NORTHEAST ENERGY EFFICIENCY PARTNERSHIPS

Regional Evaluation Measurement & Verification Forum

Common Statewide Energy Efficiency Reporting Guidelines:

Building the Credibility of Energy Efficiency

EM&V Forum
Annual Public Meeting
October 19, 2010

Overview – Common Statewide EE Reporting Guidelines

- Purpose, Uses and Scope
- Example Draft Templates
- Status of Draft Guidelines
- Stakeholder perspectives: purpose, use and implementation of common reporting tables

Common Statewide Energy Efficiency Reporting Guidelines

Preface: Purposes, Uses & Outcome (if implemented)

PURPOSE

Common reporting with consistent or transparent definitions for electric & natural gas EE savings, costs, emission and job impacts, with links to supporting EE data and EM&V methods

USES

State SEOs/PUCs track program impacts against state energy and economic goals, allowing for comparison and aggregation of state impacts to multi-state or regional levels

Program Administrators/Regulators review and compare consistently reported costs of saved energy, and relative effectiveness of programs to inform more effective program and policy design

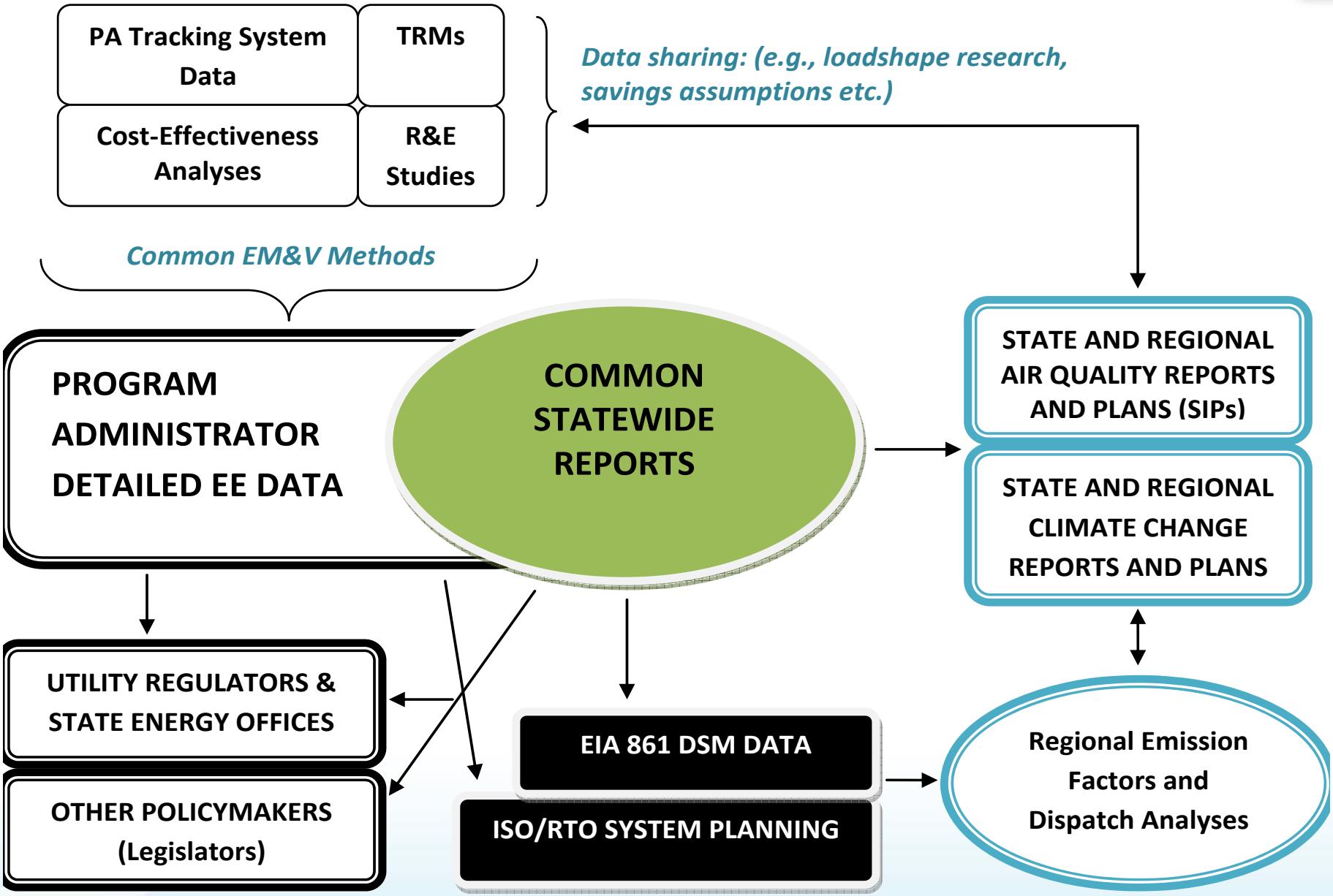
Air quality Regulators incorporate consistently reported efficiency savings data into air quality reporting and planning (SIPs, climate change plans), and have access to EE data sources and supporting EM&V information

