

National Grid Distributed Generation MA Webinar

Special Topics

November 14, 2024

nationalgrid



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The presentation is being recorded.

*The information in this presentation could be affected by future revisions to the Standards for Interconnection of Distributed Generation, M.P.D.U. No. **1468** (Tariff).*

Agenda

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01

Safety Message

Will Kern

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Safety Message - Portable Ladder Safety

Falls from portable ladders are one of the leading causes of occupational fatalities and injuries.

- Read and follow all labels/markings on the ladder.
- Avoid electrical hazards! – Look for overhead power lines before handling a ladder. Avoid using a metal ladder near power lines or exposed energized electrical equipment.
- Always inspect the ladder prior to using it. If the ladder is damaged, it should be removed.
- Always maintain a 3-point (two hands and a foot, or two feet and a hand) contact on the ladder when climbing. Keep your body near the middle of the step and always face the ladder while climbing
- Only use ladders and appropriate accessories for their designed purposes.
- Ladders must be free of any 3-Point Contact slippery material on the rungs, steps or feet.
- Do not use the top step/rung of a ladder as a step/rung unless it was designed for that purpose.
- Use a ladder only on a stable and level surface, unless it has been secured (top or bottom) to prevent displacement.
- Do not place a ladder on boxes, barrels or other unstable bases to obtain additional height.
- Do not move or shift a ladder while a person or equipment is on the ladder.
- Be sure that all locks on an extension ladder are properly engaged.



02

General Communications

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General Communications

Former Webinars are posted to our [‘Stakeholder Meetings Updates Page’](#)

National Grid requires 24/7 access to all Company owned PCC equipment

- Clear paths to meter sockets so we can access in a safe and reliable way
- If equipment is behind a locked gate, a double lock (supplied by the Company) will be required

Updating Emergency Contact:

- Reminder to update emergency contacts on case pages for outage emergency accuracy

Procurement Delays:

- Actively working with vendors, but the supply chain inventory and procurement is being monitored

25 kW Cap Net Metering Exemption:

- Company has not implemented any changes yet, awaiting DPU approval
- Please refer to docket D.P.U. 23-140

ARI/LPC Pilot Program:

- Website with full information:
 - <https://gridforce.my.site.com/s/article/ACTIVE-RESOURCE-INTEGRATION-ARI-FLEXIBLE-INTERCONNECTIONS-PILOT>
- Seeking interest from solar cases and storage cases, for both ARI and Local Power Controllers
 - **ARI**
 - [Energy Storage ARI Pilot Criteria & Eligibility Requirements](#)
 - [Solar ARI Criteria & Eligibility Requirements](#)
 - **Local Power Control**
 - [Local Power Control \(LPC\) Pilot Participation Guidance Document](#)
- To submit a request, please email NationalGridARI@nationalgrid.com

03

Group Study/ CIP Communications

Will Kern

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Group Study – Capital Investment Project (CIP) Communications

National Grid's CIP proposals have been approved by the Department of Public Utilities (DPU) for the following distribution Group Study areas:

- **Barre-Athol:** \$617.71 per kW
- **Gardner-Winchendon:** \$327.09 per kW
- **Monson-Palmer-Longmeadow (MPL) (East):** \$432.70 per kW
- **Spencer Rutland:** \$558.47 per kW

As the Company implements the Order, we will determine next steps for applications impacted within the Group Study Areas and associated timelines and will share that information with affected applications as that information is developed. The consolidated Order (D.P.U. 22-170/23-06/23-09/23-12) dated 10/31/24 is available on the DPU's website, and can also be found via this

link: <https://eeaonline.eea.state.ma.us/DPU/Fileroom/dockets/bynumber/22-170>

Proposed Project Changes

Proposed Change	Significant/Moderate Change	Next Steps	Requires Group Consent?
Change Inverter Manufacturer*	Moderate	Desk top review required by NG Engineering.	No
Increase system size to use up added capacity created	Significant	New application to be submitted.	No
Decrease of nameplate capacity size up to the largest allowable import/export during study	Moderate	Protection Restudy (30BDs)	No
Change in interface transformer or grounding requirements, other than the ones recommended by the study	Moderate	Protection Restudy (30BDs)	No
Changes to the site layout	Moderate or Significant <i>dependent on the proposed change</i>	Restudy required (40BD) or mutually agreed upon timeline	No
Aux Power Layout Changes	Moderate	Mutually agreed upon timeline	No

