

APPENDIX B

Program	PY	Recommendation	Action Completion Date	Action(s) Taken
EEE	2019	The Guidehouse team does not expect the measures included in the joint Nicor Gas and Nicor Gas only kits to change in CY2020. Therefore, Guidehouse recommends that Nicor Gas claim 11.745 therms per kit in CY2020 to reduce rounding differences with measure-level savings results. Consider developing a Project Memo for each project explaining key measure analysis details and specific documentation sources in support of project savings. Use memo to both support the implementation team's internal QAQC review and to inform evaluation team. Memo details should be determined collaboratively between AHNC stakeholders (Utilities, Slipstream, Guidehouse, etc.) and may include: a. Applicable TRM and Code versions, b. Measure analysis methodology, c. Measure documentation location for key quantities and efficiency specifications Update savings calculator tools to 17.6 gallons per person per day consistent with 2019 TRM	7/1/2020	Nicor Gas has adjusted 11.745 therms per kit in CY2020 to reduce rounding differences with measure-level savings results.
AHNC	2019	Summarize the quantity of each installed measure as a field in the tracking data. Update program tracking data with final project therm savings obtained from the implementation contractor.	9/30/2020	Nicor Gas agrees and has worked with the evaluation team/ICs to determine how to best document a project memo or process to clarify verification documentation. Nicor Gas has updated future workbooks to align savings calculator tools to 17.6 gallons per person per day consistent with TRM.
AHNC	2019	Guidehouse recommends the implementer ensure Nicor Gas tracking data accurately reflects installed efficiency values for gas high efficiency furnaces and matches ComEd tracking data for joint projects.	9/30/2020	Nicor Gas agrees, further discussion may be warranted to ensure expectations are met for both implementation and evaluation teams. Resource Innovations has ensured Nicor Gas tracking data accurately reflects installed efficiency values for gas high efficiency furnaces and will double check ComEd tracking data for joint projects.
AHNC	2019	Guidehouse recommends the implementer ensure Nicor Gas tracking data contains all pre installation system efficiency values for early retirement gas high efficiency boilers for future evaluations.	7/30/2020	Resource Innovations has ensured Nicor Gas tracking data contains all pre installation system efficiency values for early retirement gas high efficiency boilers for PY2020 and future evaluations.
IQ-SF-IHWAP	2019	Guidehouse recommends using the single family household factor of 2.56 for all measures that do not have custom values, as deemed by the TRM v7.0.	7/30/2020	Nicor Gas has used the single family household factor of 2.56 for all measures that do not have custom values, as deemed by the TRM in PY2020.
IQ-SF-IHWAP	2019	Guidehouse recommends using a furnace efficiency derated by distribution losses when evaluating savings for air sealing and insulation measures.	7/30/2020	Nicor Gas has adjusted the calculation to incorporate the distribution losses of 15% in PY2020.
IQ-SF-IHWAP	2019	Guidehouse recommends using the single family household factor of 2.56 for all measures in this program that do not have custom values, as deemed by the TRM v7.0.	7/30/2020	Nicor Gas has used the single family household factor of 2.56 for all measures in this Income Qualified Single Family contractor channel program that do not have custom values, as deemed by the TRM v8.0.
IQ-SF-CC	2019	Guidehouse recommends using a furnace efficiency derated by distribution losses when evaluating savings for air sealing and insulation measures.	7/30/2020	Nicor Gas has adjusted the calculation to incorporate the distribution losses of 15% in PY2020.
IQ-SF-CC	2019	Guidehouse recommends the program claim savings for only one thermostat measure per household.	9/30/2020	There are multiple thermostats installed, but Nicor Gas is only claiming savings on 1 of the thermostats, we zero out therms on the additional thermostats.
HES	2019	Guidehouse recommends derating the equipment efficiency using a derating factor as deemed by the IL TRM v7.0 to determine the heating system efficiency.	9/30/2020	Nicor Gas has adjusted the derating the equipment efficiency using a derating factor as deemed by the IL TRM v8.0 to determine the heating system efficiency and incorporate into the saving calculation in PY2020. Nicor Gas has added the AC Cover measure as a new measure to the data. No new 2020 data has been uploaded into Nicor system because of missing Energy Efficiency % that RI will provide when received.
IQ-MF	2019	Guidehouse recommends Nicor Gas update the tracking data to reflect an accurate measure name and include measure variables needed to evaluate savings.	7/30/2020	No available 2020 data for CA Door Weatherstrip as well. Nicor Gas has implemented updates, but no completed attic insulation measures have been provided through the dataset in 2020.
