



# PG&E Measured Savings for Summer Reliability (MSSR) Program

Commercial Program  
Aggregator Training

September 24, 2024

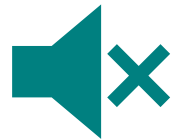
# Welcome!



This Aggregator Training is required before becoming an enrolled Aggregator in the program. Please type your Name and Company into the chat.



If you are viewing a recording of this training, please email us at [mssr@aesc-inc.com](mailto:mssr@aesc-inc.com) to confirm that you have reviewed the training.



Please keep microphones on mute throughout presentation.



Please type any questions in the chat. We will answer questions at the end of the webinar. The Q&A document answering all questions will be posted to our website.

# Agenda



- 1 Introduction
- 2 Overview
- 3 Project Eligibility
- 4 Process
- 5 Incentives and Payment
- 6 Program Tools
- 7 Questions

# AESC Introduction

**30+**

Supported/Administered  
Utility EE Programs

**120+**

Energy and Water Audits  
Performed Annually

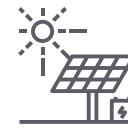
**2,500+**

Engineering Calculation  
Reviews Annually



## Engineering

- Integrated Energy Audits
- Retrocommissioning (RCx) Studies
- Project Development
- Technical Reviews
- Measurement & Verification (M&V)



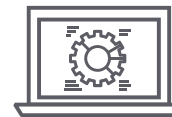
## Technology

- Emerging Technology Studies
- Renewable Technologies
- Grid Intelligence / Grid Integration
- Electric Vehicle Infrastructure
- Electrification / Decarbonization
- Virtual Power Plants
- Wastewater Treatment



## Programs

- **PG&E Market Access Program**
- **Marin Clean Energy EE Market Program**
- Strategic Energy Management (SEM)
- Duke Energy Custom Program
- PG&E Wastewater Optimization Program
- State of CA Energy Strategy & Support Program
- Self-Generation Incentive Program (SGIP)
- CalNext Emerging Technologies Program



## Software

- Energy Project Management Platform (Praxis)
- Meter-Based M&V
- Utility Application Processing Platforms
- Online Audits and Customer Engagement
- Custom Software Development

