



Janet M. Audunson, P.E., Esq.
Assistant General Counsel

October 29, 2020

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 20-E- ____ – PETITION OF THE IPWG MEMBERS SEEKING A COST-SHARING AMENDMENT TO THE NEW YORK STATE STANDARDIZED INTERCONNECTION REQUIREMENTS FOR NEW DISTRIBUTED GENERATORS AND ENERGY STORAGE SYSTEMS 5 MW OR LESS CONNECTED IN PARALLEL WITH UTILITY DISTRIBUTION SYSTEMS

Dear Secretary Phillips:

Enclosed please find for filing the Petition of the Interconnection Policy Working Group (“IPWG”) Members Seeking a Cost-Sharing Amendment to the New York State Standardized Interconnection Requirements for New Distributed Generators and Energy Storage Systems 5 MW or Less Connected in Parallel with Utility Distribution Systems.

Thank you for your attention to this matter.

Respectfully submitted,

/s/ Janet M. Audunson

Janet M. Audunson
Assistant General Counsel

Enc.

cc: Elizabeth Grisaru (DPS Staff), w/enclosure (via electronic mail)
Jason Pause (DPS Staff), w/enclosure (via electronic mail)
Houtan Moaveni (DPS Staff), w/enclosure (via electronic mail)
Jim Hastings (NYSEIDA), w/enclosure (via electronic mail)
Shyam Mehta (NYSEIA), w/enclosure (via electronic mail)
Harold Turner (Central Hudson), w/enclosure (via electronic mail)
Joe White (Con Edison), w/enclosure (via electronic mail)
Timothy Lynch (NYSEG/RG&E), w/enclosure (via electronic mail)
Aaron Anaya (O&R), w/enclosure (via electronic mail)
Wajiha Mahmoud, w/enclosure (via electronic mail)
Casey Kirkpatrick, w/enclosure (via electronic mail)

**STATE OF NEW YORK
PUBLIC SERVICE COMMISSION**

Petition of the IPWG Members Seeking a Cost-Sharing)
Amendment to the New York State Standardized)
Requirements for New Distributed Generators and) Case 20-E-_____
Energy Storage Systems 5 MW or Less Connected in)
Parallel with Utility Distribution Systems)

**PETITION OF THE IPWG MEMBERS SEEKING A COST-SHARING AMENDMENT
TO THE NEW YORK STATE STANDARDIZED INTERCONNECTION
REQUIREMENTS FOR NEW DISTRIBUTED GENERATORS AND ENERGY
STORAGE SYSTEMS 5 MW OR LESS CONNECTED IN PARALLEL WITH UTILITY
DISTRIBUTION SYSTEMS**

Central Hudson Gas & Electric Corporation, Consolidated Edison Company of New York, Inc., New York State Electric & Gas Corporation, Niagara Mohawk Power Corporation d/b/a National Grid, Orange and Rockland Utilities, Inc., and Rochester Gas and Electric Corporation (collectively, the “Joint Utilities”) and the New York Solar Energy Industries Association (“NYSEIA”), New York Battery and Energy Storage Technology Consortium (“NY-BEST”), BQ Energy, LLC, Borrego Solar Systems, Inc., Cypress Creek Renewables, LLC, CleanChoice Energy, Oya Solar Inc., SunCommon, GreenSpark Solar, Distributed Sun, LLC, Clearway Energy Group LLC, Sol Systems, Omni Navitas, Ameresco, Nexamp, Inc., Blueprint Power, US Light Energy, Delaware River Solar, Dynamic Energy, EDF Renewables North America, NextEra Energy Resources, LLC, Novis Renewables, LLC, Con Edison Clean Energy Businesses, Inc., Boralex Inc., GEM Energy, East Light Partners, Horizon Power, Dimension Energy LLC, ETM Solar Works, Ric Energy, AES Distributed Energy, and Summit Ridge Energy, as members of the Interconnection Policy Working Group (“IPWG”)

(collectively, the “IPWG Members”) hereby petition the Public Service Commission (“Commission”) for an amendment to the December 2019 version of the *New York State Standardized Interconnection Requirements and Application Process For New Distributed Generators and Energy Storage Systems 5 MW or Less Connected in Parallel with Utility Distribution Systems* (“December 2019 SIR”).¹

The IPWG Members have collaborated with the New York State Department of Public Service Staff to develop a workable and more inclusive solution that improves upon the existing cost-sharing methodology first implemented in the January 2017 SIR.² The filing of this Distributed Generation / Energy Storage Systems Interconnection: Comprehensive Cost-Sharing Proposal (“Cost-Sharing 2.0 Proposal”), attached hereto as Exhibit A, represents the IPWG Members’ efforts to effectuate a comprehensive cost-sharing amendment to the December 2019 SIR. The IPWG Members believe that this Cost-Sharing 2.0 Proposal will result in improved overall participation and thereby increased siting of distributed generation (“DG”) and energy storage system (“ESS”) projects in support of the State’s Climate Leadership and Community Protection Act (“CLCPA”)³ goals. The CLCPA goals include the deployment of 6 gigawatts (“GW”) of solar capacity by 2025 and 3 GW of ESS by 2030.

¹ The December 2019 SIR was approved in Case 19-E-0566, *Joint Petition for Certain Amendments to the New York State Standardized Interconnection Requirements (SIR) for New Distributed Generators and Energy Storage Systems 5 MW or Less Connected in Parallel with Utility Distribution Systems*, Order Modifying Standardized Interconnection Requirements (issued December 13, 2019).