IQ-PHES	2019	Guidehouse recommends Nicor Gas check the tracking data inputs for the attic insulation savings calculation for all measure installations.	7/30/2020	Nicor Gas has implemented updates, but no Gas Water Heaters completed or planned for 2020. (No plan to install in PY2020)
IQ-PHES	2019	Guidehouse recommends that Nicor Gas identify early replacement measures within the tracking data	7/30/2020	Nicor Gas has implemented updates, but no Gas Water Heaters completed or planned for 2020. (No plan to install in PY2020)
IQ-PHES	2019	Guidehouse recommends that the utilities work with the ICs implementing the SEM program to standardize the approach in modeling and provide similar regression analysis and reporting. Guidehouse found strengths with each ICs approach to SEM which should be incorporated and standardized by the others. For instance, Cascade provided very thorough and detailed opportunity registers with clear documentation on activities leading to SEM savings. CLEAResult provided accurate and detailed models, which included the actual data used in regression analysis, that were easy to follow and evaluate. Graphet clearly documented the post period measurement savings and clearly identified any gaps that impacted SEM savings. Sharing these approaches between ICs will improve the overall SEM program for customers and utilities.	9/30/2020	Nicor Gas continues to work with the other ICs to encourage best practices already underway with our team. Nicor Gas has completed this recommendation several years ago, Nicor Gas is continuing its practice to provide robust regression models with clearly documented steps on how the AMI data was adjusted to calculate savings. This will allow the evaluator to replicate the regression analysis and document changes in savings results.
SEM	2019	Guidehouse recommends all ICs provide robust regression models with clearly documented steps on how the AMI data was adjusted to calculate savings. This will allow the evaluator to replicate the regression analysis and document changes in savings results.	9/30/2020	Nicor Gas has completed this recommendation several years ago, Nicor Gas is continuing its practice to provide robust regression models with clearly documented steps on how the AMI data was adjusted to calculate savings. No further action is required to comply.
SEM	2019	Guidehouse recommends ICs treat capital savings consistently and remove capital savings as a lump sum after calculating savings for the post period.	9/30/2020	Nicor Gas has completed this recommendation several years ago, Nicor Gas is continuing its practice to treat capital savings consistently and remove capital savings as a lump sum after calculating savings for the post period. Nicor Gas has completed this recommendation several years ago, Nicor Gas is continuing its practice to standardize the regression modeling methods to ensure consistencies in SEM savings calculations.
SEM	2019	Guidehouse recommends the ICs standardize their regression modeling methods to ensure consistencies in SEM savings calculations.	9/30/2020	Nicor Gas has completed this recommendation several years ago, Nicor Gas is continuing its practice to standardize the regression modeling methods to ensure consistencies in SEM savings calculations.
Custom	2019	If a hard-coded value is found in a calculation, Guidehouse recommends providing the supporting reference for that value. This aids in the evaluation of the projects as well as internal quality control processes.	9/30/2020	Nicor Gas agrees and will document sources and explanations as available. Sometimes these are "best judgement".
Custom	2019	If the Shomate Equation is used to calculate the specific heat capacity of exhaust gases, Guidehouse recommends confirming that the coefficients reflect the appropriate temperature ranges. The National Institute of Standards and Technology (NIST) provides coefficient values for various temperature ranges. The coefficient values used in the calculation should reflect the temperatures involved in the project. This is a common source of error based on evaluation experience.	9/30/2020	Nicor Gas agrees to use NIST coefficient values in the calculation to reflect the temperatures involved in the project going forward.
Custom	2019	Guidehouse recommends that the implementer review the sensitivity of calculation inputs and confirm that the strength of the supporting references reflect the effect that it has on the calculation. For example, if an assumption such as heat capacity in Project NG-18-035, has a significant impact on the savings of the project, the supporting reference for that assumption should be strong.	9/30/2020	Nicor Gas agrees and will document sources and explanations as available. Sometimes these are "best judgement", but we will endeavor to use strong supporting references.
Custom	2019	Guidehouse recommends that the implementer not treat multiple heating units (i.e., boilers or furnaces) as one unit. There are a number of properties that can vary based on unit capacity: efficiency, losses, load, and modulation capability, among others.	9/30/2020	Nicor Gas agrees and will treat multiple heating units as individual measures to account for variations. This check will be implemented in our QA/QC processes & M&V guidelines. Nicor Gas current approach is to only exclude outliers when there is sufficient evidence to do so. We pass along information on outliers that we receive from participants.
Custom	2019	Guidehouse recommends that the implementer provide explanations for anomalous or outlier values found in pre- or post-installation usage data.	9/30/2020	Nicor Gas agrees and will document sources and explanations as available. Sometimes these are "best judgement", but we will endeavor to use strong supporting references
Custom	2019	Guidehouse recommends that the implementer provide supporting references for thermodynamic and physical properties of materials. Effective references for physical properties include, but are not limited to thermodynamic textbooks, online engineering tables, or ASHRAE handbooks.	9/30/2020	Nicor Gas agrees and will document sources and explanations as available. Sometimes these are "best judgement", in this case, we rounded the efficiency value.
Custom	2019	Guidehouse recommends that the implementer provide supporting references that provide context regarding the omission of any usage or process data points from the calculation.	9/30/2020	Nicor Gas agrees to use the greatest amount of post-installation data available at the time of verification of ex-ante savings estimates.
Custom	2019	Guidehouse recommends that the implementer utilize post-installation data for a full year, if available.	9/30/2020	Nicor Gas agrees to use the greatest amount of post-installation data available at the time of verification of ex-ante savings estimates.
Custom	2019	Guidehouse recommends that the implementer provide supporting references for calculation inputs in the calculation file. This aids in the evaluation of the projects as well as internal quality control processes.	9/30/2020	Nicor Gas agrees and will document sources and explanations as available. Sometimes those are "best judgement".