Energy Efficiency Transition Stakeholder Meeting

Evaluation, Measurement & Verification

Mercer County Community College
Conference Center Auditorium
West Windsor, NJ

December 18, 2019
10:00 am – 1:00 pm

@NJBPU

New Jersey Board of Public Utilities

AGENDA

- **Welcome & Overview** (Kelly Mooij, Deputy Director, Division of Clean Energy, NJ Board of Public Utilities)
- **Timeline Overview** (Kelly Mooij, Deputy Director, Division of Clean Energy, NJ Board of Public Utilities)
- **Evaluation, Measurement & Verification Introduction** (Benjamin Witherell, Chief Economist, Division of the Economist, NJ Board of Public Utilities)
- **Panel Discussion** (Jennifer Senick, PhD, Executive Director, Rutgers Center for Green Building)
  - Rachel Gold, Senior Manager, Utilities, ACEEE
    - *Best Practices for EM&V to Support NJ's Energy Efficiency Policy*
  - Chris Neme, Principal, Energy Futures Group
    - *The National Standard Practice Manual (NSPM): Industry Best Practices for Assessing Cost-Effectiveness of EE and other DERs*
  - Diane Rapp, Manager, Energy Efficiency EM&V, FirstEnergy*:*
    - *EM&V Best Practices and Lessons Learned – Utility Perspective*
  - Kurt S. Lewandowski, Esq., Asst. Deputy Rate Counsel, NJ Division of Rate Counsel
    - *Ratepayer Perspective in the Context of the Clean Energy Act*
- **Discussion** (Facilitator: Jennifer Senick, PhD, Executive Director, Rutgers Center for Green Building)
- **Questions & Answers** (From Audience to Panelists)
- **Wrap Up & Next Steps** (Kelly Mooij, Deputy Director, Division of Clean Energy, NJ Board of Public Utilities)

PROCESS

- Public engagement continues to be a critical part of energy efficiency transition
- Staff has hosted stakeholder meetings on the following topics:
  - Program Administration (September 25, 2019)
  - Programs (October 30, 2019)
  - Cost Recovery Technical Meetings (October 31, 2019 & December 13, 2019)
- Staff expects to continue to host stakeholder meetings on topics that may include but are not limited to: cost recovery and the application of utility targets and utility specific quantitative performance indicators (QPIs).
- Staff will further utilize expertise provided by consultants, experts, and the Clean Energy Act required Energy Efficiency Advisory Group (EEAG).

PROPOSED TIMELINE

- Fall 2019-Spring 2020
  - EEAG and stakeholder meetings
- Spring 2020
  - Board directs utility filings
- Summer 2020:
  - Utility EE filings due to BPU
- Winter/Spring 2021:
  - BPU completes review of utility filings
- July 1, 2021:
  - New EE programs begin

CLEAN ENERGY ACT

In 2018, Governor Murphy signed the Clean Energy Act, taking a significant step to establish New Jersey's leadership in the clean energy economy.

The Act requires:

- That each electric and gas public utility reduce the use of electricity and natural gas. N.J.S.A. 48:3-87.9(a);
  - Each electric public utility must achieve annual reductions of 2% of average annual usage in the prior three years within five years of implementation of programs.
  - Each natural gas public utility must achieve annual reductions of 0.75% average annual natural gas usage in the prior three years within five years of implementation of programs.
- That the Board establish a stakeholder process to evaluate the economically achievable energy efficiency and peak demand reduction requirements, rate adjustments, quantitative performance indicators, and the process for **evaluating, measuring, and verifying** energy usage reductions and peak demand reductions. N.J.S.A. 48:3-87.9(f); and
- Establish an independent advisory group to study the **evaluation, measurement, and verification process** for the reduction programs and provide recommendations to the Board for improvements to the programs. N.J.S.A. 48:3-87.9(g).

CLEAN ENERGY ACT

The Act requires each electric and gas public utility to:

- Establish energy efficiency programs and peak demand reduction programs, which must have a benefit-to-cost ratio greater than or equal to 1.0 at the portfolio level;
- File with the BPU implementation and reporting plans as well as **evaluation, measurement, and verification strategies**;
- File an annual petition with the BPU to demonstrate compliance with the energy efficiency and peak demand reduction programs, and for cost recovery of the programs;
- Conduct a demographic analysis to determine if all of its customers are able to participate fully in implementing energy efficiency measures, identify market barriers, and provide recommendations to overcome such barriers.

- If an electric or gas public utility achieves the energy-saving performance targets, the public utility shall receive an incentive as determined by the Board; and
- If an electric or gas public utility fails to meet its performance targets, the utility shall be assessed a penalty as determined by the Board.

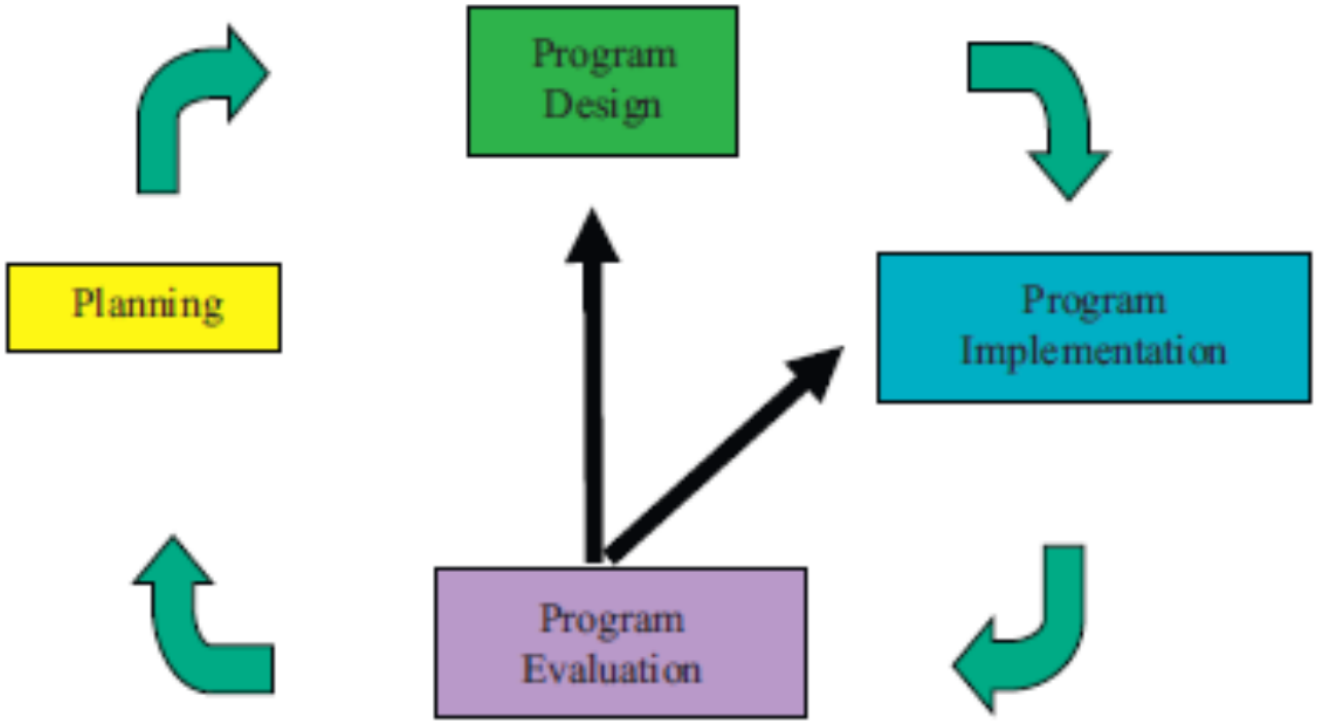
What is E, M & V?