# MSSR Programs Team



Rosie Ballo



Andrew Nishida



Chaz Branson



Allison Bially



Jon Kingsley



Keith Valenzuela



Ryan Jacoby



Justin Fricker



Eric Bornstein



Olya Singer



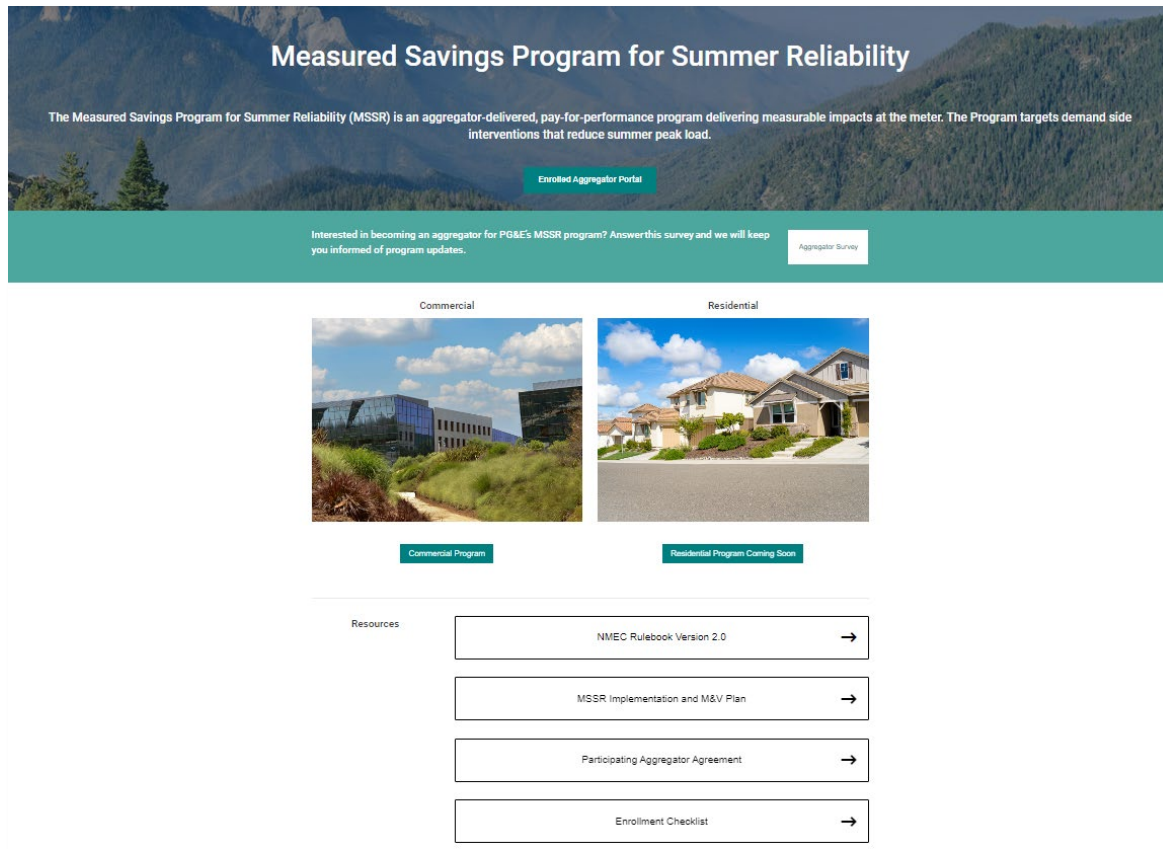
Chrissy Crowell



# Available Resources

## Informational Website (Public):

<https://www.aesc-inc.com/measured-savings-program-for-summer-reliability/>



**Measured Savings Program for Summer Reliability**

The Measured Savings Program for Summer Reliability (MSSR) is an aggregator-delivered, pay-for-performance program delivering measurable impacts at the meter. The Program targets demand side interventions that reduce summer peak load.

[Enrolled Aggregator Portal](#)

Interested in becoming an aggregator for PG&E's MSSR program? Answer this survey and we will keep you informed of program updates. [Aggregator Survey](#)

**Commercial** **Residential**

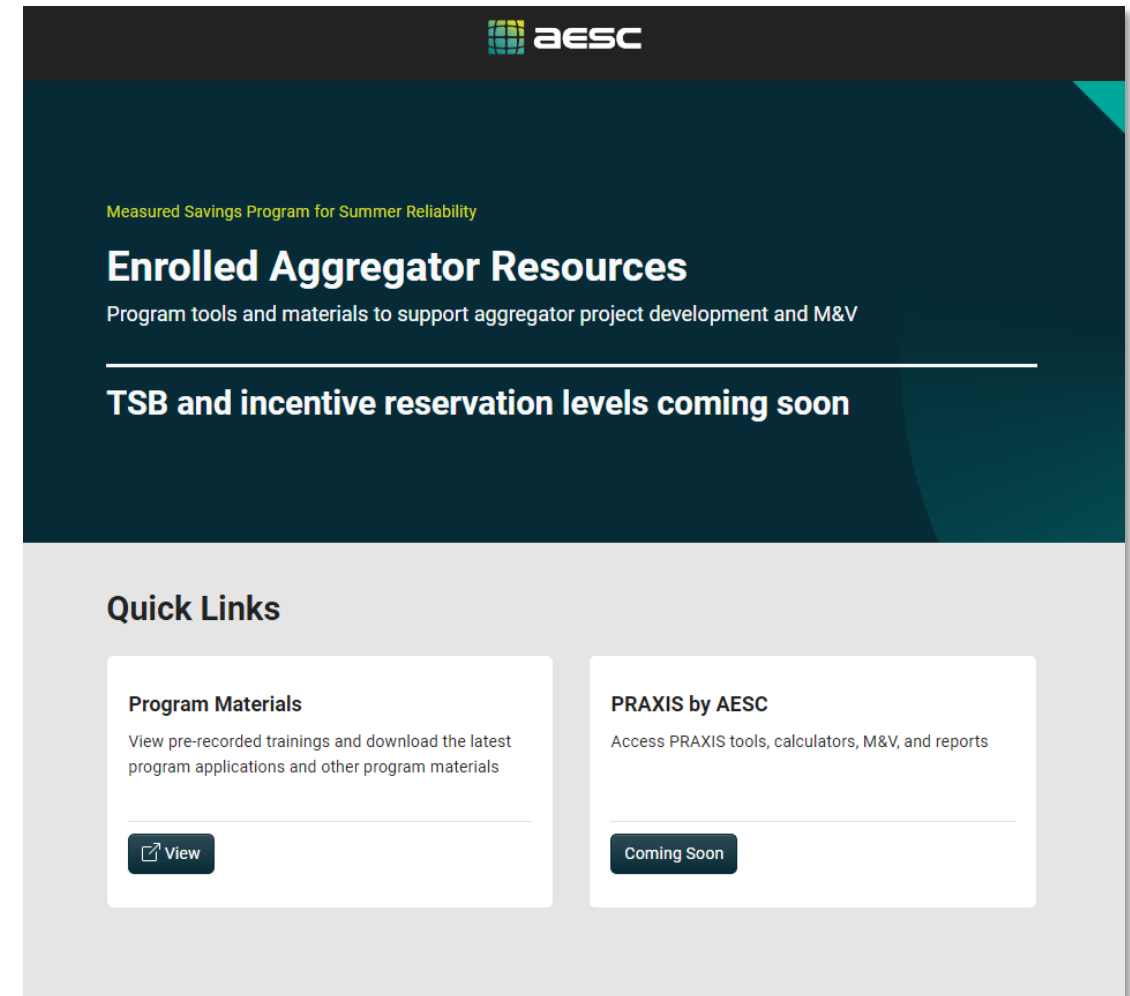
[Commercial Program](#) [Residential Program Coming Soon](#)

