While these gaps hinder progress, ongoing efforts like the development of Distributed System Platforms (DSPs) demonstrate that the issues are being addressed incrementally, reflecting the measurable but not prohibitive nature of the barrier.
23	**Technology**	**Transportation electrification**	Deployment of electric vehicles and electric vehicle charging infrastructure.	Framework to share locational information and forecast EV needs enables utilities and market participants to align infrastructure development with actual and projected EV demand, ensuring that the grid can accommodate the growing number of EVs and support the grid.	Indirect	Few Tailwinds	While initiatives like the EV Make-Ready Order and related pilot projects play a pivotal role in advancing EV infrastructure, some challenges associated with large-scale EV fleet deployment remain, particularly in urban areas constrained by limited space and aging electrical systems. Still, these initiatives are instrumental in advancing the state's electrification goals as they enhance overall EV infrastructure, including public charging and fleet electrification.

Item	Category	Topic	Supporting Info	Technical Topics	Relevant Proceeding
21	**Technology**	**Technology Innovation**	The Clean Energy Fund (CEF) drives market transformation and the development of advanced energy efficiency technologies, grid modernization solutions, and the commercialization of renewable energy technologies. These innovations are essential for accelerating energy efficiency and building electrification activities, enhancing grid reliability and flexibility, and integrating renewable energy into the grid. The policies and regulations that support innovation ensures continuous improvement and scalability of clean energy programs, supporting New York's ambitious climate targets under the NE:NY initiative and the CLCPA. The Innovation & Research Portfolio supports the development of innovative solutions to meet the State's climate targets, demonstration of grid modernization solutions, as well as accelerating the commercialization of existing solutions on their path to mass market adoption.	Energy Efficiency Integration and Innovation Integrated Planning	14-M-0094 (15-Sept-2022): Proceeding on Motion of the Commission to Consider a Clean Energy Fund, Order Initiating the New Efficiency: New York Interim Review and Clean Energy Fund Review 14-M-0101 (21-Jan-2016): Proceeding on Motion of the Commission in Regard to Reforming the Energy Vision, Order Establishing the Benefit Cost Analysis Framework
22	**Technology**	**Technology requirements**	The Clean Energy Fund Proceeding recognized that continued progress in the deployment of clean energy technologies and the transition to a clean energy future is dependent on addressing the barriers posed by the lack of uniformity and interoperability across technology platforms. It speaks to the need for statewide standards and platforms to integrate Distributed Energy Resources (DERs) into the grid effectively, highlighting how lack of standardized technology could hinder this process. The Energy Storage Roadmap for New York, aimed at achieving 6 GW of energy storage capacity by 2030, noted that the significant technological gaps in long-duration energy storage technologies must be addressed. The Roadmap urged that innovative solutions need to be funded to drive progress.	Hosting Capacity Grid Operations DER Interconnections	14-M-0094 - 5/2014 Proceeding on Motion of the Commission to Consider a Clean Energy Fund, Order Commencing Proceeding 18-E-0130 - 12/2022 Energy Storage Proceeding, New York State Department of Public Service and the New York State Energy Research and Development Authority New York's 6 GW Energy Storage Roadmap: Policy Options for Continued Growth in Energy Storage ("Energy Storage Roadmap"); 3/2024 In the Matter of Energy Storage Deployment Program, New York's 6 GW energy Storage Roadmap 2024 Update
23	**Technology**	**Transportation electrification**	The EV Make-Ready Order is focused on the deployment of electric vehicle supply equipment (EVSE) and supporting infrastructure to accelerate the state's transition to electric transportation. The order supports both public charging infrastructure and fleet electrification. It recognizes the growing need for widespread EV charging infrastructure to accommodate a range of EVs, including those in fleets, and facilitate greater adoption of electric vehicles in the state.	Electric Vehicle Integration Beneficial Locations for DERs and NWA Advanced Forecasting Integrated Planning	18-E-0138 - 7/2020 EVSE and Infrastructure Proceeding, Order Establishing Electric Vehicle Infrastructure Make-Ready Program and Other Programs ("EV Make-Ready Order")

APPENDIX C. DSP FRAMEWORK AND PROSPECTIVE DSIP ASSESSMENTS

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DSP Framework - Key Elements Definitions

Pillars	Functionalities	Functionalities definition	Example solutions	Technical Topics
Distribution planning and network development	Advanced forecasting (load and DERS)	Use of advanced systems, techniques, and models to forecast future electricity demand, supply, and energy storage.	Load/DER forecasting software like EPRI's LoadSEER	Advanced Forecasting
Distribution planning and network development	Integrated system planning processes	Development of integrated planning framework that combines generation, transmission, distribution, and energy storage needs to ensure efficient and reliable energy delivery.	Grid resource coordination framework, planning criteria	Integrated Planning
Distribution planning and network development	Power system modelling and network design	Detailed analyses to understand the impact of anticipated demand, supply, and energy storage growth on the network, guiding decisions on whether to reinforce existing infrastructure or adopt flexible solutions.	Non-Wires Alternatives (NWAs) planning, network model management systems, beneficial locations for DERs and NWAs	Beneficial locations for DERs, NWAs, Storage Integration, Transportation Electrification, Building Electrification, and Integrated Planning
Distribution planning and network development	Asset management strategy	The creation of appropriate strategies and policies to manage asset health and network development in a cost-efficient, safe and reliable way	Long term viability indexing (Asset Health indexing), Asset Investment Planning (AIP)	
Distribution planning and network development	Outage planning	Coordinating and communicating with relevant parties to ensure electric service is provided to utility customers with minimal disruption, while maintaining network resilience and efficiency through careful scheduling, risk assessment, and resource allocation.	Policies and procedure according to ISO 55000	
Distribution planning and network development	Tariff Design and Implementation	Engagement with relevant regulations and regulatory processes to ensure that tariff designs are compliant and can be implemented	Rate case templates, benefit cost modeling	
Distribution planning and network development	Transmission network engagement	Engagement with transmission owners to understand transmission network development plans and to communicate distribution network requirements	Joint planning meetings, shared databases, coordination protocols	
Distribution planning and network development	Emergency response planning	Developing strategies to ensure the network is resilient to emergency situations (e.g., storms, equipment failures) and can be managed quickly and efficiently to minimize disruption.	Storm response protocols, mutual aid agreements, mobile dispatch	
Interconnection and network reinforcement	Customer engagement and application support	Provision of appropriate services and support to customers to ensure that they have the necessary information to submit interconnection requests and can do so efficiently	Online "self-service" interconnection application portal with automated pre-screening	DERs Interconnection, Storage Integration
Interconnection and network reinforcement	Interconnection application management	The processing and timely response to interconnection applications, including making connection offers by evaluating, approving, and setting operating requirements for new DER connections (in case of flexible connection), while also tracking applications at an organizational level to ensure proper resourcing.	Queue management system, automated studies, tracking dashboard	DERs Interconnection
Interconnection and network reinforcement	Interconnection / reinforcement project planning	Ongoing customer and stakeholder engagement for the execution of new infrastructure projects in response to interconnection needs.	Milestone tracking, stakeholder communication platform, project timeline tools (project management functions)	DERs Interconnection
Interconnection and network reinforcement	Project design and optioneering	The high-level and detailed design of interconnection/reinforcement projects to ensure that they comply with relevant standards, regulation and legislation and consider an appropriate range of options (e.g. physical reinforcement v. flexibility)	Flexible interconnection, cost estimation tools, alternative analysis templates	DERs Interconnection
Interconnection and network reinforcement	Project tendering and contracting	The procurement of necessary materials and labor to execute interconnection/reinforcement projects in a timely and cost-effective manner	Online procurement platform, vendor database, contract templates	DERs Interconnection
Interconnection and network reinforcement	Construction project management	Management of interconnection/reinforcement construction projects to ensure installation / building / commissioning of assets according to required standards / regulation / legislation / consents	Field reporting app, schedule tracking, quality assurance tools	DERs Interconnection
Interconnection and network reinforcement	Charges for network connection and use	The charging of customers for the connection of assets to the network and the use of the network	Cost calculator, payment processing, cost share agreements, usage tracking	DERs Interconnection
Interconnection and network reinforcement	Connection data provision	Providing appropriate data to relevant parties (e.g. DER developers) to inform DER development (e.g. system needs, curtailment information, network topology)	Hosting capacity maps, beneficial Locations for DERs and Non-Wires Alternatives, IEDR	Hosting Capacity, DER Interconnection, Beneficial Locations for DERs, Non-Wires Alternatives, Storage Integration, Data Sharing
Distribution network operations	Asset intervention planning	The application of asset management strategies and policies to the assets on the network to ensure that appropriate interventions are taken on assets to keep the network operational and safe	Enterprise asset management systems (EAM), geographical information system (GIS), Asset performance management (APM), Enterprise Resource Planning (ERP) System, Maintenance Management System (MMS)	Grid Operations, Grid Asset Management
Distribution network operations	Operational planning	Running near-real-time and look-ahead network analyses to identify physical constraints and develop measures and action plans necessary to keep the network balanced and restore the network in case of faults.	Load forecasting, constraint analysis, switching order management	Grid Operations, Advanced Forecasting
Distribution network operations	Network control	The execution of measures to keep the network operational such as through switching operations, load balancing and fault isolation.	ADMS, volt/var optimization, automated switching	Grid Operations
Distribution network operations	Planned Outage management	The execution of planned outages according to plans and live network conditions to ensure that required network interventions can go ahead safely	Modern workforce management system w/ crew tracking/status features, switching management	Grid Operations
Distribution network operations	Inspection and maintenance	The planning and execution of inspection and maintenance practices to ensure that assets are appropriately maintained and that asset condition is accurately understood	Crew dispatch, restoration tracking, customer communications	Grid Operations
Distribution network operations	Fault Detection and Service Restoration	The appropriate identification and resolution of faults during unplanned outages and emergency situation and using an appropriate method including remote monitoring systems and the dispatch of response teams	Automated fault location, isolation, and service restoration (FLISR), fault prediction, automated restoration, outage management system (OMS), work management system	Grid Operations
Distribution network operations	Distribution system stakeholder engagement and coordination	Engagement, coordination and data sharing with relevant stakeholders in the distribution system (e.g. system operators, customers, embedded distributors, DER owners, etc.) to ensure that network operations are aligned to their requirements to operate a safe and reliable network	Data sharing portal, operational coordination platform, communication system	Grid Operations

DSP Framework - Key Elements Definitions

Pillars	Functionalities	Functionalities definition	Example solutions	Technical Topics
Distribution network operations	Supply of grid operational services	The supply of operational services to alleviate constraints on the transmission and/or distribution networks. For example, the operation services allow for automatic actions on the distribution network (facilitated by DNO/DSO) that can relief constraints on the transmission or boundary networks.	Automated reactive power/voltage support coordination system	Grid Operations
Distribution network operations	Network Visibility and Control, and Situational Awareness	The capability to deploy and maintain advanced sensing, monitoring, and control technologies across the distribution network that provide visibility and control from grid-edge devices to DER interfaces. The collection, presentation and analysis of the data needed to understand real-time network conditions. For example, SCADA data is analyzed and insights are provided to the operators e.g. CB open, alarms, etc.	Substation automation, distribution automation, fault indicators, protection relays, sectionalizing devices, reclosers, D-Statcom	Grid Operations
Distribution network operations	Communication Infrastructure	The ability to deploy, operate, and maintain advanced communication infrastructure to enable data exchange between grid devices, edge devices, and control systems (e.g. WAN, FAN, BAN)	Network management system, fiber optics, 4/5g, AMI communications network	Grid Operations
Distribution network operations	Emergency Operations	Addressing emergencies (e.g. forest fire, storms) by assessing damages, minimizing disruption, and prioritizing vulnerable customers.	Damage Assessment, Storm mode ADMS	Grid Operations
Distribution network operations	Optimizing Network Infrastructure	The capability to dynamically optimize network configuration and resource dispatch based on real-time conditions while managing constraints and maximizing the value of distributed energy resources.	Management of flexible connection, Intertrip schemes	Grid Operations
Distribution network operations	Managing Power Quality	The process of ensuring that the quality of electrical power meets the requirements for the proper operation of electrical systems and equipment.	VVO, advanced inverters	Grid Operations
Market design and integration (MDI)	Forecasting Flexibility Needs and Availability	The forecasting network constraints, calculating the amounts and types of flexibility needed to alleviate those constraints, and determining the amounts and types of flexibility available to serve those needs.	Constraint identification, flexibility valuation, and flexibility availability tracking	Grid Operations
Market design and integration (MDI)	Flex services market or rule-based flex allocation	Establish and implement rules and processes for flexibility markets or regulated congestion mechanisms, including requests, trades, settlements, and contractual agreements. This may involve running proof of concept(s) to explore end-to-end business processes, data sharing, and compensation mechanisms.	Trading platform, settlement system, rules-based flexibility management system (ADMS/DERMS)	Market Operations
Market design and integration (MDI)	Flexibility coordination	Multi-party coordination of planning and operations to ensure that the right levels of flexibility are dispatched and can be accommodated on the network.	DERMS, DSO interface, dispatch optimization	Grid Operations
Market design and integration (MDI)	Market analysis and oversight	Analyzing market trends and consumer behavior, along with conducting ex post evaluations, to understand past performance and predict future market dynamics.	Performance monitoring, trend analysis, market metrics dashboard	Market Operations
Market design and integration (MDI)	Market and Customer Data Management	The capability to securely collect, process, and exchange data between market participants, customers, and grid operators while maintaining data privacy and enabling efficient market settlement.	Data warehouse platform, privacy-compliant data exchange system, encrypted data transfer protocols	Market Operations
Market design and integration (MDI)	Market Information sharing	~~S~~haring market rules and requirements with flexibility providers to allow for efficient integration and utilization of flexible resources in the energy market	Market portal, data access platform, reporting system	Market Operations, Data Sharing
Market design and integration (MDI)	Manage DER Cyber Security	Develop and ensure compliance with cyber security requirements for DER providing services to the distribution system	Multi-factor authentication system, encryption protocols, penetration testing framework	Cyber Security
Market design and integration (MDI)	Registering grid service providers	Registering and verifying grid service providers' credentials, ensuring compliance with regulatory and security requirements	Grid service provider qualification portal, compliance verification system, automated credential checking	Market Operations
Market design and integration (MDI)	Determine & Signal Flexibility Needs	Translating network congestion into flexibility requirements	Network congestion mapping tool, flexibility requirement calculator, procurement portal	Grid Operations, Market Operations
Market design and integration (MDI)	Receive and evaluate grid service provider offerings	Receive and review grid service provider offerings to ensure that activating the offered service does not result in adverse distribution system impacts	DER impact assessment tool, grid constraint checker, automated bid screening system	Grid Operations
Market design and integration (MDI)	Select offered gid services	Determine which offered grid services should be activated to serve specific local and/or system needs.	Market clearing engine, bid-matching platform, price formation algorithm	Grid Operations, Market Operations
Market design and integration (MDI)	Schedule and activate grid service resource operations	Schedule and activate grid service resource operations (start, increase, decrease, stop) in accordance with operating agreements or contracted services	Automated dispatch system, DERMS control interface, real-time performance monitoring	Grid Operations
Market design and integration (MDI)	Grid service quantification and settlement	Recording and assessing grid service providers' performance to determine proper settlement between the buyer and seller of a grid service.	Advanced metering infrastructure (AMI), meter data management system (MDMS), grid service resource performance metrics, transaction management system(s), customer accounting & billing system	AMI, Billing and Compensation, Market Operations
Customer Services & Engagement	Analyze Customer Usage	The use of customer account and usage data to understand consumer behaviors and network loads	Smart meters, interval data collection, real-time outage detection (AMI)	AMI, Data Sharing, Advanced Forecasting, Customer Account Management, Billing and Compensation, Grid Operations, Market Operations
Customer Services & Engagement	Rate design/tariffs	The development of structures and methodol~~ogy~~ to determine how customers are charged or credited for electricity and grid services. This involves setting prices that reflect the cost of providing electricity, encouraging efficient energy use, and ensuring fairness among different customer groups. (e.g. Fixed charges, TOU, Demand charges)	TOU rates, peak pricing, dynamic tariffs	AMI, Data Sharing, Rate Analytics, Customer Account Management, Billing and Compensation, Grid Operations, Market Operations

