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**MEMORANDUM**

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**TO:** IL TRM TECHNICAL ADVISORY COMMITTEE

**FROM:** KEITH CRONIN, PROJECT LEAD and SAM DENT, TECHNICAL LEAD - VEIC

**SUBJECT:** IL TRM VERSION 14.0 FINAL DRAFT - SUMMARY

**DATE:** 09/19/2025

**Cc:** CELIA JOHNSON, SAG

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VEIC has submitted the final version 14.0 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\_010126\_v14.0\_Vol\_1\_Overview\_09192025\_FINAL
- IL-TRM\_Effective\_010126\_v14.0\_Vol\_2\_C\_and\_I\_09192025\_FINAL
- IL-TRM\_Effective\_010126\_v14.0\_Vol\_3\_Res\_09192025\_FINAL
- IL-TRM\_Effective\_010126\_v14.0\_Vol\_4\_X-Cutting\_Measures\_and\_Attach\_09192025\_FINAL

VEIC have also provided on SharePoint:

- An Excel file titled 'Stakeholder Comments\_09192025' containing all comments received from Deliverable 1, 2 and Almost Final together with VEIC response and outcome.
- A final errata memo documenting both approved and new changes to Version 13.0, effective 1/1/2025.
- A final non-consensus memo titled:  
    'IL-TRM v14.0 Comparison\_Exhibit\_of\_Nonconsensus\_Update\_Issues\_09192025'

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 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>				
3.11	Discount Rates, Inflation Rates, and O&M Costs	N	Update to the current TRM discount rates (approved last year). Note that future costs have been updated to use the new inflation rates. <del>This will likely be updated in a later version when HVAC cost assumptions are finalized.</del>	N/A
3.7	Electrical Loadshapes (kWh)	N	<del>Two new loadshapes have been proposed – R20 Residential Solar and C69 Commercial Solar. These will be added pending approval of the inclusion of “Solar as Energy Efficiency” as a measure.</del>	N/A
<b>Volume 2 – Commercial and Industrial Measures</b>				
4.1.1	Engine Block Timer for Agricultural Equipment	N	Measure cost update.	<u>4.1.1 - Cost Update Request</u>
4.1.11	Commercial LED Grow Lights	N	Reliability Review. Updated DLC Horticultural Specifications to v4.0. Clarification added that measure excludes greenhouses. Crop type naming updated. Additional context and clarifications on crop and growth stages. Corrected formatting issues with reference notes. Included hours of use estimates for greenhouses. Updates to cost assumption. <b>Wordsmithing including excluding floriculture applications. Measure description LED lifetime changed from 30,000 to 50,000 hours.</b>	N/A
4.1.19	ENERGY STAR Dairy Water Heater	N	Addition of language on possible ENERGY STAR retirement. Removal of “and corresponding Qualified Products List” to allow new product to qualify if the QPL is not being updated (applied throughout volumes).	N/A
4.1.21	Indoor Agriculture Dehumidifier	N	New measure Example calculation fixed.	<u>Indoor Agriculture Dehumidifier</u>
4.2.1 4.2.2 4.2.3 4.2.5	Combination Oven Commercial Solid and Glass Door Refrigerators & Freezers Commercial Steam Cooker	N	Addition of language on possible ENERGY STAR retirement.	N/A

Measure # and Name		Errata?	Brief description of what changed	Tracker Item(s)
	ENERGY STAR Convection Oven			
4.2.6	ENERGY STAR Dishwasher	N	Reliability Review. Addition of language on possible ENERGY STAR retirement. Updated measure cost, ENERGY STAR Calculator inputs and resultant savings.	N/A
4.2.7	ENERGY STAR Fryer	N	Addition of language on possible ENERGY STAR retirement.	N/A
4.2.8	ENERGY STAR Griddle	N	Addition of language on possible ENERGY STAR retirement. Update to calculation of dual fuel systems.	N/A
4.2.9	ENERGY STAR Hot Food Holding Cabinets	N	Reliability Review. Addition of language on possible ENERGY STAR retirement. Updated days variable to consistent 365.25	N/A
4.2.10	Ice Maker	N	Addition of language on possible ENERGY STAR retirement.	N/A
4.2.11	High Efficiency Pre-Rinse Spray Valve	N	Reliability Review. Updated measure cost.	N/A
4.2.21	On-Demand Package Sealers	N	Reliability Review. Updated measure cost.	N/A
4.2.22	Automatic Conveyor Broiler	N	Reliability Review. Updated measure cost.	N/A
4.2.25	Efficient Cooktops	N	Addition of language on possible ENERGY STAR retirement.	N/A
4.3.1	Water Heater	N	Updates to default heating and cooling efficiency assumptions based upon GDS Baseline Study data, including 95% distribution efficiency.	<u>Review GDS Baseline Study</u>
4.3.2	Low flow Faucet Aerators	N	Reliability Review. <del>No updates recommended.</del> Update to %Electric v %Fossil DHW.	N/A <u>Review GDS Baseline Study</u>
4.3.3	Low Flow Showerheads	N	Update to %Electric v %Fossil DHW.	<u>Review GDS Baseline Study</u>
4.3.6	Ozone Laundry	N	Reliability Review. No updates recommended.	N/A
4.3.8	Controls for Central Domestic Hot Water	N	Moving defined variables in to correct section. Update to %Electric v %Fossil DHW.	<u>Controls for Central Domestic Hot Water</u> <u>Review GDS Baseline Study</u>

Measure # and Name		Errata?	Brief description of what changed	Tracker Item(s)
4.4	HVAC End Use	N	<del>Existing Building heating and cooling EFLHs updated, including descriptive introduction. New Construction EFLHs to follow.</del> Decision to delay entry of new EFLHs until v15.	<u>Review climate data and assumptions</u>
4.4.3	Process Boiler Tune-Up	N	Reliability Review. No updates recommended.	N/A
4.4.7	ENERGY STAR and CEE Tier 2 Room Air Conditioner	N	Addition of language on possible ENERGY STAR retirement.	N/A
4.4.8	Guest Room Energy Management (PTAC & PTHP)	N	Reliability Review. No updates recommended.	N/A
4.4.9	Air and Water Source Heat Pump Systems (Centrally Ducted and Ductless)	Y	Fix of error in ASHPSiteHeatingImpact algorithm for non-fuel switch measures >60kBtuh. Edits to unit conversions when using COP efficiency ratings.	N/A
		N	Updated measure costs for residential sized units added based on program data and discussions within the HVAC Cost Working Group.	N/A <u>Update incremental measure costs - ASHP, CAC, ductless mini-splits</u> <u>ASHP Costs (Ducted and Ductless)</u>
4.4.11	High Efficiency Furnace	N	Update to future avoided replacement costs based on 2026 inflation rate. Updated measure costs for residential sized units added based on program data and discussions within the HVAC Cost Working Group.	N/A <u>Update incremental measure costs - ASHP, CAC, ductless mini-splits</u> <u>ASHP Costs (Ducted and Ductless)</u>
4.4.13	Package Terminal Air Conditioner (PTAC) and Package Terminal Heat Pump (PTHP)	N	Update to future avoided replacement costs based on 2026 inflation rate.  Update to loadshape and coincidence factors to reflect common application in hotel guest or multi family rooms.  Update to EERexist value due to likely code level at time of purchase. Error in example calculation fixed.	N/A  <u>Coincidence Factor Update</u>  <u>Package Terminal Air Conditioner (PTAC) and Package Terminal Heat Pump (PTHP)</u>
4.4.14	Pipe Insulation	N	Update to default heating efficiencies.	N/A

