

Nicor Gas Energy Efficiency Program - Plan Year 2021

APPENDIX B

Quarterly Report: First Quarter (January 1, 2021 - March 31, 2021)

Response to Evaluators' Recommendations

Program	PY	Recommendation	Action Completion Date	Action(s) Taken
Custom	2019	<p>Use linear regressions to model linear systems. When equipment operates in different modes, use piece-wise linear regressions for each mode. For example, a building with gas heat, domestic hot water and absorption cooling will have a linear correlation for consumption with a negative slope at low temperatures, a linear correlation with a positive slope during the cooling season and a linear (horizontal) section for domestic hot water only when indoor comfort can be maintained with the ventilation system alone. Linear extrapolation beyond 2019 measured data is acceptable, if consistent with the expected operating mode.</p>	3/31/2021	<p>This method of using regression equations has already been incorporated into our current M&V calculations and any calculations that do otherwise are in error or were meant to represent the data set outside of the range from known past experiences and has been done so as a reasonable assumption. For example of using a linear relationship outside of the known data set of daily therms with daily average OAT as the OAT drops. An example of a polynomial regression that could be used partially outside of known data would be a Power Factor on y axis versus amperage on the x axis when spot kW readings are taken. In polynomial regressions as a QC check it would make sense to plot out points that are extrapolated to ensure that the trend is consistent with what is typically expected and to cut off the regression where it appears it becomes inconsistent.</p>