

Nicor Gas Energy Efficiency Program - Plan Year 2024
Quarterly Report: Fourth Quarter (October 1, 2024
through December 31, 2024)
Response to Evaluators' Recommendations

APPENDIX B

Program	PY	Recommendation	Action Completion Date	Action(s) Taken
Custom	2023	Measures: Boiler Replacement, HVAC upgrade, HVAC Upgrade & BAS, AHU, BAS, Burner and controls replacement. Recommendation 1a: When conducting a utility data analysis to calculate project savings, utilize utility data through the most recent billing period, if possible, to allow maximum coverage of the post installation period. Measures: Boiler Replacement, HVAC upgrade, HVAC Upgrade & BAS, AHU, BAS, Burner and controls replacement. Recommendation 1b: When determining the heating balance temperatures in a utility data analysis, apply the common approach of determining the heating balance temperatures by achieving the minimum residual in the model. However, the results from this approach should be reviewed and updated when necessary, e.g., when the resultant summer usages for the post installation and the baseline cases are considerably different and unexpected. In this scenario, Guidehouse recommends manually updating and optimizing the heating balance temperatures based on actual summer usages from the utility data.	11/10/2024	<p>Nicor Gas will utilize all post-installation data that is available at the time of project completion to minimize differences between ex ante and ex post measurements.</p> <p>Nicor Gas updated our regression analysis tool so that we can specifically model around seasonal usage).</p>
Custom	2023	Measure: BAS Metasys System Upgrade Recommendation: Notify the evaluation team when each phase of a multiple phase project is submitted so all phases of the project can be tracked and evaluated consistently across the project timeline, allowing savings to be handled correctly to account for impact of different phases.	11/10/2024	<p>Nicor gas will clearly label all projects with multiple phases in their filename and communicate updates with phased projects during regular meetings with evaluation team.</p>
Custom	2023	Measure: Laundry Facility Recommendation: Continue to enhance data collection and document references for key input and parameters. If a key input or parameter cannot be determined during the ex ante review, consider conducting customer interviews to address data gaps, allowing additional time period for data collection, and/or applying a safety factor to account for potential variances due to the uncertainty in used values.	11/10/2024	<p>Nicor gas will exercise caution in our estimates when they are highly dependent on unknown variables, like forecasted production.</p>
Custom	2023	Measure: Boiler Upgrade and Replacement Recommendation: When a project savings exceeds the threshold of 10%1 of the building usage and when the project key assumptions and inputs cannot be obtained or verified, use a utility consumption data analysis to true up the claimed energy savings.	11/10/2024	<p>Nicor Gas will consult a regression analysis when there is uncertainty or when measures use >10% of the building energy usage.</p>
Custom	2023	Measure: Boiler Upgrade and Replacement Recommendation: When a project savings exceeds the threshold of 10%1 of the building usage and when the project key assumptions and inputs cannot be obtained or verified, use a utility consumption data analysis to true up the claimed energy savings.	11/10/2024	<p>Nicor Gas will consult a regression analysis when there is uncertainty or when measures use >10% of the building energy usage.</p>
Custom	2023	Measure: Boiler Upgrade and Replacement Recommendation: When conducting a utility data analysis to calculate project savings, if the summer and winter gas consumptions are considerably different, use individual models for summer and winter for better savings accuracy.	11/10/2024	<p>Nicor Gas updated our regression analysis tool so that we can specifically model around seasonal usage.</p>
Custom	2023	Measure: Boiler Upgrade and Replacement Recommendation: Enhance the engineering review quality control process for projects with multiple improvements under the same project scope to confirm the claimed savings components are applicable for the project.	11/10/2024	<p>Nicor Gas updated quality control process for projects with multiple improvements to confirm the claimed savings components are applicable for the project.</p>
Custom	2023	Measure: Roofing Insulation Recommendation: Enhance the engineering review QC process for projects to ensure the inputs and parameters match the project implementation details.	11/10/2024	<p>Nicor Gas QC engineer will confirm that input variables in calculations match project documentation.</p>
Custom	2023	Measure: Burner replacement and VFD Recommendation: Review the dataset used in savings analysis for outliers and exclude or account for these outliers.	11/10/2024	<p>Nicor Gas will review all production data for outliers and exclude or account for these outliers.</p>

Custom	2023	Measure: Burner replacement and VFD Recommendation: Refer to utility data to true up the estimates for equipment percentage load. Measure: RCx	11/10/2024	Nicor Gas will review all production data for outliers and exclude or account for these outliers.