Measure # and Name		Errata?	Brief description of what changed	Tracker Item(s)
4.4.15	Single-Package and Split System Unitary Air Conditioners	Y	Reliability Review. Corrected SEER2 value and compliance date from Code of Federal Regulations for split systems <65,000 Btu/h. Transitioning the SEER/EER metrics for systems <65,000 Btu/h to SEER2/EER2	<a href="#">SEER2 Update</a>
4.4.16	Steam Trap Replacement or Repair	N	Update to default heating efficiencies.	N/A
4.4.17	<del>Variable Speed Drives for HVAC Pumps and Cooling Tower Fans</del>	<del>N</del>	<del>Update to heating and cooling run hours based on modeling updates.</del>	<del>N/A</del>
4.4.21	Linkage-Less Boiler Controls for Space Heating	N	Re-worked excess air savings factors. Clarified that 4.4.22 is incremental to 4.4.21.	<a href="#">4.4.22 C&amp;I Oxygen Trim Controls for Space Heating Boilers</a>
4.4.22	Oxygen Trim Controls for Space Heating Boilers	N	Re-worked excess air savings factors. Updated measure costs.	
4.4.24	Small Pipe Insulation	N	Update to default heating efficiencies.	N/A
4.4.26	Variable Speed Drives for HVAC Supply and Return Fans	N	Reliability Review. Updated measure costs. <del>Update to Total Fan Run Hours based on modelling.</del>	N/A
4.4.27	Energy Recovery Ventilator	N	Reliability Review. Removed "heat pipes" from tables, as they are sensible-only devices	N/A
4.4.29	Stack Economizer for Boilers Serving Process Loads	N	Reliability Review. No updates recommended.	N/A
4.4.30	<del>Notched V Belts for HVAC Systems</del>	<del>N</del>	<del>Update to Total Fan Run Hours and resulting EUL based on modelling.</del>	<del>N/A</del>
4.4.33	Commercial & Industrial Air Curtain	N	Updates to default heating and cooling efficiency assumptions based upon GDS Baseline Study data, including 95% distribution efficiency.	<a href="#">Review GDS Baseline Study</a>
4.4.34	De-stratification Fan	N	Updates to default heating and cooling efficiency assumptions based upon GDS Baseline Study data, including 95% distribution efficiency.	<a href="#">Review GDS Baseline Study</a>
4.4.35	Economizer Repair and Optimization	N	Reliability Review. No updates recommended.	N/A

Measure # and Name		Errata?	Brief description of what changed	Tracker Item(s)
4.4.36	Multi-Family Space Heating Steam Boiler Averaging Controls	N	Added second equation option to estimate boiler load. Added footnote that capacity/EFLH is the preferred methodology.	<u>Boiler Averaging Controls-Alternative Capacity Input</u>
4.4.41	Advanced Rooftop Controls	N	Addition of multi-speed motor.	<u>Language clarification for 4.4.41 - VFD vs Multi-speed</u>
4.4.43	Packaged RTU Sealing	N	Reliability Review. Updated measure costs.	N/A
4.4.44	Commercial Ground Source and Ground Water Source Heat Pump	N	Addition of language on possible ENERGY STAR retirement.  Update to future avoided replacement costs based on 2026 inflation rate. Updated measure costs for residential sized units added based on program data and discussions within the HVAC Cost Working Group  Clarification that part load COP / 3.412 is equivalent to HSPF2, no need for additional conversion factor.	N/A  <u>Update incremental measure costs - ASHP, CAC, ductless mini-splits</u>  <u>ASHP Costs (Ducted and Ductless)</u>
4.4.46	Server Room Temperature Set Back	N	Reliability Review. Minor updates.	N/A
4.4.48	Small Commercial Thermostats	N	Updates to default HSPF2, SEER2, EER2 and AFUE assumptions based upon GDS Baseline Study data. SEER2 and EER2 values updated to now include 95% distribution efficiency.	<u>Baseline Inconsistencies</u>  <u>Review GDS Baseline Study</u>
4.4.51	Advanced Rooftop Controls with High Rotor Pole Switch Reluctance Motors	N	Updates to default SEER2, EER2 assumptions based upon GDS Baseline Study data, including 95% distribution efficiency. <del>Update to Total Fan Run Hours based on modelling.</del>	<u>Review GDS Baseline Study</u>
4.4.53	<del>HVAC Supply, Return and Exhaust Fans — Fan Energy Index</del>	N	<del>Update to Total Fan Run Hours based on modelling.</del>	N/A
4.4.55	Commercial Gas Heat Pump	N	<del>VEIC recommendation is to remove the Fuel Switch portion of this measure. Now that savings must be evaluated at site, savings would be negative for fuel switching from an electric heat pump to a gas heat pump. We will discuss this</del>	N/A

Measure # and Name		Errata?	Brief description of what changed	Tracker Item(s)
			<p><del>proposal in the next phase, but edits and example updated to illustrate this point.</del></p> <p>Fuel switch calculation fixed to be at site rather than source. Fuel switch example updated to reflect replacing electric baseboard heating to yield positive total site energy savings.</p>	
4.4.56	Commercial Duct Sealing	N	<p>Reliability Review. Minor edits. Updates to default HSPF2, SEER2, EER2 and AFUE assumptions based upon GDS Baseline Study data, including 95% distribution efficiency.</p>	<a href="#">Review GDS Baseline Study</a>
4.4.57	Condensate Recovery System	N	<p>Removed hot water as only steam systems produce condensate. Example calculation corrected – final result was correct but algorithm was presented incorrectly. Update to default heating efficiencies.</p>	<p>N/A</p> <p><a href="#">4.4.57 - Algorithm Inconsistency</a></p>
4.4.58	Steam Trap Monitoring System	Y	Correct deemed table results for process heating based on variable inputs provided.	<a href="#">Align deemed savings with calculated savings using default assumptions</a>
		N	<p>Reliability Review. Updated footnote.</p> <p>Clarifications to Sa calculation section headers to clarify that the space heating formula is for systems ≤ 5psig and the process heating formula is for all other systems &gt; 5 psig, including commercial and multifamily LPS. &gt;5psig typo fixed Addition of High Pressure Steam category. Adjustments to Heat of Vaporization table, average steam trap inlet pressure Update to default heating efficiencies.</p>	<p>N/A</p> <p><a href="#">Align deemed savings with calculated savings using default assumptions</a></p>
4.4.60	Variable Refrigerant Flow HVAC System	Y	Energy saving algorithm for units >65 kBtu/hr should use IEER rather than EER.	N/A
		N	Reliability Review. Incorporated the new efficiency metrics for systems <65,000 Btu/h, SEER2/EER2/HSPF2	N/A
4.4.61	Chiller Condenser Water Temperature Reset	N	<p>Reliability Review. Propose consideration to making measure more prescriptive based on program data. No changes at this time.</p>	N/A

Measure # and Name		Errata?	Brief description of what changed	Tracker Item(s)
4.4.63	Boiler Blowdown Heat Recovery	N	Update to default heating efficiencies.	N/A
4.4.64	Steam Vent Condensers	N	Update to default heating efficiencies.	N/A
4.4.66	Steam Leak Repair	N	Update to default heating efficiencies.	N/A
4.4.67	CRAC/CRAH Electronically Commutated Plug Fans	N	New measure	<u>Computer Room Air Handler Motor Efficiency</u>
4.4.68	Turbulators	N	New measure Capacity unit corrected. Adjustments made to align measure calculation with boiler tune up measures. "Load Factor" changed to "Utilization Factor". Update to default heating efficiencies.	<u>Add measure for turbulators for HVAC Boilers</u>
4.4.69	Waterless HVAC Condensate Trap	N	New measure Conversion from minutes to hours (60) added to Fossil Fuel algorithm. Change from boiler efficiency to heating system efficiency. Updates to default assumptions based on Federal Register or GDS baseline study. Footnotes updated. <del>Update to Total Fan Run Hours based on modelling.</del> Update to default heating efficiencies.	<u>Commercial RTU HVAC Air Traps</u>
4.5	Lighting End Use	N	Added reference to new excel reference document that provides default wattages for baseline fixture types. <del>Waste Heat Factors, Coincident Factors and select fixture hours updated (additional fixture hours added). Descriptive introduction updated.</del> Decision to delay entry of new modelling assumptions until v15.	N/A  <u>Review climate data and assumptions</u>
4.5.2	<del>Fluorescent</del> Linear Delamping	N	Reliability Review. Renamed measure. Removed restriction to only allow T12 and T8 fluorescent lamp delamping. Updated baseline mix based on GDS Nonresidential Baseline Study. Default T5 and LED wattages added.	N/A  <u>Review GDS Baseline Study</u>

