

**To:** North Shore Gas

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**From:** Charles Ampong, Yeab Lakew, Laura Agapay-Read, Jeff Erickson, Guidehouse,  
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**Date:** November 18, 2024

**Re:** North Shore Gas 2023 Energy Efficiency Portfolio Economic Impact Reporting

## 1. Introduction

This memo presents the results of the Guidehouse analysis of the 2023 economic and employment impacts produced by the 2023 North Shore Gas energy efficiency portfolio. This analysis was conducted in alignment with the Illinois Energy Efficiency Policy Manual (“the Policy Manual”) Version 3.0 requirement that each program administrator in Illinois must annually report estimates of the economic development and employment impacts of its energy efficiency programs.

The methodology used in this analysis is consistent with the methodology developed by the Illinois Stakeholder Advisory Group Non-Energy Impacts Working Group and used in the previously submitted 2019 - 2022 economic analyses. The evaluation team made refinements to the analysis and data inputs (e.g., utility rates) as process improvements from the prior analyses, including purchasing the most recent Illinois data for IMPLAN. The most significant difference in the new IMPLAN dataset is that the productivity values increased (i.e., there is a higher economic output per job), resulting in fewer job-years than in previous economic analyses.

Overall, the 2023 North Shore Gas energy efficiency portfolio will produce 103 job-years and \$32.4 million dollars of industry output<sup>1</sup> across the state of Illinois.

## 2. Results

### 2.1 Summary of Input Data

Table 1 presents a summary of input data used for the 2023 economic and employment impact analysis. All data was sourced from Guidehouse’s 2023 evaluation of the North Shore Gas energy efficiency portfolio.

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<sup>1</sup> Industry output is the total annual production value of an industry; it can be described as business sales or revenues.

**Table 1. Summary of Economic and Employment Impact Analysis Input Data – North Shore Gas**

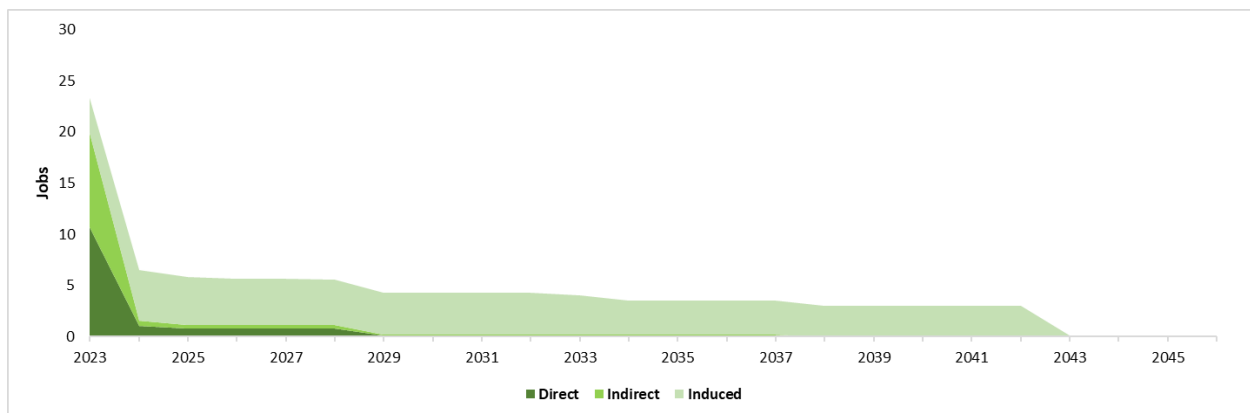
Impact Category	Amount (2023 \$)	Description of Impact	Time Period
Gas Bill Savings	\$16.1M	Positive economic effect on ratepayers	2023-2047
Program Funding	-3.3M	Negative economic effect on ratepayers	Over WAML period (Gas: 2023)
Net Ratepayer Gas Bill Savings	\$12.8M	Net economic effect on ratepayers	2023-2047
Lost Utility Fuel Expenditures	-\$1.1M	Negative economic impact on fuel production and transportation	2023-2047
Incentives and Rebates	\$1.8M	Positive economic effect on ratepayers	2023
Net Incremental Measure Costs	\$4.5M	Negative economic effect on ratepayers; positive economic effect on retailers and suppliers	2023
Program Administration Costs	\$1.4M	Positive economic effect on utilities	2023

Source: Guidehouse analysis of North Shore Gas Tracking data (2023).