DSP Framework - Key Elements Definitions

Pillars	Functionalities	Functionalities definition	Example solutions	Technical Topics
Customer Services & Engagement	Customer management and engagement	Appropriate management of the utility's relationship with its customers to ensure a comprehensive understanding of customers and their needs, that engagement with the customer is tracked and recorded and that the customer's needs are fulfilled.	Customer relationship management (CRM), self-service portal, communication platform	AMI, Data Sharing, Customer Account Management, Billing and Compensation
Customer Services & Engagement	Customer billing	Delivering an accurate, transparent and timely bill to customers according to the terms of their agreement with the utility and the data recorded by the utility's metering infrastructure (where relevant).	Smart billing, usage analysis, paperless options	AMI, Billing and Compensation
Customer Services & Engagement	Customer Program Development and Management	The engagement and enrollment of customers into programs that encourage saving, managing or producing localized energy. The engagement and enrollment of customers into programs that incentivize heating or vehicle transition to electric sources.	DR management, program enrollment portal, managed EV charging	Clean Heat, EE Integration, Storage Integration, EV Integration
Enablers	Governance	Appropriate governance to ensure that DSIPs are completed to the required standard, on time and with the correct data. This includes being able to show that investments are worthwhile against the relevant checks and balances (e.g. with BCAs)	Investment review board, decision-making framework, performance metrics dashboard	BCA, MCOS
Enablers	Data governance	Appropriate policies and tools covering the collection, storage, processing and sharing of data is key to ensuring efficient operations within business capabilities. Systems and technologies should enable this by ensuring that data is available to those who need it and of sufficient quality and granularity to fulfil its role.	Data quality framework, metadata management system, data access control policies	Data Sharing
Enablers	Cybersecurity and resilience	Security of systems and data should underpin everything that the utility does along with a consideration of business resilience. Greater integration of DERs potentially presents an increased threat surface and so policies and processes should be updated to reflect this. Cybersecurity also needs to consider business continuity and resilience in the event of a cybersecurity breach.	Security information and event management (SIEM), intrusion detection system, disaster recovery plan	
Enablers	Comprehensive System Architecture (CSA)	**Electric Infrastructure** includes the physical grid resources that meet the operational needs of grid operators, grid service providers, utility business managers, and customers to implement DSP capabilities (DER integration, grid control and monitoring, etc.). Components of the electric infrastructure include transmission-distribution interfaces, distribution substations, protection equipment, distribution lines, line switches, capacitors, distribution transformers, service transformers, smart inverters, EVs/EVSE, grid-scale solar and batteries, residential solar and batteries, dispatchable load and supply resources, etc. **Digital Infrastructure** includes both the business information systems (IT) and operations management systems (OT) that enable the utility to implement and advance essential DSP capabilities (i.e. market operations, DER integration, and flexible grid operations). Components of a utility's digital infrastructure include MDMS, DERMS, ADMS, SCADA, cyber security systems/devices, communication networks (wide-area, field area, and local), GIS, grid modelling and simulation tools, outage management systems, work management systems, asset management systems, data management systems, customer information/billing systems, data lakes, integration service platforms, customer web portals, intelligent customer-owned assets, etc. **Commercial Framework** includes an integrated set of standards that are applied to design, implement, and operate the commercial mechanisms that enable the utility's business and grid operations. Utility commercial mechanisms generally take the form of rates, tariffs, programs, and contracts; however, the need for other mechanisms could emerge as utility grid and business operations evolve. Each commercial mechanism also includes a distinct set of structural, technical, and procedural components which comply with the standards to enable effective integration of the overall commercial framework.	Examples of electric infrastructure include transformers, switchgear, overhead lines, towers, cables, etc. More advanced technologies will have a greater degree of monitoring and control capability through increased digitization. Examples of digital infrastructure include enterprise architecture framework, system integration platform, interoperability standards. Example elements of commercial framework include 1) definitions of all grid services/products purchased and sold by the utility; 2) structures, policies, and procedures that govern how the exchanges of products/services are conducted ; 3) standards for measuring, recording, managing, and sharing information about services/products delivered; 4) methods for fairly assessing and allocating the benefits and costs of grid services/products; and 5) methods of billing, crediting, and paying for grid products/services.	
Enablers	Stakeholder engagement and change management	Modern utilities are likely to undergo process and system transformation to deliver the required functionalities. These transformations should be managed by experienced teams who understand how to make change happen within (and not just to) an organization.	Change management toolkit, stakeholder communication platform, training management system	

Name	Source
California Future Grid Study	https://gridworks.org/initiatives/california-future-grid-study/
DOE Grid Modernization Initiative	https://www.energy.gov/gmi/grid-modernization-initiative
EPRI New York Grid Modernization Roadmap	https://www.epri.com/research/products/000000003002016843
GOTF Phase 1 Flexibility Study	https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId=%7B70ECBD94-0000-CB2A-BCB1-EB2D260FED0B%7D
Mass. Grid Modernization Advisory Council Recommendations, 2023	https://www.mass.gov/doc/gmac-final-report/download
National Grid DSO Strategic Plan	https://www.nationalgrid.co.uk/dso/dso-strategy
National Grid, MA Future Grid Strategic Plan	https://www.nationalgridus.com/Our-Company/MA-Grid-Modernization
Northern Power Grid Roadmap for Digitalization	https://www.northernpowergrid.com/sites/default/files/2022-06/DSAP%20December%202021%20June%20%202022.pdf
Ontario Energy Association, DSO Study	https://energyontario.ca/Files/OEA_DSO_Study_Dec_13_2023_FINAL.pdf
Scottish and Southern DSO Capabilities Framework	https://www.ssen.co.uk/globalassets/about-us/dso/publication--reports/dso-capabilities-roadmap-final-report.pdf
Seattle City Light Grid Modernization Roadmap	https://www.seattle.gov/documents/departments/citylight/gridmodroadmap.pdf
Smart Grid Interoperability Matrix (SG IMM)	https://gridwiseac.org/index.php/1812-2/
Smart Grid Maturity Matrix (SGMM)	https://www.sei.cmu.edu/our-work/projects/display.cfm?customel_datapageid_4050=48925

		Definition	Framework Pillar	Framework Enabler
General Requirements				
	Evolving plan	Easy to access, updatable, living plan		
	Architectural Focus	The Plan produced through this project shall describe a workable and actionable path for evolving the combined technical and commercial architecture of the electric grid/industry in New York State between now, 2030, and 2040. Quantitative analyses, diagrams, and inventories of grid-related elements processes, and organizations shall be provided when needed to describe and explain how architectural aspects of the Plan are affected by and/or affect results.		
	Broad Context	Consider key elements of the overall grid/industry architecture including (but not limited to) technology, commerce, government policy, utility regulation, utility capabilities, consumer/supplier capabilities, and consumer/ supplier participation.		
	Engagement with others	The Consultant is expected to engage extensively with market actors, regulators, engineers, analysts, researchers, economists, and other experts to identify and characterize relevant opportunities, challenges, and best practices that could affect the Plan produced by this project.		
	Relevant Information and Tools	In performing the work, the Consultant is expected to access, assess, and use relevant information and tools already produced by related PSC proceedings, NYSERDA programs, NYISO proceedings, utility programs, DOE programs, stakeholder organizations, and various working groups. As an early step, the Consultant shall collaborate with DPS and NYSERDA to identify and access said information and tools. Where necessary, the Consultant's work products shall properly cite the information sources and tools that informed development of the work products.		
	Information From NYS Initiatives	The Consultant shall perform the work in the context of New York's climate and energy goals, including the CLCPA and its goals for renewable energy and for electrification. NYSERDA expects this work to take full account (and advantage) of recent/current NYS initiatives – including the Power Grid Study (PGS), the Coordinated Grid Planning Process (CGPP), 0x40 proceeding, CLCPA Integration Analysis, Transportation Electrification Distribution Impact (TEDI) Study, the Holistic Grid Reliability Study (GE Study), Managed EV Charging initiatives, TOU initiatives (LIPA), Energy Storage initiatives, the latest Energy Storage Roadmap, DR initiatives, and the Market Design and Integration Working Group (MDIWG). Noting that some of these initiatives may advance during this project, the Consultant shall engage with NYSERDA, DPS, and others to stay current on such developments.		

		Definition	Framework Pillar	Framework Enabler
Working Assumptions				
	Achievement of State goals	Developed based on the expectation that the State's ambitious electrification and clean energy goals are achieved fully according to the stated timelines.		Regulatory engagement and reporting
	Need for transformative change	Achieving the State's ambitious electrification and clean energy goals will require the grid's key stakeholders to develop and implement transformative technical, commercial, and regulatory changes within a short period of time. The current approach produces a pace of change that will not get us where we need to go.		
	Need for energy storage	Rapid and extensive deployment and use of energy storage will be needed to mitigate and isolate the effects of increasingly volatile load and supply at all grid levels.	Interconnection and network reinforcement; Distribution network operations	
	Need for automation	Data, analyses, and controls needed for safe, reliable, and efficient grid operation will become much more time-sensitive; consequently, the need for real-time and near-real-time functions will increase greatly.	Distribution network operations	
	Limits of market-based resource operations	Generally, market-based approaches to determining grid resource operations will not work for local operations, or when fast data acquisition, analyses, and control functions are needed. This means that any Plan produced through this project must determine where market-based approaches are unsuitable and identify workable non-market alternatives (tariffs and contracts, for example).		
	Distributed optimization, coordination, and control	As the grid evolves, the scale and complexity of grid optimization, coordination, and control will increase greatly. Any Plan produced through this project must identify, characterize, and explain a workable strategy for shifting to highly-distributed means and methods for optimizing, coordinating, and controlling grid operation across all grid levels.	Distribution network operations	

		Definition	Framework Pillar	Framework Enabler
Principles				
	No change to the grid exists in isolation	The electric power system is an ultra-large-scale network of complex cyber-physical and commercial structures that interconnect and interact in complex ways; consequently, this project addresses a grid architecture problem that should to the greatest extent feasible and practical consider all those structures simultaneously.	Distribution planning and network development; Distribution network operations	
	Prioritize cyber-physical security	While NYSERDA does not expect this plan to fully solve the details of cyber- and physical-security requirements, any acceptable plan must be inherently securable; consequently, securability has to be an essential attribute of the planned grid evolution. Therefore, the cyber and physical elements of the electric system must have strong protections against events and/or conditions that could degrade the system's integrity, operation, and use.		Cybersecurity and resilience
	Prioritize grid user needs	Decision processes for determining grid structure and operations must prioritize serving the needs of electricity users with minimal effects on their comfort, convenience, and capabilities. Ideally, the Plan will help ensure that electricity users have the amount of energy they want, when they want it, and in the form they want; otherwise, it will be very difficult to achieve the levels of consumer acceptance and participation needed to support adequate flexibility at all grid levels	Distribution planning and network development; Customers	Stakeholder engagement and change management
	Bounded by the laws of physics	While it should be obvious, it's worth noting that the design and use of all technical elements in the Plan must be governed by the physical laws applicable to safe and reliable generation, transport, and consumption of electric power. Proposing Consultants are encouraged to consider creative and wide-ranging potential strategies, so long as they can persuasively make the supporting arguments.	Distribution network operations	

