STATE OF NEW YORK
PUBLIC SERVICE COMMISSION

Proceeding on Motion of the Commission to Address Interconnection Reforms for Large Loads	)))	**Case 26-E-0045**

COMMENTS OF NIAGARA MOHAWK POWER CORPORATION D/B/A NATIONAL GRID
IN RESPONSE TO
ORDER INSTITUTING PROCEEDING AND SOLICITING COMMENTS

May 13, 2026

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I. INTRODUCTION

Niagara Mohawk Power Corporation d/b/a National Grid ("National Grid" or the "Company") submits these comments to support the New York Public Service Commission's ("PSC") consideration of an appropriate framework for the interconnection and integration of large load customers within the New York electric system. National Grid supports system growth consistent with its obligation to serve all customers and recognizes the importance of establishing policies that enable the responsible addition of new load while maintaining system safety, reliability, and affordability. This proceeding represents an important opportunity to examine approaches for accommodating large load customers in a manner that benefits both new entrants and existing customers.

National Grid appreciates the PSC's leadership in convening this discussion. When appropriately planned and executed, large load additions can provide meaningful system and societal benefits. These benefits may include contributing to investment in and modernization of aging transmission infrastructure, placing downward pressure on delivery rates for customers, strengthening local tax bases, advancing clean energy goals, and ensuring that New York shares in the economic and technological benefits associated with emerging industries during a critical period of global economic and technological development.

National Grid offers these comments in its role as an electric delivery utility and as a steward of economic development within the communities it serves. The comments are organized in response to the

PSC's questions and identify both key challenges and potential actions or policy considerations for the PSC. They address specific operational and process-related issues that could help establish a more predictable and competitive environment for investment. These suggestions are offered as an attempt to utilize the conversation in this docket to move State policy forward and to ensure a robust business environment for new customers, while protecting existing customers. This proceeding represents an important step for New York's energy and economic future, and the resulting framework will help demonstrate the State's commitment to developing a clear and mutually beneficial path for the integration of large load customers.

II. BACKGROUND

National Grid submits these comments in response to the PSC's February 12, 2026, Order Instituting Proceeding and Soliciting Comments.[1] The PSC initiated the Large Load Proceeding to advance the Energize NY Development initiative announced by Governor Hochul in her January 13, 2026, State of the State address. The initiative is intended to establish a framework for how substantial new loads, particularly data centers and other high-energy-density facilities, interconnect to the electric grid, while ensuring that such facilities pay their fair share of associated infrastructure costs.

Large electric load interconnections in New York are growing at an unprecedented pace, creating new planning and cost allocation considerations. As set forth in the Order, in 2025 alone, the New York Independent System Operator, Inc. ("NYISO") interconnection queue for loads increased by 8.3 GW, bringing the cumulative total to 12.5 GW as of April 2026. National Grid is the connecting transmission owner for 3.7 GW of that predicted load, and the affected transmission owner for an additional 3.5 GW, meaning approximately 57 percent of all large load interconnection requests in New York either interconnect directly to or materially affect National Grid's system.

[1] Case 26-E-0045, *Proceeding on Motion of the Commission to Address Interconnection Reforms for Large Loads* ("Large Load Proceeding"), "Order Instituting Proceeding and Soliciting Comments" ("Order") (issued and effective Feb. 12, 2026).

National Grid concurs with the PSC that action is needed to reduce the current planning uncertainty caused by speculative or duplicative interconnection requests and to apply a consistent approach to major transmission upgrades. This proceeding also comes at a time when National Grid's transmission system requires significant investment independent of large load project demand. The scale and timing of large load interconnections therefore present an opportunity to align preexisting infrastructure investment needs with new demand investment requirements in a manner that reinforces reliability needs of the backbone system, supports economic development, improves grid readiness, protects customers, and promotes appropriate allocation of costs of electric infrastructure.

III. EXECUTIVE SUMMARY

In these comments, National Grid recommends a reform package designed to protect existing customers from improper cost shifts from new large loads, while enabling the timely investment needed to maintain and modernize the electric grid for all customers. The PSC has a once in a generation opportunity to set the groundwork in this proceeding to encourage large load development in a manner that is mutually beneficial for all customers. Growth from large load development can be achieved without shifting delivery costs to existing customers while maintaining reliability and supporting clean energy objectives. With the targeted safeguards and the cost allocation practices National Grid is proposing, the State can protect customers and facilitate a downward pressure on delivery rates. The policy choice is not between affordability and growth; rather, it is to ensure the use of the right tools and added safeguards that mitigate large-load-specific risks.

National Grid respectfully identifies the following four issues as most critical to the PSC consideration in this proceeding:

1. **Cost Allocation and Recovery –** The PSC should adopt a comprehensive large load cost allocation and recovery framework that requires upfront contribution in aid of construction ("CIAC") for sole-use facilities, while recovering broader network upgrade

costs, through rates consistent with the beneficiary-pays principle. The framework should also require long-term, take-or-pay contracts to protect customers from cost-shift and credit risks. In addition, the framework should establish a dedicated large load rate class, provide a timely approval and recovery pathway for network upgrades that deliver system benefits, require customer benefit contributions to support State identified customer or energy priorities, and direct collaboration with NYISO and the Transmission Owners ("TOs") to develop a statewide approach for inter-transmission-owner upgrades.

2. **Load Flexibility –** National Grid recommends that load flexibility be recognized as a tool to accelerate large load connections. The spectrum of flexibility can include customer-managed demand reductions, curtailment, energy storage, demand response, and phased ramps that reduce or manage the load seen by the grid. In many cases, these tools can serve as bridge-to-wires solutions that allow customers to energize sooner while permanent upgrades are completed. The PSC should also preserve the ability for flexibility to serve as a longer-term solution for limited situations where future reliability is not degraded.

3. **Co-Located Generation –** National Grid recommends that co-located generation be considered to reduce the net load seen by the grid and potentially accelerate speed to power. The PSC should support a streamlined process, coordinated with NYISO and the connecting utility, to study co-located generation alongside large load interconnection requests.

4. **Large Load Landing Zones –** National Grid recommends that the PSC support the State working with NYISO and utilities to develop a Large Load Landing Zone concept for New York, to prioritize electricity access, reserve capacity, and provide faster

connections in a predefined area for strategically important loads. This initiative could apply the experience of the United Kingdom's ("UK's") 'AI Growth Zones' model, which seeks to accelerate the build-out of large artificial intelligence ("AI") data centers through coordinated government support.

The sections below respond to each of the PSC questions through a consistent framework: context and background, key challenges, and proposed reforms. This structure is intended to provide a clear record and a practical path for enabling timely large load interconnections while protecting customers, maintaining reliability, and supporting New York's policy goals. In some areas such as forecasting and planning, no significant Commission action is needed at this time, and the Company provides detailed responses for informational purposes only.

IV. FORECASTING & PLANNING FOR LARGE LOADS

Q1. How can large load demand be accurately forecasted and verified before being included in long-term load forecasts and system planning studies?

A. Intake of Large Load Information and Entry into NYISO Processes

Context and Background: National Grid receives large load customer inquiries through multiple internal pathways depending on project size, connection voltage, and stage of development. When certain criteria are met,[2] customers are directed into the NYISO interconnection process pursuant to the NYISO Open Access Transmission Tariff ("OATT"). Early-stage customer information informs local utility planning activities and coordination with NYISO forecasting and study processes.

Challenges: At early stages, information used for forecasting and planning (sections detailed, below) is largely customer-provided and may change materially as projects evolve. Speculative or duplicative requests can consume limited engineering and study resources, reduce confidence in

[2] "The NYISO Load interconnection procedures apply to Load interconnections that are either: a) greater than 10 MW connecting at a voltage level of 115 kV or above, or b) 80 MW or more connecting at a voltage level below 115 kV." NYISO, *Load Interconnection Projects System Impact Study (SIS) Procedure* (November 2025) *available at* nyiso.com/documents/20142/2931465/TB266-LoadInterconnection-20251107-Final.pdf/.

identifying which projects should meaningfully influence forecasts, and increase the risk that planning assumptions reflect projects that do not materialize. When such projects with limited information are included in forecasts, utilities and independent system operators ("ISOs") may over-procure capacity, which can increase supply prices and negatively impact customers.