**Resources**

- [NMEC Rulebook Version 2.0](#)
- [MSSR Implementation and M&V Plan](#)
- [Participating Aggregator Agreement](#)
- [Enrollment Checklist](#)

## Aggregator Portal (for Enrolled Aggregators):

<https://mssr.aesc-inc.com/>



**aesc**

Measured Savings Program for Summer Reliability

### Enrolled Aggregator Resources

Program tools and materials to support aggregator project development and M&V

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### TSB and incentive reservation levels coming soon

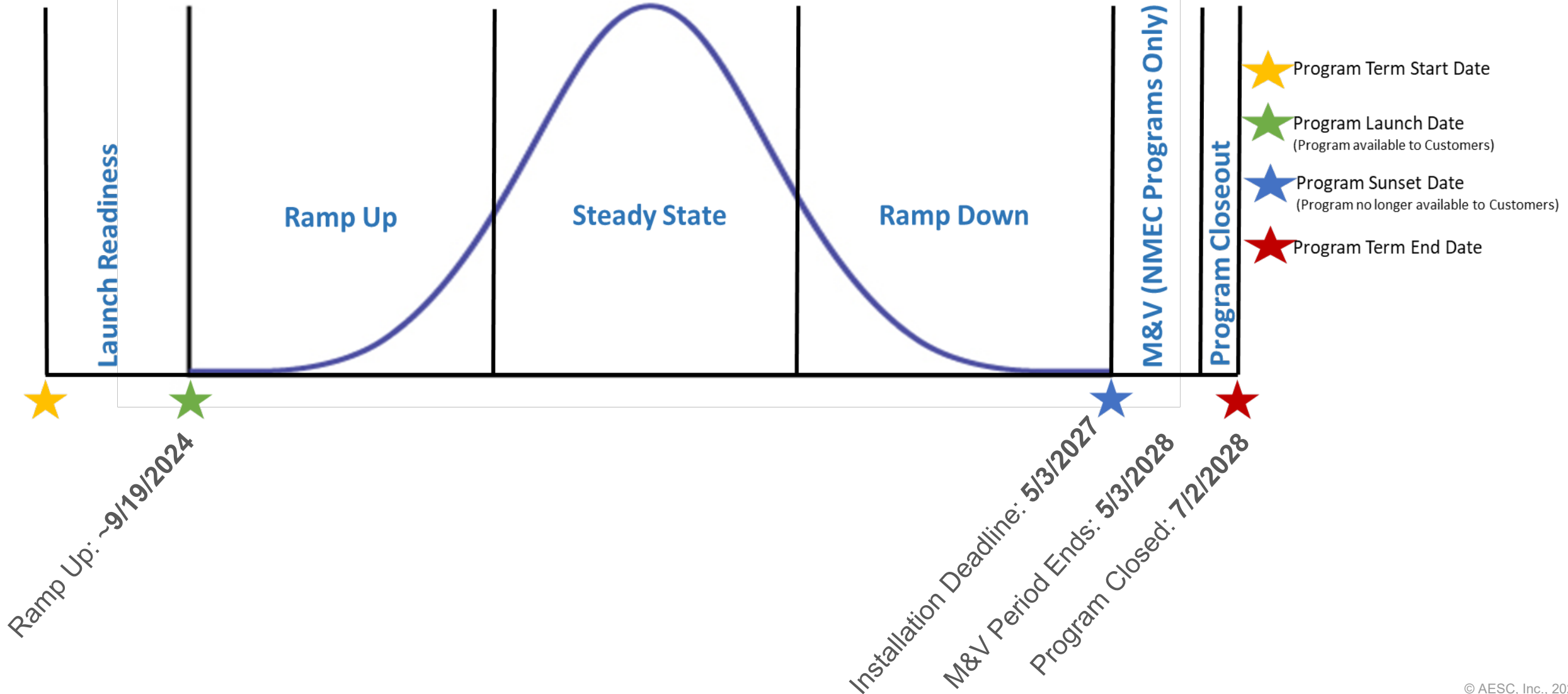
**Quick Links**

- Program Materials**  
View pre-recorded trainings and download the latest program applications and other program materials  
[View](#)
- PRAXIS by AESCC**  
Access PRAXIS tools, calculators, M&V, and reports  
[Coming Soon](#)

# Important Dates (Commercial)

## Program Lifecycle\*

\*not to scale



# What is Total System Benefit?

**Incentives are based on the dollar value of Total System Benefit (TSB) of installed projects.**

## **What is Total System Benefit (TSB)?**

*TSB = (Hourly kWh savings \* Hourly Avoided Grid Costs \* Weighted Effective Useful Life (EUL) of Measures) + (Monthly therm savings \* Monthly Avoided Gas Costs \* Weighted EUL of Measures)*

## **What are avoided grid costs?**

CPUC defined avoided costs related to generation and distribution of energy as detailed in the Avoided Cost Calculator (ACC). Components of the avoided costs of electricity include generation energy, generation capacity, ancillary services, transmission and distribution capacity, and decarbonization policy compliance.



