

STATE OF NEW YORK  
PUBLIC SERVICE COMMISSION

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In the Matter of Proactive Planning for Upgraded :  
Electric Grid Infrastructure :  
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Case 24-E-0364

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**PETITION OF NEW YORK STATE ELECTRIC & GAS  
CORPORATION AND ROCHESTER GAS AND  
ELECTRIC CORPORATION FOR APPROVAL OF  
URGENT UPGRADE PROJECTS AND ASSOCIATED  
COST RECOVERY**

New York State Electric & Gas  
Corporation; and  
Rochester Gas and Electric  
Corporation

By: Jeremy J. Euto  
Vice President, Regulatory Economics  
NYSEG and RG&E  
3 City Center  
180 South Clinton Avenue  
Rochester, New York 14604  
[Jeremy.Euto@Avangrid.com](mailto:Jeremy.Euto@Avangrid.com)

Dated: November 26, 2024

**Case 24-E-0364**

Petition

NYSEG and RG&E Urgent Upgrade Projects

November 26, 2024

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# 1. Introduction

New York State Electric & Gas Corporation (“NYSEG”) and Rochester Gas and Electric Corporation (“RG&E”), collectively the “Companies”, are committed to advancing the State of New York’s electrification public policy goals. The Companies have significant core reliability, resiliency, and asset condition investment needs to address system issues required to be able to continue to provide safe and reliable service. The Companies continue to experience sizeable capacity constraints across their systems, which are hindering the ability of known existing electrification load from interconnecting. The Companies also both continue to experience significant cash flow and credit metric pressures even with the rate increases associated with the current rate plan and the possible major storm securitization benefits. This is due to ongoing pressures from additional major storm expenditures and customer arrears, increasing broadband Make Ready investments, increasing Prevailing Wage costs, and Climate Leadership and Community Protection Act (“CLCPA”) Phase 2 investments where Construction Work in Progress (“CWIP”) in rate base is not available until after Article VII/VIII permits are secured<sup>1</sup>. Accelerating additional incremental investments to advance State electrification public policy goals will require adequate cash flow support for the Companies to be able to make these urgent upgrade projects a reality without negative impact on credit metrics.

Pursuant to the State of New York Public Service Commission’s (“Commission”) Order Establishing a Proactive Planning Proceeding<sup>2</sup> (“Proactive Planning Order”), the Companies hereby submit this joint petition for approval to commence the accelerated development of ten electric system upgrade projects (collectively, the “Urgent Upgrade Projects”) totaling \$554 million (seven projects totaling \$468 million at NYSEG and three projects totaling \$86M at RG&E)<sup>3</sup> that are urgently needed to support immediate capacity demands related to the electrification of building, transportation, and industrial loads. This proposal is

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<sup>1</sup> FERC ruling issued on October 1, 2024, in Docket Nos. ER24-1967-001 and ER-1968-001.

<sup>2</sup> Case 24-E-0364, *In the Matter of Proactive Planning for Upgraded Electric Grid Infrastructure, Order Establishing Proactive Planning Proceeding* (issued August 15, 2024)

<sup>3</sup> Amounts do not include AFUDC consistent with the Companies’ proposal to include CWIP in rate base. RG&E amount does not reflect \$4.7 million state grant offset for the upgrades at Station 255 (Henrietta).

contingent upon the approval to allow (1) 100% CWIP in rate base, or a similar cash flow recovery mechanism while in construction, and (2) a surcharge to recover the full revenue requirements associated with each project that would stay in effect until the first rate plan that is adopted following the year in which the assets are placed into service to provide timely cost recovery of these significant capital investments. Additionally, the Companies also request authorization to accelerate the recovery of depreciation expense with an early start mechanism, described in more detail in Section 5, to further help with the cash flow challenges these capital investments will place on the Companies.

The proposed Urgent Upgrade Projects consist of “urgent” projects, as defined by the Proactive Planning Order and described in the Joint Utilities’ Proactive Planning Urgent Upgrade Projects Evaluation and Funding Proposal<sup>4</sup> (“JU Urgent Project Criteria”). Each of these projects satisfy the Urgent Upgrade Projects defined criteria in the Commission’s Proactive Planning Order, including enabling transportation and building electrification in accordance with New York State statute and policy objectives and needing to start construction-related activities prior to Q2 2026. Without approval to commence project execution under the conditions described herein to provide for timely cost recovery mechanisms, the electrification plans that are currently delayed and dependent upon the capacity provided by the Urgent Upgrade Projects will be significantly delayed even further.

In summary, with this petition, the Companies are seeking the following Commission determinations:

1. A finding that the proposed Urgent Upgrade Projects are justified in accordance with the JU Urgent Project Criteria and that the Companies should begin expedited development;
2. Authorization to include 100% CWIP in rate base, or similar cash flow recovery mechanism while in construction, to provide cash recovery of the financing costs associated with constructing the projects (conditional proposal requirement);

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<sup>4</sup> Case 24-E-0364, *In the Matter of Proactive Planning for Upgraded Electric Grid Infrastructure, Joint Utilities’ Proactive Planning Urgent Upgrade Projects Evaluation and Funding Proposal* (filed November 13, 2024)

3. Authorization to recover costs associated with the Urgent Upgrade Projects through the establishment of a billing surcharge to recover all revenue requirements associated with each project remaining in place until the first-rate plan adopted following the year in which the assets are placed into service (conditional proposal requirement); and
4. Authorization for the accelerated recovery of project costs through the allowance of Accelerated Depreciation with an early start while in construction.

The Companies respectfully request the Commission issue an order authorizing the proposed projects and cost recovery treatment described herein including at a minimum the required CWIP in rate base, or similar cash recovery mechanism while in construction, and the surcharge.

## 2. Background

On July 18, 2019, the CLCPA, was signed into law. The CLCPA codified New York State's greenhouse gas ("GHG") emission reduction goals as well as established statutory targets for the accelerated deployment of renewable and emission-free electric generation across the State. The Companies are committed to supporting New York State in reaching its climate goals and furthering the CLCPA. To that end, the Companies are currently implementing numerous emissions-reducing customer programs that educate and enable customers to increase adoption of Electric Vehicles ("EVs") and Building Electrification measures such as electric heat pumps, thereby reducing GHG emissions across the Companies' service territories. Specifically, the Clean Heat<sup>5</sup> and EV Make-Ready Programs have focused on spurring customer adoption of heat pumps and EVs. The NY Clean Heat Program has enabled adoption of more than 18,000 electric heat pumps, helping to decarbonize the building sector while the EV Make-Ready Program<sup>6</sup> has enabled adoption of more than 1,961 EV charging plugs, helping to decarbonize the transportation sector.

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<sup>5</sup> Case 18-M-0084, *In the Matter of a Comprehensive Energy Efficiency Initiative ("NENY Proceeding")*, Order Authorizing Utility Energy Efficiency and Building Electrification Portfolios Through 2025 ("2020 NENY Order") (issued January 16, 2020)

<sup>6</sup> Case 18-E-0138, *NY Electric Vehicle Make-Ready Program*

## 2.1. Electrification and Capacity Considerations

Among numerous statutes specific to the electric sector, the CLCPA also established specific targets intended to drive economy-wide decarbonization. To achieve the ambitious decarbonization targets set by the CLCPA, New York State has established ambitious policies including, but not limited to, pursuing the electrification of the transportation and building sectors. Among the transportation and building electrification goals and regulations enacted by the State are:

- Adoption of Advanced Clean Trucks (“ACT”) rule in 2021 requiring and increasing percentage of new truck sales to be zero emission beginning in the 2025 model year leading to as much as 75% of sales by 2035 for certain weight classes.
- Adoption of Advanced Clean Cars II in 2022 requiring an increasing percentage of new light-duty vehicle sales to be zero emission beginning with 35% in 2026 building toward 100% by 2035.
- The 2023 Zero-Emission School bus mandate requires that all new school buses purchases must be zero-emission starting in 2027 and all school buses in operation must be zero-emission by 2035.
- The 2024 All-Electric Building Act requires that all new buildings be all-electric beginning January 1, 2026, for smaller buildings and beginning January 1, 2029, for larger buildings, with limited exceptions.

Significant adoption of building and transportation electrification is an important component of New York State’s strategy for meeting the CLCPA’s greenhouse gas emission reduction goals. To accomplish the State’s objectives for building and transportation electrification, substantial incremental electrical load will need to be integrated into New York State’s electric grid, including the transmission and distribution systems operated by NYSEG and RG&E. According to forecasting from the New York Independent System Operator (“the NYISO”), the New York Control Area’s coincident system peak load level is projected to increase by 31-42% by the year 2040<sup>7</sup>, with most of that load growth attributed to vehicles and building electrification<sup>8</sup>. For this sizable growth in electricity demand to be safely and

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<sup>7</sup> Gold Book “Baseline Scenario” projects 31% growth in annual coincident peak load. The “Policy Scenario” projects 42% growth in annual coincident peak demand. This load growth relates 2024 summer peak demand to 2040 winter peak demand.