Measure # and Name		Errata?	Brief description of what changed	Tracker Item(s)
4.5.3	High Performance and Reduced Wattage T8 Fixtures and Lamps	N	Reliability Review. Measure retired.	N/A
4.5.4	LED Bulbs and Fixtures	N	Addition of language on possible ENERGY STAR retirement. Clarifications to lifetime section. Screw based bulbs: SAG consensus that measure can continue for Direct Install. No consensus for any other program types. Measure therefore is now written as DI only. With no new stakeholder compromise on appropriate measure life, measure applies technical assumption of expected remaining life of baseline halogen/incandescent bulb (2 years) for all installations (i.e. 8 year measure life for IQ common area has been removed). If we receive notice that these changes are not consensus, we will develop a non-consensus exhibit that will be filed with the v14 TRM. That notice must be made by August 15 <sup>th</sup> .	N/A <u>EUL Clarification</u>
4.5.6	LED Traffic and Pedestrian Signals	N	Addition of language on possible ENERGY STAR retirement.	N/A
4.5.8	Miscellaneous Commercial/Industrial Lighting	N	Reliability Review. No updates recommended.	N/A
4.5.9	Multi-Level Lighting Switch	N	Reliability Review. Updated measure cost. CF calculation updated to be consistent with Occupancy Controls.	N/A
4.5.10	Lighting Controls	N	Reliability Review. No updates recommended.	N/A
4.5.11	Solar Light Tubes	N	Reliability Review. CF calculation updated to be consistent with Occupancy Controls.	N/A
4.5.12	T5 Fixtures and Lamps	N	Reliability Review. Measure retired.	N/A
4.5.15	LED Open Sign	N	Reliability Review. Removed 20% eligibility criteria. Updated default savings based on current hour assumptions. Added $\Delta kWh_{heatpenalty}$ for buildings with a heat pump.	N/A

Measure # and Name		Errata?	Brief description of what changed	Tracker Item(s)
4.5.17	Exterior Photocell Repair	N	Reliability Review. No updates recommended.	N/A
4.5.18	Ultra-Efficient LED Lighting	N	Reliability Review. No updates recommended. Update of measure to use baseline lu/watt assumptions to estimate baseline wattage. Algorithm fixed. Addition of DI application with mid-life adjustment.	N/A
4.6.2	Beverage and Snack Machine Controls	N	Addition of language on possible ENERGY STAR retirement.	N/A
4.6.5	ENERGY STAR Refrigerated Beverage Vending Machine	N	Addition of language on possible ENERGY STAR retirement.	N/A
4.6.10	High Speed Rollup Doors	N	Reliability Review. No updates recommended.	N/A
4.6.11	Q-Sync Motors for Walk-in and Reach-in Coolers/Freezers	N	Reliability Review. No updates recommended.	N/A
4.6.13	Add Doors to Open Refrigerated Display Cases	N	Reliability Review. No updates recommended. Updates to default cooling and heating efficiency assumptions based upon GDS Baseline Study data, including 95% distribution efficiency.	N/A <a href="#">Review GDS Baseline Study</a>
4.6.14	Floating Head Pressure Control	N	Reliability Review. Measure cost updated.	N/A
4.7.13	Compressed Air Leak Repair	N	Addition of methodology for estimating CFM leakage based on ultrasonic leak detection decibel readings. Fixed and updated example calculation.	N/A <a href="#">Compressed Air Leak Repair - Clarify Calc Input</a>
4.8.1	Roof Insulation for C&I Facilities		Updates to default cooling and heating efficiency assumptions based upon GDS Baseline Study data, including 95% distribution efficiency.	<a href="#">Review GDS Baseline Study</a>
4.8.2	Spring-Loaded Garage Door Hinge	N	Added algorithm and resulting savings outputs for electric heating (heat pump and resistance). <del>Fix to some EFLH assumptions</del> Removed EFLH assumptions (user should use values in section 4.5) and savings outputs for gas savings.	<a href="#">4.8.2 Spring-Loaded Garage Door Hinge - Add Electric Heat Option</a> N/A
4.8.4	C&I Air Sealing	N	Updates to default cooling and heating efficiency assumptions based upon GDS	<a href="#">Review GDS Baseline Study</a>

Measure # and Name		Errata?	Brief description of what changed	Tracker Item(s)
			Baseline Study data, including 95% distribution efficiency.	
4.8.5	High Speed Overhead Doors	N	Reliability Review. No updates recommended. Updates to default cooling and heating efficiency assumptions based upon GDS Baseline Study data, including 95% distribution efficiency.	N/A
4.8.6	Dock Door Seals and Shelter	N	Reliability Review. <del>No updates recommended.</del> Updates to default cooling and heating efficiency assumptions based upon GDS Baseline Study data, including 95% distribution efficiency.	N/A
4.8.7	Commercial Wall Insulation	N	Updates to default cooling and heating efficiency assumptions based upon GDS Baseline Study data, including 95% distribution efficiency.	<u>Review GDS Baseline Study</u>
4.8.8	Commercial Secondary Windows	Y	Fixed Fossil Fuel algorithm to divide by heating system efficiency, not multiply.	N/A
		N	Updates to default cooling and heating efficiency assumptions based upon GDS Baseline Study data, including 95% distribution efficiency.	<u>Review GDS Baseline Study</u>
4.8.9	Efficient Windows	N	New measure References/footnotes updated. Added deemed baselines for retrofit if existing u-factor is unknown. Updates to default cooling and heating efficiency assumptions based upon GDS Baseline Study data, including 95% distribution efficiency. Example calculation added.	<u>Window Replacement</u>
4.9.2	Computer Power Management Software	N	Reliability Review. No updates recommended.	N/A
4.9.5	ENERGY STAR Computers	N	Reliability Review. Addition of language on possible ENERGY STAR retirement. Update to ENERGY STAR specification Version 9.0 and resultant default savings.	N/A
4.9.6	Advanced Power Strip – Tier 1 Commercial	N	Added clarification that midstream should use same ISR as kit programs.	<u>Midstream ISR Value Clarification</u>  <u>Possible inconsistency across the Commercial APS (4.8.7) and Smart Socket (4.8.22) measures.</u>

Measure # and Name		Errata?	Brief description of what changed	Tracker Item(s)
			Update to assumption of office open hours to be consistent with Smart Socket measure.	
4.9.7	High Efficiency Transformer	N	Reliability Review. Updated load factor and source, previous value applied only to utility transformers. New Federal Standard coming in 2029 so review deadline set accordingly.	N/A
4.9.12	Low Flow Toilets and Urinals	N	Reliability Review. No updates recommended.	N/A
4.9.15	ENERGY STAR Low Wattage Uninterruptible Power Supply	N	Addition of language on possible ENERGY STAR retirement.	N/A
4.9.23	Energy Efficient Hand Dryers	N	Reliability Review. No updates recommended.	N/A
4.9.25	Virtual AMI Driven Commissioning (VCx)	N	New measure Measure name updated to avoid trademarked term. Acronyms expanded. Additional description of process added. Measure life clarification added. PES and updated to be based on change type. Footnote updated to include ex post adjustment value. Removed language on cross program participation since already accounted for in PES/PDS. PDS value updated to reflect average savings across peak hours. Value and reference updated. Clarifications of required evaluation, and review deadline footnote added. Addition of language as to why no fossil fuel savings provided. <b>Wordsmithing. Addition of clarification on year end savings eligibility.</b>	<u>Virtual Commissioning Measure Addition</u>
4.9.26	Solar as Energy Efficiency	N	New measure <del>Note: The inclusion of this measure in v14 of the IL TRM is dependent on the determination of its appropriateness by the IL SAG.</del> It is provided here for ongoing technical review while the policy decision is reached. No consensus was reached at SAG so measure is not included. If we receive notice that NOT including the measure is not consensus, we will develop a non-	<u>Solar as Energy Efficiency</u>