² See Case 16-E-0560, *Joint Petition for Modifications to the New York State Standardized Interconnection Requirements and Application Process For New Distributed Generators 5 MW or Less Connected in Parallel with Utility Distribution Systems*, Order Adopting Interconnection Management Plan and Cost Allocation Mechanism, and Making Other Findings (issued January 25, 2017) (“January 2017 Interconnection Management Plan and Cost-Sharing Order”) and Attachment C thereto, *New York State Standardized Interconnection Requirements and Application Process For New Distributed Generators 5 MW or Less Connected in Parallel with Utility Distribution Systems – January 2017* (“January 2017 SIR”). In adopting the cost allocation mechanism, the Commission did so as an interim measure deeming it “a just and reasonable approach until such time that stakeholders have demonstrated that a superior solution should supplant this provision.” January 2017 Interconnection Management Plan and Cost-Sharing Order, p. 29.

³ Chapter 106 of the Laws of 2019. CLCPA is available at <https://legislation.nysenate.gov/pdf/bills/2019/S6599>

I. INTRODUCTION

The current cost-sharing mechanism first incorporated in the January 2017 SIR and still in place today in the December 2019 SIR allows first-moving interconnection projects that bear 100 percent of the cost for substation upgrades (*e.g.*, transformer bank upgrades or replacements) to be reimbursed by subsequent projects interconnected on the same substation and benefitting from such upgrades.⁴ However, this mechanism provides no certainty for the first-moving interconnection project that subsequent interconnection projects will materialize and result in any reimbursement of expenditures. Moreover, the costs of upgrading a substation can be daunting for a single project. Project financiers are not willing to take on the risk that subsequent projects fail to materialize on the same substation or the uncertainty as to when subsequent projects may materialize that interconnect on the same substation so as to provide cost reimbursement to the first-moving project. The current cost-sharing mechanism has not resulted in any DG/ESS projects taking on the first-mover cost impact and paying for substation upgrades and as such, no DG/ESS projects have been sited in distribution-saturated areas of the Joint Utilities' respective service territories.

Replacing the current cost-sharing mechanism with the Cost-Sharing 2.0 Proposal will enable cost-effective siting of DG/ESS projects on distribution-saturated or otherwise encumbered circuits and substations by removing the cost obstacle imposed on the first-mover interconnection project.

The sections that follow in this petition summarize the salient components of the Cost-Sharing 2.0 Proposal for which the supporting details can be found in Exhibit A.

⁴ See December 2019 SIR, Exhibit E, Cost Sharing for System Modifications & Cost Responsibility for Dedicated Transformer(s) and Other Safety Equipment for Net Metered Customers, p. [2].

II. COST-SHARING 2.0 PROPOSAL

A. Purpose and Benefits

The Cost-Sharing 2.0 Proposal seeks to remove certain financial burdens imposed on the first-mover interconnection project (the “Triggering Project”) by utilizing a pro rata concept whereby each project interconnected that requires an upgrade, including the Triggering Project and projects with interconnection queue positions after the Triggering Project (“Sharing Projects”) on the same substation, would pay for the specific distribution hosting capacity assigned to it by the utility and not the entire cost of the upgrade. In so doing, the cost of distribution system upgrades would be equitably allocated to each DG/ESS project interconnected on the same substation and there would be cost certainty at the outset for each such project. Additionally, an increased interest to site interconnection projects will create opportunities whereby certain substation upgrades being planned by the utility to address asset or reliability issues can be coordinated such that multiple needs can be accomplished with one upgrade and thereby maximize cost effectiveness.

B. Provisions

The Cost Sharing 2.0 Proposal applies to two categories of distribution upgrades as follows.

1. Utility-Initiated DG/ESS Upgrades

When a substation transformer bank installation/replacement is in a utility’s Capital Investment Plan (“CIP”), the utility will consider options to upgrade the equipment to provide for greater hosting capacity rather than a mere replacement-in-kind. If the equipment can be upgraded to both create increased hosting capacity and solve a pre-existing condition, reliability, resiliency, or capacity issue, this type of upgrade will be a Multi-value Distribution (“MVD”)

project. In a MVD project, the utility will bear the cost for the in-kind replacement and the Triggering Project and Sharing Projects (collectively, “Participating Projects”) will pay a pro rata share based on project size and the incremental cost difference between replacing the utility equipment in-kind and the costs associated with the equipment upgrade.

Each of the Joint Utilities will post a list of substations with major upgrade plans (*i.e.*, MVD projects) on their respective system data portals to include an estimate of the Participating Projects’ funding needed to create additional hosting capacity. This posting will identify the deadline for DG/ESS projects to submit interconnection applications for MVD projects.⁵ After the established deadline, the utility will determine a cost per kW for shared upgrades for each MVD project based on the identified projects in the interconnection queue. Based on the number of DG/ESS projects that commit to pay in order to interconnect at a given substation, the utility will have the discretion to move ahead with the upgrade.⁶

2. Market-Initiated DG/ESS Upgrades

When a hosting capacity upgrade is required to a substation transformer bank or other equipment to accommodate the interconnection of a Sharing Project beyond that required to interconnect the Triggering Project, where the utility has no corresponding planned work in its CIP for that equipment, the upgrade for that Sharing Project will be deemed a Qualifying Upgrade. The Cost-Sharing 2.0 Proposal addresses the mechanics associated with Qualifying Upgrades which vary with the type of Qualifying Upgrade.⁷ For example, for 3V0 substation upgrades, the interconnecting project’s Coordinated Electric System Interconnection Review

⁵ Existing Sharing Projects with a queue position after the Triggering Project are automatically opted into this process.

