



NORTHEAST ENERGY EFFICIENCY PARTNERSHIPS

Forum Annual Public Meeting 2014 Project Highlights and What's Next

Julie Michals - NEEP

Crissy Godfrey - Maryland Public Service Commission

Nikola Janjic - DC Sustainable Energy Utility / Efficiency Vermont

January 14, 2015

OVERVIEW OF 2014 HIGHLIGHTS



Focus in 2014 and What's Next

- Standardized Reporting and Guidelines
- Comments to EPA on CAA 111(d) EM&V
- Research & Evaluation
- Preview of 2015 projects

Key project briefings today

- Mid-Atlantic Technical Reference Manual
- Incremental Cost Research
- Standardized EM&V Methods Reporting Forms

2014 COMPLETED PROJECTS

and Supporting Activities

<http://www.neep.org/initiatives/emv-forum/forum-products>



Standardized Reporting & Guidelines

- REED data collection and Annual Report*
- Standardized EM&V Methods Reporting Forms v1.0
- Joint Comments to EPA on CAA 111(d) EM&V guidance
- Cost-Effectiveness Screening Guidelines

Research & Evaluation

- Mid-Atlantic Technical Reference Manual (v 5.0)
- Variable Speed Drive Loadshape Study Report and Spreadsheet*
- Early Replacement Measure Life Scoping Study: Phase 1
- Incremental Cost Research (Phase 3)
- Residential Lighting Market Lift Pilot / Post-EISA Trends Reports
- Ductless Heat Pump Meta-study*
- Geo-targeting EE Programs Study and Policy Recommendations

Educ & Info Access

- EM&V library of state EM&V studies
- Topical webinars on project results
- State use and implementation of Forum products
- Annual Public Meeting
- Communications (monthly updates, newsletters) and website

2014 PROJECTS (ON-GOING)

Forthcoming Products (Q1-Q2 2015)



- Net Savings Guidelines
- Loadshape Research - Commercial Refrigeration
- Emerging Technologies - Clothes Dryers Research
- Early Replacement Measure Life Research (Phase 2)
- Incremental Cost Research (Phase 4)
- Mid-Atlantic TRM (Phase 6)

2015 FORUM PROJECTS

Agenda adopted by Steering Committee Dec 2014



Base Services
Forum Operations
Project Management
Educ & Information Access
Standardized Reporting and EM&V Guidance
PD15-1 Regional EE Database (REED)
PD15-2 EM&V Methods (Standardized Reporting Forms; National EM&V Protocols)
PD15-3 Changing EM&V Paradigm
Research & Evaluation
RE15-1 Mid-Atlantic TRM
RE15-2 Incremental Cost Research (Emerging Technologies)
RE15-3 Home Energy Management Systems (HEMs) Research
RE15-4 Geo-targeting EE Programs (Phase 2 - focus on Gas EE)
RE15-5 Loadshape Data Catalog - New England Only

Forum strategic review to be conducted this year to inform future scope, function and revenue structure - also part of larger NEEP strategic review and plan

THE ENERGY STAR RETAIL PRODUCTS PLATFORM (RPP)



- National retail products effort to achieve scale of efficiency savings through consistent mid-stream program design working with major retailers
- Focus is on retail appliances and electronics
- Offers opportunity to access market share data (sales)
 - Mid-stream approach has unique EM&V challenges
- Pilot 2015 includes BGE, PEPCO, DC SEU and EVT
- On 1/21 at 3pm EST, evaluators from CA will share their EM&V perspectives and approaches with the NEEP EM&V Forum in an information exchange

Questions? Todd Malinick (in audience), or contact Claire Miziolek cmiziolek@neep.org (see handout available)

NEEP EM&V FORUM TEAM



Julie Michals, Director Forum



Elizabeth Titus, Senior Evaluation Manager



Danielle Wilson, Associate



Patrick Wallace, REED Manager

THANK YOU!



To Forum Members and Participants for their insightful and valuable input to range of Forum projects, and leadership in developing Forum agendas and project scopes





Employing the Mid-Atlantic TRM for Evaluation of EmPOWER Maryland Programs

NEEP EM&V Forum Annual Public Meeting
January 14, 2015

Crissy Godfrey

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*Mrs. Godfrey's presentation does not necessarily reflect the official position of the Maryland Public Service Commission

AN INTRODUCTION: MID-ATLANTIC TRM



- First version developed in 2009
- Serves 3 Jurisdictions: Delaware, District of Columbia, and Maryland
- Research and Guidance for Mid-Atlantic on *TRM Update Process* developed in 2011
- TRM and Update Document both available on NEEP Forum website: [http://www.neep.org/initiatives/emv-forum/forum-products#Mid-Atlantic Technical Reference Manuel \(TRM\)](http://www.neep.org/initiatives/emv-forum/forum-products#Mid-Atlantic Technical Reference Manuel (TRM))



MID-ATLANTIC TRM: EMPOWER MD



Used as foundation for impact evaluations and cost effectiveness analyses

- Covers more than 60 Res and C&I measures
- Parameters used to estimate gross annual / lifetime electric and fuel savings, measure incremental cost assumptions, gas & water savings.
- No Net-to-Gross
- Premise level data
- Limited NEBs benefits (e.g. incandescent lamp replacement costs)
- Provides adjustments for future changes in federal energy performance standards - e.g. EISA lighting standards.



