Integrated Energy Data Resource (IEDR) Program
Phase 1 Summary

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2 ABSTRACT

The New York State Energy Research and Development Authority (NYSERDA) submits this report in response to the Public Service Commission (PSC) *Order Implementing an Integrated Energy Data Resource* (the "IEDR Order"), issued on February 11, 2021. Specifically, the IEDR Order directed NYSERDA to file an IEDR Phase 1 Status and Summary Report "after the initial use cases have been implemented and are operational." This Phase 1 Status and Summary Report, among other things, will provide information to the PSC, market participants, and other stakeholders regarding the progress made in achieving the IEDR Program's stated goals and objectives.

3 BACKGROUND

New York State (NYS) is transforming its electricity system into one that is cleaner, more resilient, and affordable through changes in energy policy. Adequate access to useful energy and energy-related data is required to achieve this transformation.

On February 11, 2021, the New York PSC issued the IEDR Order[1] based on Department of Public Service (DPS) staff recommendations,[2] where the Order directed the development of an IEDR to securely collect, integrate, and provide broad and appropriate access to large and diverse sets of valuable energy and energy-related information on one statewide data platform. The IEDR Order designated NYSERDA as the IEDR Program Sponsor responsible for defining, initiating, overseeing, and facilitating the IEDR Program on behalf of NYS.

The IEDR Order articulated the foundational principles for developing the IEDR throughout its life cycle and stated that the policy of obtaining the best overall value for NYS would guide the IEDR. NYSERDA, as the Program Sponsor, established a program-guiding process—based on the three commitments below—to deliver the best overall value:

1. Conducting effective and extensive collaboration with and among stakeholders, including the state's utilities, to identify use cases of value to them. (A use case represents access to data, combinations of data, analysis, or other functions that create value for a specific type of user by supporting a specific identified use or outcome.)
2. Procuring the services of individuals and organizations with the necessary expertise and experience in developing, implementing, and operating a data platform of similar scale and scope.
3. Establishing unambiguous performance requirements, including firm schedules and milestones.

The IEDR Order established the regulatory expectation that the IEDR will enable approximately 50 use cases throughout two phases of development, with specific deadlines for achieving minimum performance capabilities:

[1] 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.
[2]Case 20-M-0082, Proceeding on Motion of the Commission Regarding Strategic Use of Energy Related Data, *Department of Public Service Staff Whitepaper Recommendation to Implement an Integrated Energy Data Resource,* May 29, 2020.

- **Phase 1:** The initial IEDR implementation was required to enable at least five of the highest priority use cases with an expectation that 10 or more could be achieved and was scheduled to be completed 24 to 30 months after the Program Manager's work commenced.
- **Phase 2:** The initial IEDR is anticipated to expand and enhance approximately 40 additional use cases, building on the successful implementation and operation of Phase 1. Phase 2 is scheduled to be completed 30 to 36 months after the completion of Phase 1 (October 1, 2026 – April 1, 2027).

Additionally, in April 2021 the PSC issued an order, *Adopting a Data Access Framework and Establishing Further Process* (the "DAF Order"*)*, whereby the Commission established a uniform and comprehensive Data Access Framework to govern the means and methods for accessing and protecting all energy-related information.[3] On October 13, 2023, the Commission issued the *Order Addressing Integrated Energy Data Resource Matters* (the October 2023 Order), whereby the Commission clarified that the IEDR Platform is a "data custodian" and stated that "[t]he IEDR is such a centralized data warehouse that will function as a data custodian for the purposes of managing the energy-related data received from various sources, including from the Joint Utilities (JU)."[4] The October 2023 Order further required the JU to transfer Customer Data Sets to the IEDR Administrator[5] (the IEDR Development Team) without customer consent, as such a transfer is an exchange of customer data between data custodians. The October 2023 Order, in relevant parts, stated that "[a]s a data custodian, the IEDR will be governed by the DAF, which establishes the means and methods for ESEs to access Customer Data Sets and other energy-related information from the IEDR platform, while ensuring that such information is properly protected from unauthorized disclosures." Accordingly, all aspects of the IEDR comply and will continue to comply with the framework and requirements that the Commission established for the DAF.

On January 19, 2024, the PSC issued their *Order Approving Integrated Energy Data Resource Phase 2 Budgets* (the January 2024 Order).[6] The January 2024, approved funding for Phase 2 of the IEDR Program, which officially began on April 1, 2024. Phase 2 funding will support the established regulatory expectations that the IEDR will enable approximately 50 use cases by the end of Phase 2, by building on the accomplishments of Phase 1, and deploying approximately 40 additional use cases.

As it relates to the filing of this report, the IEDR Order stated that "At the end of Phase 1, after the initial use cases have been implemented and are operational, NYSERDA shall file an IEDR Phase 1 Status and Summary Report, on or before July 30, 2023, which is twenty-four months after the Program Manager is expected to begin its work." To allow the most comprehensive overview of

[3] Case 20-M-0082, In the Matter of the Strategic Use of Energy Related Data, *Order Adopting a Data Access Framework and Establishing Further Process,* April 15, 2021.
[4] Case 20-M-0082, Proceeding on Motion of the Commission Regarding Strategic Use of Energy Related Data, *Order Addressing Integrated Energy Data Resource Matters,* October 13, 2023.
[5] For all intents and purposes, "IEDR Administrator" is synonymous with "IEDR Development Team" throughout IEDR related literature.
[6] Case 20-M-0082, Proceeding on Motion of the Commission Regarding Strategic Use of Energy Related Data, *Order Approving Integrated Energy Data Resource Phase 2 Budgets,* January 19, 2024.

Phase 1 activities to be included in the report, NYSERDA filed two separate Requests for Extension with the Commission. On June 28, 2023, the Secretary granted NYSERDA's first Request for Extension until January 31, 2024, and on January 25, 2024, the Secretary granted the second Request for Extension for filing the IEDR Phase 1 Status and Summary Report, until April 30, 2024.

4 IEDR Phase 1 Review

4.1 Requirements Established by the IEDR Order

The IEDR Program has established and maintains program operations in concert with satisfying IEDR Order requirements. Demonstrating that the IEDR Program has met and continues to meet the requirements of the IEDR Order is pivotal to demonstrating the integrity of the IEDR Program. This integrity is crucial to building and maintaining the trust of our stakeholders who are a critical driver of program development. The Phase 1 Status and Summary Report is intended to demonstrate how the IEDR Program has achieved requirements set forth by the IEDR Order, address any gaps in meeting the requirements, and detail Phase 1 program achievements that will enable program progress moving forward.

4.2 Mapping IEDR Order Requirements

The IEDR Order established the regulatory framework for IEDR program parameters, governance, execution, and accountability and reporting. The IEDR program parameters, as detailed in the Order, include program scope, program schedule, and program budget cap and cost recovery. Within the IEDR Order program governance requirements correspond to the scope and function of the program governing and advisory bodies: the IEDR Program Sponsor, IEDR Steering Committee, and IEDR Advisory Group (AG). The Order also establishes regulatory expectations for IEDR program execution, including establishing a Utility Coordination Group (UCG) and program accountability and reporting requirements.

While this Phase 1 Status and Summary Report narrates the summary of Phase 1 activity, Appendix B in this report provides side-by-side indexing and compares IEDR Order requirements and Phase 1 summary narratives.

4.3 Phase 1 Advancement of IEDR Program Goals

NYSERDA, as the Program Sponsor, advanced Phase 1 goals by procuring core Program Team services; establishing governance, coordination, and advisory bodies as required by the IEDR Order; and extensively engaging stakeholders to ensure the needs of potential IEDR users remained at the center of design and development activities. On March 31, 2023, the IEDR Program Team released an Initial Public Version (IPV) of the IEDR that addressed three priority use cases. [7] On March 27, 2024, the IEDR Program Team published an additional five use cases, for a total of eight use cases that were developed and released in Phase 1, in a Minimum Viable Product. All Phase 1 program activities were conducted and completed within the Phase 1 budget established in the IEDR Order.

[7] New York State Energy Research and Development Authority - Integrated Energy Data Resource (IEDR) Program. *The Initial Public Version (IPV) of the IEDR Platform has been launched!* https://www.nyserda.ny.gov/All-Programs/Integrated-Energy-Data-Resource-Program

4.4 IEDR Program Team

The IEDR Program Team consists of the following membership:

- **Program Manager:** Deloitte Consulting LLP ("Deloitte") was competitively selected as Program Manager in October 2021. As Program Manager, Deloitte maintains the overall program schedule and budget; administers the governance, coordination, and advisory groups; and oversees all technical activities that lead to the operation of the IEDR in accordance with the IEDR Order.
- **Utility Data Advisor:** Pecan Street Inc. ("Pecan Street") was competitively selected as Utility Data Advisor in October 2021. As Utility Data Advisor, Pecan Street provides subject matter expertise on utility data systems to DPS staff and participates in the IEDR UCG described below.
- **Development Team:** In October 2022, NYSERDA competitively selected a team led by E Source Companies LLC ("E Source") to design, build, and operate the IEDR platform. The E Source Team (which includes UtilityAPI, Flux Tailor, and TRC Companies) develops system requirements and architecture; establishes secure and efficient interfaces for data transfer to the IEDR from multiple sources; and develops, tests, delivers, and maintains an IEDR platform that meets use case descriptions and provides value to users.

4.5 Governance, Coordination, and Advisory Bodies

The IEDR Order called for establishing three bodies during Phase 1 to guide the IEDR Program's activities: the IEDR Steering Committee, UCG, and AG[8]. Established in Phase 1 of program operations and projected to function and evolve throughout Phase 2 and the program's life, IEDR governance, coordination, and advisory bodies work in tandem with evolving program needs and support a stakeholder-driven IEDR. Adaptive stakeholder engagement structures and feedback mechanisms serve continually changing program needs and dynamically inform program development, while continuing to satisfy foundational directives established by the IEDR Order and the IEDR Program Charter. Below are summaries of Phase 1 Steering Committee, AG, and UCG structure, activities, and functions.

4.5.1 Steering Committee

The IEDR Steering Committee, consisting of five members from DPS staff and four members from NYSERDA, was convened by NYSERDA starting on March 31, 2021, in accordance with the IEDR Order for the "first meeting to occur within 60 days of this Order's issuance." The Steering Committee reviews and, when necessary, acts on (1) program issues that require Steering Committee awareness and possible actions or decisions; (2) significant program risks that require management and mitigation; (3) planned and unplanned deviations from the program scope, schedule, or budget; and (4) upcoming program milestones—especially those that depend on Steering Committee actions or decisions. The Steering Committee initially met biweekly and has transitioned to monthly meetings unless a program matter requires a special meeting. As of the completion of Phase 1, the IEDR Steering Committee held a total of 25 meetings.

[8] Case 20-M-0082, Proceeding on Motion of the Commission Regarding Strategic Use of Energy Related Data, *Order Implementing an Integrated Data Energy Resource*, February 11, 2021, pages 22–28.

4.5.2 Advisory Group

The IEDR Order mandated the establishment of an AG representing relevant stakeholder groups, including, but not limited to, DER developers, utilities, energy consumers, state, and local government entities, and interested industry associations. Inaugural members were appointed to the AG for a 24-month term. Beginning in November 2021, the Program Manager led and facilitated monthly meetings with these appointed members of diverse stakeholder groups in NYS's energy sector. These sessions provided the IEDR Program Team opportunities to solicit feedback on all relevant program progress, including progress toward planned IEDR capabilities, prioritization of use cases for development, and stakeholder input on IEDR Program priorities and milestones. AG members also participated in additional stakeholder outreach efforts, including surveys, workshops, user acceptance testing, and other focused feedback sessions. The Program Team facilitated a total of 20 AG meetings during Phase 1.

As development progressed and changing program needs emerged, the IEDR Program Team recognized the additional value of obtaining more granular feedback tailored to specific use cases. At the expiration of the initial 24-month appointment term, the AG was restructured into two tiers.

- Tier 1 AG meetings are held as large group sessions focused on overall program development and scheduled on a quarterly basis beginning in 2024.
- Tier 2 AG meetings are small group sessions that review specific use cases and software features. Effective September 2023, Tier 2 AG meetings will be scheduled based on use case groupings and the program development roadmap.

This restructuring maintained the diversity of representation within the group while allowing the team to tailor content directly to specific stakeholder groups. The results have created a foundational and targeted stakeholder feedback mechanism that will be instrumental in Phase 2 development.

