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# TECHNICAL ADVISORY GROUP

## HAWAII PBF PROGRAM

October 16, 2024

11:00 a.m. to 12:00 p.m.

Hawai'i Energy office at 45 N. King Street, Suite 500, Honolulu (with virtual option via Teams)

# REMINDERS

- Remote participants, please mute your lines when you aren't speaking – we'd like to keep the lines open so you can easily join the conversation
  - You may also use the “raise hand” or chat functions
- Please identify yourself and your organization when speaking
- We encourage participants to ask questions and contribute their constructive comments
  - Your silence during a discussion implies that you agree

# COMMISSION WELCOME

# AGENDA & INTRODUCTIONS

JENNIFER BARNES

ENERGY EFFICIENCY MANAGER TEAM

# AGENDA

- 11:00 – Agenda & Introductions
- 11:05 – EM&V and PY23 Verification Plan Overview
- 11:25 – Avoided Cost Update
- 11:35 – Update on the PBFA RFP
- 11:40 – Capturing Societal Benefits in PBFA Portfolio
- 12:00 – Adjourn



# INTRODUCTIONS BY ORGANIZATION

FALL 2024 TAG MEETING

# PY24 EM&V OVERVIEW

TAMI RASMUSSEN

ENERGY EFFICIENCY MANAGER TEAM

# GENERAL CADENCE OF EM&V ACTIVITIES



Calendar Year	CY2023						CY2024						CY2025																
Month	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep		
Program Year	PY23												PY24												PY25				
<b>EM&amp;V Planning</b>			PY24 Planning															PY25 Planning											
<b>Verification</b>																													
Workplan PY23 LMI PIM Award																													
PY23 Verification PY23 Program Savings Claims and Award																													
<b>Technical Reference Manual Updates</b>																													
Mid-year Update (current PY) TRM																													
Full-year Review (upcoming PY) TRM																													
<b>Calendar Year EM&amp;V Reports</b>			PY22 reports												PY23 reports												PY24 reports		



# PY24 EM&V RESEARCH PLAN



## ■ Similar to PY22

### PY23 Verification

- Database review
- On-site surveys and engineering desk reviews for
- Verification of award claim and island equity

### TRM reviews

- PY24 TRM Mid-year update
- PY25 TRM Review

### New for PY24!

- Integrated custom project review

# NEW! CUSTOM PROJECT REVIEW TASK



- **New task:** evaluating custom projects on an on-going basis to review Hawai'i Energy's assumptions and data requirements
  - **Monthly meeting** with EM&V and Hawai'i Energy to review custom projects and documentation
  - **Iteration** with Hawai'i Energy with questions and follow-up to ensure the necessary information is being gathered and savings assumptions being applied
  - => **Higher custom savings realization rates**

This is a recommendation that has been considered and suggested by Hawai'i Energy and AEG and is included in the recent update of the Custom Guidance Document.



# HISTORY OF EM&V



## EM&V varies over time, why is that

- At program initiation, usually more EM&V to gauge how program is working, collect market data to inform program design
- Base EM&V activities consistent over time
  - TRM reviews
  - Verification of savings (on-sites, database review)
- Other studies are issue-dependent or periodic (not every year)
  - E.g., EEPS research, net-to-gross / attribution studies, market research for new programs

COVID19 also interrupted program and EM&V activity

# SELECT EM&V HISTORY

	All PYs	PY09	PY10	PY11	PY12	PY13	PY14	PY15	PY16	PY17/ CY18	CY19	CY20	CY21	CY22	CY23
<b>Impact Evaluation: Verification</b>															
Database review	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Engineering desk reviews	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
On-site verification		✓	✓	✓	✓		✓	✓		✓	✓			✓	✓
Verification of Award Claim, Island Equity Calculations		✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓
<b>Other Studies</b>															
Non-Energy Benefits Literature Review				✓											
Economic Impact Analysis			✓												
Net-to-Gross (NTG) Assessment				✓						✓					
Integrated Building Design and Construction Standards Verification							✓								
Small Business Direct Install Lighting (SDBIL) Verification							✓								
Peer Group Comparison Control Group Analysis				✓											
Solar Water Heating Billing Analysis			✓												
Condominium Sub-metering Analysis					✓	✓									
Peer Program Incremental Savings Approach										✓					
LED Lifetime Savings										✓					
Peer Stoppage Treatment Study												✓			