- **Evaluation** refers to review of an entire energy-efficiency program or portfolio of programs. Typical attributes of a program or portfolio that should be evaluated include: projected energy savings, cost-effectiveness, benefit-cost metrics, implementation process, and other policy objectives.

- **Measurement** activities include data collection, monitoring and analysis to document energy savings, and reporting of acquisition and implementation costs.

- **Verification** activities validate expected savings based on collected data. This may include confirmation that measures are properly installed and functioning, and that deemed savings are being achieved.

Energy Efficiency Process



E, M&V is critical to be able to demonstrate that the benefits of energy efficiency programs are realized.

Figure Source: Vine, E. "Strategies and Policies for improving energy efficiency programs: Closing the loop between evaluation and implementation." Energy Policy (10), 2008, p 3872-3881.

Evaluation, Measurement & Verification (E,M&V)

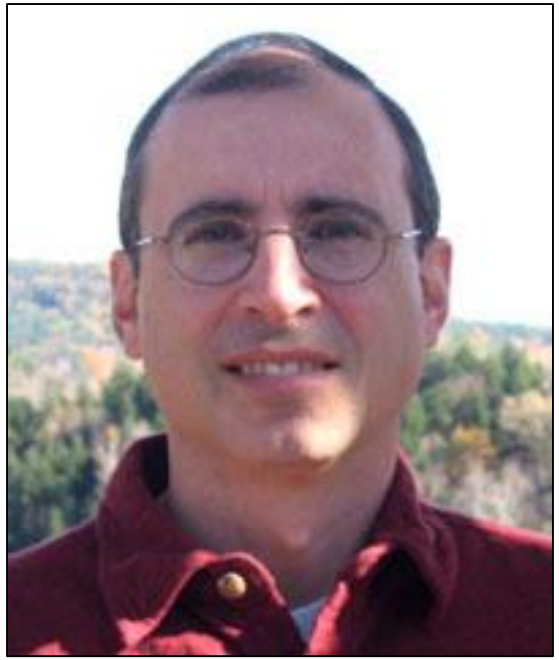
Jennifer Senick, PhD,
Rutgers Center for Green Building
Moderator

RUTGERS
Edward J. Bloustein School
of Planning and Public Policy

Rachel Gold

Rachel Gold leads ACEEE's Utilities Program. Her research focuses on state energy efficiency policy, utility regulation and ratemaking, and energy efficiency program design. Rachel joined ACEEE in 2018, and has over a decade of experience in clean energy at Rocky Mountain Institute, the California Public Utilities Commission, and Opower.

Chris Neme



Chris Neme is a Principal and Co-Founder of Energy Futures Group (EFG), a clean energy consulting firm with offices in Vermont, Massachusetts and New York. During his more than 25 years in the industry, Chris has helped clients in more than 30 states, 5 Canadian provinces and several European countries on a variety of energy efficiency, demand response, strategic electrification and other distributed energy resource market assessments, programs and policies. Chris was one of the co-authors of the 2017 *National Standard Practice Manual for Assessing Cost-Effectiveness of Energy Efficiency Resources* (the "NSPM"); he is also one of the co-authors of the next version of the Manual, which will address all distributed resources and is expected to be published in June 2020.

Diane L. Rapp

Diane Rapp is the Manager of Energy Efficiency Evaluation, Measurement & Verification for FirstEnergy Corp.
She held a number of analytical positions in Finance prior to joining the newly formed Energy Efficiency department in 2009, where she has been involved in program design, implementation, and evaluation, measurement and verification activities in Pennsylvania, Maryland, Ohio and West Virginia.

Kurt S. Lewandowski

Kurt S. Lewandowski, Esq. is an Assistant Deputy Rate Counsel for the New Jersey Division of Rate Counsel, representing the Division in electric and natural gas utility matters, including energy efficiency. With over 29 years of experience with the Division, during his tenure Kurt has also represented the Division in water, wastewater, and telecommunications matters.

Best Practices for EM&V to Support New Jersey's Energy Efficiency Policy

Stakeholder Meeting

Rachel Gold, Utilities Program Senior Manager

December 18, 2019

ACEEE
American Council for an Energy-Efficient Economy

Agenda

How should EM&V be administered to facilitate cost-effective programs that meet state policy goals?

What types of evaluations and studies are necessary to meet the goals of EM&V?

What models do we see for who conducts, reviews, and approves each of those?

How can stakeholders provide input and oversight for the process?

What's needed in this transition period and the long term?

What types of evaluations and studies are necessary to meet the goals of EM&V?

1. Accountability of the impacts: Did the program deliver its estimated benefits?
2. Risk management to support energy resource planning: How certain are these savings?
3. Continuous improvement: What can be done to improve program performance in the future?

Impact Evaluation: Assess outcomes from the changes attributable to an EE program (all programs, differing levels of effort required)

Process Evaluation: assess program operations to ID and recommend improvements

Market Evaluation: assess changes in structure, functioning of the market; to document broader impacts and assess remaining potential

What other “documents” do we need to support these principles?

