

STATE OF NEW YORK
PUBLIC SERVICE COMMISSION

At a session of the Public Service
Commission held in the City of
Albany on February 13, 2025

COMMISSIONERS PRESENT:

Rory M. Christian, Chair
James S. Alesi
David J. Valesky
John B. Maggiore
Uchenna S. Bright
Denise M. Sheehan
Radina R. Valova

CASE 24-E-0414 - Petition of New York Solar Energy Industries Association Seeking Modifications to the New York State Standardized Interconnection Requirements to Allow Use of Alternative Forms of Financial Security for Distribution Upgrades in Excess of \$500,000 for New Distributed Generators and/or Energy Storage Systems 5 MW or Less Connected in Parallel with Utility Distribution Systems.

ORDER GRANTING PETITION WITH MODIFICATIONS

(Issued and Effective February 14, 2025)

BY THE COMMISSION:

INTRODUCTION

On July 9, 2024, the New York Solar Energy Industries Association (NYSEIA) filed a petition (Petition) seeking modifications to the New York State Standardized Interconnection Requirements and Application Process for New Distributed Generators and/or Energy Storage Systems 5 MW or Less Connected

in Parallel with Utility Distribution Systems (SIRs).¹ The modifications proposed by NYSEIA would allow the use of non-cash forms of financial security to satisfy an interconnection applicant's obligations to make advance payments at various steps in the interconnection process. By this Order, the Commission grants the Petition, with modifications.

THE PETITION

NYSEIA asks the Commission to modify the SIRs to allow interconnection applicants to use surety bonds, letters of credit (LOCs), and other forms of security in lieu of cash deposits for system upgrades. According to NYSEIA, the requirement in the SIRs for upfront cash deposits is inefficient, especially as upgrades become more complex and expensive, because it compels distributed energy resource (DER) developers to lock up expensive capital years before utilities actually need the funds to construct the upgrades.

NYSEIA acknowledges that the advance payments serve to demonstrate an applicant's financial commitment to a project, hold its queue position, and provide assurance of payment for a shared upgrade under the SIRs' cost sharing rules. However, NYSEIA asserts that other commercially available financial instruments can fulfill the same objectives more efficiently. NYSEIA notes that surety bonds and LOCs are commonly accepted forms of financial security used by large utilities, such as

¹ The current New York State SIRs and Application Process for New Distributed Generators and/or Energy Storage Systems 5 MW or Less Connected in Parallel with Utility Distribution Systems are available on the Distributed Generation webpage of the Department of Public Service:
<https://dps.ny.gov/distributed-generation-information>.

Southern California Edison,² and by New York's investor-owned utilities, which accept non-cash instruments for utility-scale projects interconnecting at the transmission level under the New York Independent System Operator, Inc. (NYISO) interconnection tariff.³

NYSEIA proposes to implement the non-cash option through changes to existing Section 1-D of the SIRs, which sets out the timing of interconnection applicants' deposit payments.⁴

In a redline of the SIRs submitted with the Petition, NYSEIA provides seven scenarios illustrating the circumstances in which applicants would be allowed to use security and when they would be required to replace that security with cash. The first scenario establishes that the security option would not be available for upgrades estimated to cost \$500,000 or less. For the second scenario, which covers non-shared upgrades estimated to cost over \$500,000, security would be allowed at the 25% payment date, to be replaced by cash in the full amount of the cost estimate at the 75% milestone.⁵ Under the third and fourth

² NYSEIA references the Generator Interconnection Agreement of Southern California Edison:
https://www.sce.com/sites/default/files/2021-10/10_SCE%20WDAT%20GIP%20Attach%20I%20Appendix%206.2_6%2025%2021-ER19-2505-005%20Motion.pdf.

³ NYSEIA references a NYISO slide presentation on credit instruments for interconnection customers:
<https://www.nyiso.com/documents/20142/44095278/Customer%20Focus%20Group%2004152024%20-%20Credit%20Instruments%20-%20Final.pdf/3e659aa1-71c5-62a5-76d6-c7615255e5ed>.

⁴ Under the SIRs, deposits are due at specific milestones following completion of the utility's detailed study of the proposed interconnection and delivery of the utility's estimate of the upgrade costs. The study required by the SIRs is the Coordinated Electric System Interconnection Review (CESIR).

⁵ Non-shared upgrades include Non-Qualifying Upgrades and line extension Qualifying Upgrades.

scenarios, Qualifying Upgrades that are subject to cost sharing, with the exception of transformer banks,⁶ NYSEIA proposes that the developer be permitted to post security at the 25% and 75% milestones, to be replaced by cash at the point in time when the cost sharing provisions of the SIRs allow the utility to begin constructing the Qualifying Upgrade.⁷

In the fifth and sixth scenarios, NYSEIA suggests a two-step process for Qualifying Upgrades that include transformer banks. Following the posting of security, subsequent cash payments would be due in two increments.⁸ The first increment, limited to a percentage of total upgrade costs based upon the value of long lead time equipment, would be due at the point where the utility has collected 75% of the Qualifying Upgrade cost (through cash or security).⁹ The second payment increment would be due when the utility actually mobilizes for construction.

The seventh and final scenario described by NYSEIA involves both line upgrades and other Qualifying Upgrades for which the SIR mobilization threshold has not been reached. The proposal would allow for financial security at the 25% and 75%

⁶ A Qualifying Upgrade, as defined in the SIRs, is a system modification, with estimated costs exceeding \$250,000, that is designed to increase the Hosting Capacity of the utility's distribution system beyond what is required to interconnect a Triggering Project, and that can be shared by multiple Distributed Generation/Energy Storage System projects. See, SIRs, Section III.

⁷ For these types of upgrades, the utility is allowed to proceed once it collects developer cost shares amounting to 25% of the Qualifying Upgrade cost. See, SIRs, Appendix E.

⁸ Qualifying Upgrades that include transformer banks are the costliest type of shared upgrade.

⁹ This is the mobilization threshold defined in Appendix E of the SIRs.

payment due dates and 100% cash would be due when developer participation in the last Qualifying Upgrade achieves the mobilization threshold.

As proposed, a utility would be authorized to remove an application from the queue for failure to post acceptable security on time. NYSEIA also recommends that the Commission require a utility to notify a developer, who has posted security, when a cash payment becomes due and then allow time for the developer to replace the security with cash or to simply allow the utility to draw on the security. Utilities would be required to return the security within 15 business days after receiving the substitute cash payment. In addition, the proposal would allow a utility to charge applicants a \$500 non-refundable administrative fee.

PUBLIC NOTICE

Pursuant to the State Administrative Procedure Act (SAPA) §202(1), a Notice of Proposed Rule Making was published in the State Register on August 7, 2024 [SAPA No. 24-E-0414SP1] regarding the Petition. In addition, on August 21, 2024, the Secretary to the Commission issued a Notice Soliciting Comments on the Petition. On October 3, 2024, the Secretary extended the deadline to submit comments until October 11, 2024, in response to a request by the Joint Utilities (JU).¹⁰ The comments are summarized and addressed below.

¹⁰ The Joint Utilities are 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.

COMMENTS

Carson Power LLC (Carson Power), CVE North America (CVE), Inc., Distributed Sun LLC, Green Lantern Development, LLC (d/b/a Green Lantern Solar), GS Power Partners (GS), Kendall Sustainable Infrastructure, LLC, Scale Microgrids, Solar Liberty, Soltage, United States Solar Corporation (US Solar), and U.S. Light Energy (collectively, the Supporters) express strong support for the Petition and raise substantially similar points in their comments. The Supporters of the Petition explain that allowing alternative forms of financial security, such as surety bonds and letters of credit, would benefit DER developers by providing financial flexibility and reducing barriers to project development. They indicate that the requirement in the current SIRs for upfront cash payments has created substantial financial strain for their companies and often forces them to delay or cancel projects that would otherwise be viable because of the high cost and challenge of securing financing for large deposits. According to the Supporters, allowing the deposit alternatives proposed by NYSEIA would ease those pressures, reduce the costs of financing, and enable developers to optimize cash flow. The Supporters note that the deposit alternatives would provide utilities with assurance of payment, without locking up capital in cash deposits, long before utilities actually need the funds to complete distribution upgrades.

In addition to the common themes, some of the Supporters shared feedback that was particular to their organization. Carson Power notes that it would have benefited from the modifications proposed by NYSEIA. As an example, it mentions that one of its projects faced upgrades costs exceeding \$2.6 million, which constrained its ability to pursue parallel developments and caused it to incur substantial financing costs

long before the funds were actually needed for upgrades. Similarly, CVE shares that it is developing multiple projects that have been financially burdened by the high up-front cash payments required under the current SIRs. CVE indicates that one of its projects included upgrade costs exceeding \$500,000 that resulted in substantial financing costs well before the funds were needed by the utility, and consequently constrained CVE's ability to pursue parallel developments.

City of New York

The City of New York (the City or NYC) urges the Commission to approve the changes to the SIRs requested by NYSEIA. The City notes that there has been a regional imbalance between upstate and downstate renewable energy development and that much of the inequity is due to the high costs of developing projects in the City. It believes that the SIRs modifications proposed by NYSEIA would be a step in the direction of mitigating the cost barriers to developing renewable energy in the City.

NYC indicates that it is pursuing its own portfolio of distributed solar projects with development partners and that it is beginning to experience increasing interconnection costs. The City expresses support for reducing the soft costs of project development while acknowledging that the purposes of the advanced payments is to ensure that developers are able to finance the necessary upgrades. However, NYC points out that cash is not the only way to demonstrate financial competency and commitment, noting that other utilities across the country accept alternative forms of security, such as surety bonds and letter of credit to serve the same purpose.

Joint Utilities (JU)

The JU concur with NYSEIA on the benefits of non-cash options, but do not support all aspects of NYSEIA's proposal.

First, they suggest that the Commission should only allow the use of Standby LOCs (SLOCs) and reject the proposal to use surety bonds because of risks and collection challenges associated with surety bonds. The JU note that surety bonds are not cash equivalents, and that commercial LOCs are better suited to sales of goods as direct payment devices because of conditions related to withdrawal and payment limitations. However, the JU propose an implementation framework in the event that the Commission adopts the use of surety bonds as an alternative form of financial security.

The JU recommend that the Commission establish minimum issuer requirements, as the NYISO and each of the utilities currently impose on LOCs for transmission-level system upgrades. The JU note that such LOCs must be issued or guaranteed by an approved U.S. or Canadian commercial bank with at least an "A" rating from Standard & Poor's, Fitch, Moody's, or Dominion. If an issuer does not meet those minimum standards, the LOC must be confirmed by another financial institution that meets the rating requirements. Additionally, if an issuer no longer meets the requirements, utilities can require a replacement LOC that meets the standards.

The JU further assert that the appropriate threshold for allowing security instead of cash should be set at \$1 million for a trial period of 18 months, after which the threshold might be lowered. The JU explain that a \$1 million threshold more accurately reflects the scale of projects where financial complexity and risk justify the initial use of a LOC.

The JU propose that they be given 120 business days to develop standard forms that would effectively model the NYISO's approach. Each utility would then file the standardized forms for stakeholder review and comment.

The JU also suggest that developers should pay the full cost associated with administering LOCs. The JU propose that the Interconnection Policy Working Group (IPWG) explore appropriate fees and billing mechanisms over the course of 18 months to provide a clearer picture of the costs of managing LOCs and their impacts. In addition, the JU recommend that the SIRs clarify that applicants remain responsible for paying invoices and that LOCs will only be drawn upon by a utility in the event of a payment default, particularly in cases of bankruptcy, refusal to pay invoices, or disputes over unpaid invoices.

The JU agree with NYSEIA that security is appropriate at the 25% milestone but argue that subsequent payments should be made in cash in certain scenarios. With respect to Qualifying Upgrades, they submit a proposed schedule for replacing a SLOC with cash payments that varies in some details from NYSEIA's seven scenarios. Most notably, the JU propose refinements to the payment process for Qualifying Upgrades that include transformer banks.

New York Power Authority (NYPA)

NYPA supports NYSEIA's proposal, noting that DER projects have faced increased costs and longer timelines for upgrades required for interconnections. According to NYPA, the cash payments currently required under the SIRs well in advance of utilities beginning work creates a burden for developers to deploy or finance capital well before it is required to support the necessary infrastructure. NYPA indicates that this concern can be particularly acute for NYPA customers, which include State agencies and local governments through its DER Advisory Program. NYPA explains that projects for its governmental customers are subject to oversight and review processes that are different from private entities and include approvals by the

Office of the New York State Comptroller, New York State Attorney General's Office, and Town Boards or City Councils, which can mean that projects may still be awaiting approvals after interconnection deposits are due. NYPA suggests that allowing acceptable forms of security in place of cash deposits will provide flexibility to such projects while shielding ratepayers and utilities from the obligation to pay for the upgrades. NYPA notes that requiring security instruments to be payable on demand can provide protection and reduce the likelihood that ratepayers would be left responsible. NYPA further notes that allowing LOCs or other acceptable forms of security is consistent with the NYISO interconnection process under which developers often post non-cash security.¹¹

Nexamp

Nexamp indicates that it is the largest developer, owner, and operator of community solar assets in the United States. Nexamp supports NYSEIA's proposal for the use of non-cash forms of financial security, such as LOCs and surety bonds. However, Nexamp recommends that the Commission eliminate the threshold of \$500,000 in estimated upgrade costs and allow securities to be used for any upgrades in order to increase the number of megawatts on the grid and support New York State's clean energy goals and utility targets. Nexamp explains that allowing the use of non-cash securities would improve cash flow for developers and enable more opportunities for solar penetration across New York State. Nexamp expresses support for the requirement to make advance payments to demonstrate commitment and financial capacity for a project but believes

¹¹ NYPA references the NYISO Open Access Transmission Tariff, 40.1 Attachment HH, definition of "Security."

that the same certainty could be achieved through LOCs and surety bonds.

Nexamp identifies several benefits of allowing non-cash securities, including (1) enhanced grid flexibility and planning for utilities as they are able to more effectively incorporate DERs into grid planning, (2) encouraging innovation and new market entrants by lowering financial barriers and leading to the development of more efficient technologies and business models that benefit consumers and the overall market, (3) mitigating financial risk to developers to keep projects economically viable and freeing up resources that can be put toward more projects and grow renewable energy across the State, and (4) alignment with modern utility business models focused on flexibility, customer engagement, and the efficient use of capital.

RIC Energy (RIC)

RIC characterizes upfront cash deposits as one of the major challenges facing DER developers in New York State. RIC supports the Petition, which it believes offers a solution that is practical and reasonable for both DER developers and utilities. RIC indicates that the upfront cash payments keep developers' capital tied up long before the money is actually spent as the upgrades typically take more than two years to complete. RIC notes that the cost to secure financing for DER projects is increasing and the cash deposits are creating situations where developers may have to choose between several strong projects, which is beginning to have a more significant impact on the ability of the industry to deploy DERs to the grid. RIC points to non-cash securities as a well-established practice that utilities and developers are experienced with for projects seeking to interconnect at the transmission level. RIC also notes that developers and utilities have already

conceptually agreed upon the use of securities in lieu of deposits through discussions in the IPWG for over a year.

NYSEIA

In reply comments, NYSEIA objects to the JU's proposal to exclude surety bonds. NYSEIA asserts that surety bonds are cheaper than LOCs and provide greater liquidity to developers. According to NYSEIA, the purpose of the current requirement for deposits is not to provide a cash equivalent but rather to provide a financial commitment to hold a developer's queue position and to provide the utility with certainty of payment. NYSEIA notes that its proposal does not call for utilities to mobilize for construction before receiving a cash payment. NYSEIA further notes that surety carriers are well established and provide investment grade security that is no more difficult to administer than LOCs.

NYSEIA acknowledges some of the differences between standby and commercial LOCs articulated by the JU, specifically that standby LOCs are only drawn upon in the event of default, whereas commercial LOCs are drawn upon when certain conditions are satisfied. NYSEIA expects that commercial LOCs are more likely to be used for transformer bank upgrades where multiple payments would be made in accordance with a milestone payment schedule. NYSEIA urges the Commission to authorize standby LOCs, commercial LOCs, and surety bonds as acceptable cash deposit alternatives for distribution upgrades exceeding \$500,000, thereby providing flexibility and options to developers.

However, NYSEIA concurs with the JU that guidelines should be established if the Commission authorizes the use of surety bonds to ensure that surety bonds are issued by creditworthy financial institutions to protect against risk of nonpayment. NYSEIA supports the JU's recommendation that

issuers of alternative forms of security should meet high creditworthiness standards. For surety bonds, NYSEIA supports industry standards that the surety be required to maintain an "A" A.M. Best rating and that the surety be treasury listed. For LOCs, NYSEIA supports a minimum requirement of an investment grade rating for the issuer. NYSEIA also encourages the Commission to provide a waiver for financial institutions that are an arm of New York State government, such as the NY Green Bank.

NYSEIA opposes the JU's recommendation to set the threshold for cash deposit alternatives to upgrades exceeding \$1 million for 18 months. NYSEIA believes that such a threshold will limit the usefulness and impact of the alternatives. NYSEIA also asserts that the JU has not substantiated its claim that administering alternatives is more burdensome than cash accounting. NYSEIA does not object to the JU's proposal that interconnection customers pay for administrative costs associated with the cash deposit alternatives. NYSEIA notes that administrative fee amounts were negotiated with the JU in the IPWG and agreed to by stakeholders. NYSEIA does not object to utilities tracking their administrative costs and sharing that data with the IPWG so that fees and billing mechanisms can be explored over an 18-month period. NYSEIA would like the JU to track and disclose the costs of distribution upgrades.

NYSEIA requests that the JU's proposed 120 business-day timeline to submit standardized forms for stakeholder consideration be shortened to 60 business days. NYSEIA explains that the NYISO already has standard language and templates that could be used as a starting point. NYSEIA also reminds the Commission that the JU already accept alternative forms of security for transmission-level upgrades and that this topic was discussed at length in the IPWG in 2023 and 2024. NYSEIA also

acknowledges that the financial institutions often have their own standard forms and requests that the JU review and consider reasonable deviations from their standard forms in a timely manner.

NYSEIA agrees with the JU that cash deposit alternatives should only be used for the initial 25% payment milestone, where the cost sharing mobilization threshold has not yet been reached, or, in the case of transformer upgrades, according to the payment schedule proposed by NYSEIA. However, NYSEIA objects to the JU's request that payments be remitted directly from the interconnection customer to the utility and not by the financial institution issuing the financial security. NYSEIA notes that in the case of commercial LOCs, the expectation is for the financial institution to remit payment to the recipient as conditions are satisfied.

NY Green Bank

NY Green Bank (NYGB), a division of the New York State Energy Research and Development Authority, expresses support for the efforts by NYSEIA and the JU to develop consensus on the use of alternative forms of financial security for distribution upgrades. In its comments, NYGB indicates that it has provided over \$130 million in committed loan facilities for DER developers' interconnection needs, including to make cash advance payments. NYGB notes that it has remained one of the very few providers of interconnection financing in New York because of the early stage that cash payments are requested, the relatively small project size, administrative complexity, and credit risk.

NYGB supports NYSEIA's request to use both LOCs and surety bonds as financial security until a utility mobilizes for construction or makes payment for a transformer bank upgrade. NYGB advocates for allowing surety bonds from well-capitalized

carriers in good standing.¹² In its comments, NYGB cautions against implementing overly narrow requirements for acceptable forms of LOCs and issuers. Instead, NYGB recommends that the Commission enable NYGB and other institutions in the Coalition for Green Capital to issue LOCs on behalf of developers. Additionally, NYGB suggests that LOCs issued by insured U.S. chartered commercial banks on the Federal Reserve Statistical Release of Large Commercial Banks¹³ and U.S. branches of foreign banks with investment grade ratings should be accepted. NYGB notes that utilities can achieve their recovery and risk mitigation objectives by establishing standardized forms of LOCs and setting exposure limits per issuing financial institution.

NYGB agrees with NYSEIA that an upgrade threshold higher than \$500,000 would reduce the positive impact of NYSEIA's proposal. NYGB also explains that LOC issuers assess project pipelines and risk on a portfolio-wide basis and thus, a larger project portfolio could increase the participation of financial institutions in such financings.

NYGB supports the use of standardized forms, where possible, to promote efficiency and reduce both variability and costs. However, NYGB favors a 60-business day timeframe for reviewing standardized forms and issuer qualifications, rather than the 120-business day period proposed by the JU. NYGB recommends that the smaller size of upgrades for DERs, relative to utility-scale upgrades, should be considered, and that the standardized forms specify a mobilization trigger and timeline

¹² NYGB offers the following list as an example:
<https://www.fiscal.treasury.gov/surety-bonds/list-certified-companies.html>.

¹³ NYGB references:
<https://www.federalreserve.gov/releases/lbr/current/>.

for a developer to replace the alternative security with a cash deposit.

NYGB concurs with both the JU and NYSEIA that applicants should bear the administrative costs associated with the use of LOCs, noting that applicants already pay interest and fees under interconnection loan facilities. NYGB expects that the costs of using LOCs will be considerably lower than the cost of loans to fund interconnection deposits or the cost of using developers' own equity.

NYGB suggests that alternative security be allowed to remain in place until either the mobilization threshold or the equipment payment milestone is reached, upon which a developer would have five business days to replace the security with cash, or, in the case of default, there would be an immediate drawdown on the security.

LEGAL AUTHORITY

Public Service Law (PSL) §§5, 65, and 66 provide the Commission with broad authority over the manufacture, conveyance, sale, or distribution of electricity, supervision of electric corporations, and the responsibility to ensure that all service, instrumentalities, and facilities furnished shall be safe and adequate and all charges made by such corporations for any service rendered shall be just and reasonable. Multiple other provisions of the PSL authorize the Commission to adopt rules and regulations addressing the treatment of distributed energy resources by electric corporations.¹⁴ Through its broad authority, the Commission adopted SIRs in 1999 to facilitate the interconnection of DERs to the utilities' electric distribution

¹⁴ PSL §§5(2), 66(1), 66(2), 66(3), 66-c, 66-j, and 74.

systems.¹⁵ The Commission also established an Interconnection Policy Working Group and Interconnection Technical Working Group, which periodically propose amendments to the SIRs.¹⁶

DISCUSSION AND CONCLUSION

As the commenters recognize, we must balance the needs of customers, DER developers, and utilities when addressing interconnection requirements. Here, we grant the Petition, with the modifications discussed below, to ensure that interconnection applicants meet their financial obligations throughout the process, without additional risk to the JU, while reducing project development costs and thereby promoting the continued growth of distributed energy resources.

Threshold for Cash Alternatives

NYSEIA proposes that non-cash financial instruments be available in lieu of cash for both shared and non-shared upgrades with cost estimates exceeding \$500,000. The JU recommend that the Commission limit the use of security to upgrades estimated to exceed \$1 million for a trial period of 18 months and pending a Department of Public Service Staff (Staff) evaluation of the mechanism. Both NYSEIA and NYGB caution that setting the cost threshold at \$1 million would reduce the positive impact of the change. We agree with NYSEIA and NYGB that a \$500,000 threshold would lower costs for more projects. Therefore, we will allow the use of non-cash security, as approved herein, when either shared or non-shared upgrade costs

¹⁵ Case 94-E-0952, In the Matter of Competitive Opportunities Regarding Electric Service, Opinion And Order Adopting SIRs For Distributed Generation Units (issued December 31, 1999).

¹⁶ Case 15-E-0557, In the Matter of Proposed Amendments to the SIRs, Order Modifying Standardized Interconnection Requirements (issued March 18, 2016).

are estimated to exceed \$500,000. In the interest of efficiency, we will not require a trial period or a Staff evaluation of the threshold.

Forms of Security

NYSEIA proposes that applicants be allowed to use an LOC, surety bond, or "other acceptable forms of security" for projects exceeding the minimum threshold.¹⁷ The JU recommend that non-cash securities be initially limited to SLOCs, for the reasons discussed above. In their comments, the Supporters, NYC, and the NYGB express support for the use of surety bonds. NYSEIA notes that surety bonds are more accessible to mid-size and smaller developers and are available at a lower cost than LOCs. The NYGB suggests that standardized forms and exposure limits per issuer could mitigate the risks of using surety bonds.

Based on the filings in this proceeding, we are confident that the SLOC will fill the function of cash deposits without increasing risk to ratepayers while also providing cost relief to developers. Therefore, and subject to the other requirements of this Order, we initially approve the SLOC as a non-cash option under the SIRs. At this time, we decline to approve the use of commercial LOCs and surety bonds because of the additional risk and implementation concerns raised by the JU. However, we invite members of the IPWG to file a more detailed proposal for the use of other forms of security after collaborative discussion of standards, conditions, and remittance issues. If additional options could reduce developers' cost, we would encourage them, so long as their use does not increase risk to ratepayers. We also ask the NYGB to lend its expertise to this effort.

¹⁷ Petition, p. 2.

Allowable Use of Security

NYSEIA and the JU both included seven scenarios illustrating the circumstances in which applicants would be allowed to use security and when they would be required to replace that security with cash under their proposed revisions to the SIRs. The seven scenarios are generally consistent between the parties and follow the existing payment structure of the SIRs, but there are minor differences. The Appendix to this Order provides our reconciliation of the proposed scenarios, as examples of how the rules approved here will work in practice.

NYSEIA and the JU have proposed one innovation for the SIRs' existing payment milestones, which we approve as a benefit to developers that does not raise utility risk. Specifically, in the case of certain high-cost Qualifying Upgrades, NYSEIA and the JU propose to allow a developer to satisfy its payment obligation in two installments. The applicant would be allowed to post security for its entire upgrade share and then reduce that posting through two replacement cash payments. The first cash payment would be based on the estimated cost of long-lead time equipment and would be due at the point where the utility has collected 75% of the Qualifying Upgrade cost (through cash or security). The second cash payment would be due later, at the point of mobilization for construction. However, the proposals were not clear as to how long lead-time equipment will be identified. We therefore revise the SIRs to specify that long-lead time equipment (and its estimated costs) will be identified in the CESIR. Additionally, our revised SIRs clarify that the first cash payment will be limited to the identified share of the long-lead time equipment cost.

Minimum Issuer Standards

The JU, NYSEIA, and NYGB recommend that minimum standards be established for issuers of securities to be used in

lieu of cash payments. Here, we adopt the standards proposed by the JU while also including the NYGB, as NYSEIA recommends.

The JU describe the minimum issuer requirements that the utilities and the NYISO impose on LOCs used in the context of transmission-level upgrades. Those standards require that LOCs be issued or guaranteed by a U.S. or Canadian commercial bank, or an approved U.S. or Canadian branch of a foreign bank, with a minimum "A" rating from Standard & Poor's, Fitch, Moody's, or Dominion, as approved by the respective utility. If an issuer does not meet those requirements, the LOC must be confirmed by another financial institution that meets the rating requirements. As these standards are familiar to the utilities and developers in the NYISO interconnection process, we find that they are appropriate to adopt here.

In addition, we will recognize the NYGB as an authorized issuer of SLOCs for use pursuant to this Order and the SIRs. The Commission established and funded the NYGB to bridge this type of financial gap in the clean energy markets, and to help support the State's clean energy objectives.¹⁸

While this Order adopts minimum issuer requirements that both the JU and developers are already familiar with, we agree with the NYGB that adjustments may be warranted in the future to account for the nature of distribution-level upgrades and to broaden the pool of eligible LOC issuers for such projects. To that end, we invite the NYGB to work with Staff and to propose changes to these standards that will lower developers' financing costs without increasing utilities' risk.

