GOVERNMENT OF THE DISTRICT OF COLUMBIA OFFICE OF THE ATTORNEY GENERAL



KARL A. RACINE ATTORNEY GENERAL

Public Advocacy Division Social Justice Section

ELECTRONIC FILING

February 16, 2021

Ms. Brinda Westbrook-Sedgwick Public Service Commission Of the District of Columbia Secretary 1325 G Street, NW, Suite 800 Washington, DC 20005

Re: Formal Case No. 1050: In the Matter of the Investigation and Implementation of Interconnection Standards in the District of Columbia

&

Rulemaking No. RM29-2020-02: In the Matter of 15 DCMR Chapter 29 – Renewable Energy Portfolio Standards

Dear Ms. Westbrook-Sedgwick:

On behalf of the Department of Energy and Environment (DOEE), please find enclosed DOEE's comments in response to the Second Notice of Proposed Rulemaking appearing in the D.C. Register on December 25, 2020 in the above captioned matters. If you have any questions regarding this filing, please do not hesitate to contact the undersigned.

Respectfully submitted,

KARL A. RACINE Attorney General

By: <u>/s/ Brian Caldwell</u>

BRIAN CALDWELL Assistant Attorney General (202) 727-6211 – Direct

Email: brian.caldwell@dc.gov

cc: Service List

BEFORE THE PUBLIC SERVICE COMMISSION OF THE DISTRICT OF COLUMBIA

)	
In the Matter of 15 DCMR Chapter 40 -	-)	
District of Columbia Small Generator)	RM40-2020-01
Interconnection Rules)	
)	

DEPARTMENT OF ENERGY AND ENVIRONMENT'S COMMENTS IN RESPONSE TO SECOND PROPOSED RULEMAKING RM40-2020-01

Pursuant to the Public Service Commission of the District of Columbia's ("Commission") Public Notice published in the District of Columbia Register on December 25, 2020,¹ and Order No. 20693,² the Department of Energy and Environment (DOEE), on behalf of the District of Columbia Government (the District), respectfully submits these comments on the Second Notice of Proposed Rulemaking (NOPR) published by the Commission in the above-captioned proceeding.

I. BACKGROUND

The NOPR amends the Small Generator Interconnection Rules (SGIR) in Chapter 40 of Title 15 of the District of Columbia Municipal Regulations (DCMR). The stated purpose of the NOPR is to address the following: (1) distribution system upgrade costs for Community Renewable Energy Facilities (CREF); (2) timelines for small generator interconnection; and (3) a timeframe for advanced inverter deployment and the implementation of the *IEEE Standard for Interconnection and Interoperability of Distributed Energy Resources with Associated Electric Power Systems Interfaces* (IEEE 1547-2018 Standard).³ This Second NOPR follows extensive comments filed in response to the First NOPR, from DOEE, Center for Renewable Integration

1

¹ Vol. 67 – No. 53.

² RM40-2020-01 (rel. Jan. 29, 2021).

³ Supra, note 1, \P 1.

(CRI), Joint Solar Advocates (JSA), Potomac Electric Power Company (Pepco), and DC Climate Action (DCCA). DOEE submits the following comments in response to the Second NOPR.

II. SUMMARY OF DOEE'S INTERCONNECTION PRINCIPLES

DOEE supports continual updates and improvements to the SGIR that are paired with adequate enforcement to ensure that Distributed Energy Resource (DER) interconnection and integration continues apace to put the District on track to meet its decarbonization and solar-driven economic development goals. DOEE's comments in the First NOPR centered on the following principles: (1) Enabling the District's climate goals and mandates; (2) Addressing interconnection delays through additional Commission oversight and enforcement; (3) Streamlining the interconnection process; (4) Cost transparency; (5) Non-discriminatory access to the electric distribution system (EDS); (5) Technical justification for EDS upgrades and interconnection facilities; and (6) Modernization with stakeholder collaboration and input.

For ease of organization, DOEE has divided its comments into five sections: (1)

Transparency; (2) Interconnection processes, timelines, and enforcement; (3) Cost sharing; (4)

IEEE 1547-2018 Standard; and (5) Grid modernization gap analysis. In Attachment A, DOEE provides its proposed modifications as a redline to the SGIR published in the Second NOPR.

Finally, DOEE believes that the work required to modernize the interconnection regulations necessitates re-convening the interconnection working group (RM-9 WG) as soon as possible.

III. TRANSPARENCY

This section will focus on the following topics: (A) Public queue, (B) Itemized costs, (C) Technical justification for EDS upgrades and interconnection facilities, and (D) Interconnection facilities cost matrix.

A. Public Queue

As DOEE stated in its comments in response to the First NOPR, the public queue is required to facilitate fair, non-discriminatory access to the EDS, by ensuring that all developers have access to the same information.⁴ The Second NOPR fulfills the need for a public queue for Levels 2-4, sortable by feeder. The proposed queue would provide detailed information regarding project fuel type, size, timelines, and costs. DOEE commends the Commission for the inclusion of the Public Queue as currently designed and looks forward to using this tool to track the trends of both interconnection costs and timelines going forward. DOEE views this public queue development as an iterative process and finds that it will be sufficient to start with Levels 2-4, with the potential to add Level 1 in a subsequent amendment to the regulations.

B. Itemized Costs

DOEE believes that additional cost transparency will improve the interconnection process by avoiding costs for upgrades that may be unnecessary and will also improve the predictability of necessary interconnection costs. With the proposed cost sharing structure for CREF projects in the Second NOPR, this transparency is even more important to protect ratepayers from the risk of paying for potentially unjustified upgrade costs.

A crucial step for increasing cost transparency and predictability will be the itemization of cost letters. Unfortunately, the language of the Second NOPR has reduced transparency in the cost letters with respect to the First NOPR. DOEE finds that simply requiring the EDC to break out "total materials" and "total labor" in Section 4005.6(b)(5) is an unacceptable level of transparency, given that one of the main issues projects are currently facing is cost uncertainty

⁴ DOEE Reply Comments to First NOPR, at pg 5 (August 14, 2020).

and irregularity. DOEE recommends that both the initial and final cost letters be itemized, and that the regulations include the following language, at a minimum: "a detailed list of necessary EDS upgrades and an itemized cost estimate, breaking out unit costs for equipment, labor, operation and maintenance." DOEE has made it clear throughout the RM-9 WG and this NOPR process that any support from DOEE for a cost-sharing agreement for CREF upgrades would be contingent upon this basic cost transparency measure.

Alternatively, the EDC could provide a full and comprehensive Unit Cost Guide for all potential facilities and/or upgrades, as is required in California and referenced in DOEE's comments to the First NOPR.⁵

C. Technical Justification for EDS Upgrades and Interconnection Facilities

DOEE commends the Commission's inclusion of language in the Second NOPR that requires technical justification for EDS upgrades, and requests that this is explicitly required for interconnection facilities as well. One other change that DOEE requests is to ensure that this justification is provided *in writing* to the interconnection applicant.

D. Interconnection Facilities Cost Matrix

Regarding the Interconnection Facilities Cost Matrix, DOEE stated in its Comments in response to the First NOPR:

DOEE disagrees with the way in which the design of the interconnection process in this NOPR has been based on the Interconnection Facilities Cost Matrix. Rather, DOEE strongly believes that the interconnection procedures and timelines should be based on the safety and reliability of the system, not the availability of up-front, and, at this time, arbitrary, cost estimates.⁶

-

⁵ *Id.*, at pg. 10.

⁶ *Id.*, at pg. 4.

DOEE finds that requiring timelines that are based on whether a facility or upgrade is included in the EDC's cost menu is inappropriate for interconnection regulations. The existence of the Matrix on its own may introduce some cost transparency but should have no bearing on interconnection timelines. Simply adding a short review period to object to the EDC's proposed costs does not cure the opacity that will be introduced to the process. While stakeholders will be able to contest costs included in the Matrix, there is still the question of what facilities are included in the Matrix in the first place. A facility or upgrade should not have an extended timeframe simply because it is not on a cost menu on the EDC's website. DOEE reiterates this point because this proposed process creates arbitrary interconnection rules that are grounded in the existence of up-front cost estimates, instead of DER and EDS technical attributes and operating criteria.

DOEE reiterates that National Renewable Energy Laboratory (NREL) has a database of interconnection costs available that may help the EDC and solar developers to quickly estimate the cost of various interconnection facilities and upgrades.⁷ In addition, the California Public Utility Commission (CPUC) issued Decision 16-06-052 on June 23, 2016, regarding the development of a "Unit Cost Guide" for each investor-owned utility, which is intended to increase cost transparency without altering the interconnection regulations.⁸

V. INTERCONNECTION PROCESSES, TIMELINES, AND ENFORCEMENT

This section will elaborate on the following topics: (A) Level 1 fast-track; (B) Level 2 timelines and enforcement, (C) Changes to design, and (D) Dispute Resolution.

5

⁷ https://www.nrel.gov/solar/distribution-grid-integration-unit-cost-database.html

⁸ CPUC Decision 16-06-052 (rel. June 23, 2016).

A. Level 1 Fast-Track

DOEE has recommended in its Comments to the First NOPR and in Formal Case No. 1130 to preserve Level 1 interconnections as fast-track only, with any modifications to the process requiring a project to go through Level 2, as a first step to moving Level 1 towards a fully automated interconnection process. DOEE commends the Commission for adopting this change, which represents the first step in moving Level 1 to a fully automated, fast-tracked process. In recognition that the improvements to this process are iterative, DOEE expects to see a roadmap to fully automated Level 1 interconnection as part of the next round of amendments to the SGIR.

B. Level 2 Timelines and Enforcement

One of the current setbacks to streamlined interconnection of solar in the District of Columbia stems from delays in Level 2 project interconnection timelines. The Second NOPR, as written, increases the timelines for Level 2 to align with current delays instead of working toward significantly reducing the timelines to align with the District's climate mandates. DOEE does not believe that there is any reason to extend Approval To Install (ATI) timelines for Level 2. Pepco has already demonstrated compliance in recent quarterly reports with Level 2 ATI deadlines, as illustrated in the table below. DOEE commends Pepco for its performance in the last three quarters of 2020 on meeting ATI deadlines at Level 2 for both Net Energy Metering and CREF projects, which is a significant improvement, particularly as the number of project applications increased.

⁹ Pepco's Quarterly reporting filed in Formal Case 1050

Quarter	Total ATI	Compliance (%)	Compliance Excluding CREF (%)
Q1 2019	405	77	n/a
Q2 2019	586	90	99
Q3 2019	634	89	100
Q4 2019	685	100	100
Q1 2020	405	87	97
Q2 2020	408	94	97
Q3 2020	855	93	94
Q4 2020	829	96	97

DOEE welcomes the addition of the reporting and corrective action plan process proposed for Level 2. However, this cannot be fully enforced without adding an Authorization To Operate (ATO) deadline of 20 business days. DOEE reiterates its request that the ATO timeline be required at each interconnection level. Without this, unnecessary delays in receiving ATO will continue, while reporting and enforcement at that point in the process will be difficult. DOEE notes that the Maryland Public Service Commission, where Pepco also operates, already requires a 20-day ATO timeline for Level 2.10 The relevant section of the Code of Maryland Regulations (COMAR) is included as Appendix B.

Additionally, providing a period of 60 business days, or 3 months, to develop a final cost letter in Section 4005.6(b)(5) is an unreasonably long timeframe that will unnecessarily delay DER interconnection in the District of Columbia. As DOEE stated in comments responding to the First NOPR:

"DOEE finds that the timeline for provision of the final, itemized cost letter is too long. Thirty (30) business days -- six (6) weeks -- should provide a sufficient timeframe to develop the final, itemized cost letter, given that there is already an estimate provided for ATI and that the Interconnection Customer has had time to review and challenge the operational requirements. DOEE finds that a timeline of sixty (60) business days - three (3) months -- will unnecessarily delay the interconnection of DER."11

¹⁰ Maryland COMAR Chapter 20.50.09

¹¹ DOEE Comments in Response to First NOPR, pg. 15 (July 15, 2020).

DOEE reiterates its request to reduce this timeframe to a *maximum* of 30 business days and will propose a roadmap to reduce this timeframe beyond 30 business days in the next round of amendments.

C. Changes to Design

The language in the Second NOPR does not adequately capture would what happen if a design changes at the behest of either the EDC or the interconnection customer. This language also does not address if such a change constitutes a Material Modification. As DOEE stated in its comments to the First NOPR:

"DOEE...suggests revised language regarding changes to the design by the Interconnection Customer. The current language in the NOPR covers any type of design change; this may be overly broad, unfairly penalizing the Interconnection Customer and slowing down the interconnection of DER. Changes to the design that have been prompted by the EDC should not result in a requirement to submit a new application. If the Interconnection Customer does submit a re-design that is unprompted by the EDC and that causes a material modification, only then the Interconnection Customer should submit a new application. DOEE has added additional language to reflect this distinction. DOEE suggests the addition of this language and the following definition from the IREC 2019 Model Interconnection Procedures be included in Section 4099.1:

"Material Modification" means a modification that has a material impact on the cost or timing of processing an Application with a later queue priority date or a change in the Point of Interconnection. A Material Modification does not include, for example, (a) a change of ownership of a Generating Facility, (b) a change or replacement of generating equipment that is a like-kind substitution in size, ratings, impedances, efficiencies, or capabilities of the equipment specified in the original Application, or (c) a reduction in the output of the Generating Facility of 10% or less." 12

¹² DOEE Comments, at pg. 15 (July 15, 2020) *quoting*, Interstate Renewable Energy Council, *Model Interconnection Procedures 2019*, Attachment B pg. 4.

D. Dispute Resolution

The Second NOPR includes a provision for a "Modified Level 1/2 Scoping Meeting" in Section 4005.4(A)(2). DOEE finds this to be an improvement in allowing an interconnection customer to challenge the requirements for interconnection facilities or upgrades and the technical justification provided by the EDC. In addition to the dispute resolution language that DOEE requested in response to the First NOPR, DOEE requests that the Commission include reporting requirements for the Modified Level 1/2 Scoping Meeting to be submitted quarterly with the existing interconnection reporting by the EDC, including: the number of such meetings held, what the nature of the challenge was, and the resolution. This reporting will allow stakeholders to assess the impact of the Modified Level 1/2 Scoping meeting.

E. CREF Meter Ownership

DOEE supports the changes that the Commission has made in the Second NOPR to the definitions of "Generation Meter" and "Production Meter," in compliance with the provision in D.C. Official Code §34-1518 requiring CREF production meters to be owned by the CREF owner and read by the EDC. DOEE is aware of significant discrepancies in the reporting and compensation of CREFs in the District of Columbia and believes that enforcement of this statutory obligation will introduce additional transparency to the CREF accounting process, which should help avoid errors in CREF accounting.¹³

¹³ Attachment C. "Pepco Billing Error Notification 14-Day Report District of Columbia Case No. 982" dated July 30, 2020.

VI. COST SHARING

This section will focus on the cost sharing provision for CREF outlines in Section 4005.6(C) of the Second NOPR. If itemized unit cost letters are not provided to the interconnection customer in the event that interconnection facilities and/or EDS upgrades are required, DOEE can no longer support a cost share framework for CREF projects. As DOEE stated in the reply comments to the First NOPR:

"DOEE is willing to support a portion of cost share with ratepayer for CREF upgrades, if (1) significant improvements are made in the transparency and predictability of how the costs are allocated, including the implementation of the public queue; (2) a technical justification for any upgrades and interconnection facilities are provided; and (3) itemized cost letters are provided."¹⁴

If basic cost transparency through itemized cost letters is not required in the regulations, DOEE requests that the Commission remove the cost share provision from the NOPR until such time as such cost transparency can be introduced to the regulations. Asking ratepayers to pay a portion of EDS upgrade costs for CREFs requires additional transparency into how these costs are identified, as well as reporting requirements that record the MW of hosting capacity unlocked through the ratepayer's investment.

Additionally, the RM-9 WG agreed to an annual cap of \$200,000. Amending this to \$500,000 signifies that there is an expectation of a minimum of \$1,000,000 of EDS upgrades annually. Given DOEE's knowledge of EDS upgrade costs for CREFs, this number is significantly higher than expected. DOEE requests that this be revised to the original agreed amount of \$200,000.

-

¹⁴ At, pg. 12.

VI. IEEE 1547-2018 STANDARD

This section will focus on the IEEE 1547-2018 Standard implementation in the District of Columbia. DOEE requests clarification from the Commission regarding Order No. 20364, which stated the following (emphasis added):

"The Commission accepts Staff's recommendation to hold an educational workshop within Formal Case No. 1050 to discuss IEEE 1547-2018 Standards and Advanced Inverter Deployment. The Commission directs the Staff in conjunction with Pepco to hold educational workshops within 120 days from the date of this Order, which can be conducted live, via video, or web conference within Formal Case No. 1050 when appropriate, relative to the status and progress of the standards' implementation, to inform stakeholders of developments in the implementation of these standards. As mentioned in paragraph 58 above, the Commission also recently issued a Notice of Proposed Rulemaking in RM40, which includes the definition of "advance inverters" for stakeholder comments to include updated IEEE 1547-2018 Standards. Upon the completion of the educational workshop on IEEE 1547-2018 Standards, the Commission will consider the need for a technical conference or working group as deemed appropriate." ¹⁵

The Commission has since held two educational workshops, on October 16, 2020 and December 16, 2020. DOEE requests that the Commission provide clarity regarding Order No. 20364, noting that stakeholder engagement in the process of developing advanced inverter settings profiles has not been addressed in either the First or Second NOPR in this proceeding.

DOEE reiterates its request from its comments in response to the First NOPR for the creation of an Advanced Inverter Working Group (AIWG) and adoption of the proposed scope of work for the working group, noting that the creation of the AIWG and stakeholder engagement in the process is critical. The Commission, together with the AIWG, should draft and adopt the autonomous inverter settings profiles for the District of Columbia for each relevant feeder/circuit

_

¹⁵ Commission Order No. 20364, ¶ 77 (*rel.* June 5, 2020).

type. A Commission and stakeholder driven-engagement process could help assure that all input is adequately evaluated and taken into consideration. This process is in line with the National Association of Regulatory Utility Commissioners (NARUC) resolution published on February 12, 2020. ¹⁶

DOEE, as the District of Columbia's Energy Office, looks forward to participating in the AIWG and is willing to play a significant facilitative or supporting role at the Commission's request.

VI. GRID MODERNIZATION GAP ANALYSIS

DOEE finds that the following areas still need to be addressed, and done so with urgency, given the key role that interconnection regulations will have in either enabling or hindering compliance with the District's climate goals and mandates: (1) Establishing autonomous inverter settings profiles; (2) Storage interconnection (including net system capacity, streamlined interconnection for non-exporting systems, and addressing inadvertent export); (3) Microgrid and islanding interconnection procedures and agreements; (4) Communications and cybersecurity protocols; (5) Dispute resolution and potential role of an ombudsperson; (6) Overhaul of minimum import requirements; and (7) Improved hosting capacity assessment with transparent criteria and open to independent evaluation.

VIII. CONCLUSION

DOEE appreciates all of the efforts made by the parties, including Pepco, to improve the interconnection process in the District of Columbia. DOEE also commends the Commission for this NOPR, which takes additional steps in the direction of a modern and non-discriminatory

12

¹⁶ NARUC, "Resolutions Passed by NARUC Board of Directors 2020 Winter Policy Summit" pgs. 1-2

EDS. However, much work remains to be done to expedite compliance with the District's local solar mandate. DOEE requests that the Commission move quickly to convene the AIWG and reconvene the RM-9 WG to address outstanding issues.

Chapter 40, DISTRICT OF COLUMBIA SMALL GENERATOR INTERCONNECTION RULES of Title 15 DCMR, PUBLIC UTILITIES AND CABLE TELEVISION, is amended to read as follows:

CHAPTER 40 DISTRICT OF COLUMBIA SMALL GENERATOR INTERCONNECTION RULES

Section	
4000	Purpose and Applicability
4001	Interconnection Requests, Fees, and Forms
4002	Applicable Standards
4003	Interconnection Review Levels
4004	Level 1 Interconnection Reviews
4005	Level 2 Interconnection Reviews
4006	Level 3 Interconnection Reviews
4007	Level 4 Interconnection Reviews
4008	Technical Requirements
4009	Disputes
4010	Waiver
4011	Supplemental Review
4012	Applicant Options Meeting
4013-4098	[Reserved]
4099	Definitions

4000 PURPOSE AND APPLICABILITY

- This chapter establishes the District of Columbia Small Generator Interconnection Rules ("DCSGIR") which apply to facilities satisfying the following criteria:
 - (a) The total Nameplate Capacity of the Small Generator Facility is equal to or less than twenty (20) megawatts ("MW").
 - (b) The Small Generator Facility is not subject to the interconnection requirements of PJM Interconnection.
 - (c) The Small Generator Facility is designed to operate in parallel with the Electric Distribution System.