The New York Independent System Operator, Inc. (2024, April). 2024 Load and Capacity Data (“Gold Book”). Retrieved from <https://www.nyiso.com/documents/20142/2226333/2024-Gold-Book-Public.pdf/170c7717-1e3e-e2fc-0afb-44b75d337ec6>

<sup>8</sup> The NYISO Gold Book forecast indicates that econometric load growth will be much smaller than electrification load growth.

reliably accommodated by the electric grid, significant upgrades to existing grid infrastructure will be required.

As building and transportation electrification accelerates in the coming years, system demand is expected to approach the load-serving capacity of much of NYSEG and RG&E's existing electric system. In fact, there are portions of the Companies' systems today that face capacity constraints during current peak load periods due, in part, to a notable increase in load requests since the last rate case. Capacity constraints occur when load demand is such that transmission, substation, and/or distribution facilities are unable to be operated within permissible operating limits such as equipment thermal ratings and/or voltage tolerance bandwidths. Operating electrical equipment outside of specified limitations is inconsistent with good utility practice and can result in consequences including, but not limited to, loss of expected useful lifespan for utility facilities, damage to customer equipment, reliability degradation, regulatory action,<sup>9</sup> load shedding events, and equipment failure. Accordingly, the Companies strive to make proactive and prudent investments in system capacity upgrades such that the electric system has sufficient capacity to meet both current and future demands.

## 2.2. Procedural History

In April 2023, the Commission instituted the Proceeding to Address Barriers to Medium- and Heavy-Duty Electric Vehicle Charging Infrastructure ("MHD EV proceeding")<sup>10</sup> recognizing both the need for incentives to enable customer adoption of MHD EV and the need for proactive utility planning to address the increased capacity needs to support additional transportation load. The MHD EV proceeding has included multiple opportunities for stakeholders to provide input including filed comments and technical conferences. Based on the input received from stakeholders in the MHD EV Proceeding, the Commission found

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<sup>9</sup> For Bulk Electric System facilities subject to North American Electric Reliability Council ("NERC") reliability standards, potential exceedances of defined System Operating Limits must be continuously monitored and, if necessary, reported. Failure to adequately maintain the Bulk Electric System within System Operating Limits can lead to NERC enforcement actions up to, and including, financial penalties of up to \$1M per day.

<sup>10</sup> Case 23-E-0070, Proceeding on Motion of the Commission to Address Barriers to Medium- and Heavy-Duty Electric Vehicle Charging Infrastructure. Order Instituting Proceeding and Soliciting Comments (issued April 20, 2023).

that a broader proceeding was needed that considered grid planning needs beyond just EVs<sup>11</sup>.

On August 15, 2024, the Commission initiated the Proactive Planning Proceeding recognizing that “...the rate at which consumers are electrifying buildings and vehicles has the potential to outpace the existing grid planning process”<sup>12</sup> and thereby expanded proactive planning to include all transportation electrification as well as building electrification. The first ordering clause of the Proactive Planning Order directed individual utilities to, if necessary, file proposals for Urgent Upgrade Projects<sup>13</sup> while the second ordering clause directed the Joint Utilities to propose “a common approach for evaluation criteria, cost allocation, and cost recovery for Urgent Upgrade Projects.”<sup>14</sup> The Companies commend the Commission for recognizing the criticality of electric grid capacity as a requirement for CLCPA achievement and taking action accordingly.

### 2.3. Urgent Upgrade Projects Proposal

In response to the first ordering clause of the Proactive Planning Order, the Companies are proposing a portfolio of Urgent Upgrade Projects which must proceed with expedited development to address exigent system capacity constraints which are currently or imminently inhibiting electrification of vehicles and/or buildings. The following sections of this petition will:

- describe the methodology by which the Urgent Upgrade Projects were identified and developed,
- demonstrate that the proposed projects conform with the requirements of the Proactive Planning Order and the JU Urgent Project Criteria; and
- detail the cost allocation and recovery mechanisms that are necessary, as a condition of this proposal, for the Companies to construct the proposed projects on an accelerated timeline and with sufficient financial support to do so.

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<sup>11</sup> Proactive Planning Order p. 2

<sup>12</sup> NYS DPS press release. On August 15, 2024. <https://dps.ny.gov/news/commission-announces-new-proactive-grid-planning-proceeding-prepare-new-yorks-electric-grid>.

<sup>13</sup> Proactive Planning Order p. 14.

<sup>14</sup> Joint Utilities' Proactive Planning Urgent Upgrade Projects Evaluation and Funding Proposal (filed November 13, 2024)



# 3. Urgent Needs Assessment Methodology

NYSEG and RG&E performed an Urgent Needs Assessment to identify capacity-driven needs and their associated projects which could qualify as Urgent according to the Proactive Planning Order and the JU Urgent Project Criteria.

## 3.1. Urgent Projects Proposal Requirements

Consistent with the Proactive Planning Order, the JU Urgent Project Criteria establishes qualifications that a prospective capacity upgrade project must exhibit to be considered as Urgent. These qualification criteria can be summarized as follows:

- i. **Upgrade Required to Enable Transportation or Building Electrification** – Demonstrate that an upgrade project is required to serve anticipated load with strong ties to transportation and/or building electrification.
- ii. **Urgency Determination** – Demonstrate that “Construction-Related Activities” must commence by or before July 1, 2026, to avoid the risk of delay in connection of customer electrification load.
- iii. **Degree of Certainty** – Demonstrate a high degree of certainty of the need for each project based on location, magnitude, and timing of expected load and demonstrate how the utility proposal manages stranded asset risk.
- iv. **Consideration of Risks and Benefits** – Demonstrate how an Urgent Upgrade Project (1) is appropriately sized to address risks of over- or under building, and (2) minimizes risks of delayed action and/or considers benefits of early action in making proposed upgrades.

In addition to meeting these criteria, the Urgent Upgrade Project proposals must include discussion regarding impacts to disadvantaged communities as well as consistency with the State’s greenhouse gas emissions reduction objectives.

## 3.2. Urgent Needs Assessment Overview

To determine which capacity needs, and corresponding solutions, could be classified as Urgent, the Companies developed a process which sought to identify electric facilities (e.g., substations, circuits, etc.) which were either currently or imminently expected to constrain electrification load growth. The application of this process was broken down into four discrete stages, as summarized, below:

1. **Capacity-Limited Facility Screening** – Screening of facilities known to be currently or imminently capacity-limited or constrained as determined by recent reliability assessments as well as historic interconnection interest and/or requests. Capacity upgrade projects designed to mitigate these constraints that were developed to rate case quality were considered candidates for identification as Urgent.
2. **Electrification Hosting Capacity Assessment** – Analysis to determine how much, if any, incremental electrification load can be accommodated under current loading conditions.
3. **Electrification Impact Evaluation** – Evaluation to determine the extent to which unmitigated capacity constraints at each candidate facility could have a material negative impact on the integration of electrification loads.
4. **Urgency Determination** – The Companies assessed whether the proposed solution for each candidate capacity project qualified as Urgent based on the criteria included in the JU Urgent Project Criteria.

The stages of this assessment were designed in accordance with the Proactive Planning Order and the JU Urgent Project Criteria to identify candidate projects which best align with the qualification criteria. Details of how each stage of the assessment were conducted are detailed below.

## 3.3. Stage 1) Capacity-Limited Facility Screening

The first stage of the Companies' Urgent Needs Assessment methodology included a review of capacity-limited transmission, substation, and distribution facilities and associated capacity upgrade projects to identify projects which could qualify for identification as

Urgent. To comply with the Commission’s direction that Urgent projects have a “higher degree of certainty in the need they propose to address,”<sup>15</sup> the Companies prioritized review of facilities with known or imminently expected capacity constraints. Accordingly, the Companies’ review of capacity-limited facilities focused on those which were either (1) loaded at 95% or greater of their firm capacity ratings<sup>16</sup> and/or (2) facilities which have historically been found to be limiting to electrification load interconnection(s)<sup>17</sup>. Several of the candidate facilities were loaded to 100% or greater (i.e., they either have experienced overload conditions or are at risk of exceeding applicable ratings under current-year peak load periods).

This approach aligns with the requirement that Urgent projects demonstrate a “high degree of certainty” in the capacity need because the screening was designed to select facilities where the capacity need is, effectively, *current*. Facilities loaded at-or-above 95% of their firm rating will generally not be capable of accommodating any material interconnection of incremental electrification loads without requiring upgrades. Moreover, forecasted load growth driven by smaller-scale, distributed electrification (e.g., residential EV charger and heat pump installations) can rapidly erode the remaining capacity of heavily-loaded facilities, even in the absence of larger electrification interconnection requests.

In addition to screening facility needs for a high degree of certainty, the Companies also screened associated upgrade projects based on how mature the project definition was. This aligns with the Proactive Planning Order’s requirement that Urgent project proposals be of “rate case quality”<sup>18</sup> and that Urgent project proposals be submitted within 90 days of the initiating Order (i.e., November 13, 2024<sup>19</sup>). In effect, this meant that the Companies could only consider capacity upgrade projects which could be proposed at rate case quality by the date of this petition.

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<sup>15</sup> Proactive Planning Order p. 12

<sup>16</sup> The 95% threshold is higher than the Companies’ typical system planning practice. Generally, the Companies consider facilities currently loaded to 90% or higher of the firm rating to be capacity-limited. Once a facility is identified as capacity-limited, system planners at the Companies begin the process of developing plans to accommodate future load growth while also monitoring load growth to identify when action is needed.

