## **MEMORANDUM**

TO: STAKEHOLDER ADVISORY GROUP

FROM: ERIN CARROLL, PROJECT MANAGER on Behalf of VEIC TRM Team

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

**DATE:** FEBRUARY 21, 2014

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

| Measure #      | Measure                                | Parameter                        | Priority     |
|----------------|--|----------------------------------|--------------|
| 4.4.           | EFLH heating                           | Multifamily heating system run   | High         |
|                |  | hours and equipment types        |              |
| 4.4.           | EFLH heating                           | Heating equipment run hours      | High         |
|                |  | for systems and building types   |              |
|                |  | found most frequently in         |              |
|                |  | efficiency programs              |              |
| 4.4.           | EFLH cooling                           | Cooling equipment run hours      | High         |
|                |  | for systems and building types   |              |
|                |  | found most frequently in         |              |
|                |  | efficiency programs              | _            |
| 4.4.1          | Air Conditioner Tune-up                | Deem therm savings values        | Low          |
|                |  | should be evaluated              | _            |
| 4.4.5          | Condensing Unit Heaters                | Deem therm savings values        | Low          |
|                |  | should be evaluated              |              |
| 4.4.12         | Infrared Heaters (all sizes), Low      | Deem therm savings values        | Low          |
| 4.4.14         | Intensity                              | should be evaluated              | Law          |
| 4.4.14         | Pipe Insulation                        | Regain                           | Low          |
| 4.4.18         | Small Commercial Programmable          | Persistence                      | High         |
|                | Thermostat                             | TRM v metering studies           |              |
|                |  | Baseline set back                |              |
| 4.4.20, 4.4.21 | High Turndown Burner, Linkageless      | Boiler loading histogram or bins | Medium       |
| & 4.4.22       | Boiler Controls & Oxygen Trim Controls |                                  |              |
| 4.4.23         | Shut Off Damper for Space Heating      | Savings Factor                   | Low          |
| 5.3.8          | Ground Source Heat Pump                | FLH assumptions for ground       | Low          |
|                |  | source heat pumps                |              |
| 5.3.10         | HVAC tune up                           | Measure life.                    | Low          |
|                |  | Savings factor.                  |              |
| 5.3.11         | Programmable Thermostat                | Persistence / lifetime           | Low          |
| 5.4.4          | Faucet Aerator                         | Drain Factor for kitchen and     | Medium       |
|                |  | bathroom installations           |              |
|                |  | Rated and throttled v metered    |              |
|                |  | flow rates                       |              |
| 5.5.4          | Exterior CFL Fixture                   | Hours of use                     | Medium       |
|                |  | Coincidence factor               |              |
| 5.5.6          | LED Downlights                         | Hours of use – specific to LED   | Medium       |
|                | 1.500                                  | bulbs                            |              |
| 5.5.8          | LED Screw based Omnidirectional        | Hours of use – specific to LED   | Medium       |
| F.C.4          | bulbs                                  | bulbs                            | D. 4. 1.     |
| 5.6.1          | Air sealing                            | TRM v metering / billing study   | Medium       |
| F.C.2. F.C.4   | Inquilable or management               | result                           | N.A. alivusa |
| 5.6.2 – 5.6.4  | Insulation measures                    | More review of TRM v metering    | Medium       |
|                |  | / billing study results          |              |