4001 INTERCONNECTION REQUESTS, FEES, AND FORMS

4001.1 Interconnection Customers seeking to interconnect a Small Generator Facility shall submit an Interconnection Request using a standard form approved by the Commission to the Electric Distribution Company ("EDC") that owns the Electric

Distribution System ("EDS") to which interconnection is sought. The EDC shall establish processes for accepting Interconnection Requests electronically.

- The Commission shall determine the appropriate interconnection fees, and the fees shall be posted on the EDC's website and listed in the EDC's tariffs. There shall be no application fee for submitting a Level 1 Interconnection Request.
- In circumstances where standard forms and agreements are used as part of the interconnection process defined in this document, electronic versions of those forms shall be approved by the Commission and posted on the EDC's website. The EDC's Interconnection Request forms shall be provided in a format that allows for electronic entry of data.
- The EDC shall allow an Interconnection Request to be submitted through the EDC's website. The EDC shall allow electronic signatures to be used for Interconnection Request.
- In accordance with Subsection 4003.2 herein, Interconnection Customers may request an optional Pre-Application Report from the EDC to get information about the Electric Distribution System conditions at their proposed Point of Common Coupling without submitting a completed Interconnection Request form.
- The EDC shall assign each complete Interconnection Requests a queue position based on when it is deemed complete. The EDC shall maintain a single queue, which includes all Interconnection Requests which have been assigned a queue position. The queue information which pertains to Levels 2, 3, and 4 Interconnection Requests shall be available publicly, shall be sortable by feeder, and be updated at least monthly. Information to be included in the publicly-available queue is shown in Attachment A.
- The EDC shall maintain on its website an Interconnection Facilities Cost Matrix 4001.7 ("Interconnection Facilities Cost Matrix") as defined in Section 4099. Interconnection Facilities Cost Matrix will be updated annually by April 1st of each year, and may be updated up to twice annually. The EDC shall file a Notice with the Commission of the Interconnection Facilities Cost Matrix it intends to post not less than fourteen (14) days prior to its posting, on the EDC website. The Notice shall specify the intended effective date of the Interconnection Facilities Cost Matrix. Each proposed update should be publicly posted for a ten (10)-day objection period. If no objections are filed with the Commission, the updated Interconnection Facilities Cost Matrix shall be made final. If two or more objections are received by the Commission pertaining to a certain cost item, the updated Interconnection Facilities Cost Matrix shall be postponed pending resolution of the objectionable cost data. In the event of any dispute or postponement, the filed and approved copy of the Interconnection Facilities Cost Matrix is controlling.

4002 APPLICABLE STANDARDS

- Unless one or more of the following standards are waived by the EDC, a Small Generator Facility must comply with the following standards, as applicable:
 - (a) Institute of Electrical and Electronics Engineers ("IEEE") 1547 Standard for Interconnection and Interoperability of Distributed Energy Resources with Associated Electric Power Systems Interfaces;
 - (b) IEEE 1547.1 Standard Conformance Test Procedures for Equipment Interconnecting Distributed Energy Resources with Electric Power Systems and Associated Interfaces;
 - (c) IEEE 1547.2 Application Guide for IEEE Standard 1547 for Interconnecting Distributed Resources with Electric Power Systems;
 - (d) Underwriters Laboratories ("UL") 6142 Standard for Small Wind Turbine Systems; and
 - (e) UL 1741 Standard for Inverters, Converters and Controllers for Use in Independent Power Systems. UL 1741 compliance must be recognized or certified by a Nationally Recognized Testing Laboratory as designated by the U.S. Occupational Safety and Health Administration. Certification of a particular model or a specific piece of equipment is sufficient. It is also sufficient for an inverter built into a Generating Facility to be recognized as being UL 1741 compliant by a Nationally Recognized Testing Laboratory.

4002.2-4002.4 [RESERVED]

- The Interconnection Equipment shall meet the requirements of the most current approved version of each document listed in Subsection 4002.1, as amended and supplemented at the time the Interconnection Request is submitted.
- Nothing herein shall preclude the need for an on-site Witness Test or operational test by the Interconnection Customer.

4002.7 Advanced Inverters

To comply with IEEE 1547-2018:

(a) After January 1, 2022, any Small Generator Facility requiring an inverter that submits an interconnection request shall use an Advanced Inverter with either a default or a site-specific EDC required inverter settings profile, as determined by the EDC.

- (b) Any Small Generator Facility may replace an existing inverter that was purchased prior to January 1, 2022, with an inverter of equal or greater ability than the original inverter, for use at the Small Generator Facility.
- (c) The Commission, with the support of a stakeholder working group, will establish default EDC required inverter settings profiles for Advanced Inverters pursuant to Subsection 4002.7(e). The default EDC required inverter settings profile shall be published by the Commission as a technical addendum to the SGIR and on the EDC's website prior to January 1, 2022.
- (d) To the extent reasonable, pursuant to any modifications required by Subsection 4002.7(e), all EDC required inverter settings profiles shall be consistent with applicable Advanced Inverter recommendations from PJM Interconnection, LLC.
- (e) A default EDC required inverter settings profile shall optimize the safe and reliable operation of the Electric Distribution System, and shall serve the following objectives:
 - (1) The primary objective is to incur no involuntary real power inverter curtailments incurred during normal operating conditions and minimal real power curtailments during abnormal operating conditions.
 - (2) The secondary objective is to enhance Electric Distribution System hosting capacity and to optimize the provision of grid support services.
- (f) A site-specific EDC required inverter settings profile may be established by an EDC as necessary to optimally meet objectives established in Subsection 4002.7(e).
- (g) All default EDC required inverter settings profiles will be documented in the interconnection agreements.
- (h) A list of acceptable Advanced Inverters shall be published on the EDC's website prior to January 1, 2022.

4003 INTERCONNECTION REVIEW LEVELS

The EDC shall review Interconnection Requests using one (1) or more of the four (4) levels of review procedures established by this chapter. The EDC shall first

use the level of agreement specified by the Interconnection Customer in the Interconnection Request form. If a Small Generator Facility fails a screen at any level, the EDC may elect to complete the evaluation at the current level, if safety and reliability are not adversely impacted, or at the next appropriate level. The EDC may not impose additional requirements not specifically authorized unless the EDC and the Interconnection Customer mutually agree to do so in writing.

- If an Interconnection Customer requests a Pre-Application Report from the EDC, the request shall include:
 - (a) Contact information (name, address, phone and email).
 - (b) A proposed Point of Common Coupling, including latitude and longitude, site map, street address, utility equipment number (e.g., pole number), meter number, account number or some combination of the above sufficient to clearly identify the location of the Point of Common Coupling.
 - (c) Generation technology and fuel source (if applicable).
 - (d) A three hundred dollar (\$300) non-refundable processing fee.
- For each Pre-Application Report requested, which includes the requisite information and fee, the EDC shall furnish a report, within ten (10) business days of receipt of the completed Pre-Application Report request, which:
 - (a) Advises the Interconnection Customer that the existence of "Available Capacity" in no way implies that an interconnection up to this level may be completed without impacts since there are many variables studied as part of the interconnection review procedures.
 - (b) Informs the Interconnection Customer that the Electric Distribution System is dynamic and subject to change.
 - (c) Informs the Interconnection Customer that data provided in the Pre-Application Report may become outdated and not useful at the time of submission of the complete Interconnection Request.
 - (d) Includes the following information, if available:
 - (1) Total Capacity (MW) of substation/area bus or bank and distribution circuit likely to serve proposed Point of Common Coupling.
 - (2) Allocated Capacity (MW) of substation/area bus or bank and distribution circuit likely to serve proposed Point of Common Coupling.

- (3) Queued Capacity (MW) of substation/area bus or bank and distribution circuit likely to serve proposed Point of Common Coupling.
- (4) Available Capacity (MW) of substation/area bus or bank and distribution circuit most likely to serve proposed Point of Common Coupling.
- (5) Whether the proposed Small Generator Facility is located on an area, spot or radial network.
- (6) Substation nominal distribution voltage or transmission nominal voltage if applicable.
- (7) Nominal distribution circuit voltage at the proposed Point of Common Coupling.
- (8) Approximate distribution circuit distance between the proposed Point of Common Coupling and the substation.
- (9) Relevant Line Section(s) peak load estimate, and minimum load data, when available.
- (10) Number of protective devices and number of voltage regulating devices between the proposed Point of Common Coupling and the substation/area.
- (11) Whether or not three-phase power is available at the proposed Point of Common Coupling and/or distance from three-phase service.
- (12) Limiting conductor rating from proposed Point of Common Coupling to the electrical distribution substation.
- (13) Based on proposed Point of Common Coupling, existing or known constraints such as, but not limited to, electrical dependencies at that location, short circuit interrupting capacity issues, power quality or stability issues on the circuit, capacity constraints, or secondary networks.
- The Pre-Application Report need only include pre-existing data. The EDC is not obligated in its preparation of a Pre-Application Report to conduct a study or other analysis of the proposed project in the event that data is not available. If the EDC cannot complete all or some of a Pre-Application Report due to lack of available data, the EDC will provide the potential Applicant with a Pre-Application Report that includes the information that is available and identify the information that is unavailable. Notwithstanding

any of the provisions of this Section, the EDC shall, in good faith, provide Pre-Application Report data that represents the best available information at the time of reporting.

(e) As an alternative to information required pursuant to § 4003.3(d), the EDC may elect to perform a power flow-based study providing the Interconnection Customer with the maximum size distributed energy resource (DER) that can be installed at a specified location without Distribution System Upgrades and the constraint encountered precluding installation of a larger system without upgrades. EDC shall make available, upon request, a copy of its power flow-based study for each Interconnection Customer to the Commission.

4004 LEVEL 1 INTERCONNECTION REVIEWS

- For Level 1 Interconnection Review, the EDC shall use Level 1 procedures for evaluation of all Interconnection Requests to connect inverter-based Small Generator Facilities.
- For Level 1 Adverse System Impact screens, the EDC shall evaluate the potential for Adverse System Impacts using the following screens, which must be satisfied:
 - (a) The Small Generator Facility has a Nameplate Capacity of twenty (20) kW or less.
 - For interconnection of a proposed Small Generator Facility to a Line (b) Section on a Radial Distribution Circuit, the aggregated generation on the Line Section, including the proposed Small Generator Facility and all other generator facilities capable of coincidental export of energy on the Line Section, shall not exceed the anticipated minimum load on the Line Section, as determined by the results of a power flow-based study performed by the EDC to evaluate the impact of the proposed Small Generator Facility. If such results are unavailable, the aforementioned aggregate generating capacity shall not exceed fifteen percent (15%) of the Line Section's annual peak load as most recently measured at the substation or calculated for the Line Section. Should the EDC have previously identified the aforementioned Line Section as exceeding fifteen percent (15%) of the Line Section's annual peak load, the EDC shall use its best efforts to complete a power-flow based study to evaluate the impact of the proposed Small Generator Facility as described herein. The EDC shall not fail the Small Generator Facility based solely on the application of the fifteen percent (15%) peak load limitation if the EDC has valid power flow-based study results that can be used to evaluate the impact of the proposed Small Generator Facility.
 - (c) When a proposed Small Generator Facility is to be interconnected on a single-phase shared Secondary Line, the aggregate generation capacity on

- the shared Secondary Line, including the proposed Small Generator Facility, may not exceed twenty (20) kW.
- (d) When a proposed Small Generator Facility is single-phase and is to be interconnected on a transformer center tap neutral of a two hundred forty (240) volt service, its addition may not create an imbalance between the two (2) sides of the two hundred forty (240) volt service of more than twenty percent (20%) of the nameplate rating of the service transformer.
- (e) For interconnection of a Small Generator Facility within a Spot Network or Area Network, the aggregate generating capacity including the Small Generator Facility may exceed fifty percent (50%) of the network's anticipated minimum load if the EDC determines that safety and reliability are not adversely impacted. If solar energy small generator facilities are used, only the anticipated daytime minimum load shall be considered. The EDC may select any of the following methods to determine the anticipated minimum load:
 - (1) The network's measured minimum load in the previous year, if available;
 - (2) Five percent (5%) of the network's maximum load in the previous year;
 - (3) The Interconnection Customer's good faith estimate, if provided; or
 - (4) The EDC's good faith estimate, if provided in writing to the Interconnection Customer, along with the reasons why the EDC considered the other methods to estimate minimum load inadequate.
- (f) No construction of facilities by the EDC on its own system other than metering is required in order to accommodate the Small Generator Facility.
 - (1) If the Interconnection Request requires the construction of Interconnection Facilities or Distribution System Upgrades to accommodate the Small Generator Facility, the EDC shall continue its evaluation using Level 2 procedures, commencing at Subsection 4005.4(a)(1), and the EDC shall notify the Interconnection Customer that it is continuing its evaluation using Level 2 procedures, with an extended timeline of twenty-five (25) business days to Approval to Install.
- (g) The EDC may use results from a valid power flow-based study performed to evaluate the impact of the proposed Small Generator Facility, provided such results are not used to fail any of the Subsections 4004.2 (c), (d), or

- (e) screens. EDC shall make available upon request a copy of its power flow-based study for each applicant to the Commission.
- (h) If a Small Generator Facility fails a Level 1 Adverse System Impact screen, the EDC may elect to complete the evaluation at Level 1, if safety and reliability are not adversely impacted, or at the next appropriate level.
- The Level 1 Interconnection Review shall be conducted in accordance with the following procedures:
 - (a) The EDC shall, within five (5) business days after receipt of Part 1 of the Interconnection Request, notify the Interconnection Customer in writing or by electronic mail of the review results, which shall indicate that the Interconnection Request is complete or incomplete, and what materials, if any, are missing.
 - (b) When an Interconnection Request is complete, the EDC shall assign the Interconnection Request a Queue Position.
 - (c) Within five (5) business days after the EDC acknowledges receipt of a complete Interconnection Request, the EDC shall notify the Interconnection Customer of the Level 1 Adverse System Impact screening results. If the proposed interconnection meets all of the applicable Level 1 Adverse System Impact screens or the EDC determines that the Small Generator Facility can be interconnected safely and reliably to its system, the EDC shall provide the Interconnection Customer with an Approval to Install.
 - (d) The EDC will provide an EDC-executed Interconnection Agreement within three (3) business days of issuing the Approval to Install.
 - (e) Unless extended by mutual agreement of the Interconnection Customer and the EDC, within six (6) months of receiving an Approval to Install or six (6) months from the completion of any upgrades, whichever is later, the Interconnection Customer shall provide the EDC a completed Level 1 PART II Small Generator Facility Interconnection Certificate of Completion Form, including the signed inspection certificate.
 - (f) The EDC may, within ten (10) business days of receiving a completed Level 1 PART II Small Generator Facility Interconnection Certificate of Completion Form and the inspection certificate from the Interconnection Customer, conduct a Witness Test at a time mutually agreeable to the Interconnection Customer and the EDC. If the Witness Test fails to reveal that all equipment has been appropriately installed and that all electrical connections have been made in accordance with applicable codes, the EDC shall offer to redo the Witness Test at the Interconnection Customer's expense at a time mutually agreeable to the Interconnection Customer and the EDC. If the EDC determines that the Small Generator

Facility fails the inspection it must provide a written explanation detailing the reasons and any standards violated. If the EDC does not perform the Witness Test within ten (10) business days or other time as is mutually agreed to by the Interconnection Customer and the EDC, the Witness Test is deemed waived.

- (g) The EDC shall provide the Interconnection Customer with the Authorization to Operate within twenty (20) business days of receiving a completed Level 1 PART II Small Generator Facility Interconnection Certificate of Completion Form, including the signed inspection certificate. An Interconnection Customer may begin interconnected operation of a Small Generator Facility provided that there is an Interconnection Agreement in effect, the EDC has received proof of the electrical code official's approval, the Small Generator Facility has passed any Witness Test by the EDC, and the EDC has issued the Authorization to Operate
- (h) The EDC may require photographs of the site, Small Generator Facility components, meters, or any other aspect of the Interconnection Facilities as part of the Level 1 Interconnection Review process, provided that failure to provide a photo in a timely manner will not be a reason for the EDC to deem an Interconnection Request incomplete.
- 4004.4 [RESERVED]
- 4004.5 [RESERVED]
- The EDC, at its sole option, may approve the Interconnection Request provided that such approval is consistent with safety and reliability. If the EDC cannot determine that the Small Generator Facility may nevertheless be interconnected consistent with safety, reliability, and power quality standards, the EDC shall provide the Interconnection Customer with detailed information on the reason(s) for failure in writing. In addition, the EDC shall either:
 - (a) Notify Interconnection Customer that the EDC is continuing to evaluate the Small Generator Facility under Supplemental Review if the EDC concludes that the Supplemental Review might determine that the Small Generator Facility could continue to qualify for interconnection pursuant to Level 2; or
 - (b) Offer to continue evaluating the Interconnection Request under Level 4.
- If, on an annual basis, the EDC fails to issue at least ninety percent (90%) of all Authorizations to Operate and Approval to Install in the Level 1 interconnection process (as specified within the timeline(s) stipulated in Subsection 4004.3), it shall be required to develop a corrective action plan.

- (a) The corrective action plan shall describe the cause(s) of the EDC's non-compliance with Subsection 4004.7, describe the corrective measure(s) to be taken to ensure that the standard is met or exceeded in the future, and set a target date for completion of the corrective measure(s). To the extent automation is an element of the corrective measure(s), this should be described in the plan.
- (b) Progress on current corrective action plans shall be included in the EDC's Small Generator Interconnection Annual Report.
- (c) The EDC shall report the actual performance of compliance with Subsection 4004.7 during the reporting period in the Small Generator Interconnection Annual Report of the following year.

4005 LEVEL 2 INTERCONNECTION REVIEWS

- For a Level 2 Interconnection Review, the EDC shall use the Level 2 procedures for an Interconnection Request.
- For Level 2 Adverse System Impact screens, the EDC shall evaluate the potential for Adverse System Impacts using the following screens, which must be satisfied:
 - (a) The Small Generator Facility Nameplate Capacity rating does not exceed the limits identified in the table below, which vary according to the voltage of the line at the proposed Point of Common Coupling. Small Generator Facilities located within two and a half (2.5) miles of a substation and on a main distribution line with a minimum six hundred (600)-amp capacity are eligible for Level 2 Interconnection Review under higher thresholds.

Line Capacity	Level 2 Eligibility	
	Regardless of location	On \geq 600 amp line and \leq 2.5 miles from substation
<u><4</u> kV	< 1 MW	< 2 MW
4.1 kV – 14 kV	< 2 MW	< 3 MW
15 kV - 30 kV	< 3 MW	< 4 MW
31 kV - 60 kV	≤ 4 MW	≤ 5 MW

(b) For interconnection of a proposed Small Generator Facility to a Radial Distribution Circuit, the Small Generator Facility aggregated with all other generation capable of coincidental exporting energy on the Line Section may not exceed the anticipated minimum load on the Line Section, as determined by the results of a power flow-based study performed by the EDC to evaluate the impact of the proposed Small Generator Facility. If such results are unavailable, the aforementioned aggregate generating capacity shall not exceed fifteen percent (15%) of the Line Section annual peak load, as most recently measured at the substation or calculated for the

Line Section. Should the EDC have previously identified the aforementioned Line Section as exceeding fifteen percent (15%) of the Line Section's annual peak load, the EDC shall use its best efforts to complete a power-flow based study to evaluate the impact of the proposed Small Generator Facility as described herein. The EDC shall not fail the Small Generator Facility based solely on the application of the fifteen percent (15%) peak load limitation if the EDC has valid power flow-based study results that can be used to evaluate the impact of the proposed Small Generator Facility.

- For interconnection of a proposed Small Generator Facility within a Spot (c) or Area Network, the proposed Small Generator Facility shall utilize an inverter-based equipment package and use a minimum import relay or other protective scheme that will ensure power imported from the EDC to the network will, during normal EDC operations, remain above twenty percent (20%) of the minimum load on the network transformer based on historical data, or will remain above an import point reasonably set by the EDC in good faith. For interconnection of a proposed Small Generator Facility within an Area Network, the proposed Small Generator Facility shall utilize an inverter-based equipment package and adhere to a maximum aggregate export level of eighty percent (80%) of the generation level that would cause reverse flow on a network transformer, or will remain below an export point reasonably set by the EDC in good faith. At the EDC's discretion, the requirement for minimum import relays or other protective schemes may be waived.
- (d) The proposed Small Generator Facility, in aggregation with other generation on the distribution circuit, may not contribute more than ten percent (10%) to the distribution circuit's maximum Fault Current at the point on the high voltage (primary) level nearest the Point of Common Coupling.
- (e) The proposed Small Generator Facility, in aggregate with other generation on the distribution circuit, may not cause any distribution protective devices and equipment (including substation breakers, fuse cutouts, and line reclosers), or EDC customer equipment on the Electric Distribution System, to exceed ninety percent (90%) of the short circuit interrupting capability. The Interconnection Request may not receive approval for interconnection on a circuit that already exceeds ninety percent (90%) of the short circuit interrupting capability.
- (f) The proposed Small Generator Facility's Point of Common Coupling may not be on a transmission line.
- (g) The Small Generator Facility complies with the applicable type of interconnection, based on the table below. This screen includes a review of the type of electrical service provided to the Interconnecting Customer,

including line configuration and the transformer connection to limit the potential for creating over-voltages on the EDC's Electric Distribution System due to a loss of ground during the operating time of any anti-islanding function. This screen does not apply to Small Generator Facilities with a gross rating of 11 kVA or less.