COLLABORATIVE UPDATING



- Updated annually (December), aligned with reporting / evaluation schedules
- Project subcommittee includes utilities, regulatory staffs, evaluators and other stakeholders from MD, DE, DC.
- NEEP / Shelter Analytics works with subcommittee to prioritize measures & measure parameters for targeted review / update.
- States, Utilities, evaluation contractors (e.g., Itron, NCI) suggest recent relevant studies & make recommendations.
 - Shelter Analytics & NEEP compile background info / recommendation & convene meetings to discuss
 - Most cases parameters developed on consensus



EMPOWER MD: TRM AS DEFAULT



- Evaluators use different input assumptions only if better information is available
 - If reliable primary data from MD is collected
 - If new secondary resources become available
 - If TRM sources or analysis are unclear
- The burden of proof is on the evaluators
 - Must convince Staff and others that the parameters used will more accurately reflect conditions in Maryland
- EmPOWER evaluation findings usually subsequently reflected in Mid Atlantic TRM updates

BENEFITS TO EMPOWER MARYLAND



- Cost Economies
 - Leveraging of TRM Costs
- Quality
 - Additional vetting of assumptions
- Legitimacy
 - Comes from transparency



CHALLENGES



- Accommodation of different planning & reporting schedules
- Comprehensive measures still require modeling and/or pre-post M&V
- Some holes in the data - e.g., incremental costs
- Adjusting costs & EULs to reflect future changes in baselines & persistence
- Anticipating new measures
- National & regional integration of TRMs & method (e.g., Section 111(d) & PJM capacity markets)





IN SUMMARY...

- Very diverse budgets / spectrum of organizations involved
- Reduces evaluation costs
- Used extensively, invaluable tool
- Improves evaluation accuracy and reliability
- Promotes exchange of knowledge, leverages expertise and local data sources
- Not a substitute for evaluation in MD





FORUM INCREMENTAL COST STUDIES

Regional EM&V Efforts (2011 - 2015)

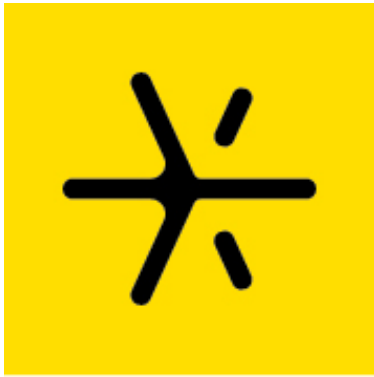
Nikola Janjic
Vermont Energy Investment Corp

DE Sustainable Energy Utility and VT
Efficiency Utility

PRESENTATION OVERVIEW



- Introduction
- Importance and Usage of Incremental Costs
- Incremental Cost Definitions & Nuances
- Challenges and Opportunities
- NEEP's Incremental Cost Study Overview
- Key Questions and Recommendations



