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**MEMORANDUM**

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**TO:** IL TRM TECHNICAL ADVISORY COMMITTEE

**FROM:** CHERYL JENKINS, PROJECT MANAGER and SAM DENT, TECHNICAL LEAD - VEIC

**SUBJECT:** IL TRM VERSION 9.0 DRAFT 1 - SUMMARY

**DATE:** 06/26/2020

**Cc:** CELIA JOHNSON, SAG

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VEIC has submitted the first full draft of the version 9.0 Illinois TRM to the Technical Advisory Committee and uploaded to SharePoint. This draft includes both proposed redline changes to existing measures and new measures (also in redline) proposed to be included for the first time in this version. Changes have been made to all four volumes:

- IL-TRM\_Effective\_010120\_v9.0\_Vol\_1\_Overview\_06262020\_DRAFT
- IL-TRM\_Effective\_010120\_v9.0\_Vol\_2\_C\_and\_I\_06262020\_DRAFT
- IL-TRM\_Effective\_010120\_v9.0\_Vol\_3\_Res\_06262020\_DRAFT
- IL-TRM\_Effective\_010120\_v9.0\_Vol\_4\_X-Cutting\_Measures\_and\_Attach\_06262020\_DRAFT

VEIC have also provided on SharePoint:

- Proposed Electric Vehicle Measures\_06262020\_DRAFT
- An draft errata memo documenting those potential changes to Version 8.0, effective 1/1/2020.
- An Excel table with all the comments from TAC members on the workpapers received, VEIC responses and whether the adjustments have been applied in the draft.

Presented below are two summary tables. The first provides the measures that have been edited or added, with a brief description of what has changed, whether it is being considered an errata, and a link to the corresponding SharePoint Tracker Item(s). The second table provides a list of those tracker items still pending, with progress made to date and those requests that have not resulted in a change.

Measure # and Name		Errata?	Brief description of what changed	Tracker Item(s)
<b>Volume 1 – Overview and User Guide</b>				
1.1	Acknowledgments	N	Updates to table of SAG/TAC Stakeholders	N/a
3.3.1	LED Lamp and Linear Fixture Baseline Assumptions	N	Updates to text to reflect new approach to LED Lamps.	N/a
3.5	Glossary	N	Addition of Drug Store and Public Sector building definitions.	<a href="#">Clarify Drug Store/Pharmacy Classification</a> <a href="#">Add definition of "Public Sector"</a>
		N	Clarification of Technical v Measure Lifetime definitions.	<a href="#">WAML calculation for lighting for 2020 IL-TRM</a>
3.5	Electrical Loadshapes (kWh)	N	Addition of 6 new agricultural loadshapes.	<a href="#">Create Agricultural Loadshape(s) and Models</a>
		N	Addition of 2 new Voltage Optimization loadshapes.	<a href="#">Voltage Optimization Measure</a>
3.10	Discount Rates, Inflation Rates and O&M Costs	N	Update to nominal and real discount rates and inflation rate.	<a href="#">Update discount rate in section 3.9, volume 1</a>
<b>Volume 2 – Commercial and Industrial Measures</b>				
4.1.11	Commercial LED Grow Lights	N	Updates to eligibility, efficient and baseline assumptions. Updates to measure life and coincidence factors. Calculation methods provided for grow space square footage or per fixture. Additional hour assumptions for different crop types.	<a href="#">Changes to 4.1.11 Commercial LED Grow Lighting</a>
4.1.12	Swine Heat Pads	N	New measure	<a href="#">New Measure: Swine Heat Pads</a>
4.2.10	Ice Maker	N	Correct typo of federal standard date.	<a href="#">Typo / Quick fixes</a>
4.3.1	Storage Water Heater	N	Addition of all draw pattern baseline calculation algorithms plus note that same draw pattern should be used for efficient and baseline units.	<a href="#">Revise DHW efficiency factor to reflect actual savings</a>
4.3.6	Ozone Laundry	N	Update to measure cost assumption.	<a href="#">Recommend a new Measure Cost</a>
4.3.12	Tank Insulation	N	New measure	<a href="#">Tank Insulation</a>
4.4.2	Space Heating Boiler Tune-Up	N	Provided defaults for pre and post efficiency based on Guidehouse evaluation results.	<a href="#">Provide default values as an option for custom efficiency inputs for Non-Residential process and space heating boiler tune-ups</a>