# Overview and Market Pathways

Goal	Quantity
TSB	\$64,266,675
Commercial Incentive Budget:	\$22,364,802



## Main Pathway: Population-based NMEC

- Majority of MSSR projects will use this pathway
- Site must meet Pop-NMEC eligibility requirements
- Savings adjusted based on granular profiles
- Non-routine Events (NREs) will be flagged based on set-thresholds:
  - Savings exceed 50%
  - Post-Installation CV(RMSE) deteriorates to greater than 0.75
- Standardized NRE adjustment uses assigned savings based on Aggregator's realization rates
- \$0.35/TSB Incentive Rate



## Alternate Pathway: Site-Specific NMEC

- Approved on case-by-case basis, for projects that:
  - Don't meet Pop-NMEC requirements
  - Have significant savings
  - Are Cost-effective
- NRE adjustment and savings assessment are at the individual site level (GPs not used)
- Projects are subject to heavier PG&E and CPUC review
- \$0.33/TSB Incentive Rate

# Site Eligibility

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# Commercial Program Site Eligibility (Pop-NMEC)



## Location and Service

- Located in PG&E Territory (except MCE customers)
- Customer pays the Public Purpose Program Surcharge
- Site is not currently participating, and has not participated in the past 12-months, in a CPUC ratepayer-funded energy efficiency program;



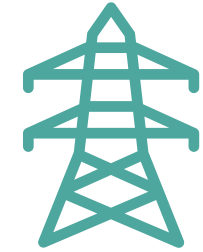
## Site Requirements

- Non-residential, non-industrial, and non-agricultural (though exceptions may be made on case-by-case basis)
- Sites with distributed energy resources (e.g., solar, fuel cells, batteries), must have been completed installation at least 12 months prior to the EE intervention;
- Customers cannot make material changes to their site or operations, including implementing new EE measures, or installing new on-site distributed energy resources during the 1-year M&V period.



## Data Requirements

- 12 consecutive months of energy usage data is available (>90% of values per month)
- Model fit needs to be  $< 1.0$  Coefficient of the Variation of the Root Mean Square Error (CV(RMSE)) and site must pass interval data sufficiency analysis;



## Projects/Measures

- Project must save electric energy (produce positive electric benefits)
- The program prefers gas savings measures that are accompanied by electric savings measures; however, AESC will screen and approve gas measures on a case-by-case basis.
- Projects must demonstrate an effective useful life (EUL) of longer than 1 year
- Project is cost-effective

# Commercial Program Site Eligibility (Site-NMEC)



## Location and Service

- Same as Pop-NMEC Eligibility Requirements



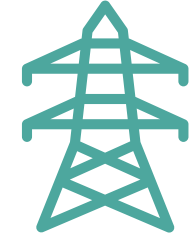
## Site Requirements

- AESC will accept Site-NMEC projects on case-by-case basis
- Do not meet Pop-NMEC screening requirements



## Data Requirements

- 12 consecutive months of energy usage data is available;
- 10% forecasted savings at the meter
- Model fit needs to be  $< 0.25$  Coefficient of the Variation of the Root Mean Square Error (CV(RMSE)) and site must pass interval data sufficiency analysis;
- Fractional Savings Uncertainty (FSU) is less than 50% at 90% confidence



## Measures

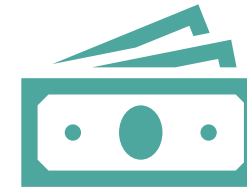
- Project size is large (savings greater than \$250,000 TSB)
- Project is cost-effective (ideally TRC without Admin  $> 1.20$ )

# Program Coordination



## Demand Response (DR)

- Enrollment with PG&E DR is does not affect MSSR eligibility
- Savings for DR event days will not be counted toward MSSR
- Aggregator required to declare if project is enrolled in DR