Proposed Reforms: National Grid recommends the Department of Public Service ("DPS") Staff collaborate with NYISO to strengthen and standardize intake requirements and milestones for transmission-connected large loads to improve forecast accuracy and study efficiency and to align with North American Electric Reliability Corporation ("NERC") expectations for data adequacy and modeling accuracy. At a minimum, credible entry into the queue should require demonstrated customer credibility and meaningful financial commitments; proof of site control; disclosure of duplicative development activity in other jurisdictions; and technical information sufficient to support modeling and realistic schedules, such as load ramp rates, operating characteristics, equipment descriptions, and key permitting and engineering, procurement, and construction ("EPC") milestones. Increasing intake rigor will improve the quality and stability of data in the NYISO forecasting and planning processes and reduce speculative requests that undermine planning confidence and increase supply prices.

B. NYISO Forecast

Context and Background: Large load demand is incorporated into NYISO forecasts through coordination between NYISO and TOs. National Grid follows the NYISO M-06 Load Forecasting Manual, participates in the annual Federal Energy Regulatory Commission ("FERC") Form 715 modeling process, and works routinely with NYISO's Demand Analysis and Forecasting team to reconcile customer-specific intelligence with NYISO's systemwide methods.

Challenges: Despite the existing coordination, however, there is not yet a clear, standardized methodology for determining when large loads should be included in NYISO forecasts and planning models. As noted in a recent NERC report, the criteria for including large loads in forecasts are highly inconsistent across entities. This results in differing assumptions about whether loads are treated as firm, probabilistic, or speculative, effectively leading to inconsistent treatment in transmission planning and forecasting.[3] Schedules supplied at early stages may rely heavily on customer targets and may not reflect permitting, procurement, construction, and energization realities.

Proposed Reforms: National Grid supports PSC action to encourage the NYISO to establish objective forecast-inclusion criteria aligned with NERC recommendations. Rather than relying on a purely binary firm/non-firm distinction, these criteria should recognize degrees of project maturity informed by milestone achievement and data quality.

At a minimum, inclusion should be supported by consistent and realistic schedule inputs reflecting permitting, procurement, construction, energization, and ramp-up constraints; evidence of project maturity (such as site control and executed agreements); and submission of a standardized large-load data and modeling package. Forecast inclusion criteria should align with downstream planning requirements, including clear expectations for advanced or EMT analysis where power-electronics-dominated loads may warrant such high-fidelity physics-based simulation for grid planning on what happens in the milliseconds after a disturbance.

C. Study and Planning Process

Context and Background: Large loads with active interconnection requests are incorporated into system planning through established NYISO-administered study and modeling processes. NYISO's Regional Planning process evaluates future system needs under a range of load growth scenarios using consistent assumptions across transmission, generation, and demand. These assumptions are reflected in annual FERC Form 715 base cases and supported by the NYISO Gold Book and Modeling Data

[3] *See* NERC, "Aggregated Report on NERC Level 2 Industry Recommendation: Large Load Interconnection, Study, Commissioning, and Operations," ("NERC Level 2 Recommendations") (March 17, 2026) *available at* https://www.nerc.com/globalassets/programs/bpsa/alerts/2025/aggregated-report-level-2-large-load-interconnection-study-commissioning-and-operations.pdf.

processes. As a practical matter, sufficient time is required to incorporate loads into forecasts, conduct system impact studies, identify reliability needs, and construct reinforcements. Very early inclusion can increase the risk of overbuilding, while delayed inclusion can increase reliability risk.

Challenges: When large load data gaps from the intake and forecasting phase persist into the study phase, they reduce the accuracy and comparability of system impact assessments. Common issues include incomplete characterization of seasonal real and reactive power requirements, inconsistent representation of ramp-up and utilization profiles, insufficient information on dynamic performance, and uncertainty regarding participation in flexibility or demand response programs.

Proposed Reforms: National Grid seeks PSC support for the recommendation that NYISO strengthen data collection and study requirements consistent with NERC Level 2 Recommendations by:

- Requiring a standard large load modeling package (steady-state, dynamic, and short-circuit assessments, as applicable);
- Defining criteria for when advanced inverter-based or EMT studies are required; and
- Establishing expectations for model verification and validation during commissioning, using measured performance where feasible.

In addition, the Company recommends that NYISO and TOs strengthen "queue discipline" measures that prevent capacity reservation by projects that do not progress. On the front end, NYISO and the TOs should consider more robust criteria for inclusion in and/or advancement to a NYISO-conducted System Impact Study ("SIS") (*e.g.*, increased security deposits and evidence of site control). Additional measures to be considered include strict limits on post-study modifications and clear milestones for continued advancement, with removal and re-entry requirements for projects that fail to make progress.

V. INNOVATIVE TECHNOLOGY FOR LARGE LOAD PROCESS

Q2. What innovative technology should be considered to improve interconnection cost estimates, reduce development time, and provide sensitivity analysis?

a. How has this technology been utilized and what were the results?

A. AI & Analytics

Context & Background: AI & Analytics software provides real value in system efficiency and reliability. There are also instances where a large load interconnection study reveals that grid upgrades will be required to serve a customer's full requested load. As large load customers seek to accelerate speed to power, flexibility may serve as a "bridge-to-wires" solution, allowing the customer to interconnect before grid upgrades necessary to serve their full load are constructed. The Company's full position on the role of flexibility in large-load interconnections is detailed in our response to Question 4. In some circumstances, flexibility may defer or complement conventional capital upgrades to support an accelerated interconnection timeline.

Challenges: While large load customers seem interested in flexibility as an avenue to accelerate speed to power, they are looking for certainty and stricter terms (*e.g.*, defined number of days or hours, early notice) regarding when they will be expected to reduce their demand and leverage their flexible capabilities. The potential and suitability to utilize flexibility may be informed by sensitivity analyses that can estimate how often flexibility operations may occur to address system concerns. Conducting this type of sensitivity analysis is expected to be time and data intensive.

Proposed Solution: National Grid recommends embracing innovative solutions to minimize the time required for this type of analysis. The Company is currently exploring the capabilities of AI and other analytics software to efficiently and reliably provide insight into temporal and spatial constraints on the local electric transmission system and is investigating whether or not these insights support the use of flexibility to reduce interconnection time for new large loads until system upgrades can be completed, or in certain situations, by deferring or eliminating the need for system upgrades.

B. Standardized Substation Designs

Context & Background: Substations are often designed on a project-by-project basis as interconnection requests are received.

Challenges: This process requires several iterations and handoffs between different engineering and design teams with designs undergoing several reviews and passing through the appropriate gates before reaching the point where materials can be ordered. The Company has started using standardized designs to streamline the process of building new substations by reducing engineering time, design time, and mitigating risks caused by long equipment lead times.

Proposed Solution: National Grid recommends the PSC support standardization substation design where possible to accelerate connection times. National Grid is developing customer-facing standardized starter design packages for the two most common bus configurations used for interconnections and requests the support of the PSC in pursuing this solution. These configurations are three-breaker ring substations and 115-13.2 kV open air distribution substations including a breaker ring bus. These substation layouts can supply a variety of use cases such as data centers and other large load customers, large-scale deployment of electric vehicle ("EV") charging infrastructure on highways or provide load support in areas where the Company anticipates high penetration of electrification.

Standardized substation designs have the potential to reduce the overall time to interconnect a large load customer. These starter design packages serve to standardize a portion of the conceptual design, consisting of engineering schematics and documentation that standardize the equipment, layout, and control schemes which only require site-specific adjustments. Contractors and internal engineering teams can use these design packages as they provide clear guidance, minimize interpretation differences between internal designers and contractors, and allow for faster review and approval.