		Definition	Framework Pillar	Framework Enabler
Cross Cutting Factors				
	Temporal and locational variations	The use and operation of the State's electric system varies significantly, depending on the times and locations of use. For example, use and operation of the grid changes significantly as the seasons change. Regarding locational variation, the use and operation of the grid in a rural area differs with grid uses and operations in densely populated areas. That variability is expected to increase greatly as the grid evolves to meet the State's goals for clean energy and electrification. Where applicable and necessary for Plan development and implementation, the Consultant shall identify and characterize those variations and describe how they affect the Plan and its implementation.	Distribution network operations	
	Availability, deployment, use and impact of end-use technologies	End-use technologies to consider are generally "behind the meter" and shall include (but not be limited to) PV systems, EVs, EV chargers, stationary storage, fuel cells, heat pumps, smart appliances, smart thermostats, smart inverters, intra-site data communications, and end-user interfaces. Where applicable and necessary for Plan development and implementation, the Consultant shall develop, describe, and explain its expectations and recommendations for the availability, deployment, uses, and impacts of end-use technologies as they and the grid evolve over time.	Interconnection and network reinforcement; Customers	
	Availability, deployment, use and impact of grid technologies	Grid technologies to consider are generally part of the electric system's cyber-physical infrastructure and shall include (but not be limited to) grid-scale PV, grid-scale storage, power flow controllers, remote automation controllers, solid state transformers, intelligent switchgear, system protection, sensors, meters, data communications networks, data management systems, SCADA, ADMS, DERMS, asset management systems, work management systems, grid modeling and forecasting tools, billing systems, grid data sharing, customer data sharing, customer interfaces, and third-party interfaces. Where applicable and necessary for Plan development and implementation, the Consultant shall develop, describe, and explain its expectations and recommendations for the availability, deployment, uses, and impacts of grid technologies as they and the grid evolve over time.	Distribution network operations	
	Cyber-physical security	The cyber and physical elements of the electric system must have strong protections against events and/or conditions that could degrade the system's integrity, operation, and use. Threats to cyber-physical security can be intentional, accidental, or environmental. It is of paramount importance that the Consultant considers how potential changes to grid technologies, operating practices, environment, and use could affect both cyber and physical security as the grid evolves. Where applicable and necessary for Plan development and implementation, the Consultant shall develop, describe, and explain its expectations and recommendations concerning the needs and solutions for cyber-physical security as the grid and its environment evolve over time. Cybersecurity considerations as it pertains to proposed system architectures extend across current challenges with securing existing communications to future threats associated with quantum computing and their impacts on encryption schemes.		Cybersecurity and resilience; Data governance

		Definition	Framework Pillar	Framework Enabler
Cross Cutting Factors				
	Interoperability of end-use and grid technologies	New York's existing electric system is already a very large and complex assemblage of end-user and grid technologies that interoperate as needed to support both operational and commercial functions at all grid levels (bulk, distribution, edge). The need for interoperable technologies will increase greatly as the grid evolves to meet the State's electrification and clean energy goals. The descriptions of the three previous factors illustrate the range of technologies that must interoperate to at least some degree. Where applicable and necessary for Plan development and implementation, the Consultant shall develop, describe, and explain its expectations and recommendations concerning the evolution of needs and solutions for interoperable grid technologies.	Interconnection and network reinforcement	Data governance
	Interoperability of commercial processes	Using, operating, and managing New York's existing electric system requires a large and complex framework of commercial processes that support business functions at all grid levels (bulk, distribution, edge). The need for interoperability among grid-related commercial processes will increase greatly as the grid evolves to meet the State's electrification and clean energy goals. Some notable elements of the commercial framework are products and services, contracts, market participation, market pricing, market administration, administrative pricing, measurement, billing functions, payment mechanisms, and compensation mechanisms. Where applicable and necessary for Plan development and implementation, the Consultant shall develop, describe, and explain its expectations and recommendations concerning the evolution of needs and solutions for interoperable commercial processes.	Market design and implementation; Interconnection and network reinforcement	Data governance
	Roles, responsibilities, objectives, and business models	The electric system's operational and commercial functions are managed and performed by many entities comprising multiple categories. Each of those entities must interact with one or more other entities in ways that are aligned with their respective roles, responsibilities, objectives, and business models. The combination of all those entities and their interactions represents the overall structure of New York State's electric power industry. That framework will have to change significantly as the grid evolves to meet the State's electrification and clean energy goals. Notable power industry entities to be considered shall include (but not be limited to) utility customers, grid owners/planners/operators, market operators, DER developers/owners/operators/aggregators, LSEs, and utility regulators (state and federal). Where applicable and necessary for Plan development and implementation, the Consultant shall develop, describe, and explain its expectations and recommendations for evolving the structure of New York State's electric power industry.	Market design and implementation	Governance; Stakeholder engagement and change management
	Grid infrastructure plans and planning	Plans and planning methods for the State's transmission and distribution systems must evolve to effectively and timely drive physical grid infrastructure changes that will help the State meet its electrification and clean energy goals while ensuring reliability, safety, and affordability. Where applicable and necessary for Plan development and implementation, the Consultant shall develop, describe, and explain its expectations and recommendations for evolving the means and methods used to plan New York State's electric power infrastructure.	Distribution planning and network development	

		Definition	Framework Pillar	Framework Enabler
Cross Cutting Factors				
	Aligning grid and market operations	The Consultant shall identify and characterize requirements for aligning physical grid operations with related commercial functions that affect grid conditions at any grid level (bulk, distribution, edge). Where applicable and necessary for Plan development and implementation, the Consultant shall describe where, when, and why alignment is needed as grid operations and commercial functions evolve to support the State's electrification and clean energy goals.		Regulatory engagement and reporting
	Capital and operating costs	Evolving the grid infrastructure and its operation to meet the State's goals will require large expenditures that can vary significantly, depending on the grid plan that is developed and implemented. The components, location, timing, complexity, scale, and purpose of any change – technical or commercial - will directly affect capital and operating costs associated with the change. Those costs, and their respective benefits, must be carefully identified, characterized, and considered when determining whether a potential change should be part of the Plan.	Distribution planning and network development	
	Fair allocation of costs and benefits	Implementing the Plan produced by this project will result in costs and benefits that must be accurately identified and fairly allocated among all grid stakeholders. Where applicable and necessary for Plan development and implementation, the Consultant shall describe where, when, why, and how the means and methods for allocating costs and benefits should change as the Plan is implemented. Stakeholders to consider shall include (but not be limited to) utility customers, grid owners/planners/operators, DER developers/owners/operators/aggregators, market operators, and LSEs.		Stakeholder engagement and change management
	Scale, distribution, availability, types, and uses of flexible demand	The needs for demand flexibility at all grid levels will increase greatly as the grid evolves to support the State's electrification and clean energy goals. Where applicable and necessary for Plan development and implementation, the Consultant shall describe where, when, and why the scale, distribution, availability, types, and uses of flexible demand will need to change as the Plan is implemented.	Interconnection and network reinforcement; Distribution network operations	System Architecture
	Consumer flexibility	The availability of flexible demand will be materially affected by the level of consumer willingness to provide flexibility. The level of consumer participation possible will be determined by the following factors that will change over time: the timing, duration, and amount of consumers' available demand flexibility; the ease of providing demand flexibility; the value of providing demand flexibility; and the cost of not providing demand flexibility. Where applicable and necessary for Plan development and implementation, the Consultant shall clearly describe and explain its expectations for consumer participation as the Plan is implemented.	Interconnection and network reinforcement; Distribution network operations; Customers	System Architecture
	Scale, distribution, availability, types, and uses of flexible supply	The needs for supply flexibility at all grid levels will increase greatly as the grid evolves to support the State's electrification and clean energy goals. Where applicable and necessary for Plan development and implementation, the Consultant shall describe where, when, and why the scale, distribution, availability, types, and uses of flexible supply will need to change as the Plan is implemented.	Interconnection and network reinforcement	

		Definition	Framework Pillar	Framework Enabler
Cross Cutting Factors				
	Supplier flexibility	The availability of flexible supply will be materially affected by the level of supplier willingness to provide flexibility. The level of supplier participation possible will be determined by the following factors that will change over time: the timing, duration, and amount of suppliers' available supply flexibility; the ease of providing supply flexibility; the value of providing supply flexibility; and the cost of not providing supply flexibility. Where applicable and necessary for Plan development and implementation, the Consultant shall clearly describe and explain its expectations for supplier participation as the Plan is implemented.		System Architecture
	Scale, distribution, and impact of variable renewable energy (VRE)	To support the State's clean energy goals, the amounts of energy generated by variable solar and wind resources at all grid levels will increase greatly between now and 2040. Those VRE increases will in turn drive needs for deploying much more flexible demand and flexible supply capacity throughout the electric system. Where applicable and necessary for Plan development and implementation, the Consultant shall clearly describe and explain its expectations for the scale, distribution, and impacts of VRE as the Plan is implemented.	Distribution planning and network development	
	Scale, distribution, and impact of electrification	To support the State's clean energy goals the scale, distribution, and impact of electrification at all grid levels will increase greatly between now and 2040. Those electrification increases will in turn drive needs for deploying much more flexible demand and flexible supply capacity throughout the electric system. Where applicable and necessary for Plan development and implementation, the Consultant shall clearly describe and explain its expectations for the scale, distribution, and impacts of electrification as the Plan is implemented.	Distribution planning and network development	
	Situational awareness	Human and automated operators of the electric system at all grid levels (bulk, distribution, edge) require real-time situational awareness encompassing a range of information that includes (but is not limited to) grid topography, voltages, power flows (real and reactive), asset conditions, storage state-of-charge, availability of flexible load and supply, load forecasts, supply forecasts, and grid contingencies. The required scope and content of awareness is different for each of the grid levels. Where applicable and necessary for Plan development and implementation, the Consultant shall describe and explain how requirements for situational awareness will change as the Plan is implemented.	Distribution network operations	Data governance
	Regional Differences	The Plan produced by this project shall identify, characterize, and consider the significant differences expected over time between New York's upstate and downstate electric power systems. The differences considered shall include (but not be limited to) transmission constraints, distribution constraints, environmental constraints, grid configuration (i.e., radial vs. meshed), demographics, and the scale and placement of generation, energy storage, and load. Where applicable and necessary for Plan development and implementation, the Consultant shall clearly describe and explain how it addresses those regional differences.	Distribution planning and network development	

		Definition	Framework Pillar	Framework Enabler
Cross Cutting Factors				
	Utility regulation and public energy policies	In recent years, utility regulations and public energy policies (local, state, and federal) have been changed and created to foster progress toward clean energy. While being generally productive, those changes will not be enough to drive the grid evolution needed between today and 2040. Where applicable and necessary for Plan development and implementation, the Consultant shall identify, characterize, and consider the ways the existing framework of regulations and policies would promote or prevent implementation of the Plan. The Consultant shall also describe potential additions and changes to regulations and policies to enable timely Plan implementation.		Governance; Regulatory engagement and reporting; Stakeholder engagement and change management; Regulatory engagement and reporting

	1 - Initiating	
	Building the business case	
Pillars	**Capabilities**	**Examples**
Distribution network planning and development	The organization is aware that outdated network planning and development leads to several problems such as excessively long planning processes and time-intensive decision-making over asset replacements. It has started to understand its processes and how these can be improved. In simpler cases, proof of concept projects may be initiated - e.g. around sharing of network models more effectively and better use of data to support decision-making	The organization is aware that outdated network planning and development leads to several problems such as excessively long planning processes and time-intensive decision-making over asset replacements. Initial evaluation of network modeling and planning tools is underway, with proof of concept projects being implemented. The organization is exploring how to improve data sharing and decision-making processes through new systems and tools. Documentation of current planning processes is beginning, helping identify areas where manual effort can be reduced and automation introduced.
Interconnection and network reinforcement	The organization identifies areas for improvement to its interconnection and reinforcement processes based on increased application timelines, the number of applications and required reinforcements. The organization is exploring where efficiencies can be made in existing interconnection and reinforcement processes and the supporting systems The organization has few integrations between different departments involved in interconnection and reinforcement planning The organization is reactive in implementing interconnections and reinforcements with inefficient processes for submitting business cases	The organization is exploring how to improve the customer experience and internal efficiency for processing interconnection applications. For example, using a portal / online application. The organization is exploring how to make relevant network data available to relevant third parties so they can identify low-cost, high-value connection points The organization is identifying cross collaboration opportunities and advanced data sharing methodologies to allow for alternatives to physical network reinforcement (e.g. non-wires alternatives in future). Rate cases for reinforcement projects are lengthy to compile because relevant data and decisions are poorly recorded. Cost sharing mechanisms are being explored.
Distribution network operation	The organization is evaluating potential opportunities for automation in grid operations and explores business processes optimization capabilities. Future implementation for planned efforts and funded efforts are developed, initiatives scope of work is developed and stakeholders needs are clear. Clear understanding of roles and responsibilities of the utility and other parties involved in planning and executing grid operations which accommodate and productively employ DERs. Clear understanding of the existing level of system monitoring and distribution automation and identification of areas to be enhanced through additional monitoring and/or distribution automation. Clear understanding of the ADMS and DERMS current capabilities and how capabilities will increase overtime.	Business cases for new equipment and systems related to smart grid are approved (e.g. capabilities, benefits, costs, resources, schedule, risks). New technologies are being evaluated for grid monitoring and control. Research and development, piloting and testing of equipment (e.g. smart inverters) with stakeholders based on specific criteria (e.g. safety, security, interoperability). Stakeholder engagement strategy and stakeholders mapping (e.g. project team, internal departments/teams , external organizations) and their responsibilities in planning and executing grid operations projects. Network operation has basic SCADA functionality and reactive asset management