4.5.3 Utility Coordination Group

A UCG was established in accordance with the IEDR Order. The UCG has provided and will continue to provide a venue for collaboration, coordination, and oversight of the utility activities related to the design and implementation of the IEDR, including alignment with the schedules and activities of both the DAF and future Orders. The UCG frequently met virtually throughout Phase 1, with meetings varying from monthly, weekly, and biweekly cadences. One in-person UCG was held in Albany in January 2023, which enabled the group to network and address topics related to early releases of the platform. Another area of focus with the UCG throughout Phase 1 included discussing the means and methods of acquiring the data needed to fulfill the requirements of IEDR use cases successfully. The UCG met approximately 105 times during Phase 1. This figure includes regularly scheduled UCG meetings (the cadence adjusted from monthly to weekly to biweekly over time), dedicated "office hours" outside of scheduled meetings, and additional one-on-one and ad hoc meetings to discuss topics such as network data and budget preparation.

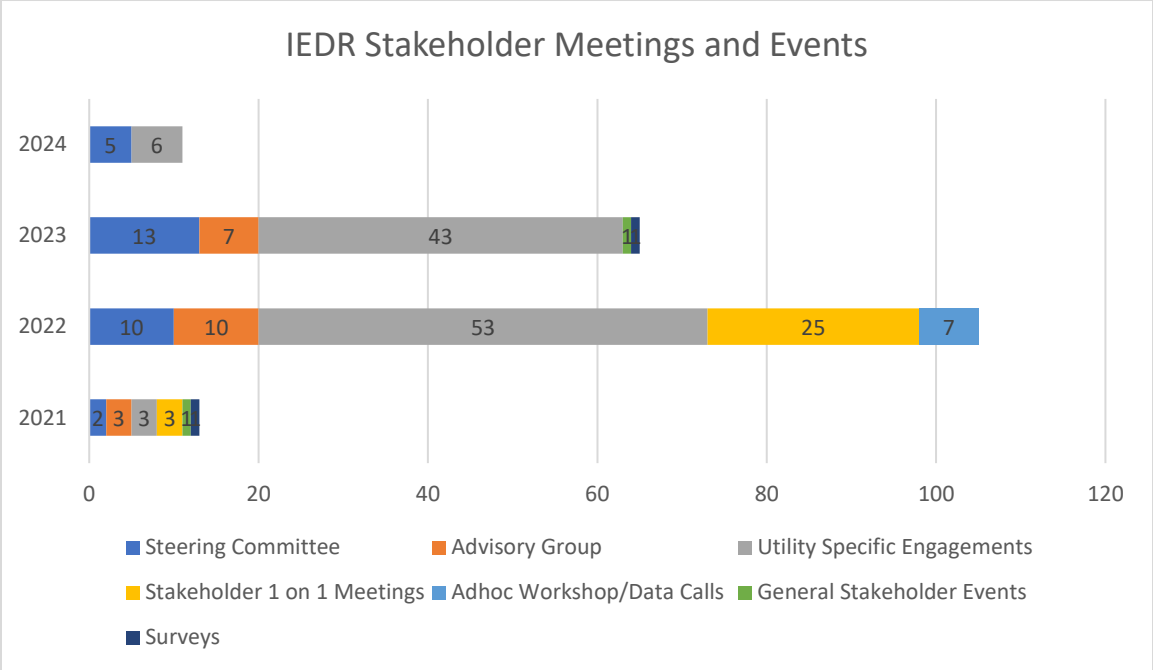
5 Stakeholder Engagement

The IEDR Order articulates policy objectives and establishes venues and processes intended to ensure the broadest possible opportunity for stakeholder contributions throughout the entire life cycle of the IEDR initiative. Robust stakeholder engagement is required to ensure the centralized platform

provided by the IEDR will be a trusted resource that all interested parties and stakeholders can use to efficiently access and analyze pertinent elements of the State's energy system and utility customer information. As such, the IEDR Program Team conducted a robust stakeholder outreach campaign that was initiated and executed throughout Phase 1. This outreach campaign ensured that all program activities were driven by stakeholder input, helping to craft a platform ultimately born from the ideas of potential end users and shaped by subject-matter experts.

Moreover, stakeholder involvement is crucial in defining and prioritizing the numerous use cases required by the IEDR Order. The development of the IEDR platform is informed by stakeholder feedback and contributions through a framework of workshops, technical conferences, periodic reports, and other formats, such as demos with industry stakeholder groups. Stakeholders can directly engage with the Program Team at these stakeholder events, providing valuable feedback and obtaining answers to their specific questions. These stakeholder engagement events will continue in Phase 2.

Figure 1. Volume Of Stakeholder Engagement Conducted in Phase 1



5.1 Stakeholder Engagement Activities

Phase 1 stakeholder engagement activities began with the foundational establishment of a program communications plan. Stakeholder engagement activities expanded to include outreach efforts, targeted interviews, and program conferences that resulted in the selection and prioritization of Phase 1 use cases. As development progressed, new avenues for stakeholder engagement were created and implemented, including additional program conferences and an IEDR user feedback portal. Below is a chronological overview of stakeholder engagement activities performed throughout Phase 1.

5.2 Stakeholder Communications Plan

To further solidify its commitment to empowering individuals and organizations to contribute to the creation of the platform, the IEDR Program Team established a communications plan to serve as a framework to engage stakeholders. The public has been encouraged to elect to receive program communications updates (by signing up to be on the IEDR mailing list) and review program updates, which have been shared via newsletters, NYSERDA's IEDR website updates, and posts to NYSERDA's social media accounts. Messaging tailored to specific stakeholder groups was used to increase participation from potential end users of the platform. Open digital communication channels with the public were established to enable and encourage ongoing feedback between specific outreach and engagement events. A program-wide email address was created to field all incoming program-related stakeholder questions and feedback. All communications include a link or mention of this email address, which is monitored daily by the IEDR Program Team.

5.3 Initial Use Case Outreach and First General Stakeholder Event

In the spring of 2021, NYSERDA began accepting use case proposals from the public. Once Phase 1 officially began, the IEDR Program Team held a General Stakeholder Event (GSE) on November 15, 2021, which was advertised and open to the public. This inaugural event marked a pivotal moment, bringing together key stakeholders to discuss critical issues and explore innovative solutions. The audience included 119 attendees representing 65 organizations who interactively participated as the IEDR Program Team provided background and context on the IEDR and explained the use case identification and prioritization processes. The event also served to share the vision of the IEDR platform, inform the IEDR Program Team of the current composition of existing stakeholder groups, and create an understanding of ways public use case submissions would be considered for development. The outcomes of the GSE fueled the stakeholder awareness campaign, generated public excitement, and solidified the IEDR Program's direction.

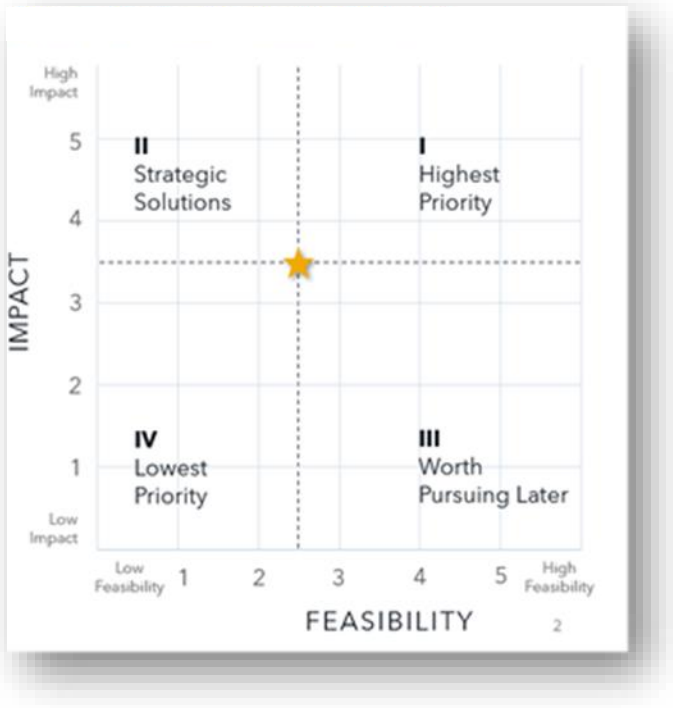
5.4 IEDR Use Case Prioritization and Selection | December 2021 to Spring 2022

Using the momentum gained from the initial awareness efforts, the IEDR Program Team engaged in a comprehensive use case prioritization and selection process. To prioritize the use cases addressed in Phase 1, the IEDR Program Team created a use case prioritization framework. This framework assessed use cases based on impact (the extent to which a use case enabled Climate Act goals) and feasibility (the degree to which a use case can be easily implemented, focusing on cost and time requirements). This use case prioritization framework was used throughout Phase 1 and reviewed during six AG meetings. The prioritization framework was also used to create the proposed use case road map for Phase 2.

5.4.1 IEDR Use Case Prioritization Framework

As shown in Figure 2, prioritization results were divided into quadrants correlating to priority level: I Highest Priority, II Strategic Solutions, III Worth Pursuing Later, and IV Lowest Priority. For the Phase 2 roadmap, the IEDR Program Team also normalized the results so that each stakeholder group response was represented equally and to avoid any one stakeholder group from skewing the results.

Figure 2. Use Case Prioritization Framework



Using this framework, the IEDR Program Team refined and finalized the prioritized IEDR use cases to establish a firm and consolidated use case repository while identifying specific utility and nonutility data required to support high-priority Phase 1 use cases. Stakeholder outreach and feedback were critical in finalizing and implementing the Phase 1 use case prioritization framework. Stakeholder outreach and feedback will continue to shape the use case prioritization framework throughout Phase 2, as the Program Team continues to evaluate and prioritize new data elements, use cases, and features as stakeholders and the IEDR Program Team propose them.

5.5 Stakeholder Engagement in Use Case Selection

Stakeholder engagement in use case selection involved various stakeholders, including the general public, the program's governing bodies, organizations that submitted use cases, and the Utility Data Advisor (Pecan Street).

5.5.1 Non-Utility Stakeholders

The IEDR Program Team conducted 28 one-on-one interviews with a diverse set of nonutility stakeholders, explaining the vision of the program, the use-case development and prioritization process, and incorporating stakeholder feedback into user stories. These interviews provided a deeper understanding of each use case's specific challenges and opportunities, enabling the Development

Team to decide which use cases would receive further development based on assessed feasibility and potential impact.

5.5.2 Utility Stakeholders

In parallel with the one-on-one interviews with nonutility stakeholders, the IEDR Program Team engaged in discussions with utilities to review utility-centric use cases and the availability of utility data sets required to enable stakeholder-requested use cases. The Utility Data Advisor (Pecan Street) provided expert guidance on the technical and logistical aspects of data-sharing and analysis. The knowledge exchanged within these meetings helped establish the feasibility of use cases during use case prioritization and created a pipeline of utility-centric use cases that may be prioritized to deliver value to utilities as platform users in Phase 2.

5.5.3 Data Science and Analytics Subject-Matter Experts

The Program Team anticipated that the IEDR would benefit from periodic expert consultation on matters of strategic importance to the program. To address this, the Program Team hosted a forum to ask (nonenergy) data science and analytics subject-matter experts questions to help inform the platform's development strategy. This panel provided valuable "lessons learned" from other nonenergy data projects, critical data-specific considerations, and insights on shaping the platform's solution architecture to maximize the end-user experience. The perspective provided by this expert panel proved beneficial when creating the use case prioritization framework and building the roadmap for future use case development.

5.5.4 Initial Advisory Group Meetings

Initially, AG sessions were partially open to the public to provide valuable perspectives from diverse backgrounds. These AG meetings played a crucial role in ensuring that the selection process was inclusive, transparent, and aligned with the needs and priorities of the targeted audience. AG feedback helped shape use case evaluation criteria by ensuring the value of selected IPV and MVP use cases for stakeholders and aligning use case selection criteria with the goals of the IEDR Order.

5.5.5 Specific User Group Workshops

Workshops with specific user groups on vetted use cases, consisting of wireframes and persona development, were held to gain feedback on the use cases. The workshops ensured that each use case's value was clearly understood and the IEDR platform could address pain points and real-world needs and deliver tangible benefits to users. The culmination of this comprehensive process was selecting a set of high-priority use cases that met the established criteria and demonstrated the potential to deliver significant benefits to the target audience.

5.6 Final Selection of Use Cases

The program's Steering Committee reviewed the analysis of the ultimate selection of Phase 1 use cases. The Committee approved the selection of use cases after evaluating their feasibility, impact, and alignment with the project objectives and recommended a set of prioritized use cases. The Steering Committee approved the selection, development, and deployment of all Phase 1 use cases. The final scope of each use case incorporated feedback from both the AG and Steering Committee. Section 6.5 of this report details the use cases deployed in Phase 1.

5.7 Stakeholder Engagement in Phase 2 Visioning | December 2022 to April 2023

The stakeholder outreach campaign successfully provided the IEDR Program Team with insights from potential future platform users and increased general awareness of the platform before the initial platform releases. These outreach efforts enabled the Program Manager and Development Team to gather firsthand feedback to shape the prioritization and development of use cases and a Phase 2 Proposal. Building on Phase 1 progress, visioning, and strategic planning of Phase 2 of the IEDR commenced in December 2022. Phase 2 visioning encompassed a comprehensive stakeholder engagement process to define the IEDR's future direction.