Vermont Energy Investment Corporation



DC
SUSTAINABLE ENERGY
UTILITY



EFFICIENCY\$MART



Commons
Energy

Saving Energy,
Strengthening
Communities



BERC
Biomass Energy
Resource Center

Drive
Electric
Vermont



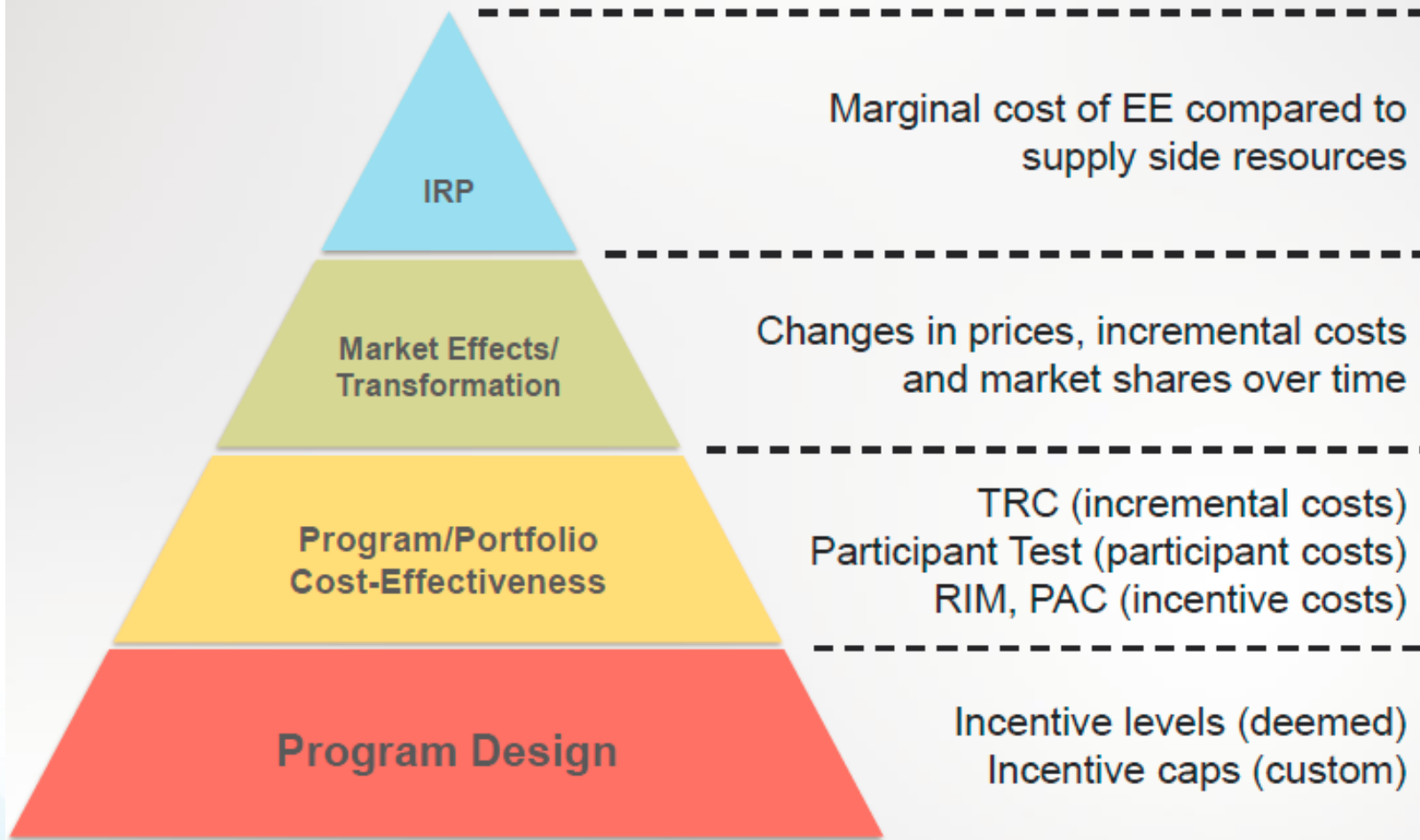
RENEWABLE ENERGY
RESOURCE CENTER

IMPORTANCE OF INCREMENTAL COSTS



REGULATORY & PROGRAM APPLICATIONS

Measure costs play a central role nearly every level of the larger EE endeavor



WHAT ARE INCREMENTAL COSTS?



Simplest Definition:

- *Incremental cost (\$) = EE Measure material cost (\$) - Baseline material cost (\$) + applicable labor cost if any*

Example:

ENERGY STAR Clothes Washer - Baseline Clothes Washer

= \$700 - \$400

= \$300



INCREMENTAL COST NUANCES



- Energy Efficiency Tiers (CEE Tier 1,2,3, ESTAR ME)
- Premium Equipment Features?
- Market Baseline Definitions (MOP, Retrofit, ROB)
- What about Complex Equipment ?
 - Air Compressors (sizes, uses, markets, parts, labor)*
 - Refrigerator Evaporator Motor Controls*
 - Heat Pump Water Heaters*
 - Insulation & Air Sealing*

INCREMENTAL COST CHALLENGES



- Much existing cost information was extremely old. Much cost data based in 1990's data.
- Lack of comprehensive, reliable measure cost data in the public domain
- Assimilation of actual prices paid for a given product in a given jurisdiction
- Market actors, supply chains, delivery channels vary across "universe" of EE technologies, products and programs
- Require very large sample sizes in the 100s or 1000s

INCREMENTAL COST CHALLENGES



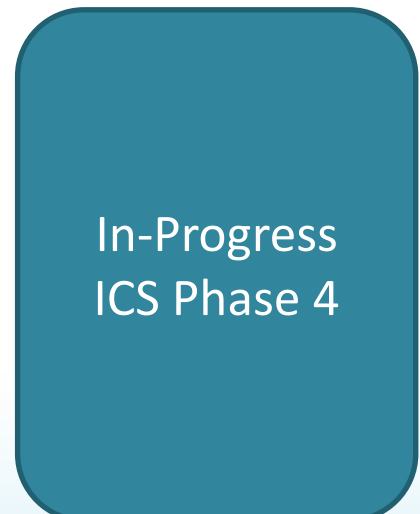
- Cost studies must bridge gap between generalized “measures” and actual products
- For energy analysis, technologies can be grouped together according to energy performance criteria (SEER, AFUE, R-value)
- Costs are dynamic: changes in baselines, technologies, market adoptions, often produce non-linear cost changes
- Rapid market transformation

FORUM INCREMENTAL COSTS STUDIES 2011-2015



Study Sponsors

- BGE
- Berkshire Gas
- Columbia Gas
- DC SEU
- Efficiency VT
- First Energy
- National Grid
- New England Gas
- Northeast Utilities
- NSTAR
- NYPA
- NYSERDA
- PEPSCO
- SMECO
- United Illuminating
- Vermont Gas



WHY A REGIONAL APPROACH?



- Combining Forces - cost studies are expensive
 - typically get low priority in planning or evaluation budgets
- Many program administrators short on staff to manage multiple studies
- Markets and suppliers don't fit neatly into Program Administrator (PA) service territories, but they are definable
- Common interests - with respect to important measures
- Priorities set from bottom up, interactively among PA's, NEEP, Navigant

Markets in ICS Region (Defined by R.S. Means)



- Markets**
1. Northern NE: ME, NH, VT
 2. Central NE: MA, RI, most CT
 3. NE City- Boston, Providence
 4. Metro NY - NYC, LI, SW CT
 5. NY UPstate
 6. Mid-Atlantic



Market	Market Code	Market Territory	Cost Factor
Northern New England	1	ME, VT, NH	0.85
Central/Southern New England	2	MA , RI, most CT	1.06
New England City	3	Boston, Providence	1.13
Metro New York	4	NYC, metro suburbs Southwest CT	1.29
Upstate New York	5	Albany, Buffalo, Rochester, balance of the state	1
Mid-Atlantic	6	MD, DE, DC	0.95
Base Cost Factor (BCF)*	-	-	1