¹⁸ Case 13-M-0412, Petition for New York Green Bank, Order Establishing New York Green Bank and Providing Initial Capitalization (issued December 19, 2013).

Standardization

We agree that standardizing the forms used for SLOCs is an important step for the sake of both transparency and efficiency. However, we reject the JU proposal for a 120-business day process timeline as too lengthy. Instead, we direct the JU to file the standard forms currently used in the NYISO interconnection process and any modifications to those forms that the JU believe are necessary for their use in the SIRs process. The JU are directed to make this filing within 30 days of the effective date of this Order. Thereafter, we direct Staff to convene stakeholders in the IPWG, and to consult with NYGB, to review the forms filed by the utilities and resolve any disputes regarding the content of the standard forms. Following discussion in the IPWG and Staff's resolution of any disputes, each utility shall have 30 days to file their final forms in this proceeding and post them on their respective Distributed Generation websites.

Remittance

Since we are adopting the SLOC mechanism, remittance issues are resolved. A developer that has posted a SLOC for a cash obligation shall be required to substitute cash payments at the designated times, or face the consequences of a payment default, which include losing queue position and, in the case of certain Qualifying Upgrades, forfeiture of a deposit. We note that where a developer makes a cash payment on time as required under the rules approved in this Order, the utility shall return the posted security promptly after receipt of that payment.

Administrative Fees

We agree that the costs of administering the SLOCs should be borne by developers. However, we determine that the \$500 fee suggested by NYSEIA is a reasonable amount that is likely to cover the modest incremental costs incurred by the

utilities. The JU may track their expenditures related to the use of securities as compared to the costs of managing cash deposits under the SIRs and propose a change to the fee structure in the future, if warranted.

SIRs Modifications

The Appendix to this Order contains the SIRs, with revisions to Section 1.D that implement the process modifications approved hereunder appearing in redline. It also includes our reconciliation of the discrepancies in the various scenarios identified by NYSEIA and the JU. We direct the JU to file conforming tariff revisions, to go into effect on a permanent basis, on five days' notice, incorporating the revised SIRs into their respective tariffs. Given that stakeholders have had ample notice and opportunity to submit comments, we waive the requirements of PSL §66(12)(b) and 16 NYCRR §720-8.1, as to newspaper publication with respect to the tariff filings directed in this Order.

The Commission orders:

1. The Petition filed in this proceeding by the New York Solar Energy Industries Association on July 9, 2024, is approved, with modifications, as discussed in the body of this Order.

2. 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 JU) are directed to file standard forms currently used in the New York Independent System Operator, Inc. interconnection process, incorporating any modifications to those forms that the JU believe are necessary for their use in the Standard

Interconnection Requirements process, within 30 days of the effective date of this Order.

3. New York State Department of Public Service staff is directed to coordinate stakeholder review, consult with the New York Green Bank, and resolve any disputes related to the standard forms filed in compliance with Ordering Clause 2 of this Order, as described in the body of this Order.

4. 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 are directed to file revised standard forms and post the forms on their respective Distributed Generation websites within 30 days of completion of the review and resolution process conducted pursuant to Ordering Clause 3 of this Order.

5. 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 are directed to make tariff filings, as discussed in the body of the Order, to incorporate the Appendix to this Order into their electric tariffs, to be included in the New York State Standardized Contract for Interconnection of New Distributed Generation Units and/or Energy Storage Systems with Capacity of 5 MW or Less Connected in Parallel with Utility Distribution Systems, and to make any necessary conforming changes and to remove any inconsistent tariff provisions. These tariff amendments shall become effective on not less than five days' notice to take effect on March 1, 2025.

6. The requirements of Public Service Law §66(12)(b) and 16 NYCRR §720-8.1, as to newspaper publication with respect to the tariff filings directed in Ordering Clause 5, are waived.

7. 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 shall post the New York State Standardized Contract for Interconnection of New Distributed Generation Units and/or Energy Storage Systems with Capacity of 5 MW or Less Connected in Parallel with Utility Distribution Systems, as amended in compliance with this Order to include the Appendix to this Order, along with any necessary conforming changes, to their respective Distributed Generation websites no later than March 1, 2025.

8. In the Secretary's sole discretion, the deadlines set forth in this Order may be extended. Any request for an extension must be in writing, must include a justification for the extension, and must be filed at least three days prior to the affected deadline.

9. This proceeding is continued.

By the Commission,

(SIGNED)

MICHELLE L. PHILLIPS
Secretary

**New York State
Public Service Commission**

**New York State Standardized Interconnection Requirements and Application Process
For New Distributed Generators and/or Energy Storage Systems 5 MW or Less
Connected in Parallel with Utility Distribution Systems**

Effective: March 1, 2025

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Section I. Application Process

A. Introduction

This Standardized Interconnection Requirements and Application Process for New Distributed Generators and/or Energy Storage Systems 5 MW or Less Connected in Parallel with Utility Distribution Systems (SIR) provides a framework for processing applications to:

- interconnect new distributed generation (DG) facilities with an alternating current (AC) generator nameplate rating of 5 MW or less aggregated on the customer side of the point of common coupling (PCC);
- interconnect new energy storage system (ESS) facilities with an AC inverter/converter nameplate rating of 5 MW or less aggregated on the customer side of the PCC that may be stand-alone systems or combined with existing or new DG (Hybrid Projects), however, maximum export capacity onto the utility distribution system is capped at an AC nameplate rating or AC inverter/converter nameplate rating of 5 MW; and,
- review any modifications affecting the interface at the PCC to existing DG and/or ESS facilities with an AC nameplate rating of 5 MW or less (aggregated on the customer side of the PCC) that have been interconnected to the utility distribution system, and where an existing contract between the applicant and the utility is in place.

Distributed Generation or Energy Storage Systems neither designed to operate, nor operating, in parallel with the utility's electrical system are not subject to these requirements. This document will ensure that applicants are aware of the technical interconnection requirements and utility interconnection policies and practices. This SIR will also provide applicants with an understanding of the process and information required to allow utilities to review and accept the applicants' equipment for interconnection in a reasonable and expeditious manner.

The time required to complete the process will reflect the complexity of the proposed project. Projects using previously submitted designs certified per the requirements of Section II.H, Equipment Certification, will move through the process more quickly, and several steps may be satisfied with an initial application depending on the detail and completeness of the application and supporting documentation submitted by the applicant. Applicants submitting systems utilizing certified equipment however, are not exempt from providing utilities with complete design packages necessary for the utilities to verify the electrical characteristics of the generator systems, the interconnecting facilities, and the impacts of the applicants' equipment on the utilities' systems.

The application process and the attendant services must be offered on a non-discriminatory basis. The utilities must clearly identify their costs related to the applicants' interconnections, specifically those costs the utilities would not have incurred but for the applicants' interconnections. The utilities will keep a log of all applications, milestones met, and justifications for application-specific requirements. The applicants are to be responsible for payment of the utilities' costs, as provided for herein. Any unspent project analysis/study fees shall be applied forward to any subsequent analysis applicable to a given application/project.

All application timelines shall commence the next Business Day following receipt of information from the applicant or the utility. For purposes of determining the date of an applicant's payment, when a payment is required, fees paid by wire transfer shall be deemed paid on the day of the transfer, whereas fees paid by check shall be deemed paid on the day the check clears.

Staff of the Department of Public Service ("DPS Staff") will monitor the application process to ensure that applications are addressed in a timely manner. To perform this monitoring function, DPS Staff will meet periodically with utility and applicant representatives.

A glossary of terms used herein is provided in Section III.

B. Application Process Steps for Systems 50 kW or Less

Exception 1:

For inverter based systems above 50 kW up to 300 kW, applicants may follow the expedited application process outlined in this section provided that the inverter based system has been certified and tested in accordance with the most recent revision of UL 1741, including supplement B ("UL 1741 SB"), with settings as specified in the utility's technical requirements document, and the utility has approved the project accordingly. The utility has ten (10) Business Days upon receipt of the original application submittal to determine if the application is complete, project is eligible for the expedited process, and whether it is approved for interconnection if eligible for expedited process. The utility shall notify the applicant in writing of its findings upon review of the application. If the utility determines that the inverter based system is not eligible for the expedited application process, the applicant can:

- 1) Proceed with the remaining steps of Section I.C of the SIR (Systems above 50 kW up to 5 MW); or
- 2) request a review by DPS Staff.

Exception 2:

For non-inverter based system 50 kW or less, the applicant should be aware that additional information and review time may be required by the utility (refer to Step 3). The applicant must include the items required in Step 5 of the Application Process Steps for Systems above 50 kW up to 5 MW in its original application. This exception should not be considered the rule but used by the utility only in justified situations. Utilities are encouraged to use the expedited process whenever possible. The utility has ten (10) Business Days upon receipt of the original application submittal to determine if the application is complete, project is eligible for expedited process, and whether it is approved for interconnection if eligible for expedited process. The utility shall notify the applicant in writing of its findings upon review of the application. If the utility determines that the non-inverter based system is not eligible for the expedited application process, the applicant can:

- 1) Proceed with the remaining steps of Section I.C of the SIR (Systems above 50 kW up to 5 MW); or
- 2) Request a review by DPS Staff.

Exception 3:

For all systems 50 kW or less, that are proposed to be installed in underground secondary network areas, the applicant should be aware that additional information and review time may be required by the utility (refer to Step 3). In some cases, interconnection may not be allowed or approved. DG systems interconnected to underground secondary network systems can cause unique design issues and overall reliability problems for the utilities. For this reason, additional review and analysis may be needed on a case by case basis. The utility has ten (10) Business Days upon receipt of the original application submittal to determine if the application is complete, project is eligible for the expedited process, and whether it is approved for interconnection if eligible for expedited process. The utility shall notify the applicant in writing of its findings upon review of the application. If the utility determines that the DG system cannot be interconnected, the applicant can request a review by DPS Staff.

STEP 1: Initial Communication from the Potential Applicant

Communication could range from a general inquiry to a completed application.

STEP 2: The Inquiry is Reviewed by the Utility to Determine the Nature of the Project

Technical staff from the utility may discuss the scope of the interconnection with the potential applicant (either by phone or in person) and provide a copy of the SIR document and any utility specific technical specifications that may apply. A utility representative shall be designated to serve as the single point of contact for the applicant in coordinating the potential applicant's project with the utility.

STEP 3: Potential Applicant Files an Application

The potential applicant submits an application package in the name of the customer¹ to the utility. No application fee is required of the applicant for systems 50 kW or less. A complete application package will consist of all items detailed in Appendix F. Electronic submission of all documents via the Interconnection Online Application Portal ("IOAP") is required. The utility has ten (10) Business Days upon receipt of the original application submittal to determine if the application is complete, meets the SIR technical requirements in Section II, and/or approved for interconnection if all other requirements are met. The utility shall notify the applicant by email, fax, or other form of written communication. If the application is deemed not complete by the utility, the utility shall provide a detailed explanation of the deficiencies identified and a list of the additional information required from the applicant.

¹ Per the Community Distributed Generation Program Order (issued July 17, 2015, in Case 15-E-0082), the project sponsor shall submit the interconnection application to the electric utility for approval. The sponsor may be any single entity, including the generation facility developer, an energy service company (ESCO), a municipal entity such as a town or village, a business or not-for-profit corporation, a limited liability company, a partnership, or other form of business or civic association.

Once it has received the required information, the utility shall notify the applicant of the acceptance or rejection of the application within ten (10) Business days. If the applicant fails to submit the additional information to the utility within thirty (30) Business Days following the date of the utility's written notification, the application shall be removed from the queue and no further action on the part of the utility is required.

The utility's notification of acceptance to the applicant shall include an executed New York State Standardized Interconnection Contract and the applicant may proceed with the proposed installation. The utility shall also indicate in its response to the applicant whether or not it plans to witness the testing and verification process in person.

An application will be placed in each utility's interconnection inventory once it is accepted as complete. If the final acceptance as set out in Step 6 below is not completed within twelve (12) months as a result of applicant inactivity, the utility has the right to notify the applicant by U.S. first class mail with delivery receipt confirmation or via email that the applicant's project will be removed from the utility's interconnection inventory if the applicant does not respond within thirty (30) Business Days of the issue of such notification and provide a project status update and/or justification as to why the project should remain in the utility's interconnection inventory for an additional period of time.

With respect to an applicant proposing to install a system rated 25 kW or less, that is to be net-metered, if the utility determines that it is necessary to install a dedicated transformer(s) or other equipment to protect the safety and adequacy of electric service provided to other customers, the applicant shall be informed of its responsibility for the actual costs for installing the dedicated transformer(s) and other safety equipment. Appendix E sets forth the responsibility each applicant shall have with respect to the actual cost of the dedicated transformer(s) and other safety equipment.

STEP 4: System Installation

The applicant will install the DG system according to the utility accepted design and the equipment manufacturer's requirements. If there are substantive design variations from the originally accepted system diagram, a revised system diagram (and other drawings for non-inverter based systems) shall be submitted by the applicant for the utility's review and acceptance. All inverter based systems will be allowed to interconnect to the utility system for a period not to exceed two hours, for the sole purpose of ensuring proper operation of the installed equipment.

For net metered systems as defined in Section II.A.6, Metering, any modifications related to metering configurations to allow for net energy metering for residential, farm service and non-residential wind electric generating systems shall be completed by the utility within ten (10) Business Days of either notification to the utility that the installation has been completed and inspected, or a request for a verification test, whichever comes first. If the utility requires inspection of the new metering configuration installation, such inspection shall be completed within the ten (10) Business Days allotted for the new meter installation.

STEP 5: The Applicant's Facility is Tested in Accordance with the Standardized Interconnection Requirements

Verification testing will be performed by the applicant in accordance with the written

verification test procedure specified in Appendix F. If the utility requested to witness the testing and verification process in person as required in Step 3, the applicant shall provide a written letter of notification to the utility that the system installation is completed, including any applicable inspections and authorization. After receipt of notification, the verification testing will be performed within ten (10) Business Days, at a mutually agreeable time. If the utility has opted not to witness the test, the applicant will send the utility within five (5) Business Days of completion of such tests a written notification certifying that the system has been installed and tested in compliance with the SIR, the utility-accepted design and the equipment manufacturer's instructions. The applicant's facility will be allowed to commence parallel operation upon satisfactory completion of the tests in Step 5. The applicant must have complied with, and must continue to comply with, all contractual and technical requirements.

STEP 6: Final Acceptance

Within five (5) Business Days of receiving the written notification of successful test completion from Step 5, the utility will issue to the applicant a formal letter of acceptance for interconnection. Within five (5) Business Days of the completion of the on-site verification, the utility will issue to the applicant either a formal letter of acceptance for interconnection or a detailed explanation of the deficiencies in the system.

C. Application Process Steps for Systems above 50 kW up to 5 MW

If, at any point in its review of an application, the utility determines that the project may benefit from or require a Qualifying Upgrade, the procedures of Appendix E shall apply.

For inverter based systems above 50 kW up to 300 kW, certified and tested in accordance with the most recent revision of UL 1741, including supplement B (UL 1741 SB), and with settings as specified in the utility's technical requirements document, applicants and utilities are encouraged, but not required, to use the expedited application process (Section I.B).

Exception 1: For all systems 50 kW up to 5 MW that are proposed to be installed in underground secondary network areas, the applicant should be aware that a Coordinated Electric System Interconnection Review (CESIR) may be required by the utility, based on each utility's specific technical requirements and design considerations on a case-by-case basis. In some cases, interconnection may not be allowed or approved. DG systems interconnected to underground secondary network systems can cause unique design issues and overall reliability problems for the utilities. The utility has ten (10) Business Days upon receipt of the original application submittal and payment to determine if the application is complete and whether it is eligible for interconnection. The utility shall notify the applicant in writing of its findings upon review of the application. If the utility determines that the DG system cannot be interconnected or requires additional information be submitted and/or additional review time is needed, the applicant can:

- 1) Work with the utility on an appropriate timeframe and approval schedule agreeable to both parties; or
- 2) request a review by DPS Staff.

STEP 1: Initial Communication from the Potential Applicant.

Communication could range from a general inquiry to a completed application.

STEP 2: The Inquiry is Reviewed by the Utility to Determine the Nature of the Project.

Technical staff from the utility may discuss the scope of the interconnection with the potential applicant (either by phone or in person) and shall provide a copy of the SIR and any utility specific technical specifications that may apply. A utility representative shall be designated to serve as the single point of contact for the applicant in coordinating the potential applicant's project with the utility. At this time the applicant may also request that a Pre-Application Report (see Appendix D herein) be provided by the utility. The applicant shall provide a non-refundable fee of \$750 with its request for completion of the Pre-Application Report. The Pre-Application Report shall be provided to the applicant within ten (10) Business Days of receipt of the form and payment of the fee. The Pre-Application Report will be non-binding and shall only provide the electrical system data and information requested that is readily available to the utility. Should the applicant formally apply to interconnect their proposed DG project within fifteen (15) Business Days of receipt of the utility's Pre-Application Report, the \$750 will be applied towards the application fee in Step 3.

STEP 3: Potential Applicant Files an Application

The potential applicant submits an application to the utility in the name of the customer.² A complete application package will consist of all items detailed in Appendix F. Electronic submission of all documents via the Interconnection Online Application Portal (IOAP) is required. If a Pre-Application Report has been provided to the customer, and an application is received by the utility within fifteen (15) Business Days of the date of issue of the Pre-Application Report, a \$750 credit will be applied towards the application fee. If an application is received by the utility later than fifteen (15) Business Days from the date of issue of the Pre-Application Report, the \$750 fee will not be applied to the application fee. If the applicant proceeds with the project to completion, the application fee will be applied as a payment to the utility's total cost for interconnection, including the cost of processing the application.

The utility shall review the application to determine whether it is complete in accordance with Appendix F, and whether any additional information is required from the applicant. The utility shall notify the applicant in writing within ten (10) Business Days following receipt of the application and the application fee. If the application is not complete, the utility shall provide a detailed explanation of the deficiencies and provide a list of additional

² Per the Community Distributed Generation Program Order (issued on July 17, 2015, in Case 15-E-0082), the project sponsor shall submit the interconnection application to the electric utility for approval. The sponsor may be any single entity, including the generation facility developer, an energy service company (ESCO), a municipal entity such as a town or village, a business or not-for-profit corporation, a limited liability company, a partnership, or other form of business or civic association.

information needed to the applicant. The utility shall notify the applicant by email, fax, or other form of written communication. The utility review at this stage is limited to the determination of completeness from an administrative perspective and does not mean the application has also received approval from an engineering perspective. The utility may require supplemental materials and information for purposes of performing a CESIR.

If the applicant fails to submit all items required by Appendix F, or to provide additional information identified by the utility within thirty (30) Business Days following the date of the utility's notification, the application shall be deemed withdrawn and no further action on the part of the utility is required.

A completed application shall be placed in the utility's interconnection queue.

If the required documentation is presented in this step, it will allow the utility to move to Step 4 and perform the required reviews and allow the process to proceed as expeditiously as possible.

The utility will refund any advance payments for services or construction not yet completed should the applicant be removed from the utility's interconnection inventory. If the costs incurred by the utility exceed the advance payments made by the applicant prior to removal from the interconnection inventory, the applicant will receive a bill for any balance due to the utility.

STEP 4: Utility Performs Preliminary / Supplemental Screening Analysis and Develops a Cost Estimate for the Coordinated Electric System Interconnection Review (CESIR) if required

The utility shall perform a Preliminary Screening Analysis of the proposed system interconnection utilizing the technical screens A through F detailed in Appendix G. The Preliminary Screening Analysis shall be completed and a written response detailing the results of each screen and the overall outcome of the Preliminary Screening Analysis shall be sent to the applicant within fifteen (15) Business Days of the completion of Step 3. Depending on the results of the Preliminary Screening Analysis and the subsequent choices of the applicant, the following process(es) will apply:

If the Preliminary Screening Analysis finds that the applicant's proposed system passes all of the relevant technical screens (i.e., Screens A through F) and is in compliance with the Interconnection Requirements outlined in Section II, and there are no requirements for Interconnection Facilities or Distribution Upgrades, the utility will return a signed and executed New York State Standardized Interconnection Contract to the applicant. The applicant will sign and return the contract within 15 Business Days after receipt from the utility and proceed with the interconnection process.

If the Preliminary Screening Analysis finds that the applicant's proposed system cannot pass all of the relevant technical screens (i.e., Screens A through F), the utility shall provide the technical reasons, data and analysis supporting the Preliminary Screening Analysis results in writing. The applicant shall notify the utility within ten (10) Business Days following such notification whether to (i) proceed to a Preliminary Screening Analysis results meeting, (ii) proceed to Supplemental Screening Review, (iii) proceed to a full CESIR, or (iv) withdraw the Interconnection Request. If a cost estimate for the CESIR is not provided with the Preliminary

Screening Analysis results, the utility shall provide one within five (5) Business Days of a request from the applicant. If the applicant opts to proceed to a full CESIR, the utility shall provide an invoice for the CESIR fee to the applicant within ten (10) Business Days of receipt of the applicant's notification. The applicant shall have ten (10) Business Days from receipt of the invoice to pay the CESIR fee. If the applicant fails to meet either the notification or the payment deadline, the application shall be removed from the queue and no further action on the part of the utility is required.

- i. If the applicant chooses to proceed to a Preliminary Screening Analysis results meeting and modifications that obviate the need for Supplemental Screening Analysis are identified, and the applicant and the utility agree to such modifications, the utility shall return a signed and executed New York State Standardized Interconnection Contract within fifteen (15) Business Days of the Preliminary Screening Analysis results meeting if no Interconnection Facilities or Distribution Upgrades are required. The applicant will sign and return the contract within 15 Business Days after receipt from the utility and proceed with the interconnection process.

If Interconnection Facilities or Distribution Upgrades are required and agreed to, the utility shall provide the applicant with a non-binding cost estimate of any Interconnection Facilities or Distribution Upgrades within fifteen (15) Business Days of the Preliminary Screening Analysis results meeting. The applicant will pay the cost estimate as provided in Section I-D.

If the applicant chooses to proceed to a Preliminary Screening Analysis results meeting and modifications that obviate the need for Supplemental Analysis are not identified and agreed to, the applicant shall notify the utility within ten (10) Business Days of the meeting of their intention to (i) proceed to Supplemental Screening Analysis, (ii) proceed to a full CESIR, or (iii) withdraw the application. If the applicant fails to notify the utility of their decision by this deadline, the application shall be removed from the queue and no further action on the part of the utility is required.

- ii. Applicants that elect to proceed to Supplemental Screening Analysis shall provide a nonrefundable fee of \$2,500 with their response; however actual costs up to a maximum of \$5,000 will be billable to the applicant upon reconciliation of utility costs as defined in Step 11 or exit from the interconnection queue. The utility shall complete the Supplemental Screening Analysis within twenty (20) Business Days, absent extraordinary circumstances, following authorization and receipt of the fee. If the Supplemental Screening Analysis finds that the applicant's proposed system passes all of the relevant technical screens (i.e., screens G through I) and is in compliance with the Interconnection Requirements outlined in Section II, then there are no requirements for Interconnection Facilities or Distribution Upgrades. Thus, the utility will return a signed and executed New York State Standardized Interconnection Contract to the applicant within fifteen (15) Business Days of providing the applicant the results of the Supplemental Screening Analysis. The applicant will sign and return the contract within fifteen (15) Business Days after receipt from the utility and proceed with the interconnection process.

If the Supplemental Screening Analysis finds that the applicant's proposed system cannot pass all of the relevant technical screens (i.e., Screens G through I), the utility shall provide the technical reasons, data, and analysis supporting the Supplemental Screening Analysis results in writing. The applicant shall notify the utility within ten (10) Business Days following such notification whether to (i) proceed to a Supplemental Screening Analysis results meeting, (ii) proceed to a full CESIR, or (iii) withdraw the application. If the applicant fails to notify the utility of their decision by this deadline, the application shall be removed from the queue and no further action on the part of the utility is required.

- i. If the applicant chooses to proceed to a Supplemental Screening Analysis results meeting and modifications that obviate the need for a CESIR are identified, and the applicant and the utility agree to such modifications, the utility shall return a signed and executed New York State Standardized Interconnection Contract within fifteen (15) Business Days of the Supplemental Screening Analysis results meeting if no Interconnection Facilities or Distribution Upgrades are required. The applicant will sign and return the contract within fifteen (15) Business Days after receipt from the utility and proceed with the interconnection process.

If Interconnection Facilities or Distribution Upgrades are required and agreed to, the utility shall provide the applicant with a non-binding cost estimate of any Interconnection Facilities or Distribution Upgrades within fifteen (15) Business Days of the Supplemental Screening Analysis results meeting. The applicant will pay the cost estimate as provided in Section D.

- ii. If the applicant chooses to proceed to a Supplemental Screening Analysis results meeting and modifications that obviate the need for a CESIR are not identified and agreed to, the applicant shall notify the utility, within ten (10) Business Days of the meeting, of their intention to proceed to a full CESIR or withdraw the application. If the applicant fails to notify the utility of their decision by this deadline, the application shall be removed from the queue and no further action on the part of the utility is required.
- iii. If the applicant decides to proceed to a CESIR after the Supplemental Screening Analysis results meeting, or if the applicant chooses at any time in the above process to proceed directly to a CESIR, the utility shall provide a cost estimate for the CESIR, if not already provided with preliminary analysis results, within five (5) Business Days of a request from the applicant. If the applicant opts to proceed to a full CESIR, the utility shall provide an invoice for the CESIR fee to the applicant within ten (10) Business Days of receipt of the applicant's notification. The applicant shall have ten (10) Business Days from receipt of the invoice to pay the fee. If the applicant fails to meet the payment deadline, the application shall be removed from the queue and no further action on the part of the utility is required.

If Interconnection Facilities or Distribution Upgrades are required to interconnect a proposed system that passes the relevant screens, the utility shall provide the applicant with a non-binding

cost estimate for the Interconnection Facilities or Distribution Upgrades within fifteen (15) Business Days of the Preliminary or Supplemental Screening Analysis. The applicant will pay the cost estimate as provided in Section D.

STEP 5: Applicant Commits to the Completion of the CESIR

Prior to commencement of the CESIR, the applicant shall provide the following information to the utility:

- a complete updated interconnection design package, if there have been any changes to the documents submitted with the application;
- proof of site control by executing the New York State Standard Site Control Certification Form, Appendix J;
- the name, phone number, and agent letter of authorization (if appropriate) of the individual(s) responsible for addressing technical and contractual questions regarding the proposed system;
- if applicable, advance payment of the costs associated with the completion of the CESIR; and
- electrical studies as requested by the utility to demonstrate that the design is within acceptable limits, inclusive and not limited to the following: system fault, relay coordination, flicker, voltage drop, and harmonics. This shall include all relay, communication, and controller set points.

The utility may require a three-line diagram for solar photovoltaic (PV) and BESS designs proposed on three-phase systems, which shall include detailed information on the wiring configuration at the PCC and an exact representation of the existing utility service.

If the utility determines that the detailed interconnection design package provided by the applicant is incomplete or otherwise deficient, the utility shall notify the applicant within ten (10) Business Days and provide a detailed explanation of the deficiencies identified and a list of what is required by the applicant. Unless otherwise notified by the utility, the CESIR review period begins upon confirmed receipt and acceptance of the applicant's interconnection design package and associated fees.

If the applicant fails to provide the utility authorization to proceed, CESIR fee, and information requested within thirty (30) Business Days of the request, the application shall be removed from the queue and no further action on the part of the utility is required.