Engineering teams can also utilize these design packages to proactively procure equipment and materials and realize cost efficiencies. Long lead times for critical materials, like transformers and breakers, are a significant contributor to a prolonged interconnection process, so standardization that facilitates proactive procurement can help to mitigate delays. This also reduces the need for repeat decisions on what equipment will be used on interconnection projects and allows for cost efficiencies through larger bulk orders.

The Company also plans to leverage the standardized substation designs to develop estimates for each design. This approach mirrors the methodology used to support the high volume of work associated with the NYISO 2025 generation interconnection transition cluster study. These estimates will provide developers with order-of-magnitude cost ranges based on the selected standard station design. As the design advances, the estimates will be refined and updated to incorporate site-specific factors, including civil and grading requirements, environmental impacts, and permitting considerations. Developing estimates for the standardized substation designs will increase transparency by enabling the Company to provide customers with cost information earlier in the interconnection process to better inform decision making.

C. Developer-Facing Digital Tools

Context & Background: National Grid currently hosts an online Electric Connections Portal that allows customers to submit information required for the load interconnection process. In evaluating innovative technology expected to improve interconnection cost estimates and reduce development time, we are seeing promise in developer-facing digital tools.

Challenges: Beyond application submission there is no additional functionality for customers to check status, submit additional information, or collaborate with National Grid employees for their project. Most communications occur through emails and/or phone calls.

Proposed Solution: National Grid requests the PSC support the prudence of developing this ongoing effort to enhance digital tools to provide transparency to external stakeholders. The Company is developing a next-generation self-service portal which will modernize and digitize interactions with the utility for the interconnection process for a broad spectrum of connection types, and requests PSC support in this ongoing effort. The Company also plans to explore integrating solutions into the portal to automate CIAC estimation. The portal is expected to support improved communication, foster more informed decision-making, and facilitate adoption of innovative technologies, shortening cycle time as a result. Ultimately, this new portal represents a significant step toward modernizing the interconnection ecosystem, promoting efficiency, and accommodating the dynamic needs of customers and the utility sector.

D. Other Advanced Technologies

Context & Background: Other National Grid efforts related to innovation include the use of grid-enhancing technologies alongside traditional transmission and distribution investments to modernize the electric system, address aging infrastructure, and accommodate load growth. These technologies can increase utilization of existing infrastructure, enhance system reliability and resilience, reduce congestion, and, in certain applications, defer or complement conventional capital upgrades needed to accommodate large loads, and therefore facilitate faster connections.

Challenges: The speed at which large load customers are looking to interconnect outpaces the rate at which conventional infrastructure can be built. Technology is constantly advancing and we need to both move forward with opportunities while also embracing the potential for new technology to enable acceleration of large load connections.

Proposed Solution: National Grid supports continued engagement with the Advanced Technologies Working Group as a forum for New York to consider technologies that can help lower costs for customers. The Company has conducted a number of pilot projects for advanced and grid-enhancing technologies, and where solutions show promise, has progressed to broader deployment across the network as appropriate. The grid-enhancing and system modernization pilots and deployments include:

1. Dynamic line ratings on select 115-kV lines to validate real-time transmission capability;
2. Grid-connected and mobile battery energy storage to relieve local constraints and provide bridge-to-wires reliability and resiliency;
3. Power-flow control deployments (including phase-balancing technologies) to reduce neutral currents and improve distribution performance;
4. Advanced conductor demonstrations (including high-temperature superconducting and carbon-core technologies);
5. Standardization of Aluminum Conductor Steel Supported ("ACSS") for new construction and rebuilds to increase capacity cost-effectively; and
6. Advanced analytics (voltage and reactive power optimization, smart-inverter coordination, EMT modeling, and Light Detection and Ranging ("LiDAR")-based mapping) to strengthen voltage control, protection performance, and system visibility.

The Company will continue to evaluate additional deployments and scaling proven solutions through approved programs and proactive planning efforts. Technologies are always advancing, and companies like National Grid are investing in those developments. Continued engagement with the Advanced Technologies Working Group is a good forum for New York stakeholders to stay abreast of advancements that can help lower costs for customers.

VI. REQUIREMENTS TO PROTECT RELIABILITY, CUSTOMERS, CLIMATE GOALS

Q3. What requirements should be applied to large loads and / or data centers to maintain grid reliability, protect ratepayers, and meet New York's climate goals?

A. Balancing economic development with reliability, customers, and climate

Interconnecting large electric loads to New York's electric grid necessitates a balancing act between economic development, reliability of the electric system, fairness to customers, and climate goals. Manufacturers, data centers, and other large loads will generate different economic development benefits, with some creating large investment and short-term jobs, others presenting longer-term job prospects, and all of them will expand the State's property tax base, which may lower the property tax burden for residents and businesses throughout the State. However, such benefits must be weighed against potential impacts on reliability, affordability, and New York's climate goals.

B. Protecting Customers

B1. Performance agreements in the form of take-or-pay contracts

Context & Background: Given the significant costs associated with interconnecting large loads, for either single-use facilities or upgrades to the broader system, it is critical that the customer who triggers the upgrade demonstrate a financial commitment before significant costs are incurred.

Challenges: Investor-Owned Utilities have an obligation to serve all customers, but the size of large load customers introduces concerns with costs being shifted to existing customers in the near term and an increased risk of future loss if the new customer leaves the system.

Proposed Reform: In the Cost Allocation section below, the Company describes an important policy proposal that protects customers by requiring that large loads enter into long-term, take-or-pay contracts (terms of which are memorialized in a new large load tariff) that ensure they fairly contribute to electric grid costs, reduce credit risk, while preventing the large loads from shifting costs onto existing customers. Although this general framework would need to be incorporated into tariffs, the PSC can use this proceeding to establish the public policy direction. In doing so, the PSC would signal that New York is open for business to new large load customers while simultaneously affirming its commitment to protecting existing customers from unfair cost shifts.

B2. Adequate Funding Mechanisms

Adequate funding mechanisms are required to facilitate investment in transmission system upgrades that enable economic development and provide broader system benefits. Multi-year rate cases and capital budgets may require additional flexibility and/or alternative mechanisms may be required, to accommodate urgent economic development-driven needs within planned utility financing and avoid unanticipated cashflow conditions which could impact credit metrics and utilities' cost of capital.

C. Maintaining Reliability

C1. Facility Ownership Impacts to Reliability

Context & Background: Large-load customer-owned facilities will impact the transmission system and the experience of other customers. As the voltage levels for a customer's equipment increase above 600V, especially at 115 kV and above, the technical complexity of operating and maintaining substation and line equipment increases significantly. Customers often need to rely on specialized contractors with enhanced training and special equipment to operate and maintain customer-owned substations and lines. Likewise, the size of some loads could cause system security risks on the grid left without proactive operational guardrails.

Challenges: Increased risk from inadequate maintenance, mis-operation, or temporary configuration issues can directly impact Bulk Electric System performance and must be minimized. Without proper configurations and maintenance, equipment failures and flashovers will lead to poor system reliability, limited system capacity, and degraded customer experiences. Recent NERC analyses of large load disturbances in other states have shown that rapid load fluctuations, unexpected load reductions, and protection-related issues at large customer facilities can propagate into the transmission network and compromise stability.[4] Additionally, NERC exclusion rules may require a customer operating above 50 kV to register as a transmission owner ("TO"), depending on the configuration. Many large load customers are not typically prepared or well-equipped to be a TO.

Proposed Solution: National Grid recommends that the DPS Staff and NYISO collaborate to ensure large load customers follow strict interconnection requirements or limit the voltage levels of customer-owned equipment, enabling the utility to retain control over reliability, protection, and operating configuration. For example, many TOs do not supply large loads above 50kV to maintain their own control over transmission system reliability, configuration, maintenance, and operation.

C2. Under Frequency Load Shed ("UFLS") and Operational Requirements

Context & Background: The ability of large load customers to participate in load shed programs is critical for broader electric system reliability. The mandatory NERC standard, PRC-006-NPCC, sets automatic load shed requirements to maintain the transmission system in the event of a generation/load mismatch.[5]

Challenges: In compliance with this NERC standard, National Grid endeavors to select distribution feeders that do not supply critical loads such as hospitals, water treatment facilities, wastewater treatment facilities, etc. for inclusion in the automatic UFLS program. In addition, large load customers are increasing the total system load but may not proportionally increase the load that can be shed, challenging the ability of utilities to comply with UFLS requirements. The size of these large load customers will outstrip the ability of an load serving entity ("LSE") to achieve the required load shed with its own distribution feeders alone.

