

Distributed Energy Resources Interconnection Seminar

Simplified Process



Thank you for joining us.

The presentation will begin at 9:00am.

Please mute your phones to avoid any feedback.

Thank you.

Distributed Energy Resources Interconnection Seminar



February 7, 2024
Eversource Energy

Co-Hosts

EVERSOURCE

nationalgrid



Mass ACA



Is the most important thing to consider in designing, connecting and operating a successful DG project.

- Overhead power lines are not insulated and carry enough energy to cause serious injury or even death. Regard all wires as live.
- Keep yourself, your co-workers, tools, ladders and vehicles at least 10 feet away from electric lines and equipment.
- Make sure the area is clear of wires before working near trees or shrubs.
- Never attach or tie anything off to power lines or electrical equipment.
- If you need to dig, first call Dig Safe at 1-888-dig-safe (1-888-344-7233) to get underground utilities marked. (www.digsafe.com)

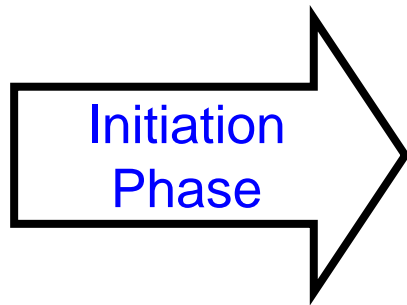
Interconnection Contacts

- Eversource Energy – Eastern MA DG (Simplified)
 - Email: emdg@eversource.com
 - Jeena Hatton
 - Evan Melillo: evan.melillo@eversource.com
 - **Julia Bucceri**

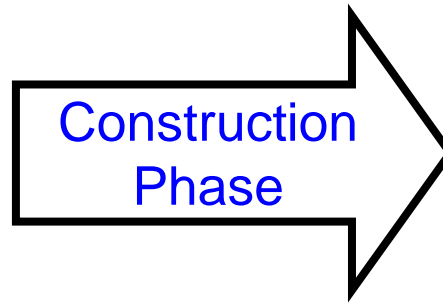
- Expedited Projects
 - Melanie Khederian
 - Zachary Tedford
 - Ryan Boyd
 - **Brandon Natale**

Simplified Interconnection Information

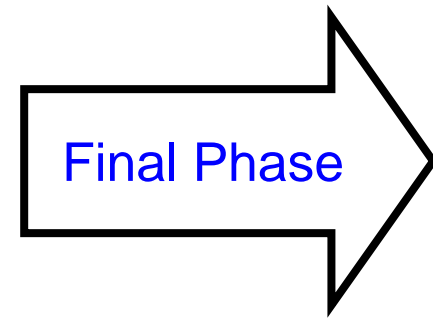
Simplified Process flow



- Installer/Customer submits an online application via Power Clerk
- “*Acknowledgement*” is sent upon submission with Project ID number
- Technical Review is completed (if applicable)
- Electric Service Support Center (ESSC) creates work order
- Review application
- Send acknowledgment letter to customer/installer via email
- Send “Time Frame Verification” letter via email



- Customer builds their system
- Upon completion – All DG Interconnection documents are uploaded to Power Clerk
 - Certificate of Completion
 - ESS Questionnaire
 - Valid Schedule Z
 - One Line Diagram
 - Inverter Cut Sheet
 - Photos (Inverter, AC Disconnect, Closed –Up Meter, and PV Array)
 - Fully Executed Exhibit H (3rd Party Only)
 - MASS ACA Registration Proof for system size 10.01 kW AC or greater



- Review completion documents
- If any discrepancies are identified, additional information is requested
- Communication “Meter Set Scheduled” is sent to customer & installer
- Release to Meter Department for meter exchange/Install with a net meter and/or production meter for SMART participants
- Send letter authorization (PTO) to go online via email to solar installer
- Send final valid schedule Z to Billing Department

Simplified Time Frame

Typically little or no utility system modifications required. If meter only – usually no charges passed to customer.

If system modifications are required, they must be completed before approval to install is granted.

	Simplified Process
Eligible Facilities	Listed Small Inverter
Acknowledge Receipt of Application (Note 2)	(3 days)
Review Application for Completeness	10 days
Complete Review of All Screens	15 days (20 Days) (Note 3)
Complete Supplemental Review (if needed)	N/A
Complete Standard Process Initial Review	N/A
Send Follow-on Studies Cost/Agreement	N/A
Complete Impact Study (if needed)	N/A
Complete Detailed Study (if needed)	N/A
Send Executable Agreement (Note 4)	Done. The agreement is part of the application.
Total Maximum Days (Note 5)	25 days (30 days in case of failure of Screen #5)
Construction Schedule	By Mutual Agreement
Witness Test	Within 10 days from receipt of Certificate of Completion or by mutual agreement.

