

Aggregated Residential Passive Assets



Initial Registrations & Change Requests in CAMS

Olivia Love

ASSET REGISTRATION



What is an Aggregated Residential Passive Asset?

- A multitude of residential solar installations (i.e. residential rooftop solar) all located within the same **load zone** and have the same **distribution company**, that meets the definition of a **passive demand capacity resource**, specifically an **on-peak demand resource**.
- The individual residential solar installations are then aggregated to be registered as a singular asset in ISO systems.



Passive Demand Capacity Resource: a demand capacity resource principally designed to save electric energy use, which is in place at all times without requiring real-time direction from the ISO (iso-ne.com, Glossary & Acronyms)



On-Peak Demand Resource: a type of Demand Capacity Resource and means installed measures (e.g., products, equipment, systems, services, practices and/or strategies) on end-use customer facilities that reduce the total amount of electrical energy consumed during Demand Resource On-Peak Hours, while delivering a comparable or acceptable level of end-use service. Such measures include Energy Efficiency, Load Management, and Distributed Generation (ISO New England Inc. Transmission, Markets, and Services Tariff, Section 1, 2022, p. 70)

Reminder!

A Measurement & Verification Plan must have been submitted and approved during the qualification of the Capacity Resource that will be mapped to the asset. Please verify that this was completed prior to registering the asset.

Measurement &
Verification Manual



Please reach out to ISO Participant Support (askiso@iso-ne.com) for additional questions regarding the Measurement & Verification Plan.

INITIAL REGISTRATION

Getting Started

What You Will Need

Necessary Documents

- ✓ A representative utility bill
- ✓ *Sample contract
- ✓ Completed Aggregated Residential Passive Asset Template
- ✓ Explanations of specific value calculations
- ✓ Measurement & Verification Plan
- ✓ Other supporting documentation

*Only necessary if this is the first aggregated residential passive asset being registered by the Participant

Representative Utility Bill

- The bill should be located in the same **load zone** and have the same **distribution company** that matches the residential installations comprising the asset
- This **same utility bill** will be used for each additional asset registered by the Participant in the same load zone and with the same distribution company that make up one **aggregation series**
 - This allows ISO to identify the assets as being linked to one another in CAMS



Aggregation Series: several assets that each contain installations within the same load zone and distribution company, separated by six month groupings

Sample Contract

- Only necessary if this is the **first** aggregated residential passive asset enrollment for a Participant
- The sample contract can be a **blank version** with no customer information provided



Aggregated Residential Passive Asset Template

- A blank copy of the Aggregated Residential Passive Asset Template can be found on the [ISO-NE](#) website

Aggregated Residential Passive
Asset Template



Calculation Explanations

- An explanation of how the **Maximum Interruptible Capacity (MIC)**, **Maximum Generation**, **Maximum Load**, and **Maximum Net Supply** are calculated will need to be uploaded to the asset's service notes



Tip: these explanations can be generic (not inclusive of specific numbers), and therefore can be applied to other registrations of this type that use the same calculations. Put these explanations on a PDF or Word file to make it an easier Service Notes upload for future registrations.

Measurement & Verification Plan

- The Measurement and Verification Plan shall be submitted for an On Peak Demand Resource or Seasonal Peak Demand Resource as part of the qualification process for the Forward Capacity Auction pursuant to the requirements of Section III.13.1.4.3 of Market Rule 1 and the ISO New England Manuals. (*ISO New England Inc. Transmission, Markets, and Services Tariff, Section 1, 2022, p. 58-59*)
- If your M&V document is not readily accessible, you may provide an explanation of how the meter data will be collected for this aggregation as a whole and submitted for every hour of every month, via the asset's service notes.

Supporting Documentation

- Any other supporting documentation should be uploaded that will be helpful for ISO's review of the registration (i.e. a document that was used when calculating certain values associated with the asset)

INITIAL REGISTRATION

The Aggregated Residential Passive Asset Template

Reminder!

Before registering the asset in CAMS, please make sure to download a blank version of the Aggregated Residential Passive Asset Template.