<sup>17</sup> This includes, but is not limited to, instances where electrification interconnection requests were withdrawn due to the cost and/or timing of a pre-requisite capacity upgrade project.

<sup>18</sup> Proactive Planning Order p. 12

<sup>19</sup> The Companies sought, and were granted, an extension until November 27, 2024 to file this petition.

Collectively, the Companies' screening criteria for the capacity-limited facility screening can be summarized as follows:

1. The facility must be currently loaded to 95% or greater of its firm rating: OR
2. The facility must have been found to be limiting to electrification load interconnection(s); AND
3. There must be a rate case quality project proposal prepared by the time of the Urgent Upgrade Project filing deadline.

Any facility/project pairings which passed the screening process were considered candidates for further consideration in the next stage of the assessment.

### 3.4. Stage 2) Electrification Hosting Capacity Assessment

The Companies performed an electrification hosting capacity assessment for each candidate facility using power flow simulation software<sup>20</sup> to model the electric system, including interconnected loads and generation, in the vicinity of the candidate facilities under current peak loading conditions<sup>21</sup>. The electrification hosting capacity at each candidate facility was determined by using electric system modeling software to determine the maximum electrification load<sup>22</sup> that can be interconnected downstream of a capacity-limited facility before any applicable performance criteria<sup>23</sup> would be violated. Electrification hosting capacity, measured in units of Mega Volt-Amperes (MVA), is the maximum electrification load that can be interconnected downstream of a facility without exceeding system performance criteria. Electrification load interconnections beyond a given facility's electrification hosting capacity cannot be safely and reliably accommodated without some form of capacity constraint mitigation up to, and including, capital upgrade projects.

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<sup>20</sup> CYME was to evaluate distribution facilities. PSS/E and TARA were used to evaluate transmission facilities.

<sup>21</sup> "Current" peak loading conditions are determined by averaging the weather-normalized coincident peak loading observed over each of the past three years.

<sup>22</sup> Where a facility already exceeds applicable performance criteria under current peak loading conditions, the electrification hosting capacity for the facility can be negative. The negative value indicates how much load must be removed downstream from a facility before the performance criteria violation is mitigated.

<sup>23</sup> Distribution facilities were assessed under N-0 (i.e., all-lines-in) conditions. Transmission facilities were assessed according to the "Avangrid Electric Transmission Planning Manual" <https://www.nyseg.com/documents/40132/5899226/Avangrid+Transmission+Planning+Manual.pdf/c1e5a95e-e662-a0b0-4ca0-9787de5c3512?t=1702061606566>.

Once the load hosting capacity of each candidate facility was established, the extent to which limited hosting capacity may constrain the electric system's ability to support future electrification was assessed in the next stage.

### 3.5. Stage 3) Electrification Impact Evaluation

The Proactive Planning Order stipulated that Urgent project proposals should exhibit “stronger ties to transportation and building electrification needs”<sup>24</sup> than proactive planning projects which may be considered in the long-term proactive planning process envisioned by the Proactive Planning Order. To demonstrate that candidate capacity upgrade projects have strong ties to electrification, the Companies performed an electrification impact assessment based on each candidate project's associated capacity need. This consisted of quantitative and qualitative evaluations of how the need addressed by each project, if left unmitigated, could constrain queued and forecasted electrification load growth and spot load<sup>25</sup> interconnections. To perform the assessment, the Companies utilized data sources such as, but not limited to:

- Interconnection system impact studies
- Interconnection request history
- Strategic proximity of facilities with respect to expected electrification spot loads (e.g., NYS Thruway rest stops, school bus depots, airports, etc.)
- Forecasted electrification of native load (e.g., smaller scale / distributed EVs and heat pumps)

#### 3.5.1. Load Forecasting

The Proactive Planning Order states that granular, “bottom-up” forecasting should be considered by the utilities when identifying capacity projects to support electrification. However, the Order also leaves the option to use alternative forecasting methods up to the Utilities<sup>26</sup>. While the Companies see the value in developing granular forecasts, it is not

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<sup>24</sup> Proactive Planning Order p. 12

<sup>25</sup> A spot load generally refers to a single customer, or a concentrated cluster of customers, whose electric load requires dedicated infrastructure, such as transformers. Large spot loads can require major infrastructure such as dedicated circuits and/or substations.

<sup>26</sup> Proactive Planning Order p. 8

feasible to develop such forecasts at this time given data availability and the limited time available to submit this petition.

The Companies are currently developing an enhanced forecasting methodology to better incorporate state public policy initiatives, especially electrification of the transportation and building sectors. The enhanced forecast will incorporate locational data for known heat pump installations, EV chargers, and EV purchases to improve forecasting accuracy and precision with respect to electrification trends. The Companies also continue to advance the implementation of AMI and automated load-sensing equipment on the system. Leveraging such historic electrification data and more granular customer usage and system data will allow the Companies to develop more accurate electrification forecasts at the service division-or-lower level which could support future Proactive Planning studies.

In the interim, the Companies elected to use a traditional “top-down” forecasting approach, broadly consistent with the Companies’ current approach to system planning and the development of projects for their respective Capital Investment Plans, to quantify expected load growth at candidate facilities. This approach consisted of using internal econometric forecasts in combination with data from the NYISO Gold Book to quantify forecasted coincident peak load at the service division-level<sup>27</sup>. The division-level forecasts were disaggregated to both the substation level and to the circuit level by following a multi-step process to calculate facility load shares with respect to contributions to coincident peak load conditions. This process was conducted as follows:

1. **Division-Level Forecast** – Developed division-level load forecasts based on internal econometric forecasting, supported by NYISO Gold Book data.
2. **Substation-Level Forecast** – Disaggregated division-level forecasts to the substation level. This was done by proportionately assigning forecasted load to each substation according to its divisional load share<sup>28</sup> at peak load.

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<sup>27</sup> NYSEG has thirteen service divisions. RG&E has four.

<sup>28</sup> Load share is calculated as a substation’s percentage contribution to a division’s peak load. If a substation historically contributes 25 MW to a divisional peak load of 1000 MW, its load share is 25/1000, or 2.5%.

3. **Circuit-Level Forecast** – Disaggregated substation-level forecasts to the circuit-level. This was done by proportionately assigning forecasted load to each circuit at a substation according to its substation-level load share at peak load.

### 3.5.2. Electrification Interconnection History and Strategic Locations

To supplement the load forecast, the Companies also utilized data from historic interconnection requests and from qualitative factors such as candidate facilities' proximity to strategically important electrification locations (e.g., highway interchanges, NYS Thruway rest stops, school bus depots, etc.). This information is not currently incorporated into the Companies' forecasting methodology but can be very useful in the identification of Urgent electrification needs because of how heavily loaded the candidate facilities currently are (e.g., over 95% of firm rating). In fact, the Companies determined that most candidate facilities are incapable of incorporating *any* incremental electrification spot loads without capacity upgrades.

For candidate facilities where it was found that the unmitigated capacity constraints would have a near-term and materially negative impact on supporting transportation and/or building electrification load requests, NYSEG and RG&E evaluated the urgency of the associated capacity upgrade project.

## 3.6. Stage 4) Urgency Determination

The Joint Utilities described the common approach for determining whether a capacity upgrade project is Urgent in the JU Urgent Project Criteria. In summary, a project is determined to be Urgent when the date of electrification need necessitates that "Construction-Related Activities" for the associated capacity upgrade project must commence prior to July 1, 2026<sup>29</sup> to avoid the risk of a delay in connection of electrification load. The significance of the Construction-Related Activities threshold is that the commencement of this phase of project development represents the point at which a utility would be materially financially and/or reputationally harmed by cancelling the project. As

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<sup>29</sup> The July 1, 2026 deadline was determined based on an assumption that the initial Joint Utilities long-term proactive planning process project proposals will be filed on-or-about January 1, 2026, and that the Commission will issue an Order approving projects 6 months later.

such, project development will generally not proceed beyond this point without all regulatory and financial approvals being secured. Therefore, when determining whether an upgrade project is urgent, the project execution timeline assumes that Construction-Related Activities will commence shortly after Commission approval is issued in an Order responsive to this petition.

Construction-Related Activities include, but are not limited to:

- Incurring material expenses towards project development.
- Initiation of procurement activities or execution of contracts for major equipment (transformers, circuit breakers, switchgear, structures, etc.), particularly when the equipment has a long lead-time.
- Site preparation (e.g., site clearing/grading, matting, access road construction, etc.).
- Placement of permanent structures (e.g., footings, piles, slabs, poles, buildings, etc.).
- Contracting and/or mobilization of construction crews.
- Staging of construction equipment.

As another check to determine if a candidate upgrade project was truly urgent, the Companies evaluated the impact of waiting and pursuing project approval through the to-be-established long-term Proactive Planning Process in the future. The Commission has indicated that an Order in the long-term Proactive Planning Process will be issued by July 1, 2026. Under that timeframe and assuming Construction-Related Activities commenced immediately following a Commission Order<sup>30</sup> on July 1, 2026,<sup>31</sup> the expected in-service date for the capacity upgrade project would result in a material delay<sup>32</sup> to an electrification load, relative to approval in response to this Urgent Upgrade Projects petition. As described further below, each proposed project is addressing a known electrification load request that is currently unable to be accommodated due to existing or imminent capacity constraint

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<sup>30</sup> As discussed previously, Construction-Related Activities cannot commence until regulatory and financial approvals in place.