KEY ICS DESIGN CHARACTERISTICS



- Focus on prescriptive measures receiving incentives in current energy efficiency programs
- Create cost curves (efficiencies/capacities)
- Transparent calculation methodology
 - Open workbook calculation
 - User friendly, customizable
- Close coordination with on the ground program implementation staff and measure experts

CHARACTERIZATION-BASED APPROACH



Measure characterizations and baselines are carefully defined with respect to existing program offerings

But these definitions are not equal across the region.
Variances by State and by PA territory in:

- › Measure definitions
- › Rebated efficiency levels
- › Capacities/sizes of equipment supported
- › Baselines (e.g. gas furnaces in New England v. Mid-Atlantic states)

CHARACTERIZATION AND COST EXAMPLE



Commercial Unitary Air-Conditioning (AC) Characterization

Measure Description	Commercial Unitary AC (packaged)
Baseline	Standard Efficient Unitary AC
Measure Scenario(s)	ROB, NC
Baseline Efficiency Levels	IECC 2009 and/or jurisdiction-specific. Baseline efficiency varies by size.
Measure Level Description	High-Efficiency Unitary Air-Conditioning Equipment
Measure Efficiency Levels	CEE Tier 1 & Tier 2 (see CEE Criteria Tab)
Sizes (1 ton = 12,000 Btu/h of cooling)	5.4-11.25 tons
	11.25-20 tons
	20 -63 tons
	>= 63 tons
Distinguishing Features	1) Heating type (none, gas, electric resistance)
	2) Other features: (e.g., variable-speed fans and compressors associated with higher energy efficiency ratios [EERs])
Installation Scenarios	Single Package
Sources	NY TRM, Mid-Atlantic TRM, EVT TRM, Efficiency Maine TRM, MA TRM
Comments	Replace Unitary AC only There are no incremental labor costs for this measure.

UNITARY AC COSTS



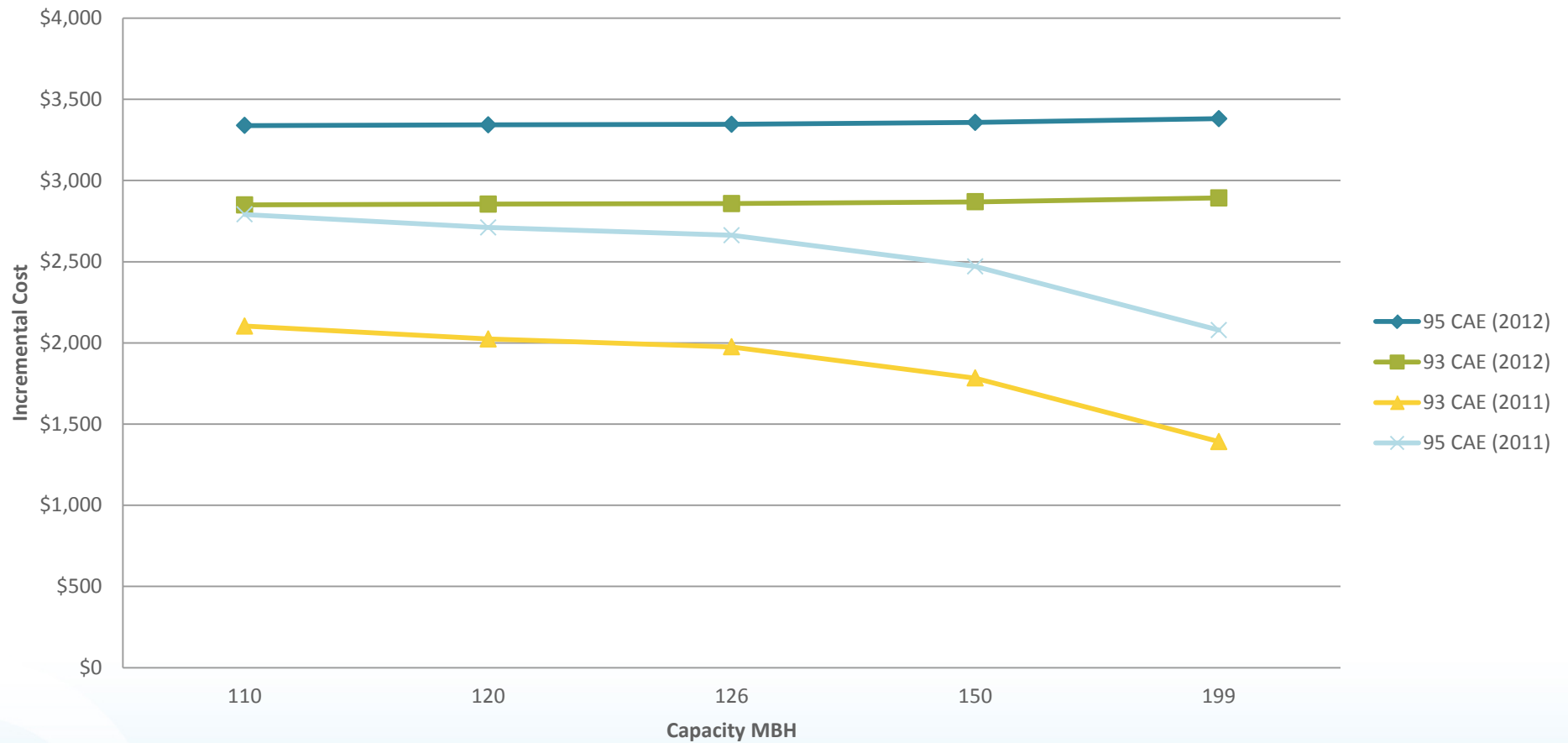
Base Costs are Determined and then for each market, multiplied by the appropriate equipment and labor factors