⁶ Each of the Joint Utilities will offer a similar opportunity at designated locations utilizing an alternative cost allocation methodology for ground fault (or zero sequence) overvoltage (“3V0”) upgrades (*i.e.*, Proactive 3V0 DG Interconnection mechanism). *See* details in attached Exhibit A.

⁷ *See* details in attached Exhibit A, pp. 5-8.

(“CESIR”) shall identify the Qualifying Upgrade Cost to be assigned to the Sharing Project to include a Qualifying Upgrade Charge equal to the Capacity Increase Shared Cost (per AC-Watt) times the capacity of the interconnecting project.

Each utility will determine the Interconnection Fee (\$/kW) for Participating Projects by dividing the sum of the total costs of the Qualifying Upgrades at each designated location by a factor representing the sum of the total hosting capacity in kW of that designated location. Costs of Qualifying Upgrades that are not recovered by additional Sharing Projects would be deferred until the utility’s next rate plan period for rate base recovery. However, unrecovered costs will be capped at no more than two percent of a utility’s distribution/sub-transmission electric capital investment budget per fiscal year, after which any Qualifying Upgrades will require full (*i.e.*, 100 percent) funding from Triggering Projects and Sharing Projects prior to utility mobilization for such projects’ construction work. The cap will be updated annually and calculated as a rolling five-year average of each utility’s forecasted distribution/sub-transmission electric capital investment for the impacted year and the next four years according to each utility’s current capital plan.

C. Impacts on SIR Process

1. Capital Project Queue

When a utility is planning a capital upgrade, the utility will create a Capital Project Queue at the substation or feeder level for those DG/ESS applications unable to interconnect due to the pending upgrade and will appropriately note same on its Hosting Capacity map. Due to the pending work, the Hosting Capacity for that location will be reflected as zero. For applications already in the interconnection queue, the utility will place the project in the Capital

Project Queue if the interconnecting customer consents.⁸ For new applications, the DG/ESS project will be placed in the Capital Project Queue at the preliminary analysis stage. Standard SIR timelines will be suspended for projects placed in the Capital Project Queue.

When a utility upgrade for a given substation is within 18 months of the expected completion date, the projects will be removed from the Capital Project Queue for that location and projects will advance through the remaining SIR steps.

2. Cost-Sharing Applicability to Projects in Queue

Should the Commission adopt this Cost-Sharing 2.0 Proposal, interconnection applications in the SIR queue at that time are proposed to be treated as follows:

- For interconnection applications that have not yet advanced to the CESIR process, Cost-Sharing 2.0 will apply.
- For interconnection applications in the CESIR process, Cost-Sharing 2.0 will apply.⁹
- For interconnection applications that have completed the CESIR process, regardless of whether the initial 25 percent payment has been made or not, the interconnecting customer can request an evaluation of the completed CESIR to determine the applicability of the Cost-Sharing 2.0 mechanism.
- For interconnection applications that have made full payment, the interconnecting customer will not be eligible for Cost-Sharing 2.0.

⁸ If the interconnecting customer does not consent to the project being placed in the Capital Project Queue, the utility will remove the interconnection application from the interconnection queue.

⁹ However, if there are 15 business days or less left in the CESIR timeline, the utility has an additional 15 business days to integrate the Cost-Sharing 2.0 mechanism into the CESIR.

III. CONCLUSION

WHEREFORE, for the aforementioned reasons, the IPWG Members respectfully request the Commission's approval of the proposed amendment to the December 2019 SIR to implement a comprehensive cost-sharing proposal, Cost Sharing 2.0, that will materially improve the existing cost-sharing mechanism and stimulate the deployment of DG/ESS projects in furtherance of the State's CLCPA goals.

Dated: October 29, 2020

Respectfully submitted,

**CONSOLIDATED EDISON COMPANY OF
NEW YORK, INC. and ORANGE AND
ROCKLAND UTILITIES, INC.**

By: */s/ Susan Vercheak*

Susan Vercheak*
Associate General Counsel
Consolidated Edison Company of New York, Inc.
4 Irving Place
New York, New York 10003
Tel.: 212-460-4333
Email: vercheaks@coned.com
*Admitted in New Jersey only

**CENTRAL HUDSON GAS AND ELECTRIC
CORPORATION**

By: */s/ Paul A. Colbert*

Paul A. Colbert
Associate General Counsel –
Regulatory Affairs
Central Hudson Gas and Electric Corporation
284 South Avenue
Poughkeepsie, New York 12601
Tel: (845) 486-5831
Email: pcolbert@cenhud.com

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

By: /s/ *Janet M. Audunson*

Janet M. Audunson
Assistant General Counsel
National Grid
300 Erie Boulevard West
Syracuse, New York 13202
Tel: (315) 428-3411
Email: Janet.Audunson@nationalgrid.com

**NEW YORK STATE ELECTRIC & GAS
CORPORATION and ROCHESTER GAS AND
ELECTRIC CORPORATION**

By: /s/ *Amy A. Davis*

Amy A. Davis
Senior Regulatory Counsel
89 East Avenue
Rochester, New York 14649
Tel: (585) 771-4234
Email: amy.davis@avangrid.com

**NEW YORK SOLAR ENERGY
INDUSTRIES ASSOCIATION (NYSEIA)**

By: /s/ *Shyam Mehta*

Shyam Mehta
Executive Director
P.O. Box 1523
Long Island City, New York 11101
Tel: (516) 554-0375
Email: shyam@nyseia.org

**NEW YORK BATTERY AND ENERGY
STORAGE TECHNOLOGY CONSORTIUM
(NY-BEST)**

By: */s/ William Acker*

William Acker
Executive Director

BQ ENERGY, LLC

By: */s/ James Falsetti*

James Falsetti
Director

BORREGO SOLAR SYSTEMS, INC.

