Memorandum

Economic & Employment Impacts

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| **To:** | Illinois Stakeholder Advisory Group Non-Energy Impacts Working Group |
| **From:** | The Opinion Dynamics and Guidehouse Evaluation Teams |
| **Date:** | May 5, 2020 |
| **Re:** | Future Approach for Assessment of Economic and Employment Non-Energy Impacts in Illinois |

#### Background

The Illinois Energy Efficiency Policy Manual Version 2.0 requires each Illinois program administrator to annually report estimates of the economic development and employment impacts of its energy efficiency programs
"using a consistent methodology" beginning in 2020.[[1]](#footnote-2)

Prior to that requirement, as part of the 2018-2021 evaluation plans for Ameren Illinois Company (AIC) and Commonwealth Edison (ComEd), the independent evaluators for those utilities (Opinion Dynamics and Guidehouse) scoped and conducted research to estimate these impacts for the 2018 program year.[[2]](#footnote-3) We (the evaluation teams) developed a model to represent the effect of energy efficiency programs in Illinois on the state's economy, and have assessed these impacts and presented their methodology and findings to the SAG Non-Energy Impacts Working Group on several occasions.

Moving forward, we have outlined several approaches to estimating these impacts in future years[[3]](#footnote-4) to align with Policy Manual requirements. This memo reiterates those approaches and presents a proposal for moving forward with conducting these analyses in future years for AIC, ComEd, Nicor Gas, Peoples Gas, and North Shore Gas.

#### Potential Approaches

Multiple options exist for estimating economic and employment impacts, with varying levels of rigor, granularity, and cost. We see three primary options available. Each option will require further tailoring/alignment to meet the specific desires of the Illinois utilities, stakeholders, and NEI Working Group, but is a general

**IMPLAN Modeling.** Modeling using IMPLAN (an industry-standard input-output modeling tool) is a rigorous and in-depth approach to assessing these impacts and uses annually updated economic data to reflect changes in the Illinois economy. We used IMPLAN to conduct the initial assessment of AIC and ComEd economic and employment impacts for the 2018 program year.

**Pros:** Annual IMPLAN model updates are the most rigorous and in-depth analysis approach being proposed for use. These updates will reflect annual changes in the structure of the economy (though IMPLAN data lags behind current economic conditions), including the percentage of goods being purchased locally in Illinois. Using annual IMPLAN model updates would also allow the general structure of the chosen model to be updated on an as-needed basis.

**Cons:** Annual IMPLAN model updates would be the most expensive option available for conducting this research. The IMPLAN input data, which must be re-purchased each year, only changes as much as the structure of the economy, which can be minimal on a year-to-year basis. Implementation of this approach requires advanced knowledge of the IMPLAN model, which likely limits its use to the evaluators.

**Spreadsheet Economic Impact Tool (e.g., NREL JEDI[[4]](#footnote-5)).** Development of a spreadsheet-based economic impact tool that provides some level of granularity in results could be conducted utilizing input-output matrices and results of the 2018 economic impact evaluations.

**Pros:** While some upfront costs would exist in developing such a tool, once all parties agreed on a final tool, a spreadsheet-based tool would provide a number of attractive attributes: ability to tailor analysis to portfolio design without building IMPLAN models, a simplified analysis that can be run by utilities and portfolio evaluators alike, and lower marginal cost to run models year to year.

**Cons:** A spreadsheet tool would naturally have a more limited ability to customize analysis than a full IMPLAN model. Similarly, its underlying data would only be updated on a periodic basis, meaning that shifts in the economy would not necessarily be captured in results until updates were made similar to IMPLAN modeling. Finally, challenges in licensing the underlying economic data may exist.

**Deemed Values.** Results from 2018 economic and employment impact evaluations could be used to develop deemed values (e.g. multipliers) that could be applied to overall portfolio spending/energy savings/etc.

**Pros:** This would be by far the simplest approach and similar in some ways to established approaches for deemed savings. Annual evaluation costs would be lower than other options by a wide margin.

**Cons:** Such an approach could substantially oversimplify impacts of some programs. Using this approach would provide limited insight into industries impacted and underlying economic effects, and opportunities to "explain" the results would likely be limited.

#### Proposed Approach

We propose a hybrid approach of the above options. There are valid reasons to suggest that in-depth periodic IMPLAN analysis is necessary to ensure that the Illinois economy is accurately represented in modeling, but such an update is costly and time-consuming, which does not seem to align well with the Policy Manual goal of making these results available annually. Instead, we suggest the following:

**Once per planning cycle IMPLAN model updates.** Updating the underlying model once per cycle will ensure that estimates of economic and employment impacts associated with energy efficiency programs in Illinois are reasonably aligned with the structure of the Illinois economy. It will also allow for periodic revisiting of the modeling used to estimate these impacts to ensure the model does not remain unnecessarily static if additional considerations are needed in future years. Finally, it is a reasonable expenditure within the bounds of evaluation budgets to conduct a full update along these lines once per cycle.

**Annual implementation of a spreadsheet-based or deemed value approach to estimating impacts.** On an annual basis, a spreadsheet-based (if a viable approach can be found to underlying data needs) or a deemed value approach will be used to estimate economic and employment impacts. This analysis can be conducted by the evaluators, but using such an approach should also allow program administrators to estimate these impacts themselves, if desired, for assessment of program impacts on the local economy and employment in Illinois - for example, if a program administrator is considering a significant programmatic change, using such an approach could allow them to understand some non-energy impacts of that change without evaluator input.

Outputs from both approaches would be consistent and align with each other; the once-per-planning cycle IMPLAN model updates would be used to "refresh" the spreadsheet or deemed approach but would fundamentally reflect the same methodology used. We believe that this approach appropriately balances the level of rigor with cost and timing considerations for this research and look forward to stakeholder input on our suggestions.

1. Illinois Energy Efficiency Policy Manual Version 2.0, Section 6.8 (p. 27). [↑](#footnote-ref-2)
2. Nicor Gas has also assessed these impacts as part of its portfolio planning process using generally similar methods. [↑](#footnote-ref-3)
3. Most recently outlined in our March 5, 2020 presentation to the SAG NEI Working Group, available here:

<https://s3.amazonaws.com/ilsag/IL_SAG_NEI_Presentation_March-5-2020_Final.pdf> [↑](#footnote-ref-4)
4. The National Renewable Energy Laboratory's Jobs and Economic Development Impact (JEDI) models are intuitive tools used for similar economic impact estimation around energy projects. Further detail on JEDI can be found online:

<https://www.nrel.gov/analysis/jedi/> [↑](#footnote-ref-5)