- Potential study
  - **assess future savings potential for technologies, strategies, or approaches in different customer markets**
  - **Informs goal setting, provides some insight for program design**
- EM&V Framework
  - **Objectives for EM&V as it relates to policy (why)**
  - **Describes how and when EM&V will be conducted, by whom —including any impact, process, market, and cost-effectiveness evaluations**
  - **Define key metrics**
  - **Benefit-Cost Analysis Framework: specifies what costs and benefits will be considered in decisionmaking, and how they will be calculated**
  - **“Evergreen” doc; updated only with major policy changes**
- Technical Reference Manual (TRM)
  - **Specifies assumptions and key factor inputs that all utilities use in evaluations, to ensure consistency and fair comparisons**
  - **Regularly updated based on relevant studies**
  - **Includes: EM&V Protocols: details on HOW specific EM&V methods will be carried out**

Principles for EM&V

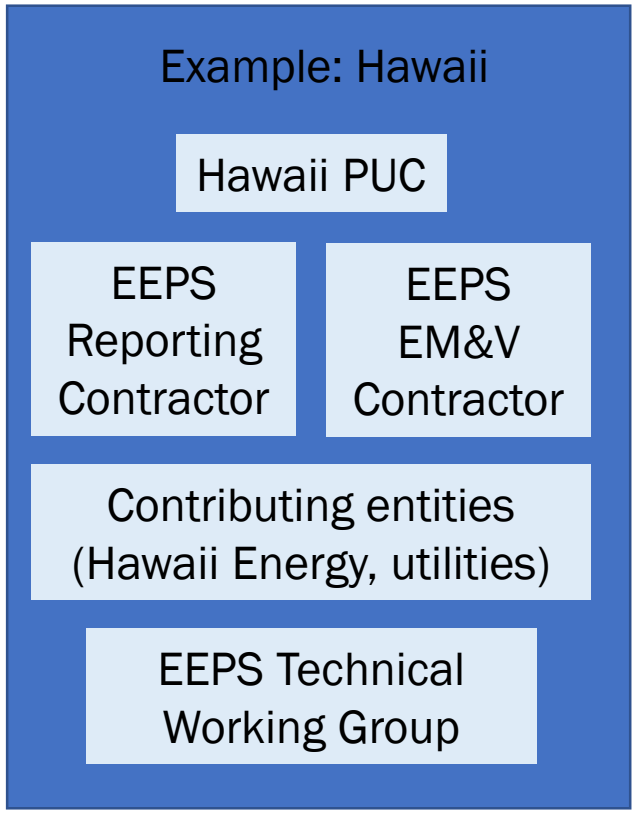
- Independence
  - **Evaluators should be free of bias and should not have a stake in the outcome of the evaluations**
  - **Conducted by professional program evaluators**
  - **Should be a structure and mechanism for regulatory oversight**
- Timeliness; integration in portfolio cycle
  - **Need evaluation results and information available when decisions need to be made, throughout the portfolio cycle**
- Adequate resources
  - **Evaluation budgets and resources should be adequate to support the evaluation scope, goals, and level of certainty expected**
  - **Level of effort balanced with value of savings, uncertainty, and risk of over/underestimation**
- Completeness and transparency
- Consistency

Source: ACEEE Toolkit; SEE Action EM&V Frameworks, 2018

Models for Who Conducts, Reviews, and Approves EM&V

PUC Oversight - regardless of structure

- Independent Evaluator
  - to oversee all evaluations, program evaluations may be statewide or utility-specific
- Statewide Evaluators
  - Typically selected by PUC
- Utility-hired Evaluators
  - Can be for statewide or utility-specific programs
  - Most common, typical where PUCs don't have technical staff/time to directly manage evaluations
  - PUC oversees, and may hire a consultant to support oversight
- Working or Advisory Groups
  - Multi-party groups with formal decision making authority regarding evaluation



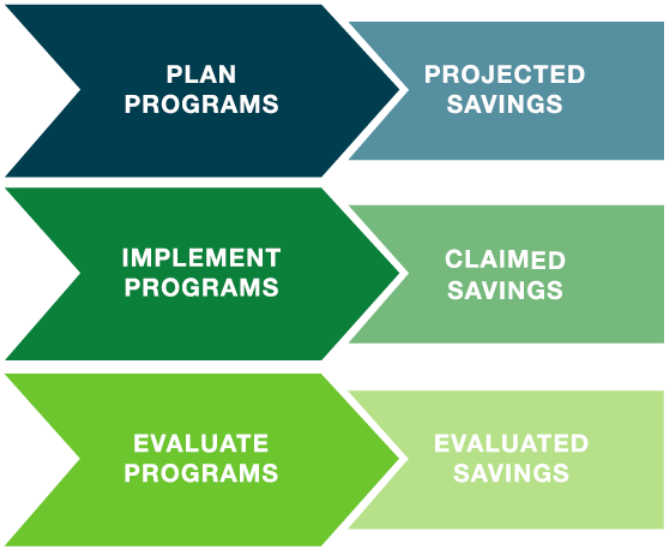
How can stakeholders provide input and oversight for the process?

- Stakeholder roles
  - **Before: Offer input in evaluation design**
  - **After: Able to review results of the evaluation**
  - **Minimum – transparency; ideally – reasonable input**
- Example: Michigan
  - **1990s: Evaluation Working Group of 5 different parties selected evaluation consultants and oversaw process**
  - **Utilities paid for consultant through ratepayer funds for EE**
- Example: Arkansas
  - **Arkansas Parties Working Collaboratively (PWC) launched 2006**
  - **Initially focused on quick-start programs, now annual updates to the AR TRM**
  - **Commission then approves PWC recommendations (aim for consensus, but often filed with majority and minority positions)**

What's needed in this transition period and the long term?

Transition Period (next ~18 months)

- Specify EM&V Framework: structure for accomplishing EM&V, who conducts, oversees, reporting requirements, etc.
- Benefit-Cost Analysis Framework - build on existing, perhaps using NSPM framework; needed for utility filings in summer 2020
- Protocols/TRM updates – ensure necessary inputs and procedures are ready
- Hire evaluation contractors – ideally before onset of programs to establish data collection, tracking procedures
- Process evaluations – early to ensure program delivery and ID any quick improvements needed
- Impact evaluations – to support annual reports



Long Term (within 5 years of implementation)

- Update potential study on regular basis (e.g. program cycle)
- Periodically conduct more intensive evaluations of programs on a priority basis, then use evaluations to update TRMs
- Align DER valuation beyond EE

Thank you!