	1 - Initiating	
	Building the business case	
Market design and integration (MDI)	The organization is identifying services to be procured through distribution markets; and identifying internal operational capabilities to enable non-wire alternative and congestion management. The organization may have experience participating in the wholesale market and/or individually offering demand response programs.	The organization can value DERs by understanding system needs and constraints, improving hosting capacity. The organization can Identify data needs for valuing DERs and administering market (DERs data, grid ops, etc.). The organization is developing a business case for new or enhanced systems to administer market. Technical review to ensure meets grid op requirements. Identifying existing teams and new resources for administering/participating in flexibility market.
Customer Services & Engagement	The organization is exploring new ways to enable customer participation in a smarter grid and enhancing the customer experience. Research is being conducted on how to (i) enable participation in the smart grid, (ii) balance customer and network benefits, (iii) improve the customer experience. Security and privacy concerns of customers and network stakeholders are being investigated A network vision and how it will impact customers is being created and communicated to customers The utility is engaging with wider stakeholders to understand the impact of future changes on the network to customers	A roll-out of smart meters is being evaluated with proofs of concept being implemented. This lays the groundwork for future customer facing offerings like advanced rate design and rapid outage detection. The organization is exploring how to enable more proactive customer engagement e.g. through the use of more modern customer management platforms (e.g. Kraken in GB)

	1 - Initiating	
	Building the business case	
Enablers		
Governance	The organization recognizes the need to achieve a DSP transformation and takes initial steps to begin building the necessary competencies. Discussions with regulators and other stakeholders about the DSP vision and its implementation take place.	The organization has a DSIP vision with high level description of envisioned future state, with clear organizational and stakeholder goals is in place. This plan anticipates a DSP business plan with secured budgets, workforce development and educations plans, commitments from organizational leadership, and stakeholder outreach/education. Regulatory compliance relies on a small team's individual expertise to manage basic reporting processes. Resource constraints lead to reactive handling of regulatory requests, with minimal dedicated support for reporting activities.
Data Governance	Identification of data governance framework (policies and tools) covering all aspect of data governance framework: the collection, storage, processing and sharing of data for enabling DSP needs.	The organization has developed comprehensive practical guidance for enterprise-wide data management, establishing foundational data governance capabilities across the utility. This includes identification and evaluation of potential enterprise-level systems and approaches to support standardized data management practices (e.g. data standards such as the Common information model, building information model)
Cyber Security and resilience	Safety and security (physical and cyber) requirements are considered in all initiatives.	Early identification and documentation of smart grid safety and security requirements guides each successive phase of development, creating a foundation for secure testing and evaluation. Rigorous assessment during pilot programs validates these requirements under real-world conditions.
Comprehensive System Architecture (CSA)	The organization researches future grid technologies and starts to determine what future technologies they would expect to bring onto the system. The organization develops an intelligent, standardized, modular IT/OT architecture that can be used as a solid technical foundation to build a robust DSP information infrastructure. The organization reviews existing commercial operations in the context of their evolving business needs and develops plans and standards for designing and implementing the components of an integrated commercial framework that will efficiently and timely support those evolving needs.	Future technologies' are those that enable the DSP elements identified in this maturity framework such as DER Integration, EV charging, greater grid monitoring and control. Initial IT/OT architecture frameworks undergo evaluation for key quality attributes, including security, interoperability, and modularity to support DSP initiatives. System maintenance follows a reactive approach, while data remains siloed across platforms with manual transfer processes between systems. The grid products and services needed to enable future business and grid operations are being identified, characterized, and prioritized.
Stakeholder engagement and change management	The organization acknowledges the growing importance of stakeholder engagement and collaboration.	Stakeholder engagement efforts rely on basic impact assessments and ad hoc communications, with departments working independently to address concerns. Initial development of an engagement strategy marks the transition from reactive responses toward more coordinated approaches.

	2 - Enabling	
	Creating the proof of concept	
Pillars	**Capabilities**	**Example**
Distribution network planning and development	The organization has effectively baselined its current processes and has a holistic improvement plan in place that considers the wider data and system implications. Proof of concept projects are maturing and are being implemented more widely. Larger projects are being scoped and planned with more complex proof of concepts being initiated such as deconfliction of multiple data sources to create single sources of data.	The organization's forecasting / planning is based on historical data with some real-time inputs. Data collection is more systematic but still has gaps and data is unlikely to be stored in a well-integrated network model management system. The organization has invested in basic planning software with some improved tools in isolated areas. There is some integration between systems. Outage planning may be moving to a system but it is not fully integrated with all relevant parties and systems. The distribution planning team is focused on forecasting and planning with minimal integration with other teams reducing the ability to create holistic end-to-end processes - e.g. for comprehensive asset management
Interconnection and network reinforcement	The organization is implementing relevant customer support systems and is initiating proof of concepts for more complicated processes. Relevant teams are sharing data between themselves more frequently but may be manual exchanges. The organization is starting to explore more advanced questions around facilitating additional flexible interconnections (e.g. use of flexible interconnections and the creation of a flexibility market) The organization is initiating conversations with transmission owners on interconnection impacts on the transmission network.	A customer interconnection portal is implemented with basic features allowing for the customer to submit an application and track its status throughout the process. This system also allows for the organization to track progress from application to commissioning. Basic network data is available to the public for basic network analysis which might help to identify better connection locations. Network planning, customer connection and market design teams are working together to assess network requirements and flexibility opportunities. Cost sharing mechanisms are in place with processes supporting high-level estimates being given in early stages of discussions. Flexible interconnections are being piloted with fixed curtailment limits along with NWAs. Improved data sharing between departments allows for design of non-wire alternatives to physical reinforcement to be explored.
Distribution network operation	The organization deploys POC of OT systems and grid monitoring and control features. As-is and to-be operating policies and processes are documented and developed. New roles and responsibilities are identified, documented and resources being assigned. Proof-of-concept projects at specific locations are progressing to enable: 1- Distribution and substation automation 2- Expanded data communication 3- Advanced outage restoration enabling self-healing or reducing unplanned outages. 4- Using SCADA (e.g. remote asset monitoring of key grid assets) to support advanced management of the distribution network. 5- Basic DER management to allow comprehensive view and communication with DER assets	Proofs of concept and component testing are progressing and being evaluated for grid data collection, data processing, communication and grid control. Distribution to substation automation is bidirectional and includes capabilities such as advanced disturbance and event recording to aid in detailed electrical fault analyses, remote switching and advanced supervisory control over the power network. Includes advanced concept such as full digital substation based on IEC 61850 “Expanded data communications” includes internet protocol (IP) networks over fiber, communications on a public carrier, or broadband over power lines. FLISR (Fault Location, Isolation and Service Restauration) is available. By “advanced,” we mean employing the use of sensing resources to know what is happening and data analytics for semi/automatically making corrections, or providing recommendations regarding corrections that can be made by an operator. Using data collection and asset modeling to inform operational planning and maintenance decisions. (e.g. load flow analysis, offline studies, state estimation). "DER management" is modelling of DERs, monitoring and control of DERs, registration of DERs, studying the impact of DERs.

	2 - Enabling	
	Creating the proof of concept	
Market design and integration (MDI)	The organization is launching proof-of-concept distribution markets to trade and purchase flexibility. These markets will operate over extended time scales, such as seasons or months in advance. The organization is implementing operational capabilities and business processes to support distribution market. The organization is operating other schemes that allow flexibility in the system such as curtailed connections.	The organization has: - Basic market rules, monitoring and services for POC. - Processes for dispatching, monitoring, and settlement, but are mostly manual for POC. - Flexibility contractual processes for congestion mechanisms and markets - Processes for using grid and DERs data to administer POC program. The organization is implementing new or enhanced systems to support POC e.g. DERMS/DRMS, market platform. The organization has dedicated staff for administering and coordinating curtailed connections and flexibility market.
Customer Services & Engagement	The organization begins to make significant investment in improving the end-to-end customer experience and enhancing business efficiency. Visibility of customer usage data is improving and is at least monthly for the residential and non-industrial segments. Technical proof of concepts and pilots are being rolled out across the network allowing for increased monitoring and visibility. The utility is starting to understand how the use of new services and processes can maximize the benefit of smart metering and increase customer engagement and decarbonization Customer engagement is moving from reactive to proactive. Security and privacy concerns are being acted upon and updated requirements are included in relevant tenders.	Larger-scale smart meter pilots are being implemented, allowing for greater visibility of customer usage by both network and customer. Time of use tariffs and renewables incentives are being explored and designed to support greater customer engagement and decarbonization. Active energy procurement and customer engagement allow for customers to specific renewable energy tariffs

	2 - Enabling	
	Creating the proof of concept	
Enablers		
Governance	The organization is creating cross-department/functional connections to support DSP vision; organization is addressing workforce barriers; organization is reviewing long-term planning. Priorities and decisions increasingly implement or increasingly inform the DSP vision. Relationships with internal and external stakeholders are established to implement the DSP vision.	The organization has their strategy and business plan approved by relevant parties (e.g. DSP committee, PUC) and incorporated into the organization's guiding documents, influencing company policy, priorities, and basic structures. An internal DSP steering committee is established to fulfill the goals of the plan, using the established budgets and cross functional teams. The organization works to rapidly deploy workforce training programs. Regular engagement with regulatory bodies shapes DSP progress updates, while standardized reporting processes continue to evolve.
Data Governance	The organization has a defined data governance plan for achieving DSP goals that recognizes the interdependencies of organization departments. Cross functional teams are trained on how to use updated data sharing standards to meet minimum DSP needs.	The organization is developing a comprehensive industry-aligned architectural vision for distribution operations, with defined data exchange requirements across key domains including network models, field operations, configuration settings, asset management, and customer behavior. Integrated data stores are being established to ensure consistency between operational and planning functions, enabling seamless data flow between transmission and distribution operators.
Cyber Security and resilience	The organization is developing comprehensive security frameworks and implementing formal security policies across to support all departments. Security monitoring capabilities are being established and risk assessment processes are being formalized to support DSP initiatives.	The organization has formalized IT/OT security policies emerge from established requirements, supported by implemented security frameworks and regular monitoring. Periodic risk assessments and incident response procedures create a baseline for operational security management.
Comprehensive System Architecture (CSA)	The organization defines the specifications for those new technologies and understands the use cases/options. The organization begins testing new technologies. The organization has a defined technology strategy for achieving DSP goals that recognizes the interdependencies of organization departments. Early deployments of technology to support DSP pilots and applications are underway. The organization designs, implements, and tests the various components of the commercial framework as needed to support the utility's evolving business and grid operations. Consistent application of standards governing the attributes and behaviors of those components lays the foundation for integrating the overall framework.	The specifications for future grid infrastructure would clearly identify new capabilities expected of technologies such as smart inverters e.g. communication protocols. The specifications would include wider considerations such as environmental impacts. Proof-of-concept deployments demonstrate the potential of modern planning tools, supported by initial system integration testing. Strategic roadmap development directs early automated data flows, creating foundational connections between key systems. The organization is implementing standard-compliant framework components as needed to enable the evolution of commercial operations. Essential integrations among the framework components are operational. Additional integrations are enabled astride new standard-compliant components. For example, business processes for onboarding and interacting with new providers may be clearly defined but at different levels of readiness across the organization. In another example, uniform project management practices are fully defined but not fully implemented.
Stakeholder engagement and change management	The organization is engaged with stakeholders and incorporates stakeholder needs into internal efforts.	Collaborative industry partnerships drive standardization of key processes and knowledge sharing, accelerating DSP goal achievement. Regular engagement opportunities enable meaningful stakeholder input, with transparent reporting demonstrating how feedback shapes planning and implementation efforts.

	3 - Integrating	
	Implementing at scale and integrating systems and teams	
Pillars	**Capabilities**	**Example**
Distribution network planning and development	The organization is integrating planning systems at an enterprise level. The key systems are asset management, GIS, and SCADA systems. Teams across the organization understand their part in the transformation and how they interact with other teams.	The organization has well-documented procedures and best practices. Rate case submissions are quick and efficient due to good data availability and cross functional teams. Data collection is systematic and reliable and is stored in centrally accessible locations like network model management system and enterprise asset management systems. There is a high level of system integration which allows for planning and forecasting to be used by other teams and departments. Outage planning systems are well-integrated with other systems and parties so that the impacts of outages can be assessed quickly and easily.
Interconnection and network reinforcement	The organization is advanced in its implementation of systems and processes to improve interconnection and reinforcements. The interconnection processes for both customers and the organization are streamlined through increasing systems implementation. Internal system integrations allow for new processes to be completed more quickly and efficiently. End-to-end integration of systems ensures a consistent view of customers and assets throughout the organization. Design of advanced processes such as use of flexible interconnections and flexibility markets is complete and new processes start to be implemented to support these processes.	The interconnection application portal has advanced features which speed up customer applications by automating checks - this could include automated load flow analysis and automated generation of high-level costs based on project specifics. The interconnection application portal is integrated with project design and planning systems to give a detailed view of interconnection and reinforcement projects throughout the organization at an individual and portfolio level. Systems integration means that newly commissioned assets appear in asset management systems with links to relevant customer records. Flexible interconnections are widely implemented with relevant connection agreements and active network management is being piloted to allow for real-time management of connections. Systems implementation allows for a quick and easy evaluation of non-wire alternatives as part of standard interconnection and reinforcement processes. Reinforcement rate case submissions are completed quickly and easily through the availability of all relevant data in one system.