Base Cost Factors	Base Cost Factor (\$/Ton)	
Size Category (Tons)	CEE Tier 1	CEE Tier 2
	5.4 to 11.25	\$63.42
11.25 to 20	\$63.42	\$126.84
20 to 63	\$18.92	\$37.83

COST CURVE EXAMPLE



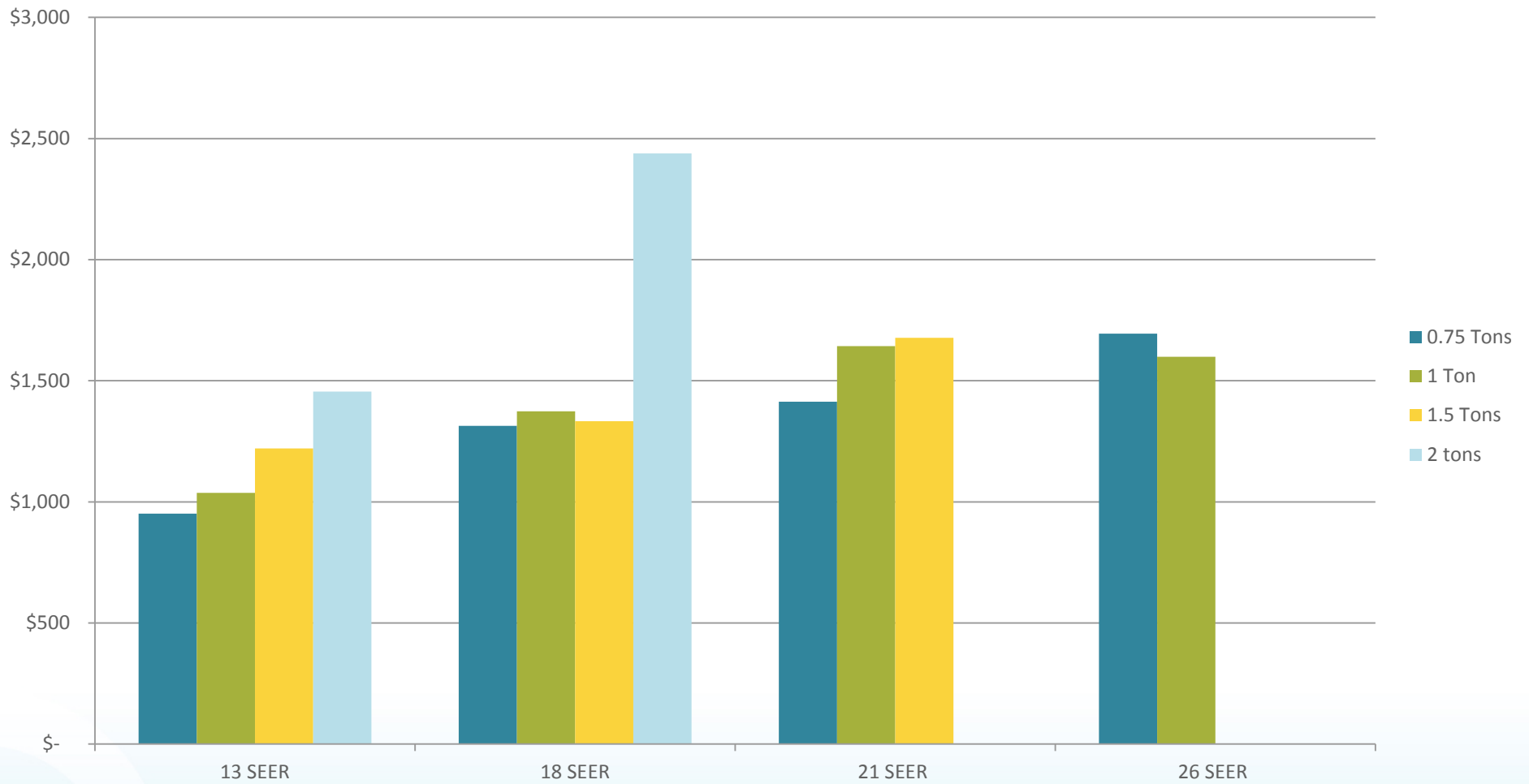
Combination Heat/Hot Water Units
2011/2012
Incremental Costs



EXAMPLE DUCTLESS MINISPLIT COSTS



Ductless Minisplits
Incremental Costs



CHALLENGE

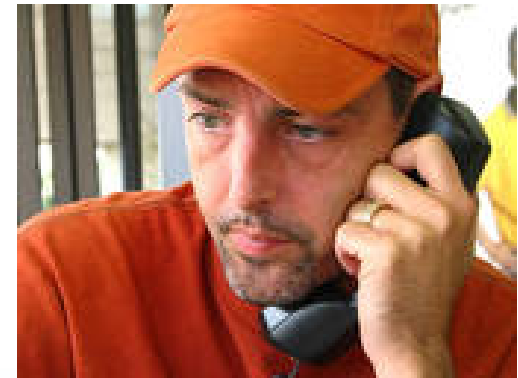
Getting to the Right People and Data



- » Program Administrators
 - › Program implementation staff - often too busy
 - › Access to program implementation contractors and their data
 - Primary data often in invoices, paper and pdfs

- » Installers: Good responses from paid interviews but *always* too busy to pick up the phone

- » There is no silver bullet. Challenges are overcome by being strategic and persistent.