5.8 Second General Stakeholder Event

A second publicly advertised GSE was held on February 9, 2023. This event was attended by 96 individuals representing 54 organizations. Following a recap and discussion of Phase 1 progress, the event's agenda focused on attendees' responses to a survey designed to solicit feedback regarding the prioritization of use cases within Phase 2. The survey featured a dynamic log that allowed participants to focus on certain use cases, tailored for specific stakeholder groups, and helped to provide valuable and relevant responses. A poll conducted during the GSE indicated that 75 percent of participants felt they had either a "very clear" or "pretty clear" understanding of Phase 1 progress, which was reflective of a successful implementation of the IEDR Program's communication plan.

5.9 IPV and MVP Stakeholder Engagement and Development | August 2022 to October 2023

As development progressed, stakeholder engagement and commentary continued to play a pivotal role in shaping the IEDR's evolution. The AG continued to play a pivotal role in shaping the IEDR, by providing guidance on IEDR functionality, feature effectiveness, usability, and feedback on software releases.

5.9.1 The Ideas Portal

In addition to soliciting input via conference participation, a mechanism for gathering stakeholder feedback—the Ideas Portal (https://iedr.ideas.aha.io/)—was established in March 2023 to allow users to submit suggestions for new use cases and features, as well as potential improvements for existing features. The Ideas Portal also allows users to "like" ideas other users submitted to help call attention to ideas with broad support. Feedback obtained from the Ideas Portal is analyzed and incorporated into prioritization processes for consideration when planning subsequent iterations of the IEDR platform. Additionally, analytics on stakeholder usage provide valuable insights into how the IEDR is used and help identify areas for improvement and optimization.

5.10 Disadvantaged Communities Stakeholder Engagement

Through the IEDR platform, NYS will help to reduce historical barriers to data access for New Yorkers living in Disadvantaged Communities (DACs), assist solution providers in delivering services to DACs, and aid government and utility program delivery in these communities to help

meet the requirements set forth by the Climate Leadership and Community Protection Act9 (the "Climate Act").

General program stakeholders were consulted during the IEDR stakeholder engagement process and specifically reached out to for priority use cases in the first phase of the IEDR Program. This outreach helped to establish the IEDR use cases that provide a direct benefit to DACs.

During Phase 1 of program development, the IEDR incorporated DAC data layers into platform functionality. IEDR use case functionality now includes two DAC-related features and subsequent filtering capabilities that allow users to identify DACs at the Census tract level and determine whether a selected parcel falls within a DAC Census tract.

Throughout Phase 1, the relevant teams within NYSERDA and the utilities have been consulted and will continue to be consulted in Phase 2 to identify ways to increase access to data that may improve LMI (Low-to-Moderate Income) program delivery, outreach, incentives, and other offerings. The IEDR Program Team is currently exploring the best way to conduct a public forum among stakeholders such as local governments, LMI and environmental justice community-based organizations, non-government organizations, and others, which will solicit additional DAC use case feedback in early Phase 2.

6 Development Overview

Phase 1 of IEDR Program development has established a foundational statewide, centralized platform that securely collects, integrates, and manages a wide range of energy and energy-related data from diverse sources. This foundational platform, and user's ability to access this data through various interfaces, including web portals and data visualization tools, demonstrates progress towards the IEDR Program's overarching goal of supporting clean energy initiatives in NYS through the effective access to useful energy data and information.

6.1 Foundational Data

As the IEDR platform is the first of its kind in NYS, gaining access to and receiving relevant data was critical and resource intensive. Various data sets were controlled by separate utilities and stored in a variety of utility systems and needed to be organized into a transmissible format and released to the IEDR. The data sets received in Phase 1, which include GIS and customer usage data, are necessary to develop use cases and serve the needs of stakeholders throughout Phase 2. By receiving and ingesting this data in Phase 1, the program is well-positioned to decrease the build and implementation times in which use cases and features are developed and deployed moving forward.

6.2 Types of Data to be Housed in the IEDR Platform

The data will be stored securely in a data warehouse designed to handle large volumes of structured and unstructured data. The data will be normalized and standardized to ensure consistency and facilitate analysis.

[9] New York State Climate Action Council. 2022. "*New York State Climate Action Council Scoping Plan.*" climate.ny.gov/ScopingPlan

For a full list of data available as part of the IEDR MVP, please refer to Appendix A. The list of available data sets will expand as the IEDR is further developed in Phase 2.

6.3 Types of Data Connections Between Utilities and the IEDR platform

Utilities must electronically transfer data to the IEDR platform promptly and accurately. Data that utilities transfer to the platform falls within two data categories for Phase 1: network data and rate plan data. Additionally, customer data transfers were also initiated as part of Phase 1 activities. Data is encrypted in transit between utility systems and the IEDR. Data deposits from the utilities leverage secure industry standards and best practices. The data is then processed through an orchestrated workflow of cleansing and normalization steps before it is encrypted at rest and stored in compliance with platform requirements.

6.4 Data Refresh Cadence

For the MVP release, from the time utility data is received by the IEDR to the time it is made available to users, data may have latency of over one month due to initial coordination efforts to create alignment in file contents and formatting. Data latency timelines are anticipated to decrease over time.

Data	Frequency of Updates
PV Hosting Capacity	Annually, or more frequent[1]
Installed DER	Monthly
Planned DER	Monthly
EV Load Capacity	Annually
ESS Hosting Capacity	Annually, or more frequent[1]
Rate Plan Data	Aperiodic – Within 2 Business Days of Publish to DPS website for new rates or changes to existing rates

(1) Six-month update for circuits that increase in DG > 500kW on PV and Storage Maps[10]

6.5 Types of Cybersecurity Risks and Safeguards of the IEDR Platform

Robust cybersecurity measures are implemented within the IEDR to ensure data security, integrity, and availability within the platform and to apply NYS cyber protection standards and industry best practices. The IEDR follows industry best practices to secure information, computer systems, networks, and devices using a defense-in-depth approach. These controls follow approved policies and procedures in the areas of access control, asset management, business continuity and disaster response, cryptography, data management, human resources security, incident response, information security, operations security, physical security, risk management, secure development, and third-party management.

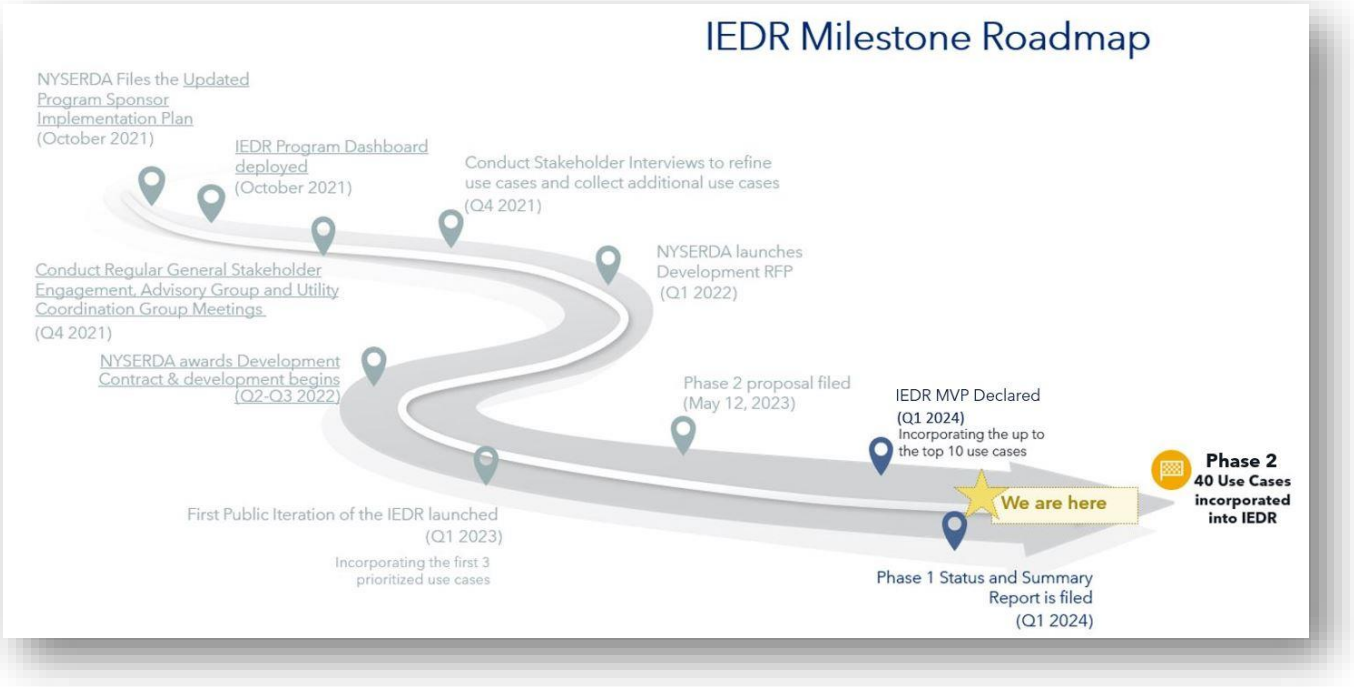
[10] "The Joint Utilities of New York." *The Joint Utilities of New York | Joint Utilities*, jointutilitiesofny.org/. Accessed 29 Mar. 2024.

6.6 IEDR Releases

While the IEDR Order "assumes that the IEDR evolves in a sequence that begins with a 'minimum viable data set' closely aligned with use-case priorities," per the program's focus on user value and the guiding principle of providing value to NYS, the program elected to create an IPV of the IEDR in advance of the MVP release. The IPV enabled three (3) of the highest priority use cases, set a constructive tempo for IEDR development, and demonstrated early value to the public and IEDR stakeholders / users. The MVP followed by enabling an additional five (5) highest priority use cases, which were built upon those of the IPV.

The IPV and MVP releases met all Phase 1 requirements as detailed in the IEDR Order. Phase 1 concluded with the IEDR Steering Committee approving the release of the MVP and the public release of the MVP on March 27, 2024.

Figure 3. IEDR Milestone Roadmap



6.6.1 Initial Public Version (IPV)

The IPV provided access to a limited set of foundational use cases and data sets from publicly available sources. Section 3.1 in Appendix A of this document contains a table of data items mapped to the high-level data needs of the IEDR IPV use cases and Appendix B of the IEDR Whitepaper. Table 1 below displays the IPV scope and use cases that were launched on March 31, 2023.

Table 1. Scope of IEDR IPV

Consolidated Hosting Capacity Maps	
Description	This use case will support DER developers, DER owners, and/or utilities to view all hosting capacity maps for the entire state in one map view, with consistent data, so that end users can site new DERs and monitor the state of DER development in New York accurately.

Acceptance Criteria	Ability to view hosting capacity data for the JU and PSEG LI on one map.	Ability to view the table underneath the map with specific information about each relevant point on the map.	Ability to filter the map by the amount of capacity available, by utility.
Installed Distributed Energy Resources (DERs)			
Description	This use case will enable access to and the ability to manipulate data that shows all installed DERs contained within utility SIR inventories.		
Acceptance Criteria	Ability to view installed DERs on a map.	Ability to filter/sort the map by location, type of DER, and capacity.	Ability to view table of data displayed on the map.
Planned Distributed Energy Resources (DERs) (Interconnection Queue)			
Description	This use case will enable utilities, DER aggregators, DER providers, and government agencies to view the most important queued DER attributes (within utility SIR inventories) in a table (e.g., DER type, DER status, DER status rationale, etc.), and as graphics that display the types and statuses of DERs, so users can forecast future projects and easily retrieve essential information.		
Acceptance Criteria	Ability to view planned DERs on a map with installed DERs.	Ability to filter/sort map by location, type of DER, capacity, phase in interconnection process/interconnection status.	Ability to view table of data displayed on the map.

6.6.2 Minimum Viable Product (MVP)

The MVP is the second major release of the IEDR platform, which builds on foundational IPV use cases and paves the way for Phase 2 platform releases. Table 2 below displays the MVP scope and use cases that were launched on March 27, 2024. Section 3.2 in Appendix A of this document contains a table of data items mapped to the high-level data needs of the IEDR MVP use cases and Appendix B of the IEDR Whitepaper. Table 2 below displays the MVP scope and use cases.

