**Illinois EE Stakeholder Advisory Group**

**Fuel Conversion Working Group**

**Policy Questions – Request for Responses (3/23/2021)**

**Instructions for Responding to Policy Questions:**

* Interested parties are requested to respond to policy questions no later than **Monday, April 19 –** send responses to [Celia@CeliaJohnsonConsulting.com](mailto:Celia@CeliaJohnsonConsulting.com).
* Please provide responses *within this Word document*.
* The SAG Facilitator will organize responses to questions and circulate in advance of Meeting #2, scheduled on Monday, April 26.

**Policy Questions – March 2021**

1. There is a 2-phase question around Section 8-103B(b-25) in the Future Energy Jobs Act (FEJA) – does the statute require the same methodology? If not, is another methodology / conversion factor more appropriate?
   1. Does Section 8-103B(b-25) relate to measures / programs that save both gas and electric for joint programs (or non-joint programs)?
   2. Since FEJA states that claiming savings from “other fuels” is permissible for measures or programs that save both electricity and other fuels, what does that mean (specifically “*measures or programs that save both electricity and other fuels*?”)

**ComEd Response:** ComEd interprets this question as seeking feedback on two distinct issues – (i) What statutory screening criteria apply to the threshold determination of whether a measure can be included in an electric EE portfolio? (ii) What statutory criteria apply to the evaluation of electric and other fuel energy savings achieved by a measure included in the portfolio? Below ComEd offers comments on these topics.

(i) What Statutory Screening Criteria Apply to the Threshold Determination of Whether A Measure Can Be Included in an Electric EE Portfolio?

Section 8-103B requires electric utilities “to use cost-effective energy efficiency and demand-response measures to reduce delivery load,” and establishes cumulative persisting annual savings goals and applicable annual incremental goals to measure achievement. 220 ILCS 5/8-103B(a), (b), (g). The statute defines “energy efficiency” by relying on the Illinois Power Agency (IPA) Act’s definition, as well as defines “cost-effective” as satisfying the “total resource cost test,” which is also defined in the IPA Act.

* “Energy efficiency” means measures that reduce the amount of electricity or natural gas consumed in order to achieve a given end use. "Energy efficiency" includes voltage optimization measures that optimize the voltage at points on the electric distribution voltage system and thereby reduce electricity consumption by electric customers' end use devices. "Energy efficiency" also includes measures that reduce the total Btus of electricity, natural gas, and other fuels needed to meet the end use or uses. 20 ILCS 3855/1-10.
* "Total resource cost test" or "TRC test" means a standard that is met if, for an investment in energy efficiency or demand-response measures, the benefit-cost ratio is greater than one. The benefit-cost ratio is the ratio of the net present value of the total benefits of the program to the net present value of the total costs as calculated over the lifetime of the measures. A total resource cost test compares the sum of avoided electric utility costs, representing the benefits that accrue to the system and the participant in the delivery of those efficiency measures and including avoided costs associated with reduced use of natural gas or other fuels, avoided costs associated with reduced water consumption, and avoided costs associated with reduced operation and maintenance costs, as well as other quantifiable societal benefits, to the sum of all incremental costs of end-use measures that are implemented due to the program (including both utility and participant contributions), plus costs to administer, deliver, and evaluate each demand-side program, to quantify the net savings obtained by substituting the demand-side program for supply resources. In calculating avoided costs of power and energy that an electric utility would otherwise have had to acquire, reasonable estimates shall be included of financial costs likely to be imposed by future regulations and legislation on emissions of greenhouse gases. In discounting future societal costs and benefits for the purpose of calculating net present values, a societal discount rate based on actual, long-term Treasury bond yields should be used. Notwithstanding anything to the contrary, the TRC test shall not include or take into account a calculation of market price suppression effects or demand reduction induced price effects. Id.

Accordingly, a ”cost-effective” “energy efficiency” measure is one that (1) “reduce[s] the amount of electricity or natural gas consumed in order to achieve a given end use,” including those “that reduce the total Btus of electricity, natural gas, and other fuels needed to meet the end use or uses, and (2) satisfies the TRC test because its benefits (e.g., avoided electric utility costs and avoided costs associated with reduced use of natural gas or other fuels) outweigh its costs.