Relevant Resources:

SEE Action Guide for States: Evaluation, Measurement, and Verification Frameworks—Guidance for Energy Efficiency Portfolios Funded by Utility Customers
https://www4.eere.energy.gov/seeaction/publication/see-action-guide-states-evaluation-measurement-and-verification-framework-guidance

ACEEE State Policy Toolkit – EM&V
https://aceee.org/sector/state-policy/toolkit/emv

ACEEE Recent Developments in Energy Efficiency EM&V
https://aceee.org/recent-developments-energy-efficiency-evaluation

Contact us at: rgold@aceee.org

National Standard Practice Manual:

Industry Best Practices for Assessing Cost-Effectiveness of EE and Other DERs

NJ Stakeholder Meeting on EM&V

Chris Neme, Energy Futures Group

December 18, 2019

Presentation Overview

- Context and Purpose of NSPM
- NSPM for Guidance on Choosing the Right Test
- NSPM Application to All Other DERs

NSPM Context & Purpose

NATIONAL STANDARD PRACTICE MANUAL
Published May 2017

New guidelines for cost-effectiveness testing

Drivers…

- Traditional tests often don't address pertinent state policies.
- Traditional tests often modified in an ad hoc manner (*without clear principles or guidelines*)
- Efficiency is not accurately valued in many jurisdictions.
- Lack of transparency on why tests chosen, how applied.

Traditional Cost-Effectiveness Tests

- Program Administrator Cost Test
  - Often called Utility Cost Test
- Total Resource Cost Test
- Societal Cost Test

Primary Tests Used in Most States

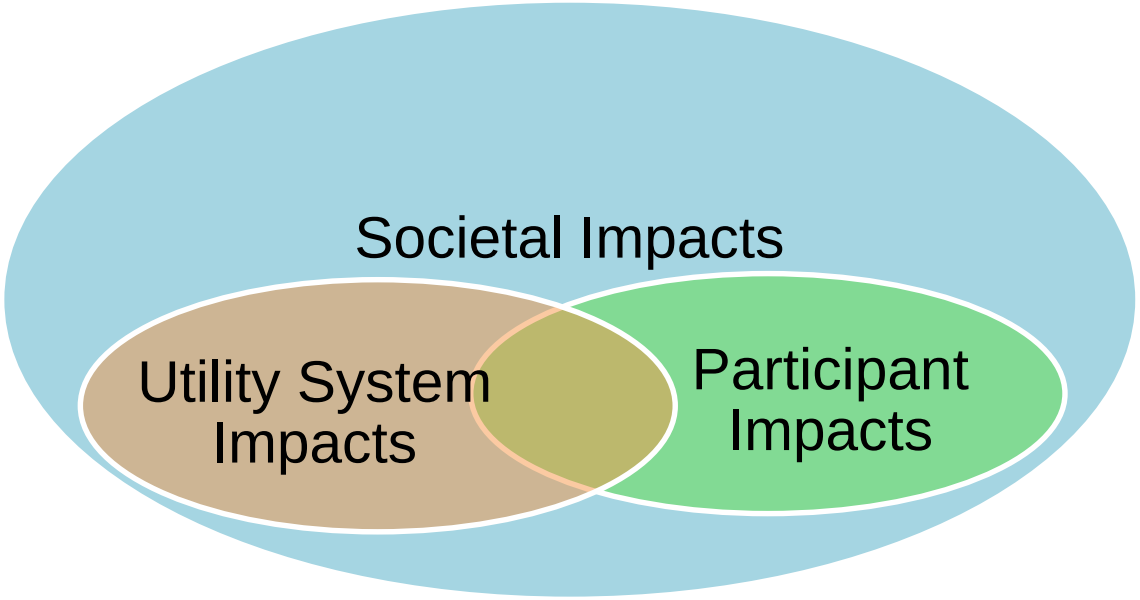
- Participant Test

Only used to inform program design

- Ratepayer Impact Test

Not a cost-effectiveness test; rather a test of equity between participants and non-participants

Conceptual Construct of Traditional Tests



UCT = Utility System Impacts

SCT = Utility System Impacts +
Participant Impacts +
Any Other Societal Impacts

TRC = Utility System Impacts +
Participant Impacts

Many Different “Flavors” of TRC

- ~30 states use “TRC” as primary test
- But many different interpretations of what it includes
  - All include participant costs
  - Most include other fuel savings
  - Many include water savings
  - Some include some other participants NEBs
  - Few include all participant NEBs

Not accounting for all of these is inconsistent with conceptual construct of TRC

- Rarely the case that TRC aligns with policy goals

NSPM: Purpose

- Policy-neutral *principles*
- Framework for selecting a *primary test*
- Guidance on *key inputs*

What's Covered -- NSPM Outline

Executive Summary

Introduction

Part 1: Developing Your Test

1. Principles
2. Resource Value Framework
3. Developing Resource Value Test
4. Relationship to Traditional Tests
5. Secondary Tests

Part 2: Developing Test Inputs

6. Efficiency Costs & Benefits
7. Methods to Account for Costs & Bens
8. Participant Impacts
9. Discount Rates
10. Assessment Level
11. Analysis Period & End Effects
12. Analysis of Early Retirement
13. Free Rider & Spillover Effects