[4] NERC, *Incident Review: Large Load Loss* ("Event Analysis Report") *available at* https://www.nerc.com/globalassets/our-work/reports/event-reports/incident_review_large_load_loss.pdf.
[5] NERC, *PRC-006-NPCC — Automatic Underfrequency Load Shedding* ("Reliability Standard") *available at* https://www.nerc.com/globalassets/standards/reliability-standards/prc/prc-006-npcc-2.pdf.

Proposed Solution: National Grid recommends that the DPS Staff collaborate with the NYISO to require that large loads have load shed protocols for their facilities to meet the UFLS requirement. The steps and load to be dropped must be closely coordinated with the LSE's program and may require LSE-owned relays inside the large load facility. Any such program will need to evolve as PRC-006-NPCC evolves.

C3. Manual Load Shedding and Operational Requirements

Context & Background: NERC Standard EOP-011-4 requires transmission operators to be able to manually shed load rapidly during operating emergencies, and the Northeast Power Coordinating Council's ("NPCC's") Directory 2 requires the ability to manually shed at least fifty percent of area load in ten minutes without interrupting Bulk Power System elements.

Challenges: Large loads increasingly challenge this requirement when load is shed only through radial distribution feeders. This creates a risk that transmission operators may not be able to rapidly manually shed the necessary load to protect the Bulk Power System during an emergency.

Proposed Solution: To maintain system reliability, National Grid recommends that the transmission operator have direct SCADA authority over large loads connected at 115 kV or higher, enabling immediate and unilateral load shedding actions. Recent NERC recommendations encourage transmission owners and operators to establish clear operational protocols and communication infrastructure to support reliable ongoing operations for emerging large loads. To ensure compliance with these emergency responsibilities, any large load connected at or above 115 kV must be directly shed-capable by the transmission operator through SCADA without customer involvement.

National Grid supports continued engagement among the utilities and the New York State Reliability Council to consider whether the State should have standardized or minimum requirements for load behavior.

D. New York Climate Goals

The large load customers may have individual sustainability goals, likely in line with those of the State. While this docket is not focused on the supply issues associated with large load adoption, it bears recognition that attracting large corporate partners dedicated to similar goals would be a productive venture to advance those goals.

VII. GRID SERVICES TO BE CONSIDERED FOR LARGE LOADS

Q4. What grid services such as load flexibility, demand response, on-site generation, energy storage, or alternative service be considered?

A. Defining Flexibility in the context of Large Loads

Flexibility, broadly, refers to a customer's ability to adjust their net load in response to signals from transmission operators based on grid conditions. Flexibility has the potential to accelerate speed to power if a customer can reduce their demand seen by the grid when instructed, addressing immediate reliability concerns resulting from the customer's new demand in the short-term while any system upgrades to support the customer's full load are constructed to provide long-term reliability.

There are three primary operational mechanisms through which a customer can adjust their net load: curtailment, co-located generation, and energy storage. It is also important to consider the spectrum of flexibility, which ranges from customer-managed demand using on-site controls and behind-the-meter resources to limit load seen by the grid to enforceable utility- or ISO-directed curtailment. Examples of customer-managed demand include software tools that allow a data center, or other large load customer, to adjust real-time power use by shedding non-critical load, managing peak demand charges while also enabling participation in demand response programs. In some instances, a customer may leverage proactive load management to avoid the buildout of a permanent system upgrade by the utility. The following sections will cover key considerations for leveraging flexibility to accelerate speed to power and the necessary operational parameters to protect system reliability.

B. Load Flexibility via Curtailment

Challenges: As large load customers seek to interconnect, capacity studies often reveal that system upgrades will be required to support a customer's full requested load. Many of these customers are also seeking to accelerate speed to power. Conventional network upgrades can take up to eight years to construct. If a large load is looking to be energized prior to the in-service dates of the necessary system upgrades, load curtailment may be an option for accelerating their interconnection timeline. The associated load curtailment scheme must meet requirements of the utility, ISO, and other regulatory bodies, and the Company sees load curtailment as primarily a temporary means to enable interconnection of the new large load prior to completion of system upgrades needed to serve the full load request. In limited circumstances, load curtailment may defer or eliminate conventional capital upgrades. Nevertheless, a customer with the ability to curtail can continue leveraging their flexible capability in the long term through participation in NYISO demand response programs.

Proposed Solution: National Grid recommends the DPS Staff collaborate with the NYISO and other responsible stakeholders to adopt operational and contractual requirements for load flexibility enabling large loads interconnections to minimize risk that poor performance or incorrect operation of the curtailing load adversely affects the safety and reliability of the electric system. The development of such requirements should involve the responsible stakeholders such as the NY transmission owners, NYISO and relevant reliability committees such as the New York State Reliability Council.

Load flexibility should be considered a temporary measure until system upgrades are in service to resolve transmission capacity needs. In some select cases, load flexibility may provide permanent system relief.

C. Energy Storage

Context & Background: Customer-sited energy storage and utility integrated storage ("UIS") can provide a scalable flexibility resource to manage large load growth and support reliability. Storage can serve as a bridge-to-wires solution that accelerates speed to power and, where cost-effective, can defer or complement conventional network upgrades while permanent infrastructure is developed.

Challenges: Energy storage may serve either as an alternative to conventional upgrades or as a complementary solution that enhances system performance while conventional infrastructure is developed, based on a large load's capacity factor. Customer-sited energy storage can be a flexible interconnection tool, and utility integrated storage can also enhance flexibility performance. When customer-sited battery energy storage systems are intended to operate continuously or serve as permanent backup solutions, enhanced protection, control, and coordination measures must be implemented to ensure safe and reliable performance.

Proposed Solution: National Grid recommends DPS Staff to encourage the use of customer-sited energy storage as part of a flexible interconnection arrangement. The same contractual and operational controls required of customers with curtailable load to ensure load remains below what was studied during peak conditions will also apply to customers leveraging energy storage for flexibility.

The Company intends to consider utility integrated storage during planning needs assessments and other analyses conducted for large load interconnection requests. UIS can deliver multiple capacity, reliability, and operability functions, including managing power flows, reducing thermal or voltage violations, bolstering contingency support, and stabilizing system operations during variable or rapid load growth. Depending on project timing and system conditions, energy storage may serve as a long-term non-market delivery system asset or as an interim solution that bridges the gap until permanent wire upgrades can be implemented. When paired with traditional infrastructure, storage can increase overall system efficiency, accelerate the availability of service to customers, and reduce siting, permitting, or construction challenges associated with more extensive upgrades.

D. Co-Located Generation

Context & Background: Co-located generation (sometimes referred to as "Bring your own generation") is another mechanism through which a large load customer can adjust their net load. Customer-sited, co-located generation, including synchronous generation and appropriately configured inverter-based resources, can provide meaningful grid services when integrated thoughtfully, particularly as large loads interconnect to the system.

Challenges: The rapid growth of large loads could strain existing generating resources. Co-located generation has the potential to lessen these impacts. The feasibility and value of co-located generation is highly dependent on project-specific characteristics, including whether the generation will export power under any operating condition or remain strictly non-export.

Proposed Solution: The PSC should support efforts to consider customer-sited generation as part of large load interconnections; however, clear, efficient, and scalable study framework must be established that allows these resources to be evaluated without unduly delaying load projects or requiring them to await NYISO generation cluster study cycles. National Grid recommends that DPS Staff collaborates with the NYISO to develop a streamlined process for studying co-located generation alongside load interconnection, enabling more timely development, maintaining system reliability, and helping mitigate supply shortfalls and associated cost increases.