Primary Distribution Line Configuration	Type of Interconnection to be Made to the Primary	Results/Criteria
	Circuit	
Three-phase, three-wire	Any type	Pass Screen
Three-phase, four-wire	Single-phase, line-to-neutral	Pass Screen
Three-phase, four-wire (For any line that has such a section, or mixed three wire and four wire)	All Others	To pass, aggregate Small Generator Facility Nameplate Capacity must be less than or equal to 10% of Line Section peak load

- (h) When the proposed Small Generator Facility is to be interconnected on single-phase shared Secondary Line, the aggregate generation capacity on the shared Secondary Line, including the proposed Small Generator Facility, shall not exceed sixty-five percent (65%) of the transformer nameplate power rating.
- (i) When a proposed Small Generator Facility is single-phase and is to be interconnected on a transformer center tap neutral of a two hundred forty (240)-volt service, its addition may not create an imbalance between the two sides of the 240-volt service of more than twenty percent (20%) of the nameplate rating of the service transformer.
- A Small Generator Facility, in aggregate with other generation (i) interconnected to the distribution low-voltage side of a substation transformer feeding the electric distribution circuit where the Small Generator Facility proposes to interconnect, may not exceed 20MW in an area where there are known or posted transient stability limitations to generating units located in the general electrical vicinity (e.g. three (3) or four (4) transmission voltage level buses from the Point of Common Coupling), or the proposed Small Generator Facility shall not have interdependencies, known to the EDC. with earlier-queued Interconnection Requests.
- (k) Except as permitted by the modified Level 2 review process in Subsection 4005.6, no construction of facilities by the EDC on its own

- system other than metering shall be required to accommodate the Small Generator Facility.
- (l) The EDC may use results from a valid power flow-based study performed to evaluate the impact of the proposed Small Generator Facility, provided such results are not used to fail any of the Subsection 4005.2 (c), (d), (e), (f), (g), (h), (i), or (j) screens.
- (m) If a power-flow analysis is performed based on Subsections 4005.2 (b) or (l), the EDC shall make available upon request a copy of its power flow-based study for each applicant to the Commission.

4005.3 [RESERVED]

- The Level 2 Interconnection Review shall be conducted in accordance with the following procedures:
 - (a) The EDC shall, within five (5) business days after receipt of Part 1 of the Interconnection Request, acknowledge, in writing or by electronic mail, receipt of the Interconnection Request, indicating whether it is complete or incomplete, and the appropriate application fee.
 - (1) If the Interconnection Request requires the construction of Interconnection Facilities or Distribution System Upgrades, the following additional information will be required to be submitted with the application. Provision of the additional information does not preclude challenging the findings in accordance with Subsection 4005.4(a)(2).
 - (A) Electrical room drawings. Such drawings may be omitted for the CREF initial application submission, but could be required by the EDC upon confirmation of the CREF location by the Interconnection Customer and the EDC.
 - (B) Meter locations.
 - (C) Initial proposed interconnection drawings.
 - (2) If the EDC requires the construction of Interconnection Facilities or Distribution System Upgrades during the Interconnection Request process, the EDC shall provide a written technical explanation that reviews the need for the identified facilities and/or upgrades. The EDC shall demonstrate that required functionalities are not satisfied by employing IEEE STD 1547 certified and UL 1741 SA listed equipment.

If requested by the Interconnection Customer, and agreed to by the Interconnection Customer and the EDC, a Modified Level 1/2

Scoping Meeting shall be held within ten (10) business days, or other mutually agreed to time, after the EDC has notified the Interconnection Customer that Interconnection Facilities and/or a Distribution System Upgrade are being required by the EDC. The Modified Level 1/2 Scoping Meeting shall take place in person, by telephone, or electronically by a means mutually agreeable to the Interconnection Customer and the EDC. The purpose of this meeting shall be to review the Interconnection Request, existing studies relevant to the Interconnection Request, the conditions at the proposed location, the results of the Level 1 or Level 2 Adverse System Impact screening criteria, and a technical explanation in which the EDC reviews the need for the aforementioned facilities and/or system upgrade.

- (b) When the Interconnection Request is deemed incomplete, the EDC shall provide a written list detailing all information that must be provided to complete the request. The Interconnection Customer shall have ten (10) business days after receipt of the list to revise the Interconnection Request to include the requested information and resubmit the Interconnection Request or request an extension of time to provide such information. If the Interconnection Request is not resubmitted with the requested information within ten (10) days, the Interconnection Request shall be deemed withdrawn. The EDC shall notify the Interconnection Customer within three (3) business days of receipt of a revised Interconnection Request whether the request is complete or incomplete. The EDC may deem the request withdrawn if it remains incomplete.
- (c) When an Interconnection Request is complete, the EDC shall assign a Queue Position.
- (d) Unless Subsection 4005.6 applies, within fifteen (15) business days after the EDC notifies the Interconnection Customer that it has received a completed Interconnection Request, the EDC shall evaluate the Interconnection Request using the Level 2 screening criteria and notify the Interconnection Customer whether the Small Generator Facility meets all of the applicable Level 2 Adverse System Impact screens. If the proposed interconnection meets all of the applicable Level 2 Adverse System Impact screens and the EDC determines that the Small Generator Facility can be interconnected safely and reliably to the Electric Distribution System, the EDC shall provide the Interconnection Customer an Approval to Install. The EDC shall provide an EDC-executed Interconnection Agreement within three (3) business days after notification of Level 2 issuance of the Approval to Install.
 - (1) If Distribution System Upgrade(s) are required, the Interconnection Customer will be notified at this time that the modified process in 4005.6 has been triggered..

- (e) Unless extended by mutual agreement of the Interconnection Customer and the EDC, within twenty-four (24) months of receiving an Approval to Install or six (6) months of completion of any Distribution System Upgrades, whichever is later, the Interconnection Customer shall provide the EDC with the signed Level 2-4 Part II Small Generator Interconnection Certificate of Completion, including the signed inspection certificate. An Interconnection Customer shall communicate with the EDC no less frequently than every six (6) months regarding the status of a proposed Small Generator Facility to which an Interconnection Agreement refers.
- (f) The EDC may conduct a Witness Test within ten (10) business days of receiving the completed Level 2-4 Part II - Small Generator Facility Interconnection Certificate of Completion and the signed inspection certificate from the Interconnection Customer, conduct a Witness Test at a time mutually agreeable to the Interconnection Customer and the EDC. If the Witness Test fails to reveal that all equipment has been appropriately installed and that all electrical connections have been made in accordance with applicable codes, the EDC shall offer to redo the Witness Test at the Interconnection Customer's expense at a time mutually agreeable to the Interconnection Customer and the EDC. If the EDC determines that the Small Generator Facility fails the inspection it must provide a written explanation detailing the reasons and any standards violated. If the EDC does not perform the Witness Test within ten (10) business days or other such time as is mutually agreed to by the Interconnection Customer and the EDC, the Witness Test is deemed waived.
- (g) An Interconnection Customer may begin interconnected operation of a Small Generator Facility provided that there is an Interconnection Agreement in effect, the EDC has received proof of the electrical code official's approval, the Small Generator Facility has passed any Witness Test by the EDC, and the EDC has issued the Authorization to Operate. The EDC shall issue the Authorization to Operate within twenty (20) business days of receipt of required documentation 4005.4(e). Evidence of approval by an electric code official includes a signed inspection certificate.
- (h) The EDC may require photographs of the site, Small Generator Facility components, meters, or any other aspect of the Interconnection Facilities as part of the Level 2 Interconnection Review process, provided that failure to provide a photo in a timely manner will not be a reason for the EDC to deem an Interconnection Request incomplete.

4005.5 [RESERVED]

4005.6 Modifications to Level 2 Interconnection Review Process:

- (a) If the Interconnection Request requires the addition of Interconnection Facilities only, the following process shall be followed for the Approval to Install. Subsection 4005.4(d) does not apply.
 - (1) If the only Interconnection Facilities required in the Interconnection Request are captured in one or more of the categories in the Interconnection Facilities Cost Matrix, the Interconnection Customer will be responsible only for the applicable Interconnection Facilities cost(s) from the Interconnection Facilities Cost Matrix.
 - (2) The cost(s) from the Interconnection Facilities Cost Matrix will be final costs.
 - (3) The EDC shall issue the final cost letter, which shall contain only the applicable cost(s) from the Interconnection Facility Cost Matrix and will be provided concurrently with the Approval to Install, and shall be provided within fifteen (15) business days after the Interconnection Request is deemed complete.
 - (4) (5) If the Interconnection Facilities are not captured in the Matrix, the EDC shall provide an itemized cost letter that includes a detailed list of interconnection facilities, breaking out unit costs for equipment, labor, operation and maintenance.
- (b) If the Interconnection Request requires the addition of Distribution System Upgrades, the following process shall be followed for the Approval to Install. Subsection 4005.4(d) does not apply.
 - (1) The estimated cost letter shall be provided within twenty-five (25) business days after the Interconnection Request is deemed complete.
 - (2) The EDC will provide a cost estimate based on a forty percent (40%) design that is accurate within +/- twenty-five percent (25%) concurrently with the Approval to Install.
 - (3) Unless extended by mutual agreement of the Interconnection Customer and the EDC, the Interconnection Customer must agree to the cost estimate and the operational requirements and execute the Interconnection Agreement within ten (10) business days of receiving the Approval to Install.
 - (4) Once the Interconnection Customer has approved the cost letter and operational requirements, the Interconnection Customer is responsible for the costs the EDC incurs designing or constructing Interconnection Facilities or Distribution System Upgrades if the Interconnection Customer decides not to move forward with the interconnection of the Small Generator Facility.

- (5) Within thirty (30) business days after the EDC notifies the Interconnection Customer that it has received a completed Interconnection Request, the EDC will issue a final cost letter based on one hundred percent (100%) design. The cost letter will include a detailed list of necessary Distribution System Upgrades and an itemized final cost, breaking out unit costs for equipment, labor, operation and maintenance, and taxesfor completing such upgrades. The final cost letter will also indicate the milestones for completion of the Interconnection Customer's installation of its Small Generator Facility and the EDC's completion of any Distribution System Upgrade, and these milestones will be incorporated by reference into the Interconnection Agreement. Upon receipt of the Interconnection Customer's written approval of the final cost letter, the EDC shall provide to the Interconnection Customer an invoice for the final costs within ten (10) business days.
- (6) If the Interconnection Customer changes the design of the interconnection of the Small Generator Facility in response to the EDC amending site-specific operating or other requirements, the project shall retain its eligibility for interconnection, including its place in the interconnection queue.
- **(7)** If the Interconnection Customer changes the design of the interconnection of the Small Generator Facility without prompting by the EDC, in a manner that results in a Material Modification, at any point, the estimated cost letter, Approval to Install, Interconnection Agreement, and final cost letter, as applicable, may be void. The Interconnection Customer shall notify the EDC of the requested design changes and if, in the reasonable judgement of the EDC, a reevaluation of the estimated and/or final cost letter is required, EDC will provide Interconnection Customer within ten (10) business days of receipt of the Interconnection Customer's notice an estimate of the time required to re-evaluate the costs and a request for all required technical data related to the proposed changes. Interconnection Customer may either (i) accept the additional time and cost to complete the re-evaluation, (ii) withdraw the proposed changes, or (iii) proceed with a new Interconnection Request for such changes. Interconnection Customer shall provide EDC written notice of its election within ten (10) business days following Interconnection Customer's receipt of EDC's estimated additional time.
- (8) If the Interconnection Customer changes the design of the interconnection of the Small Generator Facility and the proposed modification is determined not to be a Material Modification, then the EDC shall notify the Interconnection Customer in writing that

the modification has been accepted and that the Interconnection Customer shall retain its eligibility for interconnection, including its place in the interconnection queue.

- (9) The EDC will provide an EDC-executed Interconnection Agreement within three (3) business days of issuing the Approval to Install.
- (c) The EDC shall design, procure, construct, install, and own any Distribution System Upgrades for a CREF. The Distribution System Upgrades costs shall be allocated as follows, subject to availability of funding.
 - (1) The total Distribution System Upgrade costs for shared allocation as described above shall be capped at \$200,000 per calendar year. Costs paid by EDC for CREF Distribution System Upgrades shall be tracked as a regulatory asset and recovered in its next base rate case as distribution plant.
 - (2) If funding is available, Distribution System Upgrade cost responsibility shall be assigned as follows:
 - (A) For Distribution System Upgrade costs of \$50,000 or less, fifty percent (50%) of the costs shall be paid for by the CREF Interconnection Customer and fifty percent (50%) of the costs paid for by the EDC.
 - (B) For Distribution System Upgrade costs of over \$50,000, the portion paid by the EDC shall be capped at \$25,000. The CREF Interconnection Customer shall pay the balance of the Distribution System Upgrade costs after the EDC portion has been subtracted.
 - (3) If the annual funding is exhausted and thus no longer available, the CREF shall pay one hundred percent (100%) of costs.
- When a Small Generator Facility is not approved under a Level 2 review, the EDC, at its sole option, may approve the Interconnection Request provided such approval is consistent with safety and reliability and shall provide the Interconnection Customer an Approval to Install after the determination. If the EDC cannot determine that the Small Generator Facility may nevertheless be interconnected consistent with safety, reliability, and power quality standards, the EDC shall provide the Interconnection Customer with detailed information on the reason(s) for failure in writing. In addition, the EDC shall either:
 - (a) Notify Interconnection Customer that the EDC is continuing to evaluate the Interconnection Request under Supplemental Review if the EDC concludes that the Supplemental Review might determine that the Small

Generator Facility could continue to qualify for interconnection pursuant to Level 2; or

- (b) Offer to continue evaluating the Interconnection Request under Level 4.
- On an annual basis, if the EDC fails to issue at least ninety percent (90%) of all Authorizations to Operate and Approval to Install in the Level 2 interconnection process (as specified within the timeline(s) specified in Subsections 4005.4 and 4005.6), and it shall be required to develop a corrective action plan.
 - (a) The corrective action plan shall describe the cause(s) of the EDC's non-compliance with Subsection 4005.8, describe the corrective measure(s) to be taken to ensure that the standard is met or exceeded in the future, and set a target date for completion of the corrective measure(s). To the extent automation is an element of the corrective measure(s), this should be described in the plan.
 - (b) Progress on current corrective action plans shall be included in the EDC's Small Generator Interconnection Annual Report.
 - (c) The EDC shall report the actual performance of compliance with Subsection 4005.8 during the reporting period in the Small Generator Interconnection Annual Report of the following year, including milestones for the number of Interconnection Requests in total, number and percentage meeting timeline requirements for Approval to Install, estimated cost letter, final cost letter, and Authorization to Operate, as they pertain to certain sections of Level 2 procedures:
 - (1) Unmodified (Subsection 4005.4 (c)),
 - (2) Interconnection Facilities Only (Subsection 4005.6 (a), and
 - (3) EDS Upgrades (Subsection 4005.6 (b)).
- On an annual basis, the EDC will submit a report summarizing the Modified Level 1/2 Scoping Meetings that have been held, including:
 - (a) Number of meetings held
 - (b) Subject of meetings
 - (c) Outcome of meetings including:
 - (1) Number of meetings which resulted in a change to the technical or operating requirements
 - (2) Number of meetings which resulted in no change to the technical or operating requirements

4006 LEVEL 3 INTERCONNECTION REVIEWS

The EDC shall use Level 2 Interconnection Review procedures for evaluating Level 3 Interconnection Requests provided the proposed Small Generator Facility has a Nameplate Capacity rating not greater than 20MW and uses reverse power relays, minimum import relays, or other protective devices to assure that power may never be exported from the Small Generator Facility to the EDC's electrical distribution system. An Interconnection Customer proposing to interconnect a Small Generator Facility to a spot or Area Network is not permitted under the Level 3 review process.

4007 LEVEL 4 INTERCONNECTION REVIEWS

- The EDC shall use the Level 4 Interconnection Review procedures for evaluating Interconnection Requests when:
 - (a) The Interconnection Request was not approved under a Level 1, Level 2, or Level 3 Interconnection Review and the Interconnection Customer has submitted a new Interconnection Request for consideration under a Level 4 Interconnection Review or requested that the rejected Interconnection Request be treated as a Level 4 Interconnection Request; and
 - (b) The Interconnection Request does not meet the criteria for qualifying for a review under Level 1, Level 2, or Level 3 Interconnection Review procedures.
- The Level 4 Interconnection Review shall be conducted in accordance with the following process:
 - (a) Within five (5) business days from receipt of Part I of an Interconnection Request or transfer of an existing request to a Level 4 Interconnection Request, the EDC shall notify the Interconnection Customer whether the request is complete.
 - (1) If the Interconnection Request requires the construction of Interconnection Facilities or Distribution System Upgrades, the following additional information could be required by the EDC for submission with the application:
 - (A) Electrical room drawings.
 - (B) Meter locations.
 - (C) Initial proposed interconnection drawings.

- (2) If the EDC requires the construction of Distribution System Upgrades during the Interconnection Request process, the EDC shall provide a technical explanation that justifies the need for the identified facilities and/or upgrades. The EDC shall demonstrate that required functionalities are not satisfied by employing IEEE STD 1547 certified and UL 1741 SA listed equipment.
- (b) When the Interconnection Request is deemed not complete, the EDC shall provide the Interconnection Customer with a written list detailing information required to complete the Interconnection Request. The Interconnection Customer shall have twenty (20) business days to revise the Interconnection Request to include the requested information and resubmit the Interconnection Request, or the Interconnection Request shall be considered withdrawn. The Interconnection Customer and the EDC may agree to extend the time for receipt of the revised Interconnection Request. The EDC shall notify the Interconnection Customer within five (5) business days of receipt of the revised Interconnection Request whether the Interconnection Request is complete. The EDC may deem the Interconnection Request withdrawn if it remains incomplete.
- (c) When an Interconnection Request is complete, the EDC shall assign a Oueue Position.
- (d) The following procedures shall be followed in performing a Level 4 Interconnection Review:
 - (1) By mutual agreement of the Interconnection Customer and the EDC, the Scoping Meeting, interconnection feasibility study, interconnection impact study, or Facilities Study provided for in a Level 4 Interconnection Review and discussed in this paragraph may be waived;
 - If agreed to by the Interconnection Customer and the EDC, a (2) Scoping Meeting shall be held within ten (10) business days, or other mutually agreed to time, after the EDC has notified the Interconnection Customer that the Interconnection Request is deemed complete, or the Interconnection Customer has requested that its Interconnection Request proceed after failing the requirements of a Level 2 Interconnection Review or Level 3 Interconnection Review. The Scoping Meeting shall take place in person, by telephone, or electronically by a means mutually agreeable to the Interconnection Customer and EDC. The purpose of the Scoping Meeting shall be to review the Interconnection Request; existing studies relevant to the Interconnection Request; the conditions at the proposed location including the available Fault Current at the proposed location, the existing peak loading on the lines in the general vicinity of the proposed Small Generator

- Facility, and the configuration of the distribution line at the proposed Point of Common Coupling; and the results of the Level 1, Level 2 or Level 3 Adverse System Impact screening criteria;
- (3) When the Interconnection Customer and EDC agree at a Scoping Meeting that an interconnection feasibility study shall be performed, and if the Interconnection Customer and EDC do not waive the interconnection impact study, the EDC shall provide to the Interconnection Customer, no later than five (5) business days after the Scoping Meeting, an Interconnection System Feasibility Study Agreement, including an outline of the scope of the study and a nonbinding good faith estimate of the cost and time to perform the study;
- (4) When the Interconnection Customer and EDC agree at a Scoping Meeting that an interconnection feasibility study is not required, and if the Interconnection Customer and EDC agree that an interconnection system impact study shall be performed, the EDC shall provide to the Interconnection Customer, no later than five (5) business days after the Scoping Meeting, an Interconnection System Impact Study Agreement, including an outline of the scope of the study and a nonbinding good faith estimate of the cost to perform the study; and
- (5) When the Interconnection Customer and EDC agree at the Scoping Meeting that an interconnection feasibility study and interconnection system impact study are not required, the EDC shall provide to the Interconnection Customer, no later than five (5) business days after the Scoping Meeting, an Interconnection Facilities Study Agreement including an outline of the scope of the study and a nonbinding good faith estimate of the cost to perform the study.
- (6) The EDC may elect to perform one or more of these studies concurrently.
- (e) Any required Adverse System Impact studies shall be carried out using the following guidelines:
 - (1) An interconnection feasibility study shall include the following analyses and conditions for the purpose of identifying and addressing potential Adverse System Impact to the EDC's Electric Distribution System that would result from the interconnection:
 - (A) Initial identification of any circuit breaker short circuit capability limits exceeded as a result of the interconnection;