Simplified Application

- APPLIES TO:
 - Single phase service on radial feed 15.0 kW or less.
 - In CIP areas, Eversource is temporarily allowing field limited outputs. This field limiting is often via Power Control Systems (PCS). See next page for details.
 - Three phase service on radial feed 25.0 kW or less.
 - Simplified Spot Network Process: listed inverter based system 1/15th of electric customer's **MINIMUM** load.
 - Simplified Area Network Process: listed inverter based system 15.0 kW or less and 1/15th of electric customer's **MINIMUM** load.
 - A listed inverter means:
 - Complies with current IEEE Standard 1547 and utility's technical standard. MA has adopted UL 1741 **SB*** as the standard for inverters to comply with IEEE 1547.
 - Nationally recognized test lab results.
 - AC size greater than 10 kW is required to apply for and receive a reserved Cap Allocation from the System of Assurance (SoA) at www.MassACA.org

Field Limiting In CIP Areas

Group Name	Substation Name
Plymouth	Brook St 727
	Manomet 721
	Tremont 713
	Valley 715
	Wareham 714
	West Pond 737
	Kingston 735
Freetown	Assonet 647
Marion-Fairhaven	Arsene St 654
	Crystal Springs 646
	Rochester 745
	Wing Lane 624
Cape	Falmouth 933
	Harwich 968
	Hatchville 936
	Hyannis Jnc 961
	Sandwich 916
	Oak St 920
	Mashpee 946
	Otis 915
Dartmouth-Westport	Cross Rd 651
	Fisher Rd 657
Blandford	Blandford 19J

- There are a few stations on CIP Hold in EMA. To the left is the list of CIP stations. Before you submit, please feel free to check the address on our host capacity map and this will tell you the station the address connects to.
- <https://eversource.maps.arcgis.com/apps/webappviewer/index.html?id=7b13d31f908243e49406f198b359aa71>

Everything starts with application

- A complete application includes:
 - Completed applications online
 - Electrical Sketch
 - One Line Diagram
 - Site Plan / Drawing
 - Inverter cut sheet
 - UL 1741 **SB*** certification (if not already on file)
 - Work Request number if there is a new service or there is a service upgrade
 - If necessary, identify ownership of property and provide proof of site control if Customer and/or Interconnecting Customer does not own the property.
 - Identify electric utility customer and owner of proposed generation
- Errors or problems with application will slow down the process and “stop the clock”
- Send **Electronic copy** of all documents if possible – Easier to distribute, saves paper and is faster.

Submitting a Simplified Application

New Simplified Application (Behind the Meter)

New Simplified Application (Standalone)

All Projects Application Unsubmitted Customer Completed ESignature Customer Action Required Permission To Install Wiring Issue

- To initiate a standalone PV application, you will first need to contact our **Electric Service Support Center (ESSC)** 888-633-3797 to initiate a new PV account number which is required

Example – DG Interconnection Application

1
Welcome

2
Tips

3
Start

4
Parties

5
Ownership Agreement



Welcome

This application is for MA DG Simplified Program if you intend to install one of the following:

Simplified (Non-Area Network)

A single-phase UL-Listed inverter-based system that is 15 kW or less on a single-phase service fed from a radial circuit

A three-phase UL-Listed inverter-based system that is 25 kW or less on a three phase service fed from a radial circuit

Simplified (Area Network)

A UL-Listed inverter-based system less than 1/15th of the customer's minimum load and fed from a spot network, or

A UL-Listed inverter-based system that is 15 kW or less and less than 1/15th of the customer's minimum load and fed from an area network

These PDF resources can help you answer questions related to this application:

[MA DG Tariff](#)

[Net Metering](#)

[SMART Program Regulations](#)

[Power Purchase Rate](#)