Table 2. Scope of IEDR MVP

Access to Basic Rate Data and Tariff Book for Individual Rate			
Description	This use case comprises features that enable those estimating energy customer bills to access the data they need to do so more easily and precisely than they are currently able to by: 1. Making rate parameters that change slowly available in structured format: rate periods, holidays, seasons, minimum and other fixed charges, and baseline allowances (also known as "tiered block rates") 2. Facilitating easier navigation to the section of the tariff book where rate parameters for a given rate can be found, which includes more straightforward navigation to both the most recent version of the tariff book itself and historical versions of the tariff book		
High-Level Data Needs	Utilities: All data-specification parameters (tariff service classes, rate holidays, etc.) for slowly changing dimensions for priority rates DPS: Tariff book PDFs		
Expected Outcome	• Better experience accessing, understanding, and using data to drive valuable outcomes (renewables, EVs, heat pumps). • Reduced calls to utility call centers for access to / explanation of rates and tariffs by ESE on behalf of customers. • Fewer steps in the process to access rate and tariff data. • Currently, anyone who wants to estimate customer bills is manually navigating through complex tariff data books if they need parameters more precise than an estimated dollar-per-usage unit (e.g., from historical customer bill totals from a secondary source). This use case aims to reduce the time required to do this work significantly.		
DER Siting – Environmental, Community, Terrain, Land, and Property Assessment			
Description	This use case will support local governments and community solar developers who want to accelerate identifying, selecting, and negotiating site agreements for community solar projects to deploy available capital more quickly and increase the amount of clean energy available to NY electricity customers. In addition to electrical infrastructure information, which was foundationally covered in the IEDR IPV release, these end users need environmental, community, and property data to reliably identify feasible sites for solar development. The IEDR will serve as a one-stop shop for standardized DER data and operationalize the flexible demand marketplace.		
High-Level Data Needs	Third party • Parcel	• Terrain/landform	• Critical environment areas

	• Zoning • Additional base maps	• DAC regions • Land cover	• Civil boundaries • Climate zones
Expected Outcome	• Better experience accessing, viewing, understanding, and using data to drive valuable outcomes. • Fewer steps in the process to access parcel and land data. • Easier way to filter parcels and save results. • Currently, anyone who wants to identify or select sites for solar projects is doing so by gathering information from multiple government websites and PDF resources. This use case aims to significantly reduce the time required to do this work.		
EIAT Hosting Capacity & DER Map Enhancements			
Description	This use case will support DER developers, DER owners, and/or utilities to better understand and accelerate the interconnection approval process for planned/installed DER systems so that DER projects can deliver clean energy to customers as soon as possible. Accelerating the interconnection process also includes a clearer understanding and evaluation of the process of siting the location of a DER installation. These goals could be achieved by enhancing existing hosting capacity maps through standardization, adding interconnection approval time and interconnection cost information, including utility upgrade project information, and corresponding forecasts of hosting capacity updates.		
High-Level Data Needs	Utility • Interconnection costs and approval times • Utility upgrade project data		
Expected Outcome	• EIAT usability enhancements • Consistent statewide experience for DER providers and owners • Reduced time to deploy DERs for providers • Improved DER siting based on interconnection queues and timing		
Find and Filter Rate Options Across NYS IOU Utilities			
Description	This use case will support energy service entity (ESE) or government staff members who want to view a list of rates/tariffs across NYS utilities filterable by key criteria (e.g., rate name, rate type, location, etc.) to quickly navigate to the pertinent rate information. This use case is driven by a need to access rate and tariff information in a consistent and machine-readable format that does not require an ESE or government staff member to manually review individual PDFs throughout time or visit individual utility websites to see the available rates. This use case will allow users to export the list for analysis and integration with other analysis tools.		
High-Level Data Needs	Utility: Rate lists per utility and Development Team jointly developed specifications for priority rates.		
Expected Outcome	• Increased enrollment in time-of-use (TOU) rates • Increased participation in demand response (DR) programs • Increased standardization in rate and tariff attributes across utilities • Increased awareness and understanding of rates and tariffs by stakeholders		
Efficient and Effective Access to Existing Customer Billing Data (Sandbox)			
Description	Current access to bill data is problematic as the only way to access bill image PDFs is through a customer online account, which brings risks. An energy manager obtains authorization from customers at contract signing to share data access with a data provider to access data. This use case would grant access electronically for a list of properties at the time of the energy manager and data services contract signing, with no additional action required on behalf of the customer after that for the data services provider to access data for those properties at a later point within the authorized timeframe. Currently, separate actions are required for each customer account at the time of the authorization request. Ideally, customer consent can be granted both in advance and at the moment of the request, and it should be possible to grant access via mobile phone. This use case would help improve the timeliness of bill payments, reduce late fees, and verify customer savings. At the time of MVP release, this use case was available in an online environment known as a "sandbox environment" that allows users to explore the functionality and value of the use case with mock data sets, and to submit comments and suggestions to the Ideas Portal without having to complete the full IEDR Green Button Connect registration process. The full rollout of this feature, which will allow utility customers to share their actual customer data with approved third-party energy companies, will be forthcoming later in 2024 as part of Phase 2 program development.		
High-Level Data Needs	Utility • Customer data • Billing data • Usage data • Complete set of data representing usage, charges, and transaction data, with 100-percent accurate, machine-readable representation of all elements from customer bills • Relationship between unique property ID, service points, addresses, meters, accounts billed, and		

	bill images
Expected Outcome	• Consistent statewide Green Button Connect (GBC) experience • Save users time and resources accessing bill data • Reduce time and resources spent managing out of date authorization documentation and bill data • Increase the number of customers who authorize the use of their bill data to users • Increased customer program participation enabled with bill data analysis

6.6.3 Change in Scope of IEDR MVP

Due to unexpected changes in the timeline regarding utility customer data availability, a change to the MVP use case scope was required. After careful consideration, the Program Team decided that the full release of the "Efficient and Effective Access to Existing Customer Usage and Billing Data" use case must be delayed from the MVP release. The MVP does not include actual customer data. However, the development of a use case sandbox environment was included in the MVP release. The sandbox environment allows users to explore this use case's functionality without the applied data sets. Building on the extensive work performed in Phase 1 to initiate customer data transfers to the IEDR, Phase 2 of program development will allow the full functionality of this use case. The Transmission Line Layer has also been excluded from the MVP release due to utility CEII (Critical Energy Infrastructure Information) sensitivities.

To backfill the scope of MVP use case development, alternative features were identified by the Program Development Team and selected in consultation with the IEDR Steering Committee, including:

- Usage of large rooftops public data source
- Landform feasibility, Storage hosting capacity
- EVSE (electric vehicle supply equipment) load capacity

6.6.4 Shift in Public Release of MVP

Per the IEDR Order, the project's MVP is required to be released within 24 to 30 months from the project's inception. The IEDR Program Team made a strategic decision to reschedule the MVP release from the fourth quarter of 2023 to the first quarter of 2024. This timeline adjustment continues to adhere to the mandated release timeframe and allows the Program Team the required time to incorporate refinement and capabilities into the platform that maximize User Experience (UX) prior to the MVP release. On March 27, 2024, the IEDR Program Team released the IEDR MVP to the public.

6.7 Orders Impacting Development

6.7.1 October 2023 Decision – Order Addressing Integrated Energy Data Resource Matters

Issued October 12, 2023, the Order Addressing Integrated Energy Data Resource Matters directed the JU to share non-anonymized, non-aggregated customer data sets with the IEDR as part of a data-custodian-to-data-custodian exchange and affirms the IEDR's status as a data custodian. The Order states that all aspects of implementing and operating the IEDR must comply with any policies adopted under the DAF, and all ESEs seeking access from the IEDR will need to meet all DAF requirements.

The Order also directed the JUs to file tariff revisions within 30 days (by November 13, 2023) with language comparable to the following: *"The [Utility] has provided non-anonymized and non-aggregated customer specific data to the State's Integrated Energy Data Resource (IEDR) pursuant to the New York Public Service Commission's [XX Order] in Case 20-M-0082. If such data is improperly released from the IEDR as the result of a cyber-related incident, or inadvertently disclosed by the IEDR administrator or its agents or contractors due to an operational error, the [Utility] will not be liable for such release or disclosure."* Additionally, the Order stated: *"Concurrent with the filing of the tariff revisions discussed above, the Joint Utilities and the IEDR Administrator are directed to finalize any data sharing agreements necessary to begin the transfer of data from the Joint Utilities to the IEDR platform. The Joint Utilities shall work with NYSERDA and the IEDR Administrator so that the transfer of Customer Data Sets and system data from the utilities to the IEDR platform, as envisioned in the IEDR and DAF Orders and in this Order, can begin within 60 days[11] of this Order."*

6.7.1.1 Order Compliance and Impacts

To meet the Order requirements, Consolidated Edison, Orange and Rockland, and Liberty Utilities filed their required tariff revisions on November 9, 2023. Central Hudson similarly filed on November 11, 2023, and Rochester Gas and Electric, New York State Electric & Gas, National Fuel, National Grid, and Brooklyn Union Gas filed on November 13, 2023.

The JU and the IEDR Administrator executed a Cybersecurity and Nondisclosure Agreement on January 9, 2024, to govern the sharing of Customer Data Sets. Each utility began to share customer data on January 16, 2024.

6.7.1.2 How the October 2023 Order Foundationally sets up the IEDR Program for Iterative Enhancements in Phase 2

The Commission's October 2023 Order had several significant impacts on IEDR development. Firstly, it clarifies that the JU must transfer customer data sets to the IEDR Administrator without customer consent and that utilities will not be liable for third-party data breaches once the transfer occurs. This unlocked the transfer of customer data sets to the IEDR in Phase 1 and made feasible a range of IEDR use cases in Phase 2, from efficient, effective, and consistent access to consented utility customer usage and billing data to statewide benchmarking and aggregated community consumption metrics. Secondly, the Order specifies that the IEDR is a data custodian. This clarifies the responsibilities of the IEDR Administrator, reduces ambiguity regarding DAF requirements, and has allowed the IEDR Program Team to prepare critical next steps in Phase 2.

6.7.2 How the IEDR Does and Will Comply with DAF Requirements

The IEDR Order establishes the IEDR Program for iterative enhancements in Phase 2 by clarifying the types of data to be housed in the platform and the necessary safeguards against cybersecurity risks. All protections established in the DAF Order will apply to the IEDR, including the requirement for ESEs to comply with policies and requirements for accessing data. The IEDR will be governed by the DAF, ensuring that customer data sets and other energy-related information are properly protected from unauthorized disclosures. The IEDR Order also allows the IEDR platform to share or

[11] 12/12/2023 marked 60 days from the Order

make public derivatives of customer data sets for prioritized use cases if the data is anonymized and aggregated in compliance with legal and regulatory requirements. Thus, the Order sets the foundation for the IEDR Program to evolve and enhance its functionality in Phase 2 while maintaining data protection measures.[12]

6.7.3 January 2024 Decision - Order Approving Integrated Energy Data Resource Phase 2 Budgets

On May 12, 2023, the IEDR Program Team authored and filed the IEDR Phase 2 Proposal as directed by the IEDR Order[13]. Issued January 19, 2024, the PSC issued the Order Approving Integrated Energy Data Resource Phase 2 Budgets that approved the Phase 2 Proposal and budget filed by NYSERDA.[14] The January 2024 IEDR Order acknowledged the continuation of established program participant roles of the Program Sponsor (NYSERDA), the Program Manager (currently Deloitte), the Development Team (currently E Source), and the Utility Data Advisor (currently Pecan Street). The Order also acknowledged that Phase 2 funding includes dedicated administrative funds, as requested in the Phase 2 Proposal, for contracting with or reimbursing organizations that support DACs, to ensure that DAC use cases and functionality are prioritized. The latest IEDR Order further directed NYSERDA to file a Phase 2 Status and Summary Report, on or before April 1, 2026.

7 Program Costs Incurred During IEDR Phase 1

Phase 1 was accomplished through core and noncore program activities. Core program activities were completed by three main program contributors under the direction of NYSERDA: the Program Manager (Deloitte), the Utility Data Advisor (Pecan Street), and the Solution Architect and Development Team (the "Development Team," led by E Source). As key data suppliers and a potential IEDR users, noncore program activities were completed by the Jurisdictional Utilities (JU) and non-jurisdictional utilities (PSEG LI), to support the program through initial data transfer needs and prepare for future data transfers as guided by the IEDR program.

7.1 Core Program Costs

The IEDR Order established a budget cap for core program costs of $13.5 million for the Program Sponsor's efforts for Phase 1, including $12 million for procured resources and $1.5 million for the NYSERDA administrative costs as Project Sponsor Core program costs through Phase 1 fell under Phase 1 budget caps and are within the expected estimated range for all program contributors. Phase 1 core program costs totaled $12,634,543.25, including $11,360,929.30 for procured resources and $1,273,614 for Program Sponsor administrative costs.

7.1.1 Core Program Costs Incurred

The Program Sponsor manages all IEDR program-related expenditures in compliance with NYSERDA's budget and accounting policies and principles. From October 2021 when the Program

[12] Case 20-M-0082, Proceeding on Motion of the Commission Regarding Strategic Use of Energy Related Data, *Order Implementing an Integrated Data Energy Resource Matters*, October 13, 2023, Pages 5-6.
[13]Case 20-M-0082, Proceeding on Motion of the Commission Regarding Strategic Use of Energy Related Data, *IEDR Phase 2 Proposal*, May 12, 2023.