Measure # and Name		Errata?	Brief description of what changed	Tracker Item(s)
			consensus exhibit that will be filed with the v14 TRM. That notice must be made by August 15 <sup>th</sup> .	
<b>Volume 3 – Residential Measures</b>				
5.1.1	ENERGY STAR Air Purifier/Cleaner	N	<p>Addition of language on possible ENERGY STAR retirement.</p> <p>Update to ENERGY STAR Version 3.0. Update to measure costs.</p> <p>Update to Hours assumption. Algorithm and resulting savings reworked. The Integrated Energy Factor includes both active and standby energy usage. Hours made consistent with assumptions used in IEF, reverting back to v13 assumption. IQ Adjustment updated. IQ values updated.</p>	<p>N/A</p> <p><u>Update 5.1.1 ENERGY STAR Air Purifier/Cleaner with final specification</u></p> <p><u>Update to Air Purifier Hours and ISR</u></p>
5.1.2	ENERGY STAR Clothes Washer	N	<p>Addition of language on possible ENERGY STAR retirement.</p> <p>Update to %Electric_Dryer assumption based on GDS Baseline Study and recalculation of all deemed savings. Now provided as per utility value. %Electric_DHW and %Fossil_DHW updated based on GDS baseline study. <b>ComEd %Electric DHW values updated again to be consistent with %Electric Heat from v13.</b> Recalculation of deemed savings.</p>	<p>N/A</p> <p><u>Review GDS Baseline Study</u></p>
5.1.3	ENERGY STAR Dehumidifier	N	<p>Addition of language on possible ENERGY STAR retirement.</p> <p>Update to ENERGY STAR specification v6.0 effective 10/01/2025, and resulting deemed savings results. Transfer issue fixed to update the savings results. &lt;8 sq ft whole home dehumidifier savings values updated, &gt;8 ft default savings removed as no available product.</p>	<p>N/A</p> <p><u>Update 5.1.3 ENERGY STAR Dehumidifier with final specification update</u></p>
5.1.4	ENERGY STAR Dishwasher	N	<p>Addition of language on possible ENERGY STAR retirement.</p> <p>%Electric_DHW and %Fossil_DHW updated based on GDS baseline study. Recalculation of deemed savings. ComEd %Electric DHW values updated again to be consistent with %Electric Heat from v13.</p>	<p>N/A</p>



Measure # and Name		Errata?	Brief description of what changed	Tracker Item(s)
			as these are expected to be the most inefficient units being retired.	
5.1.10	ENERGY STAR Clothes Dryer	N	Addition of language on possible ENERGY STAR retirement. Clarification to use Actual CEFeff if unknown. Fix to variable name in demand savings algorithm Added language about splitting any additional installation costs across applicable electrification measures.	N/A <u>Clothes Dryer</u> <u>Peak Demand Savings Calculations for Heat Pump Clothes Dryers in Fuel Switching Situations</u>
5.1.11	ENERGY STAR Water Coolers	N	Addition of language on possible ENERGY STAR retirement.	N/A
5.1.12	Ozone Laundry	N	Reliability Review. No updates recommended. %Electric_DHW and %Fossil_DHW updated based on GDS baseline study. ComEd %Electric DHW values updated again to be consistent with %Electric Heat from v13.	N/A
5.1.14	Residential Induction Cooking Appliances	N	Update to measure to apply prescriptive consumption values. Update measure costs. Added language about splitting any additional installation costs across applicable electrification measures.  %cooling assumptions provided by market type based on GDS baseline study. Unknown category now provided. <del>Note we plan on developing a Unknown category once we have appropriate weightings</del>  %Electric_Heat and %Fossil_Heat provided by market and utility based on GDS baseline study. ComEd %Electric_Heat values reverted back to v13.	<u>Res Induction Cooking Appliances</u>  <u>Review GDS Baseline Study</u>
5.1.17	ENERGY STAR All-in-One Clothes Washer-Dryer	N	Addition of language on possible ENERGY STAR retirement.  Fixing term names in SiteEnergySavings and ElectricConsumption algorithms. Algorithms for fossil DHW added to both non-fuel switch and fuel switch sections.	N/A <u>All-In-One Washer/Dryer</u>

Measure # and Name		Errata?	Brief description of what changed	Tracker Item(s)
			%Electric_DHW and %Fossil_DHW updated based on GDS baseline study. ComEd %Electric DHW values updated again to be consistent with %Electric Heat from v13.	
5.1.18	Residential Refrigerator Seal Replacement – Provisional Measure	N	New measure. <del>VEIC propose making a Provisional Measure as the savings methodology is based upon commercial units and resultant example calculation appears high. A simple metering evaluation would sure up the savings for this measure.</del> Methodology updated to use DOE implied savings factors to the existing baseline refrigerator consumption. Propose provisional tag be removed. Measure is characterized as IQ only.	<u>Add Residential Refrigerator Seal Replacement Measure</u>
5.2.3	ENERGY STAR Televisions	N	Addition of language on possible ENERGY STAR retirement.	N/A
5.2.4	Smart Sockets	N	Reliability review. Updated measure cost	N/A
5.3.1	Centrally Ducted Air Source Heat Pump (Central, Ductless and Portable)	N	Addition of language relating to full v partial displacement assumptions when program takes measures to ensure full displacement.  Clarification that resistance heat is both baseboard and electric furnace. Addition of Room AC being appropriate baseline for mobile homes when the existing condition.  Addition of Electric Furnace Fan Savings calculation when appropriate.  Update to future avoided replacement costs based on 2026 inflation rate.  Updated measure costs added based on program data and discussions within the HVAC Cost Working Group. <b>Fix to incremental cost to include the additional cost of higher efficiency units.</b>	<u>Partial Displacement HeatPumps</u>  <u>Electric Resistance Furnaces - Claim Fan Savings?</u>  <u>Update incremental measure costs - ASHP, CAC, ductless mini-splits</u>  <u>ASHP Costs (Ducted and Ductless)</u>  <u>Review and potentially update ESTAR default assumptions for EER2 in ASHP and CAC measures</u>

Measure # and Name		Errata?	Brief description of what changed	Tracker Item(s)
			<p>Added language about splitting any additional installation costs across applicable electrification measures.</p> <p>Update to Room AC existing efficiency assumptions. IQ value adjusted to reflect least efficient units being replaced.</p> <p>Update to EER2_ee assumption to meet ENERGY STAR specification v6.2.  '<b>Unknown, installing ductless' efficiency assumptions added to AFUE and EER2 tables.</b></p>	
5.3.3	Central Air Conditioning	N	<p>Replacing efficient specifications from ENERGY STAR (which is being sunset in February 2026) with the Consortium for Energy Efficiency (CEE).</p> <p>Update to capacity assumptions now by market sector, based on GDS Baseline Study.</p> <p>Update to mobile home Room AC baseline efficiency assumptions.</p> <p><del>Adding distribution efficiency to cooling efficiency assumptions.</del></p> <p>Updated measure costs added based on program data and discussions within the HVAC Cost Working Group.  <b>Fix to incremental cost to include the additional cost of higher efficiency units.</b></p>	<p><u>Discuss shifting specification from ENERGY STAR to CEE for 5.3.3. Central Air Conditioning</u></p> <p><u>Review GDS Baseline Study</u></p> <p><u>Update incremental measure costs - ASHP, CAC, ductless mini-splits</u></p> <p><u>ASHP Costs (Ducted and Ductless)</u></p>
5.3.4	Duct Insulation and Sealing	N	<p>Addition of savings for electric furnaces.</p> <p>Addition of Electric Furnace Fan Savings calculation when appropriate.</p> <p><del>Addition of savings for room AC cooled homes. Addition of LoadFactor and efficiency.</del></p> <p>Unknown efficiency and %cooling assumptions provided by market type based on GDS baseline study.  %Electric_Heat and %Fossil_Heat provided by market and utility based on GDS</p>	<p><u>Electric Resistance Furnaces - Claim Fan Savings?</u></p> <p><u>Room AC Cooling for Shell End Use Measures</u></p> <p><u>Review GDS Baseline Study</u></p>

