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Memorandum

2019 AIC Portfolio Job Reporting

To: Fernando Morales and Matt Armstrong, AIC and Jennifer Morris, ICC Staff

From: Zach Ross and Tyler Sellner, Opinion Dynamics and Adam Winston and Christian Berglund, Guidehouse

Date: September 13, 2021

Re: 2019 Ameren Illinois Economic and Employment Impact Analysis

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This memo presents results of the Opinion Dynamics evaluation team's analysis of the 2019 economic and employment impacts produced by the 2019 Ameren Illinois Company (AIC) energy efficiency portfolio. This analysis was conducted in alignment with the Illinois Energy Efficiency Policy Manual ("the Policy Manual") Version 2.0's requirement that each program administrator in Illinois must annually report estimates of the economic development and employment impacts of its energy efficiency programs.[1,2]

Methodology used in this analysis is consistent with that developed by consensus with the Illinois Stakeholder Advisory Group Non-Energy Impacts Working Group and used in the previously prepared 2018 analysis.[3] The evaluation team made minor refinements to the analysis as process improvements from the 2018 analysis.

Results

Summary of Input Data

Table 1 presents a summary of input data used for the 2019 economic and employment impact analysis. All data was sourced from the evaluation team's 2019 evaluation of the AIC energy efficiency portfolio.

[1] Illinois Energy Efficiency Policy Manual Version 2.0, Section 6.8.
[2] While this requirement did not technically go into effect until the 2020 program year, the evaluation team and AIC chose to comply with these requirements voluntarily for the 2019 evaluation.
[3] Guidehouse and Opinion Dynamics. "Illinois DSM Portfolio Non-Energy Impacts Economic Analysis." July 10, 2020. Available online: https://ilsag.s3.amazonaws.com/IL_NEI_Economic_Analysis_July-2020-Final-Revised-Sept.pdf

Table 1. Summary of Economic and Employment Impact Analysis Input Data

Impact Category	Amount (Million Dollars)	Description of Impact	Time Period
Bill Savings	$670M	Positive economic effect on ratepayers	2019-2045
Program Funding	-$113M	Negative economic effect on ratepayers	Over WAML period (Electric: 2019-2031, Gas: 2019)
Net Ratepayer Bill Savings	$557M	Net economic effect on ratepayers	2019-2045
Lost Utility Fuel & Transp. Expenditures	-$28M	Negative economic impact on fuel production and transportation	2019-2045
Incentives and Rebates	$71M	Positive economic effect on ratepayers	2019
Net Incremental Measure Costs	$147M	Negative economic effect on ratepayers; positive economic effect on retailers and suppliers	2019
Program Administration Costs	$42M	Positive economic effect on utilities	2019
Voltage Optimization	$2M	Positive economic effect for utilities	2018 (capital) & 2019-2033 (O&M)

Each impact category is described in more depth below.

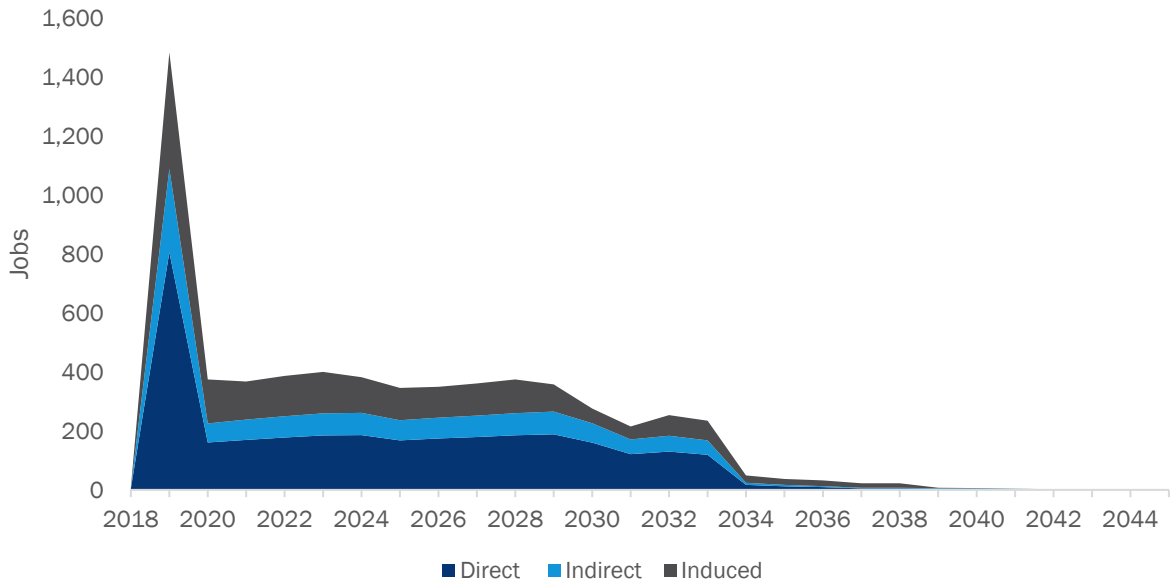
- **Bill Savings:** This flow represents the monetized savings program participants realize from their energy efficiency improvements through the utility program. Bill savings are monetized by multiplying the net verified savings values by each customers' applicable unit energy cost. Bill savings are realized through the lifetime of the measure as a positive cash flow to the participants.
- **Program Funding:** This flow represents the bill surcharges realized by participants to fund the utility programs. This flow occurs over the weighted average measure life (WAML) of the measure for traditional electric energy efficiency measures and in the year the measures are implemented for gas energy efficiency measures.
- **Net Ratepayer Bill Savings:** This is the net positive bill savings realized by all ratepayers: bill savings less program funding charges.
- **Lost Utility Fuel and Transportation Expenditures:** This flow represents decreased expenditures on fuel and transportation (and therefore decreased job creation) due to decreased electric generation as a result of energy efficiency measures.
- **Incentives and Rebates:** These flows represent payments made by the utility to program allies and contractors as part of the installation of energy efficiency measures in 2019 and rebate payments made by the utility to program participants in 2019.
- **Net Incremental Measure Costs:** This flow is the sum of all incremental measure costs that program participants expend on energy efficiency projects through the utility's programs in 2019. As in verified cost-effectiveness analysis, incremental measure costs used in this analysis are net costs calculated using SAG-approved NTG values. From the perspective of the participants this is a negative flow as they expend money implementing a project. From the perspective of contractors, trade allies, and equipment providers this is a positive cash flow as they receive income from sales of energy efficiency products and services.