## On-Bill Financing (OBF)

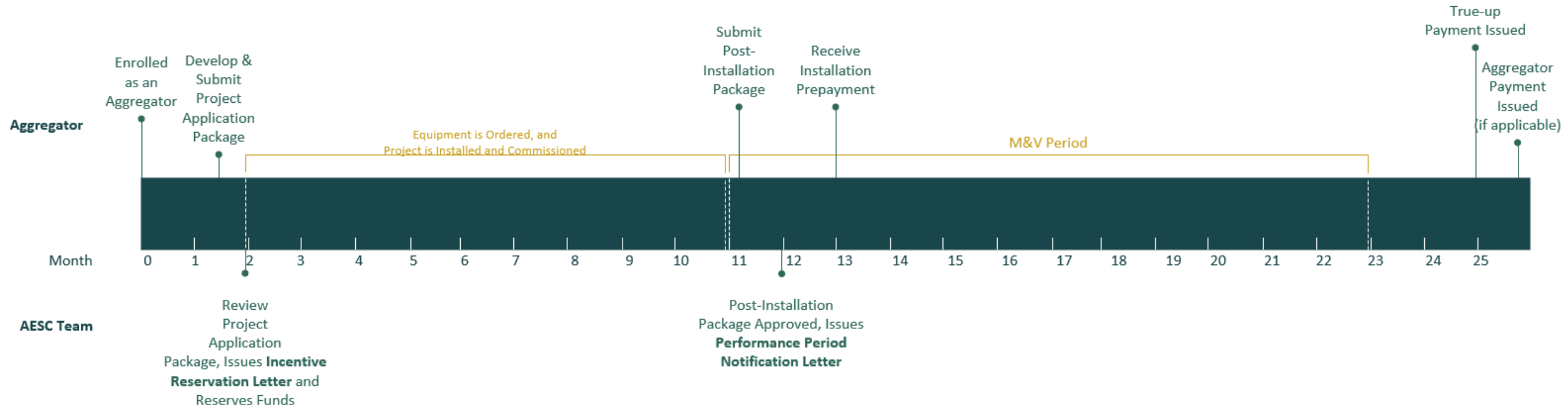
- AESC and PG&E are working on process for combining MSSR incentives and PG&E OBF funding
- Adhere to applicable requirements:
  - OBF Project requirements
  - PG&E's Financing Platform Rulebook

# Process

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# Project Process



## Incentive Reservation Letter (IRL):

- Pre-Installation Project Approval
- Required before Customer purchases equipment or construction starts on project.
- Project must be installed and commissioned within nine months (270 days)

## Performance Period Notification Letter (PPNL):

- Post-Installation Project Approval
- Required before receiving Installation Prepayment

# Commercial EE Program - Enrollment

## MSSR Aggregator Managers

Program updates and initial enrollment support will be communicated through [mssr@aesc-inc.com](mailto:mssr@aesc-inc.com).



**Rosie Ballo**  
[rballo@aesc-inc.com](mailto:rballo@aesc-inc.com)



**Ryan Jacoby**  
[rjacoby@resource-innovations.com](mailto:rjacoby@resource-innovations.com)



# Aggregator Enrollment

## 1. Sign the Participating Aggregator Agreement

- Email your signed PAA to [mssr@aesc-inc.com](mailto:mssr@aesc-inc.com).
- AESC will return your fully executed agreement and provide a point-of-contact for the program.

## 2. Gather Aggregator Enrollment Checklist Items

AESC will request the following from aggregators:

- W-9
- 2-3 company contacts to be granted access to the password-protected Aggregator Portal
- Company logo and contact email to list on AESC's website (optional)

## 3. Upload checklist items to your Private SharePoint Folder

- Each aggregator will be given a link to a private SharePoint folder where all enrollment and project documents will be uploaded.
- Include proof of insurance per the PAA.

## 4. Confirm your uploads

- Email your point-of-contact (and cc [mssr@aesc-inc.com](mailto:mssr@aesc-inc.com)) when all enrollment documents have been uploaded.
- Include the requested company contact information in your message.

## 5. Enrollment Complete!

# Commercial Program – Project Submission

## 1. Enroll as an Aggregator

- Participating Aggregator Agreement

## 2. Identify potential projects and sites

## 3. Verify site program eligibility

- Use Customer Site Eligibility Tool (CSET)

## 4. Estimate Incentives

- Use Value Estimator Tool (VET)

## 5. Enroll Projects to Reserve Incentives

- Submit project application package
- AESC performs QA/QC review
  - For Site-NMEC projects, Aggregator will need to submit Project Feasibility Study, and AESC team will review before submitting to PG&E
- AESC communicates initial reservation in **Incentive Reservation Letter (IRL)**

## 6. Install Project (blackout period)

## 7. Submit post-installation package

- Submit final project info and calcs
- AESC performs QA/QC review
  - For Site-NMEC projects, Aggregator will need to submit Installation Report, and AESC team will review before submitting
- AESC communicates final incentive amount with **Performance Period Notification Letter (PPNL)**
- AESC will issue Incentive Prepayment will be processed in the month following when PPNL was issued

## 8. 12 months of M&V (performance period)

- AESC tracks project performance using Pop-NMEC M&V methodology
- Check your project's performance!