Measure # and Name		Errata?	Brief description of what changed	Tracker Item(s)
4.4.3	Process Boiler Tune-Up	N	Provided defaults for pre and post efficiency based on Guidehouse evaluation results.	<a href="#">Provide default values as an option for custom efficiency inputs for Non-Residential process and space heating boiler tune-ups</a>
4.4.10	High Efficiency Boiler	N	Update to Federal Standard for <300,000 Btu/hr boilers, impacting measure cost and baseline assumption.	<a href="#">Residential sized Boiler Federal Standard update (Commercial measure)</a>
4.4.11	High Efficiency Furnace	N	Clarification of Federal Standard. Addition of HOURSyear assumptions for additional building types.	<a href="#">Typo / Quick fixes</a>
4.4.12	Infrared Heaters	N	Modifications to measure to allow savings to be claimed by size. Updates to measure life and cost.	<a href="#">Infrared Heaters</a>
4.4.14	Pipe Insulation	N	Addition of reference to external tool allowing more flexibility and comprehensive analysis of pipe insulation projects. Maintaining default savings for specific measure applications.	<a href="#">Revision to Pipe Insulation Workpaper</a>
4.4.16	Steam Trap Replacement or Repair	N	Edits proposed by Elevate Energy have been applied together with comments received from Nicor, CLEAResult, Opinion Dynamics and Guidehouse. Working Group set up to discuss next steps.	<a href="#">Steam Trap Replacement or Repair</a>
		N	Addition of lifetime assumptions for Venturi Steam Traps	<a href="#">Venturi Steam Traps</a>
4.4.17	Variable Speed Drives for HVAC Pumps and Cooling Tower Fans	N	Clarification that hours should be provided via Energy Management Software or metered.	<a href="#">Clarification on "actual hours" in VSD measures</a>
		N	Addition of Hours assumptions for additional building types.	<a href="#">Add "Public Sector" building type for VSD Measure</a>
4.4.26	Variable Speed Drives for HVAC Supply and Return Fans	N	Removal of language that implies all other VSD applications should be custom.	<a href="#">Remove "custom analysis" language from 4.4.26</a>
		N	Clarification that hours should be provided via Energy Management Software or metered.	<a href="#">Clarification on "actual hours" in VSD measures</a>
4.4.28	Stack Economizer for Boilers Serving HVAC Loads	N	Fixed footnote issue.	<a href="#">Typo / Quick fixes</a>
4.4.38	Covers and Gap Sealers for Room Air Conditioners	Y	Fixing typos in algorithm that would result in incorrect savings.	<a href="#">Correct equations for Covers and Gap Sealers</a>
4.4.45	Adsorbent Air Cleaning	N	Removal of Provisional Measure status. Addition of NC and DI program types. Updates to measure cost.	<a href="#">Update measure results based on cooling data collected during 2019</a>