* Should comply with current inverter SB certification requirements

Next Steps

➤ **Notice Period: Ends 11/22/24**

- By 11/22/24, confirm your decision to proceed or not proceed with the interconnection process via the "Group Study Notice Period Response" form on your case within Salesforce, and finalize the form once completed.
- Please also notify us via chatter if you plan on making changes by 11/22/24

➤ **Submit Project Changes or Updated Documents by 12/06/2024**

- Any changes proposed after 12/06/2024 will require unanimous consent from each Group Member

➤ **Assessment for Potential Review / Re-Study**

➤ **ISA Delivery**

- This Group Study will allow for 35 BD for the issuance of the ISA.
- The 35 BD clock will start once the steps above (*which may include Re-Study*) have been completed.
 - If no Re-Study, ISA clock will start on 12/06/2024

04

Preliminary Assessment Walkthrough

Ben Grace

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Preliminary Assessment

Purpose

- To communicate insights on system upgrades and provide a customer decision point for DG operation.

Customer Documents Required

- One line
- Site plan
- BESS data collection (questionnaire, operating narrative, tech sheets)

Analysis

- Desktop thermal analysis for the normal system configuration and N-1 contingencies. Thermal limits are reviewed at the substation, at the feeder head, and at the known feeder midline limiting elements.

Preliminary Assessment Date

- Preliminary assessment is an internal milestone targeting 40, 50 and 60 business days for 100, 125 and 160 business day group studies, respectively.

Preliminary Assessment

Preliminary Assessment Template

Post-Preliminary Assessment

Customer Decision (10BD Hold)

- The schedule includes a 10 business day hold period after the preliminary assessment for customers to make a decision on BESS operation.
 - Changes require group consent
 - Customer inaction defaults to original customer submission.
 - If original customer submission includes a BESS schedule that does not align with the National Grid schedule the project will default to unscheduled nameplate operation.

Changes after Customer Decision

- Any changes after the customer decision hold period are subject to:
 - Group consent
 - Company significant / moderate change process. An application with a significant change must withdraw and submit a new application – losing its queue position.

Examples of Significant changes include, but are not limited to:

- Relocation of POI to feeder location with different electrical characteristic
- Increase or decrease in nameplate rating or total export capacity
- Change to BESS charge/discharge schedule
- Change to BESS charging method/source (ex. grid charging vs PV charging)
- Change in Market participation, causing a change to site design or operational characteristics
- Changes that affect any ASO analyses

This is a preliminary, non-binding, high-level assessment of the area and is not intended to produce a complete or exhaustive list of the potential area constraints. System conditions can and do change frequently. After the preliminary assessment the Company will evaluate, without limitation, system conditions, capacity thresholds that trigger certain conditions, and system modifications required to mitigate impacts for the Group through the Group Study. The Company's assessments do not include potential constraints on any ASO electric power systems, including the transmission system.

05

ASO Study Update

Jamie Seidl

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Next Round of ASO Studies

While there are no active ASO Studies currently, National Grid is preparing for the commencement of the next round of ASO Studies.

The ASO Study window, to be included in the next round of ASO Studies, closed on 10/18/24, and applicants expected to participate in the next round of ASO Studies have already been notified that an ASO Study is required for their project.

ASO Study scope, groupings, and costs are not yet determined

- National Grid and ISO-NE are in the midst of conversations to determination ASO Study grouping and dependencies with active FERC Interconnection Studies for the North, South, and West-Central regions.
- Invoices will be sent out once the scope and groups have been determined, and ASO Study fees must be paid within 15BD from that invoice date.
- Expected to have scoping, groupings, and costs determined by next week.