Important Notes

- Any new proposed distribution generation (DG) system must remain offline until written approval to operate is granted from Eversource. Any exported generation (kWh) which accumulates before the system is approved to operate will be removed from the bill.
- Any new proposed DG must be installed in accordance with all applicable codes, including National Electrical Code (NEC). Eversource does not review projects for compliance with NEC.
- All required permits must be obtained for the DG installation.
- After receiving Approval to Install, a Certificate of Completion signed by the electrical inspector, must be submitted to Eversource along with photos prior to scheduling a Witness Test/Self Certification (if applicable).
- You will not be able to proceed with this application without an Eversource electric account. If you do not yet have an account, please call Eversource New Service Department now:
Western MA Support: 1800-880-2433
Eastern MA Support: 1888-633-3797

Next

Example – DG Interconnection Application

1
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Tips

Here are some tips to help you complete this application:

- PowerClerk automatically saves your progress
- You can log out and return where you left off
- Navigate the form using the buttons at the bottom of the page or the icons at the top
- Questions with a red * (asterisk) are required and must be answered
- Click on a blue question mark (?) icon to reveal helpful tips
- If you are connecting a new DG under standalone service, please reach out to the NCC team to set up a new account and start your application

Back

Next

Example – DG Interconnection Application

Parties

Complete the fields below for all parties involved in the project. For required company fields: Enter Last of customer if no company exists.

Customer Mailing Address

Customer Information As it Appears on the Utility Bill

Joint Account Holder First Name

Joint Account Holder Last Name

Do you want to use different email ID for the above customer?

- Yes
 No

Please enter the alternative Customer Email ID *

Customer Facility Address

Facility Address As it Appears on the Utility Bill

Facility Address



Zip Code

Interconnecting Customer

Individual, company or entity that owns and/or operates the facility

Interconnecting Customer

Name *

Company

Simplified Requirements

Submit an electrical sketch with application:

- DOES NOT need to be stamped by a MA PE.
- Must show the existing/proposed service, including the revenue metering and production meter, and how/where the proposed generation will interconnect to it.
- Can be hand drawn but must be legible.
- Include: Size of main breaker, external disconnect switch (when required or installed), kW rating, Customer name, address of facility, Inverter(s) and existing and back up generation (if applicable)
- Must show actual proposed equipment. Ex: Do NOT include “MIN 60A” for a disconnect size.
- Inverter settings.
- SHOULD NOT specify equipment TBD by Company.
- If you submit a revised electrical sketch, please include a date and/or revision number on the sketch.

Net Metering in Massachusetts

- December 2009 Net Metering Tariff, updated periodically by DPU.
- Means the process of measuring the difference between electricity delivered by a Distribution Company and the electricity generated by a Class 1, Class II, or Class III Net Metering Facility and fed back to the Distribution Company.

- Three Classes of Net Metering Facility
- Net Metering facilities in Net Metering Tariff:
 - Class I: Any generator up to 60 kW is eligible (though compensation differs depending on type of generation).

 - Class II: Agricultural, Anaerobic Digestion, Solar, or Wind Net Metering Facility over 60 kW but less than or equal to 1 MW (for Municipality or Other Governmental Entity it's "per unit").

 - Class III: Agricultural, Anaerobic Digestion, Solar, or Wind Net Metering Facility over 1 MW but less than or equal to 2 MW (for Municipality or Other Governmental Entity it's "per unit").

Net Metering Eligibility

- 11-11E issued 7/1/13 which allows for ‘an exception for optimal interconnection’.
- Utility can have more than one interconnection point and meter for technical and/or operational reasons.
- New DPU ruling adopts blanket exceptions to parcel rule such as:
 - Multiple technologies
 - Rooftop cap exempt facilities
- The Department established an application form to apply for blanket exceptions
- Customers can petition DPU for exceptions.
- Can have a separate metered service for net metering facility along with other non-net metered services on the single parcel.
- Parcel boundaries needed to be set in 2010.

Net Metering Process

- Customer is compensated for energy produced after receiving approval to operate and all other requirements have been met.
 - If you have questions regarding billing, compensation for exported energy, and/or credit allocation contact:
 - Western MA = Customer Care Department at 888-783-6616
 - Eastern MA = Residential Contact Center 800-592-2000.

- Net metering credits may not be applied to the Host Customer's account until the next billing cycle.
 - Customers may be on different billing cycles.
 - Credits allocated to other Eversource accounts may be applied on a different billing cycle than the Host Customer's account.

- Once online, review and implementation of a new Schedule Z will take a minimum of one billing cycle.

Schedule Z – Additional Information Required for Net Metering Service

Please fill out the form completely.

