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| To:  | North Shore Gas  |
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| From: | Avery Byrne, Madalin How, Bryan Montes, Adam Winston, Patricia Plympton, & Kevin Grabner, Guidehouse |
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| CC: | Elizabeth Horne, ICC Staff; Celia Johnson, Illinois Stakeholder Advisory Group |
|  |  |
| Date: | November 7, 2022  |
|  |  |
| Re: | North Shore Gas 2021 Energy Efficiency Portfolio Economic Impact Reporting |

# Introduction

This memo presents results of the Guidehouse analysis of the 2021 economic and employment impacts produced by the 2021 North Shore Gas 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.

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 prepared 2018, 2019, and 2020 analyses.

# Results

## Summary of Input Data

Table 1 presents a summary of input data used for the 2021 economic and employment impact analysis. All data was sourced from the evaluation team's 2021 evaluation of the North Shore Gas energy efficiency portfolio.

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

| Impact Category | Amount ($M’s) | Description of Impact | Time Period |
| --- | --- | --- | --- |
| Bill Savings | $19.6M | Positive economic effect on ratepayers | 2021-2045 |
| Program Funding | -$4.0M | Negative economic effect on ratepayers | Over WAML period (Gas: 2021) |
| Net Ratepayer Bill Savings | $15.7M | Net economic effect on ratepayers | 2021-2045 |
| Lost Utility Fuel Expenditures | -$2.1M | Negative economic impact on fuel production and transportation | 2021-2045 |
| Incentives and Rebates | $2.2M | Positive economic effect on ratepayers | 2021 |
| Net Incremental Measure Costs | $4.7M | Negative economic effect on ratepayers; positive economic effect on retailers and suppliers | 2021 |
| Program Administration Costs | $1.7M | Positive economic effect on utilities | 2021 |

Source: Guidehouse analysis of North Shore Gas Tracking data (2021)

## Employment Impacts

Figure 1 presents a visual summary of the employment impacts of the 2021 energy efficiency portfolio investments over time, separated into direct, indirect, and induced impacts. 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 2021-2045 time period.

Figure 1. North Shore Gas Portfolio Employment Impacts (2021-2045)



Source: Guidehouse analysis of North Shore Gas Tracking data (2021)

The large spike in impacts seen in 2021 results from initial spending triggered by the implementation and management of North Shore Gas’s portfolio in calendar year 2021, including but not limited to program incentives and administrative spending and incremental measure spending resulting from the effects of the portfolio. The impacts beyond 2021 are derived almost entirely from the persisting effects of North Shore Gas’s portfolio in the form of net ratepayer bill savings realized by those who were treated by or participated in North Shore Gas’s 2021 programs. Impacts persist over a similar period as the cumulative persisting annual savings (CPAS) produced by the North Shore Gas portfolio. The net lifetime therm savings and ratepayer bill savings were significantly higher in 2021 compared with prior years.

## Industry Labor Income and Business Sales

Figure 2 presents direct, indirect, and induced effects on labor income and industry output from the 2021 North Shore Gas 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 . North Shore Gas Portfolio Labor Income and Industry Output Impacts (2021-2045)



*Source: Guidehouse analysis of North Shore Gas Tracking data (2021)*

Table 2 presents a summary of the cumulative industry labor income and industry output impacts (“economic impacts”) of the 2021 energy efficiency portfolio investments (2021-2045).

Table 2. Cumulative 2021-2045 Industry Labor Income and Industry Output Impacts of 2021 North Shore Gas Energy Efficiency Portfolio Investments

| Impact Type | Labor Income | Industry Output |
| --- | --- | --- |
| Direct | $7.2M | $14.4M  |
| Indirect | $2.4M | $6.5M  |
| Induced | $4.0M | $14.0M  |
| **Total** | **$13.6M** | **$34.9M**  |

Source: Guidehouse analysis of North Shore Gas Tracking data (2021)

# Appendix

Figure 3, Table 3, Table 4, and Table 5 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.

Figure 3. Cumulative Economic Impacts (2021-2045)



Rest of IL:

6 Job Years

Labor Income: $0.4M

Industry Output: $1.4M

Utility Service Territory:

175 Job Years

Labor Income: $13.2M

Industry Output: $33.6M

Source: Guidehouse analysis of North Shore Gas Tracking data (2021)

Table . Job Impacts by Year (2021 – 2045)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Year** | **Direct** | **Induced** | **Indirect** | **Total** |
| 2021 | 30 | 13 | 9 | 53 |
| 2022 | 3 | 1 | 6 | 11 |
| 2023 | 3 | 1 | 6 | 11 |
| 2024 | 3 | 1 | 6 | 10 |
| 2025 | 3 | 1 | 6 | 10 |
| 2026 | 3 | 1 | 4 | 8 |
| 2027 | 2 | 1 | 3 | 6 |
| 2028 | 2 | 1 | 3 | 6 |
| 2029 | 2 | 1 | 3 | 6 |
| 2030 | 2 | 1 | 3 | 6 |
| 2031 | 2 | 1 | 3 | 6 |
| 2032 | 2 | 1 | 2 | 5 |
| 2033 | 2 | 1 | 2 | 5 |
| 2034 | 2 | 1 | 2 | 5 |
| 2035 | 2 | 1 | 2 | 5 |
| 2036 | 1 | 1 | 2 | 4 |
| 2037 | 1 | 1 | 2 | 4 |
| 2038 | 1 | 1 | 2 | 4 |
| 2039 | 1 | 1 | 2 | 4 |
| 2040 | 1 | 1 | 2 | 4 |
| 2041 | 1 | 1 | 1 | 3 |
| 2042 | 1 | 1 | 1 | 3 |
| 2043 | 1 | 1 | 1 | 3 |
| 2044 | 1 | 1 | 1 | 3 |
| 2045 | <1 | <1 | <1 | <1 |
| **Total** | **77** | **33** | **71** | **181** |

