



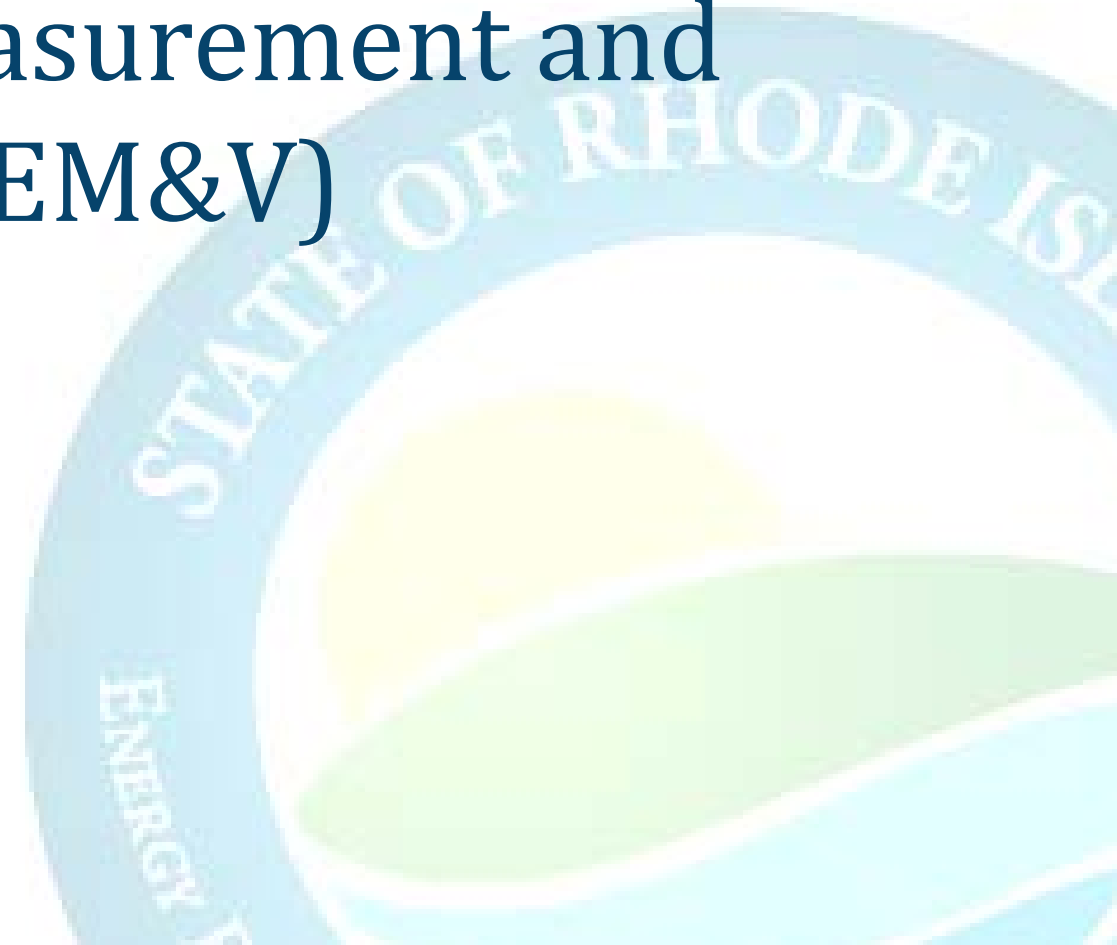
STATE OF RHODE ISLAND
**ENERGY EFFICIENCY &
RESOURCE MANAGEMENT COUNCIL**

CONSULTANT TEAM

2020 Evaluation, Measurement and Verification (EM&V)

Presented By: Mark Kravatz

Date: March 19, 2020





What is EM&V?

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- **EM&V** = Commitment to providing accurate, transparent, and consistent metrics – based on good data – that assesses the performance and implementation of energy efficiency projects, programs, and portfolios of programs.
 - Industry has 30+ years of EM&V experience



Why EM&V?