- (B) Initial identification of any thermal overload or voltage limit violations resulting from the interconnection;
- (C) Initial review of grounding requirements and system protection;
- (D) Description and nonbinding estimated cost of facilities required to interconnect the Small Generator Facility to the EDC's Electric Distribution System in a safe and reliable manner; and
- (E) Additional evaluations, at the expense of the Interconnection Customer, when an Interconnection Customer requests that the interconnection feasibility study evaluate multiple potential Points of Common Coupling.
- (2) An interconnection system impact study shall evaluate the impacts of the proposed interconnection on both the safety and reliability of the EDC's Electric Distribution System. The study shall identify and detail the Adverse System Impacts that result when a Small Generator Facility is interconnected without project modifications or Distribution System Upgrades, focusing on the Adverse System Impacts identified in the interconnection feasibility study or potential impacts including those identified in the Scoping Meeting. The interconnection system impact study shall consider all Small Generator Facilities that, on the date the interconnected with the EDC's Electric Distribution System, have a pending higher Queue Position to interconnect to the system, or have a signed Interconnection Agreement.
 - (A) A distribution interconnection system impact study shall be performed when a potential Electric Distribution System Adverse System Impact is identified in the interconnection feasibility study. The EDC shall send the Interconnection Customer an Interconnection System Impact Study Agreement within five (5) business days of transmittal of the interconnection feasibility study report. The agreement shall include an outline of the scope of the study and a good faith estimate of the cost to perform the study. The impact study shall include:
 - (i) A load flow study;
 - (ii) Identification of Affected Systems;
 - (iii) An analysis of equipment interrupting ratings;

- (iv) A protection coordination study;
- (v) Voltage drop and flicker studies;
- (vi) Protection and set point coordination studies;
- (vii) Grounding reviews; and
- (viii) Impact on system operation.
- (B) An interconnection system impact study shall consider the following criteria:
 - (i) A short circuit analysis;
 - (ii) A stability analysis;
 - (iii) Alternatives for mitigating Adverse System Impacts on Affected Systems;
 - (iv) Voltage drop and flicker studies;
 - (v) Protection and set point coordination studies; and
 - (vi) Grounding reviews.
- (C) The final interconnection system impact study shall provide the following:
 - (i) The underlying assumptions of the study;
 - (ii) The results of the analyses;
 - (iii) A list of any potential impediments to providing the requested interconnection service;
 - (iv) Required distribution upgrades; and
 - (v) A nonbinding good faith estimate of cost and time to construct any required Distribution System Upgrades.
- (D) The Interconnection Customer and EDC shall use an Interconnection System Impact Study Agreement approved by the Commission.
- (3) The Facilities Study shall be conducted as follows:

- (A) Within five (5) business days of completion of the interconnection system impact study, the EDC shall transmit a report to the Interconnection Customer with an Interconnection Facilities Study Agreement, which includes an outline of the scope of the study and a nonbinding good faith estimate of the cost and time to perform the study;
- (B) The Facilities Study shall estimate the cost of the equipment, engineering, procurement and construction work including overheads needed to implement the conclusions of the interconnection feasibility study and the interconnection system impact study to interconnect the Small Generator Facility. The Facilities Study shall identify:
 - (i) The electrical switching configuration of the equipment, including transformer, switchgear, meters and other station equipment;
 - (ii) The nature and estimated cost of the EDC's Interconnection Facilities and Distribution System Upgrades necessary to accomplish the interconnection; and
 - (iii) An estimate of the time required to complete the construction and installation of the facilities;
- (C) The Interconnection Customer and EDC may agree to permit an Interconnection Customer to separately arrange for a third party to design and construct the required Interconnection Facilities. The EDC may review the design of the facilities under the Interconnection Facilities Study Agreement. When the Interconnection Customer and EDC agree to separately arrange for design and construction and to comply with security and confidentiality requirements, the EDC shall make all relevant information and required specifications available to the Interconnection Customer to permit the Interconnection Customer to obtain an independent design and cost estimate for the facilities, which shall be built in accordance with the specifications;
- (D) Upon completion of the Facilities Study and with the agreement of the Interconnection Customer to pay for the Interconnection Facilities and Distribution System Upgrades identified in the Facilities Study, the EDC shall issue the Approval to Install; and

- (E) The Interconnection Customer and EDC shall use an Interconnection Facilities Study Agreement approved by the Commission.
- (f) Upon completion or waiver of procedures defined in Subsection 4007.2 (c) as mutually agreed by the Interconnection Customer and EDC and the EDC determines that the Small Generator Facility can be interconnected safely and reliably to the Electric Distribution System, the EDC shall provide the Interconnection Customer with an Approval to Install. If the Interconnection Request is denied, the EDC shall provide a written explanation;
- (g) When Distribution System Upgrades are required, the interconnection of the Small Generator Facility shall proceed according to milestones agreed to by the Interconnection Customer and EDC in the Interconnection Agreement. The Authorization to Operate shall be issued within twenty (20) business days of completion of the following:
 - (1) The milestones agreed to in the Interconnection Agreement are satisfied;
 - (2) The Small Generator Facility is approved by electric code officials with jurisdiction over the interconnection;
 - (3) The Interconnection Customer provides a Certificate of Completion to the EDC. Completion of local inspections may be designated on inspection forms used by local inspecting authorities; and
 - (4) There is a successful completion of the Witness Test per the terms and conditions found in the Standard Agreement for Interconnection of Small Generator Facilities, unless waived.
- (h) The EDC may require photographs of the site, Small Generator Facility components, meters or any other aspect of the Interconnection Facilities as part of the Level 4 Interconnection Review process, provided that failure to provide a photo in a timely manner will not be a reason for the EDC to deem an Interconnection Request incomplete.
- An interconnection system impact study is not required when the interconnection feasibility study concludes there is no Adverse System Impact, or when the study identifies an Adverse System Impact, but the EDC is able to identify a remedy without the need for an interconnection system impact study.
- The Interconnection Customer and EDC shall use a form of Interconnection Feasibility Study Agreement approved by the Commission.

4008 TECHNICAL REQUIREMENTS

- 4008.1 Unless one or more of the listed standards are waived by the EDC, a Small Generator Facility must comply with the technical standards listed in Subsection 4002.1, as applicable.¹
- When an Interconnection Request is for a Small Generator Facility that includes multiple energy production devices at a site for which the Interconnection Customer seeks a single Point of Common Coupling, the Interconnection Request shall be evaluated on the basis of the aggregate Nameplate Capacity of multiple devices.
- When an Interconnection Request is for an increase in capacity for an existing Small Generator Facility, the Interconnection Request shall be evaluated on the basis of the new total Nameplate Capacity of the Small Generator Facility.
- The EDC shall maintain records of the following for a minimum of three (3) years:
 - (a) The total number of and the Nameplate Capacity of the Interconnection Requests received, approved, and denied under Level 1, Level 2, Level 3, and Level 4 reviews;
 - (b) The number of Interconnection Requests that were not processed within the timelines established in this rule;
 - (c) The number of Scoping Meetings held and the number of feasibility studies, impact studies, and Facility Studies performed, and the fees charged for these studies;
 - (d) The justifications for the actions taken to deny Interconnection Requests; and
 - (e) Any special operating requirements required in Interconnection Agreements that are not part of the EDC's written and published operating procedures applicable to Small Generator Facilities.
- The EDC shall provide a report to the Commission containing the information required in Subsection 4008.4, paragraphs (a)-(c) within ninety (90) calendar days of the close of each year.
 - (a) The EDC shall include the total amount of solar energy from solar energy systems meeting the requirements of D.C. Official Code § 34-1432(e)(1) for which interconnection requests have been submitted in the previous six

ATTACHMENT A

The PJM Manual, PJM Manual 14G, "Generation Interconnection Requests" Attachment C, which is available at: https://www.pjm.com/-/media/documents/manuals/m14g.ashx, shall be used as a guide (but not a requirement) to detail and illustrate the interconnection protection requirements that are provided in IEEE Standard 1547.

- (6) months in its Quarterly Interconnection Report filed in accordance with Commission Order No. 18575.
- (b) The EDC shall provide a public and confidential list of final interconnection approvals for renewable generators (name, address, capacity (DC and AC), and system type) on the 15th of each month, for the previous month interconnections.
- The EDC shall designate a contact person and contact information on its website and the Commission's website for submission of all Interconnection Requests and from whom information on the Interconnection Request process and the EDC's Electric Distribution System can be obtained regarding a proposed project. The information shall include studies and other materials useful to an understanding of the feasibility of interconnecting a Small Generator Facility at a particular point on the EDC's Electric Distribution System, except to the extent that providing the materials would violate security requirements or confidentiality agreements, or otherwise deemed contrary to District or federal law/regulations. In appropriate circumstances, the EDC may require a confidentiality agreement prior to release of information.
- When an Interconnection Request is deemed complete, a modification other than a minor equipment modification that is not agreed to in writing by the EDC, shall require submission of a new Interconnection Request, with the exception of a change in design subject to EDC re-evaluation as specified in Subsection 4005.6(b)(7).
- When an Interconnection Customer is not currently a customer of the EDC at the proposed site, the Interconnection Customer, upon request from the EDC, shall provide proof of site control evidenced by a property tax bill, deed, lease agreement, or other legally binding contract.
- To minimize the cost of interconnecting multiple Small Generator Facilities, the EDC or the Interconnection Customer may propose a single Point of Common Coupling for multiple Small Generator Facilities located at a single site. If the Interconnection Customer rejects the EDC's proposal for a single Point of Common Coupling, the Interconnection Customer shall pay the additional cost, if any, of providing a separate Point of Common Coupling for each Small Generator Facility. If the EDC rejects the customer's proposal for a single Point of Common Coupling without providing a written technical explanation, the EDC shall pay the additional cost, if any, of providing a separate Point of Common Coupling for each Small Generator Facility.
- Small Generator Facilities shall be capable of being isolated from the EDC. For all Small Generator Facilities interconnecting to a Primary Line, the isolation shall be by means of a lockable, visible-break isolation device accessible by the EDC. For all Small Generator Facilities interconnecting to a Secondary Line, the isolation shall be by means of a lockable isolation device whose status is clearly

indicated and is accessible by the EDC. The isolation device shall be installed, owned and maintained by the owner of the Small Generator Facility and located between the Small Generator Facility and the Point of Common Coupling. A Draw-out Type Circuit Breaker with a provision for padlocking at the draw-out position can be considered an isolation device for purposes of this requirement.

- The Interconnection Customer may elect to provide the EDC access to an isolation device that is contained in a building or area that may be unoccupied and locked or not otherwise readily accessible to the EDC, by installing a lockbox provided by the EDC that shall provide ready access to the isolation device. The Interconnection Customer shall install the lockbox in a location that is readily accessible by the EDC, and the Interconnection Customer shall permit the EDC to affix a placard in a location of its choosing that provides clear instructions to the EDC's operating personnel on access to the isolation device. In the event that the Interconnection Customer fails to comply with the terms of this subsection and the EDC needs to gain access to the isolation device, the EDC shall not be held liable for any damages resulting from any necessary EDC action to isolate the Interconnection Customer.
- Any metering necessitated by a Small Generator Facility interconnection shall be installed, operated, and maintained in accordance with applicable tariffs. Any such metering requirements shall be clearly identified as part of the Interconnection Agreement executed by the Interconnection Customer and the EDC. The EDC is not responsible for installing, operating, or maintaining customer-owned meters.
- 4008.13 [RESERVED]
- 4008.14 [RESERVED]
- The Interconnection Customer shall design its Small Generator Facility to maintain a composite power delivery at continuous rated power output at the Point of Common Coupling at a power factor within the power factor range required by the EDC's applicable tariff for a comparable load customer. The EDC may also require the Interconnection Customer to follow a voltage or VAR schedule if such schedules are applicable to similarly situated generators in the control area on a comparable basis and have been approved by the Commission. The specific requirements for meeting a voltage or VAR schedule shall be clearly specified in Attachment 3 of the "District of Columbia Small Generator Interconnection Rule Level 2-4 Standard Agreement for Interconnection of Small Generator Facilities". Under no circumstance shall these additional requirements for reactive power or voltage support exceed the normal operating capabilities of the Small Generator Facility.
- 4008.16 For retail interconnection non-exporting Energy Storage devices, the load aspects of the storage devices will be treated the same as other load from customers, based on incremental net load.

- Interconnection of Energy Storage facilities should comply with IEEE Standard 1547 technical & test specifications and requirements.
- The Energy Storage overcurrent protection (charge/discharge) ratings from inverter nameplate shall not exceed EDC capabilities.
- In front of the meter Energy Storage exporting systems will be subject to Level 4 review requirements.
- When a Microgrid reconnects to the EDC, the Microgrid must be synchronized to the grid, matching: (1) voltage, (2) frequency, and (3) phase angle. This should require an asynchronous interconnection.
- At all interconnection levels, the power conversion system performing energy conversion/control at the Point of Common Coupling must be equipped to communicate system characteristics over secured EDC protocol.
- Inverters shall meet the safety requirements of UL 1741 and 12 months after the publication of UL 1741 SA (Supplement A) utility-interactive inverters shall meet the specifications of UL 1741 SA.

4009 TIMELINE EXTENSIONS AND DISPUTES

Interconnection Procedures. If the EDC cannot meet all timelines set by these Interconnection Procedures. If the EDC cannot meet a timeline, the EDC shall notify the Applicant in writing within one (1) Business Day after the missed deadline. The notification shall explain the reason for the EDC's failure to meet the deadline and provide an estimate of when the step will be completed. The EDC shall keep the Applicant updated of any changes in the expected completion date. The Applicant may request in writing the extension of one timeline set by these Interconnection Procedures. The requested extension may be for up to one-half of the time originally allotted (e.g., a ten (10) Business Day extension for a twenty (20) Business Day timeframe). The EDC shall not unreasonably refuse this request. If further timeline extensions are necessary, the Applicant may request an extension in writing to the Interconnection Ombudsperson, who shall grant or deny the request, if it is reasonable, within three (3) Business Days."

A party shall attempt to resolve all disputes regarding interconnection as provided in the DCSGIR promptly, equitably, and in a good faith manner.

In the event of a dispute, the disputing Party shall provide the other Party a written Notice of Dispute containing the relevant known facts pertaining to the dispute, the specific dispute and the relief sought, and express notice by the disputing Party that it is invoking the procedures under this Section. A copy of the notice shall also be sent to Commission. The non-disputing Party shall acknowledge the notice within three (3) Business Days of its receipt and identify a representative with the authority to make decisions for the non-disputing Party with respect to the dispute. 4009.3 If the dispute is principally related to one or

both Parties' compliance with timelines specified in these Interconnection Procedures or associated agreements, the Parties shall seek assistance from the Commission if the Parties cannot mutually resolve the dispute within eight (8) Business Days.

If the dispute is not principally related to one or both Parties' compliance with a timeline then the non-disputing Party shall provide the disputing Party with all relevant regulatory and/or technical details and analysis regarding any EDC interconnection requirements under dispute within ten (10) Business Days of the date of the notice of dispute. Within twenty (20) Business Days of the date of the notice of dispute, the Parties' authorized representatives shall meet and confer to try to resolve the dispute. Parties shall operate in good faith and use best efforts to resolve the dispute. If a resolution is not reached in thirty (30) Business Days from the date of the notice of dispute, either (1) a Party may request to continue negotiations for an additional twenty (20) Business Days, or (2) the Parties may by mutual agreement make a written request for mediation to the Commission. At any time, either Party may file a complaint before the Commission pursuant to its rules. If neither Party elects to seek assistance from the Commission, or if the attempted dispute resolution fails, then either Party may exercise whatever rights and remedies it may have in equity or law consistent with the terms of these procedures. When disputes relate to the technical application of the DCSGIR, the Commission may designate a technical consultant to resolve the dispute. Upon Commission designation, the Interconnection Customer and EDC shall use the technical consultant to resolve disputes related to interconnection. Costs for a dispute resolution conducted by the technical consultant shall be established by the technical consultant and subject to review by the Commission.

4009.4 Pursuit of dispute resolution shall not affect an Interconnection Customer with regard to consideration of an Interconnection Request or an Interconnection Customer's Queue Position.

4010 WAIVER

. . .

4011 SUPPLEMENTAL REVIEW

Within twenty (20) business days of determining that Supplemental Review is appropriate, the EDC shall perform Supplemental Review using the screens set forth below, notify the Interconnection Customer of the results, and include with the notification a written report of the analysis and data underlying the EDC's determinations under the screens.

(a) Where twelve (12) months of Line Section minimum load data is available, can be calculated, can be estimated from existing data, or can be determined from a power flow model, the aggregate Small Generator

Facility Nameplate Capacity on the Line Section is less than one hundred percent (100%) of the minimum load for all Line Sections bounded by automatic sectionalizing devices upstream of the proposed Small Generator Facility. If the minimum load data is not available, or cannot be calculated or estimated, the aggregate Small Generator Facility Nameplate Capacity on the Line Section is less than thirty percent (30%) of the peak load for all Line Sections bounded by automatic sectionalizing devices upstream of the proposed Small Generator Facility.

- (1) The type of generation used by the proposed Small Generator Facility will be taken into account when calculating, estimating, or determining circuit or Line Section minimum load relevant for the application of this screen. Solar photovoltaic (PV) generation systems with no battery storage use daytime minimum load (*e.g.*, 8 a.m. to 6 p.m.), while all other generation uses absolute minimum load.
- (2) When this screen is being applied to a Small Generator Facility that serves some onsite electrical load, all generation will be considered as part of the aggregate generation. If a Small Generator Facility uses Energy Storage without energy production equipment, and incorporates controls which limit Energy Storage discharge schedule to periods that are fixed and known to the EDC, the EDC shall consider the Energy Storage discharge schedule when calculating, estimating, or determining circuit or Line Section minimum load relevant for the application of this screen
- (b) In aggregate with existing generation on the Line Section:
 - (1) The voltage regulation on the Line Section can be maintained in compliance with relevant requirements under all system conditions;
 - (2) The voltage fluctuation is within acceptable limits as defined by IEEE Standard 1453 or Good Utility Practice similar to IEEE Standard 1453; and
 - (3) The harmonic levels meet IEEE 519 limits at the Point of Common Coupling.
- (c) The locations of the proposed Small Generator Facility and the aggregate Small Generator Facility Nameplate Capacity on the Line Section do not create impacts to safety or reliability that cannot be adequately addressed without application of Level 4 Interconnection Review procedures. The EDC may consider the following factors and others in determining potential impacts to safety and reliability in applying this screen.

- (1) Whether the Line Section has significant minimum loading levels dominated by a small number of customers (*i.e.*, several large commercial customers).
- (2) If there is an even or uneven distribution of loading along the feeder.
- (3) If the proposed Small Generator Facility is located in close proximity to the substation (*i.e.*, < 2.5 electrical line miles), and if the distribution line from the substation to the Small Generator Facility is composed of large conductor/feeder section (*i.e.*, 600A class cable).
- (4) If the proposed Small Generator Facility incorporates a time delay function to prevent reconnection of the generator to the Electric Distribution System until system voltage and frequency are within normal limits for a prescribed time.
- (5) If operational flexibility is reduced by the proposed Small Generator Facility, such that transfer of the Line Section(s) of the Small Generator Facility to a neighboring distribution circuit/substation may trigger overloads or voltage issues.
- (6) If the proposed Small Generator Facility utilizes certified antiislanding functions and equipment.
- (d) Modifications to the Electric Distribution System required by interconnections based on the Supplemental Review shall be treated in the following manner:
 - (1) If the Interconnection Request requires only Interconnection Facilities to the Electric Distribution System, a non-binding good faith cost estimate and construction schedule for the Interconnection Facilities to the Electric Distribution System, along with an Approval to Install, shall be provided within fifteen (15) business days after notification of the Supplemental Review results.
 - (2) If the Interconnection Request requires more than the addition of Interconnection Facilities, the EDC may elect to provide a non-binding good faith cost estimate and construction schedule for such Distribution System Upgrades within thirty (30) business days after notification of the Supplemental Review results, or the EDC may notify the Interconnection Customer that the EDC will need to complete a Facilities Study under Level 4 Interconnection Review to determine the cost estimate and construction schedule for necessary Distribution System Upgrades.