<sup>31</sup> The future long-term Proactive Planning Process was assumed to yield Commission approvals by July 1, 2026.

<sup>32</sup> Seeking approval for Urgent Upgrade Projects in the long-term Proactive Planning Process could delay currently queued electrification interconnection requests by up to a year, or more. These delays could be extended depending on when the long-term Proactive Planning Process concludes.



conditions. Waiting for the long-term Proactive Planning Process will not advance the State's electrification policy goals in a timely manner.

Importantly, the current rate plan does not include funding for these specific projects because, at the time the investment plan<sup>33</sup> for the current rate plan was being developed in early 2022, the needs did not support the prioritization of the projects relative to the Companies' other investment priorities. While the Companies were aware of capacity constraints at several of the facilities proposed in this petition, there were similar, or worse, constraints at a significant number of other facilities throughout the Companies' service territory, beyond the Companies' core system needs for reliability, resiliency, and asset condition, that warranted prioritization.<sup>34</sup> It was not until well after the Joint Proposal was adopted that the Companies' observed a significant increase in the number of electrification load requests and the need for capacity investments at specific locations became more apparent. Capacity investment funding that was included in the rate plan, such as the Distribution Load Relief Program, have generally already been allocated to urgent capacity needs and are insufficient to cover the cost of the proposed Urgent Upgrade Projects.

## 4. Proposed Urgent Upgrade Projects

At the conclusion of the process described in Section 3, the Companies each identified a portfolio of Urgent Upgrade Projects which must begin Construction-Related Activities prior to July 1, 2026<sup>35</sup> to avoid the risk of delay in connection of customer electrification load. The Companies' Urgent Upgrade Projects are compliant with the stipulations of the Proactive Planning Order as well as the qualification criteria detailed in the JU Urgent Project Criteria. The Companies propose that the deployment of these Urgent Upgrade Projects be pursued expeditiously, pending Commission approval of the cost recovery and cost allocation measures, detailed in Section 5.

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<sup>33</sup> The investment plan for the active rate term was proposed on May 26, 2022 in the Companies pre-filed testimony (Case numbers 22-E-0317 and 22-E-0319).

<sup>34</sup> About 35% of NYSEG substations and 42% of RG&E substations have at least one circuit or transformer that is capacity constrained such that it has only 1 MVA of available capacity.

<sup>35</sup> The July 1, 2026 deadline was determined based on an assumption that the initial JU long-term proactive planning process project proposals will be filed on-or-about January 1, 2026, and that the Commission will issue an Order approving projects 6 months later.

As mentioned above, the current rate plan does not include funding for these specific projects. At the time that the rate plan was being developed, the location and scale of electrification load requests could not have reasonably been known and it would not have been prudent to prioritize speculative capacity investments over core investments in reliability and resiliency. In future years, the Companies are optimistic that the long-term Proactive Planning Process and improvements to system data and load forecasting capabilities will be helpful for identifying high-priority capacity constraints before the needs become urgent.

The Companies' Urgent Upgrade Projects are summarized at the portfolio level in the following sections.

#### 4.1.1. NYSEG Proposed Urgent Upgrade Projects

NYSEG proposes that a total of seven projects be advanced as Urgent Upgrade Projects to resolve capacity constraints that are currently or imminently preventing active electrification load requests from progressing. The projects consist of a mix of substation, transmission, and distribution upgrades which collectively, increase load-serving capacity by 124.9 MVA. This incremental capacity will allow for 22.1 MVA of queued transportation and building electrification load associated with active interconnection requests<sup>36</sup> to proceed and will also support future electrification load growth. In addition to the electrification capacity benefits, the projects also have numerous other electrical system benefits including, but not limited to, the following:

- Reliability improvement
- Aging infrastructure replacement
- Improved resiliency
- System automation
- Improved operational flexibility
- Improved expandability/scalability
- Replacement of obsolete oil-filled circuit breakers

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<sup>36</sup> NYSEG's proposed Urgent Upgrade Projects will enable the connection of a total 52.4 MW of currently-queued load with active interconnection requests.

- Distribution voltage class consolidation

For more detailed information on the projects and their benefits, please refer to Attachments A and B.

Table 1 – NYSEG Proposed Urgent Upgrade Projects and Estimated Cashflows

NYSEG Proposed Urgent Upgrade Projects						
Project Name	Project Scope Summary	Incremental Capacity Benefits (MVA)	Electrification Load Enabled (MW)	Total Queued Load <sup>37</sup> (MW)	Cost Estimate <sup>38</sup>	Est. ISD <sup>39</sup>
Ferndale Substation Upgrades	Substation expansion with partial load transfers from nearby substations	25.2	3.2	7.6	\$30.2M	2028
Kents Falls Substation Upgrades	Install new transformer and construct new 34.5 kV distribution line	30.0	5.3	20.0	\$37.1M	2029
Clarence Substation	Construct new Clarence Substation and perform load transfers from nearby substations	19.0	3.9	4.9	\$80.4M	2029
Vincent Corners Substation Upgrade	Install new transformer, convert distribution circuits to 12.5 kV, and transfer nearby load.	4.0	0.8	0.8	\$25.2M	2029
Whitney Point Substation Upgrade	Install new transformer, convert distribution circuits to 12.5 kV, and transfer nearby load.	2.0	0.7	0.7	\$37.8M	2029
Wright Avenue Substation Rebuild	Full Rebuild of Wright Ave Substation with expanded transformation capacity.	25.2	3.0	8.6	\$105.4M	2029
Centerport Area Project	Construct new Centerport Substation and transfer/convert all Weedsport and Port Byron circuits. Expand Hamilton Substation and increase transformation capacity. Construct new 34.5 kV transmission line from Hamilton to Centerport.	19.4	5.1	9.8	\$151.7M	2031
TOTALS		124.9	22.1	52.4	\$467.9M	

NYSEG Forecasted Urgent Upgrade Projects Cashflows<sup>38</sup>

Year	2025	2026	2027	2028	2029	2030	2031	Total
<b>Expenditures</b>	\$22.4M	\$80.8M	\$153.1M	\$146.6M	\$47.1M	\$9.0M	\$8.9M	\$467.9M

<sup>37</sup> The Total Queued Load figure is inclusive of the Electrification Load in the adjacent column.

<sup>38</sup> Amounts do not include AFUDC consistent with the Companies' proposal to include CWIP in rate base. Amounts include internal labor costs for 19 Planning and Project Management incremental FTEs to execute the portfolio.

<sup>39</sup> Assumes Commission Approval by no later than July 1, 2025.

#### 4.1.2. RG&E Proposed Urgent Upgrade Projects

RG&E proposes that a total of three projects be advanced as Urgent Upgrade Projects to resolve capacity constraints that are currently or imminently preventing electrification load requests from progressing. The projects consist of a mix of substation, transmission, and distribution upgrades which collectively increase load-serving capacity by 132.5 MVA. This incremental capacity will allow for 13.4 MVA of queued transportation and building electrification associated with active interconnection requests<sup>40</sup> to proceed and will also support future electrification load growth. In addition to the electrification capacity benefits, the projects also have numerous other electrical system benefits including, but not limited to, the following:

- Reliability improvement
- Aging infrastructure replacement
- Improved resiliency
- System automation
- Improved operational flexibility
- Improved expandability/scalability
- Replacement of obsolete oil-filled circuit breakers
- Distribution voltage class consolidation

For more detailed information on the projects and their benefits, please refer to Attachments A and B.

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<sup>40</sup> RG&E's proposed Urgent Upgrade Projects will enable the connection of a total 27.3 MW of currently-queued load with active interconnection requests.

Table 2 – RG&E Proposed Urgent Upgrade Projects and Estimated Cashflows

RG&E Proposed Urgent Upgrade Projects						
Project Name	Project Scope Summary	Incremental Capacity Benefits (MVA)	Electrification Load Enabled (MW)	Total Queued Load <sup>41</sup> (MW)	Cost Estimate <sup>42</sup>	Est. ISD <sup>43</sup>
Station 255 Upgrades	Build 12kV Yard at Station 255 & transfer two (2) circuits from 419 to 255	52.5	5.0	10.2	\$19.7M <sup>44</sup>	2028
Station 89 Upgrades	Install new 50 MVA transformers 115/12 kV to replace existing 22 MVA transformer 115/12 kV	33.0	2.0	6.4	\$33.4M	2029
Station 124 Expansion	Expand Station 124 115 kV bus to a 3-bay BAAH. Install a new 50 MVA 115/12 kV transformer and replace existing 2T transformer with a new 50 MVA unit.	47.0	6.4	10.8	\$33.2M	2028
TOTALS		132.5	13.4	27.3	\$86.3M	

RG&E Forecasted Urgent Upgrade Projects Cashflows<sup>42,44</sup>

Year	2025	2026	2027	2028	2029	Total
<b>Expenditures</b>	\$7.1M	\$25.2M	\$30.4M	\$23.1M	\$0.4M	\$86.3M

#### 4.1.3. Alternative Solutions

The Companies evaluated at least one alternative solution for each of the proposed Urgent Upgrade Projects. Numerous factors were considered when determining the preferred alternatives, but the Companies generally followed a “best-fit, most-reasonable cost” approach wherein solution efficacy is prioritized (i.e., the solution “fits”), while giving preference to solutions with the lowest overall cost. While cost was a primary evaluation metric, other factors were also considered, such as longer-term expandability, scalability, and functionality as well as whether an alternative addresses other system needs beyond capacity (i.e., reliability, asset condition, etc.). Non-Wires Alternative (NWA) solutions were

<sup>41</sup> The Total Queued Load figure is inclusive of the Electrification Load in the adjacent column.