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- Policy makers and legislation require that energy efficiency programs be proven cost-effective.
 - EM&V serves three critical objectives:
 - 1. Accountability of the impacts**
 - *Did the program deliver its estimated benefits?*
 - 2. Risk management**
 - *How certain are these savings?*
 - 3. Continuous improvement**
 - *What can be done to improve program performance in the future?*



Rhode Island EM&V Standards

This **Measurement and Verification (M&V) Plan** shall address:

- Savings verification, including where appropriate analysis of customer usage.
- Verification should also facilitate participation in ISO-NE's forward capacity market;
- Issues of ongoing program design and effectiveness;
- Efforts related to market assessment and methodologies to claim savings from market effects, among others;
- Regional and other cooperative EM&V efforts the distribution company is participating in, or plans to participate in; and
- Longer-term studies, as appropriate, to assess programs over time.



EM&V Accountability

- Evaluations conducted by independent third-party evaluators, managed by National Grid with oversight from the EERMC and OER.
- All evaluations are filed with the PUC and publicly accessible.
- EM&V C-team is led by Ralph Prah to providing oversight.
- Meet with N-Grid twice per month to review all studies.



Types of EM&V

- **Impact Evaluations** – Assesses outcomes attributable to an energy efficiency program.
 - Addresses questions related to the following objectives:
 - 1) Accountability of Programs
 - 2) Risk Management
- **Process Evaluations** – Assesses program operations to identify and recommend areas of improvement
 - Addresses questions related to the following objective:
 - 3) Continuous Improvement
- **Market Evaluations** – Assesses broad aspects of the marketplace with respect to energy efficiency.
 - Addresses questions to all three objectives



2020 Residential Studies

Program/Study	Study Type	About
EnergyWise Single Family, Energy Wise Multi-Family, Income Eligible Services Multi-Family	Impact	Verify energy savings estimates for measures offered through the EnergyWise Single Family, EnergyWise Multi-Family and Income Eligible Services Multi-Family programs
EnergyWise Single Family, Energy Wise Multi-Family, Income Eligible Services Multi-Family	Process	Assess the overall delivery of the EnergyWise Single Family, EnergyWise Multi-Family and Income Eligible Services Multi-Family programs
Home Energy Report	Impact	Verify energy savings estimates for measures offered through the Home Energy Report program.
Upstream Lighting	Market	This study will support potential research studies needed to inform planning activities for both retail and direct install lighting in 2021 and beyond.
Ductless MiniSplit	Process	Assess the current Rhode Island residential ductless mini-split heat pump offering.
Sense™ Demonstration	Impact/Process	Verify energy savings and assess the delivery of Sense™ technologies



2020 Commercial & Industrial Studies

Program/Study	Study Type	About
PY16, 17,18, 19 Custom Gas Installations	Impact	Determine savings estimates for a sample of custom gas projects through site-specific inspection, metering, and analysis.
PY16, 18, 19 Custom Elec. Installations	Impact	Determine savings estimates for a sample of custom elec. projects through site-specific inspection, metering, and analysis.
Free Ridership & Spillover	Market	Free-ridership and spillover values will be updated based on an assessment of the behavior of both participants and nonparticipants of C&I energy efficiency programs.
Upstream Lighting	Impact	(MA) Verify electric energy savings estimates for a sample of upstream lighting projects through site-specific inspection, metering, and analysis.
Prescriptive Gas & Elec. Measures	Impact	(MA) Verify electric and gas energy savings estimates for a sample of prescriptive measures
Strategic Energy Mgmt. Demo	Impact	Verify savings from strategic energy management (SEM) demonstration
Small Bus. Heat Pump Demo	Impact/Process	Will inform efforts toward creating scaled solution for cold climate heat pumps for small businesses.



2020 Cross-Cutting Studies

Program/ Study	Study Type	About
Piggybacking	Custom	Assess best practices for leveraging MA-based studies
Legislated M&V	Impact	Verify claimed energy savings from the Company's energy efficiency programs and review the Company's evaluation process
Heat Pump Market	Market	Will evaluate the current status of the heat pump market and assess potential for future growth of heat pumps
Jobs	Market	Will identify the workforce associated with National Grid's energy efficiency programs
Gas Peak Demand	Market	Determine the percentage of gas energy savings that occur during peak days/hours.
Res & C&I New Const. & Code Compliance	Custom	Calculate the savings projected to be achieved by the Code Compliance program for the 2021-2023 period
Codes & Standards Development	Custom	Will develop an evaluation framework for the Company's codes and standards development support.