- (e) If the proposed interconnection meets all of the applicable Adverse System Impact screens and the EDC determines that the Small Generator Facility can be interconnected safely and reliably to the Electric Distribution System, the EDC shall provide the Interconnection Customer an Approval to Install
- (f) An Interconnection Customer that receives an Approval to Install shall provide the Small Generator Interconnection Part II Certificate of Completion and signed inspection certificate in the following timeframes:
 - (1) For Level 1 Interconnection Requests: Unless extended by mutual agreement of the Interconnection Customer and EDC, within six (6) months of receipt of the Approval to Install or six (6) months from the completion of any Distribution System Upgrades, whichever is later, the Interconnection Customer shall provide to the EDC the Level 1 Small Generator Interconnection Part II Certificate of Completion, including the signed inspection certificate.
 - (2) For Level 2 and 3 Interconnection Requests: Unless extended by mutual agreement of the Interconnection Customer and EDC, within twenty-four (24) months from an Interconnection Customer's receipt of the Approval to Install or six (6) months of completion of any Distribution System Upgrades, whichever is later, the Interconnection Customer shall provide to the EDC the Level 2-4 Small Generator Interconnection Part II Certificate of Completion, including the signed certificate of inspection. An interconnection customer shall communicate with the EDC no less frequently than every six (6) months regarding the status of a proposed small generator facility to which an Interconnection Agreement refers.
- (g) The EDC may conduct a Witness Test within ten (10) business days' of issuing the Authorization to Operate at a time mutually agreeable to the Interconnection Customer and EDC. If a Small Generator Facility initially fails the test, the EDC shall offer to redo the Witness Test at the Interconnection Customer's expense at a time mutually agreeable to the Interconnection Customer and EDC. If the EDC determines that the Small Generator Facility fails the Witness Test it must provide a written explanation detailing the reasons and any standards violated.
- (h) Upon EDC's issuance of the Authorization to Operate, an Interconnection Customer may begin interconnected operation of a Small Generator Facility, provided that there is an Interconnection Agreement in effect, the Small Generator Facility has passed any Witness Test required by the EDC, and that the Small Generator Facility has passed any inspection

- required by the EDC. Evidence of approval by an electric code official includes a signed inspection certificate.
- (i) As an alternative to the Supplemental Review procedures prescribed in this section, the EDC may elect to perform a power flow-based study, providing the Interconnection Customer with the results and the required mitigation, if necessary. The EDC shall make available, upon request, a copy of its power flow-based study for each applicant to the Commission within thirty (30) days after analysis completion.
- (j) The EDC may require photographs of the site, Small Generator Facility components, meters or any other aspect of the Interconnection Facilities as part of the Supplemental Review process.

4012 APPLICANT OPTIONS MEETING

If the EDC determines the Interconnection Request cannot be approved without evaluation under Level 4 Interconnection Review, at the time the EDC notifies the Interconnection Customer of either the Level 1, 2 or 3 Interconnection Review, or Supplemental Review, results, it shall provide the Interconnection Customer the option of proceeding to a Level 4 Interconnection Review or of participating in an applicant options meeting with the EDC to review possible Small Generator Facility modifications or the screen analysis and related results, to determine what further steps are needed to permit the Small Generator Facility to be connected safely and reliably. The Interconnection Customer shall notify the EDC that it requests an applicant options meeting or that it would like to proceed to Level 4 Interconnection Review in writing within fifteen (15) business days of the EDC's notification or the Interconnection Request shall be deemed withdrawn. If the Interconnection Customer requests an applicant options meeting, the EDC shall offer to convene a meeting at a mutually agreeable time within the next fifteen (15) business days.

4013-4098 [RESERVED]

4099 **DEFINITIONS**

- When used in this chapter, the following terms and phrases shall have the following meaning:
 - "Adverse System Impact" means a negative effect, due to technical or operational limits on conductors or equipment being exceeded, that compromises the safety and reliability of the Electric Distribution System.
 - "Advanced Inverter" means inverter(s) with a digital architecture, bidirectional communications, and software that enables functionalities providing autonomous grid support and enhance system reliability, along with the capability to adjust their operational set points in response to the changing characteristics of the grid through dedicated communications

- protocols and standards. The advanced inverter must enable, at the minimum, the following functionalities, as defined in IEEE Standard 1547-2018: dynamic and real power support, voltage ride-through, frequency ride-through, voltage support, frequency support, and ramp rates.
- "Affected System" means an electric system not owned or operated by the Electric Distribution Company reviewing the Interconnection Request that may suffer an Adverse System Impact from the proposed interconnection.
- "Area Network" means a type of Electric Distribution System served by multiple transformers interconnected in an electrical network circuit, which is generally used in large metropolitan areas that are densely populated. Area networks are also known as grid networks. Area network has the same meaning as the term distribution secondary grid networks in Section 9.2 of IEEE Standard 1547.
- "Approval to Install" means written notification that the Small Generator Facility is conditionally approved for installation contingent upon the terms and conditions of the Interconnection Request, and the EDC may provide such conditional approval by furnishing to Interconnection Customer an EDC-executed copy of the Interconnection Agreement.
- "Authorization to Operate" means written notification that the Small Generator Facility is approved for operation under the terms and conditions of the District of Columbia Small Generator Interconnection Rules.
- "Certificate of Completion" means a certificate in a completed form approved by the Commission containing information about how the Interconnection Equipment is to be used, its installation, and local inspections.
- "Commission" means the Public Service Commission of the District of Columbia.
- "Commissioning Test" means the tests applied to a Small Generator Facility by the Interconnection Customer after construction is completed to verify that the facility does not create Adverse System Impacts. The scope of the Commissioning Tests performed shall include the Commissioning Test specified IEEE Standard 1547 Section 11.2.5 "Commissioning tests".
- "Community Renewable Energy Facility" or "CREF" means an energy facility with a capacity no greater than five (5) megawatts that: (a) uses renewable resources defined as a Tier One Renewable Source in accordance with Section 3(15) of the Renewable Energy Portfolio Standard Act of 2004, effective April 12, 2005, (D.C. Law 15-340; D.C. Official Code § 34-1431(15) (2019 Repl.), as amended); (b) is located within the District of Columbia; (c) has at least two (2) Subscribers; and

- (d) has executed an Interconnection Agreement and a CREF Rider with the Electric Company.
- "Distribution System Upgrade" means a required addition or modification to the EDC's Electric Distribution System at or beyond the Point of Common Coupling to accommodate the interconnection of a Small Generator Facility. Distribution upgrades do not include interconnection facilities.
- "District of Columbia Small Generator Interconnection Rule (DCSGIR)" means the most current version of the procedures for interconnecting Small Generator Facilities adopted by the Public Service Commission of the District of Columbia.
- "Draw-out Type Circuit Breaker" means a switching device capable of making, carrying, and breaking currents under normal and abnormal circuit conditions such as those of a short circuit. A draw-out circuit breaker can be physically removed from its enclosure, creating a visible break in the circuit. For the purposes of these regulations, the draw-out circuit breaker shall be capable of being locked in the open, draw-out position.
- "Electric Distribution Company" or "EDC" means an electric utility entity that distributes electricity to customers and is subject to the jurisdiction of the Commission.
- "Electric Distribution System" or "EDS" means the facilities and equipment used to transmit electricity to ultimate usage points such as homes and industries from interchanges with higher voltage transmission networks that transport bulk power over longer distances. The voltage levels at which Electric Distribution Systems operate differ among areas but generally carry less than sixty-nine (69) kilovolts of electricity. Electric distribution system has the same meaning as the term Area EPS, as defined in IEEE Standard 1547.
- "Energy Storage" means a resource capable of absorbing electric energy from the grid, from a behind-the-meter generator, or other DER, storing it for a period of time and thereafter dispatching the energy for use on-site or back to the grid, regardless of where the resource is located on the electric distribution system. These resources include all types of energy storage technologies, regardless of their size, storage medium (e.g., batteries, flywheels, electric vehicles, compressed air), or operational purpose.
- "Facilities Study" means an engineering study conducted by the EDC to determine the required modifications to the EDC's Electric Distribution System, including the cost and the time required to build and install such modifications as necessary to accommodate an Interconnection Request.

- "Fault Current" means the electrical current that flows through a circuit during an electrical fault condition. A fault condition occurs when one (1) or more electrical conductors contact ground or each other. Types of faults include phase to ground, double-phase to ground, three-phase to ground, phase-to-phase, and three-phase. Fault current is several times larger in magnitude than the current that normally flows through a circuit.
- "Generation Meter" means the meter used to capture the level of customergenerated electricity at an Interconnection Customer's premise. The Generation Meter shall be owned, operated, and maintained as distribution plant by EDC, unless the Interconnection Customer is a CREF (see Production Meter).
- "Good Utility Practice" means any of the practices, methods and acts engaged in or approved by a significant portion of the electric utility industry during the relevant time period, or any of the practices, methods and acts which, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result of the lowest reasonable cost consistent with good business practices, reliability, safety and expedition. Good Utility Practice is not intended to be limited to the optimum practice, method or act to the exclusion of all others, but rather to be acceptable practices, methods, or acts generally accepted in the region.
- "Governmental Authority" means any federal, State, local or other governmental regulatory or administrative agency, court, commission, department, board, or other governmental subdivision, legislature, rulemaking board, tribunal, or other Governmental Authority having jurisdiction over the Interconnection Customer and EDC, respective facilities, or services provided, and exercising or entitled to exercise any administrative, executive, police, or taxing authority or power; provided, however, that such term does not include the Interconnection Customer, EDC or any affiliate thereof.
- "IEEE Standard 1547" refers to the Institute of Electrical and Electronics Engineers, Inc. (IEEE) Standard 1547 (2018) "Standard for Interconnection and Interoperability of Distributed Energy Resources with Associated Electric Power Systems Interfaces," as amended and supplemented at the time the Interconnection Request is submitted.
- "IEEE Standard 1547.1" refers to the IEEE Standard 1547.1 (2015) "Conformance Test Procedures for Equipment Interconnecting Distributed Energy Resources with Electric Power Systems," as amended and supplemented at the time the Interconnection Request is submitted.
- "Interconnection Customer" means a person or entity that has submitted either an Interconnection Request to interconnect a Small Generator

Facility to the EDC's Electric Distribution System or a pre-application report to get information about EDC's electrical distribution system at a proposed Point of Common Coupling.

- "Interconnection Equipment" means a group of equipment, components, or an integrated system connecting an electric generator with a Local Electric Power System or an Electric Distribution System that includes all interface equipment including switchgear, protective devices, inverters, Production Meter(s), or other interface devices. Interconnection equipment may be installed as part of an integrated equipment package that includes a generator or other electric source.
- "Interconnection Facilities" means facilities and equipment required by the EDC to accommodate the interconnection of a Small Generator Facility. Collectively, Interconnection Facilities include all facilities and equipment between the Small Generator Facility and the Point of Common Coupling, including modification, additions, or upgrades that are necessary to physically and electrically interconnect the Small Generator Facility to the Electric Distribution System. Interconnection Facilities are sole use facilities and do not include Distribution System Upgrades, Generation Meter(s), Production Meter(s), or Usage Meter(s).
- "Interconnection Facilities Cost Matrix" means the matrix maintained on the EDC's website that contains fixed-cost Interconnection Facilities projects associated with specific categories of facilities and lists the installation cost of such Small Generator Interconnection Facilities. Projects included in the matrix are limited in scope, and thus the matrix does not cover all possible types of Interconnection Facilities.
- "Interconnection Request" means an Interconnection Customer's application and interconnection agreement, in a form approved by the Commission, requesting to interconnect a new Small Generator Facility, or to increase the capacity or modify operating characteristics of an existing approved Small Generator Facility that is interconnected with the EDC's Electric Distribution System.
- "Interconnection System Impact Study" means a study performed by the EDC which evaluates the impacts of the proposed interconnection on both the safety and reliability of the EDC's Electric Distribution System. The study seeks to identify and detail the Adverse System Impacts that result when a Small Generator Facility is interconnected without project modifications or Distribution System Upgrades, focusing on EDC-identified or potential Adverse System Impacts.
- "Line Section" means that portion of the EDC's Electric Distribution System connected to an Interconnection Customer, bounded by automatic sectionalizing devices or the end of the distribution line.

- "Local Electric Power System" or "Local EPS" means facilities that deliver electric power to a load that are contained entirely within a single premises or group of premises. Local electric power system has the same meaning as the term Local Electric Power System defined in IEEE Standard 1547.
- "Material Modification" means a modification that has a material impact on the cost or timing of processing an Application with a later queue priority date or a change in the Point of Interconnection. A Material Modification does not include, for example, (a) a change of ownership of a Generating Facility, (b) a change or replacement of generating equipment that is a like-kind substitution in size, ratings, impedances, efficiencies, or capabilities of the equipment specified in the original Application, or (c) a reduction in the output of the Generating Facility of 10% or less.
- "Microgrid" means a collection of interconnected loads, generation assets, and advanced control equipment, installed across a limited geographic area and within a defined electrical boundary that is capable of disconnecting from the larger Electric Distribution System. A Microgrid may serve a single customer with several structures or serve multiple customers. A Microgrid can connect and disconnect from the distribution system to enable it to operate in both interconnected or island mode.
- "Modified Level 1/2 Scoping Meeting" means a meeting between representatives of the Interconnection Customer and EDC conducted for the purpose to review the Interconnection Request, existing studies relevant to the Interconnection Request, the conditions at the proposed location, and the results of the Level 1 or Level 2 Adverse System Impact screening criteria, and a technical explanation in which the EDC describes the need for Interconnection Facilities and/or Distribution System Upgrade to accommodate the Interconnection Request.
- "Nameplate Capacity" means the maximum rated output of a generator, prime mover, or other electric power production equipment under specific conditions designated by the manufacturer and is usually indicated on a nameplate physically attached to the power production equipment.
- "Nationally Recognized Testing Laboratory" or "NRTL" means a qualified private organization that meets the requirements of the Occupational Safety and Health Administration's (OSHA) regulations. NRTLs perform independent safety testing and product certification. Each NRTL shall meet the requirements as set forth by OSHA in the NRTL program.
- "Parallel Operation" or "Parallel" means the sustained state of operation over one hundred (100) milliseconds, which occurs when a Small Generator Facility is connected electrically to the Electric Distribution System and thus has the ability for electricity to flow from the Small Generator Facility to the Electric Distribution System.

- **"PJM Interconnection"** means the regional transmission organization that is regulated by the Federal Energy Regulatory Commission and functionally controls the transmission system for the region that includes the District of Columbia.
- "Point of Common Coupling" means the point where the Small Generator Facility is electrically connected to the Electric Distribution System. Point of common coupling has the same meaning as defined in IEEE Standard 1547
- "Primary Line" means a distribution line rated at greater than six hundred (600) volts.
- "Production Meter" means the Generation Meter used to capture the level of customer-generated electricity at an Interconnection Customer's premise, when the Interconnection Customer is a CREF. The Production Meter shall be owned by the CREF and read by the EDC, D.C. Official Code § 34-1518.²
- "Production Test" is defined in IEEE Standard 1547.
- "Queue Position" means the order of a valid Interconnection Request, relative to all other pending valid Interconnection Requests, that is established based upon the date and time of receipt of the complete Interconnection Request by the EDC.
- "Radial Distribution Circuit" means a circuit configuration where independent feeders branch out radially from a common source of supply. From the standpoint of a utility system, the area described is between the generating source or intervening substations and the customer's entrance equipment. A radial distribution system is the most common type of connection between a utility and load in which power flows in one direction from the utility to the load.
- "Scoping Meeting" means a meeting between representatives of the Interconnection Customer and EDC conducted for the purpose of discussing alternative interconnection options, exchanging information including any Electric Distribution System data and earlier study evaluations that would be reasonably expected to impact interconnection options, analyzing information, and determining the potential feasible points of interconnection.
- "Secondary Line" means a service line subsequent to the Primary Line that is rated for six hundred (600) volts or less, also referred to as the customer's service line.

-

² D.C. Official Code § 34-1518 (2019 Repl.).

- "Shared Transformer" means a transformer that supplies secondary source voltage to more than one customer.
- "Small Generator Facility" means the equipment used by an Interconnection Customer to generate or store electricity that operates in parallel with the Electric Distribution System and, for the purposes of this standard, is rated at twenty (20) MW or less. A Small Generator Facility typically includes an electric generator, Energy Storage, prime mover, and the Interconnection Equipment required to safely interconnect with the Electric Distribution System or Local Electric Power System as mutually agreed between the Interconnection Customer and EDC of the Interconnection Request.
- "Spot Network" means a type of Electric Distribution System that uses two or more inter-tied transformers to supply an electrical network circuit. A Spot Network is generally used to supply power to a single customer or a small group of customers. Spot network has the same meaning as the term distribution secondary Spot Networks defined in Section 9.3 of IEEE Standard 1547.
- "Standard Agreement for Interconnection of Small Generator Facilities, Interconnection Agreement, or Agreement" means a set of standard forms of Interconnection Agreements approved by the Commission which are applicable to Interconnection Requests pertaining to small generating facilities. The agreement between the Interconnection Customer and the EDC, which governs the connection of the Small Generator Facility to the EDC's Electric Distribution System, as well as the ongoing operation of the Small Generator Facility after it is connected to the EDC's Electric Distribution System.
- "UL Standard 1741" means Underwriters Laboratories' standard titled "Inverters Converters, and Controllers for Use in Independent Power Systems," as amended and supplemented at the time the Interconnection Request is submitted.
- "Usage Meter" means the meter furnished by the EDC used to capture the level of electricity consumption at an Interconnection Customer's premise. The Usage Meter shall be owned, operated, and maintained as a distribution plant by the EDC.
- "Witness Test" means verification (either by an on-site observation or review of documents) by the EDC that the installation evaluation required by IEEE Standard 1547 Section 11.2.4 and the Commissioning Test required by IEEE Standard 1547 Section 11.2.5 have been adequately performed. For Interconnection Equipment that has not been certified, the Witness Test shall also include the verification by the EDC of the on-site design tests as required by IEEE Standard 1547 Section 11.2.4 and verification by

the EDC of Production Tests required by IEEE Standard 1547 Section 11.2.3. All tests verified by the EDC are to be performed in accordance with the applicable test procedures specified by IEEE Standard 1547.1.

1. Any person interested may submit written comments on this NOPR not later than thirty (30) days after publication of this Notice in the *D.C. Register* addressed to Brinda Westbrook-Sedgwick, Commission Secretary, Public Service Commission of the District of Columbia, 1325 G Street, N.W., Suite 800, Washington, D.C. 20005 and sent electronically on the Commission's website at https://edocket.dcpsc.org/public/public_comments. Copies of the proposed rules may be obtained by visiting the Commission's website at www.dcpsc.org or at cost, by contacting the Commission Secretary at the address provided above. Persons with questions concerning this NOPR should call (202) 626-5150 or send an email to psc-commissionsecretary@dc.gov.

ATTACHMENT A – Queue Requirements

The EDC shall maintain an interconnection queue, available in a sortable spreadsheet format, which it shall update on at least a monthly basis. Information on Interconnection Requests shall be retained in the queue for three (3) years. The date of the most recent update shall be clearly indicated.

The queue should include, at a minimum, the following information on each Level 2, 3, and 4 Interconnection Request.