Measure # and Name		Errata?	Brief description of what changed	Tracker Item(s)
			<p>baseline study. ComEd %Electric_Heat values reverted back to v13.</p> <p>Adding distribution efficiency to cooling efficiency assumptions.</p>	
5.3.6	Gas High Efficiency Boiler	N	<p>Reliability Review.</p> <p>Addition of language on possible ENERGY STAR retirement.</p> <p>Update to future avoided replacement costs based on 2026 inflation rate. <del>Note— HVAC costs are being reviewed and will likely be updated in next draft.</del></p> <p>Updated measure costs added based on program data and discussions within the HVAC Cost Working Group</p>	<p>N/A</p> <p><u>Update incremental measure costs - ASHP, CAC, ductless mini-splits</u></p> <p><u>ASHP Costs (Ducted and Ductless)</u></p>
5.3.7	Gas High Efficiency Furnace	N	<p>Addition of language on possible ENERGY STAR retirement.</p> <p>Update to future avoided replacement costs based on 2026 inflation rate. <del>Note— HVAC costs are being reviewed and will likely be updated in next draft.</del></p> <p>Updated measure costs added based on program data and discussions within the HVAC Cost Working Group</p> <p>Update to deemed capacity based on GDS Baseline study. Multifamily IQ value added.</p>	<p>N/A</p> <p><u>Update incremental measure costs - ASHP, CAC, ductless mini-splits</u></p> <p><u>ASHP Costs (Ducted and Ductless)</u></p> <p><u>Review GDS Baseline Study</u></p>
5.3.8	Ground Source Heat Pump	N	<p>Addition of language on possible ENERGY STAR retirement.</p> <p>Update to future avoided replacement costs based on 2026 inflation rate. <del>Note— HVAC costs are being reviewed and will likely be updated in next draft.</del> Updated measure costs added based on program data and discussions within the HVAC Cost Working Group.</p> <p>Added language about splitting any additional installation costs across applicable electrification measures.</p> <p>Terminology made consistent with ASHP measure.</p>	<p><u>Update incremental measure costs - ASHP, CAC, ductless mini-splits</u></p> <p><u>ASHP Costs (Ducted and Ductless)</u></p> <p><u>Electric Resistance Furnaces - Claim Fan Savings?</u></p>

Measure # and Name		Errata?	Brief description of what changed	Tracker Item(s)
			<p>Addition of Electric Furnace Fan Savings calculation when appropriate.</p> <p>Update to Unknown Household Type based on 2020 RECS data.</p> <p>Clarification that part load COP / 3.412 is equivalent to HSPF2, no need for additional conversion factor.</p>	
5.3.9	High Efficiency Bathroom Exhaust or Radon Mitigation Fan	N	Addition of language on possible ENERGY STAR retirement.	N/A
5.3.10	HVAC Tune Up (Central Air Conditioning)	N	Update to future avoided replacement costs based on 2026 inflation rate. Adding distribution efficiency to cooling efficiency assumptions.	N/A
5.3.11	Programmable Thermostats	N	Clarification that resistance heat is both baseboard and electric furnace. Fan savings algorithm adjusted to allow kWh or them savings depending on furnace fuel.	N/A
5.3.13	Residential Furnace Tune-Up	N	Reliability Review. No updates recommended.	N/A
5.3.15	ENERGY STAR Ceiling Fan	N	Reliability Review. Addition of language on possible ENERGY STAR retirement. Updates to fan assumption based on ENERGY STAR QPL. Update assumption to 100% LED lamps.	N/A
5.3.16	Advanced Thermostats	N	<p>Clarification that resistance heat is both baseboard and electric furnace.</p> <p>Update to Heating_Reduction assumption when existing thermostat is unknown – applying weighting of manual and programmable thermostats. New values provided by market sector based on GDS Baseline Study. Unknown assumption added.</p> <p>Fan savings algorithm adjusted to allow kWh or them savings depending on furnace fuel.</p>	<p>N/A</p> <p><u>Review GDS Baseline Study</u></p>

Measure # and Name		Errata?	Brief description of what changed	Tracker Item(s)
			Adding distribution efficiency to cooling efficiency assumptions.	
5.3.17	Gas High Efficiency Combination Boiler	N	Reliability Review. No updates recommended. Update to Unknown Household Type based on 2020 RECS data.	N/A
5.3.20	Residential Energy Recovery Ventilator (ERV)	N	Clarification that resistance heat is both baseboard and electric furnace.  Addition of savings for room AC cooled homes. Addition of LoadFactor and efficiency. Unknown efficiency and %cooling assumptions provided by market type based on GDS baseline study. %Electric_Heat and %Fossil_Heat provided by market and utility based on GDS baseline study. ComEd %Electric_Heat values reverted back to v13.  Adding distribution efficiency to cooling efficiency assumptions.	N/A  <u>Room AC Cooling for Shell End Use Measures</u>  <u>Review GDS Baseline Study</u>
5.3.21	Air Handler Filter Cleaning/ Replacement	N	Reliability Review. Updated EFLHs to match other measures. <del>Updated to %FossilHeat to match other measures.</del> %Electric_Heat and %Fossil_Heat provided by market and utility based on GDS baseline study. <b>ComEd values updated.</b> %Cooling updated based on GDS baseline study.	N/A
5.3.22	High Efficiency Kitchen Exhaust Fans	N	Addition of language on possible ENERGY STAR retirement.	N/A
5.3.23	Gas Heat Pump	N	New measure. <del>VEIC recommendation is to remove the Fuel Switch portion of this measure. Now that savings must be evaluated at site, savings would be negative for fuel switching from an electric heat pump to a gas heat pump. We will discuss this proposal in the next phase.</del> Fuel switch calculation adjusted to Site energy and new example added for fuel switch from electric resistance.	<u>Residential Gas Heat Pump</u>

Measure # and Name		Errata?	Brief description of what changed	Tracker Item(s)
			<p><b>Added Residential Gas Fired Instantaneous Water Heaters baseline options.</b>  Clarification added for multi family applications.  Updated measure costs added based on program data and discussions within the HVAC Cost Working Group, plus adjustment to hot water heater cost assumptions.  Clarification that capacity is Output capacity. Non-fuel switch algorithm updated to also specify output capacity.</p>	
5.4.1	Domestic Hot Water Pipe Insulation	N	<p>%Electric_DHW and %Fossil_DHW updated based on GDS baseline study. ComEd %Electric DHW values updated again to be consistent with %Electric Heat from v13.</p>	<u>Review GDS Baseline Study</u>
5.4.2	Gas Water Heater	N	<p>Addition of language on possible ENERGY STAR retirement.</p> <p><b>Added Residential Gas Fired Instantaneous Water Heaters baseline options.</b>  <b>Clarification that storage units should be baseline for NC, for TOS use same type as existing or storage if unknown.</b></p> <p>Update to future avoided replacement costs based on 2026 inflation rate.  Update to Unknown Household Type based on 2020 RECS data.</p>	N/A
5.4.3	Heat Pump Water Heaters	N	<p>Addition of language on possible ENERGY STAR retirement.</p> <p><b>Added Residential Gas Fired Instantaneous Water Heaters baseline options.</b></p> <p>Update to measure costs. <b>Costs updated to include labor cost.</b>  Added language about splitting any additional installation costs across applicable electrification measures.</p> <p>Addition of algorithm for ThermsHeatImpact  <b>%FossilHeat term label fixed.</b></p>	<p>N/A</p> <p><u>Update HPWH Incremental Costs</u></p> <p><u>Heat Pump Water Heater - Clarifications</u></p>