By: */s/ Rob Tompkins*

Rob Tompkins
Interconnection Program Manager

CYPRESS CREEK RENEWABLES, LLC

By: */s/ Melissa Kemp*

Melissa Kemp
Senior Director, Policy and Strategy

CLEANCHOICE ENERGY

By: */s/ Tim Ahrens*

Tim Ahrens
Managing Director, Renewable Energy
Development

OYA SOLAR INC.

By: */s/ Yogesh Kumar*

Yogesh Kumar
Project Manager

SUNCOMMON

By: */s/ Jeff Irish*

Jeff Irish, PE
Vice President and General Manager

GREENSPARK SOLAR

By: */s/ Kevin Schulte*

Kevin Schulte
CEO

DISTRIBUTED SUN, LLC

By: */s/ John Weiss*

John Weiss
Executive Chairman

CLEARWAY ENERGY GROUP LLC

By: */s/ Hannah Muller*

Hannah Muller
Director of Public Policy

SOL SYSTEMS

By: */s/ Austin deButts*

Austin deButts
Project Development Manager

OMNI NAVITAS

By: */s/ Paul Heimlicher*

Paul Heimlicher
Vice President, Power Sales

AMERESCO

By: */s/ Kathryn Chelminski*

Kathryn Chelminski
Senior Manager, New Market Development

NEXAMP, INC.

By: */s/ Kelly Friend*

Kelly Friend
Director, Policy and Regulatory Affairs

BLUEPRINT POWER

By: */s/ Claire Woo*

Claire Woo
Vice President, Energy Systems

US LIGHT ENERGY

By: */s/ Mark Richardson*

Mark Richardson
Chief Executive Officer

DELAWARE RIVER SOLAR

By: */s/ John Schmauch*

John Schmauch
Director, Project Development

DYNAMIC ENERGY

By: /s/ *Scott Starr*

Scott Starr
Senior Vice President, Business Development

EDF RENEWABLES NORTH AMERICA

By: /s/ *Margaret Campbell*

Margaret Campbell
Manager, Business Development

NEXTERA ENERGY RESOURCES, LLC

By: /s/ *Mithun Vyas*

Mithun Vyas
Project Director, Development

NOVIS RENEWABLES, LLC

By: /s/ *Teddy Epstein*

Teddy Epstein
Development Director, Northeast

**CON EDISON CLEAN ENERGY
BUSINESSES, INC.**

By: /s/ *Jeffrey Lord*

Jeffrey Lord
Director of Project Development

BORALEX INC.

By: /s/ *Darren Suarez*

Darren Suarez
Manager Public and Government Affairs

GEM ENERGY

By: /s/ *Jason Slattery*

Jason Slattery
Director of Solar

EAST LIGHT PARTNERS

By: /s/ *Wendy DeWolf*

Wendy DeWolf
Co-Founder

HORIZON POWER

By: /s/ *Andy Melka*

Andy Melka
Director, Development

DIMENSION ENERGY LLC

By: /s/ *Brandon Smithwood*

Brandon Smithwood
Director of Policy

ETM SOLAR WORKS

By: /s/ *Gay Canough*

Gay Canough
President

RIC ENERGY

By: /s/ *Jon Rappe*

Jon Rappe
CEO

AES DISTRIBUTED ENERGY

By: /s/ *Cory Honeyman*

Cory Honeyman
Strategy and Business Development

SUMMIT RIDGE ENERGY

By: /s/ *Will Fischer*

Will Fischer
Vice President of Business Development

EXHIBIT A

Distributed Generation / Energy Storage Systems Interconnection: Comprehensive Cost-Sharing Proposal

Distributed Generation / Energy Storage Systems Interconnection: Comprehensive Cost-Sharing Proposal

I. Introduction

Limitations to existing hosting capacity and the risk of paying for substation-level interconnection upgrades continue to hold back the development, construction, and financing of distributed generation (“DG”) and energy storage systems (“ESS”) in New York, posing a fundamental risk to New York’s targets to deploy 6 GW of solar capacity by 2025 and 3 GW of energy storage capacity by 2030, as established in the Climate Leadership and Community Protection Act (CLCPA).¹ A first-mover project facing the daunting cost of upgrading a substation cannot be financed, even if such a project could afford to pay its pro rata share of the upgrade, as financiers are not willing to absorb the risk of future cost-sharing projects materializing and if so, the time durations around reimbursement to the first mover.

The existing cost-sharing mechanism as adopted in the Public Service Commission’s January 25, 2017 *Order Adopting Interconnection Management Plan and Cost Allocation Mechanism, and Making Other Findings*² attempted to address this problem by allowing first moving projects that bear 100 percent of the cost for a substation upgrade or to be reimbursed by subsequent projects benefiting from those upgrades. However, this provision provides no certainty that subsequent projects will materialize and reimbursement will in fact occur. Under the January 2017 Interconnection Management Plan and Cost-Sharing Order, the first-moving interconnecting customer develops and finances the project as if the cost-sharing mechanism were not available. As a result, the first-mover problem remains. Because no one project can risk paying the entire cost of a new or upgraded substation transformer bank, no DG/ESS projects are constructed in distribution-saturated areas, even if each project could afford to pay its pro rata share. To date, the mechanism set out in the January 2017 Interconnection Management Plan and Cost-Sharing Order has not resulted in any DG/ESS projects absorbing the first-mover impact and paying for transformer bank upgrades.