Retrocommissioning	2023	Recommendation: Emphasize the priority of measured data for measure verification when available. Hard-coded values, if used, should indicate the source and include the corresponding source document as part of the project files. If additional/more recent trend data is collected, it should be used to update the estimated savings. Measure: RCx Recommendation: Enhance quality control procedures to reduce these errors.	11/15/2024	Nicor Gas conducted Tech Reviewer and QC Reviewer training during bi-weekly Tech Reviewer meeting May 14, 2024 discussing the evaluation results, findings, and best practices to ensure that reviewers are mindful and check for references and sources of values. Incorporated QC check on hard coded values into Tech Reviewer Checklist Nicor Gas conducted Tech Reviewer and QC Reviewer training during bi-weekly Tech Reviewer meeting May 14, 2024 discussing the evaluation results, findings, and best practices to ensure that reviewers are mindful and check for references and sources of values. Incorporated QC check on inter-spreadsheet checks on the reviewer checklist
Retrocommissioning	2023	Measure: Air handling units Recommendation: Provide training to highlight the difference between a reset and a change to ensure the appropriate optimization sequence is applied through the program. Measure: RCx	11/15/2024	Nicor Gas is conducting On-going training for tech reviewers on this measure; we addressed this specific issue and highlight the difference between DAT and MAT at SP workshop 1/18
Retrocommissioning	2023	Recommendation: If the program is aware than equipment within the scope of the project is scheduled for near-term replacement, any savings resulting from operational modifications on that equipment should not be claimed as they will not persist following replacement. No-cost changes/measures are still encouraged because they provide immediate benefit to the participant, even though they may not qualify as eligible savings through the program. Measure: RCx Recommendation: Increase training on the availability of weather stations in the standard calculator template and ensure uniform use of proximal datasets. In CY2024, additional weather stations will be included in the calculator, which will increase the alternatives available as "best reference" and the possibility of erroneous selections, making the increased training more valuable. Measure: RCx Recommendation: Time should be allowed post implementation for facility operators to adjust to the measures for continued feasibility before the program finalizes the estimated project savings. If the recommended changes are identified to be too aggressive and compromise system operation or occupant comfort, the EESPs should readjust the measures before finalizing project savings. The additional time post implementation will allow the EESPs to find compromised solutions for implemented measures rather than the facility operators undoing the measure entirely. Measure: SEM Recommendation: Annualize a full year of savings for all participants. This approach is often overlooked when utilizing weekly models, as a full year is not evenly divisible by seven. Measure: Boiler Tune Up Recommendation: As the efficiency increase was very small, the savings were accepted in this instance. However, in the future, the implementation team should provide additional detail on savings and efficiency improvement sources. These sources can include custom calculations based on combustion efficiency or controls system outputs, relevant TRM guidance, or regression-based modeling.	11/15/2024	Nicor Gas has added this quality check during report reviews and included in Tech reviewer checklist (May 30); this issues was addressed with application reviewers during Team Meetings to reimphasis the importance of including any potential equipment replacements in the application section during screening progress.
Retrocommissioning	2023	Measure: RCx Recommendation: Increase training on the availability of weather stations in the standard calculator template and ensure uniform use of proximal datasets. In CY2024, additional weather stations will be included in the calculator, which will increase the alternatives available as "best reference" and the possibility of erroneous selections, making the increased training more valuable. Measure: RCx Recommendation: Time should be allowed post implementation for facility operators to adjust to the measures for continued feasibility before the program finalizes the estimated project savings. If the recommended changes are identified to be too aggressive and compromise system operation or occupant comfort, the EESPs should readjust the measures before finalizing project savings. The additional time post implementation will allow the EESPs to find compromised solutions for implemented measures rather than the facility operators undoing the measure entirely.	11/15/2024	Nicor Gas conducted a training on appropriately use weather station and provided weather station selection guideline (3/21/2024 during Standard Calc training)
Retrocommissioning	2023	Measure: SEM Recommendation: Annualize a full year of savings for all participants. This approach is often overlooked when utilizing weekly models, as a full year is not evenly divisible by seven. Measure: Boiler Tune Up Recommendation: As the efficiency increase was very small, the savings were accepted in this instance. However, in the future, the implementation team should provide additional detail on savings and efficiency improvement sources. These sources can include custom calculations based on combustion efficiency or controls system outputs, relevant TRM guidance, or regression-based modeling.	11/15/2024	Nicor Gas updated the implementation persistence guide to address the impact of aggressive setpoints and customer reverting back due to tenant complaints. Nicor Gas standard practice is to annualize savings. Any expectations will be discussed prior to evaluation.