STEP 6: Utility Completes the CESIR

The CESIR will consist of two parts:

- 1) a detailed review and explanation of the impacts to the utility system associated with the interconnection of the proposed system, and
- 2) a detailed review and explanation of the proposed system's compliance with the

applicable criteria set forth below.

A CESIR will be performed by the utility to determine if the proposed generation on the circuit results in any protective coordination, fault current, thermal, voltage, power quality, or equipment stress concerns.

The CESIR shall be completed within sixty (60) Business Days of receipt of the information set forth in Step 5. For systems utilizing type-tested equipment, the time required to complete the CESIR may be reduced. The utility shall complete the CESIR within sixty (60) Business Days, absent extraordinary circumstances, following authorization, receipt of the CESIR fee, and complete information set forth in Step 5. If the applicant fails to provide the utility authorization to proceed, CESIR fee and information requested within thirty (30) Business Days, the interconnection request shall be removed from the queue and no further action on the part of the utility is required.

The applicant and the utility may agree to allow up to an additional forty (40) Business Days beyond the time specified above for completion of the CESIR, provided that no other application is adversely impacted.

Upon completion of the CESIR, the utility will provide the following, in writing, to the applicant:

1. notification of whether the proposed system meets the applicable criteria considered in the CESIR process;
2. utility system impacts, if any;
3. a description of where the proposed system is not in compliance with these requirements;
4. detailed description of reasoning and justification for any system upgrades and associated equipment deemed necessary for interconnection of the project;
5. a good faith, detailed estimate of the total cost of completion of the interconnection of the proposed system and/or a statement of cost responsibility for any system upgrades and associated equipment deemed necessary for interconnection of the project; and
6. a Qualifying Upgrade Disclosure, if applicable

Appendix E sets forth the responsibility each applicant shall have with respect to the actual cost of the system upgrades and equipment necessary for the interconnection of the project. Utility cost estimates provided in the CESIR shall be detailed and broken down by specific equipment requirements, material needs, labor, overhead, and any other categories or efforts incorporated in the estimate. Contingencies associated with the cost estimates shall not exceed 15%. For Qualifying Upgrades that involve transformer banks, the utility shall identify the applicant's share of the cost of long lead-time equipment for the purpose of installment payments, as described in Section I-D.2.

STEP 7: Applicant Commits to Utility Construction of Utility's System Modifications

The applicant will execute the New York Standardized Interconnection Contract for interconnection and provide the utility with an advance payment of 25% of the utility's estimated

costs as identified in Step 6 within the time provided in Section I-D. The utility is not required to procure any equipment or materials associated with the project or begin construction until full payment has been received.

For applications subject to 25% and 75% payment requirements pursuant to Section I-D, the applicant shall provide both an updated three-line diagram and site-specific testing procedures within thirty (30) Business Days of making the 25% payment. For applications that do not require system modifications, a three-line diagram and site-specific testing procedure is required within thirty (30) Business Days after executing the New York State Standardized Interconnection Contract. For applications subject to a single 100% payment requirement under Section I-D, applicants are required to provide a three-line diagram and site-specific testing procedure within thirty (30) Business Days after the 100% payment. Three-line diagrams shall meet utility requirements as specified in Appendix F.

STEP 8: Project Construction

The applicant and the utility shall collaborate to identify an in-service date and develop a project construction schedule (Appendix L). The applicant shall build the facility in accordance with the utility-accepted design and the project schedule. The utility shall commence construction/installation of system modifications in accordance with the project schedule. Utility system modifications will vary in construction time depending on the extent of work and equipment required. The schedule for this work is to be discussed and agreed upon with the applicant in Step 6.

STEP 9: The Applicant's Facility is Tested in Accordance with the Standardized Interconnection Requirements

The verification testing shall be performed by the applicant in accordance with the written test procedure(s) provided by the applicant in Step 7 and any site-specific requirements identified by the utility in Step 6. The final verification testing shall be performed within ten (10) Business Days of notification to the utility by the applicant of complete installation at a mutually agreeable time, and the utility shall be given the opportunity to witness the tests. If the utility opts not to witness the tests, the applicant shall send the utility within five (5) Business Days of completion of such testing a written notification certifying that the system has been installed and tested in compliance with the SIR, the utility accepted design, and the equipment manufacturer's instructions.

STEP 10: Interconnection

The applicant's facility will be allowed to commence parallel operation upon satisfactory completion of the tests in Step 9. In addition, the applicant must have complied with and must continue to comply with the contractual and technical requirements.

STEP 11: Final Acceptance and Utility Cost Reconciliation

Except as provided in Appendix E, final project costs shall be reconciled pursuant to this section. If the utility witnessed the verification testing, then, within ten (10) Business Days of the completion of such testing, the utility will issue to the applicant either a formal letter of acceptance for interconnection or a detailed explanation of the deficiencies in the installed DG

system, ESS, or Hybrid Project. If the utility did not witness the verification testing, then, within ten (10) Business Days of receiving the written test notification from Step 9, the utility will either issue to the applicant a formal letter of acceptance for interconnection, or will request that the applicant and utility set a date and time to witness operation of the installed DG system, ESS, or Hybrid Project. This witnessed verification testing must be completed within twenty (20) Business Days after being requested. Within ten (10) Business Days of the completion of any such witnessed testing, the utility will issue to the applicant either a formal letter of acceptance for interconnection or a detailed explanation of the deficiencies in the installed DG system, ESS, or Hybrid Project. Within sixty (60) Business Days after issuance of the utility's formal letter of acceptance, or submittal of final as-built drawings to the utility, whichever occurs last, the utility shall prepare and submit to the applicant a final reconciliation statement of its actual costs less any CESIR and construction advance payments made by the applicant. Within twenty (20) Business Days after delivery of the reconciliation statement, the applicant will receive either a bill for any balance due or a reimbursement for overpayment from the utility as determined by the utility's reconciliation. The applicant may contest the reconciliation with the utility. If the utility's final reconciliation invoice states a balance due from the applicant, unless it is challenged by a formal complaint interposed by the applicant, it shall be paid to the utility within thirty (30) Business Days or the utility reserves the right to lock the generating system offline. If the utility's final reconciliation invoice states a reimbursement for overpayment to be paid by the utility, unless the reimbursement amount is challenged by a formal complaint interposed by the applicant, it shall be paid to the applicant within thirty (30) Business Days. If the applicant is not satisfied, a formal complaint may be filed with the Secretary to the Commission.

D. Payment and Construction Milestones

1. Payment Requirements

Applicants are responsible for payment of utility system modification cost estimates in accordance with the following rules and deadlines. All project costs will be subject to the provisions of Appendix E, where applicable. In certain cases, applicants may post a standby letter of credit (SLOC) in accordance with the rules detailed in D.2 instead of making a cash payment.

When the utility's estimated cost is \$10,000 or less, the applicant shall pay the utility 100% of the estimate within ninety (90) Business Days of receiving the cost estimate from the utility. Within fifteen (15) Business Days of receiving the payment, the utility will provide the applicant, via electronic communication, a signed New York State Standardized Interconnection Contract in the form of Appendix A and a written confirmation, on utility letterhead, of the compensation eligibility for which the project has qualified. The applicant will sign and return the contract to the utility within fifteen (15) Business Days. If the applicant does not return the signed contract within this period, the application shall be removed from the utility's interconnection queue, and no further action on the part of the utility is required.

When the estimated cost is greater than \$10,000, the applicant will make an advance payment of 25% of the estimate to the utility within ninety (90) Business Days of receiving the cost estimate. Within fifteen (15) Business Days of receiving the applicant's payment, the utility will provide the applicant, via electronic communication, a receipt for the payment, a signed New York State Standardized Interconnection Contract in the form of Appendix A, and a written confirmation, on utility letterhead, of the compensation eligibility for which the project has qualified. The applicant will sign and return the contract to the utility within fifteen (15) Business Days. The

applicant may request an extension of no more than fifteen (15) Business Days to return the contract. If the applicant does not return the signed contract within the time allowed, the application shall be removed from the utility's interconnection queue, and no further action on the part of the utility is required.

Within thirty (30) Business Days of receiving the 25% payment or SLOC, as detailed in D.2, where applicable, the utility shall provide an initial construction schedule to the applicant (consistent with Appendix L). The utility shall commence design work in accordance with its published guidance, unless otherwise directed by the applicant.

The applicant will have one hundred and twenty (120) Business Days from when the utility confirms receipt of the 25% payment or SLOC to pay the remaining 75% to the utility. The utility will provide a receipt to the applicant. Within thirty (30) Business Days of the payment, the utility will provide an updated project construction schedule (consistent with Appendix L).

If the applicant does not make a payment due under this section in the time required, the application shall be removed from the utility's interconnection queue with no further action required of the utility.

Within ten (10) Business Days of completion of design work, the utility will provide an updated upgrade cost estimate if the scope of work changed from the CESIR estimate.

If the applicant withdraws or is removed from the interconnection queue at any point after making a payment required under this section, any unspent portions of these payments will be refunded to the applicant consistent with the timelines described in Section I-C, Step 11.

If a local permitting moratorium prevents an applicant from meeting the above timelines, the utilities may grant affected project applicants an extension. To be granted an extension of the required timelines, the applicant must submit the New York State Standard Moratorium Attestation Form, Appendix I. Upon the applicant's payment of 25% of expected upgrade costs, if applicant has received its CESIR, returned the executed New York State Standardized Interconnection Contract, and submitted the Attestation Form to the utility, the due date for the remainder of the total upgrade payment shall be adjusted to one hundred and twenty (120) Business Days from the end of the moratorium. If applicable, any unused portion of the 25% payment shall be refunded if the project does not move forward after receiving an extension.

If the final acceptance as set out in Section I-C, Step 11 is not completed within twelve (12) months of the date the applicant returns the executed New York State Standardized Interconnection Contract as a result of applicant inactivity, the utility has the right to notify the applicant by U.S. first class mail with delivery receipt confirmation or via email that the applicant's project will be removed from the utility's interconnection queue if the applicant does not respond within thirty (30) Business Days of the issue of such notification and provide a project status update and/or justification as to why the project should remain in the utility's interconnection inventory for an additional period of time.

2. Standby Letters of Credit in Lieu of Cash for Certain Interconnection Upgrade Costs in Excess of \$500,000

a. When an applicant's share of system modification costs, as identified in a CESIR, is estimated to exceed \$500,000, applicants may provide, and utilities will accept, an irrevocable SLOC in lieu of cash in accordance with these rules. For purposes of this section, system modification costs and Qualifying Upgrade costs may not be added together to reach the

\$500,000 threshold. The applicant is responsible for providing the utility with a physical or electronic SLOC by the payment milestone date. If the applicant fails to provide a SLOC by the required deadline, the application shall be removed from the utility's interconnection queue, and no further action from the utility will be required. It is the applicant's responsibility to maintain the SLOC as valid for the duration of the obligation.

b. A SLOC must designate the utility as the beneficiary and be issued or guaranteed by the New York Green Bank, a U.S. or Canadian commercial bank, or a U.S. or Canadian branch of a foreign bank, with a minimum "A" rating from Standard & Poor's, Fitch, Moody's, or Dominion, as approved by the respective utility. If an issuer does not meet those requirements, the SLOC must be confirmed by another financial institution that meets the rating requirements. If an issuer no longer meets the requirements, the utility can require a replacement SLOC within fifteen (15) Business Days that meets the standards. The utility shall return the SLOC within fifteen (15) Business Days of receipt of the replacement.

c. The utility shall be entitled to charge the applicant a non-refundable administrative fee of \$500. An applicant intending to post a SLOC for a payment obligation shall submit the fee with the proposed SLOC.

d. For Qualifying Upgrades, cash payments shall be due at the utility mobilization thresholds set in Appendix E (Section 2-C, "*Utility Mobilization Thresholds*"). The utility will notify the applicant at least five (5) business days in advance of any payment due date outlined in the table below.

If an applicant has posted a SLOC for a payment obligation that is non-refundable under Appendix E, failure of the applicant to make a cash payment at the time required by these rules shall be a default, and the utility shall be authorized to draw on the SLOC in the amount of the cash payment due. The utility shall return the SLOC in the circumstances when a cash deposit would be refunded under Appendix E. If an applicant that has posted a SLOC for a non-refundable payment obligation withdraws from the queue prior to the cash payment date, the utility may retain the SLOC until a replacement mechanism is provided in the form of cash and/or a SLOC from a replacement project, consistent with the requirements of Appendix E.

For Qualifying Upgrades that involve transformer banks, as defined in Appendix E, an applicant that has posted a SLOC may make its cash payments in two installments. The first installment shall be the portion of the applicant's Qualifying Upgrade Charge equal to its share of the cost of long lead-time equipment, as identified in the CESIR cost estimate. The first installment shall be due to the utility when the mobilization threshold is reached, as provided in Appendix E Section 2.C, "*Utility Mobilization Thresholds*." Upon making the first cash installment, the applicant may choose to replace or amend the posted a SLOC for the remaining balance. The utility shall return the SLOC within fifteen (15) Business Days of receipt of the replacement. The second installment, equal to the balance of the Qualifying Upgrade Charge, shall be due after the utility receives the long lead-time equipment and mobilizes to initiate construction. The utility shall provide written notice through its DG portal that the balance payment is due, and the applicant shall make the cash payment within fifteen (15) Business Days of the date of the utility's notice.

e. The following table identifies scenarios when a SLOC may be used by an applicant and the requirements for replacing a SLOC with cash.

Table 1: Scenarios for the Use of Standby Letters of Credit

Scenario #	Description	Use Cases Regarding SLOCs
1	Applicant’s estimated system modification cost is at or below \$500,000	N/A (SLOC not allowed) and only cash payments by the applicant to the utility at the payment due dates will be allowed
2	Applicant’s estimated system modification cost exceeds \$500,000 and there are either: (i) no Qualifying Upgrades; or (ii) no Qualifying Upgrades except for Line Upgrades, as defined in Appendix E	SLOC may be posted at the time the applicant's 25% payment is due; a 100% cash payment to the utility will be required, covering the full amount of the CESIR cost estimate, by the 75% payment due date.
3	Applicant’s estimated system modification costs include Qualifying Upgrades (3V0, Other Substation Upgrades), as defined in Appendix E, and the applicant’s Qualifying Upgrade Charge exceeds \$500,000.	SLOC for the Qualifying Upgrade Charge may be posted ninety (90) Business Days following the CESIR delivery; the cash payment for the remaining balance is due when the cost-sharing mobilization threshold is reached.
5	Applicant’s estimated system modifications include Transformer Banks, as defined in Appendix E, for which the applicant’s Qualifying Upgrade Charge exceeds \$500,000.	SLOC may be posted for the Qualifying Upgrade Charge ninety (90) Business Days following the CESIR delivery. Cash payments are required in two installments, aligned with two milestones: <ol style="list-style-type: none"> 1. The first payment will be a percentage of the total Qualifying Upgrade cost, based on the value of long lead-time equipment, as identified in the CESIR, when the mobilization threshold is reached. 2. The second payment will be due after the utility receives long-lead time equipment and mobilizes to initiate construction.

6	Applicant's estimated system modifications exceed \$500,000 and there are both Line Upgrades and Qualifying Upgrades, as defined in Appendix E, for which the mobilization threshold has not yet been reached	SLOC may be used at the time of the applicant's 25% and 75% payment due dates to the utility with 100% of the cash payment due to the utility when the last Qualifying Upgrade achieves the mobilization threshold. The utility will not mobilize for non-shared upgrades until it receives 100% of the cash payment.
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E. Application Process for Energy Storage Systems (ESS)

Except as provided in this Section, the rules in Sections I-B and I-C shall apply to applications to: construct new Hybrid Projects; construct new stand-alone storage; add an ESS to an existing DG facility; and change the operating mode of an existing Hybrid Project or stand-alone storage facility. Whether an application will be handled under Section I-B or I-C will be determined by the sum of the AC nameplate ratings of all DG facilities and ESS facilities comprising the proposed Hybrid Project.

STEP 1: The Application

An applicant proposing a Hybrid Project or stand-alone ESS shall complete and submit Appendix K with Appendix F.

The owner of an existing DG facility may apply to add an ESS by submitting a completed Appendix K to the utility at any time.

For all projects involving ESS, the utility shall review the application and respond within the time frames provided in Section I-B or I-C, as applicable.

Following interconnection of a Hybrid Project or a stand-alone ESS, the applicant may apply to the utility to change the operating characteristics of the storage component. To initiate review, the applicant shall submit a completed Appendix K specifying the proposed new operating characteristics to the utility.

STEP 2: Protection and Control Review

When performing screening analysis and system impact studies associated with ESS, operating characteristics including maximum export and import capacity shall be utilized, except that fault current contribution shall be evaluated based on aggregate AC nameplate rating. The utility's technical review shall determine whether the proposed facility, operating per the characteristics identified in the application (Appendix K), can be safely and reliably interconnected to the utility's distribution system. The applicant shall pay the costs for the utility's review in advance.

Following the completion of Step 3 in Section I.B, or upon passing the Preliminary or Supplemental Screening Analysis in Step 4 in Section I.C, based on the application and proposed operating parameters, the utility will determine if a Protection and Control Review is required. The utility will notify the applicant of this determination. The applicant will have thirty (30) Business Days from the notification to pay the nonrefundable fee for the review, which shall be calculated as \$500 plus \$4/kW capped at \$3,000. The utilities shall have twenty (20) Business Days to perform the review and provide the results to the applicant, including a description of

any modifications to the control systems that the utility determines are necessary.

Within ten (10) Business Days of an applicant's request, the utility shall discuss the results of the Protection and Control Review. Following the discussion, the applicant will have twenty (20) Business Days to determine whether or not to accept any required modifications to the control system and take the next step in the process as defined in Section I.B or I.C, as applicable, or to withdraw the application.

For all applications relating to ESS, the utility's written report of its technical review shall include a completed Attachment I, as defined below, specifying the operating parameters studied for the proposed facility. The utility and the applicant shall discuss the listed operating parameters promptly after delivery of the study results to the applicant.

For ESS applications requiring a CESIR, the utility will provide the applicant with any additional testing procedures required in connection with the ESS, using the applicant's load management control systems to limit reverse power. The utility will provide this information with the CESIR results.

STEP 3: Contract and Payment for Utility Construction Costs

An applicant proposing a Hybrid Project, stand-alone storage, or the addition of ESS to an existing DG facility shall execute the New York State Standardized Interconnection Contract for Systems including Energy Storage, and make payment to the utility for its estimated construction costs within the time required by Section D.

Each contract shall include a completed Attachment I, which shall specify the operating parameters for the interconnected ESS after consultation with the applicant.

An applicant proposing to change the operating characteristics listed in Appendix K for an existing ESS shall sign an amendment to the New York State Standard Interconnection Contract for Facilities including Energy Storage to incorporate the revised Attachment I and make payment for any utility construction costs within the time required by Section I-D.

F. Rules for Combining DG Applications

Distributed Generation applications that have been determined to be complete and that meet the following criteria may be combined:

- (a) the applications must be sequential in the utility's queue on both the circuit and substation bus, or non-sequential combined applications may proceed with the lower queue position;
- (b) there can be no non-SIR applications in the utility's queue between the applications that propose to aggregate;
- (c) the proposed projects must be located on the same or adjacent parcels;
- (d) both applications must be compensated at the same rate and; and
- (e) the size of the combined projects may not exceed an AC nameplate rating of 5 MW.

If none of the applications has reached the deadline for payment of 25% of the estimated utility construction costs necessary for its interconnection, the applicant(s) may ask the utility to perform a technical review of the applications as a combined project. The applicant(s) shall submit its request in writing to the utility. The utility shall cease any ongoing work on the individual applications and notify the applicant(s) within ten (10) Business Days of any

additional information that is needed to perform the requested analysis and of the fee that will be charged. The utility shall apply any unspent study fees related to the individual applications to the charge for the new study. The applicant(s) shall pay the fee and provide the information sought by the utility within ten (10) Business Days of the notification. The construction cost payment due dates for the applications that are proposed to combine will be suspended until a new due date is established pursuant to this Section.

If any of the applications proposed to be combined has made a payment for estimated utility construction costs, the applicant(s) may still submit a request to study them as a combined project as provided above. Any additional payment due dates associated with the applications shall be suspended until a new due date is established. The utility shall cease work on the individual applications and shall cancel any procurements that the applicant(s) agree should be cancelled. The applicant(s) shall bear any cost associated with such cancellations. The utility shall notify the applicant(s) of any information that is needed to perform the requested analysis and of the fee that will be charged for the study within ten (10) Business Days of receiving the request. The applicant(s) shall pay the fee and provide the information sought by the utility within ten (10) Business Days of the notification.

The utility shall have sixty (60) Business Days from receipt of the fee and the project information to perform the technical review of the combined applications. The utility's report of the results shall provide the information specified in Step 6 of Section I-C to the applicant(s). The applicant(s) may:

- (1) proceed to construct the combined project;
- (2) resume the interconnection of the separate applications; or
- (3) withdraw one or more of the applications.

If the applicant(s) selects option (1), payment for the full amount of the estimated utility construction costs shall be due sixty (60) Business Days after receipt of the results of the technical review. If the applicant(s) selects either option (2) or (3), full payment of the construction cost associated with the applications that are to continue to interconnect shall be due within the same time period. If the applicant(s) does not meet these deadlines, the applications shall be deemed withdrawn with no further action required by the utility.

G. Interconnection On-Line Application Portal (IOAP)

Each utility shall maintain an IOAP system to provide applicants a web-based application submittal process. Hard copy, email, and/or mailed in application will no longer be allowed or accepted unless the utility IOAP systems are down for maintenance or failure. The IOAP shall also provide applicants with updated information regarding the status of their SIR application process. The system shall be customer specific and post the real-time status of the SIR process. At a minimum, the following content shall be provided:

1. The applicant's name and project/application identification number.
2. Description of the project, including at a minimum, the project's type (energy source), size, metering, and location.
3. SIR project application status, including all the steps completed and to be completed, along with corresponding completion/deadline dates associated with each step.
 - If the next action is to be taken by the utility, the expected date that action will

be completed,

- If the next action is to be taken by the applicant, what exactly is required and a contact for more information.
4. Information regarding any outstanding information request made by the utility of the applicant, and
 5. The status of all amounts paid and/or due to the utility by the applicant.

Access shall be available for the customer and their authorized agent(s), such that both can access the information. The IOAP must be private and secure from unauthorized access. Access to the IOAP shall be easily found on each electric utility's Interconnection / Distributed Generation home web page.

The IOAP application process must be consistent with the latest version of the SIR and include the ability to attach associated documentation or drawings for each project. Electronic signatures shall be accepted and approved for this process.

H. Modifications

Applicants may propose a Modification at any time by submitting a request to the utility through the utility's on-line application portal and /or via email. Submission of such a request will not suspend any deadlines applicable to the pending application. The utility will review the request to determine whether the proposed Modification is a Material Modification and provide its determination to the applicant within ten (10) Business Days, unless the utility first notifies the applicant that additional information is needed to make the evaluation. In that case, the utility will have ten (10) Business Days from receipt of the additional information to determine whether the proposed Modification is a Material Modification.

A Material Modification to a project will require a new application, a new queue position, and removal of the original application if the applicant elects to move forward with the modification (if not yet interconnected).

The utility reserves the right to make the final determination as to whether a proposed change is a Material Modification.

When making the materiality determination, the utility will consider the DPS Staff posted Guidance Document on DER Material Modifications and will provide the applicant with a written explanation of its finding. At the applicant's request, the utility will meet with the applicant to discuss the materiality determination.

A Modification that is not determined to be material may still require evaluation and acceptance by the utility through the process described below. The applicant is obligated to pay any necessary study costs of the evaluation. The utility will notify the applicant of any additional funding and/or information that may be required to evaluate the Modification within five (5) Business Days of providing the materiality determination. The applicant shall have ten (10) Business Days to provide any requested information and pay the associated fees or choose to remain with the original interconnection application with associated uninterrupted timeline.

If the proposed change is not a Material Modification, and is proposed prior to the start of a CESIR, the utility will study the modified project in the CESIR process.

If the proposed change is not a Material Modification and is proposed following the start

of a CESIR but no later than forty (40) Business Days after the start date, the utility may have an additional forty (40) Business Days to complete the CESIR incorporating the change.

If the proposed change is not a Material Modification and is proposed at a later date, or after completion of a CESIR, the change may require further study and will require mutual agreement between the utility and the applicant. The utility retains the right to determine the extent of evaluation necessary but will endeavor to complete any necessary study within a timeframe no longer than a standard CESIR. The applicant will be responsible for any costs related to the change.

Section II. Interconnection Requirements

A. Design Requirements

1. Common

The generator-owner shall provide appropriate protection and control equipment, including a protective device that utilizes an automatic disconnect device that will disconnect the generation in the event that the portion of the utility system that serves the generator is de-energized for any reason or for a fault in the generator-owner's system. The generator-owner's protection and control equipment shall be capable of automatically disconnecting the generation upon detection of an islanding condition and upon detection of a utility system fault.

The type and size of the generation facility or energy storage system is based on electrical generator or inverter AC nameplate rating.

The generator-owner's protection and control scheme shall be designed to ensure that the generation remains in operation when the frequency and voltage of the utility system is within the limits specified by the required operating ranges. Upon request from the utility, the generator-owner shall provide documentation detailing compliance with the requirements set forth in this document.

The specific design of the protection, control, and grounding schemes will depend on the size and characteristics of the generator-owner's generation, as well the generator-owner's load level, in addition to the characteristics of the particular portion of the utility's system where the generator-owner is interconnecting.

The generator-owner shall have, as a minimum, an automatic disconnect device(s) sized to meet all applicable local, state, and federal codes and operated by over and under voltage and over and under frequency protection. For three-phase installations, the over and under voltage function should be included for each phase and the over and under frequency protection on at least one phase. All phases of a generator or inverter interface shall disconnect for voltage or frequency trip conditions sensed by the protective devices. Voltage protection shall be wired phase to ground for single phase installations and for applications using wye grounded-wye grounded service transformers.

The settings below are listed for single-phase and three-phase applications using wye grounded- wye grounded service transformers or wye grounded-wye grounded isolation transformers. For applications using other transformer connections, a site-specific review will be performed by the utility and the revised settings identified in Step 6 of the Application Process.

The requirements set forth in this document are intended to be consistent with those contained in the most current version of IEEE Std 1547, Standard for Interconnecting Distributed Resources with Electric Power Systems. The requirements in IEEE Std 1547 above

and beyond those contained in this document shall be followed and any other Standards included in or referenced to in IEEE Std 1547 shall be adhered to.

Voltage Response

The required operating range for the generators shall be as detailed in the most current version of IEEE Std 1547 and the Category (related to Area EPS abnormal conditions) as specified by the utility's technical requirements document. In addition, the generator shall not cause the system voltage at the PCC to deviate from a range of 95% to 105% of the utility system voltage. For excursions outside these limits the protective device shall automatically initiate a disconnect sequence from the utility system as detailed in the most current version of IEEE Std 1547. Clearing time is defined as the time the range is initially exceeded until the generator-owner's equipment ceases to energize the PCC and includes detection and intentional time delay. Other static or dynamic voltage functionalities shall be permitted as agreed upon by the utility and generator-owner.

Frequency Response

The required operating range for the generators shall be as detailed in the most current version of IEEE Std 1547 and the Category (related to Area EPS abnormal conditions) as specified by the utility's technical requirements document . If deemed necessary due to abnormal system conditions the utility may request that the generator operate at frequency ranges below 59.3 Hz in coordination with the load shedding schemes of the utility system. For excursions outside these limits the protective device shall automatically initiate a disconnect sequence from the utility system as detailed in the most current version of IEEE Std 1547. Clearing time is defined as the time the range is initially exceeded until the generator- owner's equipment ceases to energize the PCC and includes detection and intentional time delay. Other static or dynamic frequency functionalities shall be permitted as agreed upon by the utility and generator-owner.