30 MEASURES STUDIED, IN ALL



Measure	Sector	Fuel	Application	Cost Type	Source of Final Results	Measure Cost Shelf Life
Phase 1: Measures September 2011						
1 Air Sealing	Res	Gas/	RET	Full	Phase 1	
2 Air Source Heat Pumps	Res	Electric	RET	Incr	Phase 1	
3 Boilers (300-2,500 kBtu/h)	C&I	Gas	ROB	Incr	Phase 1	
4 Boilers (<300 kBtu/h)	Res	Gas	ROB	Incr	Phase 1	
5 Central Air Conditioning	Res	Electric	ROB	Incr	Phase 1	Medium
6 Combination Heat Hot Water	Res	Gas	ROB/NC	Incr	Phase 2	Frequent
7 Furnace Including ECMs (60-120 kBtu/h)	Res	Gas	ROB	Incr	Phase 1	
8 Indirect Water Heaters (30-65 Gal)	Res	Gas	ROB/NC		Phase 1	
9 Insulation, Attic, Cellulose	Res	Gas	RET	Incr	Phase 2	Stable
10 Lighting Controls	C&I	Electric	RET/NC	Full	Phase 1	
11 On Demand (Tankless) Water Heaters	Res	Gas	ROB	Incr	Phase 2	
12 On Demand (Tankless) Water Heaters (Condensing)	Res	Gas	ROB	Incr	Phase 2	Medium
13 Unitary Air Conditioning	C&I	Electric	ROB/NC		Phase 1	
Phase 2: Measures January 2013						
14 Dual Enthalpy Economizers	C&I	Electric	RET/NC	Incr, Full	Phase 2	Medium
15 Ductless Mini-Splits	Res	Electric	RET/NC	Incr, Full	Phase 2	Frequent
16 ENERGY STAR Ventilation Fans	Res	Electric	ROB/NC	Incr, Full	Phase 2	Medium
17 Prescriptive Chillers	C&I	Electric	ROB	Incr	Phase 2	Medium
18 Variable Frequency Drives	C&I	Electric	RET	Incr	Phase 2	Medium

MEASURES STUDIED (2)



Measure	Sector	Fuel	Application	Cost Type	Source of Final Results	Measure Cost Shelf Life
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Phase 3: Measures June 2014

Air Source Heat Pump	Com	Electric	ROB,NC	Inc	Phase 3	Stable
Heat Pump Water Heater	Res	Electric	ROB,NC	Inc	Phase 3	Stable
LED Refrigeration Case Lighting	Com	Electric	RET	Full*	Phase 3	Frequent
Steam traps	Com	Gas	ROB,NC	Full**	Phase 3	Stable
Unitary AC 65- 135kBh	Com	Electric	ROB,NC	Inc	Phase 3	Medium

Phase 4: Measures to be completed Spring 2015

Air Compressors - multiple tiers and types	Com	electric				
Furnaces 225-500 kBh	Com	natural gas				
Infrared Heater	Com	gas				
Kitchen Equipment - Fryers	Com	gas				
Kitchen Equipment – Convection Ovens	Com	gas				
Refrigeration. Anti-sweat Heater Controls	Com	electric				
Variable Refrigerant Flow Multisplit AC Systems	Com	electric?				

HOW DATA ARE BEING USED



- » New England Gas Program Administrators used data to:
 - › Revise incentive levels for Combination Boilers / Domestic Hot Water units
 - In 2011 incentive was \$1,600
 - Non-qualifying models were removed from NEEP data set
 - Incremental cost was determined to be \$1,273.
Incentive was higher than incremental cost, so incentive lowered to below incremental cost - \$1,200
 - Revise incentive levels for High Efficiency Gas Furnaces and Boilers
 - Used curve fits [incremental cost = f (efficiency, size)] from study to extrapolate to newer, more stringent efficiency levels than study covered.
- Mid-Atlantic TRM (DE, MD, DC), includes incremental costs



HOW DATA ARE BEING USED



» NY DPS:

- › Used data for **Commercial Gas Hot Water Boilers** to develop Screening Tool for Pre-Qualified and Prescriptive Incentives
- › Used curve fit of incremental cost for 10 sizes and two efficiency levels



» NSTAR used cost data for economizers

- › To verify incentive levels
- › Recently as input to benchmarking programs



» Efficiency Vermont used data for

- › Measure cost comparisons & research for preliminary analysis of custom projects
- › As supplemental info in measure cost database
- › Has/will be using ICS data for TRM Development activities (e.g. Ductless Mini-Split data)



KEY QUESTIONS AND RECOMMENDATIONS



KEY QUESTIONS

- Are there ways to acquire better-quality data sets than those used in the past?
- Are there ways to increase the flexibility of measure cost estimates and otherwise increase their shelf-life/transferability/overall value?
- Can all this be done more frequently and at lower cost?