[14] Case 20-M-0082, Proceeding on Motion of the Commission Regarding Strategic Use of Energy Related Data., *Order Approving Integrated Energy Data Resource Phase 2 Budgets*, January 19, 2024.

Manager was selected until the award of the Development Team contract in November 2022, the Program Manager was responsible for all aspects of program execution, including stakeholder engagement, program communications, use case identification and development, early solution architecture, and Development Team procurement support. Activities within the program's technical scope transitioned to the Development Team beginning in November 2022. The majority of core program costs incurred after this transition were the result of expenditures of the Development Team, reflected in the IPV and MVP releases. Throughout Phase 1, the Utility Data Advisor had a specific role in providing input to DPS staff on the adequacy and justification for noncore (i.e., utility) activities and costs during Phase 1 (including planning for Phase 2). Core program costs incurred by program contributors through March 31, 2024, are displayed in Figure 4 and Table 3.

Figure 4. Actual IEDR Program Costs Incurred – Phase 1 (October 2021–March 31, 2024)

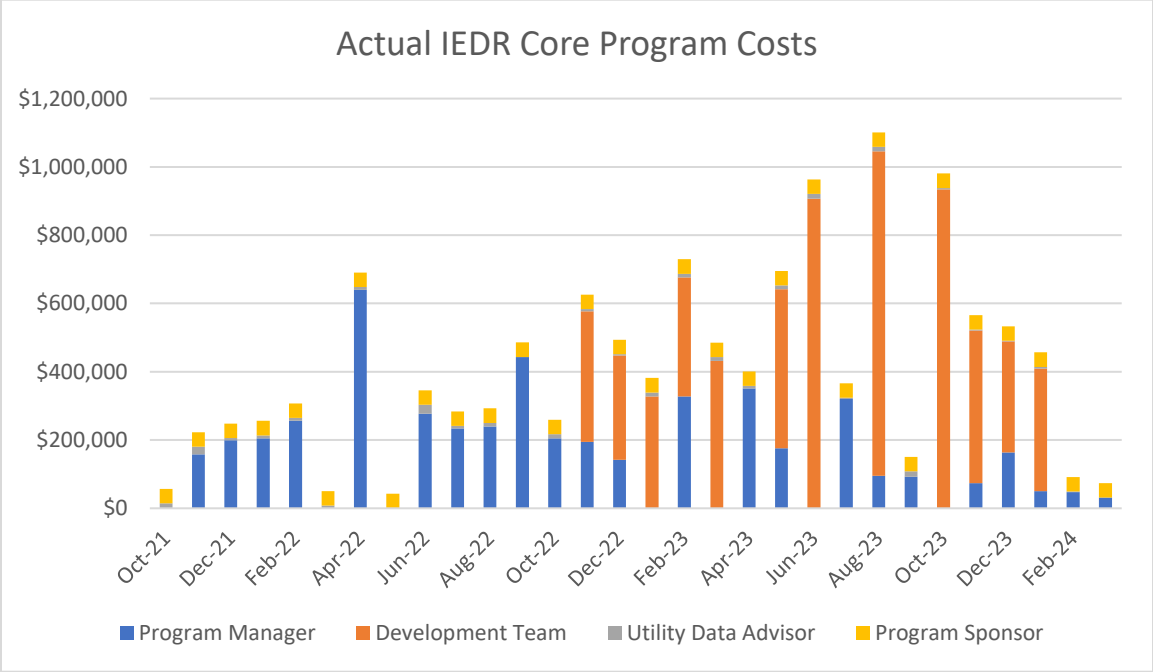


Table 3. Expected IEDR Core Program Cost Totals Per Program Contributor

	Program Manager	**Utility Data Advisor**	**Development Team**	**Program Sponsor**	**Total Program**
Contributor	Deloitte	Pecan Street	E Source	NYSERDA	Total Program
Total	$4,920,770.64	$254,367.50	$6,185,791.13	$ 1,273,614.00	$12,634,543.25

7.2 Non-Core Program Costs

The IEDR Order directed the development of the IEDR's design and adopted the necessary framework for funding, program management, and governance. Regarding funding, the Commission established utility-specific budget caps to complete the data-sourcing efforts for Phase 1 of IEDR development, directing that *"…Con Edison, Central Hudson and National Grid shall be subject to a $12 million cap each. O&R, NYSEG, and RG&E shall be subject to a $6 million cap each… National Fuel*

Gas, St. Lawrence Gas, KEDNY and KEDLI, shall each be subject to a budget cap of $1 million[15]*."* Non-core program costs through Phase 1 (as of December 31, 2023) totaled $13,163,445 and fell under Phase 1 utility budget caps and are within the expected estimated range for all utilities.

Additionally, the IEDR Order directed that each of the NYS investor-owned electric and gas utilities "*shall defer applicable costs, up to their individual budget cap, for future recovery in their next rate case filing after Phase 1 of the IEDR development is completed.*"[16]

Each utility submits an IEDR quarterly report in compliance with Ordering Clause No. 5 of the Order Implementing an IEDR[17], where the State of New York PSC directed each utility to "... file a quarterly report on Integrated Energy Data Resource enablement project planning and investments, as discussed in the body of this Order, with the first report being due on or before October 31, 2021". As such, each quarterly report submitted to and located on the NYS DPS website provides a status of the ongoing and planned projects and investments supporting the enablement of the IEDR[18].

The IEDR Order required the JU to file a report detailing the costs incurred to implement Phase 1 of the IEDR and the allocation of those costs between affiliated utilities. The IEDR Phase 1 noncore program costs are composed of the expected costs for the JU, which comprises:

- Central Hudson Gas & Electric Corporation
- Consolidated Edison Company of New York, Incorporated
- Liberty Utilities (St. Lawrence Gas) Corporation
- National Fuel Gas Distribution Corporation
- Niagara Mohawk Power Corporation d/b/a National Grid (NMPC), The Brooklyn Union Gas Company d/b/a National Grid NY (KEDNY), and KeySpan Gas East Corporation d/b/a National Grid (KEDLI) (collectively, "National Grid")
- New York State Electric & Gas Corporation
- Orange & Rockland Utilities, Incorporated
- Rochester Gas and Electric Corporation

The JU incurred costs for the IEDR Phase 1 implementation are those related to the tasks described in the IEDR Order. Each utility participates in the monthly JU IEDR Technical Working Group meetings, which provide a forum to share approaches to data architecture, discuss open questions, and form points of view to guide the development of each utility's data design and implementation.[19] At the time of filing the Phase 1 Status and Summary Report, Q1 2024 JU quarterly reports had yet to

[15] Case 20-M-0082, Proceeding on Motion of the Commission Regarding Strategic Use of Energy Related Data, *Order Implementing an Integrated Data Energy Resource*, February 11, 2021, Page 20.
[16] Case 20-M-0082, Proceeding on Motion of the Commission Regarding Strategic Use of Energy Related Data, *Order Implementing an Integrated Data Energy Resource*, February 11, 2021, Page 20.
[17] Case 20-M-0082, Proceeding on motion of the Commission Regarding Strategic Use of Energy Related Data, *Order Implementing an Integrated Energy Data Resource*, February 11, 2021, Page 39.
[18] Access to NY Department of Public Service website:
https://documents.dps.ny.gov/public/MatterManagement/CaseMaster.aspx?MatterCaseNo=20-M-0082

[19] Case 20-M-0082, Proceeding on Motion of the Commission Regarding Strategic Use of Energy Related Data, *Order Implementing an Integrated Data Energy Resource*, February 11, 2021, Pages 18–19.

be filed. As a result, the remaining Phase 1 non-core program costs incurred by the JU in Q1 2024 were not yet available for inclusion in the Phase 1 Status and Summary Report.

Figure 5. Actual IEDR Non-Core Program Costs Incurred – Phase 1 (October 2021–December 31, 2023)

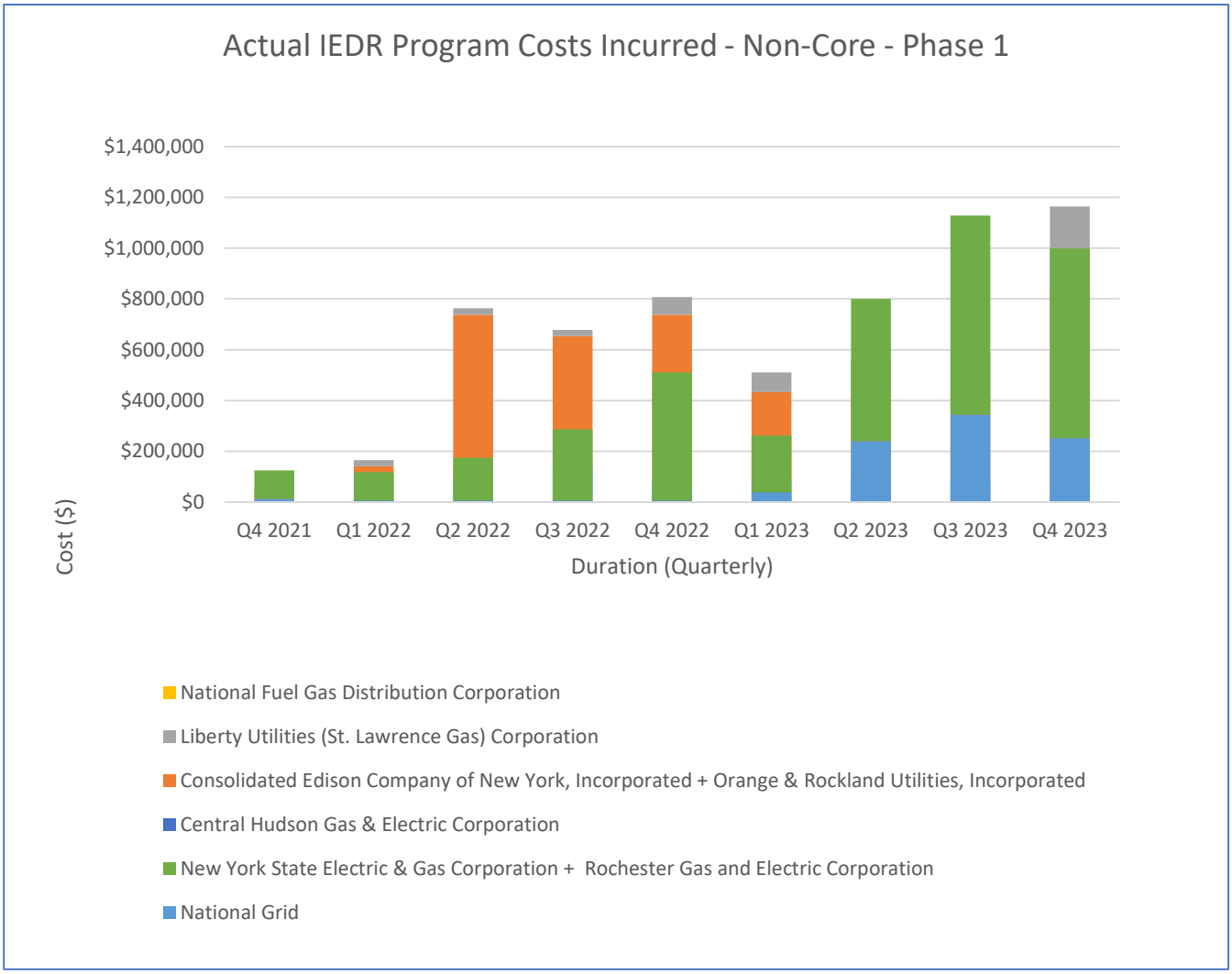


Table 4. Expected Phase 1 IEDR Non-Core Cost Totals Per Utility

Utility	Central Hudson Gas and Electric Corporation	Consolidated Edison Company of New York, Incorporated and Orange and Rockland Utilities, Incorporated	Liberty Utilities (St. Lawrence Gas) Corporation	National Fuel Gas Distribution Corporation	National Grid	New York State Electric and Gas Corporation and Rochester Gas and Electric Corporation
Total Phase 1 Costs	$650,654.00	3,805,000.00	$840,876.00	$0.00	$1,631,736.00	$6,235,179.00
Budget Cap	$12,000,000.00	$18,000,000.00	$1,000,000.00	$1,000.000.00	$12,000,000.00	$12,000,000.00

7.2.1 Phase 1 Strategies to Reduce Non-core Program Costs

The IEDR Order directed "*[an] implementation team…be formed at each utility.*"[20] Therefore, each utility belonging to the JU created a team assigned to the IEDR Program. The IEDR Program Team, in conjunction with the JU IEDR Implementation Teams, implemented strategies to reduce non-core costs, which allowed non-core costs to come in under budget.