<sup>42</sup> Amounts do not include AFUDC consistent with the Companies' proposal to include CWIP in rate base. Amounts include internal labor costs for 4 Planning and Project Management incremental FTEs to execute the portfolio.

<sup>43</sup> Assumes Commission Approval by July 1, 2025.

<sup>44</sup> This cost figure represents the total cost of the Station 255 (Henrietta) Upgrades projects. Costs which will be subject to recovery in rates will be net of a \$4.7 million state grant towards this project (i.e., \$4.7 million less capital cost subject to recovery).

not comprehensively evaluated as alternatives to the proposed Urgent Upgrade Projects because the Companies concluded that the associated urgent capacity needs were not suitable for mitigation through an NWA<sup>45</sup> due to the capacity needs occurring within 36 months of July 1, 2025<sup>46</sup> (i.e., prior to July 1, 2028). Therefore, they are not candidates for NWA consideration consistent with the Companies' NWA Suitability Criteria.<sup>47</sup> While not suitable as alternatives for these Urgent Upgrade Projects, the Companies will actively consider NWA solutions, as appropriate, within the long-term proactive planning process.

## 4.2. Joint Utilities' Evaluation Criteria Compliance Summary

In accordance with the second ordering clause of the Proactive Planning Order, the Joint Utilities collaborated to develop the JU Urgent Project Criteria to establish a common approach for evaluating Urgent Upgrade Project proposals. JU Urgent Project Criteria lists several qualification criteria which must be satisfied for a proposed project to be deemed Urgent and provides examples of how criteria compliance can be demonstrated.

The general approach that the Companies used to demonstrate criteria compliance are described below. For more detailed information on the projects and their development, please refer to Attachments A and B.

### 4.2.1. Criterion i – Upgrade Required to Enable Transportation or Building Electrification

This criterion requires the utility to “demonstrate that an upgrade project is required to serve anticipated load with strong ties to transportation and/or building electrification”. The JU Urgent Project Criteria notes that this criterion can be satisfied by demonstrating that “load growth is driven by building and/or electric vehicle load that existing infrastructure cannot accommodate” and that this should include the quantification of “the electrification load-related need that is projected to exist in a specific portion of its system”.

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<sup>45</sup> While the Ferndale Substation Upgrades project did not consider an NWA as a suitable alternative solution, completing the proposed project would enable NYSEG to pursue NWA solutions for nearby system capacity needs identified in the Liberty Division. More details can be found in Attachment A.

<sup>46</sup> It was assumed that the Commission would issue an Order approving Urgent Upgrade Projects no later than this date.

<sup>47</sup> Introducing an NWA Request for Proposal (RFP) and technical review process could delay the execution timeline of the Urgent Upgrade Projects by up to 18 months. <https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId=%7b3E7E6426-F3FC-46F3-A8C4-CD44625DA792%7d> (See Appendix 5).

As discussed in Section 3.5 regarding the Electrification Impact Evaluation performed, the Companies developed substation and circuit-level forecasts to quantify the amount of load growth due to vehicle and building electrification expected at each of the capacity-limited facilities that were being assessed. This anticipated load growth is in addition to existing load requests waiting in the queue to interconnect that have not been able to be accommodated due to known capacity constraints on the system. Additionally, the Companies supplemented these forecasts with data from historic interconnection requests and from qualitative factors such as candidate facilities' proximity to strategically important electrification locations (e.g., highway interchanges, NYS Thruway rest stops, school bus depots, etc.) to further refine the impacts that capacity constraints could have on future electrification efforts.

For each of the proposed Urgent Upgrade Projects, the Electrification Impact Evaluation found that failing to promptly mitigate the capacity constraints would have a near-term and materially negative impact on supporting transportation and/or building electrification load requests. Therefore, the proposed projects satisfy Criterion i. A summary of the electrification drivers for each Urgent Upgrade Project are listed in Table 3 and Table 4 below.



Table 3 – NYSEG Urgent Upgrade Projects – Capacity Drivers

Project Name	Drivers of Urgent Capacity Needs
Ferndale Substation Upgrades	<ul style="list-style-type: none"> <li>• 7.6 MW of new load for electrification and economic development</li> <li>• Multiple residential and commercial buildings with <u>heat pumps</u> cannot be supported due to thermal constraints and accounts for ~30% of the total load requested.</li> <li>• An <u>EV request</u> for charging cannot be supported due to thermal constraints and accounts for ~12% of the total load requested.</li> <li>• Ferndale serves the Liberty and Livingston Manor Central School Districts – <u>Possible School Bus Charging.</u></li> </ul>
Kents Falls Substation Upgrades	<ul style="list-style-type: none"> <li>• 20 MW of new load for electrification and economic development</li> <li>• Multiple commercial buildings with <u>heat pumps</u> cannot be supported due to thermal constraints and accounts for ~25% of the total load requested.</li> <li>• NYS Thruway I-87 is close to the area. Exit 36 is a desirable location for EV charging stations.</li> <li>• A commercial <u>EV request</u> cannot be supported due to thermal constraints and account for ~1.5% of the total load requested.</li> <li>• Hammond Lane and South Junction serves the Plattsburgh and Peru Central School Districts – <u>Possible School Bus Charging.</u></li> </ul>
Clarence Substation	<ul style="list-style-type: none"> <li>• 4.9 MW of new load for electrification and economic development</li> <li>• Multiple residential buildings with <u>heat pump</u> cannot be supported due to thermal constraints and accounts for ~10% of the total load requested.</li> <li>• An <u>EV request</u> for charging at the I-90 Clarence rest area cannot be supported due to thermal constraints and accounts for ~70% of the total load requested.</li> <li>• Wende and Alden substations serve the Clarence and Alden Central School Districts – <u>Possible School Bus Charging</u></li> </ul>
Vincent Corners Substation Upgrade	<ul style="list-style-type: none"> <li>• 0.8 MW of new load for electrification and economic development</li> <li>• The Binghamton Airport remodeled sections of the airport and requested 0.8 MW of load from <u>heat pumps.</u></li> <li>• Vincent Corners serves the Johnson City Central School District – <u>Possible School Bus Charging.</u></li> </ul>
Whitney Point Substation Upgrade	<ul style="list-style-type: none"> <li>• 0.7 MW of new load for electrification</li> <li>• An EV charger was installed near Interstate 81 that currently constrains the system in support of electrification.</li> <li>• Area serves the Whitney Point Central School District – <u>Possible School Bus Charging.</u></li> </ul>
Wright Avenue Substation Rebuild	<ul style="list-style-type: none"> <li>• 8.6 MW of new load for electrification and economic development</li> <li>• Multiple commercial buildings with <u>heat pumps</u> cannot be supported due to thermal constraints and accounts for ~35% of the total load requested.</li> <li>• Wright Ave serves the Auburn Enlarged City School District – <u>Possible School Bus Charging.</u></li> </ul>
Centerport Area Project	<ul style="list-style-type: none"> <li>• 9.8 MW of new load for electrification and economic development</li> <li>• Multiple residential buildings with <u>heat pumps</u> cannot be supported due to thermal constraints and accounts for ~25% of the total load requested.</li> <li>• Multiple <u>EV charging</u> requests along NY I-90 cannot be supported due to thermal constraints and accounts for ~27% of the total load requested.</li> <li>• Area serves the Weedsport and Port Byron NY State Central School Districts – <u>Possible School Bus Charging.</u></li> </ul>

Table 4 – RG&E Urgent Upgrade Projects – Capacity Drivers

Project Name	Drivers of Urgent Capacity Needs
Station 255 Upgrades	<ul style="list-style-type: none"> <li>• 10 MW of new load for electrification and economic development</li> <li>• Multiple residential &amp; commercial buildings with <u>heat pumps</u> are being approved to connect at Station 419 exacerbating the N-1 violations and account for (25%) of total load requested.</li> <li>• Several <u>EV charging</u> requests in the area served by Station 419 account for (25%) of total load requested.</li> </ul>
Station 89 Upgrades	<ul style="list-style-type: none"> <li>• 6.4 MW of new load for electrification and economic development</li> <li>• Multiple residential buildings with <u>heat pumps</u> are being requested to connect at Station 89 and account for (32%) of total load requested.</li> </ul>
Station 124 Expansion	<ul style="list-style-type: none"> <li>• 10.8 MW of new load for electrification and economic development</li> <li>• Multiple residential buildings with <u>heat pumps</u> are being requested to connect at Station 124 and account for (37%) of total load requested.</li> <li>• EV request for <u>school bus charging</u> in the area served by Station 124 accounts for (63%) of total load requested.</li> </ul>

#### 4.2.2. Criterion ii – Urgency Determination

This criterion establishes that utilities must demonstrate that Construction-Related Activities “must commence by or before July 1, 2026, to avoid the risk of delay in connection of customer electrification load.” This criterion can be satisfied in a number of ways, including by detailing the consequences of delaying the commencement of Construction-Related Activities until July 1, 2026.