Aggregated Residential Passive
Asset Template



Definitions

Aggregated Residential Passive Asset Template	
1	Distribution Company Name
2	Load Zone
3	Asset Number in Aggregation Series
4	Data As Of Date

1

Distribution Company Name: the utility company for the service territory that all of the installations are located within

2

Load Zone: the load zone in which all the listed installation addresses are located within

3

Asset Number in Aggregation Series: a two digit sequential number assigned to each asset that makes up an aggregation series. The number represents a new set of installations within a six month period also located within the same load zone and distribution company

4

Data As Of Date: the date in which the installation data was finalized and submitted to ISO

Definitions Continued

General Facility Information								
Generation Facility						Unit Capacity	Commercial Operation Date	
Name (Unit)	Address	City	State	Zip Code	Utility Account	MIC (Max Interruptible Capacity)	Nameplate Capability (MW)	mm/dd/yyyy
1	2				3	4	5	6

- 1 Name: the identifier of the installation assigned and used by the Lead Participant or Utility. If this data is not available, you may leave this field blank.
- 2 Address, City, State, Zip Code: the street number, street name, city, state, and zip code where the installation is located.
- 3 Utility Account: the unique retail account ID of the installation.
- 4 MIC: an estimate of the maximum demand reduction and Net Supply that a Demand Response Asset can deliver, as measured at the Retail Delivery Point.
- 5 Nameplate Capability: the rating of the generator installation as a measure of its ability to produce electricity
- 6 Commercial Operation Date: the In-Service date of the installation as indicated on the Permission to Operate Letter

Populating the Aggregated Residential Passive Asset Template

- Installations listed on the Aggregated Residential Passive Asset spreadsheet should:
 - ✓ Be solar residential installations only
 - ✓ Be in groupings of six (6) month periods based off the installation's commercial operation dates
 - ✓ Be located within the same load zone
 - ✓ Have the same distribution company
 - ✓ Have a **unique** utility retail account ID
 - The retail account ID should not be a duplicate of any other installations contained on the spreadsheet, or of installations contained on spreadsheets used in previous registrations

INITIAL REGISTRATION

Customer Asset Management System (CAMS) Registration

Reminder!

Before registering the asset in CAMS, please have the following documents available for your use:

Necessary Documents

- ✓ A representative utility bill
- ✓ *Sample contract
- ✓ Completed Aggregated Residential Passive Asset Template
- ✓ Explanations of specific value calculations
- ✓ Measurement & Verification Plan
- ✓ Other supporting documentation

*Only necessary if this is the first aggregated residential passive asset being registered by the Participant

Accessing CAMS

- CAMS can be accessed on the [SMD Application Home Page](#)

SMD Applications Home Page

Market System → SMD Applications Home Page

Internal Transactions

External Transactions

Bids & Offers
(Registered Users)

Customer and Asset
Management System

CAMS Enrollment

- To start the enrollment process of a new Passive Asset, go to Assets → Demand Asset → + Enroll Passive

The screenshot displays the CAMS interface. At the top, the title "Customer and Asset Management System" is visible. Below the title is a navigation bar with tabs for PERSONS, ASSETS, RESOURCES, LOCATIONS, COMMITTEES, SUBACCOUNTS, and ADMIN. The ASSETS tab is highlighted with a red box. Underneath, a sub-menu shows "Demand Asset" (highlighted with a red box), Generators, Load Assets, Tie Line, Non Energy, and Master Asset. Below the navigation bar is a search bar with various search options: Dashboard, Change Request Search, Active Asset Search, Passive Asset Search, DRR Search, Dispatch Location Search, RTU Search, PNode Lookup, and DRI. At the bottom right of the search bar, there are two buttons: "+ Enroll Active" and "+ Enroll Passive" (highlighted with a red box).



