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January 12, 2021

VIA ELECTRONIC DELIVERY

Honorable Michelle L. Phillips
Secretary
New York State Public Service Commission
Three Empire State Plaza, 19th Floor
Albany, New York 12223-1350

RE: Case 16-M-0411 - In the Matter of Distributed System Implementation Plans

Case 18-E-0130 - In the Matter of Energy Storage Deployment Program

**PETITION OF NIAGARA MOHAWK POWER CORPORATION d/b/a
NATIONAL GRID FOR APPROVAL TO DISPATCH AND WHOLESALE
MARKET THE OUTPUT FROM A UTILITY-OWNED ENERGY
STORAGE SYSTEM PROJECT**

Dear Secretary Phillips:

Enclosed please find for filing the petition of Niagara Mohawk Power Corporation d/b/a National Grid (“National Grid” or the “Company”) seeking approval to dispatch and wholesale market the output from a Company-owned energy storage system project located at National Grid’s East Pulaski Substation to the New York Independent System Operator.

Thank you for your attention to this matter.

Respectfully submitted,

/s/ Janet M. Audunson

Janet M. Audunson
Assistant General Counsel

Enc.

cc: Marco Padula, DPS Staff, w/enclosure (via electronic mail)
Denise Gerbsch, DPS Staff, w/enclosure (via electronic mail)
Warren Myers, DPS Staff, w/enclosure (via electronic mail)
Zeryai Hagos, DPS Staff, w/enclosure (via electronic mail)

Hon. Michelle L. Phillips, Secretary
National Grid Petition for Approval to Dispatch and Wholesale Market the Output from a
Utility-Owned Energy Storage System Project
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**STATE OF NEW YORK
PUBLIC SERVICE COMMISSION**

In the Matter of Distributed System Implementation Plans

Case 16-M-0411

In the Matter of Energy Storage Deployment Program

Case 18-E-0130

**PETITION OF NIAGARA MOHAWK POWER CORPORATION d/b/a NATIONAL
GRID FOR APPROVAL TO DISPATCH AND WHOLESALE MARKET THE OUTPUT
FROM A UTILITY-OWNED ENERGY STORAGE SYSTEM PROJECT**

Niagara Mohawk Power Corporation d/b/a National Grid (“National Grid” or the “Company”) hereby respectfully petitions the New York Public Service Commission (“Commission”), pursuant to Sections 65 and 66 of the New York State Public Service Law and Section 17 of the Commission’s Rules, 16 NYCRR § 17, for approval to dispatch and wholesale market the output from a Company-owned energy storage system (“ESS”) project located at National Grid’s East Pulaksi Substation (the “Project”) to the New York Independent System Operator (“NYISO”), in order to aid the Company’s understanding of such transactions in advance of the deployment of two larger-scale, bulk ESS projects in National Grid’s service territory with requested year-end 2022 in-service dates.¹ The Project was installed to meet peak load reduction needs during the summer months to mitigate at-risk load and, consequently, during most of the year the Project is idle. The financial gains from any such market transactions would accrue to the benefit of National Grid’s customers and allow the Company to more

¹ The two bulk ESS projects are the 20 MW/40 MWh Old Forge Project and the 10 MW/20 MWh North Lakeville Project.

effectively utilize the capabilities of the Project during those times of the year² when the Project is not needed for local reliability. National Grid respectfully urges the Commission to grant this request for the reasons articulated in this petition.

I. BACKGROUND

The Commission in its March 9, 2017 *Order on Distributed System Implementation Plan Filings* directed that “no later than December 31, 2018, each individual utility must have energy storage projects deployed and operating at no fewer than two separate distribution substations or feeders” that “should strive to perform at least two types of grid functions with the deployed energy storage resources (*e.g.*, increasing hosting capacity and peak load reduction).”³

Accordingly, National Grid developed and installed two such ESS projects. The first project, placed in service in November 2018 and located in the Village of Pulaski in Oswego County, consists of a single 2 MW/3 MWh ESS unit within the existing footprint of the Company’s East Pulaski Substation to provide peak load reduction to mitigate thermal overload of the substation’s 115-13.2 kV transformer during normal peak system conditions. The second project, placed in service in February 2020⁴ and located in the City of Troy in Rensselaer County, consists of a 2 MW/3 MWh ESS using five modular units within the existing footprint of the Company’s North Troy Substation to provide peak load reduction to mitigate thermal overload of the substation’s 115-13.2 kV transformer during normal peak system conditions.

² Local reliability support is anticipated to be needed only in the summer months of June through September. National Grid would primarily utilize the Project during the months of October to May for wholesale market participation.