Measure # and Name		Errata?	Brief description of what changed	Tracker Item(s)
			Edit to electric savings based on updated pilot study results and including energy penalty of AAC modules. Addition of natural gas savings	
4.4.48	Small Commercial Thermostats – Provisional Measure	N	Update to cooling assumption from 8% to 17.7% based on Guidehouse evaluation. Propose remain Provisional Measure as additional evaluation on heating savings and on Advanced Thermostats would benefit this characterization.	<a href="#">Update SCPT Cooling Savings Factor</a>
4.4.49	Boiler Chemical Descaling	N	New measure	<a href="#">Commercial Boiler Descaling</a>
4.4.50	Electric Chillers with Integrated Variable Speed Drives	N	New measure	<a href="#">Electric chillers with integrated variable speed drives</a>
4.4.51	Advanced Rooftop Controls with High Rotor Pole Switch Reluctance Motors	N	New measure	<a href="#">Switch reluctance motors</a>
4.4.52	Hydronic Heating Radiator Replacement	N	New measure	<a href="#">Hydronic Heating Radiator Replacements</a>
4.5	Lighting End Use Factors	N	Addition of hours and waste heat factors for 8 agriculture operations	<a href="#">New Measure: Dairy Farm Long Daylight</a> <a href="#">New Measure: Poultry Farm LED Lighting</a> <a href="#">Create Agricultural Loadshape(s) and Models</a>
		N	Update to fixture annual operating hours for Grocery.	<a href="#">Update to Grocery Lighting HOU</a>
		N	Addition of accounting for lighting controls in lighting hours assumptions.	<a href="#">Account for Sensors in HOU in Lighting Algorithm</a>
4.5.2	Fluorescent Delamping	N	Updates to T12:T8 weighting based on latest ComEd Baseline Study.	Reliability review
4.5.3	High Performance and Reduced Wattage T8 Fixtures and Lamps	N	TAC ascertained that the linear fluorescent measures are only being offered in a select few programs- having been largely replaced with Linear LED Fixtures. It is anticipated these measures will soon be retired. Reliability review therefore proposed unnecessary.	Reliability review
4.5.4	LED Bulbs and Fixtures	Y	Lamp measures updated to reflect Lighting Working Group developed forecasts of natural LED growth. Impacts measure lifetime, mid-life baseline adjustment and O&M impacts. Note values are different for the v8 errata and v9.	<a href="#">Review proposed 2020 lighting standards</a>

Measure # and Name		Errata?	Brief description of what changed	Tracker Item(s)
		N	Update to T12 early replacement midlife adjustment based on 2019 ComEd baseline survey results.	<a href="#">Review Linear Fixture assumptions</a>
		N	Fixing typo in baseline table.	<a href="#">Update the LED Baseline Descriptions in 4.5.4</a>
		N	Update to LED Display Case Watts assumptions.	<a href="#">Update the LED Case Lighting Wattages</a>
		N	Additional high lumen fixture assumptions added.	<a href="#">Updated Baseline Wattage Table</a>
4.5.10	Lighting Controls	N	Addition of new set of assumptions for Luminaire Level Lighting Controls (LLLCs) with high end trim and networking capabilities.	<a href="#">Luminaire Level Lighting Controls</a>
		N	Addition of refrigerated case occupancy sensor assumptions.	<a href="#">Lighting Controls</a>
		N	Update to measure lifetime	<a href="#">Update EUL: LED Streetlighting and Lighting Controls</a>
		N	Clarification that daylighting sensors are not appropriate for use as exterior photocells by addition of "Interior" term to each control type.	<a href="#">Clarify the intended application of daylight sensors</a>
		N	Addition of language that where possible installation should be verified where savings beyond occupancy sensing are claimed.	N/a
4.5.12	T5 Fixtures and Lamps	N	TAC ascertained that the linear fluorescent measures are only being offered in a select few programs- having been largely replaced with Linear LED Fixtures. It is anticipated these measures will soon be retired. Reliability review therefore proposed unnecessary.	Reliability review
4.5.16	LED Streetlighting	N	Update to measure lifetime	<a href="#">Update EUL: LED Streetlighting and Lighting Controls</a>
4.5.17	Exterior Photocell Repair	N	New measure	<a href="#">Add new measure to repair a broken photocell</a>
4.6.4	<b>Error! No text of specified style in document.</b>	N	Addition of default motor size for when it is unknown.	<a href="#">Add Default Motor Size to 4.6.4 (EC Evap Fans)</a>
4.6.5	ENERGY STAR Refrigerated Beverage Vending Machine	N	Update to ENERGY STAR specification v4.0, effective April 2020.	<a href="#">Update ENERGY STAR Refrigerated Beverage Vending Machine</a>