KEY QUESTIONS AND RECOMMENDATIONS



RECOMMENDATIONS

- Build retailer/distributor/contractor partnerships
- Integrate make/model and installation cost data into program tracking databases
- Perform regular, targeted market assessments to inform frequency and depth of future cost data collection
- Standardize data development and analysis procedures for measure cost estimation



STANDARDIZED EM&V METHODS REPORTING FORMS

Julie Michals
NEEP

PROJECT HISTORY



1. 2010 - Forum developed *Regional EM&V Methods Guidelines* covering 14 measures. But only a few Forum states referenced the guidelines. Some PAs feared they were 'lowest common denominator'
2. 2013 - Steering Committee wanted to know "what are your practices?" Focus shifted to standardized transparency and reporting (instead of protocols)
3. Forms developed in early 2014, with Steering Committee adoption in July 2014:

" States agree to encourage use of the standardized forms in their state.... "

STANDARDIZED EM&V METHODS REPORTING

Overarching goal



Build credibility of EE as a resource by building transparency and basic understanding of EM&V practices to support inclusion of growing EE resources in state, regional and national energy & environmental policies and markets

STANDARDIZED EM&V METHODS REPORTING

Objectives



1. Provide for **standardized comparability of EM&V practices** through the use of a simple, model reporting format with consistent definitions;
2. Help to **reduce administrative costs associated with presenting and reviewing EE program impacts** by having a consistent format for reviewing results;
3. Support ability for interested parties **to compile data and analyze common practices** and associated impacts
4. **Build on or replace existing reporting requirements** where they exist, to avoid new reporting burden for PAs

WHY STANDARDIZED EM&V METHODS FORMS?



Audiences and Uses:

PUCs, SEOs, DEPs, system planners, PAs questions:

- What EM&V methods were used to estimate savings?
- How reliable are the reported EE savings?
- How do EM&V methods compare across states?
- How do EM&V methods used align with existing state, regional or national EM&V protocols?
- Where do I need to dig deeper in reviewing evaluation of programs?
- How can we better understand differences in results reported in REED across states?
- How can we streamline evaluation review process and reduce costs?

Nutrition Facts	
Serving Size 1 Banana (130g)	
Servings per Container 1	
Amount Per Serving	
Calories 300	Calories from Fat 130
% Daily Value*	
Total Fat 16g	24%
Saturated Fat 8g	39%
Trans Fat 0g	
Cholesterol 0g	0%
Sodium 15mg	1%
Potassium 320mg	9%
Total Carbohydrate 44g	15%
Dietary Fiber 4g	16%
Sugars 32g	
Protein 2g	
Vitamin A	2%
Vitamin C	15%
Calcium	2%
Iron	6%
Riboflavin (Vitamin B2)	4%
Vitamin B6	15%
Folate	4%
Magnesium	6%
Copper	4%
Manganese	10%

* Percent Daily Values are based on a 2000 calorie diet. Your daily values may be higher or lower, depending on your calorie needs:

	Calories	2,000	2,500
Total Fat	Less than	65g	80g
Sat Fat	Less than	20g	25g
Cholesterol	Less than	300mg	300mg
Sodium	Less than	2,400mg	2,400mg
Total Carbohydrate		300g	375g
Dietary Fiber		25g	30g

POTENTIAL APPLICATIONS BEYOND FORUM

To Be Determined



- US DOE can use to complement its Uniform Methods Project EM&V protocols as summary/cross reference tool
- State DEPs and US EPA may use to support CAA 111(d) and SIPs state plans for EE documentation (in current form or revised)
- National EE Registry (The Climate Registry) interested in using forms for documentation for CAA 111(d). *In discussion with TCR*

FORM CATEGORIES



Program Form

1 – Program Year Summary

2 – Program **EM&V Methods Summary**

3 – Program **EM&V Rigor Summary**

4 – Relevant EM&V Documents

Study Form

1 – General Information

2 – Study Summary and Results

3 – **EM&V Methods** for Gross Savings

4 – **EM&V Methods** for Net Savings

5 – Study **EM&V Rigor Summary**

6 – Evaluation Protocols

7 – Recommendations

FORM FORMAT



Methods for Estimating Gross Impacts
Describe and characterize the methods for estimating gross and adjusted gross impacts.

1. Select method(s) for gross impact analysis: more info...

Deemed savings
 Engineering desk review
 Measurement & verification
 Large scale consumption data analysis
 Top-down analysis (macro consumption)
 Other (describe below) Not applicable

2. Select sampling method(s) for gross impact analysis: more info...

Census Sampling Unit
 Sample Participant Sample Size
 Other Non-Participant Sample Size
 Not Applicable

Provide additional description:



structured response



flexible response

FORM FORMAT



Characterization of EM&V Rigor

The following four questions aim to provide information on the overall rigor of the evaluation. In the context of this form, we define "rigor" strictly in terms of the validity of the results, based on (1) the quality of the data, (2) appropriateness of the way the data was collected, (3) statistical confidence and precision of the results, and (4) appropriateness of the measurement methods.

1. Data Quality

[more info...](#)

- All study components are recent and based on primary research.
- Most study components are based on recent and secondary research.
- Study EM&V components savings are not based on recent research.

Describe your selection:

2. Sampling Method

[more info...](#)

- All study components use census or random (incl. stratified) sampling methods.
- Most study components use census or random (incl. stratified) sampling methods.
- Study components use non-random sampling methods.

3. Confidence and Precision

[more info...](#)

- All study components achieve the planned level of confidence and precision.
- Some study components achieve the planned level of confidence and precision.
- Study components did not achieve the planned confidence and precision levels.
- The study does not quantify confidence and precision levels.

4. Measurement Methods

[more info...](#)

- Measurement methods address all major sources of bias.
- Measurement methods address some major sources of bias.
- Measurement methods do not address potential sources of bias.