Reconnection to the Utility System

If the generation facility is disconnected as a result of the operation of a protective device, the generator-owner's equipment shall remain disconnected until the utility's service voltage and frequency have recovered to acceptable voltage and frequency limits as defined in the most current version of IEEE Std 1547 for a minimum of five (5) minutes. Systems greater than 25 kW that do not utilize inverter based interface equipment shall not have automatic recloser capability unless otherwise approved by the utility. If the utility determines that a facility must receive permission to reconnect, then any automatic reclosing functions must be disabled and verified to be disabled during verification testing.

2. Synchronous Generators

Synchronous generation shall require synchronizing facilities. These shall include automatic synchronizing equipment or manual synchronizing with relay supervision, voltage regulator, and power factor control.

For all synchronous generators sufficient reactive power capability shall be provided by the generator-owner to withstand normal voltage changes on the utility's system. The generator voltage VAR schedule, voltage regulator, and transformer ratio settings shall be jointly

determined by the utility and the generator-owner to ensure proper coordination of voltages and regulator action. Generator-owners shall have synchronous generator reactive power capability to withstand voltage changes up to 5% of the base voltage levels.

A voltage regulator must be provided and be capable of maintaining the generator voltage under steady state conditions within plus or minus 1.5% of any set point and within an operating range of plus or minus 5% of the rated voltage of the generator.

Generator-owners shall adopt one of the following grounding methods for synchronous generators interconnected to effectively grounded circuits:

- a. Solid grounding
- b. High- or low-resistance grounding
- c. High- or low-reactance grounding
- d. Ground fault neutralizer grounding

Synchronous generators shall not be permitted to connect to utility secondary network systems without the acceptance of the utility.

3. Induction Generators

Induction generation may be connected and brought up to synchronous speed (as an induction motor) if it can be demonstrated that the initial voltage drop measured at the PCC is acceptable based on current inrush limits. The same requirements also apply to induction generation connected at or near synchronous speed because a voltage dip is present due to an inrush of magnetizing current. The generator-owner shall submit the expected number of starts per specific time period and maximum starting kVA draw data to the utility.

Starting or rapid load fluctuations on induction generators can adversely impact the utility's system voltage. Corrective step-switched capacitors or other techniques may be necessary. These measures can, in turn, cause ferro resonance. If these measures are installed on the customer's side of the PCC, the utility will review these measures and may require the customer to install additional equipment.

4. Inverters

Direct current generation can only be installed in parallel with the utility's system using a synchronous inverter. The design shall be such as to disconnect this synchronous inverter upon a utility system event. Inverters intended to provide local grid support during system events that result in voltage and/or frequency excursions as described in Section II.A.1 shall be provided with the required onboard functionality to allow for the equipment to remain online for the duration of the event.

It is recommended that equipment be selected from the Department of Public Service "Certified Interconnection Equipment list" maintained on the Commission's website. Interconnected DG systems utilizing equipment not found in such list must meet all functional requirements of the current version of IEEE Std 1547 and be protected by utility grade relays (as defined in these requirements) using settings approved by the utility and verified in the field. The field verification test must demonstrate that the equipment meets the voltage and frequency requirements detailed in this section.

Synchronization or re-synchronization of an inverter to the utility system shall not result in a voltage deviation that exceeds the requirements contained in Section II.E, Power Quality. Only inverters designed to operate in parallel with the utility system shall be utilized for that purpose.

5. Minimum Protective Function Requirements

Protective system requirements for distributed generation facilities result from an assessment of many factors, including but not limited to:

- Type and size of the distributed generation facility
- Voltage level of the interconnection
- Location of the distributed generation facility on the circuit
- Distribution transformer
- Distribution system configuration
- Available fault current
- Load that can remain connected to the distributed generation facility under isolated conditions
- Amount of existing distributed generation on the local distribution system.

As a result, protection requirements cannot be standardized according to any single criteria. Minimum protective function requirements shall be as detailed in the table below. Function numbers, as detailed in the latest version of ANSI C37.2, are listed with each function. All voltage, frequency, and clearing time set points shall be field adjustable.

Synchronous Generators	Induction Generators	Inverters
Over/Under Voltage (Function 27/59)	Over/Under Voltage (Function 27/59)	Over/Under Voltage (Function 27/59)
Over/Under Frequency (Function 81O/81U)	Over/Under Frequency (Function 81O/81U)	Over/Under Frequency (Function 81O/81U)
Anti-Islanding Protection	Anti-Islanding Protection	Anti-Islanding Protection
Overcurrent (Function 50P/50G/51P/51G)	Overcurrent (Function 50P/50G/51P/51G)	Overcurrent (Function 50P/50G/51P/51G)

For energy storage systems or distributed generation where net export is limited, Reverse Power (Function 32) shall be required.

The need for additional protective functions shall be determined by the utility on a case-by-case basis. If the utility determines a need for additional functions, it shall notify the generator-owner in writing of the requirements. The notice shall include a description of the specific aspects of the utility system that necessitate the addition, and an explicit justification for the necessity of the enhanced capability. The utility shall specify and provide settings for those functions that the utility designates as being required to satisfy protection practices. Any

protective equipment or setting specified by the utility shall not be changed or modified at any time by the generator- owner without written consent from the utility.

The generator-owner shall be responsible for ongoing compliance with all applicable local, state, and federal codes and standardized interconnection requirements as they pertain to the interconnection of the generating equipment. Protective devices shall utilize their own current transformers and potential transformers and not share electrical equipment associated with utility revenue metering.

A failure of the generator-owner's protective devices, including loss of control power, shall open the automatic disconnect device, thus disconnecting the generation from the utility system. A generator-owner's protection equipment shall utilize a non-volatile memory design such that a loss of internal or external control power, including batteries, will not cause a loss of interconnection protection functions or loss of protection set points.

All interface protection and control equipment shall operate as specified independent of the calendar date.

For monitoring and control of new DG projects, the most current version of the Monitoring and Control Criteria shall be employed by the utilities to evaluate the need for such equipment. The Monitoring and Control Criteria document was developed and agreed to through a collaborative process as part of the Interconnection Technical Working Group (ITWG). This document can be found on the Department of Public Service website (www.dps.ny.gov) at the Distributed Generation/Interconnections tab under Interconnection Technical Working Group Information. The communications hardware, protocols, and data models must comply with utility standards.

6. Metering

Metering requirements shall be determined by the configuration of the DER system. New metering or modifications to existing metering will be reviewed on a case-by-case basis and shall be consistent with metering requirements adopted by the Commission.

Any incremental metering costs are included in interconnection costs that may be required of an applicant.

The following table summarizes the applicable New York Net Metering Rules:

New York (PSL §66-1) - Net Metering*			
Incentive Type:	Net Metering Rules		
Eligible Renewable/Other Technologies:	Wind		
Applicable Sectors:	Residential	Non-Residential	Farm-Service Wind
Limit on System Size:	25 kW	Up to 2 MW	500 kW
Remote Net Metering	No**	Yes	Yes
Limit on Overall Enrollment:	.3% of 2005 Demand per IOU		

* Refer to specific utility tariff leaves for more detailed rules and regulations applicable to net metering wind electric generating systems.

** Residential customers who own or operate a farm operation as defined by Agriculture and Markets Law §301(11) and locate solar photovoltaic, micro-hydroelectric, wind, or fuel cells on property owned or leased by the customer are also eligible for remote net metering.

B. Operating Requirements

The generator-owner shall provide a 24-hour telephone and email/electronic contact. This contact will be used by the utility to arrange access for repairs, inspection, or emergencies. The utility will make such arrangements (except for emergencies) during normal business hours. For all required disconnections of the generator-owner's system to facilitate non-emergency utility work on the electric power system, the utility will provide two (2) Business Days' advance notice to the generator-owner contact with an indication of anticipated duration.

Voltage and frequency trip set point adjustments shall be accessible to service personnel only. Any changes to these settings must be reviewed and approved by the utility.

The generator-owner shall not supply power to the utility during any outages of the utility system that serves the PCC. The generator-owner's generation may be operated during such outages only with an open tie to the utility. Islanding will not be permitted. The generator-owner shall not energize a de-energized utility circuit for any reason.

Energy storage systems cannot disconnect to self-generate if their operating

characteristics require their stored energy to be discharged at that time. All control systems must be password protected from modification by the interconnection customer and property owner following Interconnection.

The disconnect switch specified for system size larger than 25 kW and non-inverter based systems of 25 kW or less in Section II.D, Disconnect Switch, may be opened by the utility at any time for any of the following reasons:

- a. to eliminate conditions that constitute a potential hazard to utility personnel or the general public;
- b. pre-emergency or emergency conditions on the utility system;
- c. a hazardous condition is revealed by a utility inspection; protective device tampering; or,
- d. parallel operation prior to utility approval to interconnect.

The disconnect switch may be opened by the utility for the following reasons, after notice to the responsible party has been delivered and a reasonable time to correct (consistent with the conditions) has elapsed:

- a. A generator-owner has failed to make available records of verification tests and maintenance of its protective devices;
- b. A generator-owner's system adversely impacts the operation of utility equipment or equipment belonging to other utility customers; or,
- c. A generator-owner's system is found to adversely affect the quality of service to adjoining customers.

The utility will provide a name and telephone number so that the generator-owner can obtain information about the utility lock-out.

The generator-owner shall be allowed to disconnect from the utility without prior notice to self-generate.

If a generator-owner proposes any modification to the system that has an impact on the interface at the PCC after it has been installed and a contract between the utility and the generator-owner has already been executed, then any such modifications must be reviewed and approved by the utility before the modifications are made.

C. Dedicated Transformer

The utility reserves the right to require a power-producing facility to connect to the utility system through a dedicated transformer. The transformer shall either be provided by the connecting utility at the generator-owner's expense, purchased from the utility, or conform to the connecting utility's specifications. The transformer that is part of the normal electrical service connection of a generator-owner's facility may meet this requirement if there are no other customers supplied from it. A dedicated transformer is not required if the installation is designed and coordinated with the utility to protect the utility system and its customers adequately from potential detrimental net effects caused by the operation of the generator.

If the utility determines a need for a dedicated transformer, it shall notify the generator-owner in writing of the requirements. The notice shall include a description of the specific aspects of the utility system that necessitate the addition, the conditions under which the dedicated transformer is expected to enhance safety or prevent detrimental effects, and the expected response of a normal, shared transformer installation to such conditions.

D. Disconnect Switch

Generating equipment with system size larger than 25 kW and non-inverter based systems of 25 kW or less shall be capable of being isolated from the utility system by means of an external, manual, visible, gang-operated, load break disconnecting switch. The disconnect switch shall be installed, owned, and maintained by the customer-generator, and located between the generating equipment and its interconnection point with the utility system.

The disconnect switch must be rated for the voltage and current requirements of the installation.

The basic insulation level (BIL) of the disconnect switch shall be such that it will coordinate with that of the utility's equipment. Disconnect devices shall meet applicable requirements of the most current revision of UL, ANSI, and IEEE standards, and shall be installed to meet all applicable local, state, and federal codes. (New York City Building Code may require additional certification.)

The disconnect switch shall be clearly marked, "Generator Disconnect Switch," with permanent 3/8 inch or larger letters.

The customer-generator will propose, and the utility will approve, the location of the disconnect switch. The location and nature of the disconnect switch shall be indicated in the immediate proximity of the electric service entrance. The disconnect switch shall be readily accessible for operation and locking by utility personnel in accordance with Section II.B, Operating Requirements. The disconnect switch must be lockable in the open position with a 3/8" shank utility padlock.

For installations above 600V or with a full load output of greater than 960A, a draw-out type circuit breaker with the provision for padlocking at the draw-out position will not be an acceptable disconnect switch for the purposes of this requirement unless the use of such a circuit breaker is specifically granted by the utility, based on site-specific technical requirements. If the utility grants such use, the generator-owner will be required, upon the utility's request, to provide qualified operating personnel to open the draw-out circuit breaker and ensure isolation of the DG system, with such operation to be witnessed by the utility followed immediately by the utility locking the device to prevent re-energization. In an emergency or outage situation, where there is no access to the draw-out breaker or no qualified personnel, utilities may disconnect the electric service to the premise in order to isolate the DG system.

E. Power Quality

The requirements for acceptable flicker levels shall be in accordance with the latest version of IEEE Std 1453 Recommended Practice for the Analysis of Fluctuating Installations on Power Systems. Short and long-term perception of flicker shall be within the planning and compatibility levels delineated in this standard. Mitigation measures necessary to comply with these requirements shall be at the generator-owner's expense.

F. Power Factor

If the average power factor, as measured at the PCC, is less than 0.9 (leading or lagging), the method of power factor correction necessitated by the installation of the generator will be negotiated with the utility as a commercial item. If the average power factor of the generator is proven to be above the minimum of 0.9 (leading or lagging) by the customer and accepted by the utility, that power factor value shall be used for any further utility design calculations and requirements.

Induction power generators may be provided VAR capacity from the utility system at the generator-owner's expense. The installation of VAR correction equipment by the generator-owner on the generator-owner's side of the PCC must be reviewed and approved by the utility prior to installation.

G. Islanding

Systems must be designed and operated so that islanding is not sustained on utility distribution circuits or on substation bus and transmission systems. The requirements listed in this document are designed and intended to prevent islanding. Special protection schemes and system modifications may be necessary based on the capacity of the proposed system and the configuration and existing loading on the subject circuit.

For inverter based systems, evaluation of the need for special measures to prevent unintentional islanding on radial distribution systems should be based on best practices related to the most current version of the Unintentional Islanding Protection Practice Connected to the Distribution System. This document can be found on the Department of Public Service website (www.dps.ny.gov) at the Distributed Generation/Interconnections tab under Interconnection Technical Working Group Information.

The need for zero sequence voltage (3V0) and direct transfer trip (DTT) protection schemes shall be evaluated based on minimum loads on the associated feeder and substation bus, including certain fault conditions resulting from system installation to protect for an islanded condition.

H. Equipment Certification

In order for the equipment to be acceptable for interconnection to the utility system without additional protective devices, the interface equipment must be equipped with the minimum protective function requirements listed in the table in Section II.A.5 and be tested by a Nationally Recognized Testing Laboratory (NRTL) recognized by the United States Occupational Safety and Health Administration (OSHA) in compliance with the most current revision of UL 1741, including supplement B (UL 1741 SB), with settings as specified in the utility's technical requirements document.

For each interconnection application, documentation including the proposed equipment certification, stating compliance with the most recent version of UL 1741, including UL 1741 SB, with settings as specified in the utility's technical requirements document, by an NRTL, shall be provided by the applicant to the utility. Supporting information from an NRTL website or UL's website stating compliance is acceptable for documentation.

If an equipment manufacturer, vendor, or any other party desires, documentation indicating compliance as stated above may be submitted to the Department of Public Service for listing under the certified equipment list on the Department of Public Service website (www.dps.ny.gov) at the Distributed Generation/Interconnections tab.

Certification information for equipment tested and certified to the most current revision of UL 1741, including UL 1741 SB, with settings as specified in the utility's technical requirements document, by a non-NRTL shall be provided by the manufacturer, or vendor, to the contacts listed on the Department of Public Service website for review before final acceptance and posting under the certified equipment list. Utilities are not responsible for reviewing and approving equipment tested and certified by a non-NRTL.

If a NRTL certifies equipment to the most current version of UL 1741, including UL 1741 SB, with settings as specified in the utility's technical requirements document, and compliance documentation is submitted to the utility, the utility shall accept such equipment for interconnection in New York State. All equipment certified to the most current revision of UL 1741, including UL 1741 SB, with settings as specified in the utility's technical requirements document, by an NRTL shall be deemed 'certified equipment' even if it does not appear on the Commission's website under the Certified Equipment list.

Utility grade relays need not be certified per the requirements of this section.

For DG systems that are already interconnected with the utility's electrical system and seek to use the New York State Standardized Interconnection Requirements and Application Process in order to qualify for net metering, no DG system will be required to obtain recertification the latest equipment certification standards, as long as the DG system met the equipment certification requirements by the utility in effect at the time of the DG unit's interconnection.

I. Verification Testing

All interface equipment must include a verification test procedure as part of the documentation presented to the utility in the course of the interconnection process. Except for the case of small single-phase inverters as discussed later, the verification test must establish that the protection settings meet the SIR requirements. The verification testing may be site-specific and is performed periodically to assure continued acceptable performance.

Upon initial parallel operation of a generating system, or any time interface hardware or software is changed, the verification test must be performed. A qualified individual must perform verification testing in accordance with the manufacturer's published test procedure. Qualified individuals include professional engineers, factory-trained and certified technicians, and licensed electricians with experience in testing protective equipment. The utility reserves the right to witness verification testing or require written certification that the testing was successfully performed.

Verification testing shall be performed at least once every four years. All verification tests prescribed by the manufacturer shall be performed. If wires must be removed to perform certain tests, each wire and each terminal must be clearly and permanently marked. The generator-owner shall maintain verification test reports for inspection by the utility.

Single-phase inverters and inverter systems rated 25 kW and below shall be verified upon initial parallel operation and once every four years as follows: the generator-owner shall interrupt the utility source and verify that the equipment automatically disconnects and does not reconnect for at least five minutes after the utility source is reconnected. The owner shall maintain a log of these operations for inspection by the connecting utility. Any system that depends upon a battery for trip power shall be checked and logged at least annually for proper voltage. Once every four (4) years the battery must be either replaced or a discharge test performed.

J. Interconnection Inventory

The utilities will manage the queue of interconnection applications in their inventories in the order in which they are received and according to the timelines set forth in this document.

To ensure applications are addressed in a timely manner and monitor the overall interconnection activities, utilities shall submit an SIR inventory of projects monthly to the Public Service Commission by the 15th day of the following month. Therefore, 12 interconnection inventory submissions shall be provided each year by each of the electric utilities. Utilities shall provide DPS Staff with redacted and unredacted versions of its interconnection inventory, including the current queue, for the associated time period in Excel format. At a minimum, the following information shall be provided in the inventory:

1. Utility Name
2. Applicant Name
3. Developer
4. Application No.
5. Circuit ID
6. Substation
7. System Type
8. System Capacity
9. Metering Configuration
10. Protective Equipment
11. Application Review Start and End date
12. Preliminary Screening Analysis Start and End date
13. CESIR Start and End date
14. CESIR Costs
15. Utility CESIR Costs
16. Customer CESIR Costs
17. Utility System Upgrade Costs
18. Customer System Upgrade Costs
19. Verification Testing date
20. Final Letter of Acceptance date

Section III. Glossary of Terms

Automatic Disconnect Device: An electronic or mechanical switch used to isolate a circuit or piece of equipment from a source of power without the need for human intervention.

Battery Energy Storage System (BESS): A commercially-available mechanical, electrical, or electro-chemical means to store and release electrical energy, using battery chemistries for grid-scale applications (*e.g.*, lithium-ion), and its associated electrical inversion device and control functions that may stand-alone or be paired with a distributed generator at a point of common coupling. BESS's shall comply with all ESS rules and requirements, unless otherwise specifically excepted.

Business Day: Monday through Friday, excluding utility holidays.

Cease to Energize: Cessation of energy flow capability.

Coordinated Electric System Interconnection Review (CESIR): Any studies performed by utilities to ensure that the safety and reliability of the electric grid with respect to the interconnection of distributed generation as discussed in this document.

Dedicated Transformer: A transformer installed by the utility to isolate a DG system.

Developer: The applicant or the contractor identified in Appendix F as the agent for the customer. 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.

Direct Transfer Trip: Remote operation of a circuit breaker by means of a communication channel.

Disconnect (verb): To isolate a circuit or equipment from a source of power. If isolation is accomplished with a solid-state device, "Disconnect" shall mean to cease the transfer of power.

Disconnect Switch: A mechanical device used for isolating a circuit or equipment from a source of power.

Distributed Energy Resources (DER): Energy sources that consist of distributed generation facilities or energy storage systems or any combination thereof.

Distributed Generation (DG): Generation facilities supplementing on-site load or non-centralized electric power production facilities interconnected at the distribution side of an electric power system.

Draw-out Type Circuit Breaker: Circuit breakers that are disconnected by physically separating, or racking, the breaker assembly away from the switchgear bus.

Electric Power System (EPS): Refers to the electric power system owned, controlled, and/or operated by the utility and used to provide transmission and/or distribution services to its customers.

Energy Storage System (ESS): A commercially-available mechanical, electrical or electro-chemical means to store and release electrical energy, and its associated electrical inversion device and control functions that may stand-alone or be paired with a distributed generator at a point of common coupling.

Generator-Owner: An applicant to operate on-site power generation equipment in parallel with the utility grid per the requirements of this document.

Hosting Capacity: The amount of distributed energy that can be interconnected without requiring electric infrastructure upgrades or adversely affecting power quality or reliability under

current configurations.

Hybrid Project: A facility that operates, or is planned to operate, as a distributed generator paired with an energy storage system at a point of common coupling.

Islanding: A condition in which a portion of the utility system that contains both load and distributed generation is isolated from the remainder of the utility system (Adopted from IEEE Std 929.).

Material Modification: A Modification to a facility that may have adverse impacts on subsequently queued applications in the interconnection queue, or any Modification described below (regardless of impact to a queued project):

1. A change in the physical location of the DER such that the Property Owner Consent Form or Site Control Certification Form as required by the SIR is no longer valid.
2. A change in the PCC to a location on a different line segment or different distribution feeder for projects interconnecting to the utility's radial system, or any change in PCC for projects interconnecting to the utility's network system.
3. An increase in the nameplate kVA or kW rating of the originally proposed distributed generation facility or energy storage system of more than 2%.
4. An additional distributed generation or energy storage system (other than the 2% increase in nameplate in item 3 above) not disclosed in the original application, where a separate and distinct distributed generation facility or energy storage system already exists behind the same proposed PCC. This would include existing non-disclosed distributed generation or energy storage systems or a request for additional distributed generation or energy storage systems at the project site.

Maximum Export: The maximum export capacity of an Energy Storage System to the distribution grid at the PCC communicated by the Applicant and studied as such by the utility per their review of the impacts on the utility system based on the operating characteristic of the Energy Storage System.

Maximum Import: The maximum import capacity of an Energy Storage System from the distribution grid at the PCC communicated by the Applicant and studied as such by the utility per their review of the impacts on the utility system based on the operating characteristic of the Energy Storage System.

Mobilization Threshold: The minimum percentage of a Qualifying Upgrade cost that must be funded by Participating Projects to trigger the utility to begin the construction process for the Qualifying Upgrade.

Modification: A change to the ownership, equipment, equipment ratings, equipment configuration, or operating characteristics* of the facility, or to schedules* associated with the facility as described in the application.

*Modifications that alter operating characteristics or schedules may be deemed material. Please consult with host utility for review and resolution.

Multi-Value Distribution (MVD): A transformer bank installation or replacement identified by the utility in its Capital Investment Plan as a Multi-Value Distribution project.

Network: A network (also known as an area network) is comprised of multiple, primary feeders supplying network transformers tied together in parallel on the secondary side to provide energy into a low voltage grid.

Participating Project: A Triggering Project or a Sharing Project that benefits from and shares costs of a Qualifying Upgrade. A Participating Project must be greater than 50 kW AC nameplate rating in size. Where Participating Projects are projects all proposed by the same developer, within a six-month period, such projects must be greater than 50 kW AC nameplate rating in aggregate.

Point of Common Coupling (PCC): The point at which the interconnection between the electric utility and the customer interface occurs. Typically, this is the customer side of the utility revenue meter.

Preliminary Review: A review of the generator-owner's proposed system capacity, location on the utility system, system characteristics, and general system regulation to determine if the interconnection is viable.

Proactive 3V0: A utility-initiated upgrade where the utility installs 3V0 prior to any applicant payment and collects pro rata payments from interconnecting projects that utilize the upgrade.

Protective Device: A device that continuously monitors a designated parameter related to the operation of the generation system that operates if preset limits are exceeded.

Qualifying Upgrade: System modifications which result in an increase to the Hosting Capacity of the utility's distribution system beyond that required to interconnect a Triggering Project that can be shared by multiple Distributed Generation/Energy Storage System projects and whose costs are greater than \$250,000.

Qualifying Upgrade Disclosure: An exhibit to the CESIR presenting the use case and specifics of a Qualifying Upgrade, including the technology option(s) considered to address the electric system impacts and total estimated Qualifying Upgrade cost and increase in Hosting Capacity as well as the resulting capacity increase in shared cost expressed in kW.

Required Operating Range: The range of magnitudes of the utility system voltage or frequency where the generator-owner's equipment, if operating, is required to remain in operation for the purposes of compliance with UL 1741. Excursions outside these ranges must result in the automatic disconnection of the generation within the prescribed time limits.

Safety Equipment: Includes dedicated transformers or equipment and facilities to protect the safety and adequacy of electric service provided to other customers.

Sharing Project: A project that benefits from and contributes to the cost of a Qualifying Upgrade holding an interconnection queue position after the Triggering Project.

Spot Network: A spot network is a network within a smaller area network where one or more

multiple transformers are dedicated to serve a single customer or large energy-consuming facility such as a high-rise building.

Stand-Alone Storage: An energy storage system that is solely connected to a point of common coupling and not paired with a distributed generator.

Triggering Project: The application in the queue at a given substation or feeder whose proposed interconnection triggers the need for a Qualifying Upgrade.

Utility Grade Relay: A relay that is constructed to comply with, as a minimum, the most current version of the following standards for non-nuclear facilities:

<u>Standard</u>	<u>Conditions Covered</u>
ANSI/IEEE C37.90	Usual Service Condition Ratings - <ul style="list-style-type: none">● Current and Voltage Maximum design for all relay AC and DC auxiliary relays● Make and carry ratings for tripping contacts● Tripping contacts duty cycle● Dielectric tests by manufacturer● Dielectric tests by user
ANSI/IEEE C37.90.1	Surge Withstand Capability (SWC) Fast Transient
Test IEEE C37.90.2	Radio Frequency Interference
ANSI C37.2	Electric Power System Device Function
Numbers IEC 255-21-1	Vibration
IEC 255-22-2	Electrostatic Discharge
IEC 255-5	Insulation (Impulse Voltage Withstand)

Verification Test: A test performed upon initial installation and repeated periodically to determine that there is continued acceptable performance.

Wind, Net Meter, Residential Applicant: A residential applicant who is proposing to install a wind electric generating system, not to exceed a combined rated capacity of 25 kW, located and used at the applicant's primary residence, per the requirements of New York State Public Service Law §66-1.

Wind, Net Meter, Non-Residential Applicant: A non-residential applicant who is proposing to install a wind electric generating system located and used at the applicant's premises, not to exceed 2 MW, pursuant to New York State Public Service Law §66-1.

Wind, Net Meter, Farm Applicant: A farm applicant who is proposing to install a wind electric generating system, not to exceed a combined rated capacity of 500 kW, located and used at the applicant's primary residence, per the requirements of New York State Public Service Law §66-1.