Generation relied upon to offset or support large load interconnections should be visible to the NYISO for planning purposes and operate under clear performance, control, and coordination expectations so that system benefits are realized when most needed. This approach preserves the NYISO's central role in dispatch and reliability while allowing flexibility in project configuration. Additionally, this approach allows these generation resources to be leveraged by the NYISO to mitigate some of the supply-side challenges associated with rapid load growth.

E. Phased Ramps

Context & Background: As large loads request to interconnect to the electric system, the level of impact to the electric grid in order to provide power to the customer ranges from simpler connection facilities that require no or minimal system upgrades to interconnections that require substantial and complex network upgrades (e.g., new transmission lines or major rebuilds, new substations, extensive reconductoring). Accurate representation of a customer's load will help the utility build any needed system reinforcement at the right pace and scale. Phased ramps may support earlier partial connections while permanent system upgrades are built.

Challenges: Large load customers often request their full eventual load during the interconnection process, even though it may take years to materialize as they build out their facilities. Phased ramps align utility construction timelines with the pace of a customer's load growth.

Proposed Solution: National Grid recommends the DPS Staff collaborate with the NYISO to collect relevant information during the interconnection process to facilitate identification of projects where a phased ramp may accelerate initial customer interconnection while concurrently allowing the utility to make necessary system upgrades. For example, load can be phased to align with system upgrade timing, with limited or partial capacity served in the near term (2-4 years), increased capacity supported as upgrades are completed in the medium term (4-8 years), and full load served only after long-term system upgrades are placed in service (8+ years).

The Company already offers customer phased connections and plans to continue to do so. Besides better aligning system capacity and upgrade lead-times, phased connections may help mitigate pressure on capacity markets and better spread system investment costs over time.

F. Demand Response

Context & Background: Requiring long-term participation in wholesale and/or transmission owner demand response programs may serve to mitigate continuing system constraint issues caused by interconnection of large loads.

Challenges: Demand response programs allow grid operators to manage resource adequacy and system stability. Under the DER Participation Model, NYISO can dispatch resources for capacity, energy and ancillary market needs, while transmission owners have the ability to request dispatches via the Supplemental Resource Availability and Out of Market processes as needed to meet system needs.

Proposed Solution: The Company recommends further coordination among the responsible stakeholders such as the NY Transmission Owners, NYISO and the New York State Reliability Council to determine the efficacy of demand response participation in mitigating system constraints caused by large loads and avoiding unreasonable risks to the safety and reliability of the electric system.

Large loads participating in NYISO's DER Participation Model may provide increased visibility to both NYISO and transmission owners, while also providing an operational mechanism to direct these large loads to undergo load modification in response to system requirements. Additionally, large loads may also participate in transmission owner demand response programs to provide an additional layer of operational dispatchability from these loads to transmission owners.

VIII. COST ALLOCATION TO LARGE LOADS

Q5. How should cost allocation be structured to ensure data centers or similar facilities bear the cost they impose on the electric system?

A. Background: Existing Cost Allocation Frameworks Can Continue to Protect Customers

New York's ratemaking constructs have delivered fair, nondiscriminatory allocation of network service costs for decades. These constructs rest on the PSC's application of cost-of-service ("COS") methodologies, rate design, and formal adjudication to allocate a utility's revenue requirement including operating expenses, depreciation, taxes, and authorized return across customer classes to produce "just and reasonable rates" without undue discrimination, as required by the Public Service Law (PSL § 65). Two principles are regularly applied to determine how costs are allocated:

1. Cost-causation – customers bear costs according to how their electrical requirements and system usage drives infrastructure needs
2. Beneficiary-pays – investments with broad benefits are recovered from all benefiting customers

Interconnection facilities built solely for one customer ("sole-use" facilities) are funded by that customer via a CIAC. Customers interconnecting directly to the transmission or sub-transmission systems may elect revenue assurance agreements, which can reduce upfront cost required from the customer based on forecasted revenues, and secured by minimum bills, exit fees, and collateral.

The pace and scale of large load growth have raised concerns about the costs of necessary transmission investment; yet commissions nationwide have repeatedly found that applying proven cost allocation and ratemaking frameworks remains a responsible manner of supporting efficient system-wide transmission planning while protecting existing customers from undue cost burdens.

B. Challenges: Existing Frameworks Need Reinforcement Against Key Customer Risks

Absent targeted updates, large-load-driven network investments could present several risks for cost-shifting to other customers:

1. Underutilization Risk: If forecasted loads under-utilize capacity during ramp-up, delay, downsize, or fail to materialize, rate-based investments could be recovered over fewer billing units than anticipated.
2. Financing and Credit Risk: Network upgrades require upfront financing. Absent enforceable long-term commitments from new large loads, utilities may be exposed to unrealized rates

intended to recover investment and experience pressure on credit metrics, which could increase financing costs borne by all customers.

3. Cross-Territory Subsidization (Inter-TO Upgrades): Large loads may trigger upgrades on another transmission owner's system. Without a consistent statewide or NYISO framework, cost recovery may become arbitrary, risking inter-utility-customer subsidies or inconsistent charges to large customers.

C. Proposed Solutions: National Grid's Proposed Reforms

National Grid recommends the PSC adopt the following recommendations to preserve key elements of New York's proven cost causation and beneficiary-pays models for transmission investments while neutralizing large-load-specific risks. These proposals build on lessons from other large load tariff structures on file in other states. For each policy reform, the Company summarizes its proposal, why it protects customers, and where precedent exists.

The objective of these reforms is to establish a clear and predictable framework that enables prospective large load customers to understand the cost implication of their investment decisions, while ensuring existing customers are protected from increased bills resulting from new large load interconnections. With appropriate safeguards in place, specifically, assigning full responsibility for all direct, sole-use interconnection costs to the new load, while standardizing customer commitments toward upstream network recovery, these additions can enable utility investment in necessary network infrastructure without increasing rates for other customers. National Grid's recommendations achieve these safeguards by:

1. Eliminating any potential risk of cost shifts for sole-use assets,
2. Locking in minimum demand charges for new customers regardless of usage, and
3. Creating a large load rate class to ensure fair and transparent cost responsibility for their share of system costs.

National Grid provides the following direct policy reforms for PSC consideration:

1. **Ensure Large Loads Pay for Their Upgrades by establishing 100% Upfront Assignment for Sole-Use Interconnection Facilities and Eliminating Revenue Credits for Such Sole-Use Facilities for Large Loads.**

   Direct sole-use costs should be paid 100% by the new large load. While direct assignment of sole-use is standard today in New York and in most restructured jurisdictions, many utilities, including National Grid, offer tariff-based revenue credits or allowances to connecting customers that offset the upfront cost otherwise charged to a customer via CIAC. The Company proposes the PSC directs all sole-use interconnection assets serving large loads be 100 percent customer-funded upfront via CIAC, thereby eliminating eligibility for revenue credits against CIAC that currently exists under the revenue assurance offering for this segment. CIAC prevents the costs of a customer-specific asset from entering rate base and eliminating revenue credits prevents time-shifted recovery risks of such costs.

2. **Standardize Rates-based Recovery for Network Upgrades Paired with Strong Customer Commitments.**

   The Company proposes standardizing rates-based recovery for transmission system network upgrades, recognizing their integrated and multi-benefit character, while pairing this approach with mandatory large-load commitments to address materialization and utilization risk. The greater network upgrades bolster the overall system and can be replacing aging infrastructure already in need of replacement. Rate-based recovery of these upgrades is most consistent with the beneficiary-pays principle, as capacity and reliability benefits are enjoyed broadly by customers on the networked system. After entry into the rate base, the revenue requirement associated with system upgrade costs will be allocated among rate classes (including a dedicated large load rate class as described in the next section).

Transmission network upgrades are planned and operated holistically to meet aggregate system needs, not to serve individual customers, and should be treated differently than sole-use assets. Planning standards and standardized equipment typically result in installed infrastructure capacity exceeding a single customer's needs, in order to achieve long-run least-cost outcomes. Network reinforcements also frequently provide broader reliability, congestion relief, and operational benefits.