Host Customer Information		→ Primary Account Holder
Host Customer Name:	John Doe	
Mailing Address:	#1, 234 Main Street,	
City:	Somewhere State: MA Zip: 01000 E-Mail Address:	
NSTAR Account # :	1234 567 7890	

A) Is the Host Customer applying for net metering service an electric company, generation company, aggregator, supplier, energy marketer, or energy broker, as those terms are used in M.G.L. c. 164, §§ 1 and 1F and 220 C.M.R. 11.00?

No
 Yes (you are not eligible for net metering service)

Definitions:

“Electric company” means a corporation organized under the laws of the commonwealth for the purpose of making by means of water power, steam power or otherwise and for selling, transmitting, distributing, transmitting and selling, or distributing and selling, electricity within the commonwealth, or authorized by special act so to do, even though subsequently authorized to make or sell gas; provided, however, that electric company shall not mean an alternative energy producer; provided further, that a distribution company shall not include an entity which owns or operates a plant or equipment used to produce electricity, steam and chilled water, or an affiliate engaged solely in the provision of such electricity, steam and chilled water, where the electricity produced by such entity or its affiliate is primarily for the benefit of hospitals and nonprofit educational institutions, and where such plant or equipment was in operation before January 1, 1986; and provided further, that electric company shall not mean a corporation only transmitting and selling, or only transmitting, electricity unless such corporation is affiliated with an electric company organized under the laws of the commonwealth for the purpose of distributing and selling, or distributing only, electricity within the commonwealth. G.L. c. 164, § 1.

“Generation company” means a company engaged in the business of producing, manufacturing or generating electricity or related services or products, including but not limited to, renewable energy generation attributes for retail sale to the public. G.L. c. 164, § 1.

“Aggregator” means an entity which groups together electricity customers for retail sale purposes, except for public entities, quasi-public entities or authorities, or subsidiary organizations thereof, established under the laws of the commonwealth. G.L. c. 164, § 1.

“Supplier” means any supplier of generation service to retail customers, including power marketers, brokers and marketing affiliates of distribution companies, except that no electric company shall be considered a supplier. G.L. c. 164, § 1.

For the terms “energy marketer” and “energy broker,” please use the definition for “Electricity Broker,” which means an entity, including but not limited to an Aggregator, that facilitates or otherwise arranges for the purchase and sale of electricity and related services to Retail Customers, but does not sell electricity. Public Aggregators shall not be considered Electricity Brokers. 220 C.M.R. 11.02.

Does not apply to solar or wind

B) If applying for Net Metering as an Agricultural Net Metering Facility, please answer the following questions:

- 1) Is the Agricultural Net Metering Facility operated as part of an agricultural business?
 Yes
 No (the facility is not eligible for Net Metering as an Agricultural Net Metering Facility)
- 2) Has the Commissioner of the Department of Agriculture recognized the business as an agricultural business?
 Yes
 No
- 3) Is the Agricultural Net Metering Facility located on land owned or controlled by the agricultural business mentioned in Item B.1 above?
 Yes
 No (the facility is not eligible for Net Metering as an Agricultural Net Metering Facility)
- 4) Is the energy from the Agricultural Net Metering Facility used to provide electricity to metered accounts of the agricultural business mentioned in Item B.1 above?
 Yes
 No (the facility is not eligible for Net Metering as an Agricultural Net Metering Facility)

SKIP

C) If applying for neighborhood net metering, please answer the following questions:

- 1) Are all participants served by the same distribution company? Yes No
- 2) Are all participants served by the same ISO-NE load zone? ~~Yes~~ ~~No~~
- 3) Do all participants reside in the same municipality? Yes No

NOTE: If any of the answers to the questions in Item C are no, then the facility is ineligible for neighborhood net metering unless granted an exception by the Department of Public Utilities under 220 C.M.R. 18.09(6).

SKIP

D) Please indicate how the Host Customer will report to the Company the amount of electricity generated by the net metering facility. The information is due twice each year: (1) by January 31 for the prior year's generation; (2) by September 30 for the year-to-date generation:

- Provide the Company access to their ISO-NE GIS account
- Provide the Company access to their metering or inverter data
- Provide the Company with a report in writing of the generation by January 31 and again on September 30 each year.