Phase 1 strategies to reduce non-core program costs include:

- Utilities provide their respective data sets in their native form, unless an agreed-upon alternative form brings mutual benefit to the IEDR Program and ease of data production for the utility
- The IEDR integrates and normalizes the provided data in the form required to support the use case(s)
- Utilities push their data to the IEDR through a secure standards-based interface and comply with a standard schedule
- Each utility determines and applies its own means and methods to compile data and deliver that data to the IEDR platform through the agreed-upon interface; the interface and schedule standards apply to all IEDR data sources
- The utilities validate all data before it is delivered to the IEDR to ensure accuracy, quality, and allow the IEDR to predict how and when accurate data will be sent

8 Lessons Learned

8.1 Stakeholder Engagement

As the IEDR Program progressed through the initial stages of program operations to the development and deployment of the platform, the importance of maintaining the program's relationship with its stakeholders remained central to the execution of program activities. In Phase 1, the structure, cadence, and purpose of stakeholder engagement within the program changed with the needs of the program. Acknowledging the necessity of adaptive stakeholder engagement mechanisms is foundational to Phase 2 program operations. Adaptive stakeholder engagement strategies that were employed in Phase 1, such as the bifurcation of AG participation and the altered cadence of UCG meetings, demonstrate the need for flexible engineering of stakeholder engagement mechanisms. The stakeholder engagement flexibility that was employed in Phase 1 will continue to be utilized and elaborated on in Phase 2 program operations.

8.2 Use Case Prioritization

With its broad mandate and many competing stakeholder priorities, the IEDR program will need to continue to refine its use case prioritization process to ensure the program is perpetually focused on delivering the highest amount of unique value to the greatest amount of stakeholders. This will mean continuously and efficiently balancing stakeholder requests against potential impacts to state goals,

[20] Case 20-M-0082, Proceeding on Motion of the Commission Regarding Strategic Use of Energy Related Data, *Order Implementing an Integrated Data Energy Resource*, February 11, 2021, Page 34.

size of impacted stakeholder population, required resources, and uncertainty on a much greater scale than experience in Phase 1 of the program.

8.3 Maintain Focus on User Experience

In line with the IEDR Orders, "useful access" to data is a core component of the IEDR's mission. In Phase 2, the IEDR will continue to refine the user experience to ensure that not only more data is available, but that data is accessible via tools that are intuitive, that offer multiple ways to use the data (download, APIs, etc.), and that are supported by robust user documentation. Upon the MVP release, the platform's capabilities will expand throughout Phase 2, enabling over 40 additional use cases, for a total of more than 50 use cases, and providing access to an extensive array of information to communities, residents, developers, industry, municipal governments, and others, as they navigate towards a clean energy future. Phase 2 will be completed 30 to 36 months after Phase 1.

9 Phase 2 Planning

Phase 2 represents an elevation of Phase 1 concepts, the creation of multi-market solutions, and the development of industry-first features whose cutting-edge functionality solves longstanding barriers to equitable stakeholder energy access. By providing a common data set needed by multiple stakeholders, the IEDR can create a unique opportunity for different community members to collaborate and accelerate solutions. Additional state climate policies released in New York also present potential emergent opportunities for utilizing and extending the IEDR platform and its value. To realize New York State's vision for a fully featured and fully operational IEDR platform, Phase 2 of the IEDR Program will accelerate use case design, development, and deployment, including acquisition, transfer, and processing of all required use case data identified by program stakeholders and prioritized by the Program Team. Incorporation of this data into the IEDR platform will adhere to standardized data quality and integrity specifications and will follow all privacy and security requirements contained in the DAF as adopted by the PSC.

10 Conclusion

Phase 1 of the IEDR Program established a statewide centralized platform that collects, integrates, and manages energy data from diverse sources. Access to the data contained within the IEDR aims to empower stakeholders to make informed decisions, drive innovation, and foster a more sustainable and resilient energy ecosystem for New York. Phase 1 of the IEDR Program was initiated, administered, and completed in compliance with the requirements set forth by the IEDR Order, as mapped in Appendix B of this document. Phase 2 of the IEDR Program will build on the success of Phase 1 by iteratively developing and delivering a progressively valuable and useful IEDR platform to the user community.

11 Appendix A – Summary of Data Sets (Relate Data Dictionary per Appendix B of IEDR Whitepaper)

11.1 IPV Use Cases

The following table lists data items mapped to the high-level data needs of the IPV use cases for the IEDR platform, including those data items in Appendix B of the IEDR Whitepaper:

Data Dictionary	**External Facing Data Items Name**			**Data Items per Appendix B of IEDR Whitepaper**
	CONSOLIDATED HOSTING CAPACITY MAPS			
ESS Hosting Capacity	Section ID Feeder ID Section Charging Hosting Capacity (MW) Primary Under-Voltage (MW) Primary Voltage Deviation (MW) Primary Voltage Regulator Deviation (MW) Thermal from Load (MW) Feeder Rating (MW) Substation/Bank Rating (MVA) Section Discharging Hosting Capacity (MW) Primary Voltage Deviation (MW) Primary Voltage Regulator Deviation (MW) Primary Over Voltage Primary HC Thermal From Generation Primary Anti-Islanding	Primary HC Flicker Substation/Bank Name Substation/Bank Installed DG (MW) Substation/Bank Queued DG (MW) Total Substation/Bank Installed and Queued DG (MW) Substation/Bank DG Connected Since Last HCA refresh (MW) Substation Refresh Date Substation/Bank Peak (MW) Substation/Bank Thermal Capacity (MW) Substation Backfeed Protection Estimated 3V0 Protection Threshold (MW) HCA Refresh Date Feeder Charging Maximum Hosting Capacity (MW) Feeder Charging Minimum Hosting Capacity (MW) Feeder DG Connected (MW)	Feeder DG in Queue (MW) Feeder DG Connected Since Last HCA Refresh Date (MW) Feeder DG Connected/In Queue Refresh Date HCA Refresh Date Notes Feeder Discharging Maximum Hosting Capacity (MW) Feeder Discharging Minimum Hosting Capacity (MW) Feeder DG Connected (MW) Feeder DG in Queue (MW) Feeder DG Connected Since Last HCA Refresh Date (MW) Feeder DG Connected/In Queue Refresh Date HCA Refresh Date Notes Feeder Anti-Islanding HC	Substation Details Data Items Category: structured data Substation Bus Details Data Items Category: structured data
PV Hosting Capacity	Anti Islanding Hosting Capacity Limit Anticipated In Service Date Bank Rating Borough Cost Share Notes Distance To Substation (Ft) Estimated Cost Feeder Dg Connected Feeder Dg Connected Or In Queue Refresh Date Feeder Dg Connected Since Last Hca Refresh Feeder Dg In Queue	Network Area Id Network Area Kva Networkid Networkname Nyiso Loadzone Nyiso Subzone Operationcompany Primary Over Voltage Deviation Primary Voltage Deviation Project Type Regulator Deviation	Substation Estimated 3V0 Protection Threshold Substation Estimated Incremental Impact Hosting Capacity Availability Substation Installed Dg Substation Name Substation Name Substation Id Substation Nyiso Transmission Node	Substation Details Data Items Category: structured data Substation Bus Details Data Items Category: structured data

	Feeder Max Hosting Capacity Feeder Min Hosting Capacity Feeder Id Feeder Notes Feeder Rating Flicker Value Hca Refresh Date	Section Max Hosting Capacity Section Min Hosting Capacity Sectionid Structure Kva Structureid Substation Backfeed Protection Substation Dg Connected Since Last Hca Refresh	Substation Nyiso Transmission Node Ptid Substation Peak Substation Queued Dg Substation Refresh Date Substation Street Address Substation Thermal Capacity Total Substation Installed And Queued Dg Substation Gps Coordinates Thermal From Generation Feeder Local Voltage	
	INSTALLED DISTRIBUTED ENERGY RESOURCES			
Installed DER	Der Hybrid Der Interconnection Id Der Type Der Nameplate Rating Developer Name Feederid Interconnection Cost Inverter Nameplate Rating Networkid	Operating Company Operator Name Project City Project Street Address Project Zip Project Lat Project Long Substation Name		Installed DER Details Data Items Category: structured data Circuit Details Data Items Category: structured data
	PLANNED DISTRIBUTED ENERGY RESOURCES (INTERCONNECTION QUEUE)			
Planned DER	Der Hybrid Der Interconnection Id Der Type Der Name Plate Rating Developer Name Feederid Interconnection Queue Position Inverter Nameplate Rating Milestone Status Milestone Status Date Networkid Operating Company Operator Name	Project City Project Zip Project Lat Project Long Section Voltage Substation Name Application Start Date Application End Date Application Calculated Duration Application Approved Date Construction Down Payment Date Construction Full Payment Date		Queued DER Details Data Items Category: structured data Forecasted DER Details Data Items Category: structured data Circuit Details Data Items Category: structured data

11.2 MVP Use Cases

The following table lists data items accessible in the IEDR, mapping high-level data needs to data items in Appendix B of the IEDR Whitepaper:

Data Dictionary	External Facing Data Items Name			Data Items per Appendix B of IEDR Whitepaper
	ACCESS TO BASIC RATE DATA AND TARIFF BOOK FOR INDIVIDUAL RATE			
Rate Plan Data	Utility Name Data Upload Date Tariff Book URL Tariff Book Leaves Tariff Book Pages Tariff Docket URL Unique Rate Plan Code Cancellation Date Description DPS Utility Company Name DPS Utility PSC Number Draft Update Date Effective Date IEDR Org Abbreviation Parent Utility Organization Rate Code Rate Rider Tariff ID Tariff Case Number Has ICAP Tag Has Reactive Power Has Tiered Block Rates Has Time of Use Pricing Is Rate Rider Retail Supply Number of Rate Periods Serviceclass Name			Digitized Distribution Network Value Details Category: structured and unstructured data Metadata for Digitized Documents & Other Unstructured Data Items Category: structured data
	FIND AND FILTER RATE OPTIONS ACROSS NYS IOU UTILITIES			
Rate Plan Data	Service Type Service Class Number Customer Classes Retail Supply			Digitized Distribution Network Value Details Data Items Category: unstructured data

	Demand Charges ICAP Tag No. of Rate Periods Reactive Power Service Class Name Territory Tiered Blocks TOU Pricing Eligibility Criteria Description Eligibility Criteria Name Eligibility Criteria Type Eligibility Limit Description Eligibility Limit Name Eligibility Limit Type Limit Stat Type Has Demand Charges NYISO Zone Charge Amount Minimum Charge Name Unit of Measure Charge Tier Charge Name Rate Periods Peak Type Season	structured data Metadata for Digitized Documents & Other Unstructured Data Items Category: unstructured data
	Efficient and Effective Access to Existing Customer Billing Data (Sandbox)	
Customer Data	Green Button Schema	Electric Service Point Details Category: structured data Electric Customer Details Category: structured data Electric Meter Details Category: structured data Gas Service Point Details Category: structured data

		Gas Customer Details Category: structured data Gas Meter Details Category: structured data Steam Service Point Details Category: structured data Steam Customer Details Category: structured data Steam Meter Details Category: structured data
EIAT Hosting Capacity and DER Map Enhancements		
Network Data	Cost Share Notes Estimated Cost Project Type Interconnection Approval Time & Payment Dates DER Milestone/Status Timeline Electrical Distance to Substation NYISO Transmission Node	Distribution Investment Plan Details Category: Structure data
DER Siting – Environmental, Community, Terrain, Land, and Property Assessment		
	Basemap Options – Satellite Imagery Parcels – Property Class, Area, Address, Municipality, Value, Owner Agricultural Districts Critical Environmental Areas: Name, Agency, Date, Reason Protected Areas: Category, Owner Name, Owner Type, Designation Type, Date Established DEC Brownfield and State Superfund Sites: Program, Site Name, Site Code+Class, Address Mineral Soil Groupings 1-4, 5-10 Landcover Landform Feasibility Rooftop Area Mined Land: Acres	N/A

12 Appendix B – IEDR Order Requirements Mapped to Phase 1 Status and Summary Report Narratives

The following table cross references IEDR Order Requirements and the corresponding IEDR Program compliance.

