



Natural Gas Efficiency
Programs Report

Natural Gas Efficiency Program Funding and Impacts

2019 PROGRAM YEAR

Authored by:
Sapna Gheewala

March 2022



Natural Gas Efficiency Program Funding and Impacts

While most of the funding for natural gas efficiency programs is sourced from ratepayers, some efficiency program funds originate from other sources, such as non-ratepayer funds, including utility shareholders, for efficiency programming.¹ Non-ratepayer efficiency funds have been excluded in this report to the extent possible. Given that the reporting methodology varies among respondents, expenditure and budget data should be regarded as estimates.²

Respondents were asked to categorize their 2019 expenditures and 2020 budgets by customer class and segment. Where data were not available by a specific segment, respondents reported overall spending amounts in the “Other” category, which includes but is not limited to cross-cutting funds for portfolio-wide activities, education and awareness costs, trade ally incentives, emerging technology management, school outreach, and technical assistance. If respondents were unable to categorize spending for specific activities by the customer segment, they also placed these dollar amounts under “Other.” Likewise, some respondents were not able to separate low-income program dollars from residential program funds (either overall or for specific activities, such as education and online resources) due to tracking restrictions thus, a small number of low-income program dollars were combined with residential program funds.

1. This section describes utility funding for natural gas efficiency programs in the U.S. and Canada and the resulting annual energy saving impacts. The program year 2019 expenditures correspond to funding by 123 utilities for programs administered either by the utility or by a third party, such as a non-profit public benefit organization or a state agency that runs a statewide program.

2. Budgets for 2020 represent planned funding for 110 programs. Budget data were collected during summer and fall 2020; therefore, any budgetary changes made after this period, such as those due to newly approved programs or funding cuts, are not reflected in this report. Some dollars reported for 2019 represent carry-over of unspent funds from 2018.

Natural Gas Efficiency Program Expenditures and Funding

In North America (U.S. and Canada), participating utilities spent and budgeted:

\$1.76 billion spent in 2019 on natural gas efficiency programs

This includes \$1.57 billion in the U.S. and \$191 million in Canada.

\$1.9 billion was budgeted for in 2020 on natural gas efficiency programs

This includes \$1.72 billion in the U.S. and \$182 million in Canada.

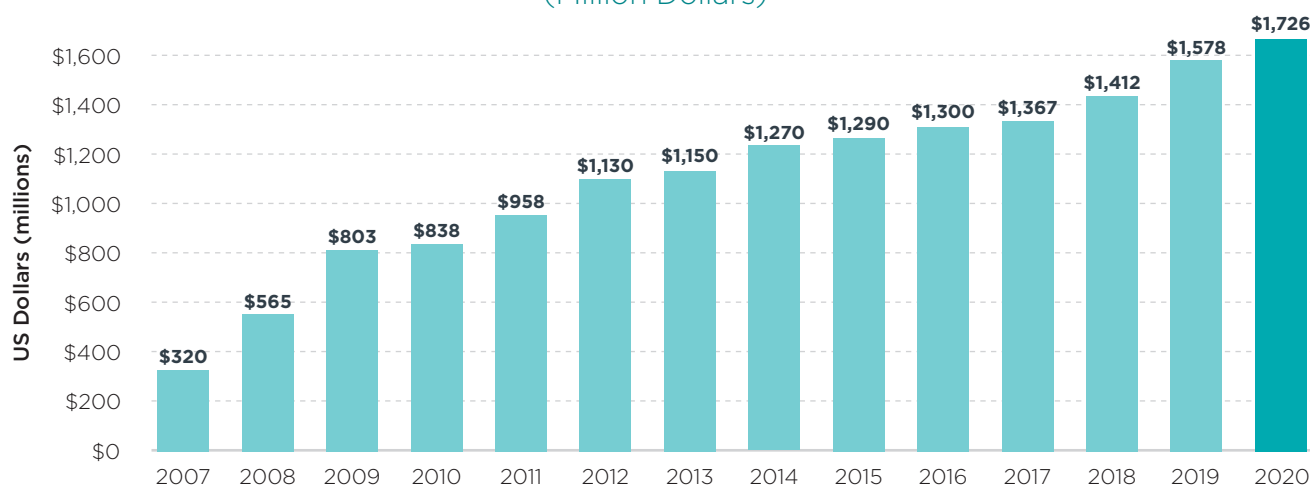
Program funding in North America increased by 20 percent from 2018 to 2019.

- In the United States, program funding has grown 12 percent from 2018 to 2019 consistent with previous year's growth, and 40 percent since 2012.
- There was a significant amount of growth and participation in the Canadian utilities data that has been captured in 2019 that was not provided in 2018.