- Calendar Year Reports document the EM&V & related studies back to PY2009
- Table to right is an excerpt only
- Verification activities have been conducted every year while a variety of other studies and investigations are conducted periodically

# FORWARD LOOKING EVALUATION ACTIVITIES (FOR PY24+)



## Planning activities underway for PY25+ evaluation

- Likely to include additional evaluation activities that have been done periodically for the PBFA:
  - Participating customer surveys
  - Measurement / EUL studies for updates to TRM
  - Market research and analysis
  - Process evaluation

Most of these activities may be conducted every ~ 3 years, so we can stagger them

# PARTICIPATING CUSTOMER SURVEYS



## Task Overview

- Conduct phone / web surveys with a sample of participating customers
- Verify measure installation
- Gather measure parameters of interest (such as for TRM updates or program requests)
- Explore customer satisfaction

FALL 2024 TAG MEETING

## Task Outcomes

- Ensure measures are being installed
- Collect information from participants about their experience with the program
- Gather information that may inform impact evaluation findings

Task  
Frequency

Every  
3  
years

# MEASUREMENT / EUL STUDIES FOR UPDATES TO TRM



## Task Overview

- Additional primary research to update TRM savings values
- Ensure they are Hawaii-specific
  - Solar water heating savings inputs
  - Hawaii-specific measure load shapes
  - Effective useful life review

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## Task Outcomes

- More reliable, accurate TRM savings values that are appropriate for Hawaii
- (TRM values are often based on generalizations)

Task  
Frequency

Every  
3  
years



# MARKET RESEARCH AND ANALYSIS



## Task Overview

- Conduct periodic market studies to get Hawaii-specific inputs
- From trade allies, non-participating customers, other market actors
  - TRM net-to-gross values
  - Codes and standards attribution update

## Task Outcomes

- More reliable, accurate savings assumptions appropriate for Hawaii

Task  
Frequency

Every  
3  
years

# PROCESS EVALUATION



## Task Overview

- Identify ways to improve the effectiveness and efficiency of program implementation
- Targeted process evaluations may also be warranted to address specific issues
  - E.g., explore areas with low savings realization rates from impact

FALL 2024 IMPACT REPORT

## Task Outcomes

- Independent, expert review of a program or issue
- Recommendations for improving the programs and increasing realized energy savings

## Task Frequency

At year 1 for new programs; then every 3-5 years

# POLL ON INTEREST IN / VALUE OF EM&V ACTIVITIES



## **Rank potential EM&V activities in order of value / preference**

Provide comments re any input on EM&V activities

- Participating customer surveys
- Special studies for updates to TRM savings assumptions
- Market research and analysis
- Process evaluation
- Other (specify activity)

# UPDATE ON AVOIDED COST ACTIVITY

TAMI RASMUSSEN  
ENERGY EFFICIENCY MANAGER TEAM

# AVOIDED COSTS – BACKGROUND



## Avoided costs are used to calculate program total resource benefits (TRB)

- TRB = net present value of the lifetime of avoided energy and demand savings from program measures
- Inputs to avoided costs:
  - **discount rate**
  - **energy costs** \$/kWh (based on HECO schedule Q rates)
  - **capacity costs** \$/kW (based on HECO's expected new capacity)
  - (T&D losses are already accounted for in customer level savings)



The primary benefits of demand-side resources are the avoided costs related to generation and distribution of electricity




# UPDATE FOR PY25-PY27 – AVOIDED ENERGY COST



## Updates for PY25-27 (compared to PY24)

- Higher expected costs to generate energy for islands compared to PY24
- PY25 cost forecast based on actual HECO schedule Q rates for PY23 (July 1, 2023 – June 30, 2024) escalated at 3% per year
  - Mostly fuel costs, plus small share of variable O&M

Annualized Avoided Energy Costs (\$/kWh per year)

County	PY	Value	Unit
Oahu 	PY24	0.121	\$/kWh-Yr 2024\$
	PY25	0.209	\$/kWh-Yr 2025\$
	PY26	0.215	\$/kWh-Yr 2026\$
	PY27	0.221	\$/kWh-Yr 2027\$
Maui 	PY24	0.163	\$/kWh-Yr 2024\$
	PY25	0.210	\$/kWh-Yr 2025\$
	PY26	0.216	\$/kWh-Yr 2026\$
	PY27	0.222	\$/kWh-Yr 2027\$
Hawaii 	PY24	0.177	\$/kWh-Yr 2024\$
	PY25	0.212	\$/kW-Yr 2025\$
	PY26	0.218	\$/kW-Yr 2026\$
	PY27	0.225	\$/kW-Yr 2027\$