¹ Chapter 106 of the Laws of 2019. CLCPA is available at <https://legislation.nysenate.gov/pdf/bills/2019/S6599>

² Case 16-E-0560, *Joint Petition for Modifications to the New York State Standardized Interconnection Requirements and Application Process For New Distributed Generators 5 MW or Less Connected in Parallel with Utility Distribution Systems*, Order Adopting Interconnection Management Plan and Cost Allocation Mechanism, and Making Other Findings (issued January 25, 2017) (“January 2017 Interconnection Management Plan and Cost-Sharing Order”). In adopting the cost allocation mechanism, the Commission did so as an interim measure deeming it “a just and reasonable approach until such time that stakeholders have demonstrated that a superior solution should supplant this provision.” *Id.*, p. 29.

New York has connected 1,964 MW (2,551 MWdc)³ of distributed solar generation against the CLCPA goal of 6 GW by 2025 based on distributed solar projects in operation to date in the respective service territories of the Joint Utilities⁴ and PSEG-Long Island (“PSEG-LI”) as of August 31, 2020.⁵ It is imperative and timely that the existing cost-sharing mechanism is improved so as to mitigate the first-mover problem described above. A revised and improved cost-sharing mechanism, Cost Sharing 2.0, as proposed herein, will enable cost-effective expansion of available hosting capacity of the distribution system, and stimulate the expansion of DG/ESS deployment in line with the State’s ambitious electric sector and economy-wide decarbonization goals. A revised and improved cost-sharing mechanism will also support New York’s CLCPA goals of 70 percent renewable generation by 2030, 3 GW of energy storage by 2030, and 100 percent carbon-free electricity by 2040.

II. Purpose and Benefits

The provisions outlined in this proposal, which were developed by the Joint Utilities in collaboration with DG/ESS developers governed by the *New York Standardized Interconnection Requirements and Application Process For New Distributed Generators and Energy Storage Systems 5 MW or Less Connected in Parallel with Utility Distribution Systems* (“SIR”), expand on the existing cost-sharing mechanism adopted in the January 2017 Interconnection Management Plan and Cost-Sharing Order, and seek to remove the first-mover hurdle described above. At its core, the comprehensive, cost-sharing mechanism outlined in this proposal utilizes a pro rata concept where a project would pay for the specific distribution hosting capacity assigned to it, as opposed to the entire cost of the upgrade. This approach will:

1. Remove the “first-mover” burden on an Interconnection Customer, except as otherwise unavoidable;
2. Fairly allocate the cost of distribution system upgrades to individual DG/ESS projects;
3. Provide cost certainty to both the first-in-queue Interconnection Customer and all subsequent queued Interconnection Customers as to the cost upgrades for which they will be responsible;
4. Acknowledge that a subset of upgrades implemented by the Utility,⁶ under its capital plan, can be integrated to address system asset and reliability issues while also enabling the delivery of renewable energy;
5. Increase the likelihood of developer-funded substation upgrades; and

³ Assumes an AC-to-DC conversion factor of 129.9 percent.

⁴ The Joint Utilities are comprised of Central Hudson Gas & Electric Corporation, Consolidated Edison Company of New York, Inc., New York State Electric & Gas Corporation, Niagara Mohawk Power Corporation d/b/a National Grid (“National Grid”), Orange and Rockland Utilities, Inc., and Rochester Gas and Electric Corporation.

⁵ Extrapolated from NY DPS SIR Inventory Information, Utility Interconnection Queue Data (through August 31, 2020), based on installed distributed solar projects, *available at* <https://www3.dps.ny.gov/W/PSCWeb.nsf/All/286D2C179E9A5A8385257F003F1F7E?OpenDocument>

⁶ Utility as used herein refers to each of the Joint Utilities.

6. Facilitate more cost-effective and more rapid expansion of DG/ESS deployment in line with New York’s CLCPA targets for solar, energy storage, electric sector decarbonization, and economy-wide emissions reductions.

III. Cost Sharing 2.0 Proposal Provisions

The provisions outlined in this Cost Sharing 2.0 proposal apply to two categories of upgrades: Utility-Initiated and Market-Driven Upgrades.

A. Utility-Initiated DG/ESS Upgrade Mechanism

Multi-value Distribution Planning Upgrades

When a substation transformer bank (“bank”) installation/replacement is in a Utility’s capital work plan, the Utility is to consider options to upgrade the asset for greater hosting capacity rather than a replacement-in-kind. If the asset can be upgraded, thus increasing hosting capacity while solving a pre-existing asset condition, reliability, resiliency, or capacity issue, this will be considered a Multi-value Distribution (“MVD”) project. The Utility will cover the cost already in their capital plan for the in-kind replacement. If there is market interest to indicate DG/ESS growth on that bank, the Utility can replace the existing unit with a larger bank. Participants in this cost sharing will include the Triggering Project, defined as the first project or portion of the first project to exceed the capacity rating of the existing bank, thereby requiring an upgrade, and Sharing Projects, defined as projects with queue positions after the Triggering Project that would also require the upgrade (collectively, “Participating Projects”). Participating Projects will pay a pro-rata share based on project size and the incremental cost difference between replacing the Utility asset in-kind and the costs associated with upgrading to a larger unit.

Step 1: Identify Market Interest

When the Utility’s Capital Investment Plan (“CIP”) is released, the Utility will share the list of substations planned for major upgrades. The CIP will outline the projects based on their planned design/construction schedule, deadline for DG/ESS applications, and an estimate of additional funds required to upgrade that substation for creating additional hosting capacity. The CIP is published on the Utility system data portals. Existing Sharing Projects with a queue position after the Triggering Project are automatically opted in to this process.