As described in Section 3.6, the Companies performed an urgency determination for each project by estimating the in-service date for each project, assuming a commencement of Construction-Related Activities on July 1, 2026, and comparing that to the date that the associated capacity constraint was expected to occur (i.e., a “need-by” date for the upgrade project). The urgency determinations found that each of the Companies’ proposed Urgent Upgrade Projects, if delayed until July 2026, would have an in-service date beyond the need-by date of the project. Therefore, execution of the proposed projects must begin prior to July 1, 2026, or the connection of electrification loads will necessarily be delayed to ensure that electrical equipment is not overloaded. Accordingly, the proposed Urgent Upgrade Projects satisfy Criterion ii.

#### 4.2.3. Criterion iii – Degree of Certainty

According to this criterion, utilities must “demonstrate a high degree of certainty of the need for each project based on location, magnitude, and timing of expected load, and demonstrate how the utility proposal manages stranded asset risk.” At a high level, the JU Urgent Project Criteria states that this criterion can be satisfied by detailing the data used and methodologies used to develop the justification for the project proposals.

As discussed in Section 3.3, the Companies addressed this criterion by exclusively considering capacity-limited facilities where there are known or imminent needs. This was done via a screening process to identify upgrade projects that addressed a capacity-limited facility loaded at 95%, or higher, of its firm rating and/or facilities which were historically found to be limiting to an electrification interconnection request. This screening process for capacity needs that are either current or imminent did not heavily rely on forecasting to establish the timing, location, and magnitude of the needs with high certainty. The basis of the need for each proposed project can be supported by observed historic system loads and the results of interconnection request studies. Instead, forecasts were used primarily as a means to establish the consequences of non-action as well as to ensure that the solutions could be right-sized for future demands.

#### 4.2.4. Criterion iv – Consideration of Risks and Benefits

The JU Urgent Project Criteria states that utilities must “demonstrate how an Urgent Upgrade Project (1) is appropriately sized to address risks of over- or underbuilding, and (2) minimizes risks of delayed action and/or considers benefits of early action in making proposed upgrades.” In effect, this criterion seeks to address how the utilities managed risk around the scope and the timing of the projects. The Companies designed the proposed projects with these criteria in mind, while also ensuring that the balance of both near-term and long-term cost-efficiency were appropriately considered<sup>48</sup>. The general approach the Companies took to mitigate risks identified in the criteria can be summarized as follows:

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<sup>48</sup> *Prioritizing the minimization of near-term costs can sometimes result in long-term costs increasing in instances where attempting to develop a project in phases introduces complexity (e.g., working in a live substation) and/or requires the duplication of past work (e.g., vegetation clearing and matting).*

## Underbuilding Risk

Underbuilding risk occurs when projects are designed based on forecasts that indicate lower/slower load growth than the load growth that is experienced over time. The principal concern related to underbuilding is that the cost-efficiency of projects can be severely impacted if a relatively new project must be re-worked in a way that results in redundancies or an overhaul of prior developed scope. To minimize underbuilding risk, the Companies designed the proposed Urgent Upgrade Projects such that project components were either right-sized, or were scalable, to be sufficient to satisfy expected system needs for at least 20 years<sup>49</sup> (i.e., through 2045). Designing the Urgent Upgrade Projects in this way lessens the potential negative impacts of electrification being more rapid than current forecasts indicate because the projects inherently include a capacity buffer (right-sizing) and/or expansion potential (scalability) that will allow the Companies to be flexible in addressing future system conditions. The Companies analyzed each project's situation and took a prudent approach consistent with good utility practice to balance the size and scope with the cost impacts.

Right-sizing solutions for future load growth is an effective method for mitigating underbuilding risk in instances where (1) there is limited space for adding additional facilities (i.e., urban substations, transmission rights-of-way) and (2) the incremental cost of installing higher-capacity equipment does not materially increase total project costs. A typical example of how right-sizing was incorporated into the proposed Urgent Upgrade Projects was the selection of larger substation transformers (e.g., 50 MVA) in instances where 20-year load forecasts indicated the capacity would be needed to support electrification. Right-sizing substation transformers in this scenario is an effective way to hedge against underbuilding risk<sup>50</sup> while not materially increasing project costs.

Scalability was incorporated into the right-sizing approach in instances where further upgrades were expected at the project site, but it was both practical and cost-efficient to defer those additional upgrades until doing so was justified by observed and forecasted load

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<sup>49</sup> As discussed in Section 3.5.1, substation and circuit-level forecasts were developed to estimate expected demand over the next 20 years. This data was supplemented by data from the Companies' interconnection queues and qualitative assessments of the facilities' proximity to strategic electrification locations.

<sup>50</sup> If the transformers were not right-sized for possible long-term electrification load growth, there is a risk that they may need to be replaced prior to the end of their expected useful life.

growth and/or interconnection requests. A typical scenario where scalability was incorporated into the Urgent Upgrade Projects in this fashion were instances where an additional substation transformer was expected to be required to support load growth in the longer-term planning horizon but was not needed within the next ten years, based on current data. In such instances, the Urgent Upgrade Projects were designed to leave sufficient space in the substation yard and buswork to be able to accommodate the addition of a future transformer with relative ease. This approach meant that the Urgent Upgrade Projects have potential for future expandability beyond the incremental capacity benefit figures listed in Section 4.1.1 and Section 4.1.2.

### Overbuilding and Early Action Risks

Overbuilding and early action risks occur when projects are designed based on forecasts that indicate higher/faster load growth than the load growth that is experienced over time. The principal concern related to overbuilding and early action risks is that it can negatively impact system cost-efficiency by resulting in investments which are more costly and/or are deployed earlier than is strictly required, respectively, to satisfy system demands. The Companies minimized early action risk in their Urgent Upgrade Project proposals by exclusively selecting for system needs which were either current or imminent, as discussed in Section 3.3. This ensured that the needs driving the proposed Urgent Upgrade Projects are not sensitive to forecast uncertainty. With respect to minimizing overbuilding risk the Companies, as discussed previously<sup>51</sup>, incorporated scalability into project design, where appropriate<sup>52</sup>, such that the projects could be deployed in phases when system conditions indicate that additional capacity is needed. This scalable solution/phased design approach can result in increased long-term cost-efficiency by allowing the scope of the solution to grow alongside system demands instead of building large amounts of capacity now in anticipation of demand that may not materialize or may be delayed relative to state goals and/or forecasted load. For example, the Station 255 project was proposed with one 50 MVA transformer with the opportunity to scale up to two 50 MVA transformers in time if warranted

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<sup>51</sup> As described in the previous discussion related to underbuilding risk, a typical example of prudent scalability is to ensure that a substation project leaves adequate space and connectivity to accommodate an additional future transformer at the site to support forecast load growth and/or possible interconnection requests.

<sup>52</sup> Based on Companies' determination regarding whether such an approach was cost-efficient, feasible, and consistent with good utility practice.

versus proposing to install two 50 MVA transformers now. Additionally, scaling/phasing projects can have the benefit of smoothing out rate base additions and thus reducing the risk of subjecting customers to sudden rate impacts (i.e., rate shock).

### 4.3. Additional Project Evaluation Factors

In addition to satisfying the JU Urgent Project Criteria, the Companies addressed the following additional evaluation factors in accordance with the Proactive Planning Order.

#### 4.3.1. Greenhouse Gas Emissions Reductions

The electrification of New York's building and transportation sectors are a key part of the New York Climate Action Council's strategy for meeting the CLCPA's greenhouse gas emission reduction goals. To allow for the energy demands of large portions of the statewide building and vehicle stock to be transitioned to the electric grid, significant additional electrical capacity will need to be developed by the State's utilities.

As discussed in Section 4.2.1, the proposed Urgent Upgrade Projects are required to enable queued transportation and building electrification requests to proceed and the associated clean energy benefits to be realized. The proposed Urgent Upgrade Projects, once constructed, will immediately provide the necessary capacity for the currently queued and near-term forecasted electrification load that otherwise could not be supported by existing infrastructure. The subsequently enabled electrification interconnections will then contribute to the reduction of greenhouse gas emissions by facilitating the transition to electric vehicles and by avoiding or offsetting emissions from fossil fuel combustion in buildings. Therefore, Commission approval to proceed with the construction of the Proposed Urgent Upgrade projects is consistent with the State's greenhouse gas emissions reduction objectives.

#### 4.3.2. Disadvantaged Communities Impacts

Section 7(3) of the CLCPA requires that State agencies, in considering and issuing permits, licenses, and other administrative approvals and decisions, "shall not disproportionately

burden disadvantaged communities.”<sup>53</sup> Accordingly, during the development of the proposed Urgent Upgrade Projects, the Companies were cognizant of both the project-level and portfolio-level implications of the proposal and its consistency with the statute. Of NYSEG’s seven proposed projects, four are partially or wholly located within Disadvantaged Communities. Of RG&E’s three proposed projects, two are partially or wholly located within Disadvantaged Communities. These projects are listed below.