- **Program Administration Costs:** This flow models program administration expenditures incurred as part of portfolio operations.
- **Voltage Optimization:** This flow represents utility expenditures on voltage optimization measures; costs are reported in the year circuits are constructed for voltage optimization measures and on an ongoing basis for operations and maintenance.

Employment Impacts

Figure 1 presents a visual summary of the employment impacts of the 2019 energy efficiency portfolio investments over time, separated into direct, indirect, and induced impacts.[4],[5] Because the portfolio produces long-term economic effects as a result of persisting energy savings, employment impacts produced are not confined to a particular year but occur over the 2018-2045 time period.

Figure 1. AIC Portfolio Employment Impacts (2018-2045)



The large spike in impacts seen in 2019 results from initial spending triggered by the implementation and management of AIC's portfolio in calendar year 2019, including but not limited to program incentives and administrative spending and incremental measure spending resulting from the effects of the portfolio. The impacts beyond 2019 are derived almost entirely from the persisting effects of AIC's portfolio in the form of

[4] Direct effects may include but are not limited to the initial changes in employment and demand for regional production triggered by the implementation and management of utility Energy Efficiency Programs. Indirect effects may include but are not limited to secondary impacts generated from business to business spending as firms and households directly impacted by the Energy Efficiency Programs increase purchases from their suppliers who must in turn increase purchases from their suppliers and so forth as the initial expenditure ripples through interconnected industries. Induced effects may include but are not limited to secondary impacts generated from household to business spending as labor income changes that result from both direct and indirect activity affect the local economy. Direct, indirect, and induced effects are defined more fully in Section 6.8 of the Illinois Energy Efficiency Policy Manual Version 2.0.

[5] Backup data for this figure is provided in the Appendix to this memo.

net ratepayer bill savings realized by those who were treated by or participated in AIC's 2019 programs. Impacts persist over a similar period as the cumulative persisting annual savings (CPAS) produced by the AIC portfolio.

Industry Labor Income and Business Sales

Figure 2 presents direct, indirect, and induced effects on labor income and industry output from the 2019 AIC portfolio. The figure also separates these effects into those resulting from 1) program spending and program-induced spending (incentives, rebates, net incremental costs, program administration, fuel/transportation expenditures etc.) and 2) net ratepayer bill savings.

Figure 2. AIC Portfolio Labor Income and Industry Output Impacts (2018-2045)