	3 - Integrating	
	Implementing at scale and integrating systems and teams	
Distribution network operation	The organization deploys OT systems and grid monitoring and control features across all areas to enable analytics, automation, and control operate across multiple systems and organizational functions: - Advanced situational awareness to support operators on their day-to-day tasks - Smart grid information available to support analysis and decision making for grid operations is available across multiple systems and organizational functions. - Analytics using asset data, equipment, and technologies have been implemented and are used to improve decision making. - Grid operations planning is now fact-based using grid and weather data made available by deployed smart grid capabilities. - Smart meters are important grid management sensors and used to provide advanced visibility in the LV network. - Automated decision making within protection schemes supported by digital substation, real-time modelling and simulations	A state-of-the-art control center is equipped with ergonomic features that enhance situational awareness, ensuring operators can monitor and respond to real-time data effectively. Organization is using customer usage data, outage aggregation and transformer monitoring ("smart grid data"). Integration of real time asset information (IoT sensors and real time data) into grid planning activities e.g. using operational data to transform towards predictive maintenance (analytics). Grid operations planning involves automation of network models (integration with GIS and EAM), real-time data, outages to identify constraints on the network and develop action plans accordingly. Uses smart meters in grid management such as SCADA pinging a smart meter to check outages on LV network. "Automated decision making" is automatically detecting and isolating faults and reconnecting load without human intervention. (e.g. FLISR, Switching management).
Market design and integration (MDI)	The organization is scaling and integrating proof of concept offering into a systemwide offering. The organization is improving and standardizing operational capabilities and business processes for distribution market. Alternative schemes for flexibility (e.g. where there is not enough demand for a whole market) have expanded to include mature Active Network Management schemes operating in close-to-real-time	Standardization of operational capabilities and business processes include: - Market rules and monitoring - Terms & conditions for flexibility services - Flexibility contractual processes for congestion mechanisms and markets - Administrative processes (e.g. registration, trading, dispatching, settlement) The organization is enhancing and integrating their operational system to manage systemwide market and are integrating into other organizational enterprise systems (i.e. billing, etc.).
Customer Services & Engagement	Integration of systems allows for a better customer experience and the availability of new services to accelerate decarbonization. The organization understands its customers and their usage patterns well enough to offer tailored services to specific segments. The initiation of such services leads to continued support for the uptake of low carbon technologies. Visibility includes both customers and key parts of the network, allowing for more proactive management of customer expectations. More consistent communications has been introduced across multiple engagement channels (e.g. online, telephone, mail).	Smart metering and the design of new services can combine to allow for the introduction of demand-side response services for residential customers. Time of use tariffs are being widely used across the network. Modern customer engagement platforms have been introduced to allow for an excellent customer experience online, which is mirrored on telephone communications. DER uptake continues and possibly even accelerates due to better customer experience throughout the process and greater customer benefit from owning such assets.

	3 - Integrating	
	Implementing at scale and integrating systems and teams	
Enablers		
Governance	The organization is integrating the DSP vision into the company structure and functions, and affecting strategy priorities and performance metrics.	The organization has established a comprehensive DSP governance framework that defines clear decision-making roles and processes, supported by dedicated management tools. Leadership alignment with the DSP vision has driven structural changes across multiple teams, with budgets approved by all key stakeholders. Success is measured through adopted KPIs, which are actively tracked and integrated into performance goals and compensation structures. A well-defined overlay structure supports and reinforces DSP objectives throughout the organization. Automated reporting processes streamline regulatory compliance, while regular stakeholder forums facilitate ongoing dialogue and feedback.
Data Governance	The DSP data governance strategy is integrated across teams and into management process.	The organization has defined standardized data exchange models for DER integration, encompassing device capabilities, monitoring and control functions, and dynamic modeling parameters. High-resolution grid-edge data streams enable improved circuit forecasting accuracy and validate detailed circuit modeling, enhancing overall system visibility.
Cyber Security and resilience	Grid data is used by an organization’s physical and cyber security functions to support situational awareness and diagnostic activities.	Security requirements are deeply embedded within all DSP initiatives, supported by automated monitoring systems and established response protocols. Regular assessments and audits validate protective measures, while tracked resilience metrics demonstrate ongoing security effectiveness.
Comprehensive System Architecture (CSA)	The organization deploys the new grid technologies and associated protocols into the system. The organization implements its digital infrastructure strategy for DSP and integrates its organizational systems and other organizational needs. The organization implements and integrates all the standard-compliant components of the commercial framework. Consistent application of standards governing the attributes and behaviors of those components the enables high levels of beneficial interoperability across the enterprise.	Modern electrical infrastructure becomes part of the integrated digital system by sending reliable data to relevant teams and can be controlled remotely. Integrated system architecture enables automated data flows throughout operations, complemented by enterprise-wide deployment of modern planning tools. Strategic execution of technology roadmaps proceeds with systematic reviews, ensuring architectural adaptability to emerging requirements. The commercial components of the organization's business and grid operations are highly interoperable within the commercial framework and are integrated with related components of the utility's electrical and digital infrastructures.
Stakeholder engagement and change management	The organization is providing new resources or initiatives as a direct result of stakeholder engagement.	The organization's comprehensive change management practices guide enterprise-wide initiatives, with proactive engagement planning ensuring consistent stakeholder interaction. Measurable outcomes validate engagement effectiveness, informing continuous improvement of outreach approaches.

	4 - Optimizing	
	Adding advanced features and capabilities	
Pillars	**Capabilities**	**Example**
Distribution network planning and development	The integration stage (3) has allowed for planning and forecasting to move from people-based decision-making, to automated decision-making. For example, load forecasts are automatically generated from the integration of weather data with customer connection and asset data. End-to-end data flows throughout the organization work well.	Data is highly accurate and reliable and is centrally stored for ease of access. This ease of access enables data-driven planning with predictive forecasting and use of data analytics to inform decision-making. Personnel are highly skilled trained to use these tools and data to improve and expedite their work. Network models are automatically updated based on real-time changes on the network and when changes are recorded in asset management systems. Outage planning systems use automation to suggest optimizations and improvements to outage plans.
Interconnection and network reinforcement	Interconnection and reinforcement processes are closely integrated with network operations and grid planning processes allowing for efficient decision-making across the organization. Systems allow for increasing connection of customers and assets through the use of real-time control of assets. Systems integration and automation allows for automation decision-support and decision-making. The data available to customers is of high-quality and automatically updated at least monthly	Interconnection application portal has near complete automation of application screening, with recommendations to internal users, through integration with relevant planning and analysis tools (e.g. power system models). flexible interconnections can be managed in near real-time through active network management. Network capacity data is shared at least monthly to give up-to-date and accurate assessments of network capacity, such that customers have a good view of whether a connection is likely to be accepted. Design of interconnections and reinforcements is increasingly automated, with implementation of data standards and compliant systems (e.g. building information model) being piloted to allow for much quicker processing of designs.
Distribution network operation	Grid operations are integrated into and drive enterprise processes, transforming from manual-based decision making to automated decision making. Grid operations information has been made available across functions and lines of business. (end to end observability). Operational data from smart grid deployments is being used to optimize processes across the organization. Grid operational management is based on near real-time data (i.e. active network management). Automated decision making within protection schemes providing services beyond their boundaries.	End to end observability means that all functions have access to relevant operation information and used to optimize business processes. An example of an optimized process could multiple customer outages triggering multiple processes e.g. detecting faults/outages, dispatching crews to fix outages, analysis metrics as per regulation requirements. 'Active network management' is using real-time data, advanced technologies and systems for load balancing, Volt/Volt-Ampere reactive (VAR) control, power factor management network reconfiguration, peak and congestion management through different mechanisms e.g. flexible connection, bilateral agreement, congestion market. An example of protection schemes providing services beyond their boundaries would be when protection schemes trigger a connection curtailment on the distribution network due to constraints on operational boundaries with the TSO. This will ensure that the DSO stays within its operational boundaries and provides a service to TSOs by preventing issues (e.g. voltage control) spilling over onto the transmission network.

	4 - Optimizing	
	Adding advanced features and capabilities	
Market design and integration (MDI)	The organization has a mature market for distribution services and are now focusing on optimizing their approach. A key area of optimization includes DSO / TSO coordination. Additionally, optimization of services and interaction with service providers is important. Assess the effectiveness of processes, rules, standards and identify improvements or updates to market operation The organization is starting to consider how to innovate in the area and be a leader.	Coordination activities include: - Consideration of how DSO / TSO markets interact and whether one has primacy over the other (and how to best enable revenue stacking across markets) - Optimization of services could include refinement of services / terms of engagement to reflect any lessons learned or changing system conditions - Interaction with service providers (SPs) could be optimized through increased automation of communication and settlement with SPs - Innovation may lead to the design of new products / services and the enablement of decentralized markets -Maintain an up-to-date repository of documents covering (processes, rules, standards, and other technical documents) in an public ally accessible place
Customer Services & Engagement	The utility has a detailed understanding of customers and the state of the network and so can offer a wide range of services and tailoring to customer requirements: - Customers can analyze their usage at near real-time and can make informed decisions on tariffs and pricing - Almost all customers can participate in new services at the residential and industrial levels - Some customers benefit from automated response to pricing signals by relevant technologies in their homes - Customer experience across all channels is modern and consistent - Networking forecasting and planning should allow for prediction of network requirements to support customer needs	Customers at nearly all levels can participate in demand response programs. In-home programs allowing customers to sell energy to the grid are enabled. Dynamic tariffs reflecting real-time, localized grid conditions are available to all customers. Customers with EVs or batteries benefit from automation that allows the assets to automatically manage themselves to optimize cost-to-customer. Faster DER implementation is enabled through better and more integrated network planning

	4 - Optimizing	
	Adding advanced features and capabilities	
Enablers		
Governance	The organization is achieving its DSP vision and extends throughout the company. Grid modernization is a core component of the business strategy and provides opportunities for enhanced business models and synergistic external relationships. There is increased information sharing and collaboration within the organization and with external stakeholders.	The organization leverages enhanced visibility and control capabilities to continuously improve processes across all teams and systems. The DSP vision and goals are regularly reviewed and refined, enabling improved decision-making through increased transparency. Both internal and external stakeholders benefit from this heightened visibility, leading to more informed and efficient collaboration throughout the organization. Proactive strategy development shapes regulatory approaches, supported by comprehensive integrated compliance systems.
Data Governance	Organizational systems are interconnected through a strategic, enterprise-wide data that has been optimized for the support of DSP services.	The organization has established standardized data models that integrate relationships between electrical networks, communications infrastructure, and cybersecurity systems. These comprehensive integrated data stores provide the foundation for advanced analytics, incorporating granular customer consumption, costs, and grid measurements. This enables sophisticated time-series analysis, scenario planning, and probabilistic assessments, driving a shift toward data-driven, internally consistent infrastructure planning processes.
Cyber Security and resilience	The organization has implemented advanced security automation and threat detection capabilities throughout its DSP infrastructure. Security and resilience are seamlessly integrated into all grid operations and planning processes. Predictive analytics and machine learning are used to identify and mitigate potential security risks before they materialize. Automated incident response and recovery procedures are standardized across the enterprise.	AI-driven security systems proactively identify and respond to threats, while automated controls continuously update protective measures. Predictive analytics integrate seamlessly with operational systems, enabling sophisticated threat prevention backed by advanced resilience metrics and automated reporting.
Comprehensive System Architecture (CSA)	New protocols for grid resources and technologies are tested and deployed at enterprise-wide. Organizational systems are interconnected through a strategic, enterprise-wide IT/OT architecture that has been optimized for the support of DSP services. Visibility extends across lines of business and business functions throughout the organization. Security, privacy, and performance issues have been considered and addressed in the IT implementations across the enterprise. High levels of interoperability within the commercial framework and with related components of the utility's electrical and digital infrastructures allow the organization to develop new operational capabilities that benefit the organization, its customers, and grid product/service providers.	Integrations between electrical infrastructure and digital architecture are refined to ensure a more consistent and smoother use of data. This would include aggregating data into a single system and ensuring consistent data models are applied between different grid technologies from different suppliers. Enterprise architecture enables seamless integration across platforms, driving automated system optimization through advanced analytics capabilities. Real-time performance monitoring informs predictive maintenance actions, ensuring proactive system management across all operational domains. Commercial mechanisms are implemented to enable commercial transactions related to distribution system hosting capacity services. Those new mechanisms are integrated with related additions and changes in the utility's electric and digital infrastructures.
Stakeholder engagement and change management	The organization has implemented business processes that deliver stakeholder needs while also improving operations, minimizing cost and supporting regulatory or policy mandates.	Sophisticated analytics guide engagement strategies through predictive impact assessment and automated stakeholder communications. Near real-time feedback integration ensures dynamic response to stakeholder needs, driving continuous improvement of outreach effectiveness.