Potential FERC Order 2023 Transitional Cluster Study Impacts for Next Round of ASO Studies

The FERC Order 2023 Transitional Cluster Study (TCS) commencement has been put on pause indefinitely.

National Grid will revert to the original process for performing ASO Studies until more information is available regarding the FERC Order 2023 and the TCS commencement date.

National Grid intends to start the next round of ASO Studies within the next month, once invoicing is complete.

Due to the unknowns related to the start of the TCS, there is potential for the next round of ASO Studies to be interrupted *if* the TCS commences prior to those ASO Studies completing.

- **Potential Impacts:**
 - ASO Study will need to re-start to align with the TCS
 - ASO Study participants may be required to pay an additional ASO Study fee

Opt-in / Opt-out of Next Round of ASO Studies

Due to the potential impacts listed on the previous slide (*re-study and additional costs*), projects expected to participate in the next round of ASO Studies will have the option to '*opt-in*' or '*opt-out*' of the next round of ASO Studies

When ASO Study invoices are delivered, the customer will also be prompted to '*opt-in*' or '*opt-out*' of the next round of ASO Study.

For each ASO Study group, the group must receive unanimous consent to '*opt-in*', for the ASO Study to commence.

- If all ASO Study participants in an ASO Study group '***opt-in***', the ASO Study will start as soon as all payments have been received, or by the payment due date (whichever comes first).
- If at least one potential ASO Study participant in an ASO Study group '***opts-out***', all ASO Study participants in that ASO Study group must wait to move forward with their ASO Study until the TCS commences.

Please Note:

The opt-in / opt-out option should be understood as an *exception* to National Grid's current ASO Study process, due to the unknowns surrounding the TCS commencement date.

Future ASO Studies will not allow for participants to opt-out and wait for the subsequent ASO Study.

06

Net Meter & SMART Program Changes

Alex Bellavia

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Net Meter & SMART Program Changes

Changes to Net Metering Provision (Model Tariff approved by DPU 10/25/24 in docket 23-108)

Definition/Terminology Additions and Changes:

- BTM Cap Exempt Facilities now called "**Cap Exempt Facilities Serving On-Site Load**" with an ISA dated on/after 01/01/21
- **Locational Marginal Price (LMP)**: the price of electric energy set by ISO-NE at each load zone, external interface with neighboring regions, and the hub that reflects:
 - (a) the operating characteristics of, and the major constraints on, the New England transmission system at each area; and
 - (b) the losses resulting from physical limits of the transmission system.
- **Nameplate Cap Exempt Facility**: A Class I Net Metering Facility that is a Renewable Energy Generating Facility, provided further that it is not a Class I Net Metering Facility of a Municipality or Other Governmental Entity on or after March 1, 2024; and has a Nameplate Capacity rating equal to or less than 10 kilowatts on a single-phase circuit or 25 kilowatts on a three-phase circuit. (***Replaces "Small Cap Exempt Facility"***)
- **On-site Load definition**: Any new or existing electric load located at the site of a Net Metering facility, other than parasitic load that may result from the installation and operation of the Net Metering facility, and that is wired to be served by a portion of the electrical energy output from the Net Metering facility before the balance of such output passes through the Net Metering facility's metered interconnection onto the electric grid. ***An energy storage system, as defined in M.G.L. c. 164, § 1, does not constitute On-site Load***
- **Standard Net Metering Credit** definition is now simplified; no exclusions for facility types

Changes to Net Metering Provision (Model Tariff approved by DPU 10/25/24 in docket 23-108 cont.)