- 1. Oueue number
- 2. Facility capacity or capacity range (kW)
- 3. Primary fuel type (e.g., solar, wind, bio-gas, etc.)
- 4. Secondary fuel type (if applicable)
- 5. Exporting or non-exporting
- 6. Zip code
- 7. Substation
- 8. Feeder
- 9. Status (active, withdrawn, interconnected, etc.)
- 10. Date Interconnection Request deemed complete
- 11. Date of notification of Adverse Impact Screen results (Levels 2-3)
- 12. Adverse Impact Screen results for Levels 2-3 (pass or fail, and if fail, identify the screens failed and if Interconnection Facilities and/or Distribution System Upgrades are being required)
- 13. Date of notification of Supplemental Review results (if applicable)
- 14. Supplemental Review results (pass or fail, and if fail, identify the screens failed)
- 15. Date of notification of Interconnection System Impact Study results (if applicable)
- 16. Date of notification of Facilities Study results and/or construction estimates (if applicable)
- 17. Date EDC-executed Interconnection Agreement is provided to Customer
- 18. Date Interconnection Agreement is signed by both parties
- 19. Date of notification of Authorization to Operate
- 20. Final interconnection cost paid to EDC

Level 1 Interconnection Request Application Form and Agreement

Interconnection Customer Contact Information:

Name			
Mailing Address:			
City:	State: Zip Code:	:	
Telephone (Daytime):	(Mobile):		
Facsimile Number:	E-Mail Address:		
Alternative Contact Information (if different from Customer Contact	Information):	
Mailing Address:			
City:	State:	Zip Code: _	
Telephone (Daytime):	(Mobile):		
Facsimile Number:	E-Mail Address:		
Name: Mailing Address: City:		Zip Code:	
Telephone (Daytime):	(Mobile):		
Facsimile Number:	E-Mail Address:		
	from Equipment Contractor):		
	State:	Zip Code:	
	(Mobile):		
	E-Mail Address:		
License number:			
Active License? Yes No			

Facility Information ((building where	the small generator fa	<u>cility is located):</u>	
Electric Distribution C	Company (EDC) S	Serving Facility Site:		
Electric Supplier (if di	fferent from EDC	C):		
Account Number of Fa	acility site (existing	ng EDC customers):		
	_	small generator facilit		
<u>-</u>		~		
City:		State:		Zip Code:
Small Generator Faci		<u>1</u> Model:		
Nameplate Rating:				
System Design Capaci		,		
Prime Mover:		voltaic Reciprocating	Fnoine TFuel Co	ell 🗌
		e Other	_	
Energy Source:		Hydro Diesel		
				_
	Fuel O	il Energy Sto	orage	
	Other_			
Is the inverter lab certi-	fied? Yes 🗌			
•		showing listing and lab acility is not eligible for		m the appropriate listing on).
Intent of Generation/	Storage (choose	one)		
Generator (or PV Pane	el) Manufacturer,	Model #:		
Number of Generators	(or PV Panels): _			
Type of Tracking if PV	V: Fixed ☐ Sin	gle Axis Double A	Axis 🗌	
Array Azimuth if PV:	o	Array Tilt if PV:	0	
Shading Angles if PV	at E, 120°, 150°, S	S, 210°, 240°, W (Separa	ate with comas:	о
Offset Load (Unit v	will operate in par	rallel, but will not expor	rt power to EDC).	
☐ Net Energy Meter Customer Net Energy l	•		t power pursuant t	to District of Columbia
Community Renew	able Energy Faci	ility (interconnection wi	th EDC).	

Export Power (CG SPP Schedule) (Unit will operate in parallel and the criteria established in the District of Columbia Customer Net Emetering).	
Note: if Unit will operate in parallel and participate in the PJM mark interconnection agreement from PJM.	tet(s), unit will need to obtain an
☐ Back-up Generation (Units that temporarily parallel for more than 10	00 milliseconds).
Note: Backup units that do not operate in parallel for more than 1 interconnection agreement.	00 milliseconds do not need an
Energy, Capacity, Load Reduction and/or Synchronized Reserve	e Markets: Yes No
PJM Demand Response Market Participant (System will not export e	energy):
Regulation Market: Yes No (if no, would have to re-app regulation)	ly in future if change to frequency
Estimated Commissioning Date:	
Insurance Disclosure	
The attached terms and conditions contain provisions related to liability be carefully considered by the interconnection customer. The interconnection general liability insurance coverage as a precondition for interconnection customer is advised to consider obtaining appropriate interconnection customer's potential liability under this agreement.	ection customer is not required to onnection approval; however, the
Customer Signature	
I hereby certify that: 1) I have read and understand the terms and conditreference and are a part of this agreement; 2) I hereby agree to conconditions; and 3) to the best of my knowledge, all of the information p form is complete and true.	aply with the attached terms and
Interconnection Customer Signature:	
Title:Date:	
Conditional Agreement to Interconnect Small Generator Facility	
By its signature below, the EDC has determined the interconnection Small Generator Facility has the Approval to Install. This approval is c and conditions of this agreement, the return of the attached Certificate the verification of electrical inspection and successful witness test or ED	ontingent upon the attached terms of Completion duly executed, and
EDC Signature:Date:	
Printed Name: Title:	

Terms and Conditions for Interconnection

- (1) **Construction of the Small Generator Facility**. The interconnection customer may proceed to construct (including operational testing not to exceed two (2) hours) the Small Generator Facility once the conditional agreement to interconnect a Small Generator Facility has been signed by the EDC.
- (2) **Final Interconnection and Operation.** The interconnection customer may operate the Small Generator Facility and interconnect with the EDC's electric distribution system once all of the following have occurred:
 - (a) Electrical Inspection: Upon completing construction, the interconnection customer will cause the Small Generator Facility to be inspected by the local electrical wiring inspector with jurisdiction who shall establish that the Small Generator Facility meets the requirements of the National Electrical Code.
 - (b) Certificate of Completion: The interconnection customer shall provide the EDC with a completed copy of the Certificate of Completion, including evidence of the electrical inspection performed by the local authority having jurisdiction. The evidence of completion of the electrical inspection may be provided on inspection forms used by local inspecting authorities. The interconnection request shall not be finally approved until the EDC's representative signs the Certificate of Completion.
 - (c) The EDC has either waived the right to a Witness Test in the interconnection request, or completed its Witness Test as per the following:
 - (i) Within ten (10) business days of receiving the notice of the anticipated start date, at a time mutually agreeable to the parties, the EDC may conduct a Witness Test of the Small Generator Facility to ensure that all equipment has been appropriately installed and that all electrical connections have been made in accordance with applicable codes.
 - (ii) If the EDC does not perform the Witness Test within the ten (10) day period or other time as is mutually agreed to by the parties, the Witness Test is deemed waived.
- (3) **IEEE 1547.** The small generator facility is installed, operated, and tested in accordance with the requirements of IEEE Standard 1547 (2018), "Standard for Interconnection and Interoperability of Distributed Energy Resources with Associated Electric Power Systems Interfaces," as amended and supplemented, at the time the interconnection request is submitted.
- (4) Access. The EDC shall have direct, unabated access to the metering equipment of the small generator facility at all times. The EDC shall provide reasonable notice to the customer when possible prior to using its right of access.
- (5) **Metering.** Any required metering shall be installed pursuant to appropriate tariffs and tested by the EDC pursuant to the EDCs meter testing requirements.

- (6) **Disconnection.** The EDC may temporarily disconnect the small generator facility upon the following conditions:
 - (a) For scheduled outages upon reasonable notice;
 - (b) For unscheduled outages or emergency conditions;
 - (c) If the small generator facility does not operate in the manner consistent with this agreement;
 - (d) Improper installation or failure to pass the Witness Test;
 - (e) If the small generator facility is creating a safety, reliability or a power quality problem; or
 - (f) The interconnection equipment used by the small generator facility is de-listed by the Nationally Recognized Testing Laboratory that provided the listing at the time the interconnection was approved.
- (7) **Indemnification**. The parties shall at all times indemnify, defend, and save the other 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, demand, suits, recoveries, costs and expenses, court costs, attorney fees, and all other obligations by or to third parties, arising out of or resulting from the other party's action or inactions of its obligations under this agreement on behalf of the indemnifying party, except in cases of gross negligence or intentional wrongdoing by the indemnified party.
- (8) **Limitation of Liability**. 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, incidental, special, consequential, or punitive damages of any kind whatsoever.
- (9) **Termination**. This agreement may be terminated under the following conditions:
 - (a) By interconnection customer The interconnection customer may terminate this application agreement by providing written notice to the EDC.
 - (b) By the EDC The EDC may terminate this agreement if the interconnection customer fails to remedy a violation of terms of this agreement within thirty (30) calendar days after notice, or such other date as may be mutually agreed to prior to the expiration of the thirty (30) calendar day remedy period. The termination date can be no less than thirty (30) calendar days after the interconnection customer receives notice of its violation from the EDC.
- (10) Modification of Small Generator Facility. The interconnection customer shall provide written notification to the EDC before making any modifications to the Small Generator Facility. The EDC will determine if the modifications are minor or non-minor in nature. Written authorization from the EDC is required for non-minor changes if the EDC determines that the interconnection customer's modifications may have a significant impact on the safety or reliability of the Electric Distribution System. If the interconnection customer makes such modifications without the EDC's prior written authorization the EDC shall have the right to temporarily disconnect the Small Generator Facility until such time as the EDC reasonably concludes the modification poses no threat to the safety or reliability of its Electric Distribution System.
- (11) **Permanent Disconnection.** In the event the agreement is terminated, the EDC shall have the right to disconnect its facilities or direct the customer to disconnect its Small Generator Facility.

- (12) **Disputes.** Each party agrees to attempt to resolve all disputes regarding the provisions of these interconnection procedures pursuant to the dispute resolution provisions of the District of Columbia Small Generator Interconnection Rules.
- (13) Governing Law, Regulatory Authority, and Rules. The validity, interpretation and enforcement of this agreement and each of its provisions shall be governed by the laws of the District of Columbia. Nothing in this agreement is intended to affect any other agreement between the EDC and the interconnection customer. However, in the event that the provisions of this agreement are in conflict with the provisions of the EDC's tariff, the EDC tariff shall control.
- (14) **Survival Rights**. This agreement shall continue in effect after termination to the extent necessary to allow or require either party to fulfill rights or obligations that arose under the agreement.
- (15) Assignment/Transfer of Ownership of the Small Generator Facility: This agreement shall terminate upon the transfer of ownership of the Small Generator Facility to a new owner unless the transferring owner assigns the agreement to the new owner and so notifies the EDC in writing prior to the transfer of electric service.
- (16) **Definitions**. Any capitalized term used herein and not defined shall have the same meaning as the defined terms used in the District of Columbia Small Generator Interconnection Rule.
- (17) **Notice**. Unless otherwise provided in this agreement, any written notice, demand, or request required or authorized in connection with this agreement ("Notice") shall be deemed properly given if delivered in person, delivered by recognized national courier service, or sent by first class mail, postage prepaid, to the person specified below:

(If Notice is sent to the Interconnection Customer):

Use the contact information provided in the agreement for the interconnection customer. The interconnection customer is responsible for notifying the EDC of any change in the contact party information, including change of ownership.

(If Notice is sent to the EDC)

Use the contact information provided on the EDC's web page for small generator interconnection.

DISTRICT OF COLUMBIA SMALL GENERATOR INTERCONNECTION RULE LEVEL 2-4

STANDARD AGREEMENT FOR INTERCONNECTION OF SMALL GENERATOR FACILITIES

This	Agreen	nent is made and entered into this day of, by and between organized and existing under the laws of
		, a organized and existing under the laws of, ("Interconnection Customer,") and, a, a
		, existing under the laws of,
		, existing under the laws of, he Interconnection Customer and the EDC each may be referred to as a "Party," or as the "Parties."
Reci	tals:	
	Small Small Interc	reas, Interconnection Customer is proposing to, install or direct the installation of a light Generator Facility, or is proposing a generating capacity addition to an existing light Generator Facility, consistent with the Interconnection Request completed by connection Customer on; and
		reas, the Interconnection Customer will operate and maintain, or cause the operation naintenance of the Small Generator Facility; and
		reas, Interconnection Customer desires to interconnect the Small Generator Facility the EDC's Electric Distribution System.
	and o	therefore , in consideration of the promises and mutual covenants set forth herein, other good and valuable consideration, the receipt, sufficiency and adequacy of are hereby acknowledged, the Parties covenant and agree as follows:
	<u>Artic</u>	le 1. Scope and Limitations of Agreement
	1.1	This Agreement shall be used for all approved Level 2, Level 3 and Level 4 Interconnection Requests according to the procedures set forth in the District of Columbia Small Generator Interconnection Rules.
	1.2	This Agreement governs the terms and conditions under which the Small Generator Facility will interconnect to, and operate in Parallel with, the EDC's Electric Distribution System. This Agreement provides the Interconnection Customer with the Approval to Install contingent upon satisfying all terms and conditions.
	1.3	This Agreement does not constitute an agreement to purchase or deliver the Interconnection Customer's power.

1.4

Nothing in this Agreement is intended to affect any other agreement between the

EDC and the Interconnection Customer. However, in the event that the provisions of this Agreement are in conflict with the provisions of the EDC's tariff, the EDC tariff shall control.

1.5 Responsibilities of the Parties

- 1.5.1 The Parties shall perform all obligations of this Agreement in accordance with all Applicable Laws and Regulations.
- 1.5.2 The EDC shall construct, own, operate, and maintain its Interconnection Facilities in accordance with this Agreement, IEEE Standard 1547, the National Electrical Safety Code and applicable standards promulgated by the District of Columbia Public Service Commission.
- 1.5.3 The Interconnection Customer shall construct, own, operate, and maintain its Interconnection Facilities in accordance with this Agreement, IEEE Standard 1547, the National Electrical Code and applicable standards promulgated by the District of Columbia Public Service Commission.
- 1.5.4 Each Party shall operate, maintain, repair, and inspect, and shall be fully responsible for the facilities that it now or subsequently may own unless otherwise specified in the attachments to this Agreement. Each Party shall be responsible for the safe installation, maintenance, repair and condition of their respective lines and appurtenances on their respective sides of the Point of Common Coupling.
- 1.5.5 The Interconnection Customer agrees to design, install, maintain and operate its Small Generator Facility so as to minimize the likelihood of causing an Adverse System Impact on an electric system that is not owned or operated by the EDC.

1.6 Metering

The Interconnection Customer shall be responsible for the cost of the purchase, installation, operation, maintenance, testing, repair, and replacement of metering and data acquisition equipment specified in Attachments 4 and 5 of this Agreement.

1.7 Reactive Power

The Interconnection Customer shall design its Small Generator Facility to maintain a composite power delivery at continuous rated power output at the Point of Common Coupling at a power factor within the power factor range required by the EDC's applicable tariff for a comparable load customer. The EDC may also require the Interconnection Customer to follow a voltage or VAR schedule if such schedules are applicable to similarly situated generators in the control area on a

comparable basis and have been approved by the Commission. The specific requirements for meeting a voltage or VAR schedule shall be clearly specified in Attachment 3. Under no circumstance shall these additional requirements for reactive power or voltage support exceed the normal operating capabilities of the Small Generator Facility.

1.8 Capitalized Terms

Capitalized terms used herein shall have the meanings specified in the Definitions section of the District of Columbia Small Generator Interconnection Rules or the body of this Agreement.

Article 2. Inspection, Testing, Authorization, and Right of Access

2.1 Equipment Testing and Inspection

The Interconnection Customer shall test and inspect its Small Generator Facility including the Interconnection Equipment prior to interconnection in accordance with IEEE Standard 1547, IEEE Standard 1547.1, and the technical and procedural requirements in the District of Columbia Small Generator Interconnection Rule. The Interconnection Customer shall not operate its Small Generator Facility in Parallel with the EDC's Electric Distribution System without prior written authorization by the EDC as provided for in Articles 2.1.1 – 2.1.3.

2.1.1 The EDC shall have the option of performing a Witness Test after construction of the Small Generator Facility is completed. The Interconnection Customer shall provide the EDC at least twenty (20) days' notice of the planned Commissioning Test for the Small Generator Facility. If the EDC elects to perform a Witness Test, it shall contact the Interconnection Customer to schedule the Witness Test at a mutually agreeable time within ten (10) business days of the scheduled Commissioning Test. If the EDC does not perform the Witness Test within ten (10) business days of the Commissioning Test, the Witness Test is deemed waived unless the parties mutually agree to extend the date for scheduling the Witness Test. If the Witness Test fails to reveal that all equipment has been appropriately installed and that all electrical connections have been made in accordance with applicable codes, the EDC shall offer to redo the Witness Test at the Interconnection Customer's expense at a time mutually agreeable to the parties. If the EDC determines that the Small Generator Facility fails the inspection it must provide a written explanation detailing the reasons and any standards violated. If the EDC does not perform the Witness Test within ten (10) business days or other time as is mutually agreed to by the parties, the Witness Test is deemed waived. After considering the "redo" option, if the Witness Test is still not acceptable to the EDC, the Interconnection

Customer will be granted a period of thirty (30) calendar days to address and resolve any deficiencies. The time period for addressing and resolving any deficiencies may be extended upon the mutual agreement of the EDC and the Interconnection Customer. If the Interconnection Customer fails to address and resolve the deficiencies to the satisfaction of the EDC, the applicable termination provisions of Article 3.3.7 shall apply. If a Witness Test is not performed by the EDC or an entity approved by the EDC, the Interconnection Customer must still satisfy the interconnection test specifications and requirements set forth in IEEE Standard 1547 Section 11.2. The Interconnection Customer shall, if requested by the EDC, provide a copy of all documentation in its possession regarding testing conducted pursuant to IEEE Standard 1547.1.

- 2.1.2 To the extent that the Interconnection Customer decides to conduct interim testing of the Small Generator Facility prior to the Witness Test, it may request that the EDC observe these tests and that these tests be deleted from the final Witness Test. The EDC may, at its own expense, send qualified personnel to the Small Generator Facility to observe such interim testing. Nothing in this Section 2.1.2 shall require the EDC to observe such interim testing or preclude the EDC from performing these tests at the final Witness Test. Regardless of whether the EDC observes the interim testing, the Interconnection Customer shall obtain permission in advance of each occurrence of operating the Small Generator Facility in parallel with the EDC's system.
- 2.1.3 Upon successful completion of the Witness Test, the EDC shall affix an authorized signature to the Certificate of Completion and return it to the Interconnection Customer approving the interconnection and authorizing Parallel Operation. Such authorization shall not be unreasonably withheld, conditioned, or delayed.

2.2 Commercial Operation

The Interconnection Customer shall not operate the Small Generator Facility, except for interim testing as provided in Article 2.1, until such time as the Certificate of Completion is signed by all Parties.

2.3 Right of Access

The EDC shall have access to the disconnect switch and metering equipment of the Small Generator Facility at all times. The EDC shall provide reasonable notice to the customer when possible prior to using its right of access.

Article 3. Effective Date, Term, Termination, and Disconnection

3.1 Effective Date

This Agreement shall become effective upon execution by the Parties.

3.2 Term of Agreement

This Agreement shall become effective on the Effective Date and shall remain in effect in perpetuity unless terminated earlier in accordance with Article 3.3 of this Agreement.

3.3 Termination

No termination shall become effective until the Parties have complied with all Applicable Laws and Regulations applicable to such termination.

- 3.3.1 The Interconnection Customer may terminate this Agreement at any time by giving the EDC thirty (30) calendar days prior written notice.
- 3.3.2 Either Party may terminate this Agreement after default pursuant to Article 6.5.
- 3.3.3 The EDC may terminate upon sixty (60) calendar days' prior written notice for failure of the Interconnection Customer to complete construction of the Small Generator Facility within twelve (12) months of the in-service date as specified by the Parties in Attachment 1, which may be extended by mutual agreement of the Parties which shall not be unreasonably withheld.
- 3.3.4 The EDC may terminate this Agreement upon sixty (60) calendar days' prior written notice if the Interconnection Customer fails to operate the Small Generator Facility in parallel with EDC's electric system for three consecutive years.
- 3.3.5 Upon termination of this Agreement, the Small Generator Facility will be disconnected from the EDC's Electric Distribution 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.
- 3.3.6 The provisions of this Article shall survive termination or expiration of this Agreement.
- 3.3.7 The EDC may terminate this Agreement if the Interconnection Customer fails to comply with the Witness Test requirement in Article 2.2.1.

3.4 Temporary Disconnection

A Party may temporarily disconnect the Small Generator Facility from the Electric Distribution System in the event of an Emergency Condition for as long

as the Party determines it is reasonably necessary in the event one or more of the following conditions or events occurs:

- Emergency Conditions Emergency Conditions shall mean any condition or situation: (1) that in the judgment of the Party making the claim is reasonably likely to endanger life or property; or (2) that, in the case of the EDC, is reasonably likely to cause an Adverse System Impact; or (3) that, in the case of the Interconnection Customer, is reasonably likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security of, or damage to, the Small Generator Facility or the Interconnection Equipment. Under Emergency Conditions, the EDC or the Interconnection Customer may immediately suspend interconnection service and temporarily disconnect the Small Generator Facility. The EDC shall notify the Interconnection Customer promptly when it becomes aware of an Emergency Condition that may reasonably be expected to affect the Interconnection Customer's operation of the Small Generator Facility. The Interconnection Customer shall notify the EDC promptly when it becomes aware of an Emergency Condition that may reasonably be expected to affect the EDC's Electric Distribution System. To the extent information is known, the notification shall describe the Emergency Condition, the extent of the damage or deficiency, the expected effect on the operation of both Parties' facilities and operations, its anticipated duration, and the necessary corrective action.
- 3.4.2 Scheduled Maintenance, Construction, or Repair The EDC may interrupt interconnection service or curtail the output of the Small Generator Facility and temporarily disconnect the Small Generator Facility from the EDC's Electric Distribution System when necessary for scheduled maintenance, construction, or repairs on the EDC's Electric Distribution System. The EDC shall provide the Interconnection Customer with five business days' notice prior to such interruption. The EDC shall use reasonable efforts to coordinate such reduction or temporary disconnection with the Interconnection Customer.
- 3.4.3 Forced Outages With any forced outage, the EDC may suspend interconnection service to effect immediate repairs on the EDC's Electric Distribution System. The EDC shall use reasonable efforts to provide the Interconnection Customer with prior notice. If prior notice is not given, the EDC shall, upon written request, provide the Interconnection Customer written documentation after the fact explaining the circumstances of the disconnection.
- 3.4.4 Adverse Operating Effects The EDC shall provide the Interconnection Customer with a written notice of its intention to disconnect the Small Generator Facility if, based on the operating requirements specified in Attachment 3, the EDC determines that operation of the Small Generator

Facility will likely cause disruption or deterioration of service to other customers served from the same electric system, or if operating the Small Generator Facility could cause damage to the EDC's Electric Distribution System. Supporting documentation used to reach the decision to disconnect shall be provided to the Interconnection Customer upon written request. The EDC may disconnect the Small Generator Facility if, after receipt of the notice, the Interconnection Customer fails to remedy the adverse operating effect within a reasonable time unless Emergency Conditions exist in which case the provisions of Article 3.4.1 apply.