APPENDIX A

**NEW YORK STATE STANDARDIZED CONTRACT
FOR INTERCONNECTION OF NEW DISTRIBUTED GENERATION UNITS AND/OR
ENERGY STORAGE SYSTEMS WITH CAPACITY OF 5 MW OR LESS CONNECTED
IN PARALLEL WITH UTILITY DISTRIBUTION SYSTEMS**

Interconnection Customer Information:

Utility Information:

Name:

Name:

Address:

Address:

Telephone:

Telephone:

Fax:

Fax:

Email:

Email:

Unit Application/File No.:

Utility Account Number:

DEFINITIONS

Delivery Service means the services the Utility may provide to deliver capacity or energy generated by the Interconnection Customer to a buyer to a delivery point(s), including related ancillary services.

Energy Storage System (ESS) means a commercially available mechanical, electrical, or electro-chemical means to store and release electrical energy, and its associated electrical inversion device and control functions that may be stand-alone or paired with a distributed generator at a point of common coupling.

Interconnection Customer means the owner of the Unit.

Interconnection Facilities means the equipment and facilities on the Utility's system necessary to permit operation of the Unit in parallel with the Utility's system.

Material Modification means a Modification to a Unit that may have adverse impacts on the Utility's system, Utility customers, other projects, or applications in the interconnection queue.

Modification means a change to the ownership, equipment, equipment ratings, equipment configuration, or operating conditions of the Unit.

Premises means the real property where the Unit is located.

SIR means the New York State Standardized Interconnection Requirements for new distributed generation units and/or energy storage systems with a nameplate capacity of 5 MW or less connected in parallel with the Utility's distribution system.

Unit means the distributed generation, stand-alone ESS, or combined generation and ESS facilities approved by the Utility for operation in parallel with the Utility's system. This Agreement relates only to such Unit, but a new agreement shall not be required if the Interconnection Customer makes physical alterations to the Unit that do not result in an increase in its nameplate generating capacity. The nameplate generating capacity or inverter/converter rating of the Unit shall not exceed 5 MW.

Utility means [insert legal name of the interconnecting utility].

I. TERM AND TERMINATION

1.1 Term: This Agreement shall become effective when executed by both Parties and shall continue in effect until terminated.

1.2 Termination: This Agreement may be terminated as follows:

- a. The Interconnection Customer may terminate this Agreement at any time, by giving the Utility sixty (60) days' written notice.
- b. Failure by the Interconnection Customer to seek final acceptance by the Utility within twelve (12) months after completion of the utility construction process described in the SIR shall automatically terminate this Agreement.
- c. Either Party may, by giving the other Party at least sixty (60) days' prior written notice, terminate this Agreement in the event that the other Party is in default of any of the material terms and conditions of this Agreement. The terminating Party shall specify in the notice the basis for the termination and shall provide a reasonable opportunity to cure the default.
- d. The Utility may, by giving the Interconnection Customer at least sixty (60) days' prior written notice, terminate this Agreement for cause. The Interconnection Customer's non-compliance with an upgrade to the SIR, unless the Interconnection Customer's installation is "grandfathered," shall constitute good cause.

1.3 Disconnection and Survival of Obligations: Upon termination of this Agreement the Unit will be disconnected from the Utility's electric system. The termination of this Agreement shall not relieve either Party of its liabilities and obligations, owed or continuing at the time of the termination.

1.4 Suspension: This Agreement will be suspended during any period in which the Interconnection Customer is not eligible for Delivery Service from the Utility

II. SCOPE OF AGREEMENT

2.1 Scope of Agreement: This Agreement relates solely to the conditions under which the Utility and the Interconnection Customer agree that the Unit may be interconnected to and operated in parallel with the Utility's system.

2.2 Electricity Not Covered: The Utility shall have no duty under this Agreement to account for, pay for, deliver, or return in kind any electricity produced by the Facility and delivered into the Utility's System unless the system is net metered as described in Public Service Law Section 66-1.

III. INSTALLATION, OPERATION AND MAINTENANCE OF UNIT

3.1 Compliance with SIR: Subject to the provisions of this Agreement, the Utility shall be required to interconnect the Unit to the Utility's system, for purposes of parallel operation, if the Utility accepts the Unit as in compliance with the SIR. The Interconnection Customer shall have a continuing obligation to maintain and operate the Unit in compliance with the SIR.

3.2 Observation of the Unit - Construction Phase: The Utility may, in its discretion and upon reasonable notice, perform reasonable on-site verifications during the construction of the Unit. Whenever the Utility chooses to exercise its right to perform observations herein it shall specify to the Interconnection Customer its reasons for its decision to perform the observation. For purposes of this paragraph and paragraphs 3.3 through 3.5, the term "on-site verification" shall not include testing of the Unit, and verification tests shall not be required except as provided in paragraphs 3.3 and 3.4.

3.3 Observation of the Unit - Ten-day Period: The Utility may perform on-site verifications of the Unit and observe the execution of verification testing within a reasonable period of time, not exceeding ten (10) business days after system installation. The Unit will be allowed to commence parallel operation upon satisfactory completion of the verification test. The Interconnection Customer must have complied with and must continue to comply with all contractual and technical requirements.

3.4 Observation of the Unit - Post-Ten-day Period: If the Utility does not perform an on-site verification of the Unit and observe the execution of verification testing within the ten-day period, the Interconnection Customer will send the Utility within five (5) days of the verification testing a written notification certifying that the Unit has been installed and tested in compliance with the SIR, the utility-accepted design and the equipment manufacturer's instructions. The Interconnection Customer may begin to produce energy upon satisfactory completion of the verification test. After receiving the verification test notification, the Utility will either issue to the Interconnection Customer a formal letter of acceptance for interconnection, or may request that the applicant and utility set a date and time to perform an on-site verification of the Unit and make reasonable inquiries of the Interconnection Customer, but only for purposes of determining whether the verification tests were properly performed. The Interconnection Customer shall not be required to perform the verification tests a second time, unless irregularities appear in the verification test report or there are other objective indications that the tests were not properly performed in the first instance.

3.5 Observation of the Unit - Operations: The Utility may perform on-site verification of the operations of the Unit after it commences operations if the Utility has a reasonable basis for doing so based on its responsibility to provide continuous and reliable utility service or as authorized by the provisions of the Utility's Retail Electric Tariff relating to the verification of Interconnection Customer installations generally.

3.6 Costs of Interconnection Facilities: During the term of this Agreement, the Utility shall design, construct and install the Interconnection Facilities. The Interconnection Customer

shall be responsible for paying the incremental capital cost of such Interconnection Facilities attributable to the Interconnection Customer's Unit. All costs associated with the operation and maintenance of the Dedicated Facilities after the Unit first produces energy shall be the responsibility of the Utility.

3.7 Modifications to the Unit: The Interconnection Customer may request a Modification at any time after commencement of parallel operation. The Utility shall evaluate the request and determine whether the proposed change is a Material Modification in accordance with the rules for requesting changes to applications in the SIR. A Material Modification will be studied pursuant to the procedures in the SIR for new applications. In the case of a non-material modification that is accepted by the Utility, the parties will execute an amendment to this Agreement describing the Unit changes that have been approved.

IV. DISCONNECTION OF THE UNIT

4.1 Emergency Disconnection: The Utility may disconnect the Unit, without prior notice to the Interconnection Customer (a) to eliminate conditions that constitute a potential hazard to Utility personnel or the general public; (b) if pre-emergency or emergency conditions exist on the Utility system; (c) if a hazardous condition relating to the Unit is observed by a Utility inspection; or (d) if the Interconnection Customer has tampered with any protective device. The Utility shall notify the Interconnection Customer of the emergency if circumstances permit. The Interconnection Customer shall notify the Utility promptly when it becomes aware of an emergency condition that affects the Unit that may reasonably be expected to affect the Utility EPS.

4.2 Non-Emergency Disconnection Due to Unit Performance: The Utility may disconnect the Unit, after notice to the responsible party has been provided and a reasonable time to correct, consistent with the conditions, has elapsed, if (a) the Interconnection Customer has failed to make available records of verification tests and maintenance of his protective devices; (b) the Unit system interferes with Utility equipment or equipment belonging to other customers of the Utility; (c) the Unit adversely affects the quality of service of adjoining customers; (d) the ESS does not operate in compliance with the operating parameters and limits described in Attachment 1 to this Agreement.

4.3 Non-Emergency Disconnection for Utility Work: The Utility may disconnect the Unit after notice to Interconnection Customer when necessary for routine maintenance, construction, and repairs on the Utility EPS. The Interconnection Customer may request to reconnect its service prior to the completion of the Utility's work. The Utility shall accommodate such requests, provided that the Interconnection Customer shall be responsible for the costs of the Utility's review and any system modifications required to reconnect the Unit ahead of schedule.

4.4 Disconnection by Interconnection Customer: The Interconnection Customer may disconnect a Unit with an AC nameplate rating above 300 kW upon 18 hours advance notice to

the Utility if the planned shutdown will last 8 hours or more. For non-emergency forced outages lasting 8 hours or more, the Interconnection Customer shall notify the Utility within 24 hours of the commencement of the shutdown.

4.5 Utility Obligation to Cure Adverse Effect: If, after the Interconnection Customer meets all interconnection requirements, the operations of the Utility are adversely affecting the performance of the Unit or the Customer's premises, the Utility shall immediately take appropriate action to eliminate the adverse effect. If the Utility determines that it needs to upgrade or reconfigure its system, the Interconnection Customer will not be responsible for the cost of new or additional equipment beyond the point of common coupling between the Interconnection Customer and the Utility.

V. ACCESS

5.1 Access to Premises: The Utility shall have access to the disconnect switch of the Unit at all times. At reasonable hours and upon reasonable notice consistent with Section III of this Agreement, or at any time without notice in the event of an emergency (as defined in paragraph 4.1), the Utility shall have access to the Premises.

5.2 Utility and Interconnection Customer Representatives: The Utility shall designate, and shall provide to the Interconnection Customer, the name and telephone number of a representative or representatives who can be reached at all times to allow the Interconnection Customer to report an emergency and obtain the assistance of the Utility. For the purpose of allowing access to the premises, the Interconnection Customer shall provide the Utility with the name and telephone number of a person who is responsible for providing access to the Premises.

5.3 Utility Right to Access Utility-Owned Facilities and Equipment: If necessary for the purposes of this Agreement, the Interconnection Customer shall allow the Utility access to the Utility's equipment and facilities located on the Premises. To the extent that the Interconnection Customer does not own all or any part of the property on which the Utility is required to locate its equipment or facilities to serve the Interconnection Customer under this Agreement, the Interconnection Customer shall secure and provide in favor of the Utility the necessary rights to obtain access to such equipment or facilities, including easements if the circumstances so require.

VI. DISPUTE RESOLUTION

6.1 Good Faith Resolution of Disputes: Each Party agrees to attempt to resolve all disputes arising hereunder promptly, equitably and in a good faith manner.

6.2 Mediation: If a dispute arises under this Agreement, and if it cannot be resolved by the Parties within ten (10) business days after written notice of the dispute, the parties agree to submit the dispute to mediation by a mutually acceptable mediator, in a mutually convenient

location in New York State, in accordance with the then current International Institute for Conflict prevention & Resolution Procedure, or to mediation by a mediator provided by the New York Public Service Commission. The Parties agree to participate in good faith in the mediation for a period of up to 90 days. If the Parties are not successful in resolving their disputes through mediation, then the parties may refer the dispute for resolution to the New York Public Service Commission, which shall maintain continuing jurisdiction over this Agreement.

6.3 Escrow: If there are amounts in dispute of more than two thousand dollars (\$2,000), the Interconnection Customer shall either place such disputed amounts into an independent escrow account pending final resolution of the dispute in question, or provide to the Utility an appropriate irrevocable standby letter of credit in lieu thereof.

VII. INSURANCE

7.1. Commercial General Liability: The Interconnection Customer shall, at its own expense, procure and maintain throughout the period of this Agreement the following minimum insurance coverage:

- 7.1.1. Commercial general liability insurance with limits not less than:**
 - 7.1.1.1.** Five million dollars (\$5,000,000) for each occurrence and in the aggregate if the AC Nameplate rating of the Interconnection Customer's Facility is greater than five (5) MWAC;
 - 7.1.1.2.** Two million dollars (\$2,000,000) for each occurrence and five million dollars (\$5,000,000) in the aggregate if the AC Nameplate rating of the Interconnection Customer's Facility is greater than one (1) MWAC and less than or equal to five (5) MWAC;
 - 7.1.1.3.** One million dollars (\$1,000,000) for each occurrence and in the aggregate if the AC Nameplate rating of the Interconnection Customer's Facility is greater than or equal to 300 (kWAC) and less than or equal to one (1) MWAC
- 7.1.2.** Any combination of general liability and umbrella/excess liability policy limits can be used to satisfy the limit requirements of Section 7.1.1.
- 7.1.3.** The general liability insurance required to be purchased in Section 7.1.1 may be purchased for the direct benefit of the Utility and shall respond to third party claims asserted against the Utility (hereinafter known as "Owners Protective Liability"). Should this option be chosen, the requirement of Section 7.3(a) will not apply but the Owners Protective Liability policy will be purchased for the direct benefit of the Utility and the Utility will be designated as the primary and "Named Insured" under the policy.

7.2. General Commercial Liability Insurance: The Interconnection Customer is not required to provide general commercial liability insurance for facilities with an AC nameplate rating of 300 kW or less. Due to the risk of incurring damages however, the New York State Public Service Commission (“Commission”) recommends that the Interconnection Customer obtain adequate insurance. The inability of the Utility to require the Interconnection Customer to provide general commercial liability insurance coverage for operation of the Unit is not a waiver of any rights the Utility may have to pursue remedies at law against the Interconnection Customer to recover damages.

7.3. Insurer Requirements and Endorsements: All required insurance shall be written by reputable insurers authorized to conduct business in New York. In addition, all general liability insurance shall, (a) include the Utility as an additional insured; (b) contain a severability of interest clause or cross-liability clause; (c) provide that the Utility shall not incur liability to the insurance carrier for payment of premium for such insurance; and (d) provide for thirty (30) calendar days’ written notice to the Utility prior to cancellation or termination of such insurance, with the exception of a ten (10) days’ notice in the event of premium non-payment; provided that to the extent the Interconnection Customer is satisfying the requirements of subpart (d) of this paragraph by means of a presently existing insurance policy, the Interconnection Customer shall only be required to make good faith efforts to satisfy that requirement and will assume the responsibility for notifying the Utility as required above.

7.4. Evidence of Insurance: Evidence of the insurance required shall state that coverage provided is primary and is not in excess to or contributing with any insurance or self-insurance maintained by Interconnecting Customer. Prior to the Utility commencing work on System Modifications, and annually thereafter, the Interconnection Customer shall have its insurer furnish to the Utility certificates of insurance evidencing the insurance coverage required above.

7.4.1 If coverage is on a claims-made basis, the Interconnection Customer agrees that the policy effective date or retroactive date shall be no later than the effective date of this agreement, be continuously maintained throughout the life of this agreement, and remain in place for a minimum of three (3) years following the termination of this agreement or if policies are terminated will purchase a three-year extended reporting period. Evidence of such coverage will be provided on an annual basis.

7.4.2 In the event that an Owners Protective Liability policy is provided, the original policy shall be provided to the Utility.

7.5. Self-Insurance: If the Interconnection Customer has a self-insurance program established in accordance with commercially acceptable risk management practices, the Interconnection Customer may comply with the following in lieu of the above requirements as reasonably approved by the Utility:

7.5.1. The Interconnection Customer shall provide to the Utility, at least thirty (30) calendar days prior to the Date of Initial Operation, evidence of such program to self-insure to a level of coverage equivalent to that required.

7.5.2. If the Interconnection Customer ceases to self-insure to the standards required hereunder, or if the Interconnection Customer is unable to provide continuing evidence of the Interconnection Customer's financial ability to self-insure, the Interconnection Customer agrees to promptly obtain the coverage required under Section 7.1.

7.6. Utility Obligation to Maintain Insurance: The Utility agrees to maintain general liability insurance or self-insurance consistent with its existing commercial practice. Such insurance or self-insurance shall not exclude coverage for the Utility's liabilities undertaken pursuant to this Agreement.

7.7. Notification Obligations: The Parties further agree to notify each other whenever an accident or incident occurs resulting in any injuries or damages that are included within the scope of coverage of such insurance, whether or not such coverage is sought.

VIII. LIMITATION OF LIABILITY

8.1 Each Party's liability to the other Party for any loss, cost, claim, injury, liability, or expense, including reasonable attorney's fees, relating to or arising from any act or omission in its performance of this Agreement, shall be limited to the amount of direct damage actually incurred. In no event shall either Party be liable to the other Party for any indirect, special, consequential, or punitive damages of any kind whatsoever. Nothing herein is meant to limit the liability of a Party to an unaffiliated third-party claimant.

IX. INDEMNITY

9.1 This provision protects each Party from liability incurred to third parties arising from actions taken pursuant to the provisions of this Agreement. Liability under this provision is exempt from the general limitations on liability found in Section 7.

9.2 Each Party (the "Indemnifying Party") shall at all times indemnify, defend, and hold the other Party (the "Indemnified Party") harmless from any and all damages, losses, claims, including claims and actions relating to injury to or death of any person or damage to property, demands, suits, recoveries, costs and expenses, court costs, attorney fees, and all other obligations by or to third parties, to the extent arising out of or resulting from the Indemnifying Party's action or failure to meet its obligations under this Agreement, except in cases of negligence, gross negligence or intentional wrongdoing by the Indemnified Party.

9.3 If a Party is obligated to indemnify and hold the Indemnified Party harmless under this section, the amount owing to the Indemnified Party shall be the amount of such Indemnified Party's actual loss, as adjudicated by the Indemnifying Party's insurance carrier, net of any insurance or other recovery.

9.4 Promptly after receipt by an Indemnified Party of any claim or notice of the

commencement of any action or administrative or legal proceeding or investigation as to which the indemnity provided for in this section may apply, the Indemnified Party shall notify the Indemnifying Party of such fact. Any unintentional failure of or delay in such notification shall not affect a Party's indemnification obligation unless such failure or delay is materially prejudicial to the Indemnifying Party.

X. CONSEQUENTIAL DAMAGES

10.1 Other than as expressly provided for in this Agreement or pursuant to the utility tariff, neither Party shall be liable to the other Party under any provision of this Agreement for any losses, damages, costs, or expenses for any special, indirect, incidental, consequential, or punitive damages, including but not limited to loss of profit or revenue, loss of the use of equipment, cost of capital, cost of temporary equipment or services, whether based in whole or in part in contract, in tort, including negligence, strict liability, or any other theory of liability; provided, however, that damages for which a Party may be liable to the other Party under another agreement will not be considered to be special, indirect, incidental, or consequential damages hereunder.

XI. MISCELLANEOUS PROVISIONS

11.1 Beneficiaries: This Agreement is intended solely for the benefit of the Parties hereto, and if a Party is an agent, its principal. Nothing in this Agreement shall be construed to create any duty to, or standard of care with reference to, or any liability to, any other person.

11.2 Severability: If any provision or portion of this Agreement shall for any reason be held or adjudged to be invalid or illegal or unenforceable by any court of competent jurisdiction, such portion or provision shall be deemed separate and independent, and the remainder of this Agreement shall remain in full force and effect.

11.3 Entire Agreement: This Agreement constitutes the entire Agreement between the Parties and supersedes all prior agreements or understandings, whether verbal or written.

11.4 Waiver: No delay or omission in the exercise of any right under this Agreement shall impair any such right or shall be taken, construed or considered as a waiver or relinquishment thereof, but any such right may be exercised from time to time and as often as may be deemed expedient. In the event that any agreement or covenant herein shall be breached and thereafter waived, such waiver shall be limited to the particular breach so waived and shall not be deemed to waive any other breach hereunder.

11.5 Applicable Law: This Agreement shall be governed by and construed in accordance with the law of the State of New York.

11.6 Amendments: This Agreement shall not be amended unless the amendment is in writing and signed by the Utility and the Customer.

11.7 Force Majeure: For purposes of this Agreement, "Force Majeure Event" means any event: (a) that is beyond the reasonable control of the affected Party; and (b) that the affected Party is unable to prevent or provide against by exercising reasonable diligence, including the following events or circumstances, but only to the extent they satisfy the preceding requirements: acts of war, public disorder, insurrection, or rebellion; floods, hurricanes, earthquakes, lightning, storms, and other natural calamities; explosions or fires; strikes, work stoppages, or labor disputes; embargoes; and sabotage. If a Force Majeure Event prevents a Party from fulfilling any obligations under this Agreement, such Party will promptly notify the other Party in writing, and will keep the other Party informed on a continuing basis of the scope and duration of the Force Majeure Event. The affected Party will specify in reasonable detail the circumstances of the Force Majeure Event, its expected duration, and the steps that the affected Party is taking to mitigate the effects of the event on its performance. The affected Party will be entitled to suspend or modify its performance of obligations under this Agreement, other than the obligation to make payments then due or becoming due under this Agreement, but only to the extent that the effect of the Force Majeure Event cannot be mitigated by the use of reasonable efforts. The affected Party will use reasonable efforts to resume its performance as soon as possible.

11.8 Assignment to Corporate Party: At any time during the term, the Interconnection Customer may assign this Agreement to a corporation or other entity with limited liability, provided that the Interconnection Customer obtains the consent of the Utility. Such consent will not be withheld unless the Utility can demonstrate that the corporate entity is not reasonably capable of performing the obligations of the assigning Interconnection Customer under this Agreement.

11.9 Assignment to Individuals: At any time during the term, the Interconnection Customer may assign this Agreement to another person, other than a corporation or other entity with limited liability, provided that the assignee is the owner, lessee, or is otherwise responsible for the Unit.

11.10 Permits and Approvals: Interconnection Customer shall obtain all environmental and other permits lawfully required by governmental authorities prior to the construction and for the operation of the Unit during the term of this Agreement.

11.11 Limitation of Liability: Neither by inspection, if any, or non-rejection, nor in any other way, does the Utility give any warranty, express or implied, as to the adequacy, safety, or other characteristics of any structures, equipment, wires, appliances or devices owned, installed or maintained by the Interconnection Customer or leased by the Interconnection Customer from third parties, including without limitation the Unit and any structures, equipment, wires, appliances or devices appurtenant thereto.

ACCEPTED AND AGREED:

Interconnection Customer

Signature:

Printed Name:

Title:

Date:

Utility Signature:

Printed Name:

Title:

Date:

ATTACHMENT 1

**ENERGY STORAGE SYSTEMS DESCRIPTION OF OPERATING
PARAMETERS AND LIMITS**

APPENDIX A-1 – FOR USE WITH FEDERAL AGENCIES

**NEW YORK STATE STANDARDIZED CONTRACT
FOR INTERCONNECTION OF NEW DISTRIBUTED GENERATION UNITS AND/OR
ENERGY STORAGE SYSTEMS WITH CAPACITY OF 5 MW OR LESS CONNECTED
IN PARALLEL WITH UTILITY DISTRIBUTION SYSTEMS**

Interconnection Customer Information:

Utility Information:

Name:

Name:

Address:

Address:

Telephone:

Telephone:

Fax:

Fax:

Email:

Email:

Unit Application/File No.:

Utility Account Number:

DEFINITIONS

Delivery Service means the services the Utility may provide to deliver capacity or energy generated by the Interconnection Customer to a buyer to a delivery point(s), including related ancillary services.

Energy Storage System (ESS) means a commercially available mechanical, electrical, or electro-chemical means to store and release electrical energy, and its associated electrical inversion device and control functions that may be stand-alone or paired with a distributed generator at a point of common coupling.

Interconnection Customer means that the owner of the Unit is a Federal agency, defined by the Federal Claims Act, 28 U.S.C. 2671 et seq., to include the executive departments, the judicial and legislative branches, the military departments, independent establishments of the United States, and corporations primarily acting as instrumentalities or agencies of the United States, but does not include any contractor with the United States (U.S.).

Interconnection Facilities means the equipment and facilities on the Utility's system necessary to permit operation of the Unit in parallel with the Utility's system.

Material Modification means a Modification to a Unit that may have adverse impacts on the Utility's system, Utility customers, other projects, or applications in the interconnection queue.

Modification means a change to the ownership, equipment, equipment ratings, equipment configuration, or operating conditions of the Unit.

Premises means the real property where the Unit is located.

SIR means the New York State Standardized Interconnection Requirements for new distributed generation units with a nameplate capacity of 5 MW or less connected in parallel with the Utility's distribution system.

Unit means the distributed generation, stand-alone ESS, or combined generation and ESS facilities approved by the Utility for operation in parallel with the Utility's system. This Agreement relates only to such Unit, but a new agreement shall not be required if the Interconnection Customer makes physical alterations to the Unit that do not result in an increase in its nameplate generating capacity. The nameplate generating capacity or inverter/converter rating of the Unit shall not exceed 5 MW.

Utility means [insert legal name of the interconnecting utility].

I. TERM AND TERMINATION

1.1 Term: This Agreement shall become effective when executed by both Parties and shall continue in effect until terminated.

1.2 Termination: This Agreement may be terminated as follows:

- a. The Interconnection Customer may terminate this Agreement at any time, by giving the Utility sixty (60) days' written notice.
- b. Failure by the Interconnection Customer to seek final acceptance by the Utility within twelve (12) months after completion of the utility construction process described in the SIR shall automatically terminate this Agreement.
- c. Either Party may, by giving the other Party at least sixty (60) days' prior written notice, terminate this Agreement in the event that the other Party is in default of any of the material terms and conditions of this Agreement. The terminating Party shall specify in the notice the basis for the termination and shall provide a reasonable opportunity to cure the default.
- d. The Utility may, by giving the Interconnection Customer at least sixty (60) days' prior written notice, terminate this Agreement for cause. The Interconnection Customer's non-compliance with an upgrade to the SIR, unless the Interconnection Customer's installation is "grandfathered," shall constitute good cause.

1.3 Disconnection and Survival of Obligations: Upon termination of this Agreement the Unit will be disconnected from the Utility's electric system. The termination of this Agreement shall not relieve either Party of its liabilities and obligations, owed or continuing at the time of the termination.

1.4 Suspension: This Agreement will be suspended during any period in which the Interconnection Customer is not eligible for Delivery Service from the Utility

II. SCOPE OF AGREEMENT

2.1 Scope of Agreement: This Agreement relates solely to the conditions under which the Utility and the Interconnection Customer agree that the Unit may be interconnected to and operated in parallel with the Utility's system.

III. Electricity Not Covered

The Utility shall have no duty under this Agreement to account for, pay for, deliver, or return in kind any electricity produced by the Facility and delivered into the Utility's System unless the system is net metered as described in Public Service Law Section 66-1.

IV. INSTALLATION, OPERATION AND MAINTENANCE OF UNIT

3.1 Compliance with SIR: Subject to the provisions of this Agreement, the Utility shall be required to interconnect the Unit to the Utility's system, for purposes of parallel operation, if the Utility accepts the Unit as in compliance with the SIR. The Interconnection Customer shall have a continuing obligation to maintain and operate the Unit in compliance with the SIR.

3.2 Observation of the Unit - Construction Phase: The Utility may, in its discretion and upon reasonable notice, perform reasonable on-site verifications during the construction of the Unit. Whenever the Utility chooses to exercise its right to perform observations herein it shall specify to the Interconnection Customer its reasons for its decision to perform the observation. For purposes of this paragraph and paragraphs 3.3 through 3.5, the term "on-site verification" shall not include testing of the Unit, and verification tests shall not be required except as provided in paragraphs

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3.4 Observation of the Unit - Post-Ten-day Period: If the Utility does not perform an on-site verification of the Unit and observe the execution of verification testing within the ten-day period, the Interconnection Customer will send the Utility within five (5) days of the verification testing a written notification certifying that the Unit has been installed and tested in compliance with the SIR, the utility-accepted design and the equipment manufacturer's instructions. The Interconnection Customer may begin to produce energy upon satisfactory completion of the verification test. After receiving the verification test notification, the Utility will either issue to the Interconnection Customer a formal letter of acceptance for interconnection, or may request that the applicant and utility set a date and time to perform an on-site verification of the Unit and make reasonable inquiries of the Interconnection Customer, but only for purposes of determining whether the verification tests were properly performed. The Interconnection Customer shall not be required to perform the verification tests a second time, unless irregularities appear in the verification test report or there are other objective indications that the tests were not properly performed in the first instance.