CAMS Enrollment: Asset Details

Enroll Passive Asset - Enter Asset Details

Asset Details

Requested Operational Date*	#Facilities*			
09/01/2022	Single	1		
Asset Name*	Asset Type*	Lead Participant*		
Sunny Days Agg SEMA 01	On-Peak Demand Resource	ISO New England Inc (50051)		
M.I.C.*	Reduction Method*	Meter Installed and Operational*	Meter Reader*	Has Generation*
13	Distributed Generation	Yes	ISO New England Inc	Yes

Next >

Cancel

CAMS Enrollment: Asset Details

- 1 Number of Facilities: should always be “Single”
- 2 Asset Name: should follow the format of “(Asset Name) nn” where nn is a two digit sequential number beginning with 01 which advances for each asset of this type the participant registers
 - If registering aggregations across multiple load zones, the number sequence should start from 01 when the load zone changes (e.g. NEMA 01 NEMA 02 SEMA 01 SEMA 02)
- 3 Asset Type: should be “On-Peak Demand Resource”
- 4 MIC: this value should match the explanation provided for calculating the value.
- 5 Reduction Method: this value should be “Distributed Generation”
- 6 Meter Installed and Operational: this value should be “Yes”

CAMS Enrollment: Distribution Company Details

Distribution Company Details

Distribution Company State*
Massachusetts (MA)

Distribution Company (ID)*
Sunny Days Utility

Retail Account ID*
1234 567 8910 01

Utility Meter Numbers

- 1 Distribution Company State: must match supplied utility bill
- 2 Distribution Company (ID): must match supplied utility bill
- 3 Retail Account ID: must follow the format of "(Retail Account ID on supplied utility bill) + nn" where nn is the same two digit suffix from the Asset Name

CAMS Enrollment: Facility Address

Facility Address

ID	Facility Name*	
52783	Sunny Days Agg SEMA 01	
Address Line 1*	Address Line 2	
123 Sunshine Blvd	Address Line 2	
City*	State*	Zip*
Quincy	MA	02169

The address entered must match the supplied utility bill exactly and should represent an address in the correct Load Zone.

CAMS Enrollment: Confirm Location Details

Confirm Location Details

Based on the USPS standardized address, the closest PNode in the state is displayed below.
If you know or suspect that the displayed Load Zone is incorrect, please set **Suspect Load Zone** to **Yes** and provide a reason.

<p>USPS Standardized <input checked="" type="checkbox"/> Use this 1</p> <p>Address Line 1* 123 Sunshine Blvd</p> <p>Address Line 2 </p> <p>City* State* Zip* Quincy MA 02169</p>	<p>Location Details</p> <p>Load Zone (ID)* SEMA (4006)</p> <p>PNode (ID)* LD.N_QUINCY13.8 (4327)</p> <p>Suspect Load Zone* No 2</p>
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1 Keep the “Use this” box checked off

2 Keep the “Suspect Load Zone” field as “No”

CAMS Enrollment: Single Facility Details

Enter Single Facility Details

Asset Details

CR ID*	Asset ID*	Requested Operational Date*	#Facilities*	
<input type="text" value="9957"/>	<input type="text" value="73329"/>	<input type="text" value="09/01/2022"/>	<input type="text" value="Single"/>	
Asset Name*	Asset Type*	Lead Participant*		
<input type="text" value="Sunny Days Agg SEMA 01"/>	<input type="text" value="On-Peak Demand Resource"/>	<input type="text" value="ISO New England Inc (50051)"/>		
M.I.C.*	Reduction Method*	Meter Installed and Operational*	Meter Reader*	Has Generation*
<input type="text" value="13"/>	<input type="text" value="MW"/> <input type="text" value="Distributed Generation"/>	<input type="text" value="Yes"/>	<input type="text" value="ISO New England Inc"/>	<input type="text" value="Yes"/>

Facility Details

Synchronize to Grid? 1

Max Net Supply* 2

Max Load* 3

Facility Contact (600077985) 4

First Name* Last Name*

Email*

Work Phone* Ext

CAMS Enrollment: Single Facility Details

- 1 Synchronize to Grid: should always be “Yes”
- 2 Max Net Supply: this value should match the explanation provided for calculating the value.
- 3 Max Load: this value should match the explanation provided for calculating the value.
- 4 Facility Contact: the contact information of a member of the Lead Participant should be used