Measure # and Name		Errata?	Brief description of what changed	Tracker Item(s)
			%Electric_Heat and %Fossil_Heat provided by market and utility based on GDS baseline study. <b>ComEd values updated.</b>  Update to Unknown Household Type based on 2020 RECS data.	
5.4.4	Low Flow Faucet Aerators	N	Update to Unknown Household Type based on 2020 RECS data. %Electric_DHW and %Fossil_DHW updated based on GDS baseline study. ComEd %Electric DHW values updated again to be consistent with %Electric Heat from v13.	N/A  <a href="#">Review GDS Baseline Study</a>
5.4.5	Low Flow Showerheads	N	Update to Unknown Household Type based on 2020 RECS data. %Electric_DHW and %Fossil_DHW updated based on GDS baseline study. ComEd %Electric DHW values updated again to be consistent with %Electric Heat from v13.	N/A  <a href="#">Review GDS Baseline Study</a>
5.4.7	Water Heater Wrap	N	Reliability Review. Minor updates.	N/A
5.4.8	Thermostatic Restrictor Shower Valve	N	Update to Unknown Household Type based on 2020 RECS data. %Electric_DHW and %Fossil_DHW updated based on GDS baseline study. ComEd %Electric DHW values updated again to be consistent with %Electric Heat from v13.	N/A  <a href="#">Review GDS Baseline Study</a>
5.4.9	Shower Timer	N	Reliability Review. <del>No updates recommended.</del> Update to Unknown Household Type based on 2020 RECS data. %Electric_DHW and %Fossil_DHW updated based on GDS baseline study. ComEd %Electric DHW values updated again to be consistent with %Electric Heat from v13.	N/A  <a href="#">Review GDS Baseline Study</a>
5.4.11	Drain Water Heat Recovery	N	Reliability Review. Minor updates. Update to Unknown Household Type based on 2020 RECS data.	N/A
5.4.12	Recirculating Pump Controls	N	Update to Unknown Household Type based on 2020 RECS data.	N/A
5.4.13	Auto-Diverting Tub Spout System	N	Updated measure description, efficient, and baseline conditions to allow measure to apply to tubs without showerheads. Added secondary equation to calculate savings for tub-only systems.	<a href="#">5.4.13 Auto Diverting Tub Spout - Wording Edits</a>

Measure # and Name		Errata?	Brief description of what changed	Tracker Item(s)
			Update to Unknown Household Type based on 2020 RECS data. %Electric_DHW and %Fossil_DHW updated based on GDS baseline study. ComEd %Electric DHW values updated again to be consistent with %Electric Heat from v13.	<u>Review GDS Baseline Study</u>
5.4.14	Residential Solar Water Heater	N	<p>New measure.</p> <p><del>Note: The inclusion of this measure in v14 of the IL TRM is dependent on the determination of its appropriateness by the IL SAG.</del></p> <p><del>It is provided here for ongoing technical review while the policy decision is reached. No consensus was reached at SAG so measure is not included. If we receive notice that NOT including the measure is not consensus, we will develop a non-consensus exhibit that will be filed with the v14 TRM. That notice must be made by August 15<sup>th</sup>.</del></p> <p>Consensus has been reached and measure has been reinserted. <b>Coincident factor updated.</b> <b>Baseline measure cost updated to include labor cost.</b> <b>Replaced SUEF with <math>UEF_{solar}</math> calculated using the Solar Fraction and <math>UEF_{backup}</math>.</b> <b>Example calculation added.</b></p>	<u>Solar Water Heating</u>
5.5.6	LED Specialty Lamps	N	<p>Addition of language on possible ENERGY STAR retirement.</p> <p><del>Note pending SAG determination of continuation of screw based lamp programs.</del></p> <p>SAG consensus that measure can continue for Direct Install. No consensus for any other program types. Measure therefore is now written as DI only. With no new stakeholder compromise on appropriate measure life, measure applies technical assumption of expected remaining life of baseline halogen/incandescent bulb (2 years). If we receive notice that these changes are not consensus, we will develop a non-consensus exhibit that will be filed with the v14 TRM. That notice must be made by August 15<sup>th</sup>.</p>	N/A

Measure # and Name		Errata?	Brief description of what changed	Tracker Item(s)
			Clarification that resistance heat is both baseboard and electric furnace. Adding distribution efficiency to cooling efficiency assumptions (no change to WHF value).	
5.5.7	LED Exit Signs	N	Clarification that resistance heat is both baseboard and electric furnace. Adding distribution efficiency to cooling efficiency assumptions (no change to WHF value).	N/A
5.5.8	LED Screw Based Omnidirectional Bulbs	N	Addition of language on possible ENERGY STAR retirement. <del>Note pending SAG determination of continuation of screw based lamp programs.</del> SAG consensus that measure can continue for Direct Install. No consensus for any other program types. Measure therefore is now written as DI only. With no new stakeholder compromise on appropriate measure life, measure applies technical assumption of expected remaining life of baseline halogen/incandescent bulb (2 years). If we receive notice that these changes are not consensus, we will develop a non-consensus exhibit that will be filed with the v14 TRM. That notice must be made by August 15 <sup>th</sup> . Clarification that resistance heat is both baseboard and electric furnace. Adding distribution efficiency to cooling efficiency assumptions (no change to WHF value).	N/A
5.5.9	LED Fixtures	N	Addition of language on possible ENERGY STAR retirement. <del>Note pending SAG determination of continuation of screw based lamp programs.</del> SAG consensus that measure can continue for Direct Install. No consensus for any other program types. Measure therefore is now written as DI only. With no new stakeholder compromise on appropriate measure life, measure applies technical assumption of expected remaining life of baseline halogen/incandescent bulb (2 years). If we receive notice that these	N/A

Measure # and Name		Errata?	Brief description of what changed	Tracker Item(s)
			changes are not consensus, we will develop a non-consensus exhibit that will be filed with the v14 TRM. That notice must be made by August 15 <sup>th</sup> . Clarification that resistance heat is both baseboard and electric furnace. Adding distribution efficiency to cooling efficiency assumptions (no change to WHF value).	
5.5.10	Holiday String Lighting	N	Clarification that resistance heat is both baseboard and electric furnace.	N/A
5.5.11	LED Nightlights	N	Clarification that resistance heat is both baseboard and electric furnace. Adding distribution efficiency to cooling efficiency assumptions (no change to WHF value). Update to lifetime ISR using new Real Discount Rate.	N/A
5.5.12	Connected LED Lamps	Y	Fixing heat penalty algorithms to reflect savings calculation. Updating assumptions to use either Omnidirectional or Specialty versions.	N/A
		N	Reliability Review. Update to measure life. Clarification that resistance heat is both baseboard and electric furnace. Adding distribution efficiency to cooling efficiency assumptions (no change to WHF value). Update to lifetime ISR using new Real Discount Rate.	N/A
5.5.13	EISA Exempt LED Lighting	N	Addition of language on possible ENERGY STAR retirement. Clarification that resistance heat is both baseboard and electric furnace.  Additional Linear bins added. Adding distribution efficiency to cooling efficiency assumptions (no change to WHF value). Update to lifetime ISR using new Real Discount Rate.	N/A  <u>EISA Exempt Lighting: Linear baselines/categories and garage style lamps</u>
5.5.14	Ultra-Efficient LED Lighting	N	Reliability Review. Addition of language on possible ENERGY STAR retirement.	N/A