Credits:

- NMRS (net metering recovery surcharge) is **NOT** included in the calculation of NM credits anymore.
- For a Cap Exempt Facility Serving On-site Load, a Distribution Company shall issue a credit or a payment to the Host Customer for any Net Metering Credits that are accrued in excess of its annual electricity consumption for the period running from April through the following March. **The value of the credit or payment = Distribution Company's Avoided Cost Rate**
- $AC = NMC * (LMP/NMR)$

Cross LZ/EDC Credit Transfers:

- **New Solar facilities** (includes **Cap Exempt Facilities Serving On-Site Load**, but “New Solar” does not include **Nameplate Cap Exempt Facilities**) can allocate credits to customers located in different LZs today, and/or to customers served by different EDCs after ~April 1, 2025
- $MRT = NMC * (LMP/NMR)$
 - MRT -> market revenue transferred from EDCs
 - NMC -> NM credit allocated to customers of the other EDC
 - LMP -> avg monthly LMP realized by settlement NM output w/ ISO-NE
 - NMR -> The avg monthly Net Metering Credit rate that Class II and Class III Net Metering Facilities received from the Distribution Company, weighted by the monthly net excess electricity generated by Class II and Class III Net Metering Facilities.

Changes to Net Metering Provision (Model Tariff approved by DPU 10/25/24 in docket 23-108 cont)

Other:

- "Notification date" to determine "New Solar" is now enshrined as **September 26th, 2016.**
- NMRS is now a separate line-item visible on customer bills
- Public cap now includes Class I (unless full)
- Class I counts towards 10 MW max. of gov/municipal facilities.

Credit Transfers:

- Cross LZ/EDC credit transfers are **NOT** available to Nameplate Cap Exempt Facilities or to non-solar facilities

Caps & Exemptions:

- Class II and III facilities may qualify as cap-exempt if they:
 - Serve on-site load
 - Have an ISA dated after 01/01/21
 - Are not gov/municipal facilities
- Class I NM facilities that meet the requirements of a public NM facility but applied to the private cap prior to 3/1/24 are not eligible to apply for the public cap; conversely, Class I NM facilities that meet the requirements of a public NM facility and applied to the private cap on or after to 3/1/24 may apply to the public cap;
- Class I NM Facilities that submitted an ACA in the private cap prior to 3/1/24 but expand after 3/1/24 would be eligible to apply for the capacity of the entire facility under the public cap;
- Class I NM facilities can only generate Market NM credits for public entities if the entire capacity is located within the public cap.

Changes to SMART Provision (MDPU 1543->1571, cancels MDPU 1510)

Community Solar Definitions:

- **Community Shared Solar (CSS):**
 - Provides electricity/bill credits to 3+ customers
 - 2 “anchor” customers combined cannot receive more than 50% of the electricity/bill credits generated
 - Not applicable to facilities with a nameplate AC capacity <100kW
 - Based off nameplate AC capacity
- **Low-Income Community Shared Solar (LICSS):**
CSS facility with at least 50% of its energy output allocated to low-income customers in the form of electricity/bill credits
- **Low-Income Property Solar Tariff Generation Unit:**
A facility with a rated (nameplate) capacity >25kW that provides all of its generation output in the form of electricity/bill credits to low- or moderate-income housing (defined under M.G.L.c.40B)

AOBC Payment/Credit Transfer Forms:

- AOBC mechanism includes Standalone **AND** BTM systems
- Owner (or authorized agent(s)) must provide Payment/Credit Form with **AT LEAST 90% of AOBCs allocated to active and valid accounts to receive an FSoQ**
- Any and all subsequent updates will not be considered complete by National Grid **until 90% allocated**
- Owner (or authorized agent(s)) may update their AOBC allocations at least four times per calendar year, and more at the Company’s discretion;
- Processing errors will not count toward this four-update limit
- Unlimited account removals are permitted; and
- Unlimited account “swaps” are permitted;

Changes to SMART Provision (MDPU 1543->1571, cancels MDPU 1510) cont.

