Agenda

• Quick review of TRM project
• Peak Demand/Load Profile Interviews
• Existing Measure Update
• New Measure Update
• Next Steps
TRM Evaluation & Update

• Franklin team
  – Sr. Program Manager: Dean Laube
  – Technical Manager: George Roemer
  – Sr. Engineer: Rick Berry
  – Engineering Mgr: Jim Stebnicki
  – Principal Engineer: Leo Schaub
  – Sr. Research Analyst: Tom Syring

• Itron team
  – Principal Engineer: Bob Ramierz
  – Sr. Principal Energy Consultant: Marc Collins
  – Sr. Principal Energy Consultant: Jennifer Fagan
TRM Evaluation & Update

• Major deliverables

<table>
<thead>
<tr>
<th>Date</th>
<th>Deliverable</th>
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<tbody>
<tr>
<td>January 30, 2015</td>
<td>Kick-off meeting with the Department and TRMAC</td>
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<tr>
<td>June 1, 2015</td>
<td>List of codes and standards changes</td>
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<tr>
<td>November 13, 2015</td>
<td>Draft TRM delivered</td>
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<tr>
<td>December 11, 2015</td>
<td>Final TRM delivered</td>
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<tr>
<td>December 11, 2015</td>
<td>Smart Measure library complete</td>
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<tr>
<td>December 11, 2015</td>
<td>Electric and gas load profiles delivered</td>
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Timeline

3/1/15  5/1/15  7/1/15  8/31/15  10/31/15  12/31/15

Existing measure updates
Member feedback - existing measures
Research coincident peak demand savings
Research new measures
Member feedback - new measure selection
New Measure screening
Technical working meetings
Documentation of updated and new measures
Load profile research
Generate load profiles
Smart measure library
Peak Demand and Load Profiles

• Utility interviews conducted (8)
• Information summarized based on responses from participants
• No surprises
  – Peak demand hits in the afternoon and resembles MISO definition
  – Load profiles are used for planning, forecasting, and program design
Existing Measure Review

- Mainly based on working group input
- All Measures
  - Codes and standards updates, notes on 2017-2019
  - Review of costs
  - Simplify inputs
  - Review of sources, original sources vs secondary
Existing Measure Review

• Lighting
  – Cost review, especially LEDs
  – Research adding In-Service Rates (ISRs)
  – Research standardizing inputs, adding options for added delivery models (DI, upstream, etc.)
  – More research on Coincidence Factors (CFs)
Existing Measure Review

- HVAC (Cooling and Heat Pumps)
  - Research Heating hours vs HDD equation
  - Shorten measure life for early replacement measures, ECM retrofits
  - Research QI measure life
  - Research adding ECM retrofit option
  - Research heat pump hours of operation
  - Contractor requirements for tune-ups
Existing Measure Review

• Heating
  – Research Heating hours vs HDD equation
  – Research HDD65 and CF vs HDD55
  – Research correct hours and default size for steam traps
  – Review commercial boiler sizing
  – ERV options – cooling savings, deemed hours
  – Maintenance procedures for commercial forced air maintenance
Existing Measure Review

• DWH
  – Review temperatures inputs used for each measure
  – Simplify inputs
  – Review Pre Rinse Spray valve temperature
New Measures

• New measures requested by TRMAC and DER
• Franklin added five more
• Priority based on: impact, data available, designed in other TRMs
• Priorities (High, Med, Low)
New Measures

• High – plan to add
• Med – most likely add, but reviewing further
• Low – not planning to add
• High Priority - 13
• Medium Priority - 21
Next Steps

• Summer TRMAC Meeting
• Late July – Early August
• One Day, Several Sessions
• Break out TBD
Wrap Up

• Questions/comments?

Thank you!

Mark.Garofano@state.mn.us
651.539.1864