*Table 5 – Proposed Urgent Upgrade Projects Partially or Wholly Located in a Disadvantaged Community*

Company	Project Name	Queued Load (DAC Benefits)	
		Electrification (MW)	Total Queued Load <sup>54</sup> (MW)
NYSEG	Ferndale Substation Upgrades	3.2	7.6
NYSEG	Kents Falls Substation Upgrades	5.3	20.0
NYSEG	Wright Avenue Substation Rebuild	2.7	8.6
NYSEG	Centerport Area Project	5.1	9.8
RG&E	Station 255 Upgrades	5.0	10.2
RG&E	Station 89 Upgrades	2.0	6.4

With respect to the siting of this subset of Urgent Upgrade Projects, locating the projects entirely outside of Disadvantaged Communities was not feasible because these projects require upgrades to distribution infrastructure which, by its nature, must be located nearby the customers served. However, the impacts to members of the proximate Disadvantaged Communities during project construction will be moderated because the more significant construction activities (i.e., new substation transformers, new distribution lines, etc.) are restricted to existing utility substation locations, utility property, and rights-of-

<sup>53</sup> Disadvantaged Communities are “communities that bear burdens of negative public-health effects, environmental pollution, impacts of climate change, and possess certain socioeconomic criteria, or comprise high concentrations of low- and moderate-income households...” ECL § 75-0101(5).

<sup>54</sup> The Total Queued Load figure is inclusive of the Electrification Load in the adjacent column.

way/easements. Therefore, no major impacts to land use or easement/ROW size are anticipated within Disadvantaged Communities.

Portions of the projects will be located within Disadvantaged Communities and are expected to bring numerous benefits to those communities. The proposed Urgent Upgrade Projects will immediately provide capacity for queued and forecasted electrification load that otherwise could not be supported by existing infrastructure. With additional electrification capacity available in the community, electrification infrastructure like EV charging stations and heat pumps will be able to more easily be located within these Disadvantaged Communities and provide service to residents. Local access to EV infrastructure and building electrification will ensure that Disadvantaged Communities can participate in the transition to electrification and thus benefit from the economic and environmental advantages, such as improved air quality,<sup>55</sup> that are associated with adoption.

In addition to the electrification benefits, each of these projects will also provide capacity that will have immediate benefits for enabling the advancement of queued economic development projects that otherwise could not be supported by existing infrastructure. By enabling these economic development projects to proceed, the proposed Urgent Upgrade Projects will also play a key role in promoting economic activity within the Disadvantaged Communities as well as creating local jobs.

Finally, while the urgency of these Urgent Upgrade Projects was primarily driven by the need for capacity, the project will also provide significant additional benefits to the surrounding community, including, but not limited to, the following:

- Improved reliability
- Aging infrastructure replacement
- Improved resiliency
- System automation
- Improved operational flexibility

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<sup>55</sup> "The tailpipe emissions from internal combustion engine vehicles cause air pollution, which leads to adverse health impacts...According to the American Lung Association, transitioning to a nationwide electric transportation system by 2050 would save approximately 6,300 lives every year and avoid 93,000 asthma attacks and 416,000 lost work days annually" (<https://www.transportation.gov/rural/ev/toolkit/ev-benefits-and-challenges/community-benefits>)



- Improved expandability/scalability
- Replacement of obsolete oil-filled circuit breakers
- Distribution voltage class consolidation

In summary, the design of the proposed Urgent Upgrade Projects minimizes potential disruptions and negative impacts to Disadvantaged Communities while conferring significant long-term local benefits. Therefore, Commission approval of the Companies' proposed Urgent Upgrade Projects will not disproportionately or unduly burden Disadvantaged Communities.

## 5. Cost Recovery and Cost Allocation

The total capital investment for the ten proposed Urgent Needs Projects is \$554.2 million, which includes \$467.9 million at NYSEG and \$86.3 million at RG&E.<sup>56</sup> Detailed estimated investments for each project are included in Attachment A.

*Table 6 – Estimated Portfolio Investments*

Year	NYSEG	RG&E	Total
2025	\$22.4M	\$7.1M	\$29.6M
2026	\$80.8M	\$25.2M	\$106.0M
2027	\$153.1M	\$30.4M	\$183.5M
2028	\$146.6M	\$23.1M	\$169.8M
2029	\$47.1M	\$0.4M	\$47.5M
2030	\$9.0M		\$9.0M
2031	\$8.9M		\$8.9M
<b>Total</b>	<b>\$467.9M</b>	<b>\$86.3M</b>	<b>\$554.2M</b>

### Cost Recovery

The Companies have significant core reliability, resiliency, and asset condition investment needs to address system issues required to be able to continue to provide safe and reliable service. The Companies are committed to enabling New York's clean energy future. The proposed Urgent Upgrade Projects are incremental to the already substantial planned

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<sup>56</sup> Amounts do not include an offset for a \$4.7 million NY State grant for the RG&E Station 255 Henrietta project. Also, amounts do not include AFUDC consistent with the Companies' proposal to include CWIP in rate base.

investment to address the core system needs noted above. The magnitude of the Urgent Upgrade Projects investment will exacerbate the cash flow and credit metrics challenges facing the Companies, which if left unchecked, will potentially result in credit rating downgrades further limiting the Companies' access to the capital markets and increasing the cost of debt for customers. Any incremental unplanned capital investment will put increased pressure on the already strained credit metrics at both Companies. The Companies' ability to implement these Urgent Upgrade Projects is contingent on having timely cash recovery of the financing costs associated with making these investments.

As a condition of the proposed Urgent Upgrade Projects, the Companies require **100% Construction Work in Progress "CWIP" in Rate Base** treatment, or a similar cash flow recovery mechanism while in construction, that can provide for cash recovery of the financing costs associated with making the investments as they are incurred. The Companies simply cannot continue to take on incremental capital investment requirements, such as these to advance the State's clean energy policy goals, without having timely cash recovery of the associated financing costs. The credit metrics at both Companies, while forecasted at the time to improve to just above the threshold for investment grade ratings from the existing rate case Joint Proposal, continue to be strained by incremental cash flow pressures from additional major storm expenditures and customer arrears, increasing broadband Make Ready investments, increasing Prevailing Wage costs, and CLCPA Phase 2 investments where CWIP in rate base is not available until after Article VII/VIII permits.

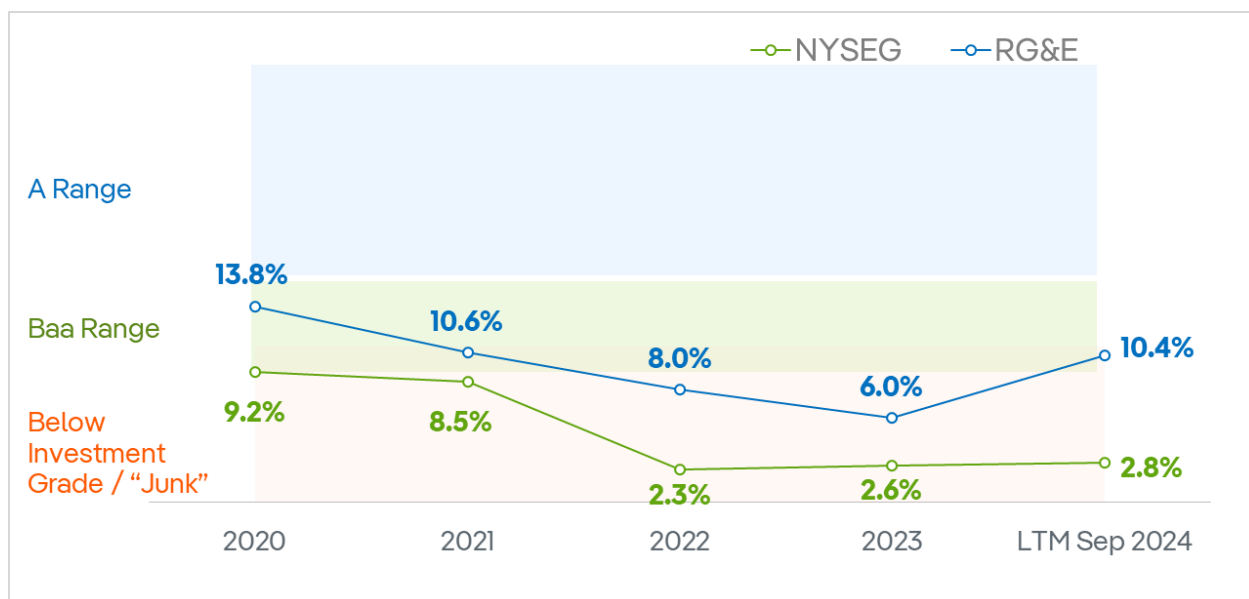


Figure 1 – Moody's Cash from Operations (CFO) Less Changes in Working Capital (WC) / Debt

### Customer Benefits of Allowing 100% CWIP in Rate Base

The inclusion of 100% CWIP in rate base as an alternative to AFUDC will help mitigate the additional pressure on the Companies' cash flow and credit metrics during project development and construction. The inclusion of 100% CWIP in rate base will also benefit customers by reducing the overall cost of the projects and help to avoid a potential credit downgrade. Applying 100% CWIP in rate base will avoid an estimated \$77 million of AFUDC resulting in nominal cost savings of approximately \$267 million to customers over the life of the assets through lower revenue requirements for the return on rate base, depreciation expense, and associated property taxes. Additionally, a one-notch credit rating downgrade is estimated to increase debt financing costs by 14 basis points, while a two-notch downgrade is estimated to increase debt financing costs by 64 basis points. This would directly increase the cost of debt and interest expense paid by customers.