Measure # and Name		Errata?	Brief description of what changed	Tracker Item(s)
			<p>Clarification that resistance heat is both baseboard and electric furnace.</p> <p>Update of measure to use baseline lu/watt assumptions to estimate baseline wattage. Algorithm fixed. Addition of DI application with mid-life adjustment.</p> <p>Adding distribution efficiency to cooling efficiency assumptions (no change to WHF value).</p> <p>Update to lifetime ISR using new Real Discount Rate.</p>	
5.6.1	Air Sealing	N	<p>Addition of savings for room AC cooled homes. Addition of LoadFactor and efficiency.</p> <p>Unknown efficiency and %cooling assumptions provided by market type based on GDS baseline study.</p> <p>%Electric_Heat and %Fossil_Heat provided by market and utility based on GDS baseline study. ComEd %Electric_Heat values reverted back to v13.</p> <p>Clarification of N_cool for 3+ stories.</p> <p>Addition of fan savings for electric furnaces.</p> <p>Update to DUA factor.</p> <p><del>Addition of new assumption for savings per linear ft of air sealing for a can of spray foam (2 linear ft/ounce).</del></p> <p>New terms added to calculate savings for spray foam, using kWh or therm savings from ASHRAE paper to find savings per ounce of product (values updated and assumption made provisional as per TAC agreement). <b>Consumer product default size updated in gas section to 12oz.</b></p> <p>Cooling unknown savings for all prescriptive savings updated based on GDS study CAC v RAC v no AC findings.</p> <p>Adding distribution efficiency to cooling efficiency assumptions.</p>	<p><u>Room AC Cooling for Shell End Use Measures</u></p> <p><u>Review GDS Baseline Study</u></p> <p><u>Air Sealing - Expand inputs based on # of floors</u></p> <p><u>Electric Resistance Furnaces - Claim Fan Savings?</u></p> <p><u>Update to Discretionary Use Adjustment for Residential Air Sealing and Insulation Measures</u></p> <p><u>Air Sealing Measure to include Spray Foam Insulation</u></p>

Measure # and Name		Errata?	Brief description of what changed	Tracker Item(s)
5.6.2	Basement Sidewall Insulation	N	<p>Clarification of conditioned v unconditioned v semi-conditioned. <del>CDD/HDD assumptions for semi-conditioned added.</del> Values that were previously labeled unconditioned now labeled as semi-conditioned, which was the original intent.</p> <p>Addition of savings for room AC cooled homes. Addition of LoadFactor and efficiency. Unknown efficiency and %cooling assumptions provided by market type based on GDS baseline study. %Electric_Heat and %Fossil_Heat provided by market and utility based on GDS baseline study. ComEd %Electric_Heat values reverted back to v13.</p> <p>Addition of fan savings for electric furnaces.</p> <p>Update to DUA factor.</p> <p>Update to cooling EFLH assumption (for Coincident peak demand savings) to provide proportionately lower EFLH for semi-conditioned spaces.</p> <p>Adding distribution efficiency to cooling efficiency assumptions.</p>	<p><u>Define and standardized conditioned, unconditioned, and semi-conditioned spaces</u></p> <p><u>Room AC Cooling for Shell End Use Measures</u></p> <p><u>Review GDS Baseline Study</u></p> <p><u>Electric Resistance Furnaces - Claim Fan Savings?</u></p> <p><u>Update to Discretionary Use Adjustment for Residential Air Sealing and Insulation Measures</u></p>
5.6.3	Floor Insulation Above Crawlspace	Y	CDD and HDD values updated to reflect <i>conditioned</i> space – as this measure will be between a conditioned space and a vented crawlspace (outside).	N/A
		N	<p>Clarification of conditioned v unconditioned v semi-conditioned.</p> <p>Addition of savings for room AC cooled homes. Addition of LoadFactor and efficiency. Unknown efficiency and %cooling assumptions provided by market type based on GDS baseline study. %Electric_Heat and %Fossil_Heat provided by market and utility based on GDS</p>	<p><u>Room AC Cooling for Shell End Use Measures</u></p> <p><u>Review GDS Baseline Study</u></p> <p><u>Mobile Home Floor and Attic Insulation Considerations</u></p> <p><u>Electric Resistance Furnaces - Claim Fan Savings?</u></p>

Measure # and Name		Errata?	Brief description of what changed	Tracker Item(s)
			<p>baseline study. ComEd %Electric_Heat values reverted back to v13.</p> <p>New assumptions for R_old and framing factor for mobile homes added.</p> <p>Addition of fan savings for electric furnaces.</p> <p>Update to DUA factor. Adding distribution efficiency to cooling efficiency assumptions.</p>	<p><a href="#"><u>Update to Discretionary Use Adjustment for Residential Air Sealing and Insulation Measures</u></a></p>
5.6.4	Wall Insulation	N	<p>Addition of savings for room AC cooled homes. Addition of LoadFactor and efficiency. Unknown efficiency and %cooling assumptions provided by market type based on GDS baseline study. %Electric_Heat and %Fossil_Heat provided by market and utility based on GDS baseline study. ComEd %Electric_Heat values reverted back to v13.</p> <p>Addition of fan savings for electric furnaces.</p> <p>Update to DUA factor. Adding distribution efficiency to cooling efficiency assumptions.</p>	<p><a href="#"><u>Room AC Cooling for Shell End Use Measures</u></a></p> <p><a href="#"><u>Review GDS Baseline Study</u></a></p> <p><a href="#"><u>Electric Resistance Furnaces - Claim Fan Savings?</u></a></p> <p><a href="#"><u>Update to Discretionary Use Adjustment for Residential Air Sealing and Insulation Measures</u></a></p>
5.6.5	Ceiling/Attic Insulation	N	<p><del>Clarification of conditioned v unconditioned v semi-conditioned, with example of where semi-conditioned would be appropriate.</del></p> <p>Addition of savings for room AC cooled homes. Addition of LoadFactor and efficiency. Unknown efficiency and %cooling assumptions provided by market type based on GDS baseline study. %Electric_Heat and %Fossil_Heat provided by market and utility based on GDS baseline study. ComEd %Electric_Heat values reverted back to v13.</p> <p><del>HDD assumptions for semi-conditioned added. Should use CDD as conditioned.</del></p>	<p><a href="#"><u>Room AC Cooling for Shell End Use Measures</u></a></p> <p><a href="#"><u>Review GDS Baseline Study</u></a></p> <p><a href="#"><u>Define and standardized conditioned, unconditioned, and semi-conditioned spaces</u></a></p> <p><a href="#"><u>Electric Resistance Furnaces - Claim Fan Savings?</u></a></p> <p><a href="#"><u>Update to Discretionary Use Adjustment for Residential Air Sealing and Insulation Measures</u></a></p>

Measure # and Name		Errata?	Brief description of what changed	Tracker Item(s)
			<p>Addition of fan savings for electric furnaces.</p> <p>Update to DUA factor.</p> <p><del>Update to cooling EFLH assumption (for Coincident peak demand savings) to provide proportionately lower EFLH for semi-conditioned spaces.</del></p> <p>Adding distribution efficiency to cooling efficiency assumptions.</p>	
5.6.6	Rim/Band Joist Insulation	N	<p>Clarification of conditioned v unconditioned v semi-conditioned. <del>CDD/HDD assumptions for semi-conditioned added.</del></p> <p>Values that were previously labeled unconditioned now labeled as semi-conditioned, which was the original intent.</p> <p>Addition of savings for room AC cooled homes. Addition of LoadFactor and efficiency.</p> <p>Unknown efficiency and %cooling assumptions provided by market type based on GDS baseline study.</p> <p>%Electric_Heat and %Fossil_Heat provided by market and utility based on GDS baseline study. ComEd %Electric_Heat values reverted back to v13.</p> <p>Addition of fan savings for electric furnaces.</p> <p>Update to DUA factor.</p> <p>Update to cooling EFLH assumption (for Coincident peak demand savings) to provide proportionately lower EFLH for semi-conditioned spaces.</p> <p>Adding distribution efficiency to cooling efficiency assumptions.</p>	<p><u>Define and standardized conditioned, unconditioned, and semi-conditioned spaces</u></p> <p><u>Room AC Cooling for Shell End Use Measures</u></p> <p><u>Review GDS Baseline Study</u></p> <p><u>Electric Resistance Furnaces - Claim Fan Savings?</u></p> <p><u>Update to Discretionary Use Adjustment for Residential Air Sealing and Insulation Measures</u></p>
5.6.7	Low-E Storm Window	N	Addition of language on possible ENERGY STAR retirement	N/A
5.6.8	High Performance Windows	N	Addition of language on possible ENERGY STAR retirement	N/A