Requirement	Order | Pager Number	IEDR Program Compliance
Reporting		
"The New York State Energy Research and Development Authority shall file an initial Implementation Plan within 30 days of the issuance of this Order and an updated Implementation Plan by August 10, 2021, as discussed in the body of this Order."	IEDR Order | 39	NYSERDA filed the initial Implementation Plan on March 11, 2021, 28 days after issuing the IEDR Order. On August 5, 2021, NYSERDA filed a request for an extension regarding the updated Implementation Plan to accommodate additional time to address contracting and reviewing program complexities with the Program Manager. The extension was granted on August 5, 2021, extending the updated Implementation Plan deadline to October 1, 2021 NYSERDA filed an amended Implementation Plan on September 15, 2021, to update program milestone deadlines and filed the updated Implementation Plan on October 1, 2021, in line with the granted request for extension.
"Therefore, the Commission adopts the recommended reporting requirements from the Whitepaper and directs NYSERDA to file quarterly reports in this proceeding, with reports being filed at the end of April, July, October, and January for the prior quarter, including information from the Program Manager monthly reports, addressing all aspects of the IEDR program." "The New York State Energy Research and Development Authority shall file quarterly reports, as discussed in the body of this Order, with the first report being due on or before October 31, 2021."	IEDR Order | 35, 39-40	NYSERDA filed the first IEDR quarterly report on October 28, 2021. NYSERDA has filed a quarterly report each January, April, July, and October since. These reports include information regarding program status, completed and future milestones, schedule deviations and planned response activities, stakeholder engagement summaries, funding updates, and program risk assessment and mitigation plans.
"The New York State Energy Research and Development Authority shall create a publicly accessible program dashboard that presents an at-a-glance summary of the Integrated Energy Data Resource program by October 31, 2021, and shall maintain the dashboard on an ongoing basis."	IEDR Order | 40	NYSERDA published the IEDR program dashboard on October 31, 2021. The dashboard has been updated regularly, summarizes the IEDR's status, and links to helpful resources like the IEDR Ideas Portal and Upcoming Features that provide stakeholders robust insight into the IEDR's development process.
"The New York State Energy Research and Development Authority shall file, as discussed in the body of this Order, an Integrated Energy Data Resource Program Phase 1 Status and Summary Report, on or before July 30, 2023."	IEDR Order | 40	On June 21, 2023, NYSERDA filed a request for an extension of time for filing the IEDR Program Phase 1 Status and Summary Report to January 31, 2024, to allow NYSERDA to implement and operationalize the remaining priority use cases and develop and submit a Phase 1 report that included the most comprehensive overview

		of Phase 1 activities possible upon completion of Phase 1 of the IEDR. This request for extension was granted on June 28, 2023. On January 12, 2024, NYSERDA filed the second Request for Extension from the Commission on the timeline for filing the IEDR Phase 1 Status and Summary Report, until April 30, 2024. The second Request for Extension was approved by the Commission on January 25, 2024.
"The New York State Energy Research and Development Authority shall file a second report, as discussed in the body of this Order, regarding the Integrated Energy Data Resource Program Phase 2 Proposal, filed on or before January 15, 2023, six months before the end of Phase 1, that addresses the remainder of the use cases to be implemented by July 30, 2026."	IEDR Order | 40	On January 3, 2023, NYSERDA filed for an extension of the timeline for filing the IEDR Phase 2 Proposal to allow for adequate time to onboard the Development Team, conduct additional stakeholder engagement, gather informed input on Phase 1 progress and Phase 2 use cases, identify opportunities for accelerating use cases, obtain clarification on utility data-sharing issues that may affect Phase 1 progress for certain use cases and Phase 2 utility cost estimates, and engage with the utilities on Phase 2 costs after data-sharing issues are resolved. On April 20, 2023, NYSERDA filed a second extension request for filing the Phase 2 Proposal to coordinate with utility filing timelines. Both requests were granted on January 5, 2023, and April 25, 2023, respectively. On May 12, 2023, NYSERDA filed the IEDR Phase 2 Proposal. The Phase 2 Proposal includes a summary and roadmap materials encompassing the Phase 2 use case scope.
Budget		
Furthermore, funding for Phase 1 is determined for those efforts that shall be undertaken and competitively procured by the Project Sponsor, which include: • Managing the IEDR program • Developing the IEDR architecture • Developing and integrating detailed IEDR designs and specifications • Deploying and integrating IEDR components and services • Testing and commissioning IEDR use cases • Operating the IEDR	IEDR Order | 18	To develop IEDR architecture, develop and integrate detailed IEDR designs and specifications, deploy and integrate IEDR components and services, test and commission IEDR use cases, and operate the IEDR, NYSERDA selected a team led by E Source Companies LLC ("E Source") to design, build, and operate the IEDR platform. The E Source Team (which includes UtilityAPI, Flux Tailor, and TRC Companies) develops system requirements and architecture; establishes secure and efficient interfaces for data transfer to the IEDR from multiple sources; and develops, tests, delivers, and maintains an IEDR platform that meets use case descriptions and delivers value to users.
"Based on the efforts of DPS Staff to obtain cost information from the results of the RFI, as well as the stakeholder comments and replies to information requests submitted to the utilities from DPS Staff, the Commission establishes a budget cap of $13.5 million for the Program Sponsor's efforts for Phase 1, including $12 million for procured resources and $1.5 million for the NYSERDA administrative costs as Project Sponsor."	IEDR Order | 19	The Program Sponsor manages all IEDR program-related expenditures in compliance with NYSERDA's budget and accounting policies and principles. Total Phase 1 program costs totaled under the $13.5 million budget cap at $12,634,543.25.

		• Costs for Phase 1 procured resources totaled under the $12 million budget at $11,360,929.30 NYSERDA administrative costs as Project Sponsor during Phase 1 totaled under the $1.5 million budget at $1,273,614. Each utility had its own budget caps as defined in the IEDR Order, and utilities maintained and reported an accounting of their own costs in separate filings.
"The New York State Energy Research and Development Authority shall file an updated Bill-As-You-Go Summary, as discussed in the body of this Order, within 60 days of the issuance of this Order."	IEDR Order | 39	NYSERDA filed a request for an extension of time on April 9, 2021, to allow for NYSERDA and the investor-owned electric distribution utilities to finalize mutually acceptable terms. The request was granted on April 12, 2021. Another request for an extension was filed and granted on May 21, 2021. NYSERDA filed the Bill-As-You-Go Summary on June 2, 2021. On August 3, 2022, NYSERDA filed a BAYG Summary Update that corrected the June 2, 2021, filing, which included an error in the IEDR cost allocation where NYPA electricity load was inaccurately reported. This error was resolved along with several other updates.
Utility Data Advisor		
During these tasks, DPS Staff will require a dedicated resource to oversee and provide guidance on the utility data sourcing efforts and investments. Therefore, NYSERDA, as Project Sponsor, shall include the provision of such resources in its implementation plan.	IEDR Order | 22	Pecan Street Inc. ("Pecan Street") was selected as the Utility Data Advisor in October 2021 as part of a competitive solicitation managed by NYSERDA. As Utility Data Advisor, Pecan Street provides subject-matter expertise on utility data systems to DPS staff and participates in the IEDR UCG.
Program Governance		
Program Sponsor		
The Commission recognizes the need for an effective IEDR Program Sponsor and assigns the role to NYSERDA. In this role, NYSERDA will be responsible for defining, initiating, overseeing, and facilitating the IEDR Program on behalf of the State. NYSERDA's principal duties as Program Sponsor shall include:		
1) Creating the IEDR Program Charter to formally establish the program's purpose, scope, guiding principles, objectives, participants, roles, and responsibilities;	IEDR Order | 23	NYSERDA filed the IEDR Program Consolidated Program Charter on August 6, 2021, establishing the purpose, objectives, scope, guiding principles, and program participants' roles and responsibilities.
2) Organizing the membership and initial meeting schedule for an IEDR Steering Committee comprising five DPS Staff members and four NYSERDA Staff members. The Program Sponsor shall schedule the Steering Committee's first meeting to occur within 60 days of this Order's issuance. In the early stages of the IEDR program, the Steering Committee shall meet monthly, with remote participation enabled by a virtual meeting technology such as WebEx or Microsoft Teams.	IEDR Order | 23 & 26	The Steering Committee comprises five members of DPS Staff and four of NYSERDA Staff. The first meeting was convened virtually on March 31, 2021. The Steering Committee met no less frequently than monthly through the program's first phase. The Steering Committee initially met biweekly and has transitioned to monthly meetings unless a program matter requires a special meeting. Remote participation is enabled for all Steering Committee meetings.

3) Organizing the membership and initial meeting schedule for an IEDR program Advisory Group comprising representatives for all significant stakeholder categories. The Steering Committee shall select the Advisory Group's members and represent all relevant stakeholder groups, including, but not limited to, DER developers; electric and gas utilities; energy consumers; state and local government entities; and interested industry groups.	IEDR Order | 23 and 28–29	In Q3 2021, the IEDR Steering Committee selected a diverse set of stakeholders representing relevant stakeholder groups, including DER developers, utilities, energy consumers, state and local government entities, academic institutions, community-based organizations, electrical vehicle supply equipment providers, energy service entities, investors, legal associations, back-end users, and interested industry associations to participate in the AG. Beginning in November 2021, the Program Manager organized, led, and facilitated initial monthly AG meetings with appointed members. After the initial two-year AG member terms were served, NYSERDA organized the restructuring and expansion of the AG to accommodate progress in IEDR development and the program's changing needs. Tier 1 of the new AG structure allows for stakeholder feedback on broad, directional priorities, and Tier 2 allows for targeted stakeholder feedback on specific use cases and feature sets.
4) Specifying, procuring, and administering the services provided by a professional Program Manager.	IEDR Order | 23	NYSERDA selected Deloitte Consulting LLP ("Deloitte") as the Program Manager in October 2021 as part of a competitive solicitation and specified the scope of the Program Manager role in accordance with the IEDR Order. As Program Manager, Deloitte maintains the overall program schedule and budget; administers the governance, coordination, and advisory groups; and oversees all technical activities that will lead to the operation of the IEDR in accordance with the IEDR Order. NYSERDA oversees the administration of these services and assists the Program Manager as needed.
5) Providing the program's participants with the means and methods for accessing and expending the funds allocated to the program by the Commission.	IEDR Order | 23	NYSERDA competitively selected a Program Manager, Utility Data Advisor, and Development Team in accordance with all NYSERDA policies. NYSERDA executed contracts including scopes of work, budget and invoicing requirements, and NYSERDA's Prompt Payment Policy with each entity to facilitate the execution of IEDR work and expenditure of IEDR funding. As the Program Sponsor, NYSERDA manages all IEDR program-related expenditures in compliance with NYSERDA's budget and accounting policies and principles.
6) Ensuring robust stakeholder engagement throughout the life of the IEDR program.	IEDR Order | 23 and 28	The IEDR Program Team conducted a robust stakeholder outreach campaign that was initiated and executed throughout Phase 1. The IEDR Program Team established a communications plan to serve as a framework to engage stakeholders and conduct a robust stakeholder outreach campaign consisting of workshops, technical conferences, periodic reports, and other formats, such as demos with industry stakeholder groups.

		In accordance with the communications plan, the Program Team conducted two GSEs in Phase 1. • The November 15, 2021, GSE served to share the vision of the IEDR platform, inform the IEDR Program Team of the current makeup of existing stakeholder groups, and create an understanding of ways public use case submissions would be considered for development. In spring 2021, NYSERDA began accepting use case proposals from the public, and the IEDR Program Team engaged in a comprehensive use case prioritization and selection process that would eventually inform program development priorities. • A second publicly advertised GSE was held on February 9, 2023. Following a recap and discussion of Phase 1 progress, the event's agenda focused on attendees' responses to a survey designed to solicit feedback regarding the prioritization of use cases within Phase 2. To further support stakeholder engagement throughout the life of the program, an IEDR Ideas Portal and open lines of digital communication, which include an IEDR mailing list and IEDR inbox, were employed: • The Ideas Portal is a mechanism for gathering feedback established to allow users to submit new use cases and features, bugs, feature improvements, and data discrepancies. The feedback obtained from the Ideas Portal is analyzed and incorporated into subsequent iterations of the IEDR platform. Additionally, analytics on stakeholder usage provided valuable insights into how the IEDR was used and identified improvement and optimization areas. • The public has been encouraged to elect to receive program communications updates by signing up for the IEDR mailing list and reviewing program updates, which have been shared via newsletters, NYSERDA's IEDR website updates, and posts to NYSERDA's social media accounts. Messaging tailored to specific stakeholder groups was used to increase participation from potential end users of the platform. • A program-wide email address (iedr@nyserda.ny.gov) was created to field all incoming program-related stakeholder questions and feedback. All program communications include a link or mention of this email address, which is monitored daily by the IEDR Program Team.

