

NATURAL GAS EFFICIENCY PROGRAMS REPORT

2020 Program Year

American Gas Association

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Note from the Authors

As part of our ongoing mission of American Gas Association, it is with immense pleasure to introduce our Natural Gas Efficiency Programs Report for the 2020 program year. This work, anchored in the bedrock of data derived from our annual energy efficiency survey, seeks to present an informed, objective, and robust analysis of our industry's strides towards efficiency.

The process of creating this report has been nothing short of a quest for truth, a desire to illuminate the industry's dynamics, and an ambitious endeavor to bring transparency to the forefront of our operations. This report forms a cornerstone of our continued commitment to the critical value of transparency, recognizing its pivotal role in fostering trust, facilitating informed decisions, and driving forward our industry. However, we encourage our esteemed readers to approach the data with an understanding of its context. When comparing data from our annual reports, we urge you to interpret it as illustrative rather than definitive, owing to the inherent fluctuations in survey sample sizes year to year.

In crafting this report, we faced a unique set of challenges. The global pandemic introduced a plethora of complexities and hurdles. Our priority was, and continues to be, the safety of our stakeholders, which necessitated adjustments and caused delays to our usually prompt delivery.

Nevertheless, these trials underscored our resilience and commitment to our mission. We navigated these circumstances together, reminded that change is a constant, and remained steadfast in our resolve to deliver insightful, actionable data. We extend our deepest gratitude to all who contributed their time and expertise in answering our annual survey, and our readers, for your patience, engagement, and continued trust.

Executive Summary

In 2021 the American Gas Association (AGA) and the Consortium for Energy Efficiency (CEE) surveyed their U.S. and Canadian members and efficiency program administrators on the status of their 2020 ratepayer-funded natural gas efficiency programs, including expenditures, savings impacts, carbon dioxide emissions reductions, and budgets for 2021. Based on survey findings for the 2020 program year:

Natural Gas Efficiency Program Funding and Impacts

In North America, gas utilities spent a total of **\$1.57 billion** on energy efficiency related expenditures in 2020 (the equivalent of \$4.3 million each day in 2020) and budgeted **\$1.6 billion** for the 2021 program year.

Spending on energy efficiency programs by natural gas utilities has increased by **391 percent** since 2007.

U.S. gas utilities have saved **1.7 million metric tons of greenhouse gas emissions** through energy efficiency programs in 2020.

42 percent of expenditures went towards single-family residential programs and 22 percent went towards low-income programs.

Natural Gas Efficiency Program Characteristics

Natural gas utilities help customers cut energy costs through innovative efficiency programs, offering rebates, incentives, low-income schemes, partnerships, joint utility programs, loans, education, marketing, energy audits, and facility retrofits.

85 percent of energy efficiency programs have been in place for over 10 years and the median program age is **12 years old**.

2020 program year data found that over 6 million residential customers participated in at least one energy efficiency program.

The average residential efficiency program reached nearly **89 thousand** residential households.

78 percent of respondents offered low-income energy efficiency programs.

Natural Gas Efficiency Program Regulatory Requirements and Cost Recovery Treatment

Many states mandate utility investment in natural gas efficiency programs via regulatory order or legislation. 74 percent of respondents reported having a requirement.

The main goals driving efficiency program funding include energy conservation and reducing costs for all customer segments, especially low-income. Most utilities have set multiple goals.

Direct costs associated with energy efficiency programs can be recovered through base rates, trackers, or deferral accounts. Margin losses are adjusted and recovered through mechanisms like revenue decoupling or margin trackers.

Performance targets are often set for utilities to earn on efficiency investments. 27 gas efficiency programs have utility performance-based incentives

29% of respondents encourage fuel switching to natural gas through financial incentives. Fuel switching can apply from electric, fuel oil, propane, or other energy sources to natural gas. 32% of respondents confirmed their state has a clear goal for GHG or carbon reduction. Only a few have regulator-approved methods to earn credits for GHG-reduction projects.

Methodology & Survey Sample

In 2021, the American Gas Association (AGA) and the Consortium for Energy Efficiency (CEE) surveyed their respective U.S. and Canadian members on the status, characteristics, and metrics of their 2020 ratepayer-funded natural gas efficiency and low-income weatherization programs. Respondents include utility and non-utility, or third-party, efficiency program administrator – 79 in total, although not every respondent answered every question. Nonresponses were filtered out as necessary. In this report, the term “*natural gas efficiency program*” refers to a set of activities designed to promote a cost-effective and prudent approach to energy usage, including low-income single and multi-family home weatherization, indirect impact activities (such as conservation education, energy audits, and contractor certification), and direct impact activities in new and existing buildings and homes (e.g., equipment replacement and Energy Star Homes)