³ Cases 16-M-0411 *et al.*, *In the Matter of Distributed System Implementation Plans* (“DSIP Proceeding), Order on Distributed System Implementation Plan Filings (issued March 9, 2017) (“2017 DSIP Order”), p. 30.

⁴ The installation of National Grid’s second ESS project was significantly delayed when the Company had to abandon its planned project in the Village of Kenmore, located within the Buffalo metropolitan area in Erie County, due to insurmountable permitting challenges. The Department of Public Service Staff was apprised of the change in location and the resulting delay to the in-service date of National Grid’s second energy storage project.

In approving limited utility ownership of ESS, the Commission, in the 2017 DSIP Order, found that utility ownership of energy storage “integrated into distribution grid architecture, is a permissible exception to the basic presumption that utility ownership of DER conflicts with REV’s underlying tenet that competitive markets and risk-based capital should fund asset development.”⁵ The REV Track One Order qualified that “[u]tility investment should not be exempt merely because it occurs on utility-owned property; rather, it will be exempt if it is directly integrated into distribution service. For those resources that are on the utility’s system and will be used to support and enhance reliable system operations, utility ownership and operation is reasonable.”⁶ The Commission further noted that the application of energy storage technology by the utility in this manner should be permitted without the need for a market power analysis.⁷ The REV Track One Order does not address whether utilities bidding energy, capacity, and ancillary services from utility-owned ESS projects integrated with the distribution system into the NYISO wholesale markets is a permissible activity, nor does the 2017 DSIP Order.

The Department of Public Service Staff (“DPS Staff”) and the New York State Energy Research and Development Authority (“NYSERDA”) filed the New York State Energy Storage Roadmap and DPS/NYSERDA Staff Recommendations (“Roadmap”) on June 21, 2018 in order to provide a range of options for the Commission to achieve the State’s goal of achieving 1,500

⁵ DSIP Proceeding, 2017 DSIP Order, pp. 29-30 (citing Case 14-M-0101, *Proceeding on Motion of the Commission in Regard to Reforming the Energy Vision* (“REV Proceeding”), Order Adopting Regulatory Policy Framework and Implementation Plan (issued February 26, 2015) (“REV Track One Order”), pp. 67-69).

⁶ REV Proceeding, REV Track One Order, p. 69.

⁷ *Id.*

MW of energy storage by 2025 and to establish a statewide energy storage goal for 2030⁸ with a corresponding deployment policy.

When the Commission issued its December 13, 2018 *Order Establishing Energy Storage Goal and Deployment Policy*⁹ in response to the Roadmap recommendations, the Commission noted that “[u]tility ownership of storage technologies has garnered significant Commission interest because of the technology’s ability to be integrated into electric grid architecture, to be used for reliability, and to enable the optimal deployment of other distributed resources.”¹⁰ At that time, the Commission stated that there was no compelling reason to modify guidance on utility ownership of ESS as set out in the REV Track One Order.¹¹ However, the Commission determined that while “utility NWAs [non-wires alternatives] have proven to be a successful mechanism to competitively procure DER solutions that can meet utility needs more cost effectively than traditional solutions... an additional utility scale storage procurement is necessary to provide the flexibility for such bulk-level storage applications to provide maximum benefits to ratepayers.”¹² The Storage Order directed that “[s]uch procurements shall take the form of responses to utility Request for Proposals (“RFPs”) from storage developers to build new storage resources that will be under contract with the utility for operation and dispatch rights.”¹³ These ESS units may be located anywhere on the utilities’ transmission and distribution systems,

⁸ Gov. Cuomo subsequently signed into law the Climate Leadership and Community Protection Act (“CLCPA”) on July 18, 2019 which established a goal of 3,000 MW of energy storage by 2030. Chapter 106 of the Laws of 2019, available at <https://legislation.nysenate.gov/pdf/bills/2019/S6599>

⁹ Case 18-E-0130, *In the Matter of Energy Storage Deployment Program* (“Energy Storage Proceeding”), Order Establishing Energy Storage Goal and Deployment Policy (issued December 13, 2018) (“Energy Storage Order”).

¹⁰ *Id.*, p. 43.

¹¹ *Id.*, p. 44.

¹² *Id.* p. 53.