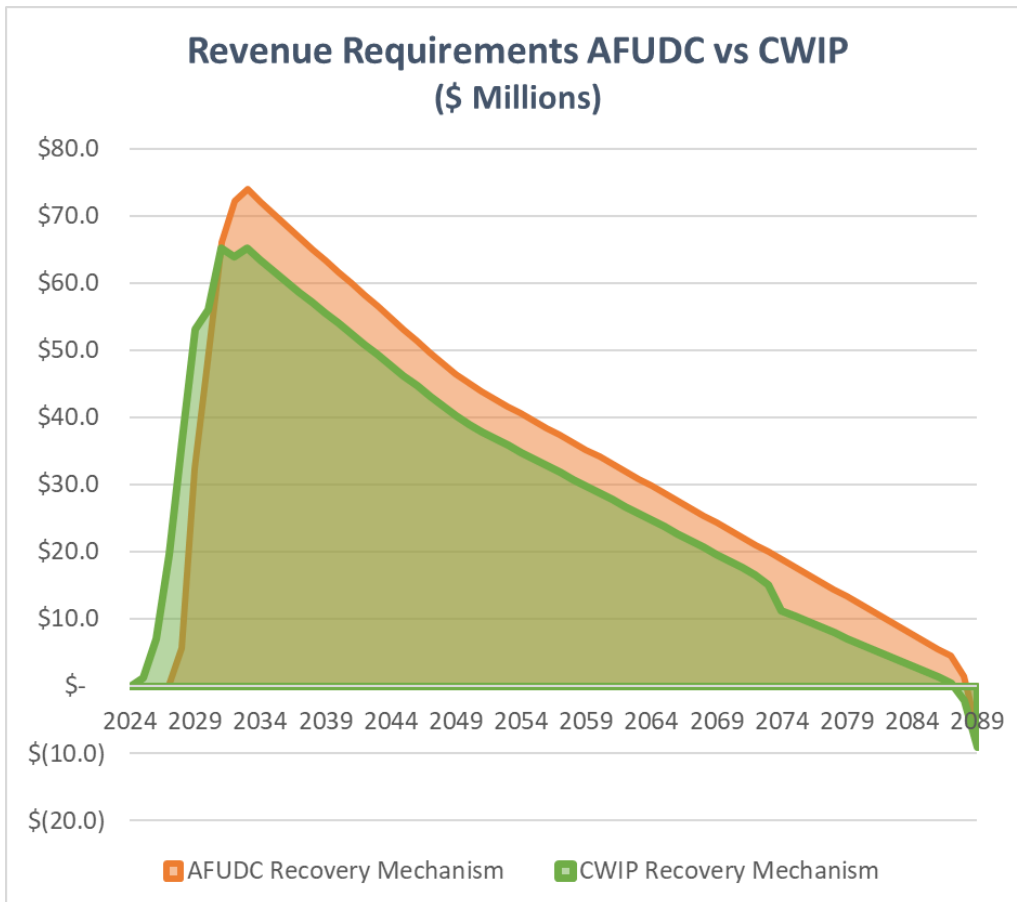


Figure 2 – Revenue Requirements Traditional AFUDC vs. CWIP in Rate Base

By replacing AFUDC with CWIP in rate base, customers will only pay for the Companies’ return on investment for the life of the asset based on the actual cost of the project excluding any AFUDC that would have otherwise been accrued with a compounding effect during construction. As noted above, this will substantially reduce the total cost of the Projects, and customer savings will persist through the life of the investment until it is fully depreciated. CWIP in rate base also assists in obtaining favorable financing, which directly benefits customers via lower overall debt costs ultimately to be borne by customers. Finally, CWIP in rate base can help reduce rate shock by smoothing out the eventual increase in rate base that would exist in a short timeframe under traditional capital investment financing cost cash recovery treatment.

## Controls for CWIP in Rate Base and AFUDC Accounting

The Companies will implement accounting controls to ensure that they do not accrue AFUDC in CWIP for the Urgent Upgrade Projects during any period when the CWIP in rate base treatment is in effect. The Companies have created new program codes in their SAP accounting systems, and all new capital orders for the Urgent Upgrade Projects will be tagged with this unique program code. All capital orders tagged with the program code will be assigned an interest profile that prohibits the calculation of AFUDC on the capital assets. In accordance with the FERC Uniform System of Accounts, CWIP balances are typically subject to AFUDC, which increases the asset balance for the cost of funds used during construction in FERC Account 107. However, the use of the program code and interest profile discussed above will prevent the Companies' SAP accounting system from calculating AFUDC on the tagged assets and will thus prevent double recovery of capitalization costs (i.e., both AFUDC and CWIP).

## Accelerated Depreciation

The Companies are also proposing an early start to the recovery of depreciation expense ("**Accelerated Depreciation**") to support the incremental investments of the proposed Urgent Upgrade Projects. Accelerated Depreciation will allow the Companies to begin recovery of the asset through cash once the investment period begins. The recovery period of depreciation will be from the start of construction through end of the useful life versus the more typical recovery period of the start of when the asset is placed in service through the end of the useful life. The amounts collected during the construction period will be recorded as a regulatory liability. The regulatory liability will be amortized once the asset is placed in service. Utilizing a simple example for illustrative purposes, assuming a \$10 million investment that takes three years to construct and has a 10-year useful life would result in a recovery period of 13 years with approximately \$770 thousand dollars recovered in cash each year starting with the first year of construction. Any true up to the actual total investment cost will be factored in at the time the assets are placed into service to appropriately adjust either up or down the depreciation expense to be recovered over the useful life. This will ensure the Companies recover 100% of the final actual prudently incurred investment, no more and no less.

## Surcharge Billing

The Companies will establish a surcharge (e.g., “Electrification Capacity Surcharge”) to be included within an existing line item on the bill. The Electrification Capacity Surcharge will fund the following:

- 1) the return on Construction Work in Progress (CWIP) and Accelerated Depreciation as proposed based on each dollar of investment being depreciated starting on the day it is spent, until the project is completed; and
- 2) once in-service, the full revenue requirement<sup>57</sup> until it is incorporated into base delivery rates at the beginning of the next rate plan following the year in which the assets are placed into service.

On an annual basis, the Companies will forecast revenue requirements for the Electrification Capacity Surcharge. These forecasts will be trued up to actual expenses. Any over collections to be refunded to customers or any under collections to be collected from customers will be added to the next year’s surcharge with carrying charges at the Companies’ allowed pre-tax weighted average cost of capital (“WACC”), applied to the after-tax balance. Once a project is completed and in-service, the Electrification Capacity Surcharge will remain in place to collect the full revenue requirement of the project until the next rate plan that is adopted following the year in which the project is placed into service. At that time, the full revenue requirement shall be incorporated into base delivery rates until the investment is fully recovered. This surcharge and cost recovery mechanism is a required condition of the Companies’ proposal.

## Cost Allocation

The Companies’ proposed Electrification Capacity Surcharge shall be initially allocated to service classes based on delivery service revenues from the then current rate plan. The allocated amounts shall be recovered on a per kWh basis for non-demand billed customers,

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<sup>57</sup> The full revenue requirement shall include all traditional components including the return of and on the assets, O&M expenses, property taxes, and all other taxes.

on a per-kW basis for demand billed customers, and on an as-used demand basis for standby service customers and optional demand service customers.

## 6. Conclusion

The Companies have significant core reliability, resiliency, and asset condition investment needs to address system issues required to be able to continue to provide safe and reliable service. The proposed Urgent Upgrade Projects, to resolve the urgent electrification constraints targeted by the Proactive Planning Order, are incremental to the already substantial planned investment to address the core system needs noted above. The Companies are committed to supporting the achievement of State climate and decarbonization goals. The approval of the proposed Urgent Upgrade Projects, with the required CWIP in rate base treatment and surcharge billing cost recovery mechanism, would allow the Companies to begin to address immediate electrification needs while the long-term proactive planning process is still being developed and implemented.

The Companies request an Order from the Commission affirming that the accelerated development of the Urgent Upgrade Projects is prudent, consistent with the Proactive Planning Order, and at a minimum, approving the inclusion of CWIP in rate base plus the surcharge billing cost recovery mechanism described above as required conditions of the Companies' proposal. Finally, while not a condition of the Companies' proposal, the Companies seek approval of the Accelerated Depreciation mechanism to provide additional cash flow support while constructing these projects.

# 7. Attachments

Attachment A – Urgent Upgrade Project Whitepapers

Attachment B – Urgent Upgrade Project Needs and Solutions Presentations