This broad, inclusive, and flexible definition of an energy efficiency measure – i.e., one that reduces consumption~~s~~ of electricity and/or natural gas or other fuels – also supports, and aligns with, the specific provisions of Section 8-103B(b-25), which expressly contemplate and authorize electric utilities’ offerings of measures that reduce both electricity and natural gas consumption, either with or without gas utility participation. As discussed below, however, the limitation imposed by Section 8-103B(b-25) on the amount of energy savings from other fuels that can be counted toward the utility’s savings goal serves as an important planning input.

(ii) What Statutory Criteria Apply to the Evaluation of Energy Savings Achieved by Measures That Reduce Consumption of Both Electricity and Other Fuels?

After a measure satisfies the TRC test criteria and is included in an ICC-approved portfolio, its energy savings must be evaluated following a given implementation year. While the independent evaluator will generally develop the specific evaluation methodology, Section 8-103B(b-25) provides specific guidance on the calculation of energy savings for measures that save both electricity and other fuels, as follows:

* Measures Offered Jointly with Gas Utilities: The first paragraph of subsection (b-25) addresses a scenario where the electric utility is jointly offering a program or measure with a gas utility and the gas utility discontinues funding. In this event, the electric utility is authorized to continue offering the measure or program, and the energy savings value associated with other fuels must be converted to electric energy savings on an equivalent Btu basis for the premises. The electric utility must also prioritize programs for low-income customers to the extent practicable.
* Measures Offered Solely by Electric Utility: The second paragraph of subsection (b-25) discusses a situation where the electric utility alone – without joint gas utility participation – offers measures or programs that save both electricity and other fuels. Here, too, the electric utility may count savings of fuels other than electricity toward the achievement of its annual savings goal, and the energy savings value associated with such other fuels shall be converted to electric energy savings on an equivalent Btu basis at the premises.
* Overall Cap on Application of Converted Fuels: The third and final paragraph of subsection (b-25) provides that “[i]n no event shall more than 10% of each year’s applicable annual incremental goal … be met through savings of fuels other than electricity.” ComEd interprets this language to mean that the decision on which therms apply under the 10% cap and are converted to kWh is the utility’s decision (provided the IE therms are counted first). Therefore, the Illinois TRM (“IL-TRM”) should be reporting the kWh and the therms saved for a measure and not converting therms to kWh.

In sum, the determination of the amount of energy savings attributable to a measure takes into account electricity savings and the saving of fuels other than electricity – just like the benefits component of the TRC test. However, unlike the TRC test, the after-the-fact evaluation of energy savings includes additional language directing that savings from “other fuels shall be converted to electric energy savings on an equivalent Btu basis at the premises.” In other words, this calculation of energy savings (kWh or therms) arguably does not consider full fuel cycle efficiency.

1. Should site or source savings be used for screening criteria (whether a project qualifies as an energy efficiency measure)?

**ComEd Response:** As an initial matter, no legal impediment stands in the way of using either approach, although a source savings approach appears to better comport with the existing threshold screening process (i.e., the TRC test analysis). As outlined in ComEd’s Response to Question 1 above, the TRC test is quite broad, and accounts for larger system and societal benefits, as well as the specific participant benefits. It also expressly includes, and accounts for, benefits related to savings across a broad range of fuels and energy sources (e.g., electricity, natural gas, water, other fuels) as well as costs that result from upstream inefficiencies, e.g., the losses in the generation, transmission, and distribution of electricity and natural gas.. Importantly, the TRC test does not include any language similar to Section 8-103B(b-25)’s conversion of other fuels on an equivalent Btu basis “at the premises.”

Given the breadth and inclusiveness of the TRC test, ComEd supports using source savings as part of the upfront screening process, provided that the utilities’ portfolios should not include any measure that uses more energy (on a full fuel cycle basis) than it saves for the customer (at the premises). Therefore, a qualifying calculation should be performed upfront for fuel conversion measures to ensure net energy savings on a full fuel-cycle basis. ComEd suggests this qualifying full fuel cycle methodology be included in Volume 1 of the TRM: Overview and User Guide.

