DELAWARE
EEAC
Energy Efficiency
Advisory Council

EM&V Committee Meeting

July 9, 2024

Optimal ENERGY Integrated Energy Resources

Agenda

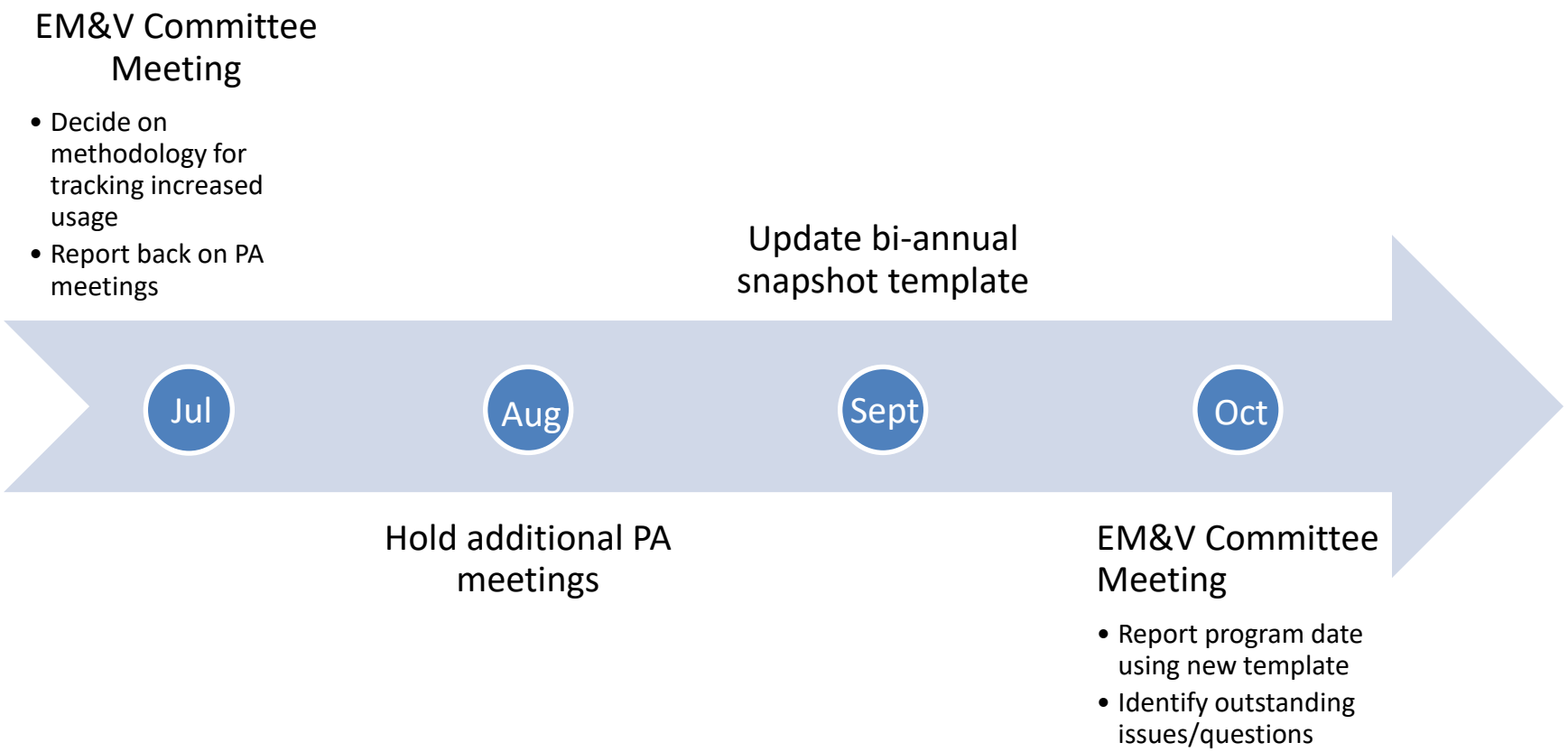
1. Welcome and Introductions
2. 2023 Q3-Q4 Bi-Annual Snapshots
3. Savings Allocation/Reporting Framework Updates
4. Reconciliation Reporting Draft Template
5. TRM Updates
6. Next Steps and Public Comment

Savings Allocation/Reporting Framework Updates

Savings Allocation/Reporting Framework: Path Forward

- Work since April
  - Scheduled/held some meetings with individual PAs where potential overlap exists to discuss process for future coordination
- Work to be done
  - Schedule additional meetings with individual PAs
  - Decide on fuel-switching reporting
  - Update reporting template

Timeline



- Goal to have as much in place in time for 2024 Q1-Q2 bi-annual snapshots as possible

Summary of Program Meetings

PA #1	PA #2	Notes
DNREC	DEC	• Limited overlap in programs. Some potential overlap between EEIF and C&I lighting projects, but small number of project • Solution likely notifying DEC when EEIF lighting projects in DEC service territory come in
DNREC	SEU	• In many cases, SEU C&I programs target different customers (i.e. non-profits) so limited overlap with EEIF • SEU often providing support in form of financing whereas EEIF provides grants • Potential to leverage Energy Orbit database to share information about projects where overlap is possible
DNREC	DEMEC	• Potential for overlap in C&I projects funded by DEMEC and those funded by EEIF • To data, small number of projects funded through EEIF in DEMEC service territory • Solution likely notifying DEMEC when EEIF projects come in
SEU	DEC	To be scheduled
SEU	DEMEC	To be scheduled

Tracking Impacts from Fuel Switching

- Fuel switching/electrification often a key strategy for achieving climate goals
- Presents needs for tracking/reporting:
  - Capture all fossil fuel savings/impacts
  - Separate accounting from electricity efficiency
- Some states report on “fuel-neutral” or “all-fuels” savings expressed in British thermal units (Btus)
  - Examples include MA and NY
  - Include parallel or subsidiary goals for electricity, gas, carbon, peak demand, etc.