## 2.2 Employment Impacts

Figure 1 presents a visual summary of the employment impacts of the 2023 energy efficiency portfolio investments over time, separated into direct, indirect, and induced impacts. Because the portfolio produces long-term economic effects of persisting energy savings, employment impacts produced are not confined to a particular year but occur over 2023-2047.

**Figure 1. Energy Efficiency Portfolio Employment Impacts (2023-2047) – North Shore Gas**



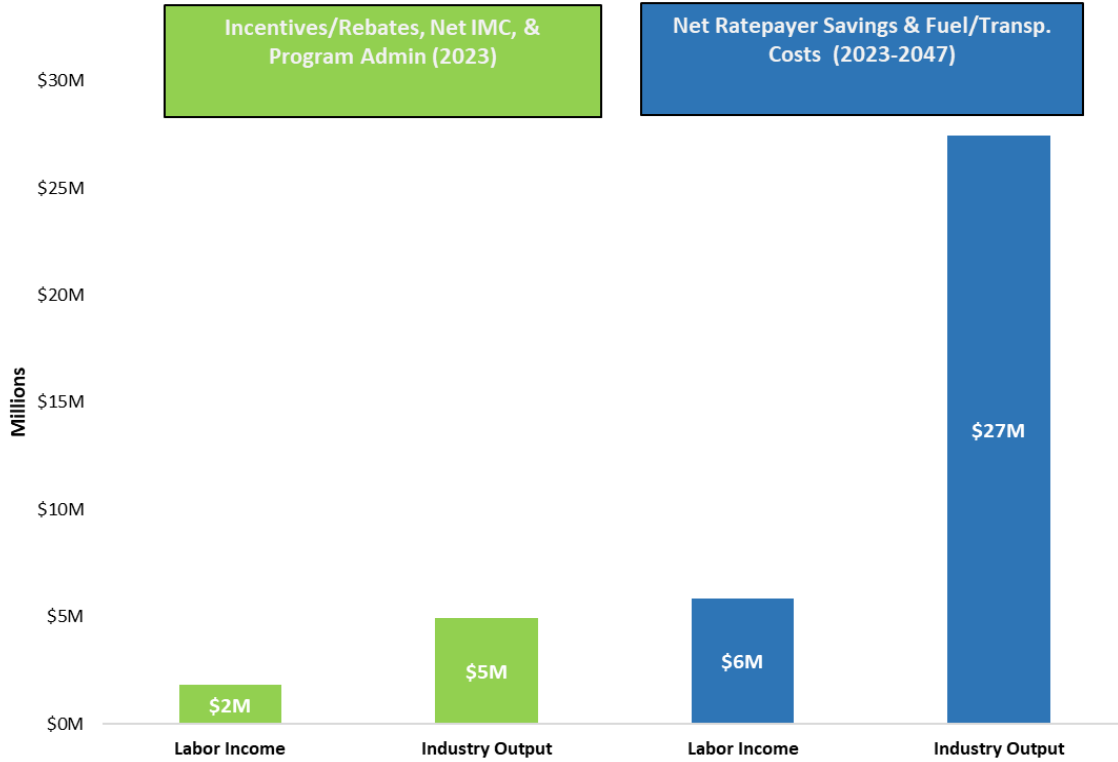
Source: Guidehouse analysis of North Shore Gas Tracking data (2023).

The large spike in impacts seen in 2023 results from initial spending triggered by the implementation and management of North Shore Gas's energy efficiency portfolio in calendar year 2023, including, but not limited to, program incentives and administrative spending, and incremental measure spending resulting from the effects of the portfolio. The impacts beyond 2023 are derived almost entirely from the persisting effects of North Shore Gas's energy efficiency portfolio in the form of net ratepayer bill savings realized by those who participated in North Shore Gas's 2023 programs. The bill savings are derived from the cumulative persisting annual savings (CPAS) and bill rates for 2023. Impacts persist over a similar period as the CPAS produced by the North Shore Gas energy efficiency portfolio.