Measure # and Name		Errata?	Brief description of what changed	Tracker Item(s)
4.6.13	Add Doors to Open Refrigerated Display Cases	N	New measure	<a href="#">Add measure for installing new or retrofitting existing coolers/freezers with doors</a>
4.7.7	Efficient Desiccant Compressed Air Dryer	N	Addition of Purge Reduction Factor.	<a href="#">Add Dew Point Demand Control Measure</a>
4.7.8	Desiccant Dryer Dew Point Demand Controls	N	New measure	<a href="#">Add Dew Point Demand Control Measure</a>
4.7.9	Compressed Air Heat Recovery	N	New measure	<a href="#">Add Compressed Air Heat Recovery Measure</a>
4.7.10	Compressed Air Storage Receiver Tank	N	New measure	<a href="#">Add measure for Compressed Air Storage Receiver Tank</a>
4.7.11	Reduce Compressed Air Setpoint	N	New measure	<a href="#">Add new measure for reducing compressed air setpoint</a>
4.8.1	Pump Optimization	N	Added loadshapes	N/a
4.8.3	Computer Power Management Software	N	Addition of assumptions for adjusting power settings on individual units. Saves the same, difference in cost and lifetime.	<a href="#">Computer Power Management Features</a>
4.8.6	ENERGY STAR Computers	N	Update to ENERGY STAR v8, effective October 15 <sup>th</sup> , 2020.	<a href="#">Federal Standard update for ENERGY STAR computers</a>
4.8.17	Switch Peripheral Equipment Consolidation	N	New measure	<a href="#">New Measure: Switch Peripheral Equipment Consolidation</a>
4.8.18	Energy Efficient Uninterruptible Power Supply or Rectifier	N	New measure	<a href="#">New Measure: Energy Efficient UPS or Rectifier</a>
4.8.19	Energy Efficient Hydraulic Oils - Provisional Measure	N	New measure	<a href="#">Energy efficient hydraulic oils</a>
4.8.20	Energy Efficient Gear Lubricants - Provisional Measure	N	New measure	<a href="#">Energy Efficient Gear Oils</a>
4.8.21	Smart Sockets	N	New measure	<a href="#">Smart Sockets</a>
<b>Volume 3 – Residential Measures</b>				
5.1.1	ENERGY STAR Air Purifier	N	Update due to ENERGY STAR Version 2.0, effective October 17, 2020.	<a href="#">Update ENERGY STAR Air Cleaner Measure</a>
5.1.3	ENERGY STAR Dehumidifier	N	Update to ENERGY STAR Most Efficient specification	<a href="#">ESTAR Most Efficient Dehumidifier criteria update</a>