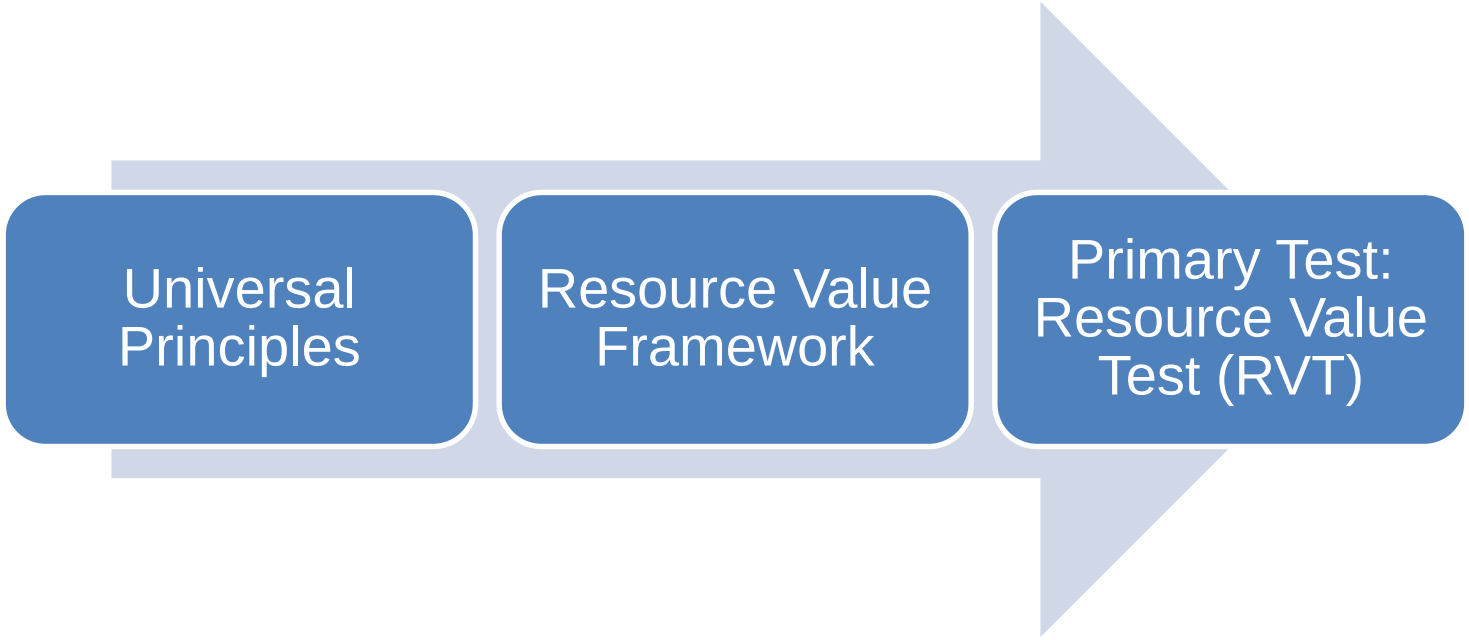
Appendices

A. Summary of Traditional Tests
B. Cost-Effectiveness of Other DERs
C. Accounting for Rate & Bill Impacts
D. Glossary

NSPM Guidance on Test Choice

Part I

Developing the Primary Cost-Effectiveness Test Using the Resource Value Framework



NSPM Principles

1. Recognize that energy efficiency is a resource.
2. Account for applicable policy goals.
3. Account for all relevant costs & benefits (based on applicable policies), even if hard to quantify impacts.
4. Ensure symmetry across all relevant costs & benefits.
5. Conduct a forward-looking, long-term analysis that captures incremental impacts of energy efficiency.
6. Ensure transparency in presenting the analysis and the results.

Implementing the Resource Value Framework Involves Seven Steps

Step 1	Identify and articulate the jurisdiction's applicable policy goals.
Step 2	Include all utility system costs and benefits.
Step 3	Decide which additional *non-utility* system costs and benefits to include in the test, based on applicable policy goals.
Step 4	Ensure the test is symmetrical in considering both costs and benefits.
Step 5	Ensure the analysis is forward-looking, incremental, and long-term.
Step 6	Develop methodologies and inputs to account for all impacts, including hard-to-quantify impacts.
Step 7	Ensure transparency in presenting the analysis and the results.

STEP 2

Examples of Utility System Impacts

Illustrative Utility System Costs	Illustrative Utility System Benefits
• EE Measure Costs (utility portion – e.g. rebates)	• Avoided Energy Costs
• EE Program Technical Support	• Avoided Generating Capacity Costs
• EE Program Marketing/Outreach	• Avoided T&D Upgrade Costs
• EE Program Administration	• Avoided T&D Line Losses
• EE Program EM&V	• Avoided Ancillary Services
• Utility Shareholder Performance Incentives	• Wholesale Price Suppression Effects
	• Avoided Costs of RPS Compliance
	• Avoided Costs of Environmental Compliance
	• Avoided Credit and Collection Costs
	• Reduced Risk
	• Increased Reliability

The principle of treating energy efficiency as a resource dictates that utility system costs and benefits serve as the foundation for all tests