Strategic Energy Management	2023	Measure: SEM Recommendation: Annualize a full year of savings for all participants. This approach is often overlooked when utilizing weekly models, as a full year is not evenly divisible by seven. Measure: Boiler Tune Up Recommendation: As the efficiency increase was very small, the savings were accepted in this instance. However, in the future, the implementation team should provide additional detail on savings and efficiency improvement sources. These sources can include custom calculations based on combustion efficiency or controls system outputs, relevant TRM guidance, or regression-based modeling.	9/3/2024	Nicor Gas team will document and provide additional detail on savings and efficiency improvement sources to evaluation team.
Strategic Energy Management	2023	Measure: Program Wide Recommendation: Ensure building simulations are updated to accurately reflect the final as-built building construction and installed equipment.	9/3/2024	
Commercial and Industrial New Construction	2023	Measure: Program Wide Recommendation: Ensure building simulations are updated to accurately reflect the final as-built building construction and installed equipment.	11/5/2024	This Program is undergoing significant redesign. As such, recommendations will be included into future program designs and quality control activities

Commercial and Industrial New Construction		Measure: Program Wide Recommendation: Ensure project documentation is complete and sufficient to verify claimed project savings to ensure evaluability. In cases where efficiency upgrades include the installation of more aggressive than code-required control sequences, documentation of the installation of the equipment is not sufficient. Instead, the documentation must include verification of the control sequence and/or setpoint.		This Program is undergoing significant redesign. As such, recommendations will be included into future program designs and quality control activities
	2023		11/5/2024	
Commercial and Industrial New Construction		Measure: HVAC equipment Recommendation: Increase QA/QC processes to ensure modelled occupancy and resulting ventilation levels are consistent with installed HVAC equipment.		This Program is undergoing significant redesign. As such, recommendations will be included into future program designs and quality control activities
	2023	Measure: Program Wide Recommendation: Ensure project data provided to ComEd, Nicor Gas, PGL, and NSG are consistent across their respective tracking data submitted for evaluation. The data should clarify which projects the coordinated utilities are claiming savings for the program year under evaluation and clarify where there are cost or therms percentage allocations for specific projects and each respective utility.	11/5/2024	This Program is undergoing significant redesign. As such, recommendations will be included into future program designs and quality control activities
Commercial and Industrial New Construction				
	2023	Measure: Program Wide Recommendation: To ensure the evaluation team has sufficient information to determine verified savings for each participant, the implementation contractor should continue to require BOC participants to provide the completed BOC Participant Information Template.	11/5/2024	Previously, Nicor Gas collected participant data via excel spreadsheet and there were cases where participants were entering wrong information or leaving some fields blank. Going forward, Nicor Gas is leveraging microsoft forms to collect data from participants and added additional QA/QC steps to ensure data quality.
Building Operator Certification		Measure: Program Wide Recommendation: In cases where multiple participants operate the same building (i.e., service address) or group of buildings and the managed square footage exceeds 500,000 ft2, the program should claim savings up to the 500,000 ft2 per participant cap until the total square footage has been accounted for.		Nicor Gas included additional QA/QC steps to ensure accurate savings are being reported. Starting in 2024, Nicor Gas has implemented a cap on the total square footage allowed and are tracking, flagging, and calculating through smartsheet.
	2023		12/5/2024	
Building Operator Certification		Measure: Program Wide Recommendation: For participant employers with large numbers of buildings, continue to work with them to gather building area information for all available buildings. This approach will allow accurate tracking of eligible building area over time and across multiple participants from the same employer.		Data collection for building 10 or greater are collected through a new software in 2024. This process is continually improving and will be iterated upon as Nicor Gas assesses the impact of a more onerous application process has on the customer experience.
	2023	Measures: Advanced Thermostat, programmable thermostat, Kit 2, Kit 4, Kit 5 Recommendation: Ensure that all kit measures reflect the therms savings Nicor Gas and Guidehouse has agreed upon.	12/6/2024	
Single Family Income Eligible Program		Measures: Kit 2, Kit 4, Kit 5 Recommendation: Ensure the tracking data includes the correct building type for all kit types for the following evaluation cycle.		Nicor Gas has updated the relevant savings values and will apply the updates for the 2024 year end evaluation.