7) Monitoring adherence to the Program Charter by all program participants.	IEDR Order | 23	As Program Sponsor, NYSERDA regularly reviews the IEDR Program Charter against program operations to evaluate program compliance, identify the need to amend the Program Charter and file the corresponding updates. One amendment to the IEDR Program Charter was filed on November 27, 2023. This amendment included updates to the AG's structure to reflect the program's changing needs, including regular stakeholder engagement regarding specific use case features aligned with the IEDR development roadmap.
8) Helping the Program Manager investigate and resolve issues that could negatively affect the program's costs, schedule, or benefits.	IEDR Order | 23	As Program Sponsor, NYSERDA conducts bi-weekly program touchpoint meetings with the Program Manager and Development Team, in which the Program Team aligns on the upcoming program development schedule, including platform releases and program events. Monthly program risk review sessions are also conducted with the Program Manager and the Development Team, in which risks to the program are cataloged, categorized, reviewed, and scoped for potential solutions. The Program Sponsor and Program Manager also meet on an as-needed basis for bi-weekly project management sync meetings, in which details related to specific coordination efforts are discussed between the Program Sponsor and Program Manager. Weekly communication check-in meetings with the Program Sponsor and Program Manager are also regularly held, in which program operations related to stakeholder engagements are coordinated and planned.
Stakeholder Engagement and Advisory Group		
To address several commenter's suggestions that additional stakeholder engagement is necessary prior to implementation of the IEDR, the Commission determines that NYSERDA, as Project Sponsor, shall include a near-term process to solicit stakeholder comments addressing, at a minimum, initial use case prioritization along with the rationale supporting that use, before selection of the Program Manager and seating of the Advisory Group.	IEDR Order | 33–34	To facilitate additional stakeholder engagement before implementing the IEDR and the official start of Phase 1: • NYSERDA held a webinar to provide a stakeholder update on April 13, 2021. This meeting provided an overview of the Commission IEDR Order, NYSERDA's initial IEDR Program Sponsor Implementation Plan, and NYSERDA's initial plan for stakeholder engagement. • NYSERDA held a webinar to discuss identifying and prioritizing IEDR use cases on June 4, 2021. This meeting provided IEDR background information, stakeholder engagement timelines, and instructions on submitting use case feedback and engaging with the IEDR team. • NYSERDA collected initial use case submissions via a written template from June 4, 2021, through July 23, 2021. Stakeholders were still welcome to provide feedback after this period. Sector-specific use case workshops with DPS and NYSERDA staff were held beginning the week of June 21, 2021, to assist stakeholders in providing written comments. NYSERDA

		filed a compilation of written stakeholder comments to summarize use case feedback on August 23, 2021. • These efforts resulted in the submission of 31 use cases, including topics such as DER development, energy efficiency, building and transportation electrification, and utility, local government, and state government functions, by 14 different organizations, including trade associations, utilities, software providers, local, state, and federal government agencies, DER providers, and energy consultants.
Program Manager		
Within six months from the issuance of this Order, the Program Sponsor shall acquire the services of a highly qualified Program Manager to carry out the activities described in the whitepaper. The Steering Committee shall inform a Program Manager of a Program Sponsor's acquisition.	IEDR Order | 33	Deloitte Consulting LLP ("Deloitte") was contracted as the Program Manager on September 23, 2021. As Program Manager, Deloitte maintains the overall program schedule and budget; administers the governance, coordination, and advisory groups; and oversees all technical activities that will lead to the operation of the IEDR in accordance with the IEDR Order. NYSERDA reviewed the Program Manager proposals in July 2021 and notified the top selected proposer on August 2, 2021, within six months after The Order was issued. However, due to the complex nature of the multi-year contract for the Program Manager role and the manager's overall importance to the initiative, the conclusion of the procurement process, including contract negotiations, was finalized in September 2021 and took additional time. This was in line with a previously sought request for an extension of time filed by NYSERDA. NYSERDA was directed to file an Updated Program Sponsor Implementation Plan by August 10, 2021, "following the procurement of the Program Manager, to reflect all of the subsequent tasks to be carried out to complete implementation of Phase 1 of the IEDR Program." On August 5, 2021, NYSERDA requested an extension of the timeline for filing the Updated Program Sponsor Implementation Plan until October 1, 2021, and received approval.
UCG		
For these reasons, the Commission directs NYSERDA to form a Utility Coordination Group as a necessary component of the IEDR Program execution. The Utility Coordination Group shall include members of the Steering Committee (DPS Staff and NYSERDA) or designees, Project Sponsor, Program Manager, Staff Resource for Utility Data Systems, and the senior-level leader of each utility IEDR implementation team, which the Commission directs be formed at each utility.	IEDR Order | 34	A UCG was established in accordance with the IEDR Order, and the first UCG meeting was held on May 12, 2021. The UCG frequently met virtually throughout Phase 1, with meetings varying from monthly, weekly, and biweekly cadences. Meetings were attended by required members and subject-matter experts as required. The UCG met approximately 105 times during Phase 1, not including supplementary one-on-one meetings held with the State's utilities to understand utility-specific data availability and transfer issues.

NYSERDA, as Project Sponsor, shall include the formation of the Utility Coordination Group in its Implementation Plan.	IEDR Order | 34	Section 8. "Utility Coordination" in the Program Sponsor Implementation Plan, details the formation of the UCG and calls out the Program Charter, which describes the size and composition of the UCG, the schedule of meetings, and the protocol for establishing agenda and conducting meetings.
Scope and Schedule		
IEDR Design and Implementation		
Therefore, Program Phase 1, the initial IEDR implementation, shall enable at least five of the highest priority use cases with the expectation that 10 or more could be achieved.	IEDR Order | 16	To demonstrate early value to the public and IEDR stakeholders/users, the IEDR Program released an Initial Public Version (IPV) of the IEDR on March 31, 2023, that addressed three priority use cases. On March 27, 2024, the IEDR Program published five additional use cases in an MVP for a total of eight use cases achieved in Phase 1.
Phase 1 shall be completed in 24 to 30 months.	IEDR Order | 16	The IEDR MVP launched on March 27, 2024. This marked the end of Phase 1, which was completed in less than 30 months.
"To enhance stakeholder value over the long-term, the IEDR's design, operation, and management shall readily accommodate adding new information sources, information types, and analytic functions as new beneficial use cases emerge."	IEDR Order | 14	Phased program development, in conjunction with foundational platform releases, has laid the groundwork for a centralized platform that will provide access to valuable energy data and information and enhance IEDR value for stakeholders throughout time. For example, foundational Phase 1 data sets such as hosting capacity and planned and installed DER data were included in the IPV release, and the MVP was expanded to include a diverse set of public data sources and rate plan data. Including MVP data sets and IPV data sets increases the complexity of possible data combinations and the functional value of the IEDR for stakeholders. Stakeholder outreach and feedback were critical in finalizing and implementing the use case prioritization framework that informs program development and will continue to shape the evolution of IEDR priorities. The IEDR use case prioritization framework will continue to be used in Phase 2 to efficiently evaluate and prioritize new data elements, use cases, and features as stakeholders and the IEDR Program Team propose them.
In addition, the inclusion of analytic tools that would enable DER providers, utilities, government agencies, and others to more readily develop valuable technical and business insights will, in turn, lead to faster and better policy, investment, and operational decisions that will accelerate the realization of NYS's clean energy goals. In addition, the Commission notes that the IEDR will enable entities that would like to perform their own data analytics and services by accessing the various data sources.	IEDR Order | 13-14	The IEDR MVP features a GIS map, filters for evaluating DER information, and a search function for rate plan information. The IEDR MVP also features the ability for users to download hosting capacity, DER, and Rate Plan data to perform their own analytics outside of the IEDR if desired.

Consequently, to establish and maintain that trust, the IEDR must be designed, implemented, and operated to ensure the integrity and accuracy of data stored within the IEDR.	IEDR Order | 14	Data ingested into the IEDR will be stored securely in a data warehouse designed to handle large volumes of structured and unstructured data. The data is then processed through an orchestrated workflow of cleansing and normalization steps before it is encrypted and stored at rest in the platform to ensure consistency and facilitate analysis.
Consequently, implementing and operating the proposed IEDR must comply with future policies adopted under a new Data Access Framework.	IEDR Order | 15	All aspects of the IEDR comply and will continue to comply with the framework and requirements that the Commission established for the DAF, which governs the means and methods for accessing and protecting all energy-related information and ensuring that customer data sets and other energy-related information are properly protected from unauthorized disclosures. All ESEs seeking access from the IEDR will also need to meet all DAF requirements. As of the end of Phase 1, all data sets and features made available via the IEDR contain public data and are publicly available to all users.
The Commission notes that the prioritization and implementation will reflect technical conditions and stakeholder input and shall be based on the Project Manager's recommendations after consultation with the Advisory Group and Steering Committee.	IEDR Order | 15	AG vetting of the use case prioritization framework and Phase 1 (IPV and MVP) use cases was conducted to ensure that the selected use cases met the needs of the targeted audience and were aligned with the goals of the IEDR set forth in the IEDR Order. Workshops with specific user groups on vetted use cases, consisting of wireframes and persona development, were held to gain feedback on the use cases. The culmination of this comprehensive process was selecting a set of high-priority use cases that met the established criteria and demonstrated the potential to deliver significant benefits to the target audience. The Steering Committee reviewed the analysis conducted by the Program Team, including an assessment of use case feasibility, impact, and alignment with the project objectives, and recommended a set of prioritized use cases. The Steering Committee approved the selection, development, and deployment of all Phase 1 use cases. The final scope of each use case incorporated feedback from both the AG and Steering Committee.
Order Addressing IEDR Matters		
The Commission also clarifies that the IEDR Administrator shall not share customer data sets without customer consent, subject to the data protection requirements outlined in the Commission's DAF Order and related orders.	Order Addressing IEDR Matters | 2	While significant work was performed in Phase 1 to enable the delivery of customer data sets to the IEDR platform, Phase 1 use cases do not allow for the release of Customer Data Sets from the IEDR. All protections established in the DAF Order will apply to the IEDR, including the requirement for ESEs to comply with policies and requirements for accessing data.

		The IEDR will be governed by the DAF, ensuring that customer data sets and other energy-related information are properly protected from unauthorized disclosures. Customer data sets will not be released from the IEDR platform until the Commission approves a GBC User Agreement, appropriate consent mechanisms can be deployed, and all other IEDR and DAF Order requirements are met.
The Joint Utilities shall work with NYSERDA and the IEDR Administrator so that the transfer of customer data sets and system data from the utilities to the IEDR platform, as envisioned in the IEDR and DAF Orders and in this Order, can begin within 60 days of this Order. If such data transfer cannot feasibly begin within that prescribed timeframe, for example, due to technical issues related to the continuing development of the IEDR platform and/or transfer protocols, NYSERDA, the Joint Utilities, and the IEDR Administrator should jointly submit a letter to the Secretary explaining the reason for the delay, and an estimated timeframe for when the data transfers can begin.	Order Addressing IEDR Matters | 16-17	On December 8, 2023, NYSERDA, the JU, and E Source jointly filed a request for an extension of time, postponing the deadline for delivery of customer data sets to the IEDR from December 12, 2023, to January 9, 2024. The request was accepted on December 11, 2023. The JU and the IEDR Administrator executed a cybersecurity and nondisclosure agreement on January 9, 2024, to govern the sharing of customer data sets. The sharing of customer data sets from each utility was initiated on January 16, 2024.

13 Appendix C – IEDR Program Commonly Used Acronyms List

The following is a list of commonly used acronyms within the program.

AG: Advisory Group
AMI: Advanced metering infrastructure
CAIDI: Customer Average Interruption Duration Index. This is a utility service reliability metric that describes the average time required to restore service.
CCA: Community choice aggregation
CDG: Community distributed generation
CESIR: Coordinated Electric System Interconnection Review
CLCPA: Climate Leadership and Community Protection Act
DACs: Disadvantaged communities
DAF: Data Access Framework
DEC: Department of Environmental Conservation
DG: Distributed generation
DER: Distributed energy resource
DR: Demand response

DSM: Demand-side management
DSO: Distribution system operator
DPS: Department of Public Service
EDI: Electronic data interchange
EIAT: Electrical Infrastructure Assessment Tool
EJ: Environmental justice
ESCOs: Energy service companies
ESS: Energy storage system
ESE: Energy service entities
EUI: Energy use intensity
EV: Electric vehicle
EVSE: Electric vehicle supply equipment
GBC: Green Button Connect
GHG: Greenhouse gas
HC: Hosting capacity
ICAP: Installed capacity
IEDR: Integrated Energy Data Resource
IPV: Initial Public Version
JU: Joint Utilities of New York
KW: Kilowatt
LCF: Low-carbon fuels
LMI: Low to moderate income
MFH: Multi-family housing
MVP: Minimum Viable Product
MW: Megawatt
NYS: New York State
NYISO: New York Independent System Operator
NYSERDA: New York State Energy Research and Development Authority
PV Hosting Capacity: Photovoltaic hosting capacity
RFP: Request for proposal
SAIDI: System Average Interruption Duration Index. This is a utility service reliability metric that describes the total duration of the average customer interruption.
SAIFI: System Average Interruption Frequency Index. This is a utility service reliability metric that describes how often the average customer experiences an interruption.

SIR: Standardized Interconnection Requirements
TOU: Time of use
UCG: Utility Coordination Group
VDER: Value of Distributed Energy Resources. This is a newer method for excess solar energy compensation designed to more accurately compensating renewable energy generation in regard to environment and electrical grid benefits. With VDER users receive a monetary credit that can roll over into future billing cycles.
3V0: Zero-sequence overvoltage