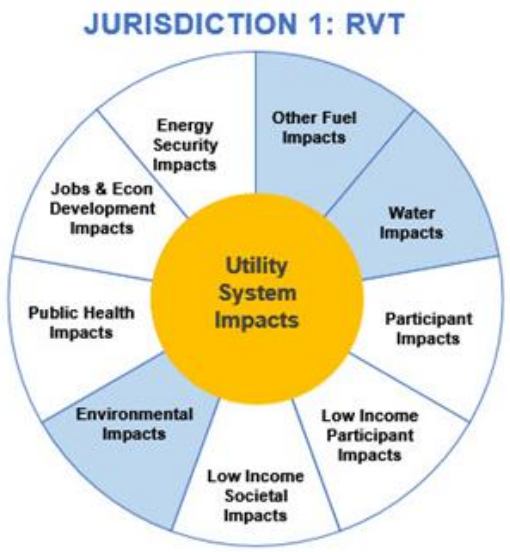
STEP 3

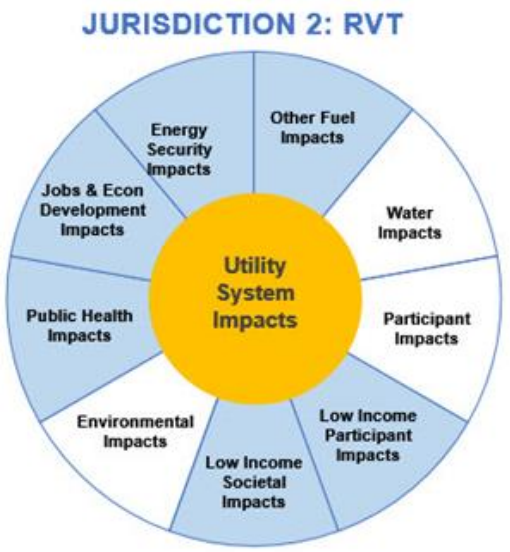
Illustrative Non-Utility System Impacts

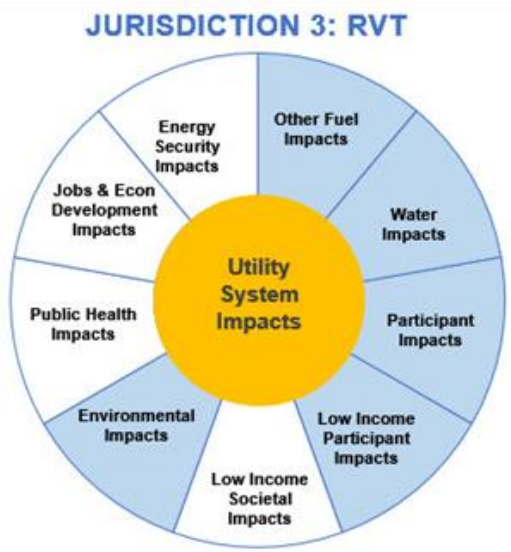
Impact	Description
Participant impacts	Impacts on program participants, includes participant portion of measure cost, other fuel savings, water savings, and participant non-energy impacts
Impacts on low-income customers	Impacts on low-income program participants that are different from or incremental to non-low-income participant impacts. Includes reduced foreclosures, reduced mobility, and poverty alleviation
Other fuel impacts	Impacts on fuels that are not provided by the funding utility, for example, electricity (for a gas utility), gas (for an electric utility), oil, propane, and wood
Water impacts	Impacts on water consumption and related wastewater treatment
Environmental impacts	Impacts associated with CO2 emissions, criteria pollutant emissions, land use, etc. Includes only those impacts that are not included in the utility cost of compliance with environmental regulations
Public health impacts	Impacts on public health; includes health impacts that are not included in participant impacts or environmental impacts, and includes benefits in terms of reduced healthcare costs
Economic development and jobs	Impacts on economic development and jobs
Energy security	Reduced reliance on fuel imports from outside the jurisdiction, state, region, or country

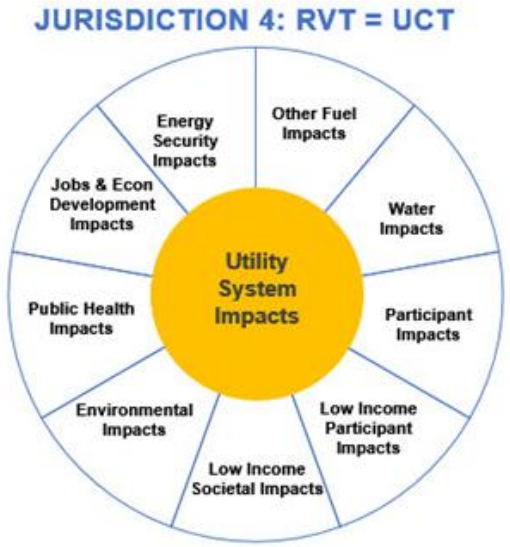
This table is presented for illustrative purposes, and is not meant to be an exhaustive list.

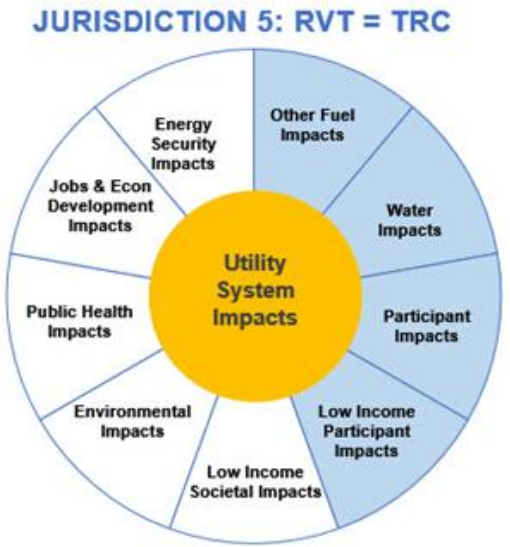
Relationship of Resource Value Test (RVT) to Traditional Tests – Results May Align or Not