Accordingly, assigning 100 percent of upstream network upgrade costs to a single customer via CIAC as a long-term regulatory policy is inconsistent with the beneficiary-pays construct and fails to reflect system-wide benefits. Such an approach could produce arbitrary results and distort planning decisions. Specifically, 100 percent assignment of network upgrades to individual customers could result in selecting solutions that are least-cost for that customer, which may not be the most efficient, lowest-cost long-term cost solution for all customers. By recovering the cost of network upgrades through rates, utilities can consider all the needs in the area (multiple customers, hosting capacity, reliability, asset condition, etc.) to develop the best holistic, right-sized solution and reduce potential rework that may cost customers more in aggregate in the long-run. Moreover, 100 percent assignment of network upgrades to individual customers approach would create free-ridership among beneficiaries and impose disproportionate burdens on customers locating or expanding in constrained areas, with significant potential to impede the state's economic development goals. For these reasons, the large load tariffs recently established around the country do not assign all the mutual beneficial system costs to just the new large load customer.

Rate-based recovery for network investments is fully compatible with protecting customers when paired with targeted rate design and strong contractual protections. Utilities nationwide have found that large load integration, despite requiring incremental or accelerated network investment, can exert downward pressure on delivery rates by spreading embedded system costs over a larger billing base[6] in addition to fully covering the revenue requirement for incremental upgrades.

National Grid's preliminary analysis, using its existing large-load queue and COS methodologies, indicates that implementing these suggested policy changes, including creating a dedicated large-load class, can avoid delivery bill increases for other customers. The Company's analysis evaluated several scenarios which indicate that adding 2–3 GW of large load could have downward pressure on residential customers' delivery rates by approximately 1%–4%. This result closely mirrors the results of at least one national peer's analysis (Pacific Gas & Electric)[7], and a number of utilities around the US have more generally cited expected rate reductions as a result of large load additions. While dependent on forecast assumptions such as interconnection timing, load realization, and system investment requirements, the Company's preliminary analysis suggests the tried-and-true mechanics of COS and rate design can continue to apply toward the largest load customers, by which new load fully offsets its incremental cost and pays a share of embedded system costs, to the benefit of other customers.

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[6] During the 2026 fourth quarter earnings call, PG&E CEO Patti Poppe commented that large load growth has helped PG&E cut electric rates for the fourth time in two years. [Emma Penrod, Data center growth has helped PG&E cut rates 11% since 2024, CEO says (Feb. 2026), https://www.utilitydive.com/news/data-center-growth-has-helped-pge-cut-rates-11-since-2024-ceo-says/812230/].

[7] Pacific Gas & Electric estimates for every 1 gigawatt of new electric demand from data centers it serves, PG&E electric customers may save between 1-2% on their monthly bill in the long term. [Pacific Gas & Electric, Surging Data Center Growth to Help Lower Energy Costs for PG&E Customers (May, 2025), https://investor.pgecorp.com/news-events/press-releases/press-release-details/2025/Surging-Data-Center-Growth-to-Help-Lower-Energy-Costs-for-PGE-Customers/default.aspx].

There is a further benefit beyond the potential benefit of downward rate pressure described above. The addition of these new customers and rate class also ensures a larger group of customers to spread the cost of necessary asset replacement. Upstate New York's electric transmission system includes some of the oldest infrastructure in the country. Regardless of the needs posed by new large load customers, significant multi-value transmission investment is needed both to support continued safe and reliable operation of the system and to enable load growth. This is especially true on the transmission system where these large loads will interconnect, as transmission towers in National Grid's service territory have a median and average age of around 70-80 years compared to the industry estimated 65-75 year useful life, and overhead transmission conductors have a median and average age of 60-70 years compared to the industry estimated 60-65 years useful life. The system upgrades and replacements needed regardless of new load additions will be shared by the larger new customers paying a greater share of those costs due to their high usage and rate class.

The Company's proposed cost allocation framework protects other customers from cost increases that integrating new large load customers could drive, while also not overly burdening large load customers and therefore maintains the competitiveness of the Company's commercial and industrial electric rates to attract new development into the service territory. Rate-basing network upgrades under a beneficiary-pays approach supports least-cost, long-lived solutions, while contractual backstops ensure that loads accelerating investment timing provide guaranteed revenue.

Regional markets including NYISO, Pennsylvania-New Jersey-Maryland ("PJM"), Independent System Operator New England ("ISO-NE"), Midcontinent Independent system Operator ("MISO"), and California Independent System Operator ("CAISO") similarly rely on broad-based recovery for network assets, recognizing that strict direct assignment is arbitrary, distorts planning, and can impede economic development[8].

3. Create a Dedicated Large-Load Rate Class.

As a policy point, the PSC should direct utilities to file tariff revisions establishing a new rate class for the largest loads (e.g., ≥50 MW)[9] with rates established based on COS-based allocation and a tailored rate design that reflects distinct load shapes, ramp profiles, and coincidence with system peaks. A dedicated class prevents cross-subsidization between large load customers and traditional large customers (e.g., SC-3A); makes class revenue responsibility transparent and auditable; and allows for targeted application of performance-linked provisions (*e.g.*, load-factor expectations tied to contracted demand).

A distinct class protects customers because it supports cost-causation principles, provides visibility into large-load contributions, and enables the utility to verify that these customers cover the appropriate share of embedded transmission costs. Utilities in numerous jurisdictions have adopted similar large-load or data-center-specific classes.[10]

4. Require Take-or-Pay Contracts (with Exit Fees and Collateral) for All Large Loads Above the Threshold.

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[8] National Laboratory of the Rockies ("NLR") establishes the merits of beneficiary-pays cost allocation and developed examples of how regional markets have designed beneficiary-pays frameworks to equitably assign costs, mitigate free-rider concerns, and support timely development of projects with broad system benefit. Amy Rose, Christina Simeone, Ellie Estreich & Nicholas Foss, *Lessons Learned for Transmission Cost Allocation in U.S. Regional Markets*, National Laboratory of the Rockies, Technical Report No. NLR/TP-6A40-97370 (Feb. 2026) *available at* https://www.nlr.gov/docs/fy26osti/97370.pdf.

[9] Fifty MW represents an initial proxy based on National Grid's review of its queue and prospective customer set. In addition, after establishing a threshold for the largest loads, consideration should be given to whether additional tariff revisions are necessary for loads interconnecting on the transmission system that are below the threshold but which still share similar attributes to those above the threshold.

[10] The Smart Electric Power Alliance (SEPA) has developed a Database of Emerging Large Load Tariffs ("DELTa"), which tracks large load tariff proposals across the United States. At present, the database has identified over 75 proposed or approved large load specific tariffs across 35 states.

For large loads at or above the threshold (*e.g.*, ≥50 MW), National Grid proposes implementing mandatory take-or-pay agreements with defined terms to be memorialized in a new large load tariff, including, but not limited to the terms below:

1. minimum monthly demand charges (*e.g.*, 90 percent of contracted demand) to secure a minimum level of revenue and protect other customers from bearing the cost of the network upgrades if the large load ceases or significantly reduces operations
2. minimum term durations (*e.g.*, 15 years) to reduce the risk of speculative load requests by requiring a long-term financial commitment
3. exit fees for early termination or downsizing to ensure recovery of system upgrades over the term of the contract
4. financial collateral covering exit exposure to guard against negative impacts to all other customers, and
5. A state-prescribed customer benefit contribution to support state customer or energy priorities.

These provisions protect customers by directly addressing utilization, delay, and attrition risks, and they are consistent with practices commonly employed in other utilities[11]. Execution of a contract provides a meaningful screen to distinguish customers with a genuine intent to locate from those that are evaluating multiple alternatives. Requiring financial commitment also encourages large-load customers to submit more accurate demand forecasts by holding them accountable to the service levels they request.