- 3.4.5 Modification of the Small Generator Facility The Interconnection Customer shall provide written notification to the EDC before making any modifications to the Small Generator Facility. The EDC will determine if the modifications are minor or non-minor in nature. Written authorization from the EDC is required for non-minor changes if the EDC determines that the Interconnection Customer's modifications could cause an Adverse System Impact. If the Interconnection Customer makes such modifications without the EDC's prior written authorization the EDC shall have the right to temporarily disconnect the Small Generator Facility until such time as the EDC reasonably concludes the modification poses no threat to the safety or reliability of its Electric Distribution System.
- 3.4.6 Reconnection The Parties shall cooperate with each other to restore the Small Generator Facility, Interconnection Facilities, and EDC's Electric Distribution System to their normal operating state as soon as reasonably practicable following any disconnection pursuant to this section; provided, however, if such disconnection is done pursuant to Article 3.4.5 due to the Interconnection Customer's failure to obtain prior written authorization from the EDC for Non- Minor Equipment Modifications, the EDC shall reconnect the Interconnection Customer only after determining the modifications do not impact the safety or reliability of its Electric Distribution System.

Article 4. Cost Responsibility for Interconnection Facilities and Distribution Upgrades

4.1 Interconnection Facilities

4.1.1 The Interconnection Customer shall pay for the cost of the Interconnection Facilities itemized in Attachment 2 of this Agreement if required under the additional review procedures of a Level 2 review or under a Level 4 review. If a Facilities Study was performed, the EDC shall identify the Interconnection Facilities necessary to safely interconnect the Small Generator Facility with the EDC's Electric Distribution System, the cost of those facilities, and the time required to build and install those facilities.

4.1.2 The Interconnection Customer shall be responsible for its expenses, including overheads, associated with (1) owning, operating, maintaining, repairing, and replacing its Interconnection Equipment, and (2) its reasonable share of operating, maintaining, repairing, and replacing any Interconnection Facilities owned by the EDC as set forth in Attachment 2.

4.2 Distribution Upgrades

The EDC shall design, procure, construct, install, and own any Distribution Upgrades. The actual cost of the Distribution Upgrades, including overheads, shall be directly assigned to the Interconnection Customer. The Interconnection Customer may be entitled to financial contribution from any other EDC customers who may in the future utilize the upgrades paid for by the Interconnection Customer. Such contributions shall be governed by the rules, regulations and decisions of the District of Columbia Public Service Commission.

Article 5. Billing, Payment, Milestones, and Financial Security

5.1 Billing and Payment Procedures and Final Accounting (Applies to additional reviews conducted under Levels 2, 3 or 4)

- 5.1.1 The EDC shall bill the Interconnection Customer for the design, engineering, construction, and procurement costs of the EDC provided Interconnection Facilities and Distribution Upgrades contemplated by this Agreement as set forth in Attachment 2, on a monthly basis, or as otherwise agreed by the Parties. The Interconnection Customer shall pay each bill within thirty (30) calendar days of receipt, or as otherwise agreed to by the Parties.
- Within ninety (90) calendar days of completing the construction and 5.1.2 installation of the EDC's Interconnection Facilities and Distribution Upgrades described in the Attachments 1 and 2 to this Agreement, the EDC shall provide the Interconnection Customer with a final accounting report of any difference between (1) the actual cost incurred to complete the construction and installation and the budget estimate provided to the Interconnection Customer and a written explanation for any significant variation; and (2) the Interconnection Customer's previous deposit and aggregate payments to the EDC for such Interconnection Facilities and Distribution Upgrades. If the Interconnection Customer's cost responsibility exceeds its previous deposit and aggregate payments, the EDC shall invoice the Interconnection Customer for the amount due and the Interconnection Customer shall make payment to the EDC within thirty (30) calendar days. If the Interconnection Customer's previous deposit and aggregate payments exceed its cost responsibility under this Agreement, the EDC shall refund to the Interconnection Customer an

amount equal to the difference within thirty (30) calendar days of the final accounting report.

5.1.3 If a Party in good faith disputes any portion of its payment obligation pursuant to this Article 5, such Party shall pay in a timely manner all non-disputed portions of its invoice, and such disputed amount shall be resolved pursuant to the dispute resolution provisions contained in Article 8. Provided such Party's dispute is in good faith, the disputing Party shall not be considered to be in default of its obligations pursuant to this Article.

5.2 Interconnection Customer Deposit

When a Level 4 Interconnection Feasibility Study, Interconnection System Impact Study, or Interconnection Facility Study or a Level 2 Review of Minor Modifications is required under the District of Columbia Small Generator Interconnection Rules, the EDC may require the Interconnection Customer to pay a deposit equal to fifty percent (50%) of the estimated cost to perform the study or review. At least twenty (20) business days prior to the commencement of the design, procurement, installation, or construction of a discrete portion of the EDC's Interconnection Facilities and Distribution Upgrades, the Interconnection Customer shall provide the EDC with a deposit equal to fifty percent (50%) of the estimated costs prior to its beginning design of such facilities, provided the total cost is in excess of one thousand dollars (\$1,000).

Article 6. Assignment, Limitation on Damages, Indemnity, Force Majeure, and Default

6.1 Assignment

This Agreement may be assigned by either Party upon fifteen (15) business days' prior written notice, and with the opportunity to object by the other Party. Should the Interconnection Customer assign this agreement, the EDC has the right to request that the assignee agree to the assignment and the terms of this Agreement in writing. When required, consent to assignment shall not be unreasonably withheld; provided that:

- 6.1.1 Either Party may assign this Agreement without the consent of the other Party to any affiliate (which shall include a merger of the Party with another entity), of the assigning Party with an equal or greater credit rating and with the legal authority and operational ability to satisfy the obligations of the assigning Party under this Agreement;
- 6.1.2 The Interconnection Customer shall have the right to assign this Agreement, without the consent of the EDC, for collateral security purposes to aid in providing financing for the Small Generator Facility. For Small Generator systems that are integrated into a building facility, the sale of the building or property will result in an automatic transfer of this

- agreement to the new owner who shall be responsible for complying with the terms and conditions of this Agreement.
- 6.1.3 Any attempted assignment that violates this Article is void and ineffective. Assignment shall not relieve a Party of its obligations, nor shall a Party's obligations be enlarged, in whole or in part, by reason thereof. An assignee is responsible for meeting the same obligations as the Interconnection Customer.

6.2 Limitation on Damages

Except for cases of gross negligence or willful misconduct, the liability of any Party to this Agreement shall be limited to direct actual damages, and all other damages at law are waived. Under no circumstances, except for cases of gross negligence or willful misconduct, shall any Party or its directors, officers, employees and agents, or any of them, be liable to another Party, whether in tort, contract or other basis in law or equity for any special, indirect, punitive, exemplary or consequential damages, including lost profits, lost revenues, replacement power, cost of capital or replacement equipment. This limitation on damages shall not affect any Party's rights to obtain equitable relief, including specific performance, as otherwise provided in this Agreement. The provisions of this Article 6.2 shall survive the termination or expiration of the Agreement.

6.3 Indemnity

- 6.3.1 This provision protects each Party from liability incurred to third parties as a result of carrying out the provisions of this Agreement. Liability under this provision is exempt from the general limitations on liability found in Article 6.2.
- 6.3.2 The Parties shall at all times indemnify, defend, and hold the other 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, demand, suits, recoveries, costs and expenses, court costs, attorney fees, and all other obligations by or to third parties, arising out of or resulting from the other Party's action or failure to meet its obligations under this Agreement on behalf of the indemnifying Party, except in cases of gross negligence or intentional wrongdoing by the indemnified Party.
- 6.3.3 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 Article may apply, the indemnified Party shall notify the indemnifying Party of such fact. Any 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.

- 6.3.4 If an indemnified Party is entitled to indemnification under this Article as a result of a claim by a third party, and the indemnifying Party fails, after notice and reasonable opportunity to proceed under this Article, to assume the defense of such claim, such indemnified Party may at the expense of the indemnifying Party contest, settle or consent to the entry of any judgment with respect to, or pay in full, such claim.
- 6.3.5 If an indemnifying Party is obligated to indemnify and hold any indemnified Party harmless under this Article, the amount owing to the indemnified person shall be the amount of such indemnified Party's actual loss, net of any insurance or other recovery.

6.4 Force Majeure

- 6.4.1 As used in this Article, a Force Majeure Event shall mean any act of God, labor disturbance, act of the public enemy, war, acts of terrorism, insurrection, riot, fire, storm or flood, explosion, breakage or accident to machinery or equipment through no direct, indirect, or contributory act of a Party, any order, regulation or restriction imposed by governmental, military or lawfully established civilian authorities, or any other cause beyond a Party's control. A Force Majeure Event does not include an act of gross negligence or intentional wrongdoing.
- 6.4.2 If a Force Majeure Event prevents a Party from fulfilling any obligations under this Agreement, the Party affected by the Force Majeure Event (Affected Party) shall promptly notify the other Party of the existence of the Force Majeure Event. The notification must specify in reasonable detail the circumstances of the Force Majeure Event, its expected duration, and the steps that the Affected Party is taking and will take to mitigate the effects of the event on its performance, and if the initial notification was verbal, it should be promptly followed up with a written notification. The Affected Party shall keep the other Party informed on a continuing basis of developments relating to the Force Majeure Event until the event ends. The Affected Party shall be entitled to suspend or modify its performance of obligations under this Agreement (other than the obligation to make payments) only to the extent that the effect of the Force Majeure Event cannot be reasonably mitigated. The Affected Party shall use reasonable efforts to resume its performance as soon as possible.

6.5 Default

6.5.1 No default shall exist where such failure to discharge an obligation (other than the payment of money) is the result of a Force Majeure Event as defined in this Agreement, or the result of an act or omission of the other Party.

- 6.5.2 Upon a default of this Agreement, the non-defaulting Party shall give written notice of such default to the defaulting Party. Except as provided in Article 6.5.3 the defaulting Party shall have sixty (60) calendar days from receipt of the default notice within which to cure such default; provided however, if such default is not capable of cure within 60 calendar days, the defaulting Party shall commence such cure within twenty (20) calendar days after notice and continuously and diligently complete such cure within six months from receipt of the default notice; and, if cured within such time, the default specified in such notice shall cease to exist.
- 6.5.3 If a Party has made an assignment of this Agreement not specifically authorized by Article 6.1, fails to provide reasonable access pursuant to Article 2.3, is in default of its obligations pursuant to Article 7, or if a Party is in default of its payment obligations pursuant to Article 5 of this Agreement, the defaulting Party shall have thirty (30) days from receipt of the default notice within which to cure such default.
- 6.5.4 If a default is not cured as provided for in this Article, or if a default is not capable of being cured within the period provided for herein, the non-defaulting Party shall have the right to terminate this Agreement by written notice at any time until cure occurs, and be relieved of any further obligation hereunder and, whether or not that Party terminates this Agreement, to recover from the defaulting Party all amounts due hereunder, plus all other damages and remedies to which it is entitled at law or in equity. The provisions of this Article will survive termination of this Agreement.

Article 7. Insurance

For Small Generator Facilities, the Interconnection Customer shall carry adequate insurance coverage that shall be acceptable to the EDC; provided, that the maximum comprehensive/general liability coverage that shall be continuously maintained by the Interconnection Customer during the term for non-inverter based systems 500 kW up to 2 MW shall have one million dollars (\$1 million) of insurance, two million dollars (\$2 million) for non-inverter based systems larger than 2 MW up to 5 MW, and three million dollars (\$3 million) for non-inverter systems larger than 5 MW. For inverter-based generating facilities, systems between 1 MW and 5 MW have \$1 million of insurance and systems larger than 5 MW have \$2 million of insurance. The EDC, its officers, employees and agents will be added as an additional insured on this policy.

Article 8. Dispute Resolution

8.1 A party shall attempt to resolve all disputes regarding interconnection as provided in this Agreement and the District of Columbia Small Generator Interconnection Rule promptly, equitably, and in a good faith manner.

- 8.2 When a dispute arises, a party may seek immediate resolution through complaint procedures available through the Commission, or an alternative dispute resolution process approved by the Commission, by providing written notice to the Commission and the other party stating the issues in dispute. Dispute resolution will be conducted in an informal, expeditious manner to reach resolution with minimal costs and delay. When available, dispute resolution may be conducted by phone.
- 8.3 When disputes relate to the technical application of this Agreement and the District of Columbia Small Generator Interconnection Rule, the Commission may designate a technical consultant to resolve the dispute. Upon Commission designation, the parties shall use the technical consultant to resolve disputes related to interconnection. Costs for a dispute resolution conducted by the technical consultant shall be established by the technical consultant, subject to review by the Commission.
- **8.4** Pursuit of dispute resolution may not affect an Interconnection Customer with regard to consideration of an Interconnection Request or an Interconnection Customer's Queue Position.
- 8.5 If the Parties fail to resolve their dispute under the dispute resolution provisions of this Article, nothing in this Article shall affect any Party's rights to obtain equitable relief, including specific performance, as otherwise provided in this Agreement.

Article 9. Miscellaneous

9.1 Governing Law, Regulatory Authority, and Rules

The validity, interpretation and enforcement of this Agreement and each of its provisions shall be governed by the laws of the District of Columbia, without regard to its conflicts of law principles. This Agreement is subject to all Applicable Laws and Regulations.

9.2 Amendment

Modification of this Agreement shall be only by a written instrument duly executed by both Parties.

9.3 No Third-Party Beneficiaries

This Agreement is not intended to and does not create rights, remedies, or benefits of any character whatsoever in favor of any persons, corporations, associations, or entities other than the Parties, and the obligations herein assumed are solely for the use and benefit of the Parties, their successors in interest and where permitted, their assigns.

9.4 Waiver

- 9.4.1 The failure of a Party to this Agreement to insist, on any occasion, upon strict performance of any provision of this Agreement shall not be considered a waiver of any obligation, right, or duty of, or imposed upon, such Party.
- 9.4.2 Any waiver at any time by either Party of its rights with respect to this Agreement shall not be deemed a continuing waiver or a waiver with respect to any other failure to comply with any other obligation, right, duty of this Agreement. Termination or default of this Agreement for any reason by Interconnection Customer shall not constitute a waiver of the Interconnection Customer's legal rights to obtain an interconnection from EDC. Any waiver of this Agreement shall, if requested, be provided in writing.

9.5 Entire Agreement

This Agreement, including all attachments, constitutes the entire Agreement between the Parties with reference to the subject matter hereof, and supersedes all prior and contemporaneous understandings or agreements, oral or written, between the Parties with respect to the subject matter of this Agreement. There are no other agreements, representations, warranties, or covenants that constitute any part of the consideration for, or any condition to, either Party's compliance with its obligations under this Agreement.

9.6 Multiple Counterparts

This Agreement may be executed in two or more counterparts, each of which is deemed an original but all constitute one and the same instrument.

9.7 No Partnership

This Agreement shall not be interpreted or construed to create an association, joint venture, agency relationship, or partnership between the Parties or to impose any partnership obligation or partnership liability upon either Party. Neither Party shall have any right, power or authority to enter into any agreement or undertaking for, or act on behalf of, or to act as or be an agent or representative of, or to otherwise bind, the other Party.

9.8 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 or other Governmental Authority, (1) such portion or provision shall be deemed separate and independent, (2) the Parties shall negotiate in good faith to restore insofar as practicable the benefits to each Party that were affected by such ruling, and (3) the remainder of this Agreement shall remain in full force and effect.

9.9 Environmental Releases

Each Party shall notify the other Party, first orally and then in writing, of the release any hazardous substances, any asbestos or lead abatement activities, or any type of remediation activities related to the Small Generator Facility or the Interconnection Facilities, each of which may reasonably be expected to affect the other Party. The notifying Party shall (1) provide the notice as soon as practicable, provided such Party makes a good faith effort to provide the notice no later than twenty-four (24) hours after such Party becomes aware of the occurrence, and (2) promptly furnish to the other Party copies of any publicly available reports filed with any governmental authorities addressing such events.

9.10 Subcontractors

Nothing in this Agreement shall prevent a Party from utilizing the services of any subcontractor as it deems appropriate to perform its obligations under this Agreement; provided, however, that each Party shall require its subcontractors to comply with all applicable terms and conditions of this Agreement in providing such services and each Party shall remain primarily liable to the other Party for the performance of such subcontractor.

- 9.10.1 The creation of any subcontract relationship shall not relieve the hiring Party of any of its obligations under this Agreement. The hiring Party shall be fully responsible to the other Party for the acts or omissions of any subcontractor the hiring Party hires as if no subcontract had been made. Any applicable obligation imposed by this Agreement upon the hiring Party shall be equally binding upon, and shall be construed as having application to, any subcontractor of such Party.
- 9.10.2 The obligations under this Article will not be limited in any way by any limitation of subcontractor's insurance.

Article 10. Notices

10.1 General

Unless otherwise provided in this Agreement, any written notice, demand, or request required or authorized in connection with this Agreement ("Notice") shall be deemed properly given if delivered in person, delivered by recognized national courier service, or sent by first class mail, postage prepaid, to the person specified below:

If to Interconnection Customer: Interconnection Customer: Attention: Address: City: State: Zip: Phone: Fax: E-mail: If to EDC: EDC: Attention: Address: ____ City: _______ State: _______ Zip: Phone: _______ Fax: _______ E-mail: 10.2 Billing and Payment Billings and payments shall be sent to the addresses set forth below: **If to Interconnection Customer:** Interconnection Customer: Attention: If to EDC: EDC: Attention: Address: City: State: Zip: **10.3** Designated Operating Representative The Parties may also designate operating representatives to conduct the communications which may be necessary or convenient for the administration of this Agreement. This person will also serve as the point of contact with respect to operations and maintenance of the Party's facilities. **Interconnection Customer's Operating Representative:**

Attention:

Address:						
City:	Fax:	State:	Zip:			
Phone:	<u> </u>					
EDC's Ope	rating Representative:					
Attention: _						
Address:						
City:		State:	Zip:			
Phone:	Fax:	E-N	Mail:			
10.4	Changes to the Notice	Information				
	Either Party may chang written notice prior to t			ve (5) business day		
IN WITNE	cle 11. Signatures SS WHEREOF, the Paruly authorized representation		is Agreement to b	be executed by thei		
	the Interconnection Cust					
Nam	ne:					
	:					
	:					
<u>For</u>	EDC:					
Nam	Name:					
	Title:					
	:					

CONSTRUCTION SCHEDULE, PROPOSED EQUIPMENT & SETTINGS

This attachment shall include the following:

- 1. The construction schedule for the Small Generator Facility
- 2. A one-line diagram indicating the Small Generator Facility, Interconnection Equipment, Interconnection Facilities, Metering Equipment, and Distribution Upgrades
- 3. Component specifications for equipment identified in the one-line diagram
- 4. Component settings
- 5. Proposed sequence of operations

DESCRIPTION, COSTS AND TIME REQUIRED TO BUILD AND INSTALL THE EDC'S INTERCONNECTION FACILITIES

The EDC's Interconnection Facilities including any required metering shall be itemized and a best estimate of itemized costs, including overheads, shall be provided based on the Facilities Study.

Also, a best estimate for the time required to build and install the EDC's Interconnection Facilities will be provided based on the Facilities Study.

OPERATING REQUIREMENTS FOR SMALL GENERATOR FACILITIES OPERATING IN PARALLEL

Applicable sections of the EDC's operating manuals applying to the small generator interconnection shall be listed and Internet links shall be provided. Any special operating requirements not contained in the EDC's existing operating manuals shall be clearly identified. The EDC's operating requirements shall not impose additional technical or procedural requirements on the Small Generator Facility beyond those found in the District of Columbia Small Generator Interconnection Rules, except those required for safety.

METERING REQUIREMENTS

Metering requirements for the Small Generator Facility shall be clearly indicated along with an identification of the appropriate tariffs that establish these requirements and an internet link to these tariffs.