Measure # and Name		Errata?	Brief description of what changed	Tracker Item(s)
5.6.9	Insulated Cellular Shades	N	Reliability Review. Measure life update Update to measure cost. Addition of fan savings for electric furnaces. Adding distribution efficiency to cooling efficiency assumptions.	N/A  <a href="#">Electric Resistance Furnaces - Claim Fan Savings?</a>
5.6.10	Multifamily Whole Building Aerosol Sealing	N	Reliability Review. No updates recommended.	N/A
5.6.11	Insulated Concrete Forms	N	Addition of savings for room AC cooled homes. Addition of LoadFactor and efficiency. Unknown efficiency and %cooling assumptions provided by market type based on GDS baseline study. %Electric_Heat and %Fossil_Heat provided by market and utility based on GDS baseline study. ComEd %Electric_Heat values reverted back to v13.  Addition of fan savings for electric furnaces.  Update to DUA factor. Adding distribution efficiency to cooling efficiency assumptions.	<a href="#">Room AC Cooling for Shell End Use Measures</a>  <a href="#">Review GDS Baseline Study</a>  <a href="#">Electric Resistance Furnaces - Claim Fan Savings?</a>  <a href="#">Update to Discretionary Use Adjustment for Residential Air Sealing and Insulation Measures</a>
5.6.12	Energy Efficient Doors	N	New measure Adding distribution efficiency to cooling efficiency assumptions. %Electric_Heat and %Fossil_Heat provided by market and utility based on GDS baseline study. ComEd %Electric_Heat values reverted back to v13. Cost information added to measure.	<a href="#">Energy Efficient Doors</a>
5.7.1	High Efficiency Pool Pumps	N	Addition of language on possible ENERGY STAR retirement	N/A
5.7.3	Level 2 Electric Vehicle Charger	N	Addition of language on possible ENERGY STAR retirement	N/A
5.7.4	Heat Pump Swimming Pool Heater	N	Reliability Review. No updates recommended.	N/A
5.7.5	Tree Planting	N	Update to multiplier by applying 2026 approved real discount rate.	N/A  <a href="#">Room AC Cooling for Shell End Use Measures</a>

Measure # and Name		Errata?	Brief description of what changed	Tracker Item(s)
			<p>Addition of savings for room AC cooled homes. Addition of LoadFactor and efficiency.</p> <p>Unknown efficiency and %cooling assumptions provided by market type based on GDS baseline study.</p> <p>%Electric_Heat and %Fossil_Heat provided by market and utility based on GDS baseline study. Unknown added. ComEd %Electric_Heat values reverted back to v13.</p> <p>Adding distribution efficiency to cooling efficiency assumptions.</p>	<u>Review GDS Baseline Study</u>
5.7.6	Smart Irrigation Controls	N	<p>New measure.</p> <p>Language relating to commercial applications removed and example updated to reflect typical residential usage.</p>	<u>Residential Irrigation Controller</u>
5.7.7	Light Duty Electric Vehicle	N	<p><del>New measure.</del></p> <p><del>Note: The inclusion of this measure in v14 of the IL TRM is dependent on the determination of its appropriateness by the IL SAG.</del></p> <p>No consensus was reached at SAG so measure is not included. If we receive notice that NOT including the measure is not consensus, we will develop a non-consensus exhibit that will be filed with the v14 TRM. That notice must be made by August 15<sup>th</sup>.</p>	<u>Electric Vehicles/EV Efficiency</u>
5.7.8	Solar as Energy Efficiency	N	<p><del>New measure.</del></p> <p><del>Note: The inclusion of this measure in v14 of the IL TRM is dependent on the determination of its appropriateness by the IL SAG.</del></p> <p><del>It is provided here for ongoing technical review while the policy decision is reached.</del></p> <p>No consensus was reached at SAG so measure is not included. If we receive notice that NOT including the measure is not consensus, we will develop a non-consensus exhibit that will be filed with the v14 TRM. That notice must be made by August 15<sup>th</sup>.</p>	<u>Solar as Energy Efficiency</u>
<b>Volume 4 – Cross-Cutting Measures and Attachments</b>				

Measure # and Name	Errata?	Brief description of what changed	Tracker Item(s)
		No changes proposed.	

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
<a href="#">Review climate data and assumptions</a>	Commercial Modeling Working Group agreed on the model attributes for all OpenStudio models, and calibrated energy intensities with ComStock where possible, or CBECs where not available. TRM values have been calculated and entered in draft 2 for all existing building tables. New Construction HVAC EFLH were provided in a follow up memo. Upon review, TAC agreed that more time was needed to review and gain comfort in the new values. The working group will continue through the rest of the year with a view for updates being made in v15.
<a href="#">Review federal energy conservation standards (10 CFR 431) for commercial heat pumps and A/C systems less than 65,000 Btu/h</a>	Upon review, confirmed that the code was being utilized correctly.
<a href="#">Combined Heat and Power</a>	TAC decided that we should wait a further year before restarting the discussions on this measure. No updates this year.
<a href="#">Air Curtains/Dock Seals - Review Savings</a>	Upon review, VEIC believe savings are in line with other sources for air curtain savings. No changes recommended.
<a href="#">4.8.6 Dock Door Seals and Shelter - Add Electric Heat Option</a>	Electric heat options are already provided in the measure. Tracker item withdrawn.
<a href="#">Keep track of ENERGY STAR specification changes</a>	VEIC and the TAC continue to monitor potential changes to ENERGY STAR and Federal Standards. Only specification changes that have already been finalized are applied in the measures. Any measure referencing ENERGY STAR has a new footnote added to direct the user in the event of ENERGY STAR being retired to continue, to use the last active specification for the remainder of the TRM effective period.
<a href="#">Building with on-site generation saves more energy than the net annual energy purchased from the grid</a>	SAG Policy Group discussions ongoing relating to this issue.
<a href="#">EUL assumptions for IQ populations</a>	No progress on this item.
<a href="#">Use Standard Algebraic Expressions</a>	VEIC are updating algorithms in the Word documents to use the formula editor for measures we are working on. This process will take time – and continue through this update cycle and likely multiple future cycles.
<a href="#">Label Equations and Tables</a>	No progress on this item. VEIC are reluctant to add additional autoformatting aspects to these very large documents, but will continue to work with the TAC to improve the usability of the documents.
<a href="#">2025 Reliability Reviews</a>	VEIC performed a reliability review on 60 measures this year. Many updates are recommended as described above.

Tracker Items:	Comments
Add default horsepower for midstream programs to Notched V-Belts	Tracker items not being pursued as per requestor. Some may be revisited for v15.
VSD Air Compressor	
Refrigerators - New DOE TSD available	
ENERGY STAR Clothes Dryer	
Modeled Approach to ASHP Savings	
HVAC Tune-Up Measure Adjust	
ERV Baseline	
IQ Behavior program - Enhanced Energy Education	
Solar Air Heater	
Coil Coating for Improved Heat Transfer	
Building Automation System Standard Measure	
Expand Boiler Chemical Descaling to Include Tube Replacement	
Cool Roofs	
Commercial Natural Gas Generator	
<a href="#">PROVISIONAL On Demand Package Sealer</a>	No significant uptake of measure or evaluation effort. No updates at this time.
<a href="#">PROVISIONAL Energy efficient hydraulic oils</a>	No significant uptake of measure or evaluation effort. No updates at this time.
<a href="#">PROVISIONAL Energy Efficient Gear Oils</a>	