System Planners use consistently reported efficiency data to support regional system plan forecasts, including energy, demand and

OUTCOME

IMPROVED UNDERSTANDING AND CREDIBILITY OF EE AS A RESOURCE TO SUPPORT FUTURE INVESTMENTS

Where do Guidelines Fit into Broader EE Reporting Scheme and Policy/Market Needs?



Common Statewide Reporting Guidelines
Scope & Basis

Scope:

- Electric and gas, and other fuel savings from state EE program administrator programs (can also report demand response savings)
- Identify funding sources (ratepayer funds, ARRA, RGGI etc)
- Impacts from previous years' installations (not forecasted)
- Savings, costs, emissions, and job impacts
- Balance of common definitions and transparency (check boxes) for "harder" definitions, and links to supporting data/sources

Basis:

- Review of current reporting practices/requirements for System Benefit Charge-funded electric and gas efficiency programs
- Interviews with PUC and air regulators, PAs, and regional system operators to document current practice/data needs
- Conducted by NMR Group/Cadmus Group/Conant contractor team

Common Statewide EE Reporting Guidelines

Future Considerations:

- Reporting forecasted energy efficiency data (to support air quality planning and system planning data needs)
- Reporting by more specific program sector and/or program type, e.g., prescriptive/custom programs, multi-family retrofit, Large C&I, Small C&I, etc.
- Reporting by specific End Use Data, e.g. Lighting, Appliances, HVAC, Motors/Drives, Refrigeration, etc.
- Reporting more specific program expenditure categories (marketing vs administrative costs?)
- Reporting only *levelized* cost per kWh or therm (and not lifetime cost of saved energy), with consistency in type of discount rate to use

Common Statewide EE Reporting Guidelines

Draft Templates

Table 1.0: Description of Reported Energy-Efficiency Savings

- Clarifying definitions for key reporting elements
- Provide documentation and key links
- Identify evaluation methods used; review and approval of savings

Table 1.1: Incremental Annual Savings

Table 1.2: Cumulative Annual Savings

Table 1.3: Lifetime Savings

Table 1.4: System Peak Annual Demand Savings

Table 2.0: Program Expenditures and Cost of Saved Energy

Table 3.0: Air Emission Reductions

Table 4.0: Job Impacts

Reporting Templates DRAFT

Table 1.0: Description of Reported Energy Efficiency Savings

Jurisdiction/State: XXXXX	**Program Year:** 20YY
1. General Information on Reported Data	
1.1 Final annual savings data reported in what quarter of the following program year.	☐ 1st Qtr. ☐ 2nd Qtr. ☐ 3rd Qtr. ☐ 4th Qtr.
1.2 Link(s) to supporting Program Administrator or State Annual Reports	www.xxx.com

1.3 Reported data can be characterized as:

☐ **Savings Tracking Database Estimates.** Where reported savings are based on year-end tracking data that incorporate impact factors from previous year evaluation studies, but where impact factors are the same ones used to project savings in the reporting year Energy Efficiency plan filings.

☐ **Adjusted Savings Estimates**. Adjustments are made to Tracking Database Estimates (e.g., third party review such as verification of installations, evaluation of program(s)). Please describe:

_____

_____

Are evaluation results systematically incorporated into following year Savings Tracking Database Estimates?