Natural Gas Efficiency Program Expenditures and Budgets by Customer Class

	2019 Expenditures (\$Million)			2020 Budgets (\$Million)		
Customer Segment	U.S.	Canada	N. America	U.S.	Canada	N. America
Residential	\$656.01	\$74.96	\$730.97	\$624.02	\$74.96	\$730.97
Low-Income	\$419.61	\$36.34	\$455.95	\$455.24	\$35.35	\$490.59
Multi-Family	\$79.30	\$1.16	\$80.46	\$55.06	\$0.00	\$55.06
Commercial	\$281.28	\$50.46	\$331.74	\$355.84	\$79.50	\$435.34
Industrial	\$23.34	\$16.00	\$39.34	\$40.86	\$5.63	\$46.49
Other	\$118.64	\$12.73	\$131.36	\$195.44	\$14.04	\$209.48
Total	\$1,578.18	\$191.64	\$1,769.83	\$1,726.46	\$182.07	\$1,908.53

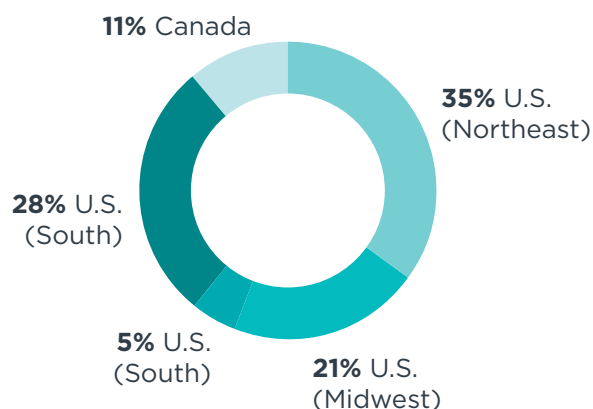
Yearly Natural Gas Efficiency Program Funds in the United States from 2007 – 2019³ (Million Dollars)⁴



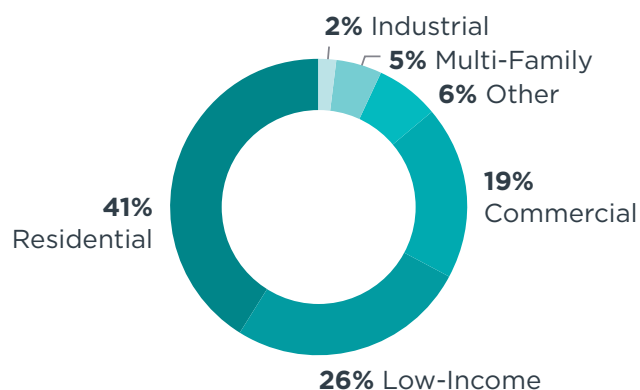
The regional breakout for 2019 program expenditures shows that the Northeast-US region comprised 35 percent of all of 2019 participant expenditures totaling \$624 million.

Additionally, the West-US region accounted for 28 percent of expenditures at \$491 million, the Midwest-US region comprised another 21 percent of all 2019 gas efficiency expenditures totaling over \$368 million, as seen in the figure below and on the left.

2019 Natural Gas Efficiency Program Expenditures in North America by Region



2019 Natural Gas Efficiency Program Expenditures in North America by Sector



A look at 2019 natural gas efficiency program expenditures across sectors shows that North American utilities allocated 41 percent of funding for residential programs, 26 percent for low-income, 19 percent for commercial, about 2 percent for separate industrial programs, and 7 percent for other program activities as seen in the figure above and on the right. The sectoral spending allocation is constant with previous years expenditures. The other category includes expenditures that were not provided by the customer segment. See the full report for more detail. See the full 2018 program year report for more details. <https://www.aga.org/globalassets/aga-ngefficiency-report-py2018-5-2021.pdf>

3. This comparison is intended for illustrative purposes since spending growth cannot be entirely attributed to new and expanded programs but also differences in survey samples from one year to the next.

4. Consistent with CEE Annual Industry Reports yearly gas efficiency expenditures <https://www.cee1.org/annual-industry-reports>

Natural Gas Efficiency Program Savings

Estimated 2019 natural gas savings were reported for 114 programs by customer class. Respondents were requested to report energy savings realized by gas efficiency measures during the 2019 program year. Savings includes calendar-year savings from natural gas efficiency measures already in place on the first day of the year (i.e., installed before 2019) as well as incremental savings realized from new measures implemented during the year. Some respondents were limited by how they track and report energy savings and thus did not provide annualized savings as defined above (with pre-existing measures and participation considered) but instead reported only incremental, or first-year therms savings.

Data were not available for several respondents, either because savings were not tracked or available. In some cases, estimates were provided based on prior-year data. While the majority of respondents submitted calendar year savings accumulated through 2019, some were able to report only for the most recent program year (with, for example, some program months falling in 2018 and some in 2019). Where data were not available by segment, some respondents reported overall savings in the “Other” category.

Respondents were also asked for gross impacts as well as net impacts—that is, to exclude free riders, spillover, savings due to government-mandated codes and standards, reduced usage owed to weather or business cycle fluctuations, and reduced usage because of natural operations of the marketplace (e.g., higher prices). Seventy-seven percent of respondents provided gross impacts, including a portion that reported both net and gross savings.