CAMS Enrollment: Generator Details

Enter Generator Details

Asset Details

CR ID*	Asset ID*	Requested Operational Date*	#Facilities*		
9957	73329	09/01/2022	Single		
Asset Name*	Asset Type*	Lead Participant*			
Sunny Days Agg SEMA 01	On-Peak Demand Resource	ISO New England Inc (50051)			
M.I.C.*	Reduction Method*	Meter Installed and Operational*	Meter Reader*	Has Generation*	
13	MW	Distributed Generation	Yes	ISO New England Inc	Yes

Generator Name* 1	In Service Date* 2	Max Generation* 3	Generator Type* 4	Fuel Type* 5	Controllable* 6	
Sunny Days Agg SEMA	11/30/2019	16	MW	Photovoltaic	Solar	No

CAMS Enrollment: Single Facility Details

- 1 Generator Name: should match the Asset's name
- 2 In Service Date: this date should be the earliest Commercial Operation Date on the Aggregated Residential Passive Asset file
 - This date must fall after the New Capacity Qualification Date of the Demand Capacity Resource, as specified in [MR-1, III.13.1.10](#)
- 3 Max Generation: this value should match the explanation provided for calculating the value
- 4 Generator Type: should always be "Photovoltaic"
- 5 Fuel Type: should always be "Solar"
- 5 Controllable: should always be "No"



CAMS Enrollment: Generator Details

Map Asset to Demand Capacity Resource

Asset Details

CR ID*	Asset ID*	Requested Operational Date*	#Facilities*		
9957	73329	09/01/2022	Single		
Asset Name*	Asset Type*	Lead Participant*			
Sunny Days Agg SEMA 01	On-Peak Demand Resource	ISO New England Inc (50051)			
M.I.C.*	Reduction Method*	Meter Installed and Operational*	Meter Reader*	Has Generation*	
13	MW	Distributed Generation	Yes	ISO New England Inc	Yes

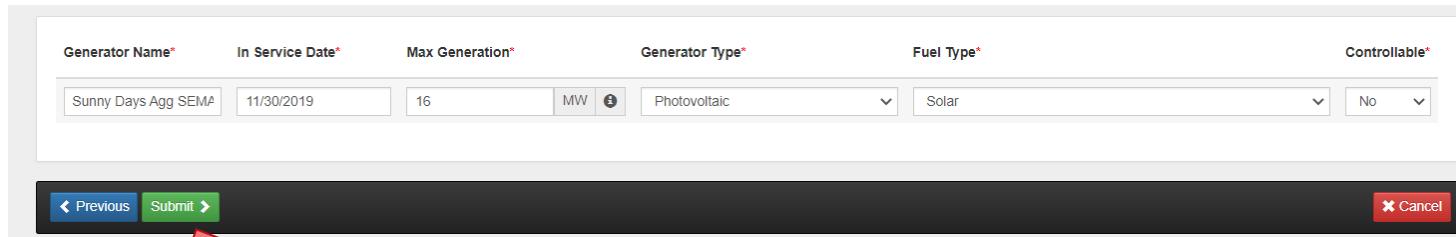
Capacity Resource Mapping

Capacity Resource (ID)*

The selected Capacity Resource (ID) must have qualified for: 1) the Distributed Generation measure type, and 2) a Capacity Commitment Period in which the residential installation commercial dates fall after the New Capacity Qualification Date, as specified in [MR-1, III.13.1.10](#)

CAMS Enrollment: Submitting the Asset for Approval

- After reviewing the data entered for the asset registration, submit the asset to ISO for approval



The screenshot displays a web form for asset registration. The form fields are as follows:

Generator Name*	In Service Date*	Max Generation*	Generator Type*	Fuel Type*	Controllable*
Sunny Days Agg SEMA	11/30/2019	16 MW ⓘ	Photovoltaic	Solar	No

At the bottom of the form, there are three buttons: a blue 'Previous' button with a left arrow, a green 'Submit' button with a right arrow, and a red 'Cancel' button with an 'x' icon. A red arrow points to the 'Submit' button.