☐ Yes or ☐ No

2. Gross Savings		**Applied to Some or All Programs?**
2.1 Adjusted Gross Energy Savings Please indicate types of adjustments made to Gross Energy Savings (or that are included in Realization Rate). Indicate if adjustments are made to some or all programs/measures. (Check all that apply)	☐ Data Errors ☐ Measure Persistence Factor ☐ Savings Persistence Factor ☐ In-Service Rate ☐ Interactive Effects ☐ Other _____ ☐ Other _____	☐ Some or ☐ All Programs ☐ Some or ☐ All Programs ☐ Some or ☐ All Programs ☐ Some or ☐ All Programs ☐ Some or ☐ All Programs ☐ Some or ☐ All Programs ☐ Some or ☐ All Programs
3. Net Savings		
3.1 Net Savings Indicate types of adjustment incorporated in reported net savings. (Check all that apply.)	Adjustments include: ☐ Free Ridership ☐ Participant Spillover ☐ Non-Participant Spillover ☐ Other _____	

Reporting Templates DRAFT

Table 1.1: Incremental Annual Energy Savings

Jurisdiction: XX	Program Year: 20YY	Adjusted Gross Annual Energy Savings				Net Annual Energy Savings			
Savings By Sector and Program		Electric (MWH)		Gas Meter Level (Therms)	Other Fuel Savings	Electric (MWH)		Gas Meter Level (Therms)	Other Fuel Savings
		Gen. Level	Meter Level			Gen. Level	Meter Level		
ENERGY EFFICIENCY PROGRAM SAVINGS:									
Residential Non-Low Income Customer Sector Energy Savings by Program									
Electric Efficiency Programs 1, 2, 3 etc (list)									
Nat. Gas Efficiency Programs 1, 2, 3 etc (list)									
SUBTOTAL									
Residential Low Income Customer Sector Energy Savings by Program									
Electric Efficiency Programs 1, 2, 3 etc (list)									
Nat. Gas Efficiency Programs 1, 2, 3 etc (list)									
SUBTOTAL									
Commercial & Industrial Customer Sector Energy Savings by Program									
Electric Efficiency Programs 1, 2, 3 etc (list)									
Nat. Gas Efficiency Programs 1, 2, 3 etc (list)									
SUBTOTAL									
Other Customer Sector Energy Savings by Program									
Electric Efficiency Programs 1, 2, 3 etc (list)									
Nat. Gas Efficiency Programs 1, 2, 3 etc (list)									
SUBTOTAL									
TOTAL ENERGY EFFICIENCY SAVINGS:									
DEMAND RESPONSE PROGRAM SAVINGS:									
Program 1									
Program 2 etc.									
TOTAL DEMAND RESPONSE SAVINGS:									
TOTAL INCREMENTAL ANNUAL ENERGY SAVINGS:									

Table 1.4.1: Summer Peak Annual Demand Savings

Jurisdiction XX	Program Year 20YY	Adjusted Gross Demand Savings		Net Demand Savings	
Summer Peak Demand Savings By Sector and Program		**Generation Level (MW)**	**Meter Level (MW)**	**Generation Level (MW)**	**Meter Level (MW)**
ENERGY EFFICIENCY PROGRAM SAVINGS					
Residential Non-Low Income Customer Sector					
Program 1					
Program 2 etc.					
SUBTOTAL					
Residential Low Income Customer Sector					
Program 1					
Program 2 etc.					
SUBTOTAL					
Commercial & Industrial Customer Sector					
Program 1					
Program 2 etc.					
SUBTOTAL					
TOTAL ENERGY EFFICIENCY PROGRAM SAVINGS					
DEMAND RESPONSE PROGRAM SAVINGS					
Program 1					
Program 2 etc.					
TOTAL DEMAND RESPONSE PROGRAM SAVINGS					
TOTAL SUMMER PEAK DEMAND SAVINGS					

Summer Annual Demand Savings - coincident with:

☐ Utility Peak Demand or ☐ ISO/RTO System Peak or ☐ Other

Provide description of peak coincidence hours (e.g., average hours, maximum hours during peak):

_____

Table 2.1: Electric and Gas Energy Efficiency Program Expenditures

Jurisdiction/State XX	Program Year 20YY	Energy Efficiency Program Expenditures*	
Expenditure Category		**Electric (dollars)**	**Gas (dollars)**
ENERGY EFFICIENCY PROGRAMS			
Program Direct Costs:			
Rebates/Incentives:		$	$
Administration/Marketing/Other:		$	$
Subtotal Program Direct Costs:		$	$
Performance Incentives:		$	$
Research and Evaluation:		$	$
Other (Describe: _____)		$	$
TOTAL ENERGY EFFICIENCY PROGRAM EXPENDITURES		$	$