Measure # and Name		Errata?	Brief description of what changed	Tracker Item(s)
5.1.4	ENERGY STAR Dishwasher	N	Fixing typo of ENERGY STAR version number	<a href="#">Typo / Quick fixes</a>
5.1.6	ENERGY STAR and CEE Tier 2 Refrigerator	Y	Fixing error in CEE Tier 2 specification which was assuming 25% better than Federal Standard rather than 15%	N/a
5.1.12	Ozone Laundry	N	Fixing typo of CEE tier used in calculation.	<a href="#">Typo / Quick fixes</a>
5.2.1	Advanced Power Strip – Tier 1	N	Updates to ISR assumptions based on Guidehouse evaluation. Note some results are still being analyzed and are presented as TBD.	<a href="#">Update APS In-Service Rate</a>
5.2.2	Tier 2 Advanced Power Strip – Residential Audio Visual	N	Removal of requirement for independent field testing. Replacement of manufacture specific performance bands with assumptions related to IR-only v IR-OS product types.	<a href="#">For v9 - review requirement for field testing for APS</a>
5.3.1	Air Source Heat Pump	N	Addition of assumptions relating to fuel switch scenarios.	<a href="#">Baseline efficiency for fuel conversion</a>
		N	Added defaults for HSPFadj assumption.	<a href="#">Add default value or guidance for HSPF adjustment</a>
5.3.2	Boiler Pipe Insulation	N	Addition of language that if existing equipment efficiency is greater than new baseline efficiency, mid-life adjustment should not be applied.	<a href="#">Midlife Adjustment for Heating/Cooling Systems</a>
5.3.4	Duct Insulation and Sealing	N	Energy Conservatory Blower Door method document and BPI Distribution Efficiency table saved to SharePoint and weblink removed from document.	<a href="#">Modified Blower Door Subtraction reference link</a>
		N	Mid-life adjustment calculation fixed for gas fueled systems to appropriate incorporate the change in equipment efficiency.	<a href="#">Midlife Adjustment for Duct Sealing</a>
		N	Addition of language that if existing equipment efficiency is greater than new baseline efficiency, mid-life adjustment should not be applied.	<a href="#">Midlife Adjustment for Heating/Cooling Systems</a>
5.3.5	Furnace Blower Motor	N	Removal of language relating to new high efficiency equipment, since this is now a retrofit only measure. Removal of TOS assumptions from savings tables.	<a href="#">Peak Savings from Furnace Blower Motors</a>
5.3.6	Gas High Efficiency Boiler	N	Update to Federal Standard, impacting cost and baseline assumptions.	<a href="#">Upcoming federal standard change for residential boilers</a>
5.3.7	Gas High Efficiency Furnace	N	Addition to cost assumption for 97% AFUE unit.	<a href="#">Update the "if unknown" assumptions for furnaces using Illinois program data</a>

Measure # and Name		Errata?	Brief description of what changed	Tracker Item(s)
			Addition of Input Capacity and AFUE(eff) default assumptions.	
5.3.8	Ground Source Heat Pump	N	Update to boiler Federal Standard efficiency and cost assumptions. Fixing ElecHeat term in fuel switch scenario. This term allows for a mix baseline to be applied to New Construction or Time of Sale applications.	<a href="#">Upcoming federal standard change for residential boilers</a>
5.3.11	Programmable Thermostats	N	Update to measure life to make consistent with Weighted Average Measure Life definitions. Addition of mid-life adjustment to discount future savings resulting in lifetime savings consistent with applying 50% persistence adjustment to measure life.	N/a
5.3.14	Boiler Reset Controls	N	Updated measure life. Removal of mid-life adjustment for this measure, assuming that the BRC will last the remaining useful life of the existing boiler.	<a href="#">Review lifetime and mid-life assumptions for Boiler Reset Controls</a>
5.3.18	Furnace Filter Alarm – Provisional Measure	N	Measure removed due to evaluation showing ineffectual results and safety concerns over reliance on measure that may not work.	<a href="#">NEW Residential Measure - Dirty Furnace Filter Whistle</a>
5.3.19	Thermostatic Radiator Valves – Provisional Measure	N	New measure	<a href="#">Thermostatic Radiator Valves</a>
5.4.1	Domestic Hot Water Pipe Insulation	N	Addition of KITS and corresponding ISR assumption.	<a href="#">Add an In-Service Rate for self install through kit distribution</a>
5.4.2	Gas Water Heater	N	Addition of additional draw pattern Federal Standard algorithms, with default provided for <55 gallons (Medium draw) and >55 gallons (High draw).	<a href="#">Revise DHW efficiency factor to reflect actual savings</a>
		N	Removal of adjustment for tankless water heaters since UEF better reflect typical draw over 24 hour period.	<a href="#">Residential Tankless Water Heater De-Rating</a>
5.4.3	Heat Pump Water Heaters	N	Addition of additional draw pattern Federal Standard algorithms, with default provided for <55 gallons (Medium draw) and >55 gallons (High draw).	<a href="#">Revise DHW efficiency factor to reflect actual savings</a>
		N	Addition of language that if existing equipment efficiency is greater than new baseline efficiency, mid-life adjustment should not be applied.	<a href="#">Midlife Adjustment for Heating/Cooling Systems</a>