At the Utility’s discretion, a window will open for additional DG/ESS developers to submit their interconnection applications based on the deadline stated in the published list of projects.⁷

⁷ This shared list will show substations in the CIP that would be eligible for a MVD project available for developer participation.

Step 2: DG/ESS Commitments

After the deadline, the Utility will calculate a cost per kW for shared upgrades identified for each project. This estimated cost per kW multiplied by the project capacity will be used for the study estimate for each project included in the Participating Projects at that substation.

Based on the number of DG/ESS applicants that commit to pay, the Utility will have the discretion to move ahead with the upgrade at a given substation. No payments will be refunded to Triggering Projects or Sharing Projects that cancel after making the full payment until/unless a subsequent project(s) take their place by making their full payment.

For example: If the Utility is replacing a 25MVA transformer in kind due to an asset condition issue, the Utility will review market interest and determine if it can upgrade to a 40MVA transformer. If so, the Utility will pay for the cost of a 25MVA transformer replacement, and any cost difference between the 25MVA bank and a 40 MVA bank will be the responsibility of Participating Projects. In this example, if the incremental difference between a 25MVA bank and 40MVA bank is \$750,000, and the upgrade creates 15MVA of additional capacity, then the Triggering Project and Sharing Projects will contribute \$50,000 per MW of their respective project capacities.

Proactive 3V0 Upgrades

The Proactive 3V0 Distributed Generation Interconnection mechanism provides customers the opportunity to connect their distributed generation projects (sized 50 kW or above) to the Utility's electric system expediently at designated locations utilizing an alternative cost allocation methodology for ground fault (or zero sequence) overvoltage ("3V0") upgrades that is intended to facilitate timely and cost-effective interconnections.

The Utility, at its discretion, may undertake 3V0 upgrades at designated substations, as determined by the Utility, for the purpose of adding capacity to such substations that will enable a certain level of DG/ESS to connect to the system without adversely impacting reliability or safety. The Utility will make these locations known to customers and developers through its system data portal. Customers will apply for interconnection by following the application process in the SIR. The SIR will be amended to reflect Cost Sharing 2.0 to state that the Utility will notify the interconnection customer if their project is eligible for Cost Sharing 2.0. The Utility will only accept projects at a 3V0 substation up to the maximum capacity available at the site for reliable and safe operation.

B. Market-Initiated DG/ESS Upgrade Mechanism

Types of Qualifying Upgrades:

1. Qualifying upgrades will be limited to those which result in an increase to the hosting capacity of the Utility's distribution system beyond that required to interconnect the Triggering Project (*i.e.*, "Qualifying Upgrade"). The mechanics of Cost Sharing 2.0 shall be somewhat different for each type of Qualifying Upgrade, as set forth in the "CESIR Process" section below. Qualifying Upgrades will include, but are not limited to:
 - a. Substation Upgrades – Other than Substation Transformer Installation/Upgrade
 - i. 3V0 substation upgrades
 - ii. Substation load tap changers ("LTCs") or relay modifications
 - iii. Substation modifications allowing for the implementation of advance inverter or command/control schema
 - b. Substation Transformer Installation/Upgrade (size increase) and associated equipment installation / upgrades.
 - c. Distribution/ Sub-transmission Line Upgrade
 - i. Three-phase extensions
 - ii. Three-phase line reconductoring
 - iii. New three-phase feeders
2. Upgrades excluded from participating in Cost Sharing 2.0 ("Non-Qualifying Upgrades") include:
 - a. Assets dedicated solely to the interconnection of any one particular project that will not provide a hosting capacity benefit for other DG/ESS projects.
 - b. Any upgrade whose gross cost is less than \$250,000.
 - c. Interconnection upgrades on the Utility's secondary network system.

Project Profiles to Be Considered in Site Selection and Eligible for the Market-Initiated DG/ESS Upgrade Mechanism

1. Participating Projects must be greater than 50 kW AC nameplate rating in size, or Participating Projects proposed by the same developer, within a six-month period, must be greater than 50 kW AC nameplate rating in aggregate.
2. The term "developer" is defined as the entity which submits the interconnection application. A single developer includes all legal entities associated or affiliated with a given company ("Affiliates") where Affiliates means any person controlling, controlled by, or under common control with, any other person; where "control" shall mean the ownership of, with right to vote, 50 percent or more of the outstanding voting securities, equity, membership interests, or equivalent, of such person.

C. CESIR Process for Utility and Market Initiated DER Upgrade Mechanism:

When, throughout the course of normal study, the determination is made that a Qualifying Upgrade is required to interconnect the Triggering Project, the Utility will discuss the upgrade required with the Triggering Project and if agreed, proceed with a more detailed study to provide an estimated cost for the required upgrade. As part of the project's Coordinated Electric System Interconnection Review ("CESIR") process under the SIR, the Utility will determine the gross cost of that modification ("Qualifying Upgrade Cost") and the net increase in hosting capacity that would result from the construction of that modification. The Utility shall be granted an additional forty (40) business days for a total of one hundred (100) business days to complete the CESIR. Once the Utility has identified the need for a Qualifying Upgrade, the Utility will present the use case and specifics in an exhibit to the CESIR entitled "Qualifying Upgrade Disclosure" to include the following items:

1. The technology option(s) considered to address the electric system impacts.
2. Total estimated Qualifying Upgrade Cost and increase in hosting capacity as well as the resulting capacity increase shared cost expressed in AC-Watt.

The Qualifying Upgrade Disclosure will be published in the following manner:

1. To the Triggering Project and any subsequently-queued Sharing Projects as an exhibit in their respective CESIRs.
2. To the general market via a notice posted on the Utility's system data portal, and/or other means.
3. To the New York State Department of Public Service and New York State Energy Research and Development Authority ("NYSERDA") via an email to the respective DG Ombudspersons.