## 9. True-up Incentive payments

- At the end of M&V period, AESC will process True-up and Aggregator incentive payments
- Payments are processed in the calendar quarter following completion of M&V

# Commercial Program - Project Application Package

## Project Application Package

- Customer Site Eligibility Tool (CSET) Results
- Value Estimator Tool (VET) Results
- Energy savings calculations
- Signed Customer Project Application
- Scope of Work
- Equipment Performance Specifications
- Copy of Customer's PG&E Bill
- Preliminary Pricing Documentation

## As Needed:

- Identification of Potential NREs
- Generation Data from Non-IOU Fuel Source
- Load Shifting Data from Energy Storage
- Operations, Maintenance, and Monitoring (OM&M) Plan
- OBF Signed Application

## Site-NMEC Only:

- M&V Plan
- Project Feasibility Study
- Geotagged Pre-installation photos (Site-NMEC)

# Commercial Program - Post-Installation Package

## Post-Installation Package

- Signed Scope of Work
- Geotagged Photos of Installed Measures
- Final Specifications for Installed Equipment
- Project Invoice
- Incentive Recipient Certification  
of Contractor Licenses and Permits Form

## As Needed:

- Revised Energy Savings Calculations
- Revised VET Output
- Contractor Certification of HVAC Permits  
and License Form (for HVAC projects)

## Site-NMEC Only:

- Project Installation Report

# Incentives

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# Commercial Incentive Structure Overview

## Rates:

- Pop-NMEC Comm: \$0.35/TSB
- Site-NMEC Comm: \$0.33/TSB

## Capping (Lesser of):

- 120% of Forecasted Incentive Amount (forecasted TSB x incentive rate)
- 110% of Project Cost
- Aggregated by Quarterly Aggregator Cohort

## Timing – 2 to 3 Payments per Project

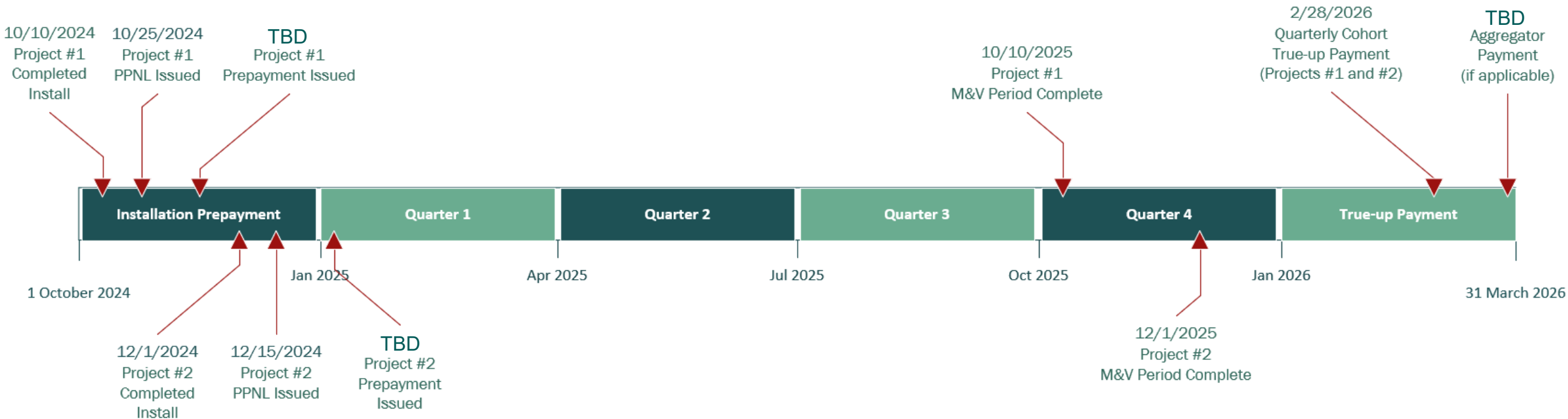
- **Incentive Prepayment:**
  - Completed Project Approved Savings (after install)
  - 45% of Forecasted Incentive Amount
- **Incentive True-up Payment:**
  - Completed Project Measured Savings (After 12-mo M&V)
  - Payments are grouped by Quarterly Aggregator Cohort, up to 100% of project cost
- **Aggregator Payment:**
  - If incentive earned exceeds project cost, this payment will be up to 10% of the project cost.

## Other notes:

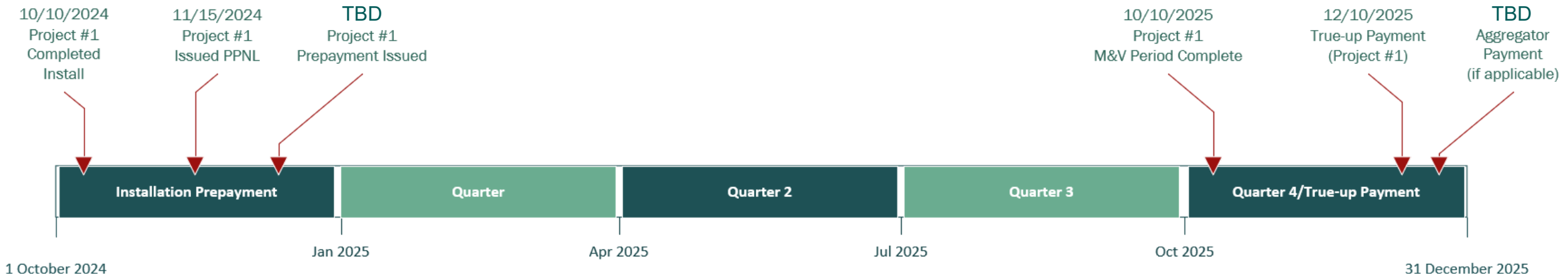
- 100% of incentives are signed over to Aggregator by customer to buy-down the project

\*Quarterly Aggregator Cohort  
= Projects for a single Aggregator  
grouped by when M&V started.