	5 - Pioneering	
	Leading the industry with new capabilities	
Pillars	**Capabilities**	**Example**
Distribution network planning and development	Automated decision-making processes are being augmented through active innovation and the integration of new technologies such as AI and automated data collection and processing. For example, network planning is supported by automated data collection from assets on the network with AI-driven trend detection and modelling to detect issues.	The organization's forecasts are automatically updated with new data feeds, enabled by A.I. and automation. Automation can happen between organizations to improve efficiency and communication for projects like outage planning. The distribution planning team leverages A.I. and machine learning integrated platforms with fully automated network planning based on comprehensive data feeds. These industry leading systems can automatically propose or validate network plans based on known asset conditions and wider future system requirements.
Interconnection and network reinforcement	A high degree of automation allows for a focus on innovation and continuous improvement. Innovations could center around: Detailed pre-emptive information on system needs is fully available to customers to plan interconnections. Systems allow for automation of many processes. Interconnection applications automatically feed into network planning processes. System integration allows for utility to accommodate and monitor complex customer connection requirements.	Interconnection of microgrids are enabled through accurate forecasting, monitoring and design processes. A majority of interconnection applications are automatically responded to through automated systems. This includes the provision of accurate costings upfront, which are responsive to customer changes. Interconnection and reinforcement project designs are highly automated through the full implementation of BIM-compliant systems.
Distribution network operation	The increased observability and control in grid operations is now driving innovation within the organization. The organization has an integrated view of customers and assets, and operations are driving new opportunities. Self-healing capabilities are present. System-wide analytics-based and automated grid decision making is in place.	An example could be exploring connection of different digital twins (internal and external) using international standards e.g. BIM, CIM, IEC 61850. A self-healing grid is capable of automatically anticipating and responding to power system disturbances, including the isolation of failed sections and components, while optimizing the performance and service of the grid to customers. Analytics-based tools provide actionable insights using artificial intelligence, enabling automated decisions to drive AI driven operational planning, outage management e.g. use of drones and AI in fully automated inspection and maintenance

	5 - Pioneering	
	Leading the industry with new capabilities	
Market design and integration (MDI)	The organization is focused on becoming a leader in distribution flexibility markets. This will include a consideration of enabling decentralized markets. The organization will share knowledge with industry and peers to allow for the development of best practice. The organization will be among the first within its jurisdiction to implement new products and services as a proof of concept and as a wider roll out.	Standardization of operational capabilities and business processes covers all markets e.g. capacity, wholesale, balancing, distribution Decentralized markets will allow for greater stability and balance at grid edge through automated trading / balancing of energy and system stability requirements The organization is offering multiple services on the distribution markets for both demand-side and supply-side participation. This could include demand-side turn down and turn-up behind and in front of the meter. The organization facilitates learning and sharing through participation in industry groups and direct sharing with relevant parties.
Customer Services & Engagement	The organization's products and services can be extensively tailored to individual customer profiles and needs and the utility is pioneering new ways of improving this service: - The organization plays a leading role in developing and sharing best-practice in relation to the customer experience. - Customer privacy and security is baked into decision-making and technical design of systems across the grid - Integrated systems allows for a highly automated and self-service customer experience	There is automatic outage detection at the customer level, meaning that customer power cuts are known about and being responded to before the customer notifies the utility. Networks are responsive to customer needs and support 'plug and play' of customer devices such as solar panels. The utility implements a wide range of innovation projects to improve the customer experience.

	5 - Pioneering	
	Leading the industry with new capabilities	
Enablers		
Governance	Organization is focused on DSP innovation and easy collaboration with external stakeholders.	The organization actively collaborates with diverse grid stakeholders to optimize overall network operations, while maintaining the agility to quickly adapt to new ventures, products, and services. A culture of innovation is embedded throughout the workforce, encouraging creative solutions to emerging grid challenges. The organizations leadership in regulatory innovation shapes industry practices through collaborative development of advanced compliance solutions.
Data Governance	Enterprise architecture leading practices enable efficient, effective, standards-based distribution data management across applications and work groups. The organization can respond rapidly to changing business requirements.	The organization leverages advanced predictive analytics capabilities to optimize real-time data streams, while implementing industry-leading data management practices. Cross-industry data sharing standards enable broader collaboration and innovation, driving continuous advancement in data analytics applications and use cases. This could be through connection of digital twins where different stakeholders have access to data through an API dependent on the use case providing they meet the data privacy and security requirements.
Cyber Security and resilience	The organization is at the forefront of developing and implementing innovative security solutions for grid modernization. Security and resilience strategies are continuously evolving through research and industry collaboration. The organization actively contributes to developing industry standards and best practices. Advanced AI and machine learning capabilities enable predictive and adaptive security measures.	Security innovations shape industry standards through active participation in framework development and cross-sector cyber defense initiatives. The organization's advanced threat prediction capabilities drive automated resilience testing, while collaborative partnerships accelerate the evolution of comprehensive security practices.
Comprehensive System Architecture (CSA)	The organization demonstrated continuous learning and improvement for protocols governing new technologies; planning to deployment is agile and iterative. Advanced technology helps the organization adapt quickly and serves as a foundation for future innovation. Organizational systems and processes have the ability to adapt to internal and external influences with sufficient speed and agility to (1) continue to meet DSP goals despite a rapid onset of adverse circumstances and (2) take advantage of new entrepreneurial opportunities that arise as a consequence of the organization's DSP capabilities. The flexibility and interoperability of the commercial framework enables rapid development and implementation of innovative business and grid operations. The organization can timely create and modify business models as business and grid needs evolve.	Industry-leading technical solutions are donated to the standardization bodies and are part of international standards. Next-generation system architecture allowing continuous innovation in system design, and flexible and adaptable systems. A next-generation digital architecture underpins and is complemented by next-generation grid technologies. For example, grid technologies are integrated and communicate across the network to automatically regulate the system and balance active and reactive power needs. A next-generation digital architecture connecting different virtual energy systems and digital twins across the industry, utility companies to better achieve their Distributed System Platform (DSP) goals. New business models are realized that promote the potential benefits derived from advanced coordination of energy consumption and supply by EVs.
Stakeholder engagement and change management	The organization is collaborating with stakeholders on initiatives new to the industry.	Innovative approaches to stakeholder engagement leverage AI-powered analytics and cross-industry collaboration, establishing new standards for change management effectiveness. Real-time feedback integration drives continuous evolution of engagement methodologies, setting benchmarks for industry practice.

Prospective DSIP Assessment - Summary

O&R

Level	Stage	Distribution planning and network development (DPND)	Interconnection and network reinforcement	Distribution network operations (DNO)	Market design and integration (MDI)	Customer Services & Engagement	Governance	Data governance	Cybersecurity and resilience	Comprehensive System Architecture (CSA)	Stakeholder engagement & change management
5	Pioneering										
4	Optimizing										
3	Integrating	3	2 with elements of 3	2 with elements of 3		3		3			
2	Enabling										2
1	Initiating										
	No Score				No score		No score		No score	No score	

National Grid

Level	Stage	Distribution planning and network development (DPND)	Interconnection and network reinforcement	Distribution network operations (DNO)	Market design and integration (MDI)	Customer Services & Engagement	Governance	Data governance	Cybersecurity and resilience	Comprehensive System Architecture (CSA)	Stakeholder engagement & change management
5	Pioneering										
4	Optimizing										
3	Integrating	2 with elements of 3	2 with elements of 3	2 with elements of 3		2 with elements of 3		3			
2	Enabling										2
1	Initiating										
	No Score				No score		No score		No score	No score	

Central Hudson

Level	Stage	Distribution planning and network development (DPND)	Interconnection and network reinforcement	Distribution network operations (DNO)	Market design and integration (MDI)	Customer Services & Engagement	Governance	Data governance	Cybersecurity and resilience	Comprehensive System Architecture (CSA)	Stakeholder engagement & change management
5	Pioneering										
4	Optimizing										
3	Integrating	2 with elements of 3									
2	Enabling		2	2		2		2			2
1	Initiating										
	No Score				No score		No score		No score	No score	

NYSEG/RG&E

Level	Stage	Distribution planning and network development (DPND)	Interconnection and network reinforcement	Distribution network operations (DNO)	Market design and integration (MDI)	Customer Services & Engagement	Governance	Data governance	Cybersecurity and resilience	Comprehensive System Architecture (CSA)	Stakeholder engagement & change management
5	Pioneering										
4	Optimizing										
3	Integrating			2 with elements of 3				3			
2	Enabling		1 with elements of 2			2					2
1	Initiating	1									
	No Score				No score		No score		No score	No score	

ConEd

Level	Stage	Distribution planning and network development (DPND)	Interconnection and network reinforcement	Distribution network operations (DNO)	Market design and integration (MDI)	Customer Services & Engagement	Governance	Data governance	Cybersecurity and resilience	Comprehensive System Architecture (CSA)	Stakeholder engagement & change management
5	Pioneering										
4	Optimizing										
3	Integrating	2 with elements of 3				3		3			
2	Enabling		2	2							2
1	Initiating										
	No Score				No score		No score		No score	No score	

		1	2	3	4	5			
Pillars	**No Score**	**Initiating**	**Enabling**	**Integrating**	**Optimizing**	**Pioneering**	**Rationale for Score**	**Capabilities Assessed**	**Capabilities Not Assessed**
Distribution planning and network development (DPND)				Three			O&R is developing granular forecasts from top down and bottom up incorporating AMI data and available data on DERs. Also including many types of DER forecasts. Not fully integrated or automated, also not near or real time. Working on increasing automation and integration. Integrated system planning processes appear to be well-integrated with an advanced level of automation being pursued. This is indicated by the fact that IOAP Phase 3 is being understood and included in requirements. Utility has a load/DER forecasting process to locate system constraints. For future improvements include adding electrification and revisit criteria to address new spot loads and climate change. Continue exploring new types of NWAs, coordination with other utilities, coordinating with customer programs.	Advanced forecasting (load and DERS) Integrated system planning processes Power system modelling and network design Asset management strategy Transmission network engagement	Outage planning Tariff planning and submission Emergency response planning
Interconnection and network reinforcement			Two with elements of Three				O&R has the following capabilities demonstrating their transition from a level 2 to 3 maturity level: - Cost sharing is implemented across Joint Utilities. - The organization uses Power Clerk to manage and track interconnection applications for the utility and the developer at all stages of project development. - Interconnection request data is provided through monthly reports and specifics are available to the developer owning a project. They are not publicly available in an intuitive tool. - Published hosting capacity maps for EVs, DERs and storage. In-line with a move towards level 3, the organization has been piloting NWAs and is looking to start rolling them out more widely now that it has developed a framework. Greater clarity around the following capabilities would help to evaluate this area: - The status of Phase 3 IOAP integrations and automations - it is understood that these are being understood and factored into plans, rather than fully implemented. - Clarity around whether the Distributed Engineering Workstation (DEW) platform has been replaced with a more fully-integrated solution to automated screening studies. - Increase granularity and publication frequency of hosting capacity maps, advanced forecasting , and wider share of data through a wide state platform. Include forecast of hosting capacity.	Customer engagement and application support Interconnection application management Interconnection / reinforcement project planning Construction project management Connection and use of system charging Connection data provision	Project design and optioneering Project tendering and contracting
Distribution network operations (DNO)			Two with elements of Three				Ongoing project to deploy ADMS capabilities and improve distribution automation. Currently planning the implementation of DERMS and advanced ADMS capabilities such as VVO and FLISR to enhance reliability. No evidence of integrated systems for grid operations, only limited reference to AMI (e.g. how data from SCADA, DMS and OMS are integrated with other systems and are being used to optimize business processes). O&R is using AMI for outage/restoration, isolate outages and voltage control. Capabilities seem to be systemwide and improving operations. To reach level 3, they should provide more granular and more frequently updated information.	Network monitoring and representation Operational planning Network control Outage management Resilient operations Distribution system stakeholder engagement and coordination Grid Intelligence Infrastructure Communication Infrastructure Network Optimization Infrastructure Power Quality management	Asset intervention planning Inspection and maintenance Supply of grid operational services Emergency response
Market design and integration (MDI)	No score						In reviewing the capabilities required for MDI and the DSIPs, we determined that most utilities would rank a 1 based on the lack of information requested and the fact the distribution markets have not been initiated. However, many of the utilities are running demand response programs, exploring design of new markets and/or participating in NYISO programs. Many of the capabilities required to run those offerings will contribute to the MDI capabilities.		Flex congestion market or rule based mechanism design Flexibility coordination Market analysis and oversight Market and Customer Data Management Information sharing Market Security Requirements Registering providers Signposting, sourcing solutions Evaluate offering Trade Flexibility Activation Quantification, settlement and billing

		1	2	3	4	5			
Pillars	**No Score**	**Initiating**	**Enabling**	**Integrating**	**Optimizing**	**Pioneering**	**Rationale for Score**	**Capabilities Assessed**	**Capabilities Not Assessed**
Customer Services & Engagement				Three			Within O&R, advanced meters are deployed territory wide and utility is using the data. They have rate designs only for EVs and did not indicate other opportunities to use advanced rate designs. They have rolled out a customer portal to all their customers that allows for better understanding of energy usage. O&R is using the data for predict capabilities (see Data Governance). O&R currently provides tools to help them better understand how customers use energy and manage their energy needs. Customer experience is streamlined and shows increased offerings. Tailored home energy reports to customers working from home. For EE programs; Customer experience across all channels is modern and consistent. They have automated billing for all rate offerings. They have also updated bills to enhance understanding and readability. They are also implementing a new billing system that will allow for increased integration, automation, and bill enhancements.	Advanced metering Rate design/tariffs Consumer management and engagement Consumer billing Electricity trading DSM Programs (EE, DR, Renewables) Electrification & Decarbonization Programs	Electricity trading; incomplete for Programs
Enablers									
Governance	No score						Information on utility organization or re-organization to enable DSP development was not requested; therefore, there is not enough information to assess.		
Data governance				Three			O&R implemented standardized data models to provide customer and system data for IEDR, Green Button, Utility Energy Registry and MyAccount Portal. Using data-driven analytics on customer usage to benchmark usage to similar homes, offer personalized savings recommendations and ways for customer to be alerted of expected high bill usage. The management of DER interconnection data seems to follow a set data structure, but publishing data seems to be a manual process rather than automated.		
Cybersecurity and resilience	No score						Cybersecurity strategy and measures were not explicitly requested; therefore, information provided about cybersecurity are mentioned intermittently throughout the DSIPs. We have not scored the utilities in this category based on the lack of information.		
Comprehensive System Architecture (CSA)	No score						There are no questions that explicitly ask utilities how timely evolution of their business and grid operations will be enabled by an integrated DSP architecture comprising grid assets (physical layer), IT/OT (digital layer), and commercial mechanisms. The technical topic Grid Operations does have the ability to touch on both the IT/OT architecture and the physical grid architecture but currently focuses on specific platforms like ADMS and DERMs. Therefore, we do not have enough information to accurately assess the utilities maturity level.		
Stakeholder engagement and change management		Two					We have assessed all the utilities at a level 2 maturity. Level 2 reflects the utilities collaboration with stakeholders to drive standardization of key processes, knowledge sharing, and acceleration DSP goal achievement. They also have regular engagement opportunities to solicit stakeholder input, with transparent reporting demonstrating how feedback shapes planning and implementation efforts. To move to a level 3 maturity, the utilities need to demonstrate comprehensive change management practices that guide enterprise-wide initiatives with proactive engagement planning ensuring consistent stakeholder interaction. The utilities should be providing measurable outcomes validating stakeholder engagement effectiveness and show continuous improvement of outreach approaches. Overall, the prompts for stakeholder engagement content were often not answered or very minimally answered; therefore, it is possible the utilities are performing at a 3. It is recommended that the utilities provide more information for future DSIPs in these sections.		