Unused AOBCs & AOBC Cashouts:

- Added formal definition into tariff: “Unused AOBCs shall mean a balance of AOBCs on an AOBC Generation Unit’s billing account. Unused AOBCs result when AOBCs are not applied, allocated, or transferred to recipient accounts.”
- **Owner** may request a cash-out.
- Cash-out option at the end of the 12-month period ending Mar 31 each year .
- Commercial operation date **on or after 01/01/21** -> cash-out at **full unused AOBC value**
- Commercial operation date **prior to 01/01/21** -> cash-out at existing calculation (avg ISO-NE Marginal Pricing rate / avg Basic Service rate)
- If receiving a cash-out payment with an AOBC Payment/Credit Form totaling to less than 100% allocation, **owner must resubmit a revised Form totaling to 100% allocation.**
- Applies to BTM and Standalone facilities .
- National Grid may also offer to allocate unused AOBCs to eligible accounts before cash-out.
- Authorized agents cannot elect the cash-out – must be the project owner.
- Unused AOBCs on recipient accounts will continue to roll forward each billing period and are not eligible for a cash-out or transfer.
- Cash-out does not need to be 100% of Unused AOBCs. Can be a portion.

07

Portal Moment (Offline Payments)

Dave Moyer

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Offline Payments

The online electronic payment system on the portal is preferred and will process payments more quickly, however we still accept "offline" check and ACH/wire payments. Completing the following steps will alert National Grid that an offline payment is on the way and helps to link the payment with the project.

Help Article Link - [Massachusetts Electric Company Offline Payment Instructions](#)

1. Locate the payment form and click the prep wrench to generate an invoice.
 - a. *Note - CIAC (construction) payments will have a custom invoice sent to you. Contact your job owner if you are unable to locate the CIAC invoice.*

New	No Signature Needed	Distribution System Impact Study Payment Form	<input checked="" type="checkbox"/>		
Draft	No Signature Needed	Authority Having Jurisdiction Approval Letter	<input checked="" type="checkbox"/>	Generate Invoice	
Draft	eSignature Chosen	Impact Study Agreement	<input checked="" type="checkbox"/>	Online Payment	

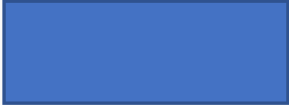
2. Print a copy of the invoice to mail with paper checks. The “Case Number” and “Invoice Number” are shown on the invoice and should be included with every payment.
 - a. If paying by check, include a copy of the invoice stub in the same parcel when mailed.
 - b. If paying by wire or ACH, be sure to include the case and invoice numbers as a note.

Offline Payments

Example of the invoice stub to include with mailed checks:

PLEASE DETACH AND RETURN THIS STUB IN THE ENVELOPE PROVIDED

Make checks payable to National Grid Mail Payment to:





Case Number:



Invoice Number:

Invoice Date:

3. Upload an image of the payment confirmation to the payment form. Confirmations can include a scanned copy of a check, an ACH wire confirmation, and/or tracking numbers.

New	No Signature Needed	Distribution System Impact Study Payment Form	<input checked="" type="checkbox"/>		
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4. The status of the payment form will change from New to Draft once the upload has been received.
 - a. *Note - If confirmation file is not uploaded to a required payment form, then you will not be allowed to finalize the submission on the case.*

Draft	No Signature Needed	Distribution System Impact Study Payment Form	<input checked="" type="checkbox"/>		
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Offline Payments

5. Complete any other requirements, such as document signatures, and then click Finalize if applicable.
- a.Note 1 – If you have chosen to e-sign any forms, the document will be emailed to the system owner on file after you have completed the payment and click “Finalize.”*
- b.Note 2 – Not all payments take place at a customer decision step, therefore a finalize button may not be available.*

APPLICATION ACTIONS



6. If sending a wire, the required banking information to initiate a wire payment is included in the help document on our website. All interconnection fees are considered “Non-Utility Payments.”

Final note – The PO lockbox is not able to accept express overnight deliveries, so checks should be mailed using USPS.

08

Compliance Documents

Michelle Bolduc

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Compliance Documentation

New Compliance Document Checklist and Example Document has been uploaded to our website:

<https://gridforce.my.site.com/s/article/MA-Interconnection-Documents>



Customer Application Portal (nCAP)



Massachusetts

For additional guidance on navigation, registration and more, please visit our [Help Page](#) or [Contact Us](#)

As a reminder, please make sure you clean out your cache to ensure the most recent updates are being viewed in the portal.