The Qualifying Upgrade Cost shall be assigned to both the Triggering Project and Sharing Projects via their respective CESIRs, in the following manner:

1. Substation Upgrades Other than Transformer Installation/Upgrade
 - a. The CESIR shall include a Qualifying Upgrade Charge equal to the Capacity Increase Shared Cost (per AC-Watt) times the capacity of the interconnecting project.
 - b. Payments in full of the CESIR estimate shall be made as set forth in the SIR.
 - c. Construction of the upgrade shall begin once full payment of the estimate in the CESIR has been made by the Triggering Project, or the Sharing Project(s).

- d. No costs shall be refunded to Triggering Projects or Sharing Projects that cancel after making the full payment until/unless a subsequent project(s) take their place by making full payment.

2. Substation Transformer and Associated Equipment Installation/Upgrade

- a. The CESIR shall include a Qualifying Upgrade Charge equal to the Capacity Increase Shared Cost (per AC-Watt) times the capacity of the interconnecting project. This charge shall include the cost of the transformer work plus any additional work required in the substation to accommodate the upgrade (e.g., switchgears, station expansion, etc).
- b. Payments in full of the CESIR estimate shall be made as set forth in the SIR.
- c. Construction of the upgrade shall begin once full payment has been made by the Triggering Project, and/or Sharing Project(s), equal to at least 75 percent of the total Capacity Increase Shared Cost.

For example, consider a scenario where DG/ESS projects in queue trigger a bank upgrade. If the cost of the upgrade is \$6M, then the Utility will proceed with the upgrade once it collects at least \$4.5M (75% of the \$6M cost of the upgrade).

- d. No costs shall be refunded to the Triggering Project or the Sharing Project(s) that cancel after making the full payment until/unless a subsequent project(s) take their place by making full payment. If the 75 percent of the total Capacity Increase Shared Cost is not collected within 12 months of a project paying their full construction contribution, meaning not enough funds were collected to begin the upgrade, then the project may request a refund.

3. Distribution/ Sub-transmission Line Upgrades

- a. The Triggering Project shall be charged for the full cost of the Qualifying Upgrade as established in its CESIR.
- b. The initial 25 percent payment and the subsequent 75 percent payment shall be made as set forth in the SIR.
- c. The circuit shall, at the time the 25 percent payment is made by the Triggering Project, be designated as a “DG/ESS Encumbered Line.”
- d. Construction of the upgrade shall begin once full payment has been made by the Triggering Project.
- e. Any Sharing Project(s) above 50 kW that later proceed to CESIR will be charged their pro rata share of the Qualifying Upgrade Cost in the manner set forth in this Section. Projects that would not otherwise trigger an upgrade would not be considered a Sharing Project. Pro rata share for distribution upgrades will be

based on the capacity and footage used of the DG/ESS project.

- f. Upon Sharing Projects making their full payment, Triggering Projects and previously paid Sharing Projects shall be reimbursed by the Utility,* with contribution to be calculated based on project size and footage utilized as detailed in attached Appendix A. After five years from the first project interconnection, or when the first mover's contribution becomes less than \$100,000 after reimbursement, whichever comes first, the line will no longer be considered a "DG/ESS Encumbered Line."
- g. No costs shall be refunded to Sharing Projects that cancel after making full payment until/unless a subsequent project(s) takes their place by making their full payment.

* NOTE: As there is currently no method of reimbursing a project prior to the reconciliation process for estimated upgrade costs versus actual costs, additional analysis by the Joint Utilities is required to determine a potential method of providing reimbursement prior to reconciliation. The Joint Utilities will commence this analysis within four months of a Commission order adopting Cost Sharing 2.0.

D. Allocation / Recovery of Unrecovered Costs

The Utility will determine the Interconnection Fee (\$/kW) by dividing the sum of the total costs of the Qualifying Upgrades at the designated locations by a factor representing the sum of the total hosting capacity in kW of that designated location. The Utility will reconcile the outstanding upgrade costs, including carrying charges using the weighted pretax cost of capital, on an annual basis, or more frequently, if needed.

Under this mechanism, costs of Qualifying Upgrades that are not recovered by additional Sharing Projects being developed would be deferred until the Utility's next rate plan period for rate base for recovery. Unrecovered costs will be limited to no more than 2 percent of a Utility's distribution/sub-transmission electric capital investment budget per fiscal year, after which any Qualifying Upgrades will require full (100%) funding from Triggering Projects and Sharing Projects prior to utility mobilization for their construction. The cap will be updated annually and calculated as a rolling five-year average of each Utility's forecasted distribution/sub-transmission electric capital investment for the impacted year and the next four years according to each Utility's current capital plan.

E. Customer Impact

The pro rata funding concept advanced in Cost Sharing 2.0 for shared distribution-level upgrades and the associated Utility mobilization for construction of the upgrade prior to receiving full payment for the cost for the upgrade leave open the possibility of costs associated with

unsubscribed capacity that may not eventually be recovered from DG/ESS projects, and after a period of time, are incorporated into the Utility's rate base for recovery as described above.

In order to mitigate potential unrecovered costs and their impact on Utility customers, Cost Sharing 2.0 limits such costs to no more than 2 percent of a Utility's distribution/sub-transmission electric capital investment budget per fiscal year as described in above. Further, as outlined above, this proposal requires that 75 percent of the upgrade cost for large substation transformer bank upgrades must be paid for by interconnecting projects before the Utility will proceed with the upgrade, ensuring that a maximum of only 25 percent of the cost has the potential to be unrecovered.