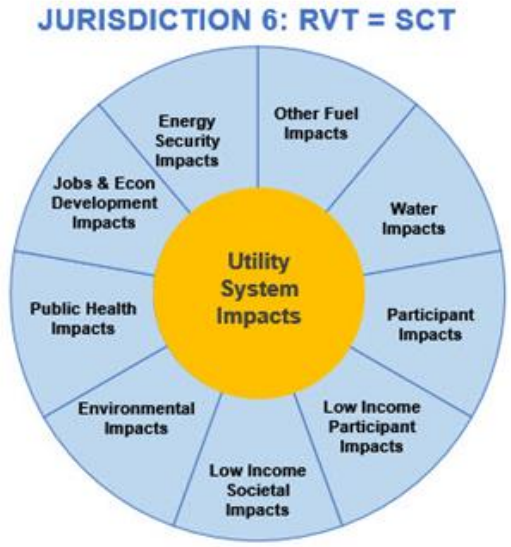




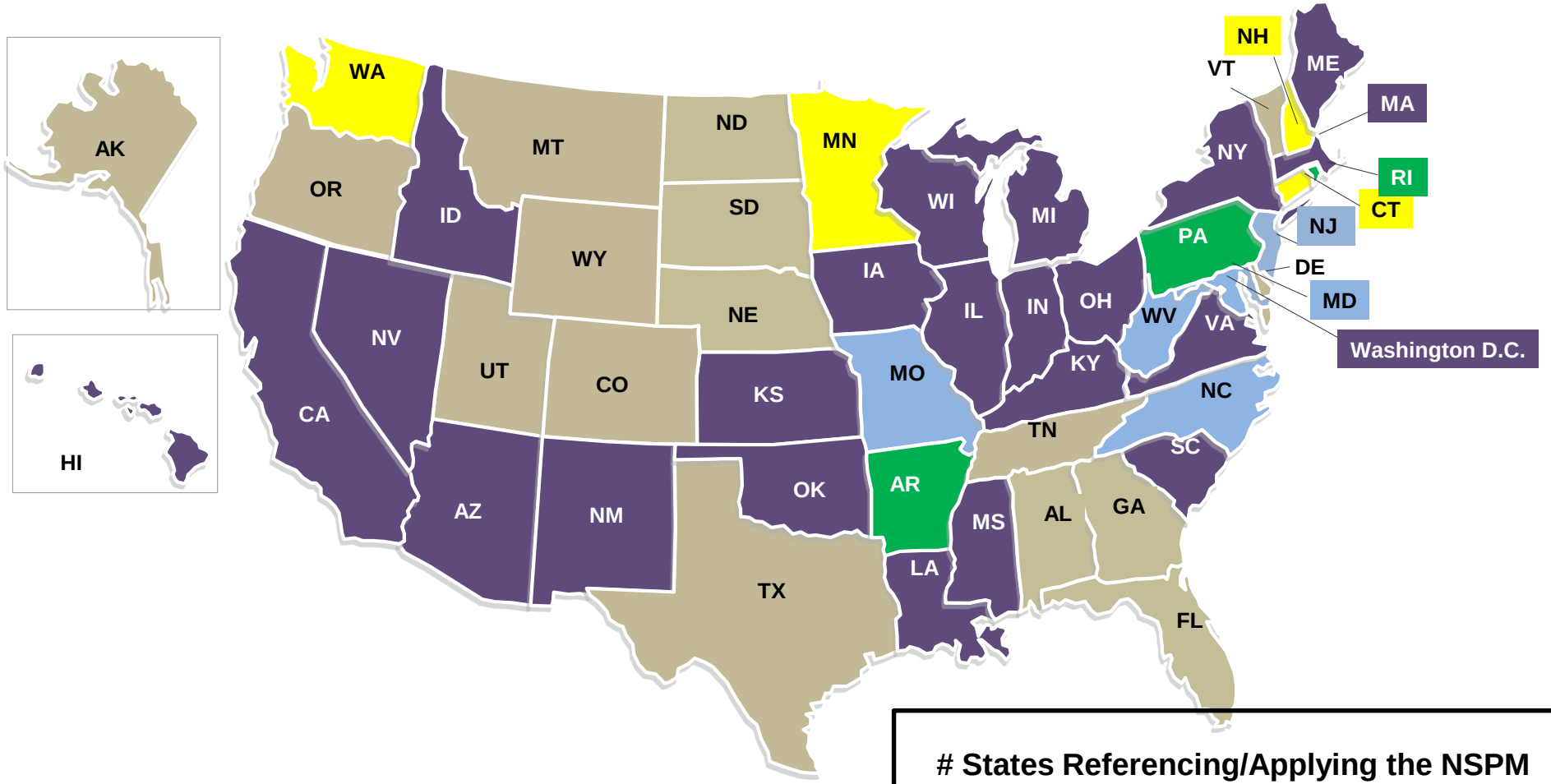








NSPM Applications/References as of Oct. 2019



States Referencing/Applying the NSPM

3	PUC Order (final/tentative) on use of NSPM/RVT
4	Actively applying NSPM to review current test
5	In process of learning about the NSPM
22	References made in PUC/legislative proceedings

NSPM for All DERs

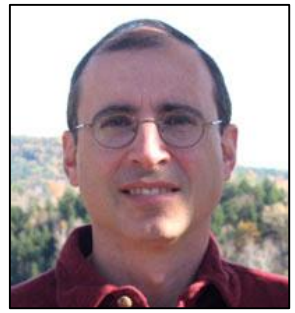
Why an NSPM for DERs

- Growing interest in DERs as grid resources
- Lack of understanding on how to apply BCA to all DERs
- Lack of consistency in BCA treatment of different DERs
  - Will lead to uneconomic choices

NSPM for DERs - Project Team

Tim Woolf – Project Lead
Synapse Energy Economics

Brenda Chew & Kate Strickland*
SEPA



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Project Coordinator
E4TheFuture

* with Janet Gail Besser as Advisory Group member

NSPM for DERs - Advisory Group

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Brian Jones	MJ Bradley
Chris Porter	National Grid
Cyrus Bhedwar	Southeast Energy Efficiency Alliance
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Dan Violette	Lumina
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Elizabeth Titus	Northeast Energy Efficiency Partnerships
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Kelly Speakes Bachman	Energy Storage Association
Marty Kushler	ACEEE
Mohit Chhabra	NRDC
Nadav Enbar	EPRI
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Paula Carmody	Maryland Office of People's Counsel
Phil Jones	Alliance for Transp Electrification
Ric O'Connell/Taylor McNair	Grid Lab
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Rodney Sobin	NASEO
Robert Kasman/Ryan Chan	PG&E
Ryan Katofsky	Advanced Energy Economy
Sami Khawaja	Cadmus
Susan Stratton	Northwest Energy Efficiency Alliance
Todd Bianco	RI Public Utilities Commission
Tom Eckman	Consultant
Tom Stanton	Nat'l Regulatory Research Institute
Wally Nixon	Arkansas

NSPM for DERs Table of Contents (Dec. 2019 Draft)

NSPM for DER Principles (DRAFT)

DERs as a Utility Resource	DERs are one of many resources that can be deployed to meet customers' needs, and therefore should be compared with other energy resources in a consistent and comprehensive manner.
Policy Goals	A jurisdiction's primary cost-effectiveness test should account for applicable policy goals and objectives.
Consistency Across DERs*	DERs should be evaluated using consistent cost-effectiveness methodologies, where (a) the primary test should consider all relevant policies for all types of DERs, and (b) all DERs should be subject to the same primary test.
Hard-to-Quantify Impacts	Cost-effectiveness practices should account for all relevant, substantive impacts (as identified based on policy goals), even those that are difficult to quantify and monetize.
Symmetry	Cost-effectiveness practices should be symmetrical, where both costs and benefits are included for each relevant type of impact.
Forward-Looking Analysis	Analysis of the impacts of resource investments should be long-term, forward-looking, and incremental.
Double-Counting and Under-Counting*	Costs and benefits should be clearly defined to avoid double-counting or under-counting.
Transparency	Cost-effectiveness practices should be completely transparent, and should fully document all relevant inputs, assumptions, methodologies, and results.

* Proposed new principles added to NSPM for EE principles

Project Timeline

Questions?