3.5 Observation of the Unit - Operations: The Utility may perform on-site verification of the operations of the Unit after it commences operations if the Utility has a reasonable basis for doing so based on its responsibility to provide continuous and reliable utility service or as authorized by the provisions of the Utility's Retail Electric Tariff relating to the verification of Interconnection Customer installations generally.

3.6 Costs of Interconnection Facilities: During the term of this Agreement, the Utility shall design, construct and install the Interconnection Facilities. The Interconnection Customer

shall be responsible for paying the incremental capital cost of such Interconnection Facilities attributable to the Interconnection Customer's Unit. All costs associated with the operation and maintenance of the Dedicated Facilities after the Unit first produces energy shall be the responsibility of the Utility.

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4.2 Non-Emergency Disconnection Due to Unit Performance: The Utility may disconnect the Unit, after notice to the responsible party has been provided and a reasonable time to correct, consistent with the conditions, has elapsed, if (a) the Interconnection Customer has failed to make available records of verification tests and maintenance of his protective devices; (b) the Unit system interferes with Utility equipment or equipment belonging to other customers of the Utility; (c) the Unit adversely affects the quality of service of adjoining customers; (d) the ESS does not operate in compliance with the operating parameters and limits described in Attachment 1 to this Agreement.

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4.4 Disconnection by Interconnection Customer: The Interconnection Customer may disconnect a Unit with an AC nameplate rating above 300 kW upon 18 hours advance notice to

the Utility if the planned shutdown will last 8 hours or more. For non-emergency forced outages lasting 8 hours or more, the Interconnection Customer shall notify the Utility within 24 hours of the commencement of the shutdown

4.5 Utility Obligation to Cure Adverse Effect: If, after the Interconnection Customer meets all interconnection requirements, the operations of the Utility are adversely affecting the performance of the Unit or the Customer's premises, the Utility shall immediately take appropriate action to eliminate the adverse effect. If the Utility determines that it needs to upgrade or reconfigure its system, the Interconnection Customer will not be responsible for the cost of new or additional equipment beyond the point of common coupling between the Interconnection Customer and the Utility.

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5.2 Utility and Interconnection Customer Representatives: The Utility shall designate, and shall provide to the Interconnection Customer, the name and telephone number of a representative or representatives who can be reached at all times to allow the Interconnection Customer to report an emergency and obtain the assistance of the Utility. For the purpose of allowing access to the premises, the Interconnection Customer shall provide the Utility with the name and telephone number of a person who is responsible for providing access to the Premises.

5.3 Utility Right to Access Utility-Owned Facilities and Equipment: If necessary for the purposes of this Agreement, the Interconnection Customer shall allow the Utility access to the Utility's equipment and facilities located on the Premises. To the extent that the Interconnection Customer does not own all or any part of the property on which the Utility is required to locate its equipment or facilities to serve the Interconnection Customer under this Agreement, the Interconnection Customer shall secure and provide in favor of the Utility the necessary rights to obtain access to such equipment or facilities, including easements if the circumstances so require.

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6.1 Good Faith Resolution of Disputes: Each Party agrees to attempt to resolve all disputes arising hereunder promptly, equitably and in a good faith manner.

6.2 Mediation: If a dispute arises under this Agreement, and if it cannot be resolved by the Parties within ten (10) business days after written notice of the dispute, the parties agree to submit the dispute to mediation by a mutually acceptable mediator, in a mutually convenient

location in New York State, in accordance with the then current International Institute for Conflict prevention & Resolution Procedure, or to mediation by a mediator provided by the New York Public Service Commission. The Parties agree to participate in good faith in the mediation for a period of up to 90 days. If the Parties are not successful in resolving their disputes through mediation, then the parties may refer the dispute for resolution to the New York Public Service Commission, which shall maintain continuing jurisdiction over this Agreement.

6.3 Escrow: If there are amounts in dispute of more than two thousand dollars (\$2,000), the Interconnection Customer shall, within 30 working days of written request from the Utility and subject to the availability of appropriations, provide the Utility with a Letter of Assurance confirming that the Interconnection Customer (a U.S. Federal Agency) has adequate funds available under the full faith and credit of the United States to cover the potential costs of the dispute, if it is resolved in the Utility's favor.

VIII. INSURANCE

7.1 Self-Insurance: The Interconnection Customer is self-insured as an agency of the United States of America pursuant to the Federal Tort Claims Act, 28 U.S.C. 2671 *et seq.*

7.2 Utility Obligation to Maintain Insurance: The Utility agrees to maintain general liability insurance or self-insurance consistent with its existing commercial practice. Such insurance or self-insurance shall not exclude coverage for the Utility's liabilities undertaken pursuant to this Agreement.

7.3 Notification Obligations: The Parties further agree to notify each other whenever an accident or incident occurs resulting in any injuries or damages that are included within the scope of coverage of such insurance, whether or not such coverage is sought.

IX. LIMITATION OF LIABILITY

8.1 Each Party's liability to the other Party for any loss, cost, claim, injury, liability, or expense, including reasonable attorney's fees, relating to or arising from any act or omission in its performance of this Agreement, shall be limited to the amount of direct damage actually incurred. In no event shall either Party be liable to the other Party for any indirect, special, consequential, or punitive damages of any kind whatsoever. Nothing herein is meant to limit the liability of a Party to an unaffiliated third-party claimant. The liability, if any, of the Interconnection Customer for injury or loss of property, or personal injury or death shall be governed exclusively by the provisions of the Federal Tort Claims Act, 28 U.S.C. 2671, *et seq.*

X. INDEMNITY

The liability, if any, of the Interconnection Customer for injury or loss of property, or personal injury or death shall be governed exclusively by the provisions of the Federal Tort Claims Act, 28 U.S.C. 1346(b).

- a. Each Party (the “Indemnifying Party”) shall at all times indemnify, defend, and hold the other Party (the “Indemnified Party”) harmless from any and all damages, losses, claims, including claims and actions relating to injury to or death of any person or damage to property, demands, suits, recoveries, costs and expenses, court costs, attorney fees, and all other obligations by or to third parties, to the extent arising out of or resulting from the Indemnifying Party's action or failure to meet its obligations under this Agreement, except in cases of negligence, gross negligence or intentional wrongdoing by the Indemnified Party.
- b. If a Party is obligated to indemnify and hold the Indemnified Party harmless under this section, the amount owing to the Indemnified Party shall be the amount of such Indemnified Party’s actual loss, as adjudicated by the Indemnifying Party’s insurance carrier, net of any insurance or other recovery.
- c. Promptly after receipt by an Indemnified Party of any claim or notice of the commencement of any action or administrative or legal proceeding or investigation as to which the indemnity provided for in this section may apply, the Indemnified Party shall notify the Indemnifying Party of such fact. Any unintentional failure of or delay in such notification shall not affect a Party's indemnification obligation unless such failure or delay is materially prejudicial to the Indemnifying Party.

XI. CONSEQUENTIAL DAMAGES

Other than as expressly provided for in this Agreement or pursuant to the utility tariff, neither Party shall be liable to the other Party under any provision of this Agreement for any losses, damages, costs, or expenses for any special, indirect, incidental, consequential, or punitive damages, including but not limited to loss of profit or revenue, loss of the use of equipment, cost of capital, cost of temporary equipment or services, whether based in whole or in part in contract, in tort, including negligence, strict liability, or any other theory of liability; provided, however, that damages for which a Party may be liable to the other Party under another agreement will not be considered to be special, indirect, incidental, or consequential damages hereunder.

XII. MISCELLANEOUS PROVISIONS

11.1 Beneficiaries: This Agreement is intended solely for the benefit of the Parties hereto, and if a Party is an agent, its principal. Nothing in this Agreement shall be construed to create any duty to, or standard of care with reference to, or any liability to, any other person.

11.2 Severability: If any provision or portion of this Agreement shall for any reason be held or adjudged to be invalid or illegal or unenforceable by any court of competent jurisdiction, such portion or provision shall be deemed separate and independent, and the remainder of this Agreement shall remain in full force and effect.

11.3 Entire Agreement: This Agreement constitutes the entire Agreement between the Parties and supersedes all prior agreements or understandings, whether verbal or written.

11.4 Waiver: No delay or omission in the exercise of any right under this Agreement shall impair any such right or shall be taken, construed or considered as a waiver or relinquishment thereof, but any such right may be exercised from time to time and as often as may be deemed expedient. In the event that any agreement or covenant herein shall be breached and thereafter waived, such waiver shall be limited to the particular breach so waived and shall not be deemed to waive any other breach hereunder.

11.5 Applicable Law: This Agreement shall be governed by the laws of the United States of America and, to the extent that there is no applicable or controlling federal law, the laws of the State of New York, without regard to conflicts of law principles.

11.6 Amendments: This Agreement shall not be amended unless the amendment is in writing and signed by the Utility and the Customer.

11.7 Force Majeure: For purposes of this Agreement, "Force Majeure Event" means any event: (a) that is beyond the reasonable control of the affected Party; and (b) that the affected Party is unable to prevent or provide against by exercising reasonable diligence, including the following events or circumstances, but only to the extent they satisfy the preceding requirements: acts of war, public disorder, insurrection, or rebellion; floods, hurricanes, earthquakes, lightning, storms, and other natural calamities; explosions or fires; strikes, work stoppages, or labor disputes; embargoes; and sabotage. If a Force Majeure Event prevents a Party from fulfilling any obligations under this Agreement, such Party will promptly notify the other Party in writing, and will keep the other Party informed on a continuing basis of the scope and duration of the Force Majeure Event. The affected Party will specify in reasonable detail the circumstances of the Force Majeure Event, its expected duration, and the steps that the affected Party is taking to mitigate the effects of the event on its performance. The affected Party will be entitled to suspend or modify its performance of obligations under this Agreement, other than the obligation to make payments then due or becoming due under this Agreement, but only to the extent that the effect of the Force Majeure Event cannot be mitigated by the use of reasonable efforts. The affected Party will use reasonable efforts to resume its performance as soon as possible.

11.8 Assignment to Corporate Party: At any time during the term, the Interconnection Customer may assign this Agreement to a corporation or other entity with limited liability, provided that the Interconnection Customer obtains the consent of the Utility. Such consent will not be withheld unless the Utility can demonstrate that the corporate entity is not reasonably capable of performing the obligations of the assigning Interconnection Customer under this Agreement.

11.9 Assignment to Individuals: At any time during the term, the Interconnection Customer may assign this Agreement to another person, other than a corporation or other

entity with limited liability, provided that the assignee is the owner, lessee, or is otherwise responsible for the Unit.

11.10 Permits and Approvals: Interconnection Customer shall obtain all environmental and other permits lawfully required by governmental authorities prior to the construction and for the operation of the Unit during the term of this Agreement.

Limitation of Liability: Neither by inspection, if any, or non-rejection, nor in any other way, does the Utility give any warranty, express or implied, as to the adequacy, safety, or other characteristics of any structures, equipment, wires, appliances or devices owned, installed or maintained by the Interconnection Customer or leased by the Interconnection Customer from third parties, including without limitation the Unit and any structures, equipment, wires, appliances or devices appurtenant thereto. The liability, if any, of the Interconnection Customer for injury or loss of property, or personal injury or death shall be governed exclusively by the provisions of the Federal Tort Claims Act, 28 U.S.C. 2671, *et seq.*

ACCEPTED AND AGREED:

Interconnection Customer

Signature:

Printed Name:

Title:

Date:

Utility Signature:

Printed Name:

Title:

Date:

ATTACHMENT 1

**ENERGY STORAGE SYSTEMS DESCRIPTION OF OPERATING
PARAMETERS AND LIMITS**

APPENDIX A-2 – FOR USE WITH STATE AGENCIES

**NEW YORK STATE STANDARDIZED CONTRACT
FOR INTERCONNECTION OF NEW DISTRIBUTED GENERATION UNITS AND/OR
ENERGY STORAGE SYSTEMS WITH CAPACITY OF 5 MW OR LESS CONNECTED
IN PARALLEL WITH UTILITY DISTRIBUTION SYSTEMS**

Interconnection Customer Information:

Utility Information:

Name:

Name:

Address:

Address:

Telephone:

Telephone:

Fax:

Fax:

Email:

Email:

Unit Application/File No.:

Utility Account Number:

DEFINITIONS

Delivery Service means the services the Utility may provide to deliver capacity or energy generated by the Interconnection Customer to a buyer to a delivery point(s), including related ancillary services.

Energy Storage System (ESS) means a commercially available mechanical, electrical, or electro-chemical means to store and release electrical energy, and its associated electrical inversion device and control functions that may be stand-alone or paired with a distributed generator at a point of common coupling.

Interconnection Customer means the State Agency that is the owner of the Unit.

Interconnection Facilities means the equipment and facilities on the Utility's system necessary to permit operation of the Unit in parallel with the Utility's system.

Material Modification means a Modification to a Unit that may have adverse impacts on the Utility's system, Utility customers, other projects, or applications in the interconnection queue.

Modification means a change to the ownership, equipment, equipment ratings, equipment configuration, or operating conditions of the Unit.

Premises means the real property where the Unit is located.

SIR means the New York State Standardized Interconnection Requirements for new distributed generation units with a nameplate capacity of 5 MW or less connected in parallel with the Utility's distribution system.

State Agency means any state department, state university of New York, city university of New York, board, bureau, division, commission, committee, council, office, or other governmental entity performing a governmental or proprietary function for the state, or any combination thereof, except any public authority or public benefit corporation, the judiciary, or the state legislature.

Unit means the distributed generation, stand-alone ESS, or combined generation and ESS facilities approved by the Utility for operation in parallel with the Utility's system. This Agreement relates only to such Unit, but a new agreement shall not be required if the Interconnection Customer makes physical alterations to the Unit that do not result in an increase in its nameplate generating capacity. The nameplate generating capacity or inverter/converter rating of the Unit shall not exceed 5 MW.

Utility means [insert legal name of the interconnecting utility].

I. TERM AND TERMINATION

1.1 Term: This Agreement shall become effective when executed by both Parties and shall continue in effect until terminated.

1.2 Termination: This Agreement may be terminated as follows:

- a. The Interconnection Customer may terminate this Agreement at any time, by giving the Utility sixty (60) days' written notice.
- b. Failure by the Interconnection Customer to seek final acceptance by the Utility within twelve (12) months after completion of the utility construction process described in the SIR shall automatically terminate this Agreement.
- c. Either Party may, by giving the other Party at least sixty (60) days' prior written notice, terminate this Agreement in the event that the other Party is in default of any of the material terms and conditions of this Agreement. The terminating Party shall specify in the notice the basis for the termination and shall provide a reasonable opportunity to cure the default.
- d. The Utility may, by giving the Interconnection Customer at least sixty (60) days' prior written notice, terminate this Agreement for cause. The Interconnection Customer's non-compliance with an upgrade to the SIR, unless the Interconnection Customer's installation is "grandfathered," shall constitute good cause.

1.3 Disconnection and Survival of Obligations: Upon termination of this Agreement the Unit will be disconnected from the Utility's electric system. The termination of this Agreement shall not relieve either Party of its liabilities and obligations, owed or continuing at the time of the termination.

1.4 Suspension: This Agreement will be suspended during any period in which the Interconnection Customer is not eligible for Delivery Service from the Utility

II. SCOPE OF AGREEMENT

2.1 Scope of Agreement: This Agreement relates solely to the conditions under which the Utility and the Interconnection Customer agree that the Unit may be interconnected to and operated in parallel with the Utility's system.

2.2 Electricity Not Covered: The Utility shall have no duty under this Agreement to account for, pay for, deliver, or return in kind any electricity produced by the Facility and delivered into the Utility's System unless the system is net metered as described in Public Service Law Section 66-J.

III. INSTALLATION, OPERATION AND MAINTENANCE OF UNIT

3.1 Compliance with SIR: Subject to the provisions of this Agreement, the Utility shall be required to interconnect the Unit to the Utility's system, for purposes of parallel operation, if the Utility accepts the Unit as in compliance with the SIR. The Interconnection Customer shall have a continuing obligation to maintain and operate the Unit in compliance with the SIR.

3.2 Observation of the Unit - Construction Phase: The Utility may, in its discretion and upon reasonable notice, perform reasonable on-site verifications during the construction of the Unit. Whenever the Utility chooses to exercise its right to perform observations herein it shall specify to the Interconnection Customer its reasons for its decision to perform the observation. For purposes of this paragraph and paragraphs 3.3 through 3.5, the term "on-site verification" shall not include testing of the Unit, and verification tests shall not be required except as provided in paragraphs

3.3 Observation of the Unit - Ten-day Period: The Utility may perform on-site verifications of the Unit and observe the execution of verification testing within a reasonable period of time, not exceeding ten (10) business days after system installation. The Unit will be allowed to commence parallel operation upon satisfactory completion of the verification test. The Interconnection Customer must have complied with and must continue to comply with all contractual and technical requirements.

3.4 Observation of the Unit - Post-Ten-day Period: If the Utility does not perform an on-site verification of the Unit and observe the execution of verification testing within the ten-day period, the Interconnection Customer will send the Utility within five (5) days of the verification testing a written notification certifying that the Unit has been installed and tested in compliance with the SIR, the utility-accepted design and the equipment manufacturer's instructions. The Interconnection Customer may begin to produce energy upon satisfactory completion of the verification test. After receiving the verification test notification, the Utility will either issue to the Interconnection Customer a formal letter of acceptance for interconnection, or may request that the applicant and utility set a date and time to perform an on-site verification of the Unit and make reasonable inquiries of the Interconnection Customer, but only for purposes of determining whether the verification tests were properly performed. The Interconnection Customer shall not be required to perform the verification tests a second time, unless irregularities appear in the verification test report or there are other objective indications that the tests were not properly performed in the first instance.

3.5 Observation of the Unit - Operations: The Utility may perform on-site verification of the operations of the Unit after it commences operations if the Utility has a reasonable basis for doing so based on its responsibility to provide continuous and reliable utility service or as authorized by the provisions of the Utility's Retail Electric Tariff relating to the verification of Interconnection Customer installations generally.

3.6 Costs of Interconnection Facilities: During the term of this Agreement, the Utility shall design, construct and install the Interconnection Facilities. The Interconnection Customer shall

be responsible for paying the incremental capital cost of such Interconnection Facilities attributable to the Interconnection Customer's Unit. All costs associated with the operation and maintenance of the Dedicated Facilities after the Unit first produces energy shall be the responsibility of the Utility.

3.7 Modifications to the Unit: The Interconnection Customer may request a Modification at any time after commencement of parallel operation. The Utility shall evaluate the request and determine whether the proposed change is a Material Modification in accordance with the rules for requesting changes to applications in the SIR. A Material Modification will be studied pursuant to the procedures in the SIR for new applications. In the case of a non-material modification that is accepted by the Utility, the parties will execute an amendment to this Agreement describing the Unit changes that have been approved.

IV. DISCONNECTION OF THE UNIT

4.1 Emergency Disconnection: The Utility may disconnect the Unit, without prior notice to the Interconnection Customer (a) to eliminate conditions that constitute a potential hazard to Utility personnel or the general public; (b) if pre-emergency or emergency conditions exist on the Utility system; (c) if a hazardous condition relating to the Unit is observed by a Utility inspection; or (d) if the Interconnection Customer has tampered with any protective device. The Utility shall notify the Interconnection Customer of the emergency if circumstances permit. The Interconnection Customer shall notify the Utility promptly when it becomes aware of an emergency condition that affects the Unit that may reasonably be expected to affect the Utility EPS.

4.2 Non-Emergency Disconnection Due to Unit Performance: The Utility may disconnect the Unit, after notice to the responsible party has been provided and a reasonable time to correct, consistent with the conditions, has elapsed, if (a) the Interconnection Customer has failed to make available records of verification tests and maintenance of his protective devices; (b) the Unit system interferes with Utility equipment or equipment belonging to other customers of the Utility; (c) the Unit adversely affects the quality of service of adjoining customers; (d) the ESS does not operate in compliance with the operating parameters and limits described in Attachment 1 to this Agreement.

4.3 Non-Emergency Disconnection for Utility Work: The Utility may disconnect the Unit after notice to Interconnection Customer when necessary for routine maintenance, construction, and repairs on the Utility EPS. The Interconnection Customer may request to reconnect its service prior to the completion of the Utility's work. The Utility shall accommodate such requests, provided that the Interconnection Customer shall be responsible for the costs of the Utility's review and any system modifications required to reconnect the Unit ahead of schedule.

4.4 Disconnection by Interconnection Customer: The Interconnection Customer may disconnect a Unit with an AC nameplate rating above 300 kW upon 18 hours advance notice to the Utility if the planned shutdown will last 8 hours or more. For non-emergency forced outages

lasting 8 hours or more, the Interconnection Customer shall notify the Utility within 24 hours of the commencement of the shutdown

4.5 Utility Obligation to Cure Adverse Effect: If, after the Interconnection Customer meets all interconnection requirements, the operations of the Utility are adversely affecting the performance of the Unit or the Customer's premises, the Utility shall immediately take appropriate action to eliminate the adverse effect. If the Utility determines that it needs to upgrade or reconfigure its system, the Interconnection Customer will not be responsible for the cost of new or additional equipment beyond the point of common coupling between the Interconnection Customer and the Utility.

V. ACCESS

5.1 Access to Premises: The Utility shall have access to the disconnect switch of the Unit at all times. At reasonable hours and upon reasonable notice consistent with Section III of this Agreement, or at any time without notice in the event of an emergency (as defined in paragraph 4.1), the Utility shall have access to the Premises.

5.2 Utility and Interconnection Customer Representatives: The Utility shall designate, and shall provide to the Interconnection Customer, the name and telephone number of a representative or representatives who can be reached at all times to allow the Interconnection Customer to report an emergency and obtain the assistance of the Utility. For the purpose of allowing access to the premises, the Interconnection Customer shall provide the Utility with the name and telephone number of a person who is responsible for providing access to the Premises.

5.3 Utility Right to Access Utility-Owned Facilities and Equipment: If necessary for the purposes of this Agreement, the Interconnection Customer shall allow the Utility access to the Utility's equipment and facilities located on the Premises. To the extent that the Interconnection Customer does not own all or any part of the property on which the Utility is required to locate its equipment or facilities to serve the Interconnection Customer under this Agreement, the Interconnection Customer shall secure and provide in favor of the Utility the necessary rights to obtain access to such equipment or facilities, including easements if the circumstances so require.

VI. DISPUTE RESOLUTION

6.1 Good Faith Resolution of Disputes: Each Party agrees to attempt to resolve all disputes arising hereunder promptly, equitably and in a good faith manner.

6.2 Mediation: If a dispute arises under this Agreement, and if it cannot be resolved by the Parties within ten (10) business days after written notice of the dispute, the parties agree to submit the dispute to mediation by a mutually acceptable mediator, in a mutually convenient location in New York State, in accordance with the then current International Institute for Conflict prevention & Resolution Procedure, or to mediation by a mediator provided by the New York Public Service Commission. The Parties agree to participate in good faith in the

mediation for a period of up to 90 days. If the Parties are not successful in resolving their disputes through mediation, then the parties may refer the dispute for resolution to the New York Public Service Commission, which shall maintain continuing jurisdiction over this Agreement.

6.3 Escrow: The Interconnection customer shall, within thirty (30) working days of written request from the Utility and subject to the availability of appropriations under §41 of the State Finance Law, provide the Utility with a Letter of Assurance confirming that the Interconnection Customer (a New York State Agency) has adequate funds available under the taxing power and/or full faith and credit of the State of New York to cover the costs in dispute, if it is resolved in the Utility's favor.

VII. INSURANCE

7.1. Commercial General Liability: The Interconnection Customer shall, at its own expense, procure and maintain throughout the period of this Agreement the following minimum insurance coverage:

7.1.1. Commercial general liability insurance with limits not less than:

7.1.1.1. Five million dollars (\$5,000,000) for each occurrence and in the aggregate if the AC Nameplate rating of the Interconnection Customer's Facility is greater than five (5) MWAC;

7.1.1.2. Two million dollars (\$2,000,000) for each occurrence and five million dollars (\$5,000,000) in the aggregate if the AC Nameplate rating of the Interconnection Customer's Facility is greater than one (1) MWAC and less than or equal to five (5) MWAC;

7.1.1.3. One million dollars (\$1,000,000) for each occurrence and in the aggregate if the AC Nameplate rating of the Interconnection Customer's Facility is greater than or equal to 300 (kWAC) and less than or equal to one (1) MWAC

7.1.2. Any combination of general liability and umbrella/excess liability policy limits can be used to satisfy the limit requirements of Section 7.1.1 (a).

7.1.3. The general liability insurance required to be purchased in Section 7.1 (a) may be purchased for the direct benefit of the Utility and shall respond to third party claims asserted against the Utility (hereinafter known as "Owners Protective Liability"). Should this option be chosen, the requirement of Section 7.3(a) will not apply but the Owners Protective Liability policy will be purchased for the direct benefit of the Utility and the Utility will be designated as the primary and "Named Insured" under the policy.

7.2. General Commercial Liability Insurance: The Interconnection Customer is not required to provide general commercial liability insurance for facilities with an AC nameplate rating of 300 kW or less. Due to the risk of incurring damages however, the New York State

Public Service Commission (“Commission”) recommends that the Interconnection Customer obtain adequate insurance. The inability of the Utility to require the Interconnection Customer to provide general commercial liability insurance coverage for operation of the Unit is not a waiver of any rights the Utility may have to pursue remedies at law against the Interconnection Customer to recover damages

7.3. Insurer Requirements and Endorsements: All required insurance shall be written by reputable insurers authorized to conduct business in New York. In addition, all general liability insurance shall, (a) include the Utility as an additional insured; (b) contain a severability of interest clause or cross-liability clause; (c) provide that the Utility shall not incur liability to the insurance carrier for payment of premium for such insurance; and (d) provide for thirty (30) calendar days’ written notice to the Utility prior to cancellation or termination of such insurance, with the exception of a ten (10) days’ notice in the event of premium non-payment; provided that to the extent the Interconnection Customer is satisfying the requirements of subpart (d) of this paragraph by means of a presently existing insurance policy, the Interconnection Customer shall only be required to make good faith efforts to satisfy that requirement and will assume the responsibility for notifying the Utility as required above.

7.4. Evidence of Insurance: Evidence of the insurance required shall state that coverage provided is primary and is not in excess to or contributing with any insurance or self-insurance maintained by Interconnecting Customer. Prior to the Utility commencing work on System Modifications, and annually thereafter, the Interconnection Customer shall have its insurer furnish to the Utility certificates of insurance evidencing the insurance coverage required above.

7.4.1 If coverage is on a claims-made basis, the Interconnection Customer agrees that the policy effective date or retroactive date shall be no later than the effective date of this agreement, be continuously maintained throughout the life of this agreement, and remain in place for a minimum of three (3) years following the termination of this agreement or if policies are terminated will purchase a three-year extended reporting period. Evidence of such coverage will be provided on an annual basis.

7.4.2 In the event that an Owners Protective Liability policy is provided, the original policy shall be provided to the Utility.