Select One

- E) For any Billing Period in which the Host Customer earns Net Metering Credits, please indicate how the Distribution Company will apply them:
- Apply all of the Net Metering Credits to the account of the Host Customer (Skip Items F and G)
 - Allocate all the Net Metering Credits to the accounts of eligible Customers (Class I and II Net Metering Facilities skip Item F)
 - Both apply a portion of the Net Metering Credits to the Host Customer's account and allocate a portion to the accounts of eligible Customers (Class I and II Net Metering Facilities skip Item F)

F) If the Host Customer has a Class III Net Metering Facility, please indicate below the range that best represents the number of eligible Customer accounts to which Net Metering Credits would be allocated. Alternatively, please complete Item G. This information will allow the Company to exercise its option to purchase Net Metering Credits from the Host Customer rather than allocating such credits.

SKIP

The Company will notify the Host Customer within 30 days of the filing of Schedule Z whether it will allocate or purchase Net Metering Credits. If the Company elects to purchase Net Metering Credits, the Company will render payment by issuing a check to the Host Customer each Billing Period, unless otherwise agreed in writing by the Host Customer and Company. If the Company elects to allocate Net Metering Credits, the Host Customer must complete Item G and submit the revised Schedule Z to the Company.

- Allocate Net Metering Credits to fewer than 50 eligible Customer accounts (Skip Item G)
- Allocate Net Metering Credits to 100 or fewer eligible Customer accounts (Skip Item G)
- Allocate Net Metering Credits to more than 100 eligible Customer accounts (Skip Item G)

Complete if applicable otherwise leave blank

G) Please state the total percentage of Net Metering Credits to be allocated.

% Amount of the Net Metering Credit being allocated. The total amount of Net Metering Credits being allocated shall not exceed 100 %. Any remaining percentage will be applied to the Host Customer's account.

Please identify each eligible Customer account to which the Host Customer is allocating Net Metering Credits by providing the following information (attach additional pages as needed):

NOTE: If a designated Customer account closes, the allocated percentage will revert to the Host Customer's account, unless otherwise mutually agreed in writing by the Host Customer and the Company.

Name: **Customer Name as listed on Electric Bill**
 Billing Address: **Service Address as listed on Electric Bill. This is NOT the Mailing Address**
 Account number: **Billing Account Number as listed on Electric Bill**
 Amount of the Net Metering Credit: **Amount being Allocated to this Account %**

Name:
 Billing Address:
 Account number:
 Amount of the Net Metering Credit: ____%

Name:
 Billing Address:
 Account number:
 Amount of the Net Metering Credit: ____%

Name:
 Billing Address:
 Account number:
 Amount of the Net Metering Credit: ____%

Name:
 Billing Address:
 Account number:
 Amount of the Net Metering Credit: ____%

Name:
 Billing Address:
 Account number:
 Amount of the Net Metering Credit: ____%

Name:
 Billing Address:
 Account number:
 Amount of the Net Metering Credit: ____%

Name:
 Billing Address:
 Account number:
 Amount of the Net Metering Credit: ____%

**Complete
 if applicable
 otherwise leave
 blank**

Name:
Billing Address:
Account number:
Amount of the Net Metering Credit: ____%

Name:
Billing Address:
Account number:
Amount of the Net Metering Credit: ____%

H) The Company may elect to seek to obtain capacity payments from ISO-NE for the electricity generated by Class II and III Net Metering Facilities. The Company will notify the Host Customer within 30 days of the filing of Schedule Z whether it will assert title to the right to seek those capacity payments. If the Company elects to assert title to those capacity payments, the Company will include any capacity payments received from ISONE in the Company's annual Net Metering Recovery Surcharge reconciliation.

I) The terms of this Schedule Z shall remain in effect unless and until the Host Customer executes a revised Schedule Z and submits it to the Company. Unless otherwise required herein or mutually agreed to in writing by the Host Customer and the Company, a revised Schedule Z shall not be submitted more than twice in any given calendar year.

J) A signature on the application shall constitute certification that (1) the Host Customer has read the application and knows its contents; (2) the contents are true as stated, to the best knowledge and belief of the Host Customer; and (3) the Host Customer possesses full power and authority to sign the application.