To better understand the potential Utility customer impact stemming from this Cost Sharing 2.0 proposal, the Joint Utilities conducted analysis assuming the worst-case scenario for unrecovered costs, where the 2 percent annual cap is reached and costs associated with unsubscribed capacity are not recovered in subsequent years of the Utility's next rate period, and comparing the unrecovered costs corresponding to the 2 percent cap to total delivery revenues. Based on this analysis, the maximum impact to rate base as a function of delivery revenues ranges from 0.03 percent to 0.49 percent depending on the Utility in question.

It is important to clarify that the theoretical impacts quantified here are based on a worst-case scenario where the likelihood of manifesting in practice is *de minimis*, as demonstrated by projects such as National Grid's Distributed Generation Interconnection REV Demonstration Project. Through this demonstration project, National Grid has proactively installed several 3V0 substation upgrades in an attempt to facilitate DG/ESS development and interconnection activity, then collecting pro rata cost contributions from interconnecting projects based on the amount of hosting capacity enabled and the size of the interconnecting project. The first phase consisted of two substations, which have been completely subscribed and costs recovered by interconnecting projects. The second phase was expanded to four additional substations, with those stations currently subscribed at 90 percent of the additional hosting capacity provided by the 3V0 upgrades.

There are a number of indicators that the pipeline of DG/ESS projects will end up fully subscribing to any new hosting capacity created via the pro rata cost contribution concept advanced in this Cost Sharing 2.0 proposal. First, there is the success of the National Grid demonstration project. Second, there is a high volume of DG/ESS projects in the SIR interconnection queue across the Joint Utilities, totaling nearly 5,100 MW of solar, over 1,100 MW of ESS, and over 350 MW of other DG technologies as of August 31, 2020.⁸ Third, the Joint Utilities collectively have 64 substation transformers with higher volumes of DG/ESS

⁸ NY DPS SIR Inventory Information, Utility Interconnection Queue Data (through August 31, 2020), *supra*, note 5.

connected and/or in queue than the capacity of those transformers as of August 31, 2020,⁹ which is indicative of the demand for transformer upgrades.

F. Capital Project Queue

When the Utility is planning a capital upgrade, the Utility will create a Capital Project Queue at the substation or feeder level for DG/ESS applications unable to interconnect due to the pending upgrade.

The Utility will note on its Hosting Capacity map within the Notes section that the station/feeder is impacted by the Capital Project Queue due to future work, and Hosting Capacity is currently “0”.

- 1) If a DG/ESS project submits an application via the SIR process, the application will follow the normal SIR process, including the assignment of an Application Approved Date. For existing applications, the Utility will place a project in the Capital Queue if the applicant consents. For new applications, the DG/ESS project will be placed into a Capital Project Queue at the preliminary analysis stage. Standard SIR timelines will be suspended for projects in the Capital Project Queue.
- 2) When the Utility upgrade for a given substation is within 18 months of the expected completion date, the projects will be removed from the Capital Project Queue for that substation and the projects will advance through the remaining SIR steps based on their original Application Approved Date.

G. Cost-Sharing Applicability to Projects in Queue

Projects that are in-queue at the time the proposed cost-sharing mechanism advanced in this Cost Sharing 2.0 proposal is adopted by the Commission are proposed to be treated per below:

- For projects prior to CESIR, Cost Sharing 2.0 shall apply.
- For projects in CESIR, Cost Sharing 2.0 shall apply. If there are 15 business days or less of time left in the CESIR timeline, the Utility has an additional 15 business days to integrate the new cost-sharing mechanism into the CESIR.
- For projects with the CESIR completed but prior to the initial 25 percent payment, the interconnecting customer can request an evaluation of the completed CESIR to determine if items identified in the completed CESIR would be subject to new cost-sharing mechanism. Projects that have made the initial 25 percent payment may also request a review for applicability of the new cost-sharing mechanism.
- Projects that have made full payment prior to the new cost-sharing mechanism adoption are not eligible for the new cost-sharing mechanism.

⁹ *Id.*

Appendix A

Calculating Encumbered Line Cost-Sharing Contribution of DG/ESS Projects

First, determine capacity contribution by taking the contributing project's capacity divided by sum of all projects sharing the line:

Example: If first mover is 5 MW and second project is 3 MW, then the second project's capacity contribution would be $3/(5+3) = 0.375$

Then, determine percentage of distribution line footage contribution* by dividing contributing project's footage use divided by first mover project's footage. If the contributing project uses more than the first mover's footage, then the contributing project's footage percentage will be 100 percent:

Example 1: If first mover is 5,000 feet and second project is 4,000 feet, then the second project's footage contribution would be $(4,000/5,000) = 0.80$.

Example 2: If the first mover is 5,000 feet and the second project is 6,000 feet, then the second project's footage factor would be 1.00 for the cost sharing-eligible portion of the line, and the last 1,000 feet would be fully billable to the second project.

Finally, multiply capacity contribution and footage contribution percentages together to get the final percentage contribution:

Example: $(0.375 \times 0.800) = 0.30$, meaning the second project would contribute 30 percent of the original cost toward the first mover.

Calculations Summary (Contributing project is defined as a project that is eligible for cost sharing after the first mover):

$$\frac{\text{(Capacity of Contributing Project)}}{\text{(Sum of all participating projects on the line)}} \times \frac{\text{(Footage of Contributing Project)**}}{\text{(Footage of First Mover)}}$$

* Cost sharing for *devices* would be based on capacity only, not the product of capacity and footage.

**If distribution line footage of contributing project is greater than or equal to footage of the first mover, then footage factor equals 1.00.