7.5. Self-Insurance: If the Interconnection Customer has a self-insurance program established in accordance with commercially acceptable risk management practices or self-retention or funding program established by law or otherwise set by local governmental policy, the Interconnection Customer may comply with the following in lieu of the above requirements as reasonably approved by the Utility:

7.5.1. The Interconnection Customer shall provide to the Utility, at least thirty (30) calendar days prior to the Date of Initial Operation, evidence of such program to self-insure or self-retain to a level of coverage equivalent to that required.

7.5.2. If the Interconnection Customer ceases to self-insure or self-retain or fund to the standards required hereunder, or if the Interconnection Customer is unable to provide

continuing evidence of the Interconnection Customer's financial ability to self-insure, the Interconnection Customer agrees to promptly obtain the coverage required under Section 7.1.

7.6. Utility Obligation to Maintain Insurance: The Utility agrees to maintain general liability insurance or self-insurance consistent with its existing commercial practice. Such insurance or self-insurance shall not exclude coverage for the Utility's liabilities undertaken pursuant to this Agreement.

7.7. Notification Obligations: The Parties further agree to notify each other whenever an accident or incident occurs resulting in any injuries or damages that are included within the scope of coverage of such insurance, whether or not such coverage is sought.

VIII. LIMITATION OF LIABILITY

8.1 Each Party's liability to the other Party for any loss, cost, claim, injury, liability, or expense, including reasonable attorney's fees, relating to or arising from any act or omission in its performance of this Agreement, shall be limited to the amount of direct damage actually incurred. In no event shall either Party be liable to the other Party for any indirect, special, consequential, or punitive damages of any kind whatsoever. Nothing herein is meant to limit the liability of a Party to an unaffiliated third-party claimant.

IX. INDEMNITY

9.1 This provision protects each Party from liability incurred to third parties arising from actions taken pursuant to the provisions of this Agreement. Liability under this provision is exempt from the general limitations on liability found in Section 7.

9.2 The Utility shall at all times indemnify, defend, and hold the Interconnection Customer (State Agency) harmless from any and all damages, losses, claims, including claims and actions relating to injury to or death of any person or damage to property, demands, suits, recoveries, costs and expenses, court costs, attorney fees, and all other obligations by or to third parties, to the extent arising out of or resulting from the action or failure to meet its obligations under this Agreement, except in cases of negligence, gross negligence or intentional wrongdoing by the Interconnection Customer .

9.3 Subject to the availability of lawful appropriations and consistent with Section 8 of the State Court of Claims Act, the Interconnection Customer shall hold Utility harmless from and indemnify it for any final judgment of a court of competent jurisdiction to the extent attributable to the negligence of the Interconnection Customer or its officers or employees when acting within the course and scope of their employment. Liability incurred to third parties as a result of carrying out the provisions under this Agreement shall be exempt from the general limitations on liability set forth above.³

³ Certain New York laws (e.g. Section 41 of New York State Finance Law, Article 2 of the Court of Claims Act and Article 17 of the Public Officers Law) define the scope of New York State's indemnification of its contractual counterparties.

9.4 If a Party is obligated to indemnify and hold the Indemnified Party harmless under this section, the amount owing to the Indemnified Party shall be the amount of such Indemnified Party's actual loss, as adjudicated by the Indemnifying Party's insurance carrier, net of any insurance or other recovery.

9.5 Promptly after receipt by an Indemnified Party of any claim or notice of the commencement of any action or administrative or legal proceeding or investigation as to which the indemnity provided for in this section may apply, the Indemnified Party shall notify the Indemnifying Party of such fact. Any unintentional failure of or delay in such notification shall not affect a Party's indemnification obligation unless such failure or delay is materially prejudicial to the Indemnifying Party.

X. CONSEQUENTIAL DAMAGES

10.1 Other than as expressly provided for in this Agreement or pursuant to the utility tariff, neither Party shall be liable to the other Party under any provision of this Agreement for any losses, damages, costs, or expenses for any special, indirect, incidental, consequential, or punitive damages, including but not limited to loss of profit or revenue, loss of the use of equipment, cost of capital, cost of temporary equipment or services, whether based in whole or in part in contract, in tort, including negligence, strict liability, or any other theory of liability; provided, however, that damages for which a Party may be liable to the other Party under another agreement will not be considered to be special, indirect, incidental, or consequential damages hereunder.

XI. MISCELLANEOUS PROVISIONS

11.1 Beneficiaries: This Agreement is intended solely for the benefit of the Parties hereto, and if a Party is an agent, its principal. Nothing in this Agreement shall be construed to create any duty to, or standard of care with reference to, or any liability to, any other person.

11.2 Severability: If any provision or portion of this Agreement shall for any reason be held or adjudged to be invalid or illegal or unenforceable by any court of competent jurisdiction, such portion or provision shall be deemed separate and independent, and the remainder of this Agreement shall remain in full force and effect.

11.3 Entire Agreement: This Agreement including standard clauses for a governmental contract (e.g. New York State Appendix A or State University of New York Exhibit A) constitutes the entire Agreement between the Parties and supersedes all prior agreements or understandings, whether verbal or written.

11.4 Waiver: No delay or omission in the exercise of any right under this Agreement shall impair any such right or shall be taken, construed or considered as a waiver or relinquishment thereof, but any such right may be exercised from time to time and as often as may be deemed expedient. In the event that any agreement or covenant herein shall be breached and thereafter waived, such waiver shall be limited to the particular breach so waived and shall not be

deemed to waive any other breach hereunder.

11.5 Applicable Law: This Agreement shall be governed by and construed in accordance with the law of the State of New York.

11.6 Amendments: This Agreement shall not be amended unless the amendment is in writing and signed by the Utility and the Customer.

11.7 Force Majeure: For purposes of this Agreement, "Force Majeure Event" means any event: (a) that is beyond the reasonable control of the affected Party; and (b) that the affected Party is unable to prevent or provide against by exercising reasonable diligence, including the following events or circumstances, but only to the extent they satisfy the preceding requirements: acts of war, public disorder, insurrection, or rebellion; floods, hurricanes, earthquakes, lightning, storms, and other natural calamities; explosions or fires; strikes, work stoppages, or labor disputes; embargoes; and sabotage. If a Force Majeure Event prevents a Party from fulfilling any obligations under this Agreement, such Party will promptly notify the other Party in writing, and will keep the other Party informed on a continuing basis of the scope and duration of the Force Majeure Event. The affected Party will specify in reasonable detail the circumstances of the Force Majeure Event, its expected duration, and the steps that the affected Party is taking to mitigate the effects of the event on its performance. The affected Party will be entitled to suspend or modify its performance of obligations under this Agreement, other than the obligation to make payments then due or becoming due under this Agreement, but only to the extent that the effect of the Force Majeure Event cannot be mitigated by the use of reasonable efforts. The affected Party will use reasonable efforts to resume its performance as soon as possible.

11.8 Assignment to Corporate Party: At any time during the term, the Interconnection Customer may assign this Agreement to a corporation or other entity with limited liability, provided that the Interconnection Customer obtains the consent of the Utility. Such consent will not be withheld unless the Utility can demonstrate that the corporate entity is not reasonably capable of performing the obligations of the assigning Interconnection Customer under this Agreement.

11.9 Assignment to Individuals: At any time during the term, the Interconnection Customer may assign this Agreement to another person, other than a corporation or other entity with limited liability, provided that the assignee is the owner, lessee, or is otherwise responsible for the Unit.

11.10 Permits and Approvals: Interconnection Customer shall obtain all environmental and other permits lawfully required by governmental authorities prior to the construction and for the operation of the Unit during the term of this Agreement.

11.11 Limitation of Liability: Neither by inspection, if any, or non-rejection, nor in any other way, does the Utility give any warranty, express or implied, as to the adequacy, safety, or other characteristics of any structures, equipment, wires, appliances or devices owned, installed or maintained by the Interconnection Customer or leased by the Interconnection Customer from

third parties, including without limitation the Unit and any structures, equipment, wires, appliances or devices appurtenant thereto.

ACCEPTED AND AGREED:

Interconnection Customer

Signature:

Printed Name:

Title:

Date:

Utility Signature:

Printed Name:

Title:

Date:

ATTACHMENT 1

**ENERGY STORAGE SYSTEMS DESCRIPTION OF OPERATING
PARAMETERS AND LIMITS**

APPENDIX B -

**NEW YORK STATE STANDARDIZED APPLICATION FOR
INTERCONNECTION OF INVERTER BASED PARALLEL
GENERATION EQUIPMENT TO THE ELECTRIC SYSTEM OF**

Utility:

Customer:

Name: Phone: ())

Address: Fax: ())

Email:

Municipality:

Utility Account No.: Utility Meter No.:

Agent (if any):

Name: Phone: ())

Address: Fax: ())

Email:

Consulting Engineer or Contractor:

Name: Phone: ())

Address: Fax: ())

Email:

Existing Electric Service:

Capacity: _____ Amperes

Voltage: _____ Volts

Service Character: Single Phase Three Phase

Location of Protective Interface Equipment on Property:

(Include address if different from customer address.)

Energy Producing Inverter Information:

Total AC Nameplate Rating of All Inverters:

Inverter

Inverter or System Tested to UL 1741 (most current version):

Yes No *If no, attach product literature.*

Manufacturer:

Model:

Quantity:

Rating per inverter: _____ kW

Type: Forced Commutated Line Commutated

Utility Interactive Stand Alone

Rated Output: _____ Amperes _____ Volts

Ramp Rate:

Method of Grounding: Grounded Ungrounded

Quantity of Inverters:

If there is more than one inverter of different types of manufacturers, please provide information on a separate sheet.

If applicable:

Step Up Transformer Winding Configuration:

Wye-Wye Wye-Delta Delta-Wye

Other existing DG such as emergency generators, other renewable technologies, microturbines, hydro, fuel cells, battery storage, etc:

() Yes () No

If yes, provide information about existing generation on separate sheet and include detail on single-line diagram.

Signature:

_____	_____	_____
CUSTOMER/AGENT SIGNATURE	TITLE	DATE

APPENDIX C -

**NEW YORK STATE STANDARDIZED APPLICATION
FOR INTERCONNECTION OF NON-INVERTER BASED PARALLEL
GENERATION EQUIPMENT TO THE ELECTRIC SYSTEM OF**

Utility:

Customer:

Name: Phone: ())

Address: Fax: ())

Email:

Municipality:

Utility Account No.:

Utility Meter No.:

Agent (if any):

Name: Phone: ())

Address: Fax: ())

Email:

Consulting Engineer or Contractor:

Name: Phone: ())

Address: Fax: ())

Email:

Estimated In-Service Date:

Existing Electric Service:

Capacity: _____ Amperes

Voltage: _____ Volts

Service Character: Single Phase Three Phase

Secondary 3 Phase Transformer Connection: Wye Delta

Location of Protective Interface Equipment on Property:

(Include address if different from customer address.)

Energy Producing Generator Unit Information:

Manufacturer:

Model No.:

Version No.:

Synchronous Induction Other

Rating: _____ kW

Rating: _____ kVA

Rated Output: _____ VA

Rated Voltage: _____ Volts

Rated Frequency: _____ Hz

Rated Speed: _____ RPM

Efficiency: _____ %

Power Factor: _____ %

Rated Current: _____ Amps

Locked Rotor Current: _____ Amps

Synchronous Speed: _____ RPM

Winding Connection:

Min. Operating Freq./Time:

Generator Connection: Delta Wye Wye Grounded

Three-Line Diagram attached: Yes

Verification Test Plan attached: Yes

If applicable, Certification to UL 1741 attached: Yes

For Synchronous Machines:

Submit copies of the Saturation Curve and the Vee Curve

Salient Non-Salient

Torque: _____ lb-ft

Rated RPM:

Field Amperes: _____ at rated generator voltage and current

and _____ % PF over-excited

Type of Exciter:

Output Power of Exciter:

Type of Voltage Regulator:

Direct-axis Synchronous Reactance (X_d): _____ ohms

Direct-axis Transient Reactance (X'_d): _____ ohms

Direct-axis Sub-transient Reactance (X''_d): _____ ohms

For Induction Machines:

Rotor Resistance (R_r): _____ ohms Exciting Current: _____ Amps

Rotor Reactance (X_r): _____ ohms Reactive Power Required:

Magnetizing Reactance (X_m): _____ ohms, _____ VARs (No Load)

Stator Resistance (R_s): _____ ohms, _____ VARs (Full Load)

Stator Reactance (X_s): _____ ohms

Short Circuit Reactance (X''_d): _____ ohms,

Phases: () Single Phase () Three Phase

Frame Size: _____ Design Letter: _____

Temp. Rise: _____ °C

Step Up Transformer Winding Configuration:

() Wye-Wye () Wye-Delta () Delta-Wye

Signature:

CUSTOMER/AGENT SIGNATURE TITLE DATE

APPENDIX D -

**PRE-APPLICATION REPORT FOR THE CONNECTION OF PARALLEL
GENERATION EQUIPMENT TO THE UTILITY DISTRIBUTION
SYSTEM**

Utility:

DG Project Information: (Provided to Utility by Applicant)
Customer name
Location of Project: (Address and/or GPS Coordinates)
DG technology type
DG fuel source / configuration
Proposed project size in kW (AC)
Date of Pre-Application Request
Pre-Application Report: (Provided to Applicant by Utility – 10 Business Days)
Date of Pre-Application Report Delivery
Operating voltage of closest distribution line
Phasing at site
Approximate distance to 3-Phase (if only 1 or 2 phases nearby)
Circuit capacity (MW)
Fault current availability, if readily obtained
Circuit peak load for the previous calendar year
Circuit minimum load for the previous calendar year
Approximate distance (miles) between serving substation and project site
Number of substation banks

Total substation bank capacity (MW)
Total substation peak load (MW)
Aggregate existing distributed generation on the circuit (kW)
Aggregate queued distributed generation on the circuit (kW)

APPENDIX E -

COST SHARING FOR SYSTEM MODIFICATIONS & COST RESPONSIBILITY FOR DEDICATED TRANSFORMER(S) AND OTHER SAFETY EQUIPMENT FOR NET METERED CUSTOMERS

Generator Type	Generator Size	Equipment Cost to Residential Net Metered Customers	Equipment Cost to Non-Residential Net Metered Customers****
Micro-CHP	Less than or equal to 10 kW	\$350 maximum	N/A
Fuel Cell	Less than or equal to 10 kW	\$350 maximum	As determined by Utility*
Fuel Cell****	Over 10 kW up to 2 MW	N/A	As determined by Utility*
Solar	Less than or equal to 25 kW	\$350 maximum	\$350 maximum
Solar****	Over 25 kW up to 2 MW	N/A	As determined by Utility*
Micro-hydroelectric	Less than or equal to 25 kW	\$350 maximum	As determined by Utility*
Micro-hydroelectric****	Over 25 kW up to 2 MW	N/A	As determined by Utility*
Wind **	Less than or equal to 25 kW	\$750 maximum	\$750 maximum
Wind****	Over 25 kW up to 2 MW	N/A	As determined by Utility*
Farm Wind ***	Over 25 kW up to 500 kW	N/A	\$5,000 maximum***
Farm Waste ***	Up to 2 MW	N/A	\$5,000 maximum***

* Subject to review by the Commission at the request of the Customer. Such costs can include the total costs for upgrades to ensure the adequacy of the distribution system which would not have been necessary but for the interconnection of the net metered DG resource (as per PSL §66-1(3)(c)(iii)).

** Residential and Non-Residential Wind Customers with a total rated capacity up to 25 kW,

Farm Wind may be required to also pay for feeder line upgrades that would not be required but for the interconnection of the net metered DG resource. Residential and Non-Residential Wind, and Farm Wind Customers are responsible for all feeder line upgrade costs if the total nameplate rating of the generating equipment exceeds 20% of the rated capacity of the feeder line (as per PSL §66-1(5)(c)(ii)). Farm Wind Customers are responsible for 50% of feeder line upgrade costs if the total nameplate rating of the generating equipment does not exceed 20% of the rated capacity of the feeder line (as per PSL §66-1(2)).

*** For Farm Wind projects with a total nameplate rating of the generation equipment that does not exceed 20% of the rated capacity of the local feeder line to which the project will connect, that portion of the CESIR costs related to transformers or other equipment installed at the customer's site is included in the \$5,000 limitation; however, the customer is also responsible for 50% of the CESIR costs related to feeder line upgrades. Farm Wind projects with a total nameplate rating of the generation equipment that does exceed 20% of the rated capacity of the local feeder line to which the project will connect, CESIR costs related to transformers or other equipment installed at the customer's site is included in the \$5,000 limitation; however, Farm Wind customers are responsible for the CESIR costs related to feeder line upgrades.

**** The first project triggering an eligible upgrade will initially bear 100% of the cost, while subsequent projects benefitting from those upgrades will reimburse the first project developer. The share of the costs paid by subsequent developers shall be calculated by the utility as the ratio of the total upgrade cost to the total AC watts the upgrade serves. If a third project uses the upgrade, the utility will perform a new calculation based on the new number of total watts served; the third project will pay its share and the utility will divide the third project's contribution among the first two projects. Sharing continues according to this formula until the capacity of the upgrade is used up or the net costs to the participating projects falls to \$100,000 or lower, whichever comes first. The utilities shall administer the allocation process and track the payments among contributing projects. The utilities are authorized to collect a \$750 fee from applicants for processing each reimbursement. The Equipment Upgrade Cost Sharing Requirement is limited in several ways. First, cost sharing only applies to substation 3V0 protection, substation transformer upgrades, and other substation-level shared upgrades. Second, only those upgrades that cost in excess of \$250,000 are subject to sharing. Third, projects below 200 kW AC in size are not required to participate.

Cost Sharing for Qualifying Upgrades

The cost-sharing provisions herein apply to two categories of system modifications: Utility-Initiated Upgrades and Market-Initiated Upgrades, as defined below, both which utilize a pro rata approach whereby the applicant pays only for the specific distribution hosting capacity assigned to its project for these types of system modifications. A pro rata approach consists of taking the estimated cost of an upgrade and dividing that cost by the total increased Hosting Capacity created by the upgrade, thereby creating a dollar per kW cost which will then be multiplied by an individual project's AC nameplate rating in kW to determine the applicant's pro

rata cost share. The rules specified in Section I. Application Process will continue to govern applicants' cost obligations with respect to all other system modifications.

1. Utility-Initiated Upgrades

The category of Utility-Initiated Upgrades consists of substation transformer bank (bank) installations or replacements and proactive zero sequence voltage (3V0) installations. Each utility shall identify its proposed Utility-Initiated Upgrades in its annual Capital Investment Plan (CIP). Each year, when the CIP is filed with the Commission, the utility will publish a link to the CIP on its system data portal and a list of those substations included in the CIP that are eligible for cost sharing hereunder as Utility-Initiated Upgrades where the utility plans to complete engineering within the next twenty-four (24) months. The utility will describe the scope of the upgrade to be performed at each such substation by providing planned design/construction schedules and funding estimates required to accommodate additional DG/ESS interconnections. After the established application deadline as defined below, the utility shall determine a pro rata cost per kW for the upgrade at each relevant substation.

A. Bank Upgrades (Proposed Multi-value Distribution Projects)

In the course of its planning process, at the time when the utility identifies the need to install or replace a bank due to asset condition, reliability, safety, resiliency, or capacity requirements, the utility shall consider options for designing the new bank equipment to create greater DG/ESS Hosting Capacity than the baseline installation would create. If the bank can be upgraded to increase Hosting Capacity while solving a pre-existing asset condition, reliability, safety, resiliency, or capacity issue, and if there is market interest that indicates DG/ESS growth above the capacity of the baseline equipment, the utility will identify the enhanced installation or replacement in the next published CIP as a Multi-value Distribution ("MVD") project. The utility will fund the cost of the baseline project. Participating Projects will fund the difference between the baseline and the MVD project cost.

If the utility determines, in its sole discretion, that there is sufficient time in the CIP project schedule (where "sufficient time" is baseline project specific and includes baseline projects where final design and engineering is not complete and prior to procurement) to allow additional DG/ESS developers to submit interconnection applications, the utility will publish a deadline for such applications on its system data portal with the link to the CIP. The utility notice will describe the baseline installation to be performed and the corresponding design/construction plan for the proposed baseline project. Within thirty (30) Business Days after the application deadline, the utility will calculate a cost per kW¹ for the upgrade for each project with an approved application to participate in the MVD Project Study and will provide that information and an invoice for MVD Project Study costs to each applicant. Applicants will have 10 Business Days to pay their share of the study costs; applicants who make this payment on time will be considered Participating Projects. Once Participating Projects commit to participate in the MVD Project Study, which requires the payment of their respective MVD Project Study cost share, Participating Projects will also be subject to CESIR payment timelines for project specific non-shared costs as per Section I-D. The utility will start the MVD Project Study and Participating Project CESIRs once the MVD Project Study and CESIR payments are

received. If Participating Projects do not meet payment timelines and are withdrawn from queue, the pro rata cost per kW remains the same for remaining Participating Projects, and the Utility will have discretion on whether enough is collected to justify proceeding with the MVD project. The utility will have one hundred (100) Business Days to complete both the MVD Project Study and each Participating Project's CESIR.

The MVD Project Study result will include an indication of the incremental project equipment, Hosting Capacity enabled, preliminary milestone schedule, and revised cost per kW required to interconnect Participating Projects as part of the proposed MVD project. If the MVD Project Study indicates that the aggregate Participating Project capacity exceeds the capacity of the MVD project, the capacity will be assigned by interconnection queue position. After the MVD Project Study results are provided to the Participating Projects, for those Participating Projects where the MVD Study confirms available increased Hosting Capacity, a non-refundable full MVD Qualifying Upgrade payment for the shared costs of proceeding with the MVD project will be due within ninety (90) Business Days from each of the Participating Projects that want to proceed. If projects are withdrawn from the queue such that additional Participating Projects in queue can now benefit from Hosting Capacity created by the Qualifying Upgrade, the utility will send invoices to additional Participating Projects where the MVD project can now meet their Hosting Capacity needs. Applicants who receive an invoice under this provision shall pay the invoice within 30 Business Days or be withdrawn from the queue.

Based on the number of DG/ESS applicants that pay the non-refundable MVD Qualifying Upgrade payment and the CIP project schedule, the utility will have the discretion to move ahead with the MVD project. If the utility determines it will not proceed with the MVD project, it will provide notice of its decision and rationale to Participating Projects within fifteen (15) Business Days of receipt of the MVD Qualifying Upgrade payment and will refund those payments via the utility cost reconciliation process per Section 1-C. No MVD Qualifying Upgrade payments will be refunded to Participating Projects that are withdrawn from the queue after making such payments until/unless a subsequent project(s) take their place by making MVD Qualifying Payments that equal or exceed the MVD Qualifying Payments received from those withdrawing Participating Projects.

B. Proactive 3V0 Upgrades

The CIP will identify substations at which the utility plans to install 3V0 upgrades. Following the utility's filing of the CIP, additional applicants may apply for interconnection at the identified substations. The utility will accept applications at a substation designated for a 3V0 upgrade up to the maximum capacity available at the site for reliable and safe operation. The utility will have the discretion to proceed where 3V0 upgrades are feasible. Payments will be due in accordance with CESIR payment timelines as per Section 1-D.

2. Market-Initiated Upgrades

This section addresses cost-sharing for Qualifying Upgrades identified in the course of the interconnection application process.

A. Process for Market-Initiated Upgrades

Whenever the utility determines that a substation Qualifying Upgrade is required to interconnect a Triggering Project, the utility will promptly discuss its finding with the applicant. If the applicant decides to continue with the application, then in addition to the CESIR process outlined in Section I-C, the utility will proceed with a more detailed study to develop a cost estimate and initial construction schedule for the Qualifying Upgrade. The utility will determine the Qualifying Upgrade Cost and the net increase in Hosting Capacity that would result from the construction of that modification. The utility shall have up to forty (40) Business Days to conduct the additional study to assess the Qualifying Upgrade and complete the CESIR. The utility will present the Qualifying Upgrade use case and supporting details in the Qualifying Upgrade Disclosure, which will include the following items:

1. The technology option(s) considered to address the electric system impacts;
2. The Qualifying Upgrade selected by the utility;
3. The estimated Qualifying Upgrade Cost and increase in Hosting Capacity;
4. The estimated Capacity Increase Shared Cost (per kW AC); and
5. A Preliminary Milestone schedule for the Qualifying Upgrade.

The utility will also publish the Qualifying Upgrade Disclosure with the next monthly update to the utility's system data portal after the CESIR is delivered to the Triggering Project applicant.

The CESIR will assign the Triggering Project and any Sharing Project its Qualifying Upgrade Charge. Each applicant shall pay the Qualifying Upgrade Charge ninety (90) Business Days following the CESIR delivery, and 25% of the project specific costs in accordance with the requirements of Section 1-D. No Qualifying Upgrade Charge payments will be refunded to Participating Projects that are withdrawn from the queue after making such payments until/unless a subsequent project(s) take their place by making Qualifying Upgrade Charge payments that equal or exceed the Qualifying Upgrade Charge payments made by the withdrawing Participating Projects.

For Qualifying Upgrades that are distribution/sub-transmission line and underground secondary network upgrades,² the utility shall charge the Triggering Project the full cost estimate for the Qualifying Upgrade as established in the CESIR. Payments shall be made in accordance with the requirements of Section I-D. At the time the Triggering Project applicant makes its first payment, the utility shall designate the upgrade as a "DG/ESS Encumbered Line." Construction of the upgrade shall begin once the utility has received full payment of the cost estimate. Any Sharing Project(s) above 50 kW AC that later proceeds to CESIR will be charged its pro rata share of the Qualifying Upgrade. The utility will calculate the pro rata share based on the capacity of the DG/ESS project and footage used. After five years from the first project interconnection, or when the Triggering Project's contribution after reimbursement becomes less than \$100,000, whichever occurs first, the line will no longer be considered a "DG/ESS Encumbered Line." No payments shall be refunded to a Sharing Project(s) after making full payment until a subsequent project(s) takes their place by making their full payment.

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

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.

The table below, “Market-Initiated Cost Sharing 2.0 Mechanisms”, provides a breakdown of Triggering and Sharing project cost responsibilities, Mobilization Threshold, and Refundability/Reconciliation of the various Market-Initiated Qualifying Upgrade mechanisms.

Market-Initiated Cost Sharing 2.0 Mechanisms

Market-Initiated Qualifying Upgrade	CESIR Cost Responsibility		Mobilization Threshold	Refundability and Reconciliation
	Triggering Project	Sharing Project		
Distribution and Sub-Transmission Lines and Underground Secondary Network Upgrades	100% of Qualifying Upgrade Cost	Pro-Rata Share based on kW Capacity and Footage	Upon payment of 100% of Qualifying Upgrade Cost by Triggering Project	<p>Qualifying Upgrade Costs are non-refundable for the Triggering Project until a Sharing Project provides payment such that the utility has receipt of 100% of Qualifying Upgrade Cost.</p> <p>Upon receipt of additional payments by Sharing Projects the utility shall reconcile with the Triggering Project based on a calculated estimated pro-rata share. Remaining reconciliation for Qualifying Upgrade Cost to occur pursuant to Section I-C of the SIR.</p>
Transformer Bank	Pro-Rata Share of Qualifying	Pro-Rata Share of Qualifying	Upon payment of 75% of Qualifying	

	Upgrade Cost based on kW Capacity	Upgrade Cost based on kW Capacity	Upgrade Cost by Triggering Project and Sharing Project(s)	Qualifying Upgrade Costs are non-refundable until another Sharing Project provides payment such that the utility has received payments equal to the pro-rata share of the Qualifying Upgrade. Remaining reconciliation for Qualifying Upgrade Cost to occur pursuant to Section I-C of the SIR.
Other Qualifying Substation Upgrades	Pro-Rata Share of Qualifying Upgrade Cost based on kW Capacity	Pro-Rata Share of Qualifying Upgrade Cost based on kW Capacity	Upon payment of 25% of Qualifying Upgrade Cost by Triggering Project and Sharing Project(s)	Qualifying Upgrade Costs are non-refundable until another Sharing Project provides payment such that the utility has received payments equal to the pro-rata share of the Qualifying Upgrade. Remaining reconciliation for Qualifying Upgrade Costs to occur pursuant to Section I-C of the SIR.