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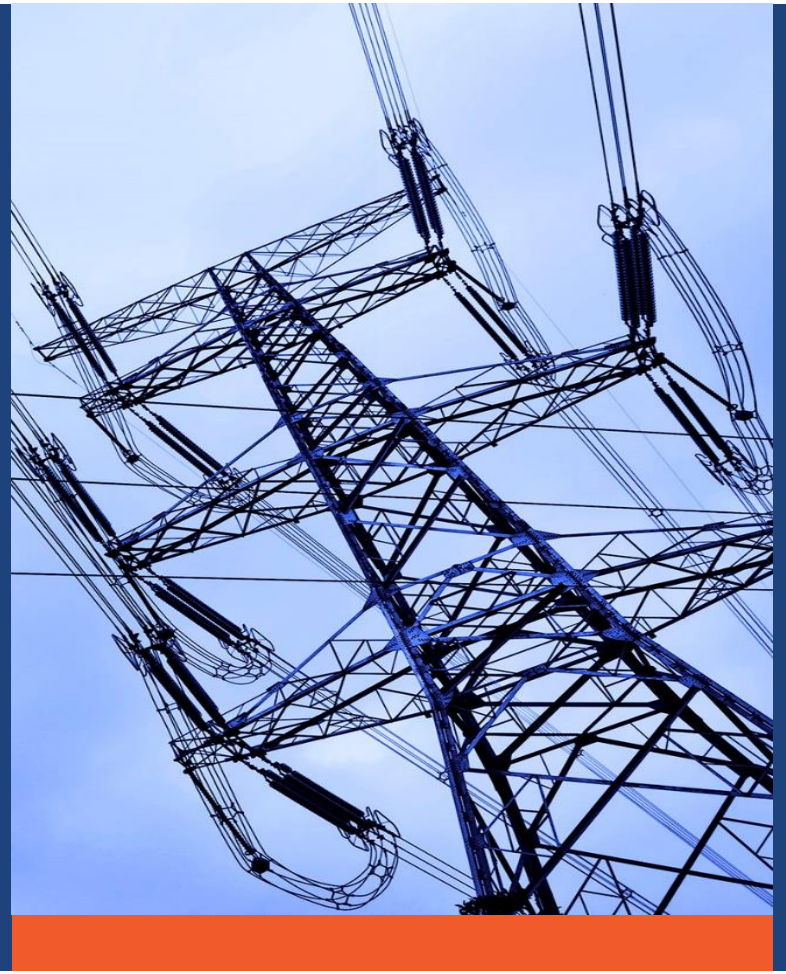
EM&V Best Practices and Lessons Learned – Utility Perspective

Diane Rapp, Manager, Energy Efficiency Evaluation, Measurement & Verification

December 18, 2019



FirstEnergy's Energy Efficiency & Demand Response (EE&DR) Experience

- Multi-State/Multi-Utility/Multi-Year EE&DR Experience
  - 5 States and 10 electric utilities
  - Program design and operations since 2009
  - Broad perspectives (varying legislation and state policies/practices)
- Experienced team
- Extensive industry interactions
  - State Utility Commissions & Staffs
  - Program Implementation Vendors
  - Utility Evaluation, Measurement and Verification Vendors
  - Commission Statewide Evaluators
  - Industry Consultants and Organizations (e.g. AESP, EPRI, etc.)
  - Diverse Stakeholders (e.g. consumer advocates, environmental organizations, etc.)
- Successful track record
  - Ability to leverage lessons learned, best practices and economies of scale

EM&V Best Practices – Structure is Key

- TRM Protocols & Cost Effectiveness Methodology developed / updated
  - Stays in place for duration of phase
  - Allows for new measure protocols and limited interim updates
- Market Baseline and Potential Studies completed
  - MPS is territory specific (unique territories, customers and rates)
  - Each utility is assigned individualized targets based on unique territory potential
- Commission issues tentative, then final Implementation Orders
  - Includes all rules and requirements associated with the next phase
  - All parties can file comments and reply comments on tentative Implementation Order to be considered prior to Final Order

EM&V Best Practices – Structure is Key (continued)

- Both Statewide and Utility Independent Evaluators are established
  - Each utility has own independent evaluator
    - Leverages broad industry experience
- Evaluation Framework is developed
  - Includes collaboration amongst evaluators on best EM&V practices
    - Semi-annual working group sessions conducted to ensure prompt attention to new issues
  - Determines how EM&V will be conducted and consistently applied
- Impact and Process evaluations are included in reports to Commission
- Statewide Evaluator ultimately verifies reported savings and makes recommendations for future consideration

EM&V Best Practices – Evaluation Approaches

- Impact Evaluation
  - Conducted annually to verify gross savings counted towards compliance
  - Quantifies and validates the extent of energy saved and demand reduced as a result of a program
- Process Evaluation
  - Conducted at least once per phase
  - Provides the explanatory depth to improve program processes, better understand market barriers and opportunities, and support identification of opportunities for improving program implementation
- Market Evaluation
  - Baseline and Potential Studies
  - Conducted once per phase
  - Results used to inform next program design cycle

EM&V Best Practices – Gross vs. Net Savings

- Gross savings should be used for compliance
  - Consistent with legislated goals
    - Captures savings from codes and standards as included in CEA
  - Measures the actual savings realized in the State
  - Reflects what utilities can control
- Net savings are not appropriate for compliance
  - Free ridership/spillover concepts not considerations of legislators when establishing goals
  - Can be useful for cost-effectiveness testing and future program adjustments
  - Involves subjective estimates
  - Potential for high variability

EM&V Best Practices – Key Points

- Structure in EM&V process
  - Use same methodologies to set goals and count savings towards compliance
  - Establish clear guidelines on processes and methodologies
  - Each Utility has own Independent Evaluator
  - Statewide Evaluator to oversee process and validate results
- Use Gross savings to count towards compliance with goals
  - Net is appropriate for cost-effectiveness

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Discussion

Question Set 1: EM&V Administration

- What types of evaluations and studies (BCA, baseline, process, impact) are necessary, in what cadence and frequency?
- What models do we see for who conducts, reviews, and approves each of those?
- How can stakeholders provide technical or on-the-ground expertise into the process?
- What model(s) for program evaluators should New Jersey consider?

Question Set 2: EM&V Transition

- How should the EM&V process intersect with filing requirements? What types of information are needed when, and from whom?
- What's needed in this transition period (through launch of new programs), and the long term (~5 year goal and beyond)?
- Should NJ evolve towards a unified framework for all DERs?

Question Set 3: NSPM

- Should New Jersey develop a primary cost test associated with key policy initiatives, e.g., following the Resource Value Framework (National Standard Practice Manual) or designate one of the five standard test as the primary test, or employ another approach? What approach is recommended?

- What are the costs and benefits that you would recommend for consideration in a single benefit-cost test?
  - Are there indirect or non-energy related costs or benefits that should be considered;
  - If so, how can they be estimated?

Question Set 4: M&V Best Practices

- What are the most important factors to address in measurement and verification of energy savings?
  - Should programs be evaluated on gross or net savings?
  - For which measures are the use of deemed (assumed) savings appropriate and which measures should be tested to verify actual savings?
- How should advanced M&V (automated data processing/increased data granulation) be integrated into EM&V?
  - When should it be incorporated?
  - What are best practices related to accuracy/confidence/reporting?

Wrap Up

THANK YOU

Comments may be submitted electronically to EnergyEfficiency@bpu.nj.gov on or before Friday, January 10, 2020.

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