### **3. Industry Labor Income and Business Sales**

Figure 2 presents direct, indirect, and induced effects on labor income and industry output from the 2023 North Shore Gas energy efficiency portfolio. The figure also separates these effects into those resulting from 1) program spending and program-induced spending (incentives, rebates, net incremental costs, and program administration costs) and 2) net ratepayer bill savings and fuel/transportation expenditures.

**Figure 2. Energy Efficiency Portfolio Labor Income and Industry Output Impacts (2023-2047) – North Shore Gas**



Source: Guidehouse analysis of North Shore Gas Tracking data (2023).

Table 2 presents a summary of the cumulative industry labor income and industry output impacts (“economic impacts”) of North Shore Gas’s 2023 energy efficiency portfolio investments (2023-2047).

**Table 2. Cumulative 2023-2047 Industry Labor Income and Industry Output Impacts of 2023 Energy Efficiency Portfolio Investments – North Shore Gas**

Impact Types	Labor Income (2023-\$)	Industry Output (2023 \$)
Direct	\$1.6M	\$5.8M
Indirect	\$1.0M	\$2.8M
Induced	\$5.0M	\$23.8M
<b>Total</b>	<b>\$7.7M</b>	<b>\$32.4M</b>

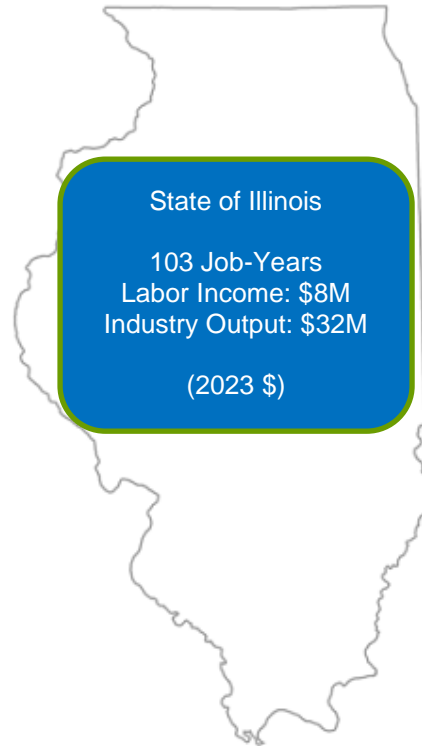
Note: Totals may not sum due to rounding.

Source: Guidehouse analysis of North Shore Gas Tracking data (2023).

## Appendix

For comparison purposes<sup>2</sup>, Figure 3 and Table 3 provide the cumulative economic and employment impacts in a format similar to that presented in the previous analyses.<sup>3</sup>

**Figure 3. Cumulative Economic Impacts (2023-2047) – North Shore Gas**



Source: Guidehouse analysis of North Shore Gas Tracking data (2023).

<sup>2</sup> The evaluation team advises against use of employment impacts reported in job-years because as shown in Figure 1, employment impacts are long-term effects not confined to a particular year, using job-years can be misleading as to the effects produced.

<sup>3</sup> Previous iterations of this analysis provided economic impacts separately for the utility territory versus the rest of Illinois. For consistency across utilities and to meet requirements in the Illinois Climate and Equitable Jobs Act, the results presented here focus on the full state of Illinois.