Potential Path for Delaware

- Continue reporting energy savings from energy efficiency measures by fuel (electric, gas other)
- Include and all fuels MMBtu number that represents all fuel impacts
- Report number of heat pumps (as defined i.e. number of heads, buildings, etc.)

Example: Energy Impacts

- Ductless Heat Pump displacing Oil Heating

	Fuel Impacts	Conversion Factor	Common Savings Unit (MMBtu)
Oil Impacts	60 MMBtu		60.00 MMBtu
Electric Impacts	-3,500 kWh	x 0.003412	-11.94 MMBtu
Total Energy Impacts			**48.06 MMBtu**

TRM

Overview

- TRMs allow PAs and other stakeholders to calculate deemed efficiency savings from measures in a clear and consistent way
  - Deemed savings are preestablished values for common energy efficiency measures based on reputable data and analysis
- It's important to regularly update the assumptions and measures included
- This presentation outlines a high-level update summary

Task 1: Measure Prioritization/Selection

- Optimal reached out to PAs to confirm which measures they currently use or plan to use in 2025
  - Priority was given to measures to be implemented by PA's
  - Measures which have fuel substitution savings opportunities

Task 2: Develop Draft TRM Updates

- Optimal identified and updated parameters in the TRM. Examples:
  - Update code/specification requirements as appropriate
  - Incudes methodologies for calculating savings from all fuels, including fuel substitution opportunities.

Update Timeline

- Expected timeline is as follows:
  - Q2
    - Develop priority measure updates
    - Draft TRM updates for PA measures/code impacts
  - Q3 2024
    - Present TRM update at Q3 EM&V Committee Meeting
  - Q3/Q4 2024
    - Finalize TRM updates post Q3-committee meeting to be ready for the 2025 program year.

Summary of Updates

- New Measure Additions & Updates
  - Update measures to include potential “Fuel Switching” measure algorithms, energy savings, etc.
    - E.g. A heat pump measure using an existing natural gas furnace as the baseline instead of a “standard” efficient heat pump baseline.
- Update references for ENERGY STAR/CEE specifications to reflect current versions
- Prepare for potential 2025 code updates to the DE State Energy Code

New Measure Additions/Updates

- Agricultural Measures
  - Engine Block Heater Timer, Auto Milker Takeoff, Dairy Scroll Compressor, High-Efficiency Fans, Heat Reclaimers, Low Pressure Irrigation, Dairy Refrigeration Tune-Ups
- Tier 2 Powerstrips, Low-Flow Aerators and Showerheads, and Vending Machine Controls
- Commercial Duct Sealing
- Equipment Tune-Ups
  - Furnaces
  - Boilers
  - DHW
- Controls for Central Domestic Hot Water Recirculation Pumps
- Additional baselines for potential “Fuel Switching” measures, to incorporate gas-fired equipment as the baseline

ENERGY STAR Specification Revisions

- Revisions for ENERGY STAR specification updates
  - Residential
    - Electric Cooking,
    - Fans,
    - Downlights,
    - Heat Pump Water Heater,
    - Gas Condensing Water Heater,
    - Efficient Windows
    - Dishwashers
  - Commercial
    - Electric Cooktops

Proposed Future Updates in 2025

- DE Legislation is expected to vote upon updating the state energy code to adopt the 2021 International Energy Conservation Code (2021 IECC) & ASHRAE 2019 standards
  - Anticipated to occur during 2025 legislative session

For more information on the specific changes between the 2018 and 2021 IECC versions, please see the DNREC summary document below.

https://documents.dnrec.delaware.gov/energy/buildings/2021-IECC-Changes-Commercial.pdf

Mechanical Systems		
C403.1	General	Data Center Systems are exempt from sections C403.4 (heating and cooling system controls) and 403.5 (economizers).
C403.1.2	Data centers	Requires data centers to comply with Sections 6 and 8 of ASHRAE 90.4 (Energy Standard for Data Centers) with some modifications.
C403.2.3	Building mechanical systems	Requires HVAC fault detection and diagnostic (FDD) systems for new buildings ≥ 100,000 sqft and lists required FDD functions.
C403.3.2	HVAC equipment performance	Increases the number of equipment efficiency tables from nine to 16 to incorporate additional equipment types. Many minimum efficiencies are updated to reflect new federal testing standards.
C403.4.1.1	Heat pump supplementary heat	Limits operation of supplemental electric resistance heat to four specific operating conditions.
C403.5	Economizers	Adds exception for VRF systems installed with a dedicated outdoor air system.
C403.7.1	Demand control ventilation	Decreases the average occupant load threshold from 25 to 15 people per 1,000 sqft, resulting in more space types requiring DCV.

Thoughts/Questions?

DELAWARE
EEAC
Energy Efficiency
Advisory Council

Thank you

Questions?

Optimal ENERGY Integrated Energy Resources