Measure # and Name		Errata?	Brief description of what changed	Tracker Item(s)
5.4.4	Low Flow Faucet Aerators	N	Clarification added that secondary kWh savings from water supply/treatment should not be included in peak kW savings calculation.	<a href="#">Add Clarification to kW Calculation for Water-Saving Measures with Secondary kWh Impacts</a>
5.4.6	Water Heater Temperature Setback	N	Added language to include costs of information insert for when part of a kit program.	<a href="#">Update IC for water temp setback</a>
		N	Added ISR for instructions provided in kit.	<a href="#">Discuss Possibility of Deeming ISR for Water Heater Temperature Setbacks in Kits</a>
5.4.11	Drain Water Heat Recovery	N	New measure	<a href="#">Drain Water Heat Recovery</a>
5.5.6	LED Specialty Lamps	Y	Lamp measures updated to reflect Lighting Working Group developed forecasts of natural LED growth. Impacts measure lifetime, mid-life baseline adjustment and O&M impacts. Note values are different for the v8 errata and v9.	<a href="#">Review proposed 2020 lighting standards</a>
		Y	Additional forecasts developed and utilized for Income Eligible populations.	<a href="#">EISA Extension for Income Eligible Income Eligible Program Baseline Adjustments</a>
		Y	Accounting for IECC 2015 in New Construction baseline. Baseline assumptions and incremental costs provided for NC program.	<a href="#">Remove NC program type from 5.5.8-9</a>
5.5.8	LED Screw Based Omnidirectional Bulbs	Y	Lamp measures updated to reflect Lighting Working Group developed forecasts of natural LED growth. Impacts measure lifetime, mid-life baseline adjustment and O&M impacts. Note values are different for the v8 errata and v9.	<a href="#">Review proposed 2020 lighting standards</a>
		Y	Additional forecasts developed and utilized for Income Eligible populations.	<a href="#">EISA Extension for Income Eligible Income Eligible Program Baseline Adjustments</a>
		Y	Accounting for IECC 2015 in New Construction baseline. Baseline assumptions and incremental costs provided for NC program.	<a href="#">Remove NC program type from 5.5.8-9</a>
5.5.9	LED Fixtures	Y	Lamp measures updated to reflect Lighting Working Group developed forecasts of natural LED growth. Impacts measure lifetime, mid-life baseline adjustment and O&M impacts. Note values are different for the v8 errata and v9.	<a href="#">Review proposed 2020 lighting standards</a>
		Y	Additional forecasts developed and utilized for Income Eligible populations.	<a href="#">EISA Extension for Income Eligible Income Eligible Program Baseline Adjustments</a>
		Y	Accounting for IECC 2015 in New Construction baseline. Baseline	<a href="#">Remove NC program type from 5.5.8-9</a>

Measure # and Name		Errata?	Brief description of what changed	Tracker Item(s)
			assumptions and incremental costs provided for NC program.	
5.6.1	Airsealing	N	Addition of language that if existing equipment efficiency is greater than new baseline efficiency, mid-life adjustment should not be applied.	<a href="#">Midlife Adjustment for Heating/Cooling Systems</a>
5.6.2	Basement Sidewall Insulation	N	Extra parenthesis in algorithm	<a href="#">Inconsistency in Basement Sidewall Insulation</a>
		N	Addition of language that if existing equipment efficiency is greater than new baseline efficiency, mid-life adjustment should not be applied.	<a href="#">Midlife Adjustment for Heating/Cooling Systems</a>
5.6.3	Floor Insulation Above Crawlspace	N	Addition of language that if existing equipment efficiency is greater than new baseline efficiency, mid-life adjustment should not be applied.	<a href="#">Midlife Adjustment for Heating/Cooling Systems</a>
5.6.4	Wall Insulation	N	Addition of language that if existing equipment efficiency is greater than new baseline efficiency, mid-life adjustment should not be applied.	<a href="#">Midlife Adjustment for Heating/Cooling Systems</a>
5.6.5	Ceiling/Attic Insulation	N	Addition of language that if existing equipment efficiency is greater than new baseline efficiency, mid-life adjustment should not be applied.	<a href="#">Midlife Adjustment for Heating/Cooling Systems</a>
5.6.6	Rim/Band Joist Insulation	N	Addition of language that if existing equipment efficiency is greater than new baseline efficiency, mid-life adjustment should not be applied.	<a href="#">Midlife Adjustment for Heating/Cooling Systems</a>
5.6.7	Low-E Storm Window	N	New measure	<a href="#">Low-E Interior Storm Windows</a>
<b>Volume 4 – Cross-Cutting Measures and Attachments</b>				
6.1.1	Adjustments to Behavior Savings to Account for Persistence	N	Updated guidance for 2022-2025 cycle. Update to length of savings persistence for electric savings. Update to decay rate for both electric and gas savings	<a href="#">HER Persistence Factor Updates</a>
6.1.2	Voltage Optimization	N	New measure	<a href="#">Voltage Optimization Measure</a>