AS BUILT DOCUMENTS

After completion of the Small Generator Facility, the Interconnection Customer shall provide the EDC with documentation indicating the as built status of the following when it returns the Certificate of Completion to the EDC:

- 1. A one-line diagram indicating the Small Generator Facility, Interconnection Equipment, Interconnection Facilities, Metering Equipment, and Distribution Upgrades
- 2. Component specifications for equipment identified in the one-line diagram
- 3. Component settings
- 4. Proposed sequence of operations

LEVEL 2, LEVEL 3 AND LEVEL 4

INTERCONNECTION REQUEST APPLICATION FORM

Interconnection Customer Contact Information: Name Mailing Address: _____ State: _____ Zip Code: _____ Telephone (Daytime): _____ (Mobile): _____ Facsimile Number: _____ E-Mail Address: _____ Alternative Contact Information (if different from Customer Contact Information): Name: Mailing Address: City: _____ State: _____ Zip Code: _____ Telephone (Daytime): _____ (Mobile): _____ Facsimile Number: _____ E-Mail Address: _____ Facility Address (Building where the Small Generator Facility is located): Address: _____ City: _____ State: ____ Zip Code: ____ **Equipment Contractor:** Name: Mailing Address: City: _____ State: ____ Zip Code: Telephone (Daytime): _____ (Mobile): _____ Facsimile Number: _____ E-Mail Address: _____ **Electrical Contractor** (if Different from Equipment Contractor): Name: Mailing Address: City: _____ State: ____ Zip Code: _____ Telephone (Daytime): _____ (Mobile): _____ Facsimile Number: _____ E-Mail Address: _____

License number:		
Active License? Yes No		
Electric Service Information for Customer Facility Where Generator Will Be Interconnected:		
Electric Distribution Company (EDC) serving Facility site:		
Electric Supplier (if different from EDC):		
Account Number of Facility site (existing EDC customers):		
Capacity:(Amps) Voltage:(Volts)		
Type of Service: Single Phase Three Phase		
If 3 Phase Transformer, Indicate Type		
Primary Winding Wye Delta		
Secondary Winding Wye Delta		
Transformer Size: Impedance:		
Intent of Generation (choose one):		
Offset Load (Unit will operate in parallel, but will not export power to EDC).		
Net Energy Metering (Small Generator Facility will export power pursuant to District of Columbia Customer Net Energy Metering Contract).		
Community Renewable Energy Facility (interconnection with EDC).		
Export Power (CG SPP Schedule) (Unit will operate in parallel and will export power but does not fit the criteria established in the District of Columbia Customer Net Energy Metering Contract for net energy metering).		
Note: If Unit will operate in parallel and participate in the PJM market(s), Unit will need to obtain an Interconnection Agreement from PJM.		
Back-up Generation (Units that temporarily parallel for more than 100 milliseconds).		
Note: Backup units that do not operate in parallel for more than 100 milliseconds do not need an Interconnection Agreement.		
☐ PJM Demand Response Market Participant (System will not export energy) Energy, Capacity, Load Reduction and/or Synchronized Reserve Markets: ☐ Yes ☐ No Regulation Market: ☐ Yes ☐ No (if no, would have to re-apply in future if change to		

freque	ncy regulation)				
 Equipr	Microgrid: NoYes; If Yes indicate below any/all Energy Production Equipment/Inverter Information that is to be used.				
	Requested Procedure Under Which to Evaluate Interconnection Request: Please indicate below which review procedure applies to the Interconnection Request.				
	Level 2 - Certified Interconnection Equipment with an aggregate electric Nameplate Capacity less than or equal to 5 MW. Indicate type of certification below. (Application fee amount is \$500.)				
	Level 3 – Small generator facility does not export power. Nameplate capacity rating is equal to or less than 20 MW if connecting to a radial distribution feeder. An Interconnection Customer proposing to interconnect a small generator to a spot or Area Network is not permitted under the Level 3 review process. (Application fee amount is \$500.)				
	Level 4 – Nameplate capacity rating is less than 20 MW and the Small Generator Facility does not qualify for a Level 1, Level 2 or Level 3 review or, the Small Generator Facility has been reviewed but not approved under a Level 1, Level 2 or Level 3 review. (Application fee amount is \$1,000, to be applied toward any subsequent studies related to this application.)				
	evel 1, 2, 3 applications before EDC's considering a Level 4 review, the applicant can t a meeting based on "Applicant Options Meeting" section of Chapter 40.				
satisfic	ptions for interconnection review categories do not list all criteria that must be ed. For a complete list of criteria, please refer to the District of Columbia Small ator Interconnection Rules.				
Small Generator Facility Information:					
Energ	y Production Equipment/Inverter Information				
Energy Gas	Source: Hydro Wind Solar Diesel Biomass Natural				
Storage	Coal Oil Other Solar + Energy Storage Energy				
Energy	Converter Type: Water Turbine Wind Turbine Photovoltaic Cell Steam Turbine Combustion Turbine Reciprocating				
Engine					

Generator Type:	Synchronous	Induction	☐ Inverter	Other
Rating:	kW Rating: _	kVA	Number of U	nits:
Rated Voltage:	Volts			
System Type Tested (Total System): Yes No; attach product literature				
	mponents/system(s) red for Level 2 and 1			ation Facility that are sts only).
1	NRTL Providing Lab			
3				
	es of manufacturer br			
For Synchronous Note: Contact EDC		e information requ	ested in this se	ection is required for the
proposed Small Gen	erator Facility.			
Manufacturer				
Model No	Version N	No		
Submit copies of the	Version Ne Saturation Curve and	d the Vee Curve		
Salient Non-	-Salient			
Torque: lb-ft	Rated RPM:	Field Amper	es:	at rated generator
voltage and current	and% PF o	ver-excited		
Type of Exciter:				
Output Power of Ex-	cıter:			
Type of Voltage Reg		C 1 D	D) (Locked Rotor
Current: A	Amps Synchronous	S Speed: K	PM T:	
Ganaratar Cannactic	n: Min. on: Delta Wy	Operating Freq./	1 ime:	
			naea	
Direct-axis Synchronous Reactance (Xd)ohms Direct-axis Transient Reactance (X'd) ohms				
Direct-axis Sub-transient Reactance (X"d)ohms Negative Sequence Reactance:ohms				
Zero Sequence Reac		1		
	or Grounding Resister		ohms	

For Induction Machines:

Note: Contact EDC to determine if all the information requested in this section is required for the proposed Small Generator Facility.

Manufacturer:				
Manufacturer: Model No Version No Locked Rotor Current: Amps Rotor Resistance (Rr) ohms Exciting Current Amps				
Locked Rotor Current: Amps				
Rotor Resistance (Rr) ohms Exciting Current Amps				
Rotor Resistance (Rr)ohms Exciting CurrentAmps Rotor Reactance (Xr)ohms Reactive Power Required:				
Magnetizing Reactance (Xm)ohmsVARs (No Load)				
Stator Resistance (Rs)ohmsVARs (Full Load)				
Stator Reactance (Xs)ohms				
Short Circuit Reactance (X"d)ohms				
Phases: Single Three-Phase				
Frame Size: Design Letter: Temp. Rise:°C.				
Reverse Power Relay Information (Level 3 Review Only)				
Manufacturer: Relay Type: Model Number:				
Relay Type: Model Number:				
Reverse Power Setting:				
Reverse Power Time Delay (if any):				
Add: 4: 1 I. f 4: F I 4: D d. F: 114:				
Additional Information For Inverter Based Facilities Inverter Information:				
Manufacturer: Model: Model: Type: ☐ Forced Commutated ☐ Line Commutated				
Number of Invertors:				
Number of Inverters: Volts Efficiency % Power Factor %				
Efficiency 9/ Dower Factor 9/				
Inverter UL1547 Listed: Yes No				
Inverter OL1347 Listed.				
D.C. Source / Prime Mover:				
Rating: kW Rating: kVA Rated Voltage: Volts				
Open Circuit Voltage (If applicable):Volts				
Rated Current:Amps				
Short Circuit Current (If applicable): Amps				
Generator (or PV Panel) Manufacturer, Model #:				
Number of Generators (or PV Panels):				
Type of Tracking if PV: Fixed Single Axis Double Axis				
Array Azimuth if PV:o Array Tilt if PV:o				
Shading Angles if PV at E, 120°, 150°, S, 210°, 240°, W (Separate with comas:				
Other Facility Information:				
One Line Diagram attached: Yes				

Plot Plan attached: Yes							
Estimated Commissioning Date:							
Customer Signature							
I hereby certify that all of the information	on provided in this application request form is true.						
Interconnection Customer Signature:							
Title:	Date:						
	plication fee. An application fee is required before the verify that the appropriate fee is included with the						
Application fee included							
Amount							



Sign In Sign Up

- - Title 20. Public Service Commission
 - Subtitle 50. SERVICE SUPPLIED BY ELECTRIC COMPANIES
 - Chapter 20.50.09. Small Generator Interconnection Standards

Sec. 20.50.09.10. Level 2 Review

Latest version.

- A. The utility shall evaluate a Level 2 small generator facility for the potential for adverse system impacts using the following:
- (1) For interconnection of a proposed small generator facility:
- (a) To a radial distribution circuit, the aggregate generation on the circuit, including the proposed small generator facility, may not exceed 15 percent of the line section annual peak load most recently measured at the substation or calculated for the line section; or
- (b) To a spot network:
- (i) When the interconnection of a proposed small generator facility is to the load side of spot network protectors, the proposed small generator facility shall utilize an inverter-based equipment package;
- (ii) The applicant's interconnection equipment proposed for the small generator facility shall be lab-certified or field-approved; and
- (iii) A small generator facility, when aggregated with other generation, the aggregate generation on the spot network, may not exceed 5 percent of a spot network's maximum load if the spot network serves more than one customer;
- (2) For fault current limitations:
- (a) The nameplate capacity of the proposed small generator facility, in aggregation with other generation and energy storage devices on the distribution circuit, may not contribute more than 10 percent to the electric distribution circuit's maximum fault current at the point on the primary line nearest the point of interconnection;
- (b) The nameplate capacity of the proposed small generator facility, in aggregation with other generation and energy storage devices on the distribution circuit, may not cause any distribution protective devices and equipment including substation breakers, fuse cutouts, and

line reclosers, or other customer equipment on the electric distribution system to be exposed to fault currents exceeding 90 percent of the short circuit interrupting capability; and

- (c) The interconnection request may not request interconnection on a circuit that already exceeds 90 percent of the short circuit interrupting capability;
- (3) The proposed small generator facility's point of interconnection may not be on a transmission line;
- (4) When a small generator facility is to be connected to 3-phase, 3-wire primary utility distribution lines, a 3-phase or single-phase generator shall be connected phase-to-phase;
- (5) When a small generator facility is to be connected to 3-phase, 4-wire primary utility distribution lines, a 3-phase or single-phase generator will be connected line-to-neutral and will be effectively grounded;
- (6) When the proposed small generator facility is to be interconnected on single-phase shared secondary line, the aggregate generation on the shared secondary line, including the proposed small generator facility, may not exceed 20 kW;
- (7) When a proposed small generator facility is single-phase and is to be interconnected on a center tap neutral of a 240 volt service, its addition may not create an imbalance between the two sides of the 240 volt service of more than 20 percent of the nameplate rating of the service transformer;
- (8) A small generator facility, in aggregate with other generation and energy storage devices interconnected to the distribution side of a substation transformer feeding the circuit where the small generator facility proposes to interconnect, the aggregate generation may not exceed 10 MW in an area where there are known or posted transient stability limitations to generating units located in the general electrical vicinity;
- (9) As an alternative method to evaluate the adverse system impacts of a proposed Level 2 small generator facility on the distribution system, as described in §A(1)-(8) of this regulation, a utility may use a power-flow based analysis system if the utility has submitted:
- (a) A plan, subject to Commission approval, that describes its methodology for its power-flow based modeling system and includes reasoning for each screen used to evaluate an application; and
- (b) Information about the system s results, as required in Regulation .14 of this chapter;
- (10) Except as permitted by an additional review in §G of this regulation, no modification or construction of additional facilities by a utility of its distribution system, with the exception of metering or a minor system modification, shall be required to accommodate the small generator facility; and

- (11) If the proposed interconnection facility requires a minor system modification, the utility shall notify the applicant of that requirement when it provides the Level 2 evaluation result, as follows:
- (a) The applicant must inform the utility within 10 business days if the applicant elects to continue the application;
- (b) If the applicant makes such an election, the utility shall provide an interconnection agreement, along with a non-binding good faith cost estimate and construction schedule for those upgrades, to the applicant within 30 calendar days after the utility receives such an election; and
- (c) The applicant shall have 30 calendar days, or other mutually agreeable time frame after receipt of the interconnection agreement, to sign and return such agreement.
- B. A utility shall, within 5 business days after receipt of the interconnection request, inform the applicant that the interconnection request is:
- (1) Complete; or
- (2) Incomplete and what materials are missing;
- C. Queue Position.
- (1) When an interconnection request is complete, the utility shall assign a queue position.
- (2) The queue position of the interconnection request shall be used to determine the potential adverse system impact of the small generator facility based on the relevant screening criteria.
- (3) The utility shall notify the applicant of any other higher queue position applicants on the same line section or spot network for which interconnection is sought.
- (4) Queue position may not be forfeited or otherwise impacted by the submission of a dispute under the provisions of Regulation .13 of this chapter.
- D. When a utility determines additional information is required to complete an evaluation:
- (1) The utility shall request the information;
- (2) The time necessary to complete the evaluation may be extended, but only to the extent of the delay required for receipt of the additional information; and
- (3) When additional information is required, the utility may not revert to the start of the review process or alter the applicant's queue position.
- E. Within 20 business days after the utility notifies the applicant it has received a completed interconnection request, the utility shall:
- (1) Evaluate the interconnection request using the Level 2 screening criteria; ATTACHMENT B

- (2) Review the applicant's analysis, if provided by applicant, using the same criteria;
- (3) Provide the applicant with the utility's evaluation, including a comparison of the results of its own analyses with those of applicant, if applicable; and
- (4) When a utility does not have a record of receipt of the interconnection request and the applicant can demonstrate that the original interconnection request was delivered, expedite its review to complete the evaluation of the interconnection request within 20 business days.
- F. Failure to Meet Level 2 Criteria.
- (1) Additional review may be appropriate when a small generator facility has failed to meet one or more of the Level 2 criteria of §A of this regulation.
- (2) A utility shall:
- (a) Within 30 calendar days, offer to perform additional review to determine whether minor modifications to the electric distribution system would enable the interconnection to be made consistent with safety, reliability, and power quality criteria; and
- (b) Provide the applicant with a nonbinding, good faith estimate of the costs of additional review and minor modifications.
- (3) The utility shall undertake the additional review only if the applicant agrees within 10 business days to pay for the cost of the review, which may be extended at the request of the applicant. A request for extension may not be unreasonably denied by the utility.
- (4) If the review identifies the need for modifications to the distribution system, the utility shall make the necessary modifications only if the interconnection customer agrees to pay for the cost of the modifications.
- G. Interconnection Agreement.
- (1) When a utility determines that the interconnection request passes the Level 2 screening criteria, or fails one or more of the Level 2 screening criteria but determines that the small generator facility can be interconnected safely and reliably, the utility shall provide the applicant an interconnection agreement within 5 business days after the determination.
- (2) The applicant shall have either 30 calendar days, or another mutually agreeable time frame after receipt of the interconnection agreement, to sign and return the interconnection agreement.
- (3) If the applicant does not sign the interconnection agreement within 30 calendar days, the request shall be considered withdrawn unless the applicant and utility mutually agree to extend the time period for executing the interconnection agreement prior to the expiration of the 30-calendar-day calendar period. A request for extension may not be unreasonably denied by the utility.

- (4) After the interconnection agreement is signed by the applicant and utility, interconnection of the small generator facility shall proceed according to any milestones agreed to by the applicant and utility in the interconnection agreement.
- (5) The utility shall approve the interconnection request and provide a permission to operate notice within 20 business days of receipt of acceptable documents, subject to the following conditions:
- (a) All milestones agreed to in the interconnection agreement are satisfied;
- (b) The small generator facility is approved by electric code officials with jurisdiction over the interconnection;
- (c) The applicant provides a certificate of completion to the utility;
- (d) Upon request of the utility, the applicant provides one or more photographs of the small generator facility site location, components, metering equipment, and other related facilities and equipment; and
- (e) There is a successful completion of the witness test, if conducted by the utility.
- H. Level 2 Review Failure.
- (1) If the small generator facility is not approved under a Level 2 review, the utility shall provide the applicant written notification explaining its reasons for denying the interconnection request.
- (2) The applicant may submit a new interconnection request for consideration under a Level 3 or Level 4 interconnection review; however, the queue position assigned to the Level 2 interconnection request shall be retained provided the request is made within 15 business days of notification that the current Level 2 interconnection request is denied.

Disclaimer | Terms of Use | Privacy Policy | Contact Us | Feedback Copyright © 2021 by eLaws. All rights reserved.

Dennis P. Jamouneau Assistant General Counsel

EP9682 701 Ninth Street NW Washington, DC 20068-0001 Office 202.872.3034
Fax 202.331.6767
pepco.com
djamouneau@pepcoholdings.com

July 30, 2020

Ms. Brinda Westbrook-Sedgwick Commission Secretary Public Service Commission of the District of Columbia 1325 G Street N.W., Suite 800 Washington, DC 20005

Re: <u>BE-2020-01</u>

Dear Ms. Westbrook-Sedgwick:

Attached please find Potomac Electric Power Company's 14-Day Billing Error Report in the above-referenced proceeding.

Please feel free to contact me if you have any questions regarding this matter.

Sincerely,

<u>s/Dennis P. Jamouneau</u> Dennis P. Jamouneau

Enclosures

cc: All Parties of Record

Pepco Billing Error Notification 14-Day Report District of Columbia Case No. 982

Date: July 30, 2020

(a) The type(s) of Billing Error(s):

Community Renewable Energy Facility (CREF) billing is in the process of being automated and issues with billing have been identified as we work through the process. Specifically, due to name changes in the Subscriber Organizations, certain subscribers did not receive credits. Also, the subscribers that were being enrolled during the automation process beginning 4/1/2020 have not received the correct credits.

(b) Date and time of the billing error(s): July 16, 2020 at 10:30AM

- (c) Number of customers affected:
 - 1) 677 customers did not receive a June credit or received less than they should have due to processing a customer requested name change
 - 2) 353 customers that have enrolled since 4/1/2020 have not received their credits
- (d) Cause of the error and status of any and all corrective action(s) taken: Changes in account status, 1) name change and 2) new enrollments during the automation process. Both scenarios prevented accounts from being recognized as CREF for the calculation of credit allocation.
- (e) Timeline for completing any and all other required corrective action(s), which must include the provision of refunds and/or credits, to be received by the customer, no later than 60 days after the billing error(s) was discovered, as necessary to correct the billing error(s).

Most missing credits will be applied in August billing with a small number trailing into September based the accounts billing window. Billing controls that divert CREF accounts with no credits for review will be implemented in August.

CERTIFICATE OF SERVICE

I hereby certify that on this 16th day of February, 2021, I caused true and correct copies of the Department of Energy and Environment's Comments on the Second Notice of Proposed Rulemaking to be emailed to the following:

Ms. Brinda Westbrook-Sedgwick Commission Secretary Public Service Commission of the District of Columbia 1325 G Street N.W. Suite 800 Washington, DC 20005 bwestbrook@psc.dc.gov Sandra Mattavous-Frye, Esq. People's Counsel Office of the People's Counsel 1133 15th Street, NW, Suite 500 Washington, DC 20005 smfrye@opc-dc.gov

Michael Engleman, Esq. Squire, Sanders & Dempsey, LLP 2550 M Street, NW Washington, DC 20037 Michael.engleman@squirepb.com Meena Gowda, Esq.
District of Columbia Water
and Sewer Authority
5000 Overlook Avenue SW
Washington, DC 20032
Meena.gowda@dcwasa.com

Barbara L. Burton, Esq. Thaddeus J. Johnson People's Counsel Office of the People's Counsel 1133 15th Street, NW, Suite 500 Washington, DC 20005 bburton@opc-dc.gov tjohnson@opc-dc.gov

Taresa Lawrence
District Department of the Environment
1200 First Street, NE, 5th Floor
Washington, DC 20002
taresa.lawrence@dc.gov

Andrea H. Harper, Esq. Potomac Electric Power Company 701 9th St. N.W. Washington, DC 20068 ahharper@pepcoholdings.com

Christopher Lipscombe, Esq. Public Service Commission of the District of Columbia 1325 G Street N.W. Suite 800 Washington, DC 20005 clipscombe@psc.dc.gov Peter Lowenthal
Maryland-DC-Virginia Solar Energy Industries
Association
4707 Elmhurst Lane
Bethesda, MD 20184
director@mdv-seia.org

Paul Sheaffer Resource Dynamics Corporation 7921 Jones Branch Drive Suite 230 Mclean Va. 22102 sheaffer@rcdnet.com

/s/ Brian Caldwell
Brian Caldwell