## **MEMORANDUM**

TO: STAKEHOLDER ADVISORY GROUP

FROM: CHERYL JENKINS, PROJECT MANAGER on Behalf of VEIC TRM Team

**SUBJECT:** PROPOSED EVALUATION PRIORITIES FOR THE TRM

**DATE:** FEBRUARY 26, 2016

Cc: JENNIFER MORRIS, ICC; JONATHON JACKSON, AMEREN

In an effort to increase the accuracy of the IL Statewide TRM, VEIC offers the following list of measures and parameters for which we believe investment in evaluation may be most beneficial to the accuracy of the saving estimates. These recommendations are based on consideration of the relative importance of the parameter in a particular measure or measures savings estimate, as well as the degree of uncertainty or confidence we have in the deemed value. We have also provided a qualitative measure of priority such that those parameters with the least confidence or highest impact rise to the top. This list is not meant to be exclusive or imply that other evaluation priorities should not be executed based on overall evaluation priorities.

## **Priority Data Elements for Evaluation**

Measure #	Measure	Parameter	Priority
4.2.1	Combination Oven	Deemed therm savings values should be evaluated	Low
4.2.4	Conveyor Oven	Deemed therm savings values should be evaluated	Low
4.2.12	Infrared Charbroiler	Deemed therm savings values should be evaluated	Low
4.2.13	Infrared Rotisserie Oven	Deemed therm savings values should be evaluated	Low
4.2.14	Infrared Salamander Broiler	Deemed therm savings values should be evaluated	Low
4.2.15	Infrared Upright Broiler	Deemed therm savings values should be evaluated	Low
4.2.17	Pasta Cooker	Deemed therm savings values should be evaluated	Low
4.2.18	Rack Oven - Double Oven	Deemed therm savings values should be evaluated	Low
4.3.1	Storage Water Heater	Deem therm savings values should be evaluated	Low
4.3.2	Low Flow Faucet Aerators	Usage (Gallons) by building type Rated and throttled v metered flow rates	Medium
4.3.6	Ozone laundry	TRM v metering studies	Medium

Measure #	Measure	Parameter	Priority
4.3.9	Heat Recovery Grease Trap Filter	Metering to help verify savings magnitude.	Low
4.4.1	Air Conditioner Tune-up	Deem therm savings values should be evaluated	Low
4.4.5	Condensing Unit Heaters	Deem therm savings values should be evaluated	Low
4.4.8	Guest Room Energy Management	Metering to help verify motel v hotel savings	Medium
4.4.12	Infrared Heaters (all sizes), Low Intensity	Deem therm savings values should be evaluated	Low
4.4.14	Pipe Insulation	Regain	Low
4.4.16	Steam Trap Replacement or Repair	Metering to help verify savings magnitude.	<u>Medium</u>
4.4.17	Variable Speed Drives for HVAC Pumps and Cooling Tower Fans	Metering to help verify Energy Savings Factor, and provide better assumption for pump and fan run hours in different building types.	Medium
4.4.18 & 4.4.25	Small Commercial Programmable Thermostat & Small Commercial Programmable Thermostat Adjustment	Persistence TRM modeling v metering studies Baseline set back practice	High
4.4.20, 4.4.21 & 4.4.22	High Turndown Burner, Linkageless Boiler Controls & Oxygen Trim Controls	Boiler loading histogram or bins	Medium
4.4.23	Shut Off Damper for Space Heating	Savings Factor	Low
4.4.24	Small Pipe Insulation	Thermal Regain Factor	Low
4.4.30	Notched V Belts for HVAC Systems	Pump and fan run hours in different building types.	Medium
4.4.33	Industrial Air Curtains	More metered installations	Low
4.5.3	High Performance and Reduced Wattage T8 Fixtures	T12 Baseline study	High
4.7.2	Cycling Compressed Air Dryer	Metering of pre and post installs v TRM claims	Low
4. <del>7.6</del> <u>8.2</u>	Roof Insulation for C&I Facilities	TRM v metering	Medium
4.8.4	Modulating Commercial Gas Clothes <u>Dryer</u>	Metering of pre and post installs v TRM claims	Low
5.1.10	Residential ENERGY STAR Clothes Dryer	Number of cycles, average capacity	Low
5.2.1	Advanced Power Strip Tier 1	Review of ISR assumptions. Persistence studies	Medium
5.2.2	Advanced Power Strip Tier 2	Metering of AV consumption. Additional product Energy Savings Percentage. Persistence studies	Medium
5.3.1	Air Source Heat Pump	Incremental costs – hedonic modeling to isolate efficiency upgrades	Medium
<u>5.3.6</u>	Gas High Efficiency Boiler	Baseline study	Low

Measure #	Measure	Parameter	Priority
5.3.7	Gas High Efficiency Furnace	Baseline study	Medium
5.3.8	Ground Source Heat Pump	FLH assumptions for ground source heat pumps Part load v Full load operation. TRM v metering study. Incremental cost	High
5.3.10	HVAC tune up	Measure life. Savings factor.	Low
5.3.11	Programmable Thermostat	Persistence / lifetime	Low
5.3.12	<u>Ductless Heat Pumps</u>	Incremental costs – hedonic modeling to isolate efficiency upgrades	Medium
5.3.14	Boiler Reset Controls	Savings Factor	Low
5.3.16	Advanced Thermostats	Continued studies on impact, baseline and persistence	<u>Medium</u>
5.4.4	Faucet Aerator	Drain Factor for kitchen and bathroom installations Rated and throttled v metered flow rates	Medium
5.5.6	LED <del>Downlights</del> Specialty	Hours of use – specific to LED bulbs	Medium
5.5.8	LED Screw based Omnidirectional bulbs	Hours of use – specific to LED bulbs	Medium
5.6.1	Air sealing	TRM v metering / billing study result	MediumHigh
5.6.2 – 5.6.4	Insulation measures	More review of TRM v metering / billing study results	Medium
6.1.1	Adjustments to Behavior Savings to Account for Persistence	Further Illinois-specific information on: persistence levels; persistence duration Peak-specific persistence Cost of behavior change Move-out rates – to be applied to cost-effectiveness calculations	Medium High