# Commercial Program Payments Example (Pop-NMEC)



# Commercial Program Payments Example (Site-NMEC)





# Program Tools

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# Customer Site Eligibility Tool (CSET)

## Eligibility

- Commercial sites in PG&E territory
- 12 consecutive months of energy usage data and no less than 10% missing data in a given month
- Building “fit” for Population-based NMEC modeling approach (requires  $< 1.0$  Coefficient of the Variation of the Root Mean Square Error (CVRMSE))
- Not served by Marin Clean Energy (MCE)
- No past EE program participation in last 12 months
- No on-site generation

Step 1  
Tell us a little about your site

Site Info

Building Name or Street Address ⓘ  
Building Name or Street Address

Electric SA ID ⓘ  
Service Account ID

Electric Meter Number ⓘ  
Meter Number

Have you confirmed that this meter is charged the public purpose program surcharge?  ⓘ

Automated version of the  
Customer Site Eligibility Tool  
will be released in late 2024

# Value Estimator Tool (VET)

## Value Estimator Tool

Aggregator provides:

- Installation completion date
- Total project cost\*
- Customer zip
- Measure(s)
- First-year savings (kWh/Therms)

VET provides estimates:

- Estimated TSB
- Estimated Incentives
- Estimated TRC

Automated version of the Value Estimator Tool will be released in late 2024!

Project Name		Sample Project
Installation Completion Date		12/31/2023
Total Project Cost		\$100,000.00
Customer Zip		94577
Customer CZ		CZ_3A
M&V Start Date		1/1/2024
Install Quarter		

### Electric Measures

Measure	First-Year Electric Savings (kWh)	EUL	Lifecycle Savings (kWh)
HVAC Retrofit	100,000	15	1,500,000
<b>Total</b>	100,000		1,500,000

### Gas Measures

Measure	First-Year Gas Savings (Therms)	EUL	Lifecycle Savings (Therms)
HVAC Retrofit	10,000	15	150,000
Boiler	1,000	20	20,000
<b>Total</b>	11,000		170,000

\*Project costs reported should be limited to the costs required to install and commission the energy efficiency measure.

## Praxis by AESCC

- Data provided monthly by PG&E
- Provides portfolio and project level information
- Identifies and flags irregular energy use
- Tracks incentive payments

## Access

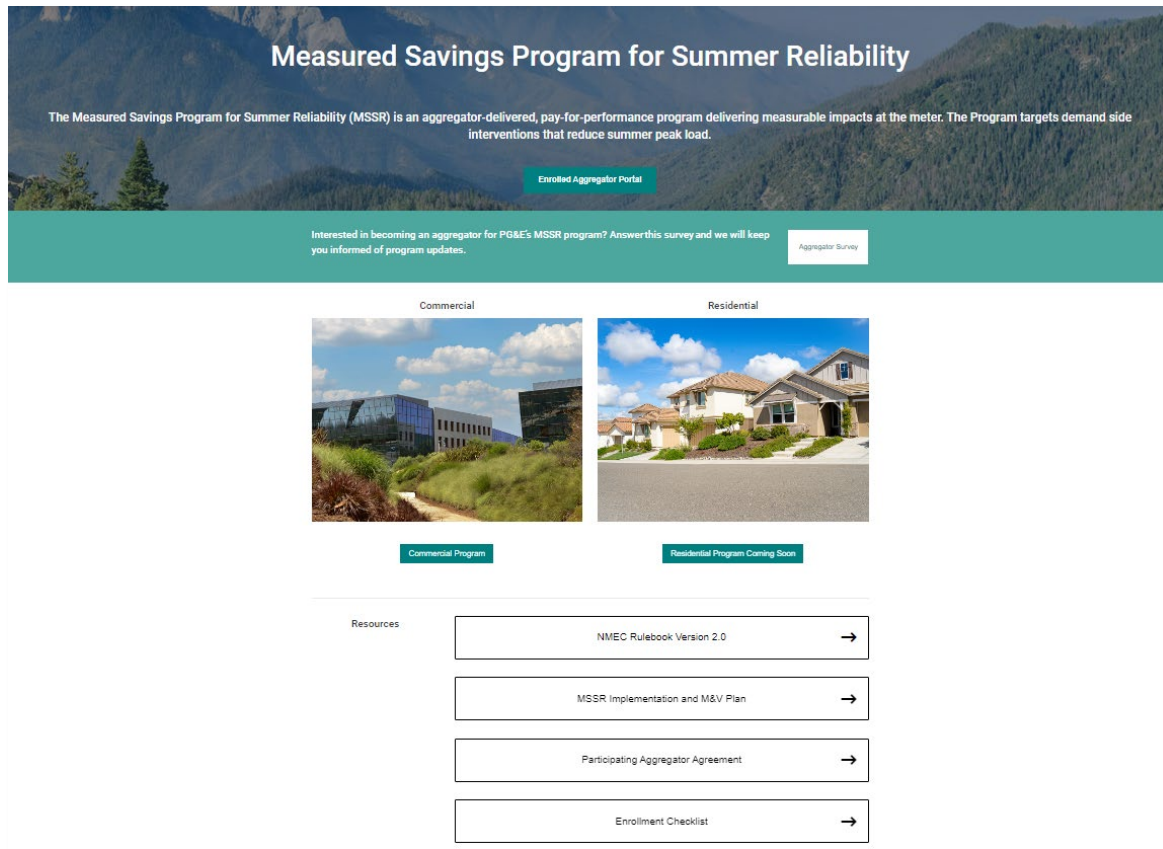
- All Participating Aggregators with active projects will have access to Praxis
- When your first project enters M&V, AESCC team will train Aggregator on how to use



