**Illinois Energy Efficiency Stakeholder Advisory Group**

**Policy Resolution – 2020 Program Year**

**Draft for Review (11/30/2020)**

**Policy Issues:**

1. How should evaluation treat gas heating penalties?
2. How should evaluation treat electric heating penalties?
3. How should evaluation treat projects that result in negative savings due to custom analysis?
4. How should evaluation treat projects that result in negative savings due to actions taken to meet code?

**Background:**

The evaluation teams (Guidehouse and Opinion Dynamics) presented these four questions and the relevant background details.

1. **Gas Penalties:** If gas penalties are added to the gas savings at the portfolio level, there are significant effects on the utility rebate program.
   * For ComEd (electric only), the impact is that it negates all gas savings from the portfolio.[[1]](#footnote-1) As a result, no gas savings would be converted using the language in the FEJA legislation.
   * For Ameren IL (dual fuel), the impact would be to negate a large share of achieved portfolio gas savings,[[2]](#footnote-2) making it more difficult to achieve statutory gas savings goals. It should be noted that Ameren IL is the only dual fuel program administrator in Illinois and therefore the only program administrator subject to this effect.

**Traditional Evaluator Action.** Guidehouse and Opinion Dynamics have not counted gas heating penalties against the utility programs’ gas savings for the purposes of goal attainment and savings conversion. The gas penalties have been accounted for in the Total Resource Cost tests.

1. **Electric Penalties:**

For ComEd and Ameren IL, electric penalties are currently counted against savings at the project-level when the heating system is known to be electric. This scenario is rare because the Illinois TRM instructs users to assume gas heat if unknown.

**Traditional Evaluator Action.** Guidehouse and Opinion Dynamics have typically added electric penalties to the project-level verified savings for the purposes of goal attainment and Total Resource Cost tests.

1. **Negative Savings due to Custom Analysis:**

A common example of this scenario involves the energy management system projects. It is not uncommon (several per year) to find that usage has increased after the installation of an EMS project. This is a prescriptive non-TRM measure for ComEd and a custom measure for Nicor and Peoples and North Shore Gas (PGL-NSG). In either approach, there are limiting factors that affect the analysis:

* + ComEd (prescriptive): the amount of post-installation data available is typically less than 12 months because the project is claimed in the same that it was installed.
  + Nicor and PGL-NSG (custom): the data is much less granular, typically monthly interval, compared to ComEd projects which have 30-minute interval AMI data. Additionally, these projects may also have less than 12 months of post-installation data available

Combining these limitations with myriad unknown factors like existing HVAC control strategies, changes in occupancy patterns, and changes in internal loads, the evaluation teams recognize that regression analyses in these cases can be imperfect tool.

**Traditional Guidehouse Action.** In these cases, Guidehouse has not counted the negative savings as verified savings, but rather as zero verified savings.

1. **Negative Savings due to Code Compliance:**

Occasionally, scenarios where negative energy savings is a result of the customer becoming compliant with local energy code. These scenarios commonly involve increasing ventilation which increases the energy needed to condition the air (heat or cool) and may also increase the fan energy required to distribute it.

**Traditional Guidehouse Action.** Guidehouse has not counted the negative savings resulting from code compliance as verified savings, but rather as zero verified savings. Guidehouse felt it inappropriate to penalize the program for actions that would benefit the health and safety of the public.

**Process:**

* *August 2020:* 
  + Guidehouse prepared a memo to ComEd regarding heating penalties and negative savings, requesting guidance on eight questions that arose while evaluating ComEd’s 2019 programs. In the memo, Guidehouse describes how the evaluator has historically treated these questions. Guidehouse requested clarification on how to treat these items in the future
    - [Guidehouse Memo to ComEd: Treatment of Negative Electric and Gas Savings by Evaluation (Aug. 4, 2020)](https://ilsag.s3.amazonaws.com/Guidehouse-Negative-Savings-Memo-to-ComEd-2020-08-04.docx)
* *November 2020:*
  + A small group SAG meeting was held on [November 13](https://www.ilsag.info/event/friday-november-13-small-group-sag-meeting/) to discuss evaluation topics. Due to the number of questions raised in the Guidehouse memo and time constraints due to the SAG Portfolio Planning Process, the discussion focused on four questions in the memo. Other questions raised are anticipated to be addressed in 2021.
  + To follow-up on the November 13 meeting, Guidehouse and Opinion Dynamics drafted proposed resolution for interested parties to review. Evaluators are interested in resolution being documented by the SAG Policy process, and in a future update to the Illinois Energy Efficiency Policy Manual.

**Final Draft Resolution:**

The preliminary conclusions of these discussion items are provided below.

1. **How should evaluation treat gas heating penalties?**

Evaluation should account for gas heating penalties where they occur, but the resulting values should only be applied as a TRC test input. The gas heating penalties will not factor into the conversion calculation of gas savings to electric savings, per the FEJA legislation. The gas heating penalties will not factor into an electric utility’s (ComEd) ability to sell gas savings to a gas utility, nor will the gas heating penalties factor into a dual-fuel utility’s (Ameren IL) ability to claim achieved portfolio gas savings against statutory gas savings goals under 8-104B.

If a project results in both gas savings and a gas heating penalty (i.e., customer with gas heat installs a kitchen hood DCV control and upgrades lighting), the gas penalty is ignored when calculating the project’s verified savings.

1. **How should evaluation treat electric heating penalties?**

Evaluation should account for electric heating penalties where they occur, and the resulting values should be included when calculating verified savings (i.e., penalty + savings = verified savings).

1. **How should evaluation treat projects that result in negative savings due to custom analysis?**

If evaluation is not confident in the precision of a custom analysis and the result is negative, it is at the evaluator’s discretion to verify a negative result or to cap the savings at a minimum value of zero. However, if evaluation has sufficient confidence in a custom analysis and the result is a negative savings value, the verified savings should be the negative savings value. An exception to this approach, depends on whether the negative savings is a result of code compliance. This exception is described in the following bullet.

The group recommended that the utilities consider delaying claiming these projects until it accumulates 12 months of usage as a way of increasing the post-installation data quantity. This would also allow the program to help the customer achieve the expected savings, through follow-up communication and remedial actions. The group has no problem with projects being claimed in years that are different from their installation year.[[3]](#footnote-3) However, it was observed that this approach would result in a one-time implementation challenge wherein implementation would need to delay projects currently in the pipeline to acquire sufficient data, which could affect utility ability to meet goals in the year this approach would begin.

1. **How should evaluation treat projects that result in negative savings due to actions taken to meet code?**

If evaluation determines that the cause of the negative savings is due to the customer achieving code compliance (i.e., repairing outside air dampers that were stuck closed, increasing minimum outside air requirements), then evaluation should attempt to use code compliant conditions as the baseline. If that approach is prohibitively difficult to apply, evaluation should cap the savings at a minimum value of zero.

1. In CY2019, ComEd generated 7,612,287 therms (gross) of savings and converted 3,761,357 (gross). During the same period, ComEd generated gas penalties of 20,596,383 therms (gross). [↑](#footnote-ref-1)
2. In 2019, Ameren IL generated 5,676,341 therms (gross) of savings. During the same period, Ameren IL generated gas penalties of 4,257,255 therms (gross). [↑](#footnote-ref-2)
3. This refers to an EMS installed in 2020 not being claimed until 2021 when sufficient data has accumulated, and any commissioning issues have been addressed. [↑](#footnote-ref-3)