**Table 3. Economic Impacts by Period (2020, 2021, 2022, 2023) – North Shore Gas**

Period	Impact Type	Job-Years	Labor Income (2023 \$)	Industry Output (2023 \$)
2023 – 2047	Direct	15	\$1.6M	\$5.8M
	Indirect	12	\$1.0M	\$2.8M
	Induced	76	\$5.0M	\$23.8M
	<b>Total</b>	<b>103</b>	<b>\$7.7M</b>	<b>\$32.4M</b>
2022 – 2046	Direct	25	\$2.2M	\$7.2M
	Indirect	14	\$1.3M	\$3.3M
	Induced	22	\$1.5M	\$5.2M
	<b>Total</b>	<b>62</b>	<b>\$5.0M</b>	<b>\$15.8M</b>
2021 – 2045	Direct	77	\$7.2M	\$14.4M
	Indirect	33	\$2.4M	\$6.5M
	Induced	71	\$4.0M	\$14.0M
	<b>Total</b>	<b>181</b>	<b>\$13.6M</b>	<b>\$34.9M</b>
2020 – 2044	Direct	34	\$2.7M	\$6.9M
	Indirect	16	\$1.2M	\$3.1M
	Induced	29	\$1.6M	\$5.8M
	<b>Total</b>	<b>80</b>	<b>\$5.6M</b>	<b>\$15.8M</b>
<b>2020 – 2047</b>	<b>Cumulative Total</b>	<b>426</b>	<b>\$31.9M</b>	<b>\$98.9M</b>

Note: Totals may not sum due to rounding.

Source: Guidehouse analysis of North Shore Gas Tracking data (2023).

The direct, indirect, and induced job-years for program years 2020 through 2023 are presented in Table 4. The job-year impacts are further outlined for 2023 in Table 5.

**Table 4. Job-Year Impacts by Period (2020, 2021, 2022, 2023) – North Shore Gas**

Time Period	Direct	Indirect	Induced	Cumulative Total
2023 – 2047	15	12	76	103
2022 – 2046	25	14	22	62
2021 – 2045	77	33	71	181
2020 – 2044	34	16	29	80
<b>2020 – 2047</b>	<b>151</b>	<b>75</b>	<b>198</b>	<b>426</b>

Note: Totals may not sum due to rounding.

Source: Guidehouse analysis of North Shore Gas Tracking data (2023).

**Table 5. Job Impacts by Year from 2023 Programs (2023-2047) – North Shore Gas**

Year	Direct	Indirect	Induced	Total
2023	11	9	3	23
2024	1	<1	5	7
2025	1	<1	5	6
2026	1	<1	5	6
2027	1	<1	5	6
2028	1	<1	4	6
2029	<1	<1	4	4
2030	<1	<1	4	4
2031	<1	<1	4	4
2032	<1	<1	4	4
2033	<1	<1	4	4
2034	<1	<1	3	4
2035	<1	<1	3	4
2036	<1	<1	3	3
2037	<1	<1	3	3
2038	<1	<1	3	3
2039	<1	<1	3	3
2040	<1	<1	3	3
2041	<1	<1	3	3
2042	<1	<1	3	3
2043	<1	<1	<1	<1
2044	<1	<1	<1	<1
2045	<1	<1	<1	<1
2046	<1	<1	<1	<1
2047	<1	<1	<1	<1
<b>Total</b>	<b>15</b>	<b>12</b>	<b>76</b>	<b>103</b>

Note: This table includes job-year impacts only for the 2023 programs and does not include cumulative impacts from previous program years. Job-year represents full time employee for one year. In some instances, the values reported as less than one can be negative. Typically, these negative job impacts arise when the expenditures related to Lost Gas Utility Fuel Expenditures and Business Program Funding (Bill Surcharges) surpass the positive impacts. Both factors detract from the overall total and are not limited to the first year. The negative values observed range from -0.1 to -0.2 from direct and indirect impact but the total impact are positive.

Source: Guidehouse analysis of North Shore Gas Tracking data (2023).

**Program-Level Economic Impacts Among Retailers and Suppliers (Net Incremental Measure Costs Only)**

Table 6 presents program-level economic impacts from the net incremental measure costs associated with each program. Note that these values are specific to the direct, indirect, and induced economic impacts among retailers and suppliers from the net incremental measure costs and do not include economic impacts from other program spending or customer bill savings or economic costs for households and businesses from the net incremental measure costs, which are included in Table 3.