Many respondents report estimated savings—a set calculation of savings per measure, developed pre-installation, with built-in assumptions regarding free ridership and other specifications.

Some respondents were unable to separate low-income program savings from overall residential program savings, while others combined commercial program savings with residential impacts. Still, others included savings for multi-family programs with C&I program savings. These combined categories represent a tiny percentage of the data. Given that the reporting methodology varied among respondents, natural gas savings data should be regarded as estimates.

2019 natural gas savings are up by 18% from 2018, the equivalence of 2.64 million metric tons of avoided CO₂.

As shown in the table below, natural gas savings in North America amounted to just about 500 million therms or 49.96 trillion Btu, the equivalence of 2.64 million metric tons of avoided CO₂ emissions in 2019. 2019 savings are up by 18% from 2018 survey respondents.

Participating utilities in the U.S. saved 319 million Therms or 32 trillion Btu through natural gas efficiency programs, thus avoiding 1.7 million metric tons of carbon dioxide emissions (CO₂) up by 3 percentage from 2018 utility responses.

2019 Natural Gas Efficiency Program Estimated Savings Impacts by Customer Segment (Million Therms)⁵

114 Programs

Sector	United States	Canada	N. America
Residential	107.3	20.2	127.5
Low-Income	14.7	9.2	23.9
Multi-Family	11.0	0.02	11.0
Commercial	124.3	88.3	212.6
Industrial	9.9	62.0	71.9
Other⁶	52.6	0.01	52.6
Total⁷	319.8	179.8	499.6

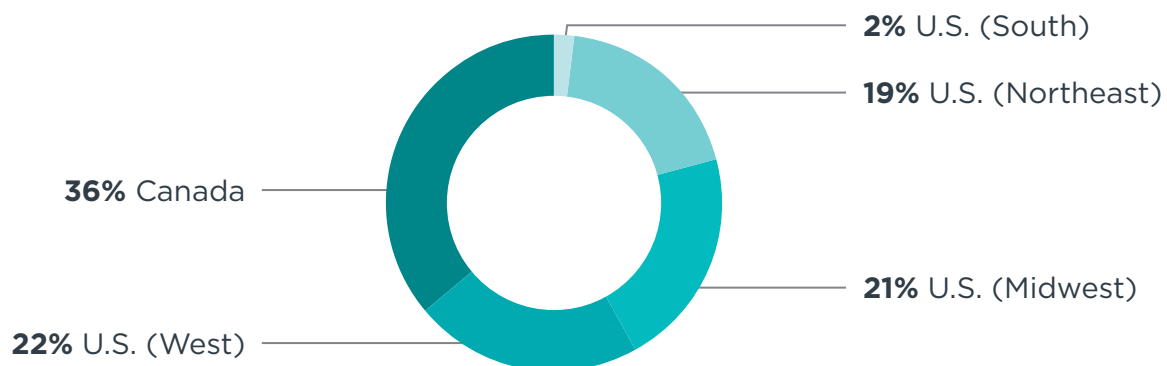
As utility program participation varies by region within North America, savings vary as well.

The western region of the U.S. accounted for 28 percent of North American efficiency spending, as seen in the Program Expenditures and Funding section which led to a gross energy savings totaling 113 million therms accounting for 22 percent of the savings across North America.

The savings accounted for decreasing emissions by 600 thousand metric tons of CO₂, equivalent to keeping about 129 thousand cars off the road for a year.

Canada accounted for 11 percent of regional energy spending, as seen in the Program Expenditures and Funding section and contributed to about 36 percent of the total gross efficiency savings of 179.7 million therms in 2019, decreasing emissions by 952 thousand metric tons of CO₂. The difference in expenditures and savings depends on the type of programs and activities that are being implemented as different measures yield various savings depending on technology, region, weather, etc.

2019 Natural Gas Efficiency Program Gross Energy Savings By Region, North America



5. Additional data available in the 2019 Appendix E - Natural Gas Efficiency Program Gross Energy Savings by Region.

6. The other category represents cross-cutting programs similar to those discussed under Program Expenditures section.

7. Subcategories might not add up exactly to reported totals due to rounding.

The Northeast is 35 percent of North American energy efficiency spending with savings of over 93 million therms, curtailing 493 thousand metric tons of CO₂, equivalent to keeping about 106 thousand cars off the road for a year or covering the energy usage for over 223 thousand homes for a year.

Commercial programs contributed to 43 percent of energy savings in North America during 2019. Residential programs accounted for 25 percent, industrial 14 percent, and low-income activities five percent. Eleven percent is classified as “other,” representing data not allocable by customer class and including estimated savings for education, general outreach, codes and standards, and pilot programs, as previously mentioned.

For U.S. savings, residential and commercial programs each account for about 34 percent and 39 percent respectively of overall savings. Low-income accounted for five percent, and industrial three percent. Six-teen percent of U.S. natural gas savings are classified as “other.”

2019 Natural Gas Efficiency Program Gross Energy Savings in North America