1. If using source energy is the SAG decision, how is “source energy” or “carbon equivalency” defined for each fuel?
   1. What losses, if any, should be included in source energy?
   2. Should historic, current or forecast be used, or a blend?

**ComEd Response:** See ComEd Response to Question 10 below.

1. Should site or source savings (or carbon equivalency) be used for counting savings?
   1. Does the decision depend on whether it’s an energy conservation measure vs. a fuel switching measure?
   2. Define “energy conservation measure”
   3. Define “fuel switching”
   4. Is there a difference between switching between a regulated fuel and a non-regulated fuel?
   5. For CHP, does the carbon equivalency need to change (given there is no methodology in the gas statute)?
   6. Should the answer to the site vs. source question be different in different use cases?
   7. How does the site vs. source decision impact custom measures?

**ComEd Response:** With respect to measures that save both electricity and other fuels, Section 8-103B(b-25) directs that other fuels be converted on an equivalent Btu basis “at the premises,” suggesting that site savings for these particular measures should be utilized to determinate achieved savings. Regarding subparts (a) through (d) and (f) of this Question, ComEd does not support the introduction of new terms and categories of energy savings because these distinctions are not reflected in the statute. Accordingly, ComEd recommends that SAG policy and the IL-TRM refrain from attempting to parse out different categories of savings.

1. There may be statutory language that is applicable for defining an energy efficiency measure; once an energy efficiency measure is identified, how should the savings be calculated?

**ComEd Response:** See ComEd Response to Question 1 above.

1. Is there a difference between reducing consumption at the site, and eliminating a natural gas customer? Does that change how we treat the savings?

**ComEd Response:** Consistent with ComEd’s Response to Question 4, ComEd does not support the introduction of new or refined definitions not reflected in the statute. Accordingly, ComEd recommends that SAG policy and the IL-TRM refrain from attempting to parse out the difference between “reducing consumption at the site” and “eliminating a natural gas customer”.

1. Are fuel switching measures limited by the 10% cap in FEJA?

**ComEd Response:** See ComEd Response to Question 1 above.

1. Are there any differences in these conclusions depending on which fuel is being substituted?
   1. Is there a difference between switching between a regulated fuel and a non-regulated fuel?

**ComEd Response:** Consistent with ComEd’s Response to Question 4, ComEd does not support the introduction of new terms and categories of energy savings because these distinctions are not reflected in the statute. Accordingly, ComEd recommends that SAG policy and the IL-TRM refrain from attempting to parse out different categories of savings.

1. When is a utility allowed to claim savings from a gas to electricity fuel switch?
   1. Criteria for electric-only utilities
   2. Criteria for gas-only utilities
   3. Criteria for dual-fuel utilities

**ComEd Response:** See ComEd Response to Question 1 above.

1. Is a source savings calculation required for each installation to determine whether it is an eligible efficiency measure?
   1. If yes, what if measures are delivered midstream and the existing fuel type is not collected?
   2. Can source savings screening occur for most likely baseline and efficiency assumptions at the start of a program year, and if eligible, no further source screening would be required for the rest of the program year?

**ComEd Response:** Beyond the interpretation of the statutory language as it applies to the fuel conversion policy, if the SAG chooses to provide further guidance on this issue to the TAC, ComEd believes the following principles should apply to the qualifying calculation:

* The heat rate should be projected over the life of the measure. The heat rate used should be that expected for the energy usage/savings associated with the measure. For example, when considering heat rates related to a heat pump measure installed in 2022 and lasting 18 years, the energy avoided would be produced by generation resources during 2022-2040. This will require estimating the generation mix and conversion efficiency from 2022-40.
* The projection should assume that the Illinois Renewable Portfolio Standard (25% renewable by 2025) will be met.
* A simple fleet-average (one heat rate value per year) is preferred.
* The heat rate assumed by generation source should consider precedents set by other states and the Department of Energy.
* The comparison of fuel conversion options and application of net heat rates should include system energy losses from all fuels.
* The establishment of appropriate baselines for fuel conversion measures should account for the energy efficiency equipment choices customers have in the market.