	2023	Measures: High performance HVAC Equipment, Reduced infiltration, high performance windows, Advanced HVAC controls Recommendation: Conduct additional quality assurance and quality control steps to ensure calculations accurately reflect installed equipment quantities and specifications.	12/5/2024	Nicor Gas has updated the building types and will apply the correct savings by building type during the year end evaluation.
Single Family Income Eligible Program				
	2023	Measures: On Demand and Storage Water Heaters Recommendation: Improve quality control of the input values used in the ex ante savings calculation for storage water heater and ensure they are consistent with the savings reported in the participation data.	12/5/2024	Nicor Gas will continue to improve our quality assurance procedures to ensure calculated values use accurate equipment quantities and specifications from plans and submittals rather than manual area takeoffs.
Affordable Housing New Construction		Measures: On Demand and Storage Water Heaters Recommendation: Review the UEF baseline with regards to the storage water heater capacity, gallons, and draw pattern and ensure the UEF improvement value results in verifiable ex ante savings in the participation data.		Nicor Gas researched the source of the discrepancy and determined the ex post UEF was based on an incorrect assumption about the size of the unit. Nicor Gas has added in the UEF value into the 2024 end of year data to explain the ex ante values.
	2023	Measures: Air Sealing Recommendation: Use the correct Climate Zone for calculating savings. Report therm savings consistent with the measure name.	12/1/2024	Nicor Gas researched the source of the discrepancy and determined the ex post UEF was based on an incorrect assumption about the size of the unit. Nicor Gas has added in the UEF value into the 2024 end of year data to explain the ex ante values.
Multifamily Income Qualified		Measures: Pipe Insulation Recommendation: Ensure all inputs and measure names are consistent in the program data, and that the technical inputs and reported savings are aligned.		Nicor Gas will continue to improve our quality assurance procedures to ensure correct climate zones are accounted for in the data and calculations
	2023		12/1/2024	Nicor Gas will continue to improve our quality assurance procedures to align the heat loss values to the technical specifications and the measure names

Multifamily Income Qualified	2023	Measures: Kit 1 MF and Kit 2 MF Recommendation: Ensure that the same types of kits leverage the same ex ante savings values within the tracking data.	12/1/2024	Nicor Gas has updated the relevant savings values and will apply the updates for the 2024 year end evaluation.
Multifamily Income Qualified	2023	Measures: Kit 3 MF Recommendation: Ensure that all kit measures reflect the therms savings Nicor Gas and Guidehouse has agreed upon.	12/1/2024	Nicor Gas has updated the relevant savings values and will apply the updates for the 2024 year end evaluation.
Home Energy Savings	2023	Measures: Bathroom Aerator SF (DI & VA) Recommendation: Update tracking data to accurately reflect ISR values. VHA Aerators should use an ISR of 0.77, DI should use an ISR of 0.93. No changes are required to the ex ante savings algorithm.	12/1/2024	Nicor Gas has updated the tracking data to use an ISR of 0.77 for VHA and an ISR of .93 for DI for these measures
Home Energy Savings	2023	Measures: Handheld Showerhead SF (DI & VA) Recommendation: Update tracking data to accurately reflect ISR values. VHA Showerheads should use an ISR of 0.803, DI should use an ISR of 0.96. No changes are required to the ex ante savings algorithm.	12/1/2024	Nicor Gas has updated the tracking data to use an ISR of 0.803 for VHA and an ISR of .96 for DI for these measures
Home Energy Savings	2023	Measures: Kitchen Aerator SF (DI & VA) Recommendation: Update tracking data to accurately reflect ISR values. VHA Aerators should use an ISR of 0.77, DI should use an ISR of 0.93. No changes are required to the ex ante savings algorithm.	12/1/2024	Nicor Gas has updated the tracking data to use an ISR of 0.77 for VHA and an ISR of .93 for DI for these measures
Home Energy Efficiency Rebate Program	2023	Measures: Boilers >95% AFUE <300MBH; Combination Boilers >95% AFUE <300MBH; Furnace >95% AFUE; Furnace >97% AFUE Recommendation: Use AFUE = 64.4% (rather than a rounded 64.0%) as the baseline efficiency value, based on the TRM. Review the tracking system inputs and ensure deemed the TRM inputs provided in the tracking data adequately reflect what were used in the ex ante savings calculation.	12/1/2024	Nicor Gas used 64.4% for the baseline efficiency for these measures in 2024, rather than the rounded value of 64% used previously