Prospective DSIP Assessment - National Grid

		1	2	3	4	5			
Pillars	No Score	Initiating	Enabling	Integrating	Optimizing	Pioneering	Rationale for Score	Capabilities Assessed	Capabilities Not Assessed
Distribution planning and network development (DPND)			Two with elements of Three				Utility is developing granular forecasts from top down and allocating to feeder level using granular data. There is a plan in place to enhance methods, add in additional data, explore deeper granularity. Not fully integrated or automated, also not near or real time. Working on increasing automation and integration. Utility studies impact of climate change on assets; integrating gas and electric planning and distribution and bulk system planning; is developing automation tools for forecasting. Utility is exploring more software options for integrating planning. Coordinates with internal programs to find NWA solutions, works with JU to share ideas and process improvements.	Advanced forecasting (load and DERS) Integrated system planning processes Power system modelling and network design Asset management strategy Transmission network engagement	Outage planning Tariff planning and submission Emergency response planning
Interconnection and network reinforcement			Two with elements of Three				National Grid provides capabilities at a level 2 and 3 maturity level. The following capabilities exhibit a reasonable level of integration between systems and more seamless user experiences indicating level 3: - Cost sharing is implemented across Joint Utilities. - The organization uses nCAP to manage and track interconnection applications for the utility and the developer at all stages of project development. - Certain screens are automated (though greater clarity on the extent of these would be beneficial). - Data from nCAP is also made publicly available (where appropriate) through the website (an integrated experience). - Published hosting capacity data for EVs, DERs and storage assets with increased granularity . To reach level 3; enhanced data, future forecasts and integrated DER value assessment is recommended.	Customer engagement and application support Interconnection application management Interconnection / reinforcement project planning Construction project management Connection and use of system charging Connection data provision	Project design and optioneering Project tendering and contracting
Distribution network operations (DNO)			Two with elements of Three				National Grid has started implementing the SCADA/ADMS at scale and advanced functionalities such as VVO/CCR. National Grid has initiated developing DERMS capabilities, such as short-term forecasting and tools for DER/Aggregator wholesale market. There is information on the integration of systems for grid operations. There is only limited reference to AMI (e.g. how data from SCADA, DMS and OMS are integrated with other systems and are being used to optimize business processes). For utilizing AMI capabilities for grid operations, it is hard to understand what is deployed and what is planned. The utility indicates they will have outage management, voltage optimization, LTC controllers, and overall more monitoring and control for their distribution operations. National Grid is investing in data integration and automation methods for planning NWA/BL, which was notable compared to other utilities.	Network monitoring and representation Operational planning Network control Outage management Resilient operations Distribution system stakeholder engagement and coordination Grid Intelligence Infrastructure Communication Infrastructure Network Optimization Infrastructure Power Quality management	Asset intervention planning Inspection and maintenance Supply of grid operational services Emergency response
Market design and integration (MDI)	No score						In reviewing the capabilities required for MDI and the DSIPs, we determined that most utilities would rank a 1 based on the lack of information requested and the fact the distribution markets have not been initiated. However, many of the utilities are running demand response programs, exploring design of new markets and/or participating in NYISO programs. Many of the capabilities required to run those offerings will contribute to the MDI capabilities.		Flex congestion market or rule based mechanism design Flexibility coordination Market analysis and oversight Market and Customer Data Management Information sharing Market Security Requirements Registering providers Signposting, sourcing solutions Evaluate offering Trade Flexibility Activation Quantification, settlement and billing

Prospective DSIP Assessment - National Grid

		1	2	3	4	5			
Pillars	No Score	Initiating	Enabling	Integrating	Optimizing	Pioneering	Rationale for Score	Capabilities Assessed	Capabilities Not Assessed
Customer Services & Engagement			Two with elements of Three				Meters have been deployed but customer portals for access to energy usage, etc. has not been released. "National Grid continues to explore creative new opportunities such as focused DR efforts, community initiatives and partnerships, NWA projects, improved customer segmentation efforts, rate designs, and a continued focus on demonstration initiatives to test new and advanced technologies, all in the pursuit of deeper savings." This along with a focus on affordability show an integrated maturity level. NG has completed automated billing for all rate offerings. Future plans include better integration to support wholesale market programs.	Advanced metering Rate design/tariffs Consumer management and engagement Consumer billing Electricity trading DSM Programs (EE, DR, Renewables) Electrification & Decarbonization Programs	Electricity trading; incomplete for Programs
Enablers									
Governance	No score						Information on utility organization or re-organization to enable DSP development was not requested; therefore, there is not enough information to assess.		
Data governance				Three			National Grid implemented standardized data models to share customer and system data within the New York System Data and IEDR portal. Clear understanding of stakeholders, the stakeholders use cases and data types required. The management of DER interconnection data is well-integrated across systems allowing for visibility to several different stakeholders (applicants, utility employees and the public).		
Cybersecurity and resilience	No score						Cybersecurity strategy and measures were not explicitly requested; therefore, information provided about cybersecurity are mentioned intermittently throughout the DSIPs. We have not scored the utilities in this category based on the lack of information.		
Comprehensive System Architecture (CSA)	No score						There are no questions that explicitly ask utilities how timely evolution of their business and grid operations will be enabled by an integrated DSP architecture comprising grid assets (physical layer), IT/OT (digital layer), and commercial mechanisms. The technical topic Grid Operations does have the ability to touch on both the IT/OT architecture and the physical grid architecture but currently focuses on specific platforms like ADMS and DERMs. Therefore, we do not have enough information to accurately assess the utilities maturity level.		
Stakeholder engagement and change management		Two					We have assessed all the utilities at a level 2 maturity. Level 2 reflects the utilities collaboration with stakeholders to drive standardization of key processes, knowledge sharing, and acceleration DSP goal achievement. They also have regular engagement opportunities to solicit stakeholder input, with transparent reporting demonstrating how feedback shapes planning and implementation efforts. To move to a level 3 maturity, the utilities need to demonstrate comprehensive change management practices that guide enterprise-wide initiatives with proactive engagement planning ensuring consistent stakeholder interaction. The utilities should be providing measurable outcomes validating stakeholder engagement effectiveness and show continuous improvement of outreach approaches. Overall, the prompts for stakeholder engagement content were often not answered or very minimally answered; therefore, it is possible the utilities are performing at a 3. It is recommended that the utilities provide more information for future DSIPs in these sections.		

		1	2	3	4	5			
Pillars	No Score	Initiating	Enabling	Integrating	Optimizing	Pioneering	Rationale for Score	Capabilities Assessed	Capabilities Not Assessed
Distribution planning and network development (DPND)			Two with elements of Three				The Utility's forecasting process is granular and provides bottom up detail for DERs (EV, Solar, EE, Storage) at the substation / planning area level but it is outsourced to a consultant so is not fully integrated into systems, nor is it automated or real time. IOAP Phase 2 automation is complete with a move towards integration of GIS systems being made. Incorporates asset condition in planning, developing substation level probabilistic forecasting, developing risk-based planning design criteria. Developed probabilistic method and avoided T&D study approach to identify NWA sites, including electrification in NWA reviews, adding more granularity and sensitivities to their avoided T&D approach. Coordinating with JU on process improvements.	Advanced forecasting (load and DERS) Integrated system planning processes Power system modelling and network design Asset management strategy Transmission network engagement	Outage planning Tariff planning and submission Emergency response planning
Interconnection and network reinforcement			Two				Central Hudson's maturity was assessed on the following capabilities: - Cost sharing is implemented across Joint Utilities. - The organization uses Power Clerk to manage and track interconnection applications for the utility and the developer at all stages of project development. - Connection information is provided to the public through the NYSSIR website. Unclear if this is an automated process. - Piloting NWAs and seeking to learn lessons for application on a wider scale. - IOAP Phase 2 automation is complete with a move towards integration of GIS systems being made. - Hosting Capacity maps available: only DERs and storage, but EV maps are missing.	Customer engagement and application support Interconnection application management Interconnection / reinforcement project planning Construction project management Connection and use of system charging Connection data provision	Project design and optioneering Project tendering and contracting
Distribution network operations (DNO)			Two				Central Hudson has been implementing their DMS systems, increasing Distribution Automation, developing the communication infrastructure to connect field devices to the SCADA. VVO & FLISr are being implemented in the DMS and the DMS will be integrated to the DERMS. Central Hudson has also been working on their GIS system to be used a source of asset database, linking it to their DMS/OMS, planning tools and designer tool. Central Hudson is developing their CIS system to improve customer experience. Central Hudson has been expanding their control center. Most of the projects are deployed in specific areas and is planning on full completion in 2026. Researching/identifying DERMS solutions and vendors will begin in 2026 with the implementation of DERMS starting in 2027. Smart grid information is available to support analysis and decision making for grid operations is available across multiple systems and organizational functions but this information is not updated very regularly (annual update of pv hosting capacity and bi-annual with 500KW DG interconnected).	Network monitoring and representation Operational planning Network control Outage management Resilient operations Distribution system stakeholder engagement and coordination Grid Intelligence Infrastructure Communication Infrastructure Network Optimization Infrastructure Power Quality management	Asset intervention planning Inspection and maintenance Supply of grid operational services Emergency response
Market design and integration (MDI)	No score						In reviewing the capabilities required for MDI and the DSIPs, we determined that most utilities would rank a 1 based on the lack of information requested and the fact the distribution markets have not been initiated. However, many of the utilities are running demand response programs, exploring design of new markets and/or participating in NYISO programs. Many of the capabilities required to run those offerings will contribute to the MDI capabilities.		Flex congestion market or rule based mechanism design Flexibility coordination Market analysis and oversight Market and Customer Data Management Information sharing Market Security Requirements Registering providers Signposting, sourcing solutions Evaluate offering Trade Flexibility Activation Quantification, settlement and billing

Prospective DSIP Assessment - Central Hudson Gas and Electric Corporation

		1	2	3	4	5			
Pillars	No Score	Initiating	Enabling	Integrating	Optimizing	Pioneering	Rationale for Score	Capabilities Assessed	Capabilities Not Assessed
Customer Services & Engagement			Two				Central Hudson is initiating their BCA for getting AMI approvals. For M&V, load research, TOU, value stack, they are doing POC with limited AMI meters. Limited information provided on impact of customer engagement or programs. Offers seven traditional program offerings and conducts process evals to gauge customer satisfaction. The utility is engaging with wider stakeholders to understand the impact of future changes on the network to customers. No future program offerings fully developed. Implementing billing practices and settlement for complex tariffs at	Advanced metering Rate design/tariffs Consumer management and engagement Consumer billing Electricity trading DSM Programs (EE, DR, Renewables) Electrification & Decarbonization Programs	Electricity trading; incomplete for Programs
Enablers									
Governance	No score						Information on utility organization or re-organization to enable DSP development was not requested; therefore, there is not enough information to assess.		
Data governance			Two				Central Hudson developed an existing data model that is currently used to share customer and system data on IEDR. The data model is currently developed on an interim solution and expected to be moved to a more robust warehouse in Microsoft Azure. The IOAP portal allows for interconnection data to be viewed by the applicant and Central Hudson employees, but it is not clear that integrations allow for this data to be viewed by the public too.		
Cybersecurity and resilience	No score						Cybersecurity strategy and measures were not explicitly requested; therefore, information provided about cybersecurity are mentioned intermittently throughout the DSIPs. We have not scored the utilities in this category based on the lack of information.		
Comprehensive System Architecture (CSA)	No score						There are no questions that explicitly ask utilities how timely evolution of their business and grid operations will be enabled by an integrated DSP architecture comprising grid assets (physical layer), IT/OT (digital layer), and commercial mechanisms. The technical topic Grid Operations does have the ability to touch on both the IT/OT architecture and the physical grid architecture but currently focuses on specific platforms like ADMS and DERMs. Therefore, we do not have enough information to accurately assess the utilities maturity level.		
Stakeholder engagement and change management			Two				We have assessed all the utilities at a level 2 maturity. Level 2 reflects the utilities collaboration with stakeholders to drive standardization of key processes, knowledge sharing, and acceleration DSP goal achievement. They also have regular engagement opportunities to solicit stakeholder input, with transparent reporting demonstrating how feedback shapes planning and implementation efforts. To move to a level 3 maturity, the utilities need to demonstrate comprehensive change management practices that guide enterprise-wide initiatives with proactive engagement planning ensuring consistent stakeholder interaction. The utilities should be providing measurable outcomes validating stakeholder engagement effectiveness and show continuous improvement of outreach approaches. Overall, the prompts for stakeholder engagement content were often not answered or very minimally answered; therefore, it is possible the utilities are performing at a 3. It is recommended that the utilities provide more information for future DSIPs in these sections.		