Source: Guidehouse analysis of North Shore Gas Tracking data (2021)

Table 4: Economic Impacts by Time Period and Impact Type (2018, 2019, 2020, & 2021)

| Time Period |  | Job Years | Labor Income | Industry Output |
| --- | --- | --- | --- | --- |
| Impact Type | Utility Territory | Rest of State | State Total | Utility Territory | Rest of State | State Total | Utility Territory | Rest of State | State Total |
| 2021 - 2045 | Direct | 77 | 0 | 77 | $7.2M | $0.0M | $7.2M | $14.4M | $0.0M | $14.4M |
| 2021 - 2045 | Indirect | 30 | 3 | 33 | $2.2M | $0.22M | $2.4M | $5.6M | $0.9M | $6.5M |
| 2021 - 2045 | Induced | 68 | 2 | 71 | $3.9M | $0.13M | $4.0M | $13.6M | $0.5M | $14.0M |
| **2021 - 2045** | **Total** | **175** | **6** | **181** | **$13.2M** | **$0.4M** | **$13.6M** | **$33.6M** | **$1.4M** | **$34.9M** |
| 2020 – 2044 | Direct | 34 | 0 | 34 | $2.7M | $0.0M | $2.7M | $6.9M | $0.0M | $6.9M |
| 2020 – 2044 | Indirect | 14 | 2 | 16 | $1.1M | $0.12M | $1.2M | $2.6M | $0.5M | $3.1M |
| 2020 – 2044 | Induced | 28 | 1 | 29 | $1.6M | $0.06M | $1.6M | $5.6M | $0.2M | $5.8M |
| **2020 – 2044** | **Total** | **77** | **3** | **80** | **$5.4M** | **$0.2M** | **$5.6M** | **$15.1M** | **$0.7M** | **$15.8M** |
| 2019 – 2043 | Direct | 30 | 0 | 30 | $2.3M | $0.00M | $2.3M | $6.3M | $0.0M | $6.3M |
| 2019 – 2043 | Indirect | 13 | 2 | 15 | $1.0M | $0.11M | $1.1M | $2.4M | $0.4M | $2.8M |
| 2019 – 2043 | Induced | 22 | 1 | 23 | $1.2M | $0.05M | $1.3M | $4.2M | $0.2M | $4.4M |
| **2019 – 2043** | **Total** | **64** | **3** | **67** | **$4.5M** | **$0.2M** | **$4.6M** | **$12.9M** | **$0.6M** | **$13.5M** |
| 2018 – 2042 | Direct | 26 | 0 | 26 | $1.9M | $0.00M | $1.9M | $5.5M | $0.0M | $5.5M |
| 2018 – 2042 | Indirect | 11 | 2 | 13 | $0.8M | $0.10M | $0.9M | $2.1M | $0.4M | $2.4M |
| 2018 – 2042 | Induced | 16 | 1 | 17 | $0.9M | $0.04M | $0.9M | $2.7M | $0.1M | $2.9M |
| **2018 – 2042** | **Total** | **53** | **2** | **55** | **$3.6M** | **$0.1M** | **$3.7M** | **$10.3M** | **$0.5M** | **$10.8M** |
| **2018 – 2045** | **Sum Total**  | **369** | **14** | **383** | **26.7M** | **$0.9M** | **$27.5M** | **$71.9M** | **$3.2M** | **$75.0M**  |

Source: Guidehouse analysis of North Shore Gas Tracking data

Table 5: Job-Year Impacts by Time Period and Impact Type (2018, 2019, 2020, & 2021)

|  |  Direct Job Years | Indirect Job Years | Induced Job Years |  |
| --- | --- | --- | --- | --- |
| Time Period | Utility Territory | Rest of State | Utility Territory | Rest of State | Utility Territory | Rest of State | State Total |
| 2021 - 2045 | 77 | 0 | 30 | 3 | 68 | 2 | 181 |
| 2020 - 2044 | 34 | 0 | 14 | 2 | 28 | 1 | 80 |
| 2019 - 2043 | 30 | 0 | 13 | 2 | 22 | 1 | 67 |
| 2018 - 2042 | 26 | 0 | 11 | 2 | 16 | 1 | 55 |
| **2018 - 2045** | **167** | **0** | **68** | **9** | **134** | **5** | **383** |

Source: Guidehouse analysis of North Shore Gas Tracking data

## Economic Impact Assessment Methodology

The economic impact assessment for energy efficiency programs follows a three-step process: (depicted in Figure 4):

1. Data collection of the economic activities of the energy efficiency programs
2. Economic modeling of these activities using IMPLAN
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

**Data Collection**

**Savings:** Net Bill Savings, Utility Fuel & Transportation

**Program Expenditures:** Incentives and Rebates, Net Incremental Measure Costs, & Program Administration Costs

**IMPLAN**

(Multipliers and ratios used from the IMPLAN economic model)

**Economic Impact Results**

(Jobs, Labor Income ($), Industry Output ($))

*Source: Guidehouse*