The following table provides a list of those tracker items still pending with progress made to date and those requests that have not resulted in a change.

Tracker Items:	Comments
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Pending/ In Progress Updates	
<a href="#">Electric Vehicles</a>	Two new measures relating to Electric Vehicles have been proposed by Ameren to be included in the v9.0 TRM and have been provided with VEIC comments embedded in a separate document. Stakeholders have already identified differences in the interpretation of statute that would determine the eligibility of these measures for inclusion in the IL TRM, and as such, it is expected that this will result in a formal non-consensus issue. Stakeholders are encouraged to follow the usual TRM process and provide any technical comments and questions within the measure draft. Additional comments/positions concerning the issue of statutory eligibility can also be included here, or can be sent separately when input is solicited as the non-consensus exhibit is developed.
<a href="#">Update RES Advanced Tstat Cooling Savings Factor</a>	The Workpaper from Guidehouse has not yet been submitted. Evaluation results are due to be released by early August.
<a href="#">Update the gas heating savings factor for small commercial standard programmable thermostats</a>	Findings from evaluation are not expected until Q3 of 2020, so this item will be put on hold for v10 review.
<a href="#">Steam Trap Replacement or Repair</a>	As stated above, Working Group set up with three calls scheduled in July. Air to reach consensus before 2 <sup>nd</sup> deliverable.
<a href="#">Standardize EUL language</a>	Request to standardize language around EUL or effective life. VEIC will review and make appropriate edits for the 2 <sup>nd</sup> deliverable.
Additional Reliability Reviews	<p>The following additional measures are due a reliability review, and did not receive a review due to submitted Tracker items. VEIC will review these measures in early July and flag early any that may result in significant changes.</p> <ul style="list-style-type: none"> <li>4.2.16 Kitchen Demand Ventilation Controls</li> <li>4.4.1 Air Conditioner Tune-up</li> <li>4.4.27 Energy Recovery Ventilator</li> <li>4.4.28 Stack Economizer for Boilers Serving HVAC Loads</li> <li>4.4.34 Destratification Fan</li> <li>4.4.4 Boiler Lockout/Reset Controls</li> <li>4.4.44 Commercial Ground Source and Ground Water Source Heat Pump</li> <li>4.5.13 Occupancy Controlled Bi-Level Lighting Fixtures</li> <li>4.5.8 Miscellaneous Commercial/Industrial Lighting</li> <li>4.5.9 Multi-Level Lighting Switch</li> <li>4.8.2 Roof Insulation for C&amp;I Facilities</li> <li>4.8.5 High Speed Clothes Washer</li> <li>4.8.8 High Efficiency Transformer</li> <li>4.8.9 High Frequency Battery Chargers</li> <li>5.1.10 ENERGY STAR Clothes Dryer</li> <li>5.1.5 ENERGY STAR Freezer</li> <li>5.1.6 ENERGY STAR and CEE Tier 2 Refrigerator</li> <li>5.3.1 Air Source Heat Pump</li> <li>5.3.10 HVAC Tune Up (Central Air Conditioning or Air Source Heat Pump)</li> <li>5.3.11 Programmable Thermostats</li> <li>5.3.12 Ductless Heat Pumps</li> </ul>