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[11] Almost all utilities proposing new terms for large loads have adopted take-or-pay structures, requiring customers to guarantee revenues based on minimum billing parameters of ~60–90% of contracted demand (for demand-based charges) over terms of ~8–20 years. These minimum charges are secured, with utilities authorized to draw predefined exit fees if obligations are not met. Examples include AEP Ohio (60–85% minimum demand over 8–12 years, depending on ramp) [OH PUC Case No. 24-0508-EL-ATA], Dominion Energy (85% over 14 years) [VA SCC Case No. PUR-2025-00058], Indiana Michigan Power (80% over 12–17 years, ramp-dependent) [IURC Cause No. 46097], and Evergy Missouri (80% over 12–17 years, ramp-dependent) [MO DPS Case No. EO-2025-0154].

For the customer benefit contribution, the PSC should require the contribution as a standardized, policy-based commitment tied to contract execution, not as a rate, fee, or cost recovery mechanism, and not negotiated on a project-by-project basis. The contribution could be aligned with defined contribution pathways and existing state or community priorities (*e.g.*, CLCPA disadvantaged community initiatives, workforce development, NYSERDA clean energy or grid modernization programs, community/municipal improvements such as roadways/parks/sponsorships, low/moderate income assistance programs), preferably administered through existing state recognized programs rather than by the utility.

Such a contribution will create durable, long-term community value, align directly with large load customer profiles, and reinforce New York as a destination for mutually beneficial infrastructure and talent development.

5. Establish a Statewide Framework for Inter-TO Network Upgrades

National Grid proposes the PSC directs the transmission owners (TOs), NYISO, and DPS Staff to develop a consistent cost-sharing and recovery framework for non-local network upgrades (i.e., upgrades that occur on systems other than the connecting TO's but are triggered by a large load). This prevents one utility's retail customers from subsidizing impacts in another territory and clarifies how benefits and costs flow across service boundaries. This will protect customers because a uniform approach avoids cross-utility cost shifts, supports coordinated statewide planning, and improves certainty for developers facing multi-area impacts. Precedents for this include Southwest Power Pool's ("SPP's") Highway/Byway and Midcontinent Independent System Operator's ("MISO") MVP cost-sharing frameworks as examples of multi-utility allocation for integrated networks; a New York-specific mechanism can achieve the same goals while tailoring to the idiosyncrasies of our jurisdiction.

The foregoing proposed reforms represent a consequential step forward in defining New York's policy related to large loads, and it is based on ensuring the protection of both customers existing on the system now and a defined environment for those customers seeking to invest in New York and locate on the system. Sole-use facilities will be directly assigned to the only benefiting customer, and recovered upfront via CIAC,[12] while network upgrades that provide system-wide benefits will be recovered through rates using cost-of-service methodologies, with added safeguards to protect customers. Embedded system costs of existing transmission and distribution infrastructure will also continue to be allocated according to cost of service methodologies, allowing the load growth to share in the embedded cost responsibility. Cost allocation for bulk system upgrades on one transmission owner's system that were triggered by a load on another transmission owner's system will be addressed through a stakeholder process. Meanwhile, on the recovery side, commercial contracting with large loads will protect customers from cost-shift risks and credit risks related to financing the network upgrades.

A clear New York policy that establishes ground rules for the addition of large loads and recognizes the benefits they can provide existing customers is good for customers and economic development in the state. The policy choice does not have to be between fairness and growth. The state can mitigate large load specific risks by aligning with the beneficiary-pays framework for network investments and CIAC for sole-use costs while adding new safeguards (dedicated rate class for large loads, take-or-pay contracts with collateral, inter-TO cost-sharing). With these in place, investment in network upgrades can keep delivering fair cost allocation, and protect customers, all while New York enables the next wave of economic development.

[12] Should new additional customer(s) seek to connect to previously constructed sole-use sub-transmission or transmission facilities, National Grid supports a cost sharing approach, as outlined in the Company's filed petition in Case 25-E-0658.

IX. ENSURING TRANSPARENCY IN LARGE LOAD INTERCONNECTION PROCESS

Q6. How can the state ensure transparency in the large load interconnection process and information sharing?

A. NYISO process improvement project

Context & Background: Large load interconnections in New York are primarily managed by transmission owners ("TOs") and generally proceed through three stages: (1) interconnection request processing and scoping, (2) facility studies, and (3) execution of an agreement to interconnect. In addition to TO-specific procedures, many large load interconnections are also subject to the NYISO's load interconnection procedures under the NYISO Open Access Transmission Tariff ("OATT"), depending on the size and voltage of the request.

NYISO's role is focused on assessing reliability impacts of proposed load projects through the System Impact Study ("SIS"). The SIS identifies adverse reliability impacts and potential alternatives to mitigate those impacts. Results of the SIS are non-binding and are provided to both the connecting TO and the developer for informational purposes. Under current procedures, NYISO estimates that the SIS process takes approximately nine months from study selection to completion, though actual timelines vary based on modeling completeness, study timing, and the complexity of identified system impacts. Importantly, under its OATT, NYISO is not held to a specified timeline for completing an SIS.

NYISO has already undertaken several efforts to improve transparency in its load interconnection process. These include publication of a Load Interconnection Technical Bulletin, enhanced communication through weekly updates via the NYISO Interconnection Portal and increased upfront data requirements for load modeling. NYISO is also conducting its first load cluster study to evaluate whether studying multiple load interconnection requests together can improve efficiency and throughput.

In addition, NYISO has launched a 2026 market project titled Reliability Planning and Large Load Integration, which is intended to further reform the NYISO's load interconnection process. The stated objectives include improving timeline predictability, enhancing evaluation of compounding impacts of multiple large loads, clarifying treatment of project modifications, and defining milestones for inclusion of large loads in NYISO's reliability planning processes. NYISO has indicated an intent to complete stakeholder development and file tariff changes with FERC by the end of 2026. National Grid supports these ongoing efforts and the State can play an important role by actively engaging in and aligning with this work.

Challenges: Despite recent improvements, significant challenges remain with respect to transparency and predictability in the large load interconnection process.

First, system impact study timelines, while estimated at approximately nine months, remain highly variable, creating uncertainty for both developers and transmission owners. Clearer study milestones and scheduling expectations would improve confidence in the process and reduce friction across stakeholders.

Second, while the SIS provides valuable transparency regarding reliability impacts, it does not provide early or consistent visibility into key downstream elements, particularly for non-local network upgrades. When upgrades are identified to resolve adverse reliability impacts, the SIS does not include non-binding, good-faith cost estimates or indicative construction timelines. These details are instead developed later through bilateral discussions in the Facility Study process, which limits early transparency for developers and policymakers.

Third, NYISO does not currently track or ensure that identified upgrades have advanced prior to load interconnection, which can lead to uncertainty around execution, sequencing, and accountability once a project moves beyond the study phase.

Finally, as NYISO seeks to improve efficiency and reduce timelines, there is a risk that process reforms could inadvertently reduce transparency or limit the informational value that the current study process provides. For example, NYISO's load cluster study can introduce uncertainty around what happens to the identified set of upgrades if a load customer drops out of the queue, uncertainty about the allocation of costs between TOs if the studies lack clarity on which customers drove which upgrades, and whether customers can ramp power usage if the study is completed assuming full load. Preserving and enhancing transparency while streamlining the process will be critical.

Proposed Solution: The State can enhance transparency in the large load interconnection process by supporting and aligning with NYISO's ongoing market reforms related to Reliability Planning and large load integration. Active engagement by the DPS and its staff can help ensure that resulting market design changes deliver both efficiency and transparency.

National Grid supports clearer definition of NYISO study milestones and timelines for the SIS process, which would improve predictability for Transmission Owners and developers alike. More structured processes and earlier information sharing, particularly around assumptions, compounding impacts, and study outcomes, would reduce uncertainty and help stakeholders make more informed decisions.

Finally, greater transparency is needed on non-local network upgrades triggered by large-load interconnections, including clear communication of indicative scope, cost ranges, and timelines, even if preliminary and non-binding. Transparency would be further enhanced through the continued updating and public availability of Electric Service Bulletins ("ESBs"), Transmission Group Procedures ("TGPs"), and related interconnection guidance as per today's process. Ensuring these documents reflect current large load requirements, modeling assumptions, and protection expectations, and are aligned with modern customer-facing platforms can help developers understand requirements early, reduce rework, and support consistent application across projects. The transmission owners have already begun to implement such practices, and the PSC can coordinate with the TOs to ensure this is being done across the State in a consistent manner. Focusing on these transparency measures will improve stakeholder understanding, reduce uncertainty, and support timely and reliable integration of large electric loads while preserving the integrity of the interconnection and planning process.