**Table 6. Program-level Economic Impacts, Net Incremental Measure Costs Only (2023-2047) – North Shore Gas**

Sector	Program	Labor Income (2023 \$)	Industry Output (2023 \$)	# of Jobs
Business	C&I and PS Joint New Construction	\$0.1M	\$0.2M	1
Business	C&I and PS Retro-Commissioning	\$0.0M	\$0.0M	<1
Business	C/I & PS Custom	\$0.0M	\$0.1M	<1
Business	C/I & PS Prescriptive	\$1.0M	\$3.0M	12
Business	C/I Gas Optimization	\$0.0M	\$0.0M	<1
Business	Small Business	\$0.1M	\$0.2M	1
Business	Strategic Energy Management	\$0.0M	\$0.0M	<1
Income Eligible	Community Joint Kits	\$0.0M	\$0.1M	<1
Income Eligible	Elementary Education Kits (EEE)	\$0.0M	\$0.0M	<1
Income Eligible	Multi-Family - IHWAP, Retrofits, PTA	\$0.7M	\$2.6M	9
Income Eligible	Public Housing Authority (PHES)	\$0.0M	\$0.0M	<1
Income Eligible	Single Family - IHWAP, Retrofits, HEA	\$0.0M	\$0.1M	<1
Residential	Elementary Education Kits (EEE)	\$0.0M	\$0.1M	<1
Residential	Home Energy Jumpstart	\$0.0M	\$0.0M	<1
Residential	Home Energy Rebates - HVAC, Weatherization	\$0.6M	\$1.8M	7
Residential	Multi-Family - DI, Prescriptive, Custom, PTA	\$0.0M	\$0.1M	<1
Market Transformation	Market Development Initiative	N/A	N/A	N/A
<b>Total</b>		<b>\$2.5M</b>	<b>\$8.2M</b>	<b>31</b>

Note: Market Transformation programs do not have Net Incremental Measure Costs. Totals may not sum due to rounding.

Source: Guidehouse analysis of North Shore Gas Tracking data (2023).

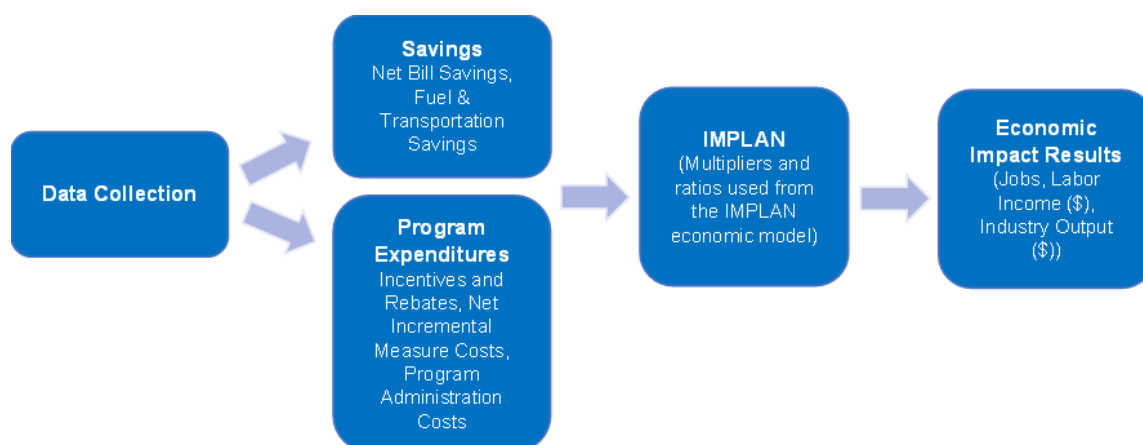


## Economic Impact Assessment Methodology

The economic impact assessment for energy efficiency programs follows a three-step process (depicted in **Error! Reference source not found. 4**):

- 1) Data collection of the economic activities of the energy efficiency programs
- 2) Economic modeling of these activities using IMPLAN<sup>4</sup>
- 3) Analysis of the results – summarizing and assessing the economic measures (e.g., industry output, labor income, and jobs)

**Figure 4. Economic Impact Assessment Methodology**



Source: Guidehouse

<sup>4</sup> IMPLAN is an economic analysis software used to estimate the impact of an economic activity on a specific geographic area. The analysis uses IMPLAN 2021 data for Illinois to capture the effect of program spending on the Illinois economy. For more information, see <https://implan.com/>