¹³ *Id.*, pp. 53-54. Per the Energy Storage Order directive, National Grid is required to procure the dispatch rights to at least 10 MW of ESS with an in-service date of December 31, 2022. National Grid has selected the winning bidders and is currently working through the contracting process for both the Old Forge Project and North Lakeville Project.

with costs that fall at or below the utility-defined bid ceiling. The Energy Storage Order directs each utility to account for the actual wholesale revenues earned from the asset as a benefit to their customers in recovering contract costs. Additionally, “[t]o provide an incentive for the utilities to maximize the wholesale revenues of the storage asset, when revenues exceed contract costs on an annual basis, the Commission authorizes revenue sharing of 30 percent to utility shareholders and 70 percent to ratepayers.”¹⁴

II. NATIONAL GRID’S PROPOSAL FOR THE PROJECT

National Grid is seeking Commission approval to bid energy, capacity, and/or ancillary services available from the Project into the NYISO markets¹⁵ which will provide a valuable learning opportunity for Company personnel in advance of the requested year-end 2022 in-service dates of the bulk ESS projects to which the Company will have dispatch rights. National Grid plans to use the bulk ESS projects in response to the Energy Storage Order directive to both support local grid reliability and participate in the NYISO wholesale markets. However, complying with the recent NYISO dual participation market rules¹⁶ is a complex process that requires careful navigation. Therefore, National Grid seeks to gain critical experience, knowledge, and customer value by bidding the Project, which is smaller and simpler but nonetheless similar to the bulk ESS projects, into the NYISO wholesale market. The lessons from this experience will inform the process ahead of registering and bidding the larger and more complex bulk ESS projects into the NYISO wholesale market.

¹⁴ *Id.*, p. 55.

¹⁵ National Grid will bid and schedule the Project in the NYISO day-ahead (“DA”) and real-time (“RT”) energy markets and the ancillary services market, and if appropriate, the installed capacity (“ICAP”) market.

¹⁶ The NYISO’s market rules allow resources that provide Wholesale Market services to also provide services to another entity (*e.g.*, utility or host facility) effective May 1, 2020 with ICAP Market Participation effective March 1, 2021 as approved by the Federal Energy Regulatory Commission (“FERC”) on January 23, 2020. *Order Accepting Tariff Revisions and Directing Compliance Filing and Informational Report*, 170 FERC ¶ 61,033 (2020).

ESS units have unique capabilities to support grid operators in meeting demand, managing the variability of intermittent resources, and potentially deferring system upgrades. In recognition of this role, FERC has adopted a comprehensive set of rules for expansion of wholesale market participation for Energy Storage Resources (“ESRs”).¹⁷ ESRs can provide energy to the grid as well as spinning reserves, frequency regulation, ramping, smoothing, peaking, and back-up power. This early opportunity to participate in the NYISO wholesale market with the Project will be valuable to the Company to learn market rules first-hand and to manage and optimize these types of resources in advance of the commercial operation of the bulk ESS projects.

National Grid believes the risks to the Company in bidding the Project into the NYISO wholesale market are minimal and can be appropriately managed. First and foremost, since the the Company will maintain operational control over the Project, it will not be operated in a manner that impairs the distribution system functionality or lowers system reliability. Through planned and careful operation, the Project can support the distribution system while also participating in the NYISO markets.

In addition, the Company sees significant ancillary benefits to having the Project participate in the NYISO wholesale markets. National Grid plans to hire the same power marketer company it selected for the two bulk ESS projects¹⁸ to provide technical advisory services to the Company in regard to participating in the wholesale market with the Project.¹⁹ This early engagement with the power marketer will also facilitate the development of key

¹⁷ *Id.*

¹⁸ National Grid is currently finalizing the contract with the power marketer company.

¹⁹ Funding of the technical advisor for the Project will be provided from National Grid’s Research and Development (“R&D”) budget.

working relationships ahead of the power marketer's responsibilities to bid the two larger bulk ESS projects into the wholesale market on behalf of National Grid.

Finally, in endeavoring to use the Project in a way that will produce revenue for customers through participation in the energy and ancillary services markets, National Grid plans to use existing personnel and develop internal processes and resources to bid the Project into the NYISO markets. Within the NYISO market settlement systems the Company will generally be responsible for submitting the following, as applicable: (1) DA and RT energy/ancillary bids; (2) updated maintenance schedules; (3) monthly available Generating Availability Data System ("GADS") information; (4) annual capability testing data; and (5) ICAP market participation. National Grid's Wholesale Electric Supply ("WES") group will receive a weekly/daily forecast from the Company's control center operator with the Project's availability. The Company's WES group will electronically submit generation offers for the Project into the DA Energy/Ancillary Market for the next dispatch day.