Primary Account
Holder

Host Customer Name (Print)

Host Customer Signature

Date

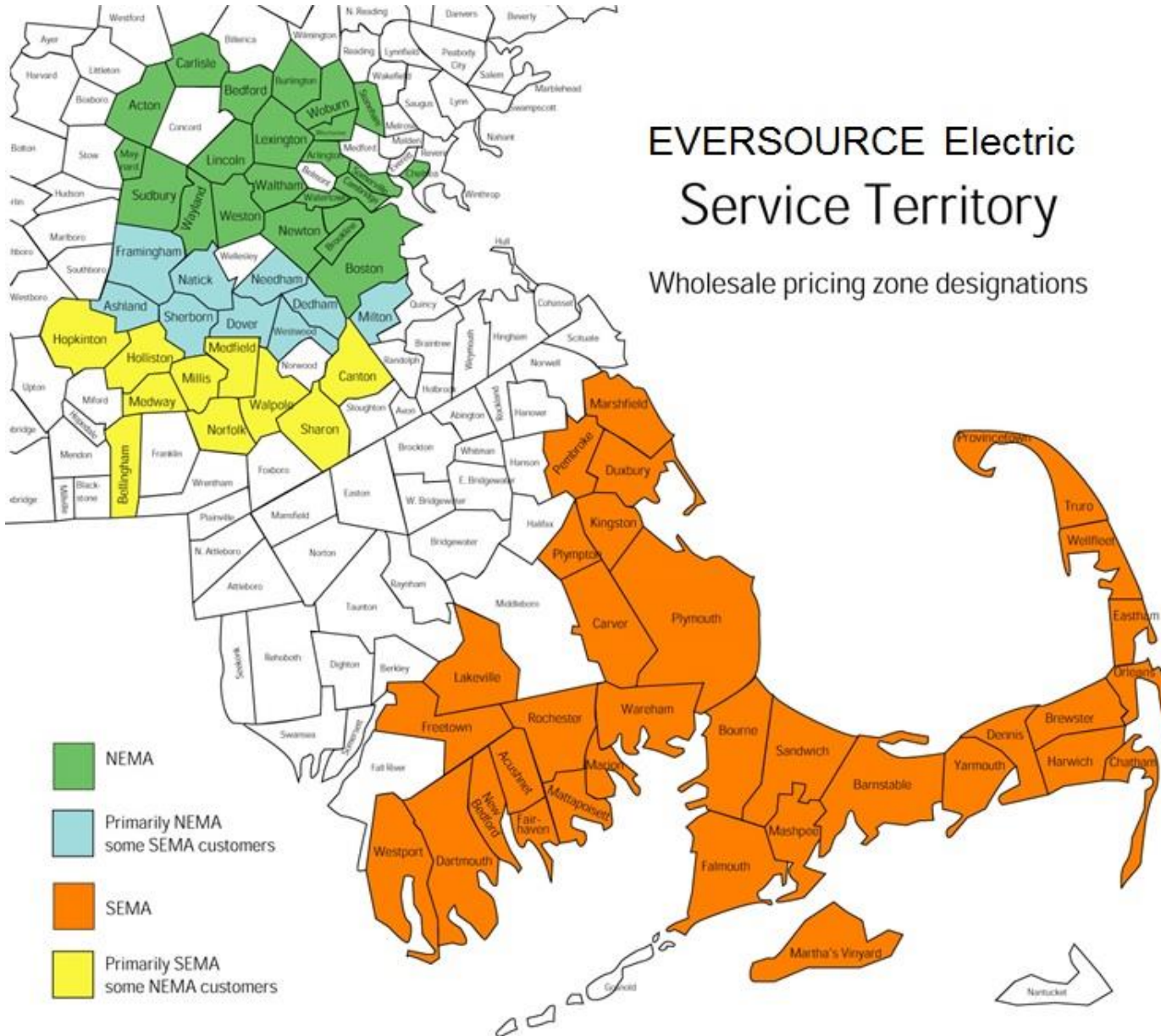
Schedule Z Allocations

- The DPU ordered that after July 31, 2018, host customers **must** include an electronic Excel spreadsheet that details the net metering credit transfers in addition to the paper schedule Z document.

Schedule Z - Net Metering Allocation					
Host Acct#	Amount of Net Metering Credit Allocated (Part G)	Sum Of Target Allocation (must match Part G)	Host Name	Host Address	Application ID (GID#)
YYYYYYY	0.00%	100.00%	Customer xyz	123 main st anywhere	1234
Account #	Allocation %	Allocatee Name	Allocatee Street Address	Allocatee Town	

EVERSOURCE Electric Service Territory

Wholesale pricing zone designations



- NEMA
- Primarily NEMA
some SEMA customers
- SEMA
- Primarily SEMA
some NEMA customers

Questions?