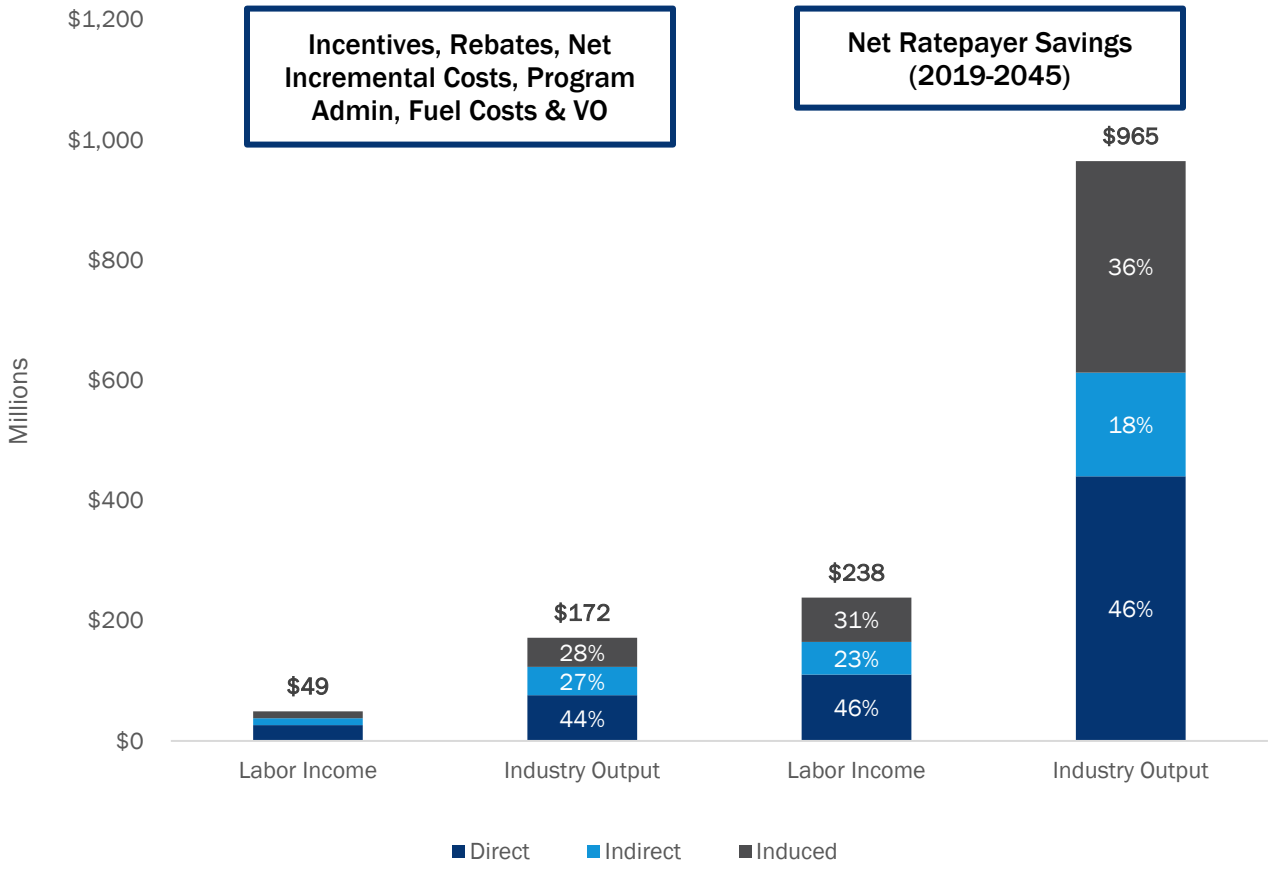


Table 2 presents a summary of the cumulative industry labor income and industry output impacts ("economic impacts") of the 2019 energy efficiency portfolio investments (2018-2045).

Table 2. Cumulative 2018-2045 Industry Labor Income and Industry Output Impacts of 2019 AIC Energy Efficiency Portfolio Investments

Impact Type	Labor Income	Industry Output
Direct	$137 M	$516 M
Indirect	$66 M	$220 M
Induced	$85 M	$401 M
Total	**$288 M**	**$1,137 M**

Appendix

Table 3 and Table 4 provide cumulative economic impacts and employment impacts in a format similar to that presented in the 2018 analysis for the purpose of comparison. The evaluation team advises against use of employment impacts reported in job-years for ongoing reporting moving forward. As shown in Figure 1, employment impacts are long-term effects not confined to a particular year, and reporting in job-years can mislead readers as to the effects produced.

Table 3. Cumulative Economic Impacts (2018-2045)

Impact Category	Utility Territory	Rest of State	Statewide Total
Job-Years	5,689 Job-Years	482 Job-Years	6,171 Job-Years
Labor Income	$253 M	$35 M	$288 M
Economic Output	$1,043 M	$94 M	$1,137 M

Table 4. Job-Year Impacts by Category (2018-2045)

Impact Type	Utility Territory	Rest of State	Statewide Total
Direct	2,955 Job-Years	0 Job-Years	2,955 Job-Years
Indirect	983 Job-Years	232 Job-Years	1,215 Job-Years
Induced	1,751 Job-Years	250 Job-Years	2,001 Job-Years
Total	**5,689 Job-Years**	**482 Job-Years**	**6,171 Job-Years**

Table 5 provides the supporting data for Figure 1 in tabular format.

Table 5. AIC Portfolio Employment Impacts (2018-2045)

Year	Direct	Induced	Indirect	Total
2018	4	2	2	7
2019	803	281	402	1,486
2020	145	63	157	365
2021	154	67	135	356
2022	162	70	143	375
2023	168	73	147	388
2024	169	74	126	369
2025	153	66	114	333

Year	Direct	Induced	Indirect	Total
2026	158	69	109	336
2027	163	71	113	347
2028	168	73	119	360
2029	172	75	95	342
2030	146	63	50	259
2031	109	47	44	200
2032	118	51	70	239
2033	107	46	67	220
2034	16	7	27	50
2035	11	5	22	38
2036	8	4	21	33
2037	4	2	17	23
2038	4	2	17	23
2039	4	2	1	7
2040	3	1	1	6
2041	2	1	1	4
2042	1	1	1	2
2043	1	<1	<1	2
2044	<1	<1	<1	<1
2045	<1	<1	<1	<1