National Grid's initial plan focuses on Project participation in the energy and ancillary services markets and does not include participation in the ICAP market. Bidding into the ICAP market will introduce additional complexity including: active management of the Project as well as additional obligations when participating in the DA and RT energy markets; semi-annual capability testing and reporting; compliance with North American Electric Reliability Corporation ("NERC")-GADS reporting requirements; and daily de-rating reporting that matches the submitted DA schedule.²⁰ To the extent that National Grid determines that pros

²⁰ *E.g.*, if a resource participates in the ICAP market and fails to timely perform all outage and availability reporting there could be financial obligations imposed by the NYISO that exceed the resource's daily capability in addition to market mitigation and penalties. If a resource is not a capacity provider, GADS reporting obligations and DA bidding requirements do not apply.

outweigh the cons of future participation in the ICAP market, the Company may additionally pursue participation in that market.

III. ALLOCATION OF REVENUES AND COSTS

National Grid proposes to allocate revenues and costs²¹ associated with the dispatch and wholesale marketing of the Project to the NYISO through the Company's Legacy Transition Charge ("LTC") mechanism in the P.S.C. No. 220 Electricity Niagara Mohawk Power Corporation d/b/a National Grid Schedule for Electric Service ("Electricity Tariff"), which is applied to all delivery customers. The draft amended tariff leaf is attached to this petition. Exhibit A provides a redlined tariff leaf while Exhibit B provides a clean version.

Unlike the Commission's authorization in the Energy Storage Order where the wholesale revenues of the bulk storage assets, when revenues exceed contract costs on an annual basis, are to be shared by allocating 30 percent of the net revenues to utility shareholders and 70 percent to utility customers,²² National Grid's proposal here will allocate 100 percent of the net revenues from the dispatch and wholesale marketing of the Project to the Company's customers through the LTC mechanism.

IV. CONCLUSION

WHEREFORE, for the aforementioned reasons, National Grid respectfully requests the Commission's approval to dispatch and wholesale market the output from the Project located at National Grid's East Pulaksi Substation to the NYISO. This will further the Company's

²¹ National Grid anticipates that the costs of participation, including any battery charging costs, NYISO Open Access Transmission Tariff ("OATT") administrative costs, and any NYISO market penalties that might be incurred, will be less than the revenue obtained.

²² Energy Storage Proceeding, *supra* note 14.

understanding of such transactions in advance of the deployment of two larger-scale bulk power ESS projects with requested year-end 2022 in-service dates, while far more effectively utilizing the capabilities of the Project where customers will be the beneficiary of the net revenues earned.

Dated: January 12, 2021

Respectfully submitted,

**NIAGARA MOHAWK POWER
CORPORATION d/b/a NATIONAL GRID**

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EXHIBIT A

**Draft Amended Tariff Leaf
Redlined Version**

GENERAL INFORMATION

46. SUPPLY SERVICE CHARGES (Continued)

46.1.3.3 For each hour, the forecasted cost, in \$/kWh, of NYISO charges under all applicable OATT schedules; plus

46.1.3.4 For each hour, the forecasted NYISO NYPA Transmission Adjustment Charge (NTAC) rate, in \$/kWh.

46.1.3.5 The sum of each item shall be adjusted by the Local Transmission Efficiency Factors set forth in Rule 39.18.1.1 for the applicable distribution delivery voltage level and by the Average Unaccounted for Energy Factor set forth in Rule 39.18.1.2 plus any applicable taxes.

46.1.3.6 Any billing adjustment from the NYISO may be flowed through this Rule 46 based on the tariff rules in effect on the date service was rendered.

46.1.3.7 Effective May 1, 2012, a customer-specific peak load demand charge shall be calculated based on the customer's unique Capacity Tag assigned for the duration of each NYISO Capability Year and on the forecasted NYISO Capacity Spot Market price and shall be assessed in each monthly billing period.

46.1.3.8 Effective July 1, 2019, the Company will perform a monthly reconciliation (Capacity Reconciliation) of the peak load demand charge to reconcile the forecasted NYISO Capacity Spot Market price in [Rule 46.1.3.7](#) to the actual NYISO Capacity Spot market price. Any under/ over collection will be charged based on the customer's unique Capacity Tag.

46.2 Legacy Transition Charge ("LTC"): Apart from the exceptions listed in Rule 46.2.4, the LTC is applicable to all delivery customers. ~~The LTC shall include: i) the costs and benefits associated with the net market value of purchased power contracts executed prior to June 1, 2001, except for the one contract listed in Rule 46.2.7 and certain benefits of Service Classification No. 6 contracts executed after June 1, 2001; and ii) the net revenues from the NYISO associated with the periodic dispatch and marketing of the output from the Company-owned energy storage project located at the Company's East Pulaski Substation. and;~~ shall be calculated as follows:

46.2.1 The net market value of each Legacy Contract is defined as the monthly contract cost less the market value of the generation.