		1	2	3	4	5			
Pillars	No Score	Initiating	Enabling	Integrating	Optimizing	Pioneering	Rationale for Score	Capabilities Assessed	Capabilities Not Assessed
Distribution planning and network development (DPND)			Two				Utility can not currently support granular forecasting of load or DERs (have a system level forecast) but there is a plan in place to integrated AMI and SCADA data to provide granular forecasting over the next few years. They discuss hosting capacity maps and improvements to forecasting but do not detail their approach. Hard to pull details about distribution planning alone out of the IP section vs what they refer to for other sections. No focus on asset condition or enhanced planning criteria design. Discussion of process improvements and using value of DER methodologies but minimal discussion of coordination with other programs within the utility and hybrid NWAs.	Advanced forecasting (load and DERS) Integrated system planning processes Power system modelling and network design Asset management strategy Transmission network engagement	Outage planning Tariff planning and submission Emergency response planning
Interconnection and network reinforcement		One with elements of Two					NYSEG exhibits the following capabilities: - There is progress on improving the connections with the portal but appears to be underway rather than complete. - The company considers the use of NWAs. - RAG reports are used to manage interconnection queues using scripted database queries. This is not an integrated process that would be expected to score level 3. - Hosting capacity maps and interconnection databases are not integrated and are updated at different time intervals. We would expect for this to be more integrated to score level 3. - Hosting capacity maps on EVs, DERs, and storage are published. These maps need to be further enhanced to be granular (e.g. location and temporal) include future hosting capacity forecasts to move to level 3.	Customer engagement and application support Interconnection application management Interconnection / reinforcement project planning Construction project management Connection and use of system charging Connection data provision	Project design and optioneering Project tendering and contracting
Distribution network operations (DNO)			Two with elements of Three				Deploying ADMS capabilities across all service territory and improve grid automation in specific substations. Full automation is planned for 2028. Implementing standalone DERMS and with a centralized DERMS combining DER forecasting, DER management and dynamic use of DERs planned for the future. No proof of integrated systems have been referenced in grid operations, only limited reference to AMI (e.g. how data from SCADA, DMS and OMS are integrated with other systems and are being used to optimize business processes). The utility is using their AMI deployment for outage notification and Volt-Var optimization. For future capabilities, they indicate better integration with other operational systems and using analytics to improve grid planning and operations. They also indicate a control central system to integrate their various platforms but all in the future.	Network monitoring and representation Operational planning Network control Outage management Resilient operations Distribution system stakeholder engagement and coordination Grid Intelligence Infrastructure Communication Infrastructure Network Optimization Infrastructure Power Quality management	Asset intervention planning Inspection and maintenance Supply of grid operational services Emergency response
Market design and integration (MDI)	No score						In reviewing the capabilities required for MDI and the DSIPs, we determined that most utilities would rank a 1 based on the lack of information requested and the fact the distribution markets have not been initiated. However, many of the utilities are running demand response programs, exploring design of new markets and/or participating in NYISO programs. Many of the capabilities required to run those offerings will contribute to the MDI capabilities.		Flex congestion market or rule based mechanism design Flexibility coordination Market analysis and oversight Market and Customer Data Management Information sharing Market Security Requirements Registering providers Signposting, sourcing solutions Evaluate offering Trade Flexibility Activation Quantification, settlement and billing

		1	2	3	4	5			
Pillars	No Score	Initiating	Enabling	Integrating	Optimizing	Pioneering	Rationale for Score	Capabilities Assessed	Capabilities Not Assessed
Customer Services & Engagement			Two				Based on the roadmap and current plans provided, many of the NYSEG's capabilities are in pilot or field trial phase. AMI rollout underway. There is not much discussion on providing more data access to customer. There is future considerations for rate design. Used the phrase, "Continuation of program expansion to meet future state goals" multiple times without a lot of detail on the expansion and how/why it would benefit customers. It seems like Customer engagement is moving from reactive to proactive. Working on automated billing. Implementing a new billing system that will complete automated billing in 2025. Current billing process is still partly manual for DER rates and tariffs.	Advanced metering Rate design/tariffs Consumer management and engagement Consumer billing Electricity trading DSM Programs (EE, DR, Renewables) Electrification & Decarbonization Programs	Electricity trading; incomplete for Programs
Enablers									
Governance	No score						Information on utility organization or re-organization to enable DSP development was not requested; therefore, there is not enough information to assess.		
Data governance				Three			NYSEG implemented a standardized data model across metering, distributed generation, and customer portal to share data on IEDR and GreenButton. Additional work through Grid Model Enhancement Project (GMEP) to improve geospatial accuracy on physical assets for more accurate mapping to share. There is a low level of integration with scripted queries supporting data transfers, rather than established data models and integrations.		
Cybersecurity and resilience	No score						Cybersecurity strategy and measures were not explicitly requested; therefore, information provided about cybersecurity are mentioned intermittently throughout the DSIPs. We have not scored the utilities in this category based on the lack of information.		
Comprehensive System Architecture (CSA)	No score						There are no questions that explicitly ask utilities how timely evolution of their business and grid operations will be enabled by an integrated DSP architecture comprising grid assets (physical layer), IT/OT (digital layer), and commercial mechanisms. The technical topic Grid Operations does have the ability to touch on both the IT/OT architecture and the physical grid architecture but currently focuses on specific platforms like ADMS and DERMs. Therefore, we do not have enough information to accurately assess the utilities maturity level.		
Stakeholder engagement and change management			Two				We have assessed all the utilities at a level 2 maturity. Level 2 reflects the utilities collaboration with stakeholders to drive standardization of key processes, knowledge sharing, and acceleration DSP goal achievement. They also have regular engagement opportunities to solicit stakeholder input, with transparent reporting demonstrating how feedback shapes planning and implementation efforts. To move to a level 3 maturity, the utilities need to demonstrate comprehensive change management practices that guide enterprise-wide initiatives with proactive engagement planning ensuring consistent stakeholder interaction. The utilities should be providing measurable outcomes validating stakeholder engagement effectiveness and show continuous improvement of outreach approaches. Overall, the prompts for stakeholder engagement content were often not answered or very minimally answered; therefore, it is possible the utilities are performing at a 3. It is recommended that the utilities provide more information for future DSIPs in these sections.		

		1	2	3	4	5			
Pillars	No Score	Initiating	Enabling	Integrating	Optimizing	Pioneering	Rationale for Score	Capabilities Assessed	Capabilities Not Assessed
Distribution planning and network development (DPND)			Two with elements of Three				Utility is developing granular forecasts from top down and bottom up. Starting to incorporate AMI data. Incorporating available data on DERs. Also including many types of DER forecasts including implementing a new DER forecasting tool. Not fully integrated or automated, also not near or real time. Working on increasing automation and integration. Provides 8760 forecasts in hosting capacity maps. The utility is very active in NWAs and designing NWA approaches. Coordinates with the JU on process improvements.	Advanced forecasting (load and DERS) Integrated system planning processes Power system modelling and network design Asset management strategy Transmission network engagement	Outage planning Tariff planning and submission Emergency response planning
Interconnection and network reinforcement			Two				ConEd exhibited the following characteristics in line with a level 2 maturity level: - Cost sharing is implemented across Joint Utilities. - The organization uses Power Clerk to manage and track interconnection applications for the utility and the developer at all stages of project development. - Interconnection request data is provided through monthly reports to the NYSPSC website - this is not an integrated process. - Expect increased temporal and local granularity as well as a fully integrated DER value assessment for hosting capaacity maps. Based on the information it is hard to determine the phase/status of IOAP integration.	Customer engagement and application support Interconnection application management Interconnection / reinforcement project planning Construction project management Connection and use of system charging Connection data provision	Project design and optioneering Project tendering and contracting
Distribution network operations (DNO)			Two				ConEd completed DERMS POC and launched DERMS MVP. Connecting DER in service area enhancing monitor & control GIS systems. Forecasting mentions a near-term forecasting tool, MetrixIDR, which provides 82 electric network hourly forecasts and 13 radial feeder hourly forecasts as well as forecasts for the relevant Area Stations. Unclear if this is near or real-time. Utility is using AMI for operational efficiencies including CVO, outage management, NGDs, network isolation. They are system wide deployments. To reach level 3, they should provide more granular and more frequently updated information.	Network monitoring and representation Operational planning Network control Outage management Resilient operations Distribution system stakeholder engagement and coordination Grid Intelligence Infrastructure Communication Infrastructure Network Optimization Infrastructure Power Quality management	Asset intervention planning Inspection and maintenance Supply of grid operational services Emergency response
Market design and integration (MDI)	No score						In reviewing the capabilities required for MDI and the DSIPs, we determined that most utilities would rank a 1 based on the lack of information requested and the fact the distribution markets have not been initiated. However, many of the utilities are running demand response programs, exploring design of new markets and/or participating in NYISO programs. Many of the capabilities required to run those offerings will contribute to the MDI capabilities.		Flex congestion market or rule based mechanism design Flexibility coordination Market analysis and oversight Market and Customer Data Management Information sharing Market Security Requirements Registering providers Signposting, sourcing solutions Evaluate offering Trade Flexibility Activation Quantification, settlement and billing

		1	2	3	4	5			
Pillars	No Score	Initiating	Enabling	Integrating	Optimizing	Pioneering	Rationale for Score	Capabilities Assessed	Capabilities Not Assessed
Customer Services & Engagement				Three			ConEd has deployed AMI and released it's customer portal with improved features with insights, energy use, and recommendations. Future plans include more features like outage notification, high bill alerts, and pricing pilots. Analytics project underway to assess load profiles, not full scale. ConEd provided details on all programs and highlights on how programs can increase participation and savings. New EM&V efforts for quality improvement and real-time feedback. Utility engages and seeks customer feedback. Overall, there seems to be an understanding of the various customers and tailored EE program offerings that are continuously revised. They have automated billing for all rate offerings. They have also updated bills to enhance understanding and readability. They are also implementing a new billing system that will allow for increased integration, automation, and bill enhancements.	Advanced metering Rate design/tariffs Consumer management and engagement Consumer billing Electricity trading DSM Programs (EE, DR, Renewables) Electrification & Decarbonization Programs	Electricity trading; incomplete for Programs
Enablers									
Governance	No score						Information on utility organization or re-organization to enable DSP development was not requested; therefore, there is not enough information to assess.		
Data governance				Three			ConEd implemented a standardized data model to share customer or system data through IEDR, Green Button, Energy Efficiency Benchmarking (EEB) platforms. Active in improving EEB by tying in AMI data for hourly load profiles. The IOAP portal allows for interconnection data to be viewed by the applicant and ConEd employees, but it is not clear that integrations allow for this data to be viewed by the public too.		
Cybersecurity and resilience	No score						Cybersecurity strategy and measures were not explicitly requested; therefore, information provided about cybersecurity are mentioned intermittently throughout the DSIPs. We have not scored the utilities in this category based on the lack of information.		
Comprehensive System Architecture (CSA)	No score						There are no questions that explicitly ask utilities how timely evolution of their business and grid operations will be enabled by an integrated DSP architecture comprising grid assets (physical layer), IT/OT (digital layer), and commercial mechanisms. The technical topic Grid Operations does have the ability to touch on both the IT/OT architecture and the physical grid architecture but currently focuses on specific platforms like ADMS and DERMs. Therefore, we do not have enough information to accurately assess the utilities maturity level.		
Stakeholder engagement and change management			Two				We have assessed all the utilities at a level 2 maturity. Level 2 reflects the utilities collaboration with stakeholders to drive standardization of key processes, knowledge sharing, and acceleration DSP goal achievement. They also have regular engagement opportunities to solicit stakeholder input, with transparent reporting demonstrating how feedback shapes planning and implementation efforts. To move to a level 3 maturity, the utilities need to demonstrate comprehensive change management practices that guide enterprise-wide initiatives with proactive engagement planning ensuring consistent stakeholder interaction. The utilities should be providing measurable outcomes validating stakeholder engagement effectiveness and show continuous improvement of outreach approaches. Overall, the prompts for stakeholder engagement content were often not answered or very minimally answered; therefore, it is possible the utilities are performing at a 3. It is recommended that the utilities provide more information for future DSIPs in these sections.		

About DNV

DNV is an independent assurance and risk management provider, operating in more than 100 countries, with the purpose of safeguarding life, property, and the environment. Whether assessing a new ship design, qualifying technology for a floating wind farm, analyzing sensor data from a gas pipeline or certifying a food company's supply chain, DNV enables its customers and their stakeholders to manage technological and regulatory complexity with confidence. As a trusted voice for many of the world's most successful organizations, we use our broad experience and deep expertise to advance safety and sustainable performance, set industry standards, and inspire and invent solutions.