# Available Resources

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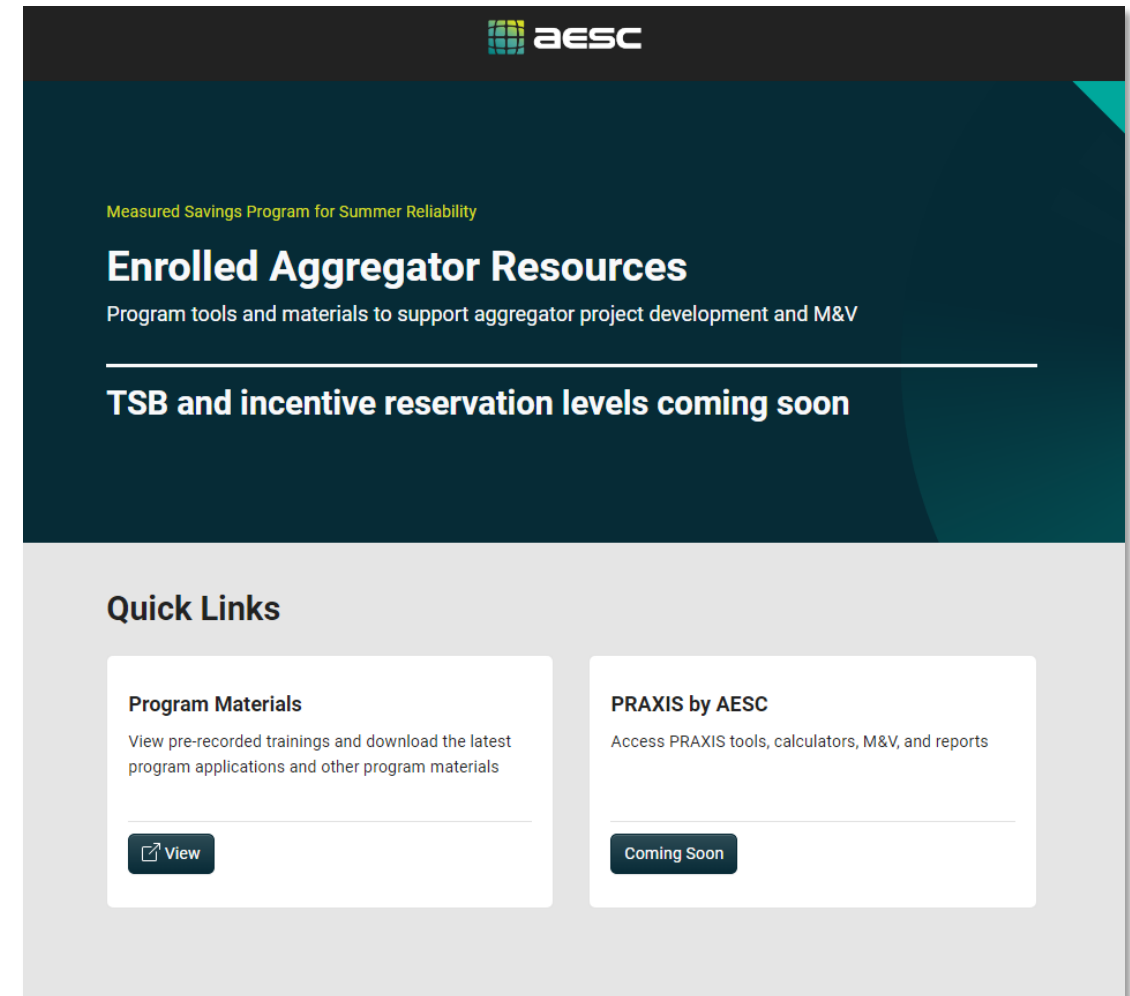
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**aesc**

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# Questions?

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Thank you