# UPDATE FOR PY25-PY27 – AVOIDED CAPACITY COST



## Updates for PY25-27 (compared to PY24)

- No new capacity planned for Maui
- New capacity planned for Hawaii (a 60 MW combined cycle facility, 2030)
- New capacity planned for Oahu (a 50 MW Combustion Turbine, 2032)

Annualized Avoided Capacity Costs (\$/kW per year)

County	PY	Value	Unit
 Oahu	PY24	223	\$/kW-Yr 2024\$
	PY25	299	\$/kW-Yr 2025\$
	PY26	306	\$/kW-Yr 2026\$
	PY27	313	\$/kW-Yr 2027\$
 Maui	PY24	650	\$/kW-Yr 2024\$
	PY25	0	\$/kW-Yr 2025\$
	PY26	0	\$/kW-Yr 2026\$
	PY27	0	\$/kW-Yr 2027\$
 Hawaii	PY24	0	\$/kW-Yr 2024\$
	PY25	139	\$/kW-Yr 2025\$
	PY26	142	\$/kW-Yr 2026\$
	PY27	145	\$/kW-Yr 2027\$

# PBFA RFP UPDATE

ASHLEY NORMAN

HAWAII PUBLIC UTILITIES  
COMMISSION



# OVERVIEW

The Hawaii Public Utilities Commission released a request for proposals (RFP) to select a Public Benefits Fee Administrator (PBFA, aka "Hawai'i Energy"), which will implement the State's programs in service of the energy efficiency portfolio standard and related clean energy policies and objectives

- **SCOPE:** Administration of both the PBFA as well as the State's Electric Vehicle Charging Station (EVCS) rebate program (established in statute as HRS § 269-72 and § 269-73)
- **BUDGET:** Overall budget is \$130,000,000 and includes PBFA and EVCS administration, transition costs, and performance award
- **TERM:** begin on or about February 14, 2025 through March 31, 2029
  - Option to extend for one additional three-year period (or portion thereof)

# PBFA RFP SCHEDULE

Activity	Scheduled Dates
RFP Released	Friday, September 20, 2024
Pre-proposal Conference (virtual)	Thursday, October 17, 2024
Written Questions Due	Monday, October 21, 2024
Responses Issued	Monday, October 28, 2024
<b>Proposals Due</b>	<b>Friday, November 22, 2024</b>
Discussions with Priority-listed Offerors	Tues. – Thurs. December 17-19, 2024
Best and Final Offers Due	Monday, January 13, 2025
Provider Selection and Award	On or around January 27, 2025
Contract Start Date	On or around February 14, 2025



# VALUING SOCIETAL BENEFITS IN THE PBFA PORTFOLIO

JENNIFER BARNES

ENERGY EFFICIENCY MANAGER TEAM

# MORE OPTIONS FOR PROMOTING SOCIETAL BENEFITS IN PBFA

Simple & Easy to Execute



Complex to Execute

Leverage Goal Setting Process

Incorporate into Avoided Costs

Develop New Framework

Establish Carve Outs or Minimums for Desired Customers, Sectors or Measures

Use a Societal Discount Rate in the Calculation of Avoided Costs

Incorporate Societal Benefits into Avoided Costs

Develop New Societal Cost Test

# PRIORITY SOCIETAL BENEFITS

- We want to understand the TAG's priorities for capturing societal benefits in the PBAF
- We'd like the attendees to rank the listed societal benefits from "most important" to "least important"
- If you there is a benefit not listed and you select "other", please be prepared to share your choice

Economic development/job creation

Improved occupant health, comfort & safety

Water savings

Reduced maintenance costs

Energy security

Grid resilience

Utility bill savings

GHG reductions

Improved public health

Increased productivity

Improved air quality

Low-income customer non-energy benefits

Other

# NEXT STEPS & WRAP UP

JENNIFER BARNES

ENERGY EFFICIENCY MANAGER TEAM

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# QUESTIONS?

- 
- Please contact Jennifer Barnes at 510-756-1501 or [jenniferbarnes@2050partners.com](mailto:jenniferbarnes@2050partners.com).
  - Meeting materials will be posted on [www.HawaiiEEPS.org](http://www.HawaiiEEPS.org)