	<p>5.3.13 Residential Furnace Tune-Up</p> <p>5.3.15 ENERGY STAR Ceiling Fan</p> <p>5.3.3 Central Air Conditioning</p> <p>5.4.9 Shower Timer</p> <p>5.5.12 Connected LED Lamps</p> <p>5.7.1 High Efficiency Pool Pumps</p>
<b>Items not proceeding at this time</b>	
<a href="#">Question Regarding ECMs</a>	SharePoint Discussion Thread posted to respond to this question. In short, yes the values provided in the kWh section include both heating and cooling impacts.
<a href="#">Possible Errata: EFLH for MF High Rise - Common Area</a>	VEIC reviewed model for EFLH of high rise MF common areas and can confirm that the published numbers are correct. The sub space-type Common addresses the reality that different system schedule and setpoints typically vary between residential units and common corridors, stairwells, and lounges. We expect to see HVAC equipment run hours to differ from setpoint adjustments alone, combine with the interior nature of these spaces reflects the low EFLH. VEIC provided this response to Guidehouse.
<a href="#">Agricultural measure minor errors</a>	Upon review, these edits were fixed late in the v8 cycle.
<a href="#">A new measure: Air Deflector for Unit Ventilator</a>	Measure to remain as Provisional. The winter of 2019/2020 did not provide appropriate conditions for evaluation but plans remain for 2020/2021.
<a href="#">Refine the guidance for Pipe Insulation Thermal Regain Factors</a>	SharePoint Discussion Thread posted to respond to this question. The request was for more guidance on developing custom TRFs. There is already a document ('Thermal Regain Factor_4-30-14.docx' on how to determine custom TRFs. This file is referenced as a source in the TRM and is stored on SharePoint.
<a href="#">Vortex Tube Thermostat</a>	This measure was added in v8 and assigned as a Provisional measure. As discussed on 5/18 TAC there are currently no plans from any utility to offer this measure. There has therefore been no evaluation and the measure should remain "Provisional" until pilot programs are developed, and data collected to improve the measure.
<a href="#">Update the gas heating savings factor for small commercial standard programmable thermostats</a>	Findings from evaluation are not expected until Q3 of 2020, so this item will be put on hold for v10 review.
<a href="#">Possible Errata: ENERGY STAR Clothes Washers</a>	SharePoint Discussion Thread posted to respond to this question. The issue is not an error, but a rounding issue where the intermediary assumptions in the TRM are rounded, however the final value is calculated in a spreadsheet.
<a href="#">For v9 - adding PJM Winter Peak</a>	VEIC held discussions with ComEd and Guidehouse on this issue. Conclusion that there is no need or benefit from adding the PJM Winter Peak coincidence factors in to the TRM at this time.
<a href="#">Add "Public Sector" building type for Advanced Rooftop Controls (ARC)</a>	VEIC reviewed this request with the original developer of the measure (CLEAResult). It was determined that the time/budget required to add this building type could not be justified. As with all commercial building type assumptions, user should use the model of best fit – likely to be "Low Rise Office" for "Public Sector" buildings as this was the starting point for the Public Sector model.

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<p><a href="#">Correct error in hot water per load in 5.1.12 Ozone Laundry (residential)</a></p>	<p>VEIC have reviewed this request. We looked back at the reference document that was provided as a basis for the measure (Residential Ozone Laundry Summary Calcs_2019.xlsx provided on the SharePoint) and this mix of hot v cold water was based on the average of twelve installations. We feel this is a reasonable basis, but happy to discuss in a future TAC call if necessary.</p>
<p><a href="#">Add other heating systems to the heating penalty</a></p>	<p>Proposal to add electric heating penalty for ECM waste heat was determined to not be appropriate as the values in the “kWhSavingsPerTon” table already account for the reduced waste heat impact in the ASHP column. The workpaper author (Guidehouse) was informed and is in agreement.</p>