UPDATE: System maintenance has been successfully completed. As of 12pm (ET) August 19, all application processing should be proceeding as normal for MA and NY applications. Note that RI application cases are no longer available in this portal. Please refer to <https://weare.energys.com/changes/> for additional instructions about RI applications processed by PPL.

Quick Links



INCENTIVES AND PROGRAMS



PROJECT GUIDANCE AND UPDATES

Compliance Checklist and Example Document Links

Expedited/Standard Completion Documentation Forms

- [ACH Payment Authorization Form \(PDF\)](#) (11/13/2024): *To authorize National Grid to initiate credit entries to the account specified within this form for qualifying facilities*
- [Schedule A: \(PDF\)](#): *M.D.P.U No. 1321 (10/01/2016)*
- [Standard & Expedited Process Compliance Documentation Checklist](#) (DOC) (Updated 08/12/2024): *Documentation required for all Standard & Expedited applicants*
- [Compliance Documents Customer Examples](#) (PDF) (09/09/2024): *Examples of the photo portion of the Compliance Document Checklist.*
- [Witness Test Procedure Guidelines](#) (DOC) (4/20/2022): *For applicants that require redundant relays (based on results of screening or study process)*
- [Witness Test Checklist](#) (DOC) (Updated 08/12/2024): *For applicants with redundant relays required (based on results of screening or study process)*
- *All Incentive Program Forms Finalized (N/A): See forms for applicable incentive program(s) below*
- [Exhibit C2 - Certificate of Completion for Expedited/Standard Interconnection Applications](#) (PDF) - M.D.P.U. 1468 (9/15/2021): *Required for all non-Simplified applicants (prior to scheduling a witness test, if applicable)*
- [Simplified/Expedited Commissioning Memo Requirements](#) (100 kW and below) (10/01/2023)

Compliance Documents and Qualifying Facility Forms

- Qualifying Facility forms need to be submitted prior to ATI along with Transfer of Ownership/Host requests (if applicable)
- Names and addresses should match on all three forms (Schedule A, ACH, and W9)
- The tax ID# should match on the ACH and W9
- The W9 should be the 2024 version
- The contact phone number on the ACH form should be a direct number (not an operator)

10

Q&A

Please submit questions using the Q&A link provided in the Microsoft Teams meeting chat.

Appendix: Summary of Resources, Documents & Links

Distributed Generation Website: <https://ngus.force.com/s/ma-home>

Interconnection Process Resources: <https://ngus.force.com/s/ma-process>

COVID & Force Majeure Updates: <https://ngus.force.com/s/article/MA-Force-Majeure-Declarations>

ISO – NE’s Interconnection Process: <https://www.iso-ne.com/participate/applications-status-changes/interconnection-process-guide/interconnection-process-steps>

National Grid’s list of active and pending FERC feeders: https://ngus.force.com/s/?tabset-651ee=2&Infrastructure__c-filterId=00B0W000006uAI3UAM

MA DG Stakeholder Meeting Information: <https://ngus.force.com/s/article/MA-DG-Stakeholder-Meeting-Information>

ASO Updates: <https://ngus.force.com/s/article/MA-ASO-Updates>

Hosting Capacity Maps: <https://ngrid.apps.nationalgrid.com/NGSysDataPortal/MA/index.html>

Storage Assistance - <https://ngus.force.com/s/article/Storage-Assistance>

DPU Interim Guidance for ESS -

<https://ngus.force.com/s/article/How-to-Add-Energy-Storage-to-an-In-Progress-Application-in-Massachusetts>

Sample One Line Diagrams SMART Program-

<https://ngus.force.com/servlet/servlet.FileDownload?file=0150W00000ET8dj>

Interconnection Documents- <https://ngus.force.com/s/article/MA-Interconnection-Documents>

Typical System Modifications and Estimated Costs for DG Interconnection- <https://ngus.force.com/s/article/System-Modifications-for-DG-Interconnection>

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