B. Indicative Transmission System Information

Context & Background: Large load interconnection requests are increasingly being submitted with limited upfront information regarding grid feasibility, cost exposure, or upgrade timing. As a result, customers often pursue multiple potential sites or submit speculative requests to preserve optionality. Meaningful information about system constraints and upgrade needs is typically provided only after a project enters the interconnection queue, when changes are more disruptive for both customers and the system. Earlier, non-binding transparency into relative grid conditions could help customers make more informed siting and investment decisions before initiating formal interconnection requests. New York is also competing with other states for the investment that comes with the addition of large loads. Business models that define the rules of the road and state investment in areas that make locating faster or easier can be a competitive advantage for the state.

Challenges: The absence of early visibility into grid feasibility contributes to speculative queue activity, increased study volumes, and late-stage project churn. Customers have limited ability to differentiate between locations with materially different cost and timing implications, which can lead to inefficient use of planning resources and delayed progress for viable projects. Without a mechanism to surface indicative system information upstream, the interconnection process becomes the primary vehicle for resolving uncertainty that could otherwise be reduced before projects formally enter the queue.

Proposed Solution: The State, NYISO and utilities could improve transparency earlier in the large-load development process by providing customers with indicative, non-binding information about areas where grid conditions have already been studied and where there is greater clarity regarding system constraints and potential upgrade requirements. By making this information available prior to formal interconnection requests, customers would be better positioned to assess relative feasibility, cost exposure, and development risk before entering the queue.

Importantly, this information would support earlier system awareness for prospective customers, but it would not serve as a mechanism to reserve capacity, confer queue priority, or guarantee interconnection outcomes. Available capacity within any zone may change as system conditions evolve, interconnection requests progress, or funding and execution pathways for upgrades are clarified. Clear communication of these limits is essential to managing expectations, preserving fairness across customers, and maintaining the integrity of existing interconnection rules and planning standards.

Additionally, when grounded in completed engineering studies and kept current over time, area network information can help reduce speculative or duplicative interconnection requests, improve customer siting decisions, and enable more efficient use of planned resources. Such area network information could enhance transparency by aligning interconnection information with broader State priorities, including clean energy integration, grid modernization initiatives, and targeted economic development investments (*e.g.*, FAST NY, POWERUP), by identifying where grid readiness and public policy objectives may already be converging. Used in this way, combining a Bring Your Own *Clean* Generation within areas of planned transmission investments, such as *Coordinated Grid Planning* solutions or other policy driven network upgrades,[13] can serve as a practical transparency mechanism

[13] *See generally*, PSC Orders in Case 20-E-0197, *Proceeding on Motion of the Commission to Implement Transmission Planning Pursuant to the Accelerated Renewable Energy Growth and Community Benefit Act*.

that supports orderly large-load growth, optimizes network upgrades, helps support continued progress on clean energy targets as large loads are added, and protects reliability and customers.

X. INTERCONNECTION RULES TO ALLOW LEVERAGING WASTE HEAT

Q7. What interconnection rules should the Commission consider that would allow for leveraging of waste heat as part of thermal energy networks?

A. Challenges

Context & Background: A significant portion of energy usage by large data centers is driven by their need to provide cooling to computational equipment that generates waste heat during operation. It is logical to explore ways that this waste heat can be leveraged given that there are heating needs around the State for residential and commercial customers.

Challenges: Leveraging waste heat is highly site-specific in terms of feasibility which can limit practicality when the waste heat is geographically distant from the heating needs. Data centers and other large loads typically locate in remote, low-density areas to minimize land and development costs. To maximize the economic viability of a thermal energy network, these large loads would need to be sited near mixed thermal loads, residential or commercial buildings, to act as end users. These facilities predominantly generate low-grade heat and have almost no local heating demand of their own, so proximity to heat sinks is critical. Otherwise, leveraging waste heat from these facilities for a thermal network would require constructing miles of new insulated piping at very high cost, with increasing losses and decreasing efficiency of the network with each incremental unit of distance.

Proposed Solution: National Grid recommends the PSC to avoid a one size fits all mandate for leveraging waste heat from data centers to form a utility thermal energy network. Interconnection rules therefore should also avoid one-size-fits all mandates when it comes to waste-heat integration from large loads, as doing so could impose onerous and impractical requirements that would not meaningfully advance decarbonization objectives. Any consideration of interconnection requirements should be flexible, high-level, and focused on encouraging voluntary, case-by-case assessments rather than creating expectations for widespread deployment of waste-heat–based thermal resources or storage from remote large loads.

XI. ADDITIONAL MEASURES TO ENSURE FAIRNESS TO CUSTOMERS, MAINTAINING RELIABILITY, AND ACHIEVING CLIMATE GOALS

Q8. What additional measures should the Commission consider as part of this proceeding to ensure large load and data centers are not causing cost increases to all other ratepayers, or adversely impacting reliability or the achievement of Climate Leadership and Community Protection Act objectives?

The State should consider working with NYISO and utilities to develop a Large Load Landing Zone concept for New York, in order to more proactively enable economic development through strategic anticipatory investment that makes New York more competitive for new business.[14] The U.K. has established a unique initiative that prioritizes areas for AI customers, which could provide insights for New York State. These 'AI Growth Zones' prioritize electricity access, reserve capacity, and provide faster connections in a predefined area. Such an endeavor would require significant coordination to launch in New York. But ideas like this are the type of partnerships National Grid is interested in exploring to ensure customers, the utility, and the State can grow responsibly.

XII. CONCLUSION

The PSC's inquiry appropriately and comprehensively addresses key issues related to economic development, system reliability, customer affordability, and climate objectives. National Grid appreciates the opportunity to engage on these matters and will continue to participate actively

[14] In 2024, the Commission established the Proactive Planning Proceeding (Case 24-E-0364) to coordinate planning and identification of necessary system upgrades to address electrification, including economic development. In 2025 the Joint Utilities were directed to "consult with the New York Independent System Operator, Inc. (NYISO), Empire State Development, the Regional Economic Development Councils, municipalities, and DPS staff to develop forecasts of economic development, industrial, and commercial load growth in New York." Case 24-E-0364, *In the Matter of Proactive Planning for Upgraded Electric Grid Infrastructure* ("Proactive Planning Proceeding"), "Order Adopting Modified Proactive Planning Framework" at 25 (issued and effective Sept. 18, 2025). The Joint Utilities were also directed to file the first statewide Proactive Planning Study Report by September 2026, including project proposals for system upgrades meeting a set of Commission-approved criteria. *See id*. at 38.

throughout this proceeding. The Company has monitored, and will continue to monitor, large load interconnection reforms and related planning and cost recovery frameworks implemented in other jurisdictions, with the goal of evaluating emerging best practices and assessing how they may be thoughtfully incorporated into National Grid's planning, interconnection, and rate recovery processes.

For the reasons discussed above, National Grid supports the PSC's efforts to modernize large load interconnection processes and respectfully requests the PSC adopt the recommendations and advance the policy positions offered, which are grounded in customer-protections and reliability safeguards. These safeguards include, among other measures, a clear state policy on cost allocation and customer protections including upfront CIAC for sole-use facilities, long-term take-or-pay commitments, a dedicated large load rate class, a timely approval and recovery pathway for broader network upgrades, and coordinated development of a statewide framework for inter-transmission-owner upgrades.

Consistent with the reforms discussed above, National Grid also supports continued coordination among DPS Staff, NYISO, the transmission owners, and other stakeholders to align implementation with ongoing NYISO process reforms and develop the tariff, operational, and planning requirements needed to integrate large loads safely, efficiently, and affordably in New York.

Dated: May 13, 2026

Respectfully submitted,
NIAGARA MOHAWK POWER CORPORATION
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