CAMS Enrollment: Service Notes

Passive Asset Details

As Of *	Asset ID	Asset Name	Asset Status	Asset Type	Asset Sub-Type	Date Effective
09/01/2022	73329	Sunny Days Agg SEMA 01	PENDING	ON_PEAK	Single Facility	08/18/2022

Lead Participant (ID)

Meter Reader (ID)

Load Zone (ID)

Demand Capacity Resource (ID)

Basic Facility Generator Contacts Change Log Change Requests **Service Notes**

Filter By:

[+ Create New](#)

Service notes are not available for this asset.

1

1 Click the “Create New” button and follow the instructions to upload the following documents as attachments.

✓ A representative utility bill	✓ Explanations of specific value calculations
✓ *Sample contract	✓ Measurement & Verification Plan
✓ Completed Aggregated Residential Passive Asset Template	✓ Other supporting documentation

*Only necessary if this is the first aggregated residential passive asset being registered by the Participant

UPDATE EXISTING REGISTRATION

Customer Asset Management System (CAMS) Change Requests

Applicable Change Requests Covered in this Presentation

- The following change requests have unique instructions for Aggregated Residential Passive Assets:
 - Maximum Interruptible Capacity (MIC)
 - Maximum Load
 - Maximum Net Supply
 - Maximum Generation
 - Demand Capacity Resource Mapping



For guidance on making update(s) to the asset in CAMS, please refer to the [CAMS User Guide for Demand Asset and Demand Resource Maintenance](#).

UPDATE EXISTING REGISTRATION

*Maximum Interruptible Capacity, Maximum Load, Maximum Net Supply,
Maximum Generation*

What You Will Need

Necessary Documents

- ✓ Revised Aggregated Residential Passive Asset Template
- ✓ Explanations of specific value calculations
- ✓ Other supporting documentation

Revised Aggregated Residential Passive Asset Template

- Via the asset's CAMS Service Notes, obtain the previous version of the populated template from when the asset was initially registered
- Remove installations listed on the Aggregated Residential Passive Asset spreadsheet:
 - ✓ Delete any installations from the spreadsheet that no longer apply to the registration
 - ✓ Update the "Data As Of Date" on the template

Calculation Explanations

- An explanation of how the **Maximum Interruptible Capacity (MIC)**, **Maximum Generation**, **Maximum Load**, and **Maximum Net Supply** are calculated will need to be uploaded to the asset's service notes



Supporting Documentation

- Any other supporting documentation should be uploaded that will be helpful for ISO's review of the registration (i.e. a document that was used when calculating certain values associated with the asset)

CAMS Service Notes

Passive Asset Details

As Of *	Asset ID	Asset Name	Asset Status	Asset Type	Asset Sub-Type	Date Effective
09/01/2022	73329	Sunny Days Agg SEMA 01	PENDING	ON_PEAK	Single Facility	08/18/2022

Lead Participant (ID): ISO New England Inc (50051)

Meter Reader (ID): ISO New England Inc (50051)

Load Zone (ID): SEMA (4006)

Demand Capacity Resource (ID): Sunny Days (1234)

Basic Facility Generator Contacts Change Log Change Requests Service Notes

Filter By: All

+ Create New

Service notes are not available for this asset.

1

1 After the change request(s) is submitted to ISO for review and approval, click the “Create New” button and follow the instructions to upload the following documents as attachments.

- ✓ Revised Aggregated Residential Passive Asset Template
- ✓ Explanations of specific value calculations
- ✓ Other supporting documentation

UPDATE EXISTING REGISTRATION

Demand Capacity Resource

What You Will Need

- For updates to the [Demand Capacity Resource](#), include an explanation for the Resource re-mapping in the asset's CAMS Service Notes



Questions?

- Please reach out to ISO Participant Support if you have any questions on the content of this presentation
- Email: AskISO@iso-ne.com
- Call: (413) 540-4220