* In cases where electric (or gas) programs provide gas (or electric) savings, please estimate cost according to allocation by either:

- ☐ Estimated Savings
- ☐ NVP of Benefits
- ☐ Other Method – Describe: _____

TOTAL DEMAND RESPONSE PROGRAM EXPENDITURES	$	
Percent of Program Funded by:		
☐ Ratepayer Funded Programs	%	%
☐ Regional Greenhouse Gas Initiative (RGGI) Proceeds	%	%
☐ Weatherization Assistance Programs (WAP)	%	%
☐ American Recovery & Reinvestment Act (ARRA) Funds	%	%
☐ Other	%	%

Reporting Templates
DRAFT

Table 2.2: Cost of Saved Energy

Jurisdiction/State XX	Program Year 20YY		
Cost of Saved Energy Methodology		**Electric Cost ($/kWh)**	**Natural Gas Cost ($/Therm)**
Lifetime Cost per kWh or Therm = Using formulas provided above			
Lifetime Cost per kWh ☐ with participant costs OR ☐ no participant costs			
Lifetime Cost per Therm ☐ with participant costs OR ☐ no participant costs			
Levelized Cost per kWh or Therm: Using formulas provided above			
Levelized Cost per kWh ☐ with participant costs OR ☐ no participant costs			
Net Levelized Cost per kWh (optional) Cost Parameters Excluded:			
Real Discount Rate (i) **Weighted Avg. Measure Life (n)** Source of Discount Rate:		**i =**	**n =**
Levelized Cost per Therm ☐ with participant costs OR ☐ no participant costs			
Net Levelized Cost per Therm (optional) Cost Parameters Excluded:			
Real Discount Rate (i) **Weighted Average Measure Life (n)** Source of Discount Rate (describe):		**i =**	**n =**

Table 3: Avoided Emissions

Jurisdiction/State:						
			Annual Emissions Avoided (metric tons)		Annual Peak Emissions Avoided (metric tons)	
Pollutant	**Emissions Calculation Method Used**	**Emissions Factor Used**	**From Electric Savings**	**From Nat. Gas Savings**	**From Electric Savings**	**From Nat. Gas Savings**
eCO_2		☐ Marginal ☐ Average Source: _____				
NO_X		☐ Marginal ☐ Average Source: _____				
SO_2		☐ Marginal ☐ Average Source: _____				
Other						

Based on Annual Demand Savings coincident with:

☐ High Electricity Demand Days ☐ Utility Peak Demand ☐ ISO/RTO System Peak ☐ Other

Provide description of peak coincidence hours:

_____

_____

Table 4: Job Impacts from Energy Efficiency Investments

Program Year:					
	Residential Program*		C&I Program	Total Program	Methodology
	L/I	Non L/I			
Gross full time equivalent jobs directly funded through program					
Net full time equivalent jobs					
Median wage of jobs funded through program (in 2010 $$)					
Other Metric (Describe): (e.g. types of programs associated with Jobs created)					

*Low Income (L/I) and Non Low Income (Non L/I)

Common Statewide EE Reporting Guidelines
Process Recommendations

Coordination needed:

- Establish inter-agency processes of SEOs/PUCs/air agencies to support effective integration of EE into state and regional air quality and climate change analyses and planning;
- Coordinate Guidelines with national efforts to develop common energy efficiency reporting templates; and
- Coordinate with regional system planners to build common approaches, and associated data needs, to incorporate EE into system planning processes (Forum 2011 project)

Implementation of Guidelines:

- Reporting templates to serve as the Statewide Annual Report, recognizing that states may opt to collect and report data in addition to the Guidelines' reporting parameters
- States to identify responsible agency/entity to complete Statewide Annual Report, where such agency could be SEO, PUC, EE PAs, ideally entity responsible for state energy planning. TBD by states.

Common Statewide EE Reporting Guidelines Next Steps:

1) Forum states final review/comments (Oct-Nov 2010)

2) Forum Steering Committee adoption of Reporting Guidelines in mid-December

3) Implementation of Forum Guidelines – 2011 project (on-line spreadsheet tool and technical support planned)

5) Coordination with key stakeholders: state agencies including PUC and air regulators, SEOs, economic development agencies, and with national efforts at US DOE (SEE Action, EIA Forum 861 Reporting) and US EPA

Stakeholder Perspectives & Discussion

1) State energy office
2) US DOE
3) State public utility commission
4) US EPA
5) State air regulator