46.2.2 The LTC shall be calculated monthly and shall be based upon the sum of the monthly forecasted contract costs and forecasted market values of ~~all of~~ the Legacy Contracts plus any reconciliation balance from prior periods determined pursuant to Rule 46.2.3. The market value of the generation associated with Legacy Contracts will be determined based on the forecasted monthly market prices as set forth in [Rule 46.1.1](#). The LTC shall be calculated as the amount so determined divided by the forecasted kWh sales for the applicable month of all delivery service customers pursuant to Rule 46.2.4 below.

46.2.3 The LTC shall be subject to reconciliation in which the actual net market value shall be calculated and compared to the actual revenue billed by the LTC for the respective month. The actual net market value shall include actual avoided ancillary cost benefits of the Legacy Contracts, ~~and~~ applicable avoided capacity and ancillary cost benefits of Service Classification No. 6 contracts, and net revenues paid to the Company by the NYISO for the periodic dispatch and marketing of the output from the Company-owned storage project located at the Company's East Pulaski Substation. Any reconciliation balance, whether positive or negative, shall be included in the LTC in effect in subsequent periods.

EXHIBIT A

**Draft Amended Tariff Leaf
Redlined Version**

GENERAL INFORMATION

46. SUPPLY SERVICE CHARGES (Continued)

46.1.3.3 For each hour, the forecasted cost, in \$/kWh, of NYISO charges under all applicable OATT schedules; plus

46.1.3.4 For each hour, the forecasted NYISO NYPA Transmission Adjustment Charge (NTAC) rate, in \$/kWh.

46.1.3.5 The sum of each item shall be adjusted by the Local Transmission Efficiency Factors set forth in Rule 39.18.1.1 for the applicable distribution delivery voltage level and by the Average Unaccounted for Energy Factor set forth in Rule 39.18.1.2 plus any applicable taxes.

46.1.3.6 Any billing adjustment from the NYISO may be flowed through this Rule 46 based on the tariff rules in effect on the date service was rendered.

46.1.3.7 Effective May 1, 2012, a customer-specific peak load demand charge shall be calculated based on the customer's unique Capacity Tag assigned for the duration of each NYISO Capability Year and on the forecasted NYISO Capacity Spot Market price and shall be assessed in each monthly billing period.

46.1.3.8 Effective July 1, 2019, the Company will perform a monthly reconciliation (Capacity Reconciliation) of the peak load demand charge to reconcile the forecasted NYISO Capacity Spot Market price in Rule 46.1.3.7 to the actual NYISO Capacity Spot market price. Any under/ over collection will be charged based on the customer's unique Capacity Tag.

46.2 Legacy Transition Charge ("LTC"): Apart from the exceptions listed in Rule 46.2.4, the LTC is applicable to all delivery customers. The LTC shall Include: i) the costs and benefits associated with the net market value of purchased power contracts executed prior to June 1, 2001, except for the one contract listed in Rule 46.2.7 and certain benefits of Service Classification No. 6 contracts executed after June 1, 2001; and ii) the net revenues from the NYISO associated with the periodic dispatch and marketing of the output from the Company-owned energy storage project located at the Company's East Pulaski Substation, and shall be calculated as follows:

46.2.1 The net market value of each Legacy Contract is defined as the monthly contract cost less the market value of the generation.

46.2.2 The LTC shall be calculated monthly and shall be based upon the sum of the monthly forecasted contract costs and forecasted market values of the Legacy Contracts plus any reconciliation balance from prior periods determined pursuant to Rule 46.2.3. The market value of the generation associated with Legacy Contracts will be determined based on the forecasted monthly market prices as set forth in Rule 46.1.1. The LTC shall be calculated as the amount so determined divided by the forecasted kWh sales for the applicable month of all delivery service customers pursuant to Rule 46.2.4 below.

46.2.3 The LTC shall be subject to reconciliation in which the actual net market value shall be calculated and compared to the actual revenue billed by the LTC for the respective month. The actual net market value shall include actual avoided ancillary cost benefits of the Legacy Contracts, applicable avoided capacity and ancillary cost benefits of Service Classification No. 6 contracts, and net revenues paid to the Company by the NYISO for the periodic dispatch and marketing of the output from the Company-owned storage project located at the Company's East Pulaski Substation. Any reconciliation balance, whether positive or negative, shall be included in the LTC in effect in subsequent periods.