C. Utility Mobilization Thresholds

The utility shall proceed to construct a Qualifying Upgrade, other than a distribution/sub-transmission line upgrade or underground secondary network upgrade, once it has collected sufficient funds from the Triggering and Sharing Project(s) in accordance with the following:

1. For all substation upgrades other than a transformer installation/upgrade, the utility shall proceed once Participating Project payments total at least 25% of the estimated Qualifying Upgrade Cost.
2. For a substation transformer installation/upgrade and associated work, construction shall begin once payments made by Participating Projects equal at least 75% of the estimated Qualifying Upgrade Cost. If the 75% threshold is not collected within twelve (12) months of an applicant paying its full construction contribution, then the applicant may request a refund, which the utility shall process within sixty (60) Business Days of the request.
3. If Triggering Project and Sharing Project(s) Hosting Capacity needs are below the minimum subscription threshold, the Triggering Project, or the Triggering Project and any Sharing Project(s), may agree to fund shares beyond their capacity needs so that the minimum subscription threshold criterion is met.

4. To mitigate the risk to utility customers, unrecovered costs shall be capped at 2% of a utility's distribution/sub-transmission electric capital investment budget per fiscal year, after which any Qualifying Upgrades would require full (100%) funding from Triggering Projects and Sharing Projects prior to utility mobilization for such projects' construction work.

3. Capital Project Queues

The utility will create a Capital Project Queue at the substation or feeder level for each Utility-Initiated Upgrade and Market-Initiated Upgrade identified under these rules where utility construction will take longer than twenty-four (24) months. The utility will note on its Hosting Capacity map that the station/feeder is impacted by the Capital Project Queue due to future work.

Applications pending at the time a Capital Project Queue is created will be placed into the queue if the applicant consents. New applications will be placed into a Capital Project Queue following the Preliminary Screening Analysis. The payment timelines in Section 1-D will be suspended for applications assigned to a Capital Project Queue, except as provided otherwise in this Section.

When the upgrade for a given substation is within eighteen (18) months of the expected completion date, applications will be removed from in the Capital Project Queue and will advance through the remaining SIR steps based on their original application completion date. Any project that was placed in the Capital Project Queue after the CESIR was complete will need to go through the CESIR process again due to potential changes to the utility's electric power system, unless the utility determines that a restudy is not needed.

4. Unsubscribed Capacity

Utilities will continue to collect contributions from Participating Projects up to five (5) years after a Qualifying Upgrade is placed in service, or all available Hosting Capacity from a Qualifying Upgrade is used, whichever occurs first.

If the Triggering Project and initial Sharing Project(s) have met the minimum threshold to begin the upgrade, but the available Hosting Capacity has not been completely filled and thus utility customers contribute to the unassigned costs (either through the establishment of a deferred regulatory asset or in base rates), then any additional Sharing Projects that use available Hosting Capacity up to five (5) years after the upgraded asset is placed in service will be required to fund their pro rata share prior to interconnection, and utility customers shall receive the benefit provided by those additional Sharing Project(s). At the time additional Sharing Project(s) provide contributions for Qualifying Upgrades under this scenario, the following utility customer protections shall apply:

- i. For Qualifying Upgrades that are in service but NOT included in base rates, the utility shall cease deferring the return on, and return of, investment associated with contributions from subsequent Sharing Projects. Additionally, the Qualifying Upgrade is to be excluded from

the utility's net plant, or capital expenditure, tracking mechanism until it is included in base rates.

ii. For Qualifying Upgrades that are in service AND included in base rates, the utility is required to reduce plant in service by the funds provided by additional Sharing Project(s). The utility's net plant, or capital expenditure, tracking mechanism will provide utility customers with the benefit of funds received from the additional Sharing Project(s).

If the additional Hosting Capacity needs of the Triggering Project and initial Sharing Project(s) are below the minimum subscription threshold, and the Triggering Project and initial Sharing Project(s) (if any), agree to fund shares beyond their capacity needs so that the minimum subscription threshold criterion is met, then the Triggering Project and initial Sharing Project(s) have provided contributions in excess of the Capacity Increase Shared Cost rate multiplied by their respective Hosting Capacity. Under this scenario the cost of unsubscribed capacity is being borne by the Triggering Project, previously paid Sharing Project(s) (if any), and utility customers.

Additional Sharing Projects that connect to the upgraded station/feeder will be required to contribute such that the Triggering Project, initial Sharing Project(s) (if any), and additional Sharing Projects have provided funding at an equal dollar per kW of Hosting Capacity. Triggering Projects and previously paid Participating Projects are to be provided refunds (from the utility) as a result of the additional contribution of Sharing Project(s). Refunds shall be provided to the Triggering Project and previously paid Sharing Project(s) until the Participating Projects have provided funding at a level that is equivalent to their Capacity Increase Shared Cost multiplied by their respective Hosting Capacity level. If additional Sharing Projects provide funding, the utility customer protections described in Scenario 1 (sections i and ii) shall apply.

5. Cost Reimbursement

The Utility will reimburse Participating Projects for the costs of Qualifying Upgrades in advance of the final project cost reconciliation process established in section 1.C, Step 11 of the SIR, as provided in this section. These reimbursements will be based on the cost estimates provided by the utility.

For upgrades involving the DG Encumbered Line mechanism, Triggering Projects and previously paid Sharing Projects shall be reimbursed by the utility when later Sharing Projects make their full payments, with contributions to be calculated based on project size and footage utilized. Once the Triggering Project and Sharing Project(s) have paid 100% of their respective payments, the utility will reimburse Sharing Projects' estimated costs to the Triggering Project within sixty (60) Business Days. When the final utility costs for all participating projects on a DG Encumbered Line are known, both the Triggering Project and any Sharing Projects will be billed or refunded by the utility as provided in the SIR.

When any Triggering Project or Sharing Projects pay more than their pro rate cost shares in order to reach a mobilization threshold, as provided in section D.3 above, payments from additional Sharing Projects received after the mobilization threshold is reached will be first applied to the Triggering Project and initial Sharing Project(s) that paid more than their pro rata cost share, until the Triggering Project and Sharing Projects' contributions are equal to the pro rata share of each project based on capacity needs. When the final costs are known, the Triggering Project and Sharing Projects will be billed or refunded based on the actual costs per the SIR. Applications held in the interim queues pursuant to the Commission's March 21, 2021 Order Directing Interim Modifications to the New York State Standardized Interconnection Requirements that pay the full cost of a Qualifying Upgrade shall be treated as Triggering Projects and shall be reimbursed in accordance with the rules stated in the preceding paragraph.

APPENDIX F -

APPLICATION PACKAGE CHECKLIST

Completed standard application form	√
New York State Standardized Acknowledgement of Property Owner Consent Form – For Systems above 50 kW up to 5 MW Only – Refer to Appendix H for form	√
For residential systems rated 50 kW and below, a signed copy of the standard contract	√
Letter of authorization, signed by the Customer, to provide for the contractor to act as the customer’s agent, if necessary	√
If requesting a new service, a site plan drawing with the proposed interconnection point identified by a Google Earth, Bing Maps, or similar satellite image. The drawings shall show all electrical components proposed for the installation and their connections to the existing on-site electrical system from that point to the PCC, and shall be clearly marked to distinguish between new and existing equipment. For those projects on existing services, account and meter numbers shall be provided.	√
Description / Narrative of the project and site proposed. If multiple DG systems are being proposed at the same site/location, this information needs to be identified and explained in detail.	√
DG technology type	√
DG fuel source / configuration	√
Proposed project size in AC kW	√
Project is net metered, remote, or community net metered	√
Copy of the certificate of compliance referencing UL 1741. If proposing power-limited equipment, provide additional generic letter by manufacturer detailing output range in which inverter model(s) were tested and certified to UL 1741.	√
Copy of the manufacturer’s product data sheet for the interface equipment. For custom equipment (<i>e.g.</i> , transformer, disconnect, or recloser), copy of the manufacturer’s product brochure.	√

<p>For systems 50 kW or less, provide a copy of manufacturer's verification test procedures.</p>	<p>√</p>
<p>For solar PV and BESS applications – a single-line drawing that meets the requirements of this Appendix. For all other types of applications – a three-line diagram that meets the requirements of this Appendix.</p> <p>Single-line and three-line diagrams must include the following:</p> <ol style="list-style-type: none"> 1. Number, individual ratings, connection configurations, and type of all major electrical components such as generating units, step-up transformers, auxiliary transformers, grounding transformers, neutral reactors, and switches/disconnects of the proposed interconnection, including the required protection devices (instrument transformer configuration and polarity if applicable) and circuit breakers. 2. Proposed inverter protection settings (and relay equipment settings if applicable). 3. Proposed generator step-up transformer MVA ratings, impedances, tap settings, neutral connections, winding configurations, and voltage ratings. 4. For those systems proposed to be interconnected at a system voltage of 1,000 volts or greater, the drawings shall be sealed by a NYS licensed Professional Engineer. 5. Control system designs, phase sequencing, differential relay settings, ground connections, and metering transformer connections. 	<p>√</p>

APPENDIX G - APPLICATION SCREENING

PRELIMINARY SCREENING

All Preliminary Screens shall be completed by the utility and results shall be provided to the applicant in accordance with Section C, Step 4.

Screen A: Is the PCC on a Networked Secondary System?

Does the proposed system connect to a secondary network system?

- Yes (Proceed to Screen B, then complete Screens 1 through 3)
- No (Proceed to Screen B, then complete Screens C through F)

Screen B: Is Certified Equipment Used?

Does the applicant propose to use equipment that has been listed to meet UL 1741 (Inverters, Converters and Charge Controllers for Use in Independent Power Systems) and for inverter-based equipment, UL 1741, including supplement B (UL 1741 SB), with settings as specified in the utility's technical requirements document, by a nationally recognized testing laboratory?

- Yes (Pass Screen)
- No (Fail Screen)

Screen 1: Are the existing service, transformer, and network protector(s) adequate?

- Yes (Pass Screen)
- No (Fail Screen)

Are the existing service, transformer (*i.e.*, transformer closest to PCC), and network protector(s) adequate to interconnect the aggregate and proposed DER capacity (inclusive of this proposed project)?

- Yes (Pass Screen)
- No (Fail Screen)

Screen 2: Is the proposed DG system compatible with the utility grid?

2(a) Identify the equipment type (inverter, synchronous, induction, or hybrid) and capacity (kW).

2(b) Can the network protector(s) accommodate reverse power?

- If answer to Items 2(a) and 2(b) Pass (Pass Screen)
- If answer to Item 2(a) or 2(b) Fails (Fail Screen)

Screen 3: Simplified Penetration Test

3(a) Is the aggregate interconnected and proposed DER capacity (including this proposed project) less than 15% of the minimum load of the network?

3(b) Is the sum of the aggregate interconnected and proposed DER capacity (inclusive of this proposed project) in the local network less than 50% of the minimum load on the transformer(s) in this area?

- If answer to Items 3(a) and 3(b) is Yes (Pass Screen)
- If answer to Item 3(a) or 3(b) is No (Fail Screen)

Screen C: Is the Electric Power System (EPS) Rating Exceeded?

Does the maximum aggregated generation or loading capacity connected to an EPS (existing and approved prior to application) exceed any EPS ratings (modified per established utility practice)?

- Yes (Fail Screen)
- No (Pass Screen)

Screen D: Is the Line and Grounding Configuration Compatible with the Interconnection Type?

1. Identify primary distribution line configuration that will serve the distributed generation or energy storage. Based on the DER interconnection and using the table below, determine compatibility with the electric power service, including, phase balance, line and grounding configuration. The following table shall be used to determine risk for ineffective grounding

Primary distribution line configuration	Type of DER connection to primary	Result/Criteria
Three-phase, three-wire	Any type	Pass
Three-phase, four-wire > 5 kV	Single-phase line-to-neutral	Pass
All Three-phase, four-wire (For any line that has sections or mixed three-wire and four-wire)	All others	Fail. To pass aggregate DER AC nameplate rating must be less than or equal to 10% of line-section peak load

2. Based on aggregate DER on the feeder, is phase balancing maintained within utility limits?
- If items 1 & 2 pass, (Pass Screen)
 - If items 1 or 2 fail, (Fail Screen)

Screen E: Simplified Penetration Test

If the aggregate DER capacity on any medium voltage line section (existing and approved prior to application) is less than 15% of the annual peak load for all line sections bounded by automatic sectionalizing devices upstream of the DER?

- Yes (Pass Screen)
- No (Fail Screen)

Screen F: Is Feeder Capacity Adequate for Individual and Aggregate DER?

1. Is the feeder available short circuit capacity at the medium voltage PCC, divided by the rating of the individual DER, greater than 25?
2. Is the feeder available short circuit capacity at the substation divided by the capacity all aggregate DER on the feeder, greater than 25?
 - If items 1 & 2 pass, (Pass Screen)
 - If items 1 or 2 fail, (Fail Screen)

SUPPLEMENTAL SCREENING ANALYSIS

All Supplemental Screens (G-I) shall be completed by the utility and results shall be provided to the applicant in accordance with Section C, Step 4.

Screen G: Supplemental Penetration Test

Where 12 months of line section minimum load data are available, can be calculated, can be estimated from existing data, or determined from a power flow model, is the aggregate DER capacity on the Line Section less than 100% of the minimum load for all line sections bounded by automatic sectionalizing devices upstream of the DER? Note the calculation of minimum load should consider both generation and charging modes of DER when energy storage is involved. Both generation and load limits need to be considered.

Screen H: Voltage Flicker Test

Can it be determined that the voltage fluctuation is within acceptable limits as defined by IEEE 1453?

1. Voltage flicker emission generated by each fluctuating installation (Pst) should be calculated using the following formula:

$$\Delta VV = \frac{dd}{dd_{pp_{sss}=1}} \times FF \leq 0.35 \quad \text{where} \quad dd = \frac{RR_{LL} \times \Delta PP + XX_{LL} \times \Delta QQ}{VV^2}$$

When: $\frac{XX_{LL}}{RR_{LL}} < 5$

OR

$$\Delta VV = \frac{dd}{dd_{pp_{sss}=1}} \times FF \leq 0.35 \quad \frac{\Delta VV}{VV} \approx \frac{\Delta SS}{SS}$$

When: $\frac{XXLL}{RRLL} \geq 5$

Whereby:

$$\frac{FF}{dd_{pp_{sss}=1}} = \frac{0.2}{2.56\%} = 7.8$$

Explanation of Variables & Acronyms

d = the relative voltage change caused by the DER at the PCC

dpst = 1 (curve value) is the relative voltage change that yields a Pst value of unity when voltage fluctuations are rectangular

Pst = the short-term flicker emission limit for the customer installation (typically based on 10-minute time frame)

X_L = the line reactance in ohms

R_L = the line resistance in ohms

Isc = the maximum available 3-phase fault current at the PCC in amperes

Ssc = the maximum available fault apparent power at the PCC

ΔS = the change in apparent power in volt amperes

ΔP = the change in real power in watts of the DG

ΔQ = the change in reactive power in vars of the DG

V = the nominal line to line voltage

ΔV = the change in voltage at the PCC

F = the shape factor related to the shape of the expected voltage fluctuation

2. Can it be determined within the Supplemental Review that aggregate DER does not cause voltage excursion outside of ANSI C84.1 Range A?
3. Can it be determined that an aggregate DER generation change of 75% of nameplate does not result in a voltage change of greater than half the bandwidth of any voltage regulating device on the associated feeder?

A Pst greater than 0.35 as calculated in Step 1 or no to the determination in Steps 2 and 3 constitutes failure of this screen.

Screen I: Operating Limits, Protection Adequacy and Coordination Evaluation

1. Review anti-islanding protection requirements based on the most recent version of the JU Unintentional Islanding Protection Practice and identify utility and DER system upgrades, if required.
2. Review DER system configuration to determine if design and operation meets utility's effective grounding and ground source contribution requirements.
3. Identify equipment where fault current exceeds 90% of its short circuit current interrupting capability.
4. Identify any additional concerns related to utility and DER protection adequacy and protection, including but not limited to: protective device coordination and coverage, load rejection overvoltage, and 3V0 protection (where applicable).

APPENDIX H -

New York State Standardized Acknowledgment of Property Owner Consent Form

Interconnecting Utility: _____

Utility Project Number (if available): _____

(Note: This Acknowledgment is to be signed by the owner of the property where the proposed distributed generation facility and interconnection will be placed, when the owner or operator of the proposed distributed generation facility is not also the owner of the property, and the property owner's electric facilities will not be involved in the interconnection of the distributed generation facility.)

This Acknowledgment is executed by _____,
(the "Property Owner"; as used herein the term shall include the Property Owner's successors in interest to the Property), as owner of the real property situated in the City/Town of _____, _____ County, New York, known as _____ [street address] (the "Property"), at the request of _____ [name of Developer] (the "Developer"; as used herein the term shall include the Developer's successors and assigns).

This Acknowledgment does not grant or convey any interest in the Property to the Developer.

1. The Property Owner certifies as of the date indicated below that the Property Owner is working exclusively with the Developer on a proposal to install a distributed generation facility (the "Facility") on the Property.

OR

2. The Property Owner certifies as of the date indicated below that the Developer has executed with the Property Owner one of the following: a signed option agreement to lease or purchase the Property, an executed Property lease, or an executed purchase agreement for the Property granting the Developer a right to use the Property for purposes of installing the Facility.

Property Owner:

Developer:

By: _____
Name: _____
Title: _____
Date: _____

By: _____
Name: _____
Title: _____
Date: _____

APPENDIX I -

New York State Standard Moratorium Attestation Form

[UTILITY COMPANY NAME]
[UTILITY DEPT. NAME AND CONTACT NAME]
[UTILITY STREET ADDRESS]
[CITY/TOWN, New York [ZIP CODE]

Re:	DEVELOPER	[name]
		[contact information]
	PROJECT	[utility ID number]
	PROPERTY	[street address]
		[municipality/county]
		[city/town and zip code]

_____ [DEVELOPER NAME] hereby attests that it will notify the
interconnecting utility identified above of the date that the moratorium on solar development in
_____ [MUNICIPALITY NAME] is lifted.

By signing below, Developer confirms that this attestation is true and correct.

By: _____

Printed Name: _____

Title: _____

APPENDIX J -

New York State Standard Site Control Certification Form

[UTILITY COMPANY NAME]
 [UTILITY DEPT. NAME AND CONTACT NAME]
 [UTILITY STREET ADDRESS]
 [CITY/TOWN], New York [ZIP CODE]

Re:	DEVELOPER	[name]
		[contact information]
	PROJECT	[utility ID number]
	PROPERTY	[street address]
		[municipality/county]
		[city/town and zip code]

_____ (the “Property Owner”) is the owner of the above- referenced property (the “Property”).

_____ (the “Developer”) is the developer of the project identified above.

The Property Owner and the Developer have entered into an agreement authorizing the Developer to use the Property for the purpose of constructing and operating a distributed generation facility. The type of agreement that is in place is indicated below by a check mark.

	Signed option agreement to lease or purchase the Property
	Executed lease agreement for the Property
	Executed agreement to purchase the Property
	License or other agreement granting exclusive right to use the Property for purposes of constructing and operating the distributed generation facility

Property Owner and Developer entered into the agreement on or about _____

(MM/DD/YYYY)

Terms of Agreement (including options to extend)

(MM/DD/YYYY)

Property Owner

Developer

By: _____

By: _____

Printed Name: _____

Printed Name: _____

Title: _____

Title: _____

Date: _____

Date: _____

APPENDIX K -

Energy Storage System (ESS) Application Requirements / System Operating Characteristics / Market Participation

Application Requirements

- a. Provide a general overview / description and associated scope of work for the proposed project. Is the new ESS project associated with a new or existing DG facility?
- b. Identify whether this is a Stand-Alone or Hybrid ESS proposal, or a change to the operating characteristics of an existing system. If Hybrid ESS, please select the configuration option:
 1. Hybrid Option A - ESS is charged exclusively by the DG
 2. Hybrid Option B - ESS will not export to the grid, only DG will.
 - a. Hybrid Option C - ESS may charge/discharge unrestricted, but grid consumption by ESS is netted out of grid exports.⁴
 3. Hybrid Option D - ESS may charge/discharge unrestricted, but any consumption on the account is netted out of grid exports
 4. N/A - not Value Stack
- c. Market participation:⁵
 1. Compensated under a utility tariff(s)? If yes, please specify. Identify any associated use case stacking (*i.e.*, parallel standby, net meter, VDER, import only, export only, peak shaving, generator firming, demand response, etc.) if applicable.
 2. NYISO markets? If yes, has the NYISO process been initiated? Please specify which anticipated NYISO market(s).
 3. As part of an NWA? If yes, please specify which associated NWA.
 4. program or market not listed? If yes, please describe.
- d. Indicate whether the ESS and DG system inverter(s)/converter(s) are DC-coupled or AC-coupled and provide the following:

⁴ ESS may have restricted charge/discharge to be defined in Question 2e.

⁵ Market participation information is non-binding but may be used to verify operating characteristics and metering configuration. Participation in NYISO markets and NWA programs may influence the technical study.

1. DER Nameplate Ratings:
 - i. Storage inverter rating (kW) for AC-coupled or stand-alone systems;
 - ii. DG inverter rating (kW) for AC-coupled systems (if DG present); or
 - iii. DG + ESS inverter rating (kW) for DC-coupled systems.
2. Storage capacity (kWh) ⁶
 - e. Provide specification data/rating sheets for both the AC and/or DC components including the manufacturer, model, and nameplate ratings (kW) of the inverter(s)/converters(s) and controllers for the ESS and/or DG system, and capacity of ESS unit(s) (kWh).
 - f. Indicate the type of Energy Storage (ES) technology to be used. For example, NaS, Dry Cell, PB-acid, Li-ion, vanadium flow, etc.
 - g. Will the proposed project provide both real power and reactive power (PQ injection)?
 - h. Will the proposed project provide reactive power control, either via volt/VAR mode or specific power factor?
 - i. Indicate whether the interconnected inverters inverter(s)/converter(s) is/are compliant to the latest versions of the following additional standards. If partially compliant to subsections of the latest standards, please list those subsections:
 1. IEEE 1547a - 2018
 2. UL 1741, including supplement B (UL 1741 SB), with settings as specified in the utility's technical requirements document
 - j. List the system's maximum import in kW AC, including any equipment and ancillary loads (*i.e.*, HVAC) to be installed to facilitate the ESS installation.
 - k. Indicate desired ramp rates in kW/second during charging and discharging (worst case will be assumed if not provided). Please attach a charge and discharge data/curve.
 - l. Is the ESS symmetrical or asymmetrical (*e.g.*, charge magnitude equivalent to discharge magnitude)? Provide proposed inverter(s) power factor operating range and anticipated operational setpoints⁷ in the context of the expected two-quadrant or four-quadrant operation.

⁶ Kilowatt hour rating values are typically not utilized for impact review outside of a utility performance requirement under and NWA solution. However, kWh is required for utility reporting and is a mandatory date field.

⁷ Final setpoints are subject to change per utility's direction

- m. Indicate the maximum potential change in power magnitude expressed in equipment limitations such as per-second, minute, hour, or day, and kW or % of kW as applicable.
- n. Indicate any specific operational limitations that will be imposed (*e.g.*, will not charge or discharge across PCC between 2-7 pm on weekdays; ESS will not charge at any time that would increase customers peak demand, etc.). Charge/discharge at any time (24 hours) will be assumed by the utility if not provided.
- o. Provide a summary of protection and control scheme functionality and provide details of any integrated protection of control schematics and default settings within controllers.
- p. Submit control schemes, electrical configurations, and sufficient details for the utility to review and confirm acceptance of proposal. Detail any integrated control scheme(s) that are included in the interconnected inverter(s)/converters including a sequence of operations for expected events, energy flows, or power restrictions. For example, provide details if the ESS can be charged only through the DG input, or if the ESS can be switched to be charged from the line input, or if a control scheme is proposed to prohibit power flow directionality or peak values. Provide details on grounding of the interconnected ESS and/or DG system to meet utility's effective grounding requirements.
- q. Provide short circuit current capabilities and harmonic output from the hybrid ESS project or stand-alone ESS.
- r. If the intended use case for the ESS includes behind-the-meter backup services, please provide a description and documentation illustrating how the entire system disconnects from the utility during an outage (*e.g.*, mechanical or electronic, coordination, etc.).

Optional Questions

Questions in this section are not required for a complete application, although any responses provided may support the utility's decision to review the project performance in a manner that could result in less impact to the customer interconnection.

- a. Indicate whether the interconnected inverters inverter(s)/converter(s) is/are compliant to the latest versions of the following additional standards. If partially compliant to subsections of the latest standards, please list those subsections:
 - a. SunSpec Common Smart Inverter Profile (CSIP) v2.103-15-2018
- b. Any other recognized standard or practice. Indicate the maximum frequency of change in operating modes (*i.e.*, charging to discharging and vice-versa) that will be allowed based upon control system configurations.

- c. Provide details on standard communication as follows:
 - a. Hardware interfaces that are available, *e.g.*, TCP/IP, serial, etc.
 - b. Protocols that are available, *e.g.*, MODBUS, DNP-3, 2030.5, etc.
 - c. Data models that are available, *e.g.*, 61850-90-7, SunSpec, MESA, 2030.5, OpenADR, etc.
- d. Provide details on whether the inverter(s)/converter(s) have any intrinsic grid support functions, such as autonomous or interactive voltage and frequency support. If so, please describe these functions and default settings.

APPENDIX L -

Project Construction Schedule

Utility Project Number (if available)

Project Name

Developer

** This Interconnection schedule depends upon receipt of funds along with notification to proceed, executed Interconnection Agreement, weather, equipment delivery, public opposition to right-of-way and timely Customer design submittals. Close coordination is required to sequence construction and planned interruption events. As a result, any final schedule requires mutual agreement and would be subject to change.*

Milestone	Estimated Time Duration to Completion (Weeks)	Responsible Party
25% Payment		Interconnection Customer
Administrative Setup		Utility
Customer Submittals Single-Line and Three-Line Diagrams Stamped Site Plans		Interconnection Customer
Design Queue		Utility
Permitting/Easements		Utility
Upgrade Design – Line/POI/Substation Design		Utility: Complete design to the point of material ordering
75% Payment**		Interconnection Customer (120 Business Days after 1 st Payment)
Updated Construction Schedule		Utility: Provide an Updated Construction Schedule

Updated Upgrade Cost Estimate	Upgrade Design + 10BD	Utility: Provide an Updated Upgrade Cost Estimate
Verification Test Coordination Customer Witness Testing Energization/Permission to Operate	Per SIR Timelines	<u>Utility/Interconnection customer</u> <i>Customer submittals required to be approved to schedule test</i>
Total Project Duration		Utility/Interconnection Customer

** The sequence of Milestone schedule might change for non-CESIR projects.