STATE PILOTS - 2015



States Invited to Pilot Using Forms in 2015

- MA, MD and VT, others? - starting discussions
- Supporting training sessions (1st training yesterday!)
- Focus on preparing completed forms for programs and studies to file with annual report to PUC/PSC this year

Revisions to Forms (V2.0)

- Based on feedback during training sessions and pilots
- Tailor or expand to be useful for EPA CAA 111(d) documentation on methods used? TBD

EM&V METHODS DATABASE

Contingent Upon funding: 2015-16



Create searchable database of completed EM&V methods forms

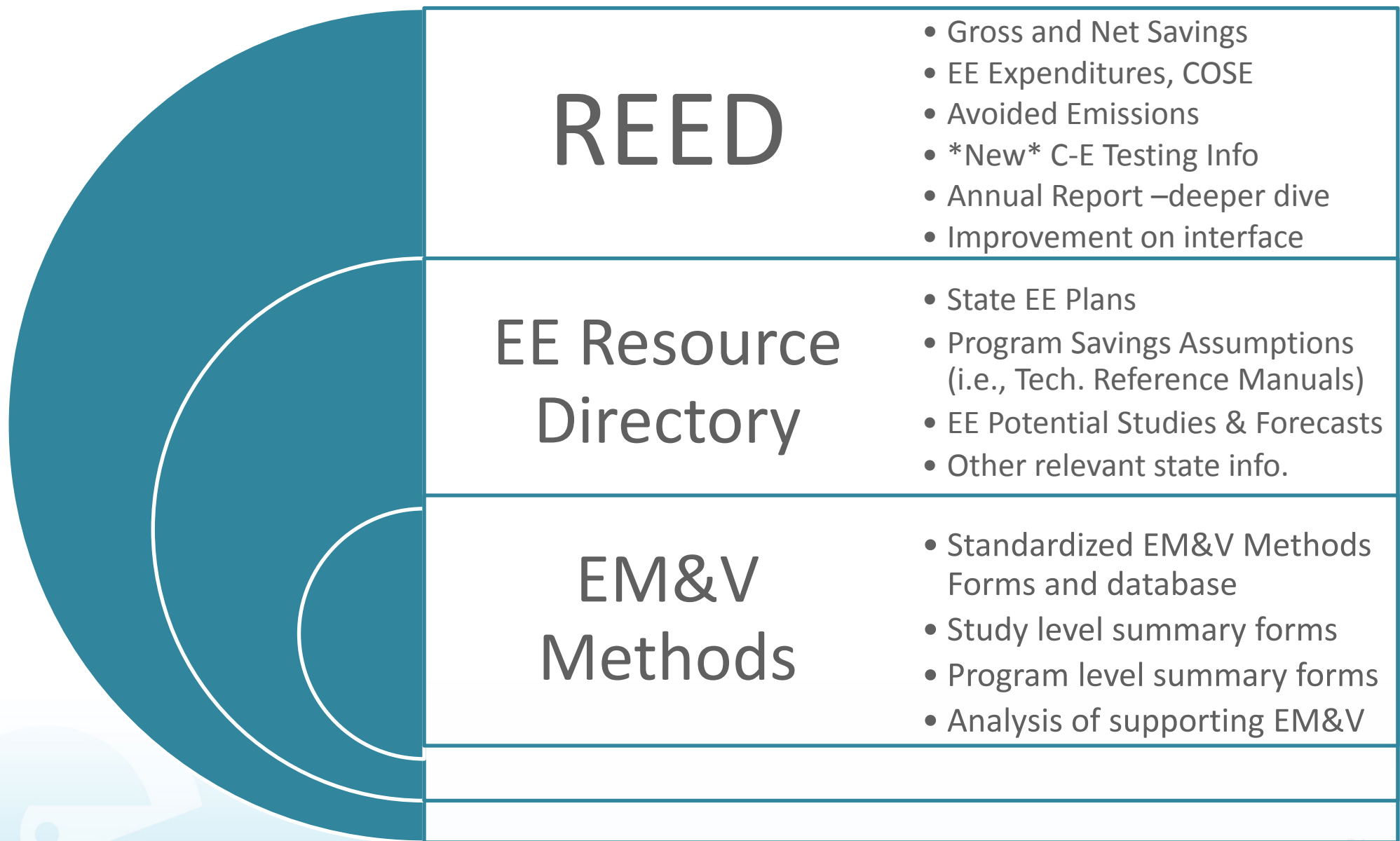
- Browse completed study and program forms
- Compare data across multiple studies or programs
- Search for studies or programs meeting specified criteria
- Extract data associated with specified parameters
- Create new reports or queries based on existing data

Connect to other resources

- Link to Regional Energy Efficiency Database (REED)
- Link programs and associated studies

STANDARDIZED REPORTING

Forums serves as platform for EE and EM&V Info to support energy policies, markets & CAA State Plans



COMMENTS TO EPA ON CAA 111(D) EM&V

Joint EE Stakeholder Comments



- 1) Mix of signatories: national NGOs, regional organizations, state agencies. See <http://www.neep.org/energy-efficiency-and-proposed-epa-clean-power-plan>
- 2) Recommended key principles: flexibility for states to include EE in state plans; support fair treatment across states; provide transparency and clarity for reporting documentation; support a streamlined EM&V and reporting review process for EPA
- 3) Use of standardized reporting tools - use or build on existing tools (e.g., standardized EMV Methods forms)
- 4) Defers certain 'hard' issues to be addressed through a recommended formal process (prior to EPA issuing rule) to identify acceptable EM&V methods, address rigor



Thank you!

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