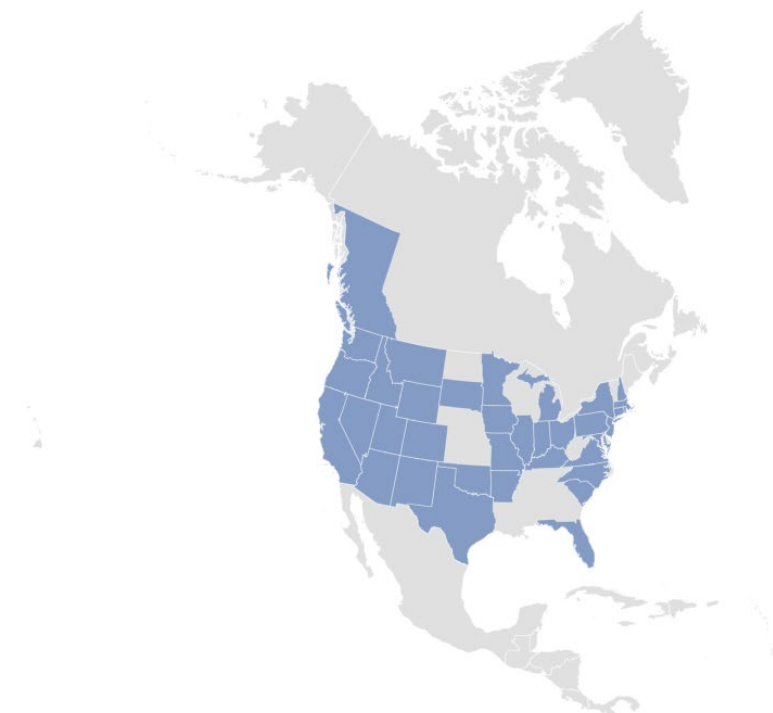
The sample frame consists of member and nonmember organizations identified as large program administrators of AGA and CEE. The survey asked respondents to describe their natural gas efficiency programs, including program expenditures and energy savings, during the 2020 calendar year or coinciding program year for which data were available. Also, the surveys collected data on 2021 program budgets. Not all responding parties answered every survey question. Therefore, the response sample varies by item. Because the sample pool is not normalized and varies year to year, this report does not directly compare 2020 with prior years data, except for illustrative purposes. Tables and charts generally represent a simple tally of the responses to the survey questionnaire. Report footnotes and section introductions provide additional information regarding methodology. Expenditures, budgets, and energy savings utilized carryover methodology.

Natural Gas Efficiency Program Characteristics

According to the 2020 program year data gathered solely from AGA's 2020 Energy Efficiency survey, there are at least 79 active natural gas utility ratepayer-funded efficiency programs in North America¹ – 78 in the United States and 1 in Canada.

It should be noted that these statistics are derived from the responses to AGA's annual survey, and there are annual fluctuations in the number of respondents. Specifically, the response rate for the 2020 survey was only 63% of the total respondents for the 2019 survey. Consequently, caution should be exercised when interpreting these figures, as they should not be compared directly. Rather, they should be considered as indicative of the sample size for each

Active Ratepayer-Funded Natural Gas Efficiency Programs in North America
(2020 Data)



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¹ In this report, North America refers solely to the United States and Canada

respective survey year. Additionally, not all survey participants responded to every question.

Program Structure & Administration

While many natural gas efficiency programs have been in place for years, the breadth and depth of programs continue to grow. Programs range from the newly launched to mature programs that span 20 years or more.

- Eighty-six percent of natural gas efficiency programs have been in place for over a decade, and over a quarter (26 percent) of those programs have been in operation for over 20 years.
- The remaining 14 percent were implemented within 10 years of 2021.
- The median program is 12 years old.

Natural Gas Efficiency Programs Since Inception (2020 data) - 74 Respondents	
Years in Service	Number of Programs
5 or less	1
6 - 10	10
11 - 19	47
20 or more	16

Customer Segments & Participants

Participant counts were obtained for 72 natural gas efficiency programs in 2020, 30 percent less than what was obtained for the year prior. There are numerous differences in how programs track and report participation or the number of enrollments in energy efficiency programs. For example, some programs provide estimates, as they don't actively monitor participants and others track the number of paid rebates or grants instead of participating customers. The numbers in the table below reflect these discrepancies, and thus participant figures should be considered as very rough estimates.

In 2020, participant counts were obtained for 72 natural gas efficiency programs. It's important to note that there are substantial variations in not only the number of survey respondents from year to year, but also individual variations in how programs track and report on participation or enrollment figures. For instance, some programs do not actively track the exact number of participants and provide estimates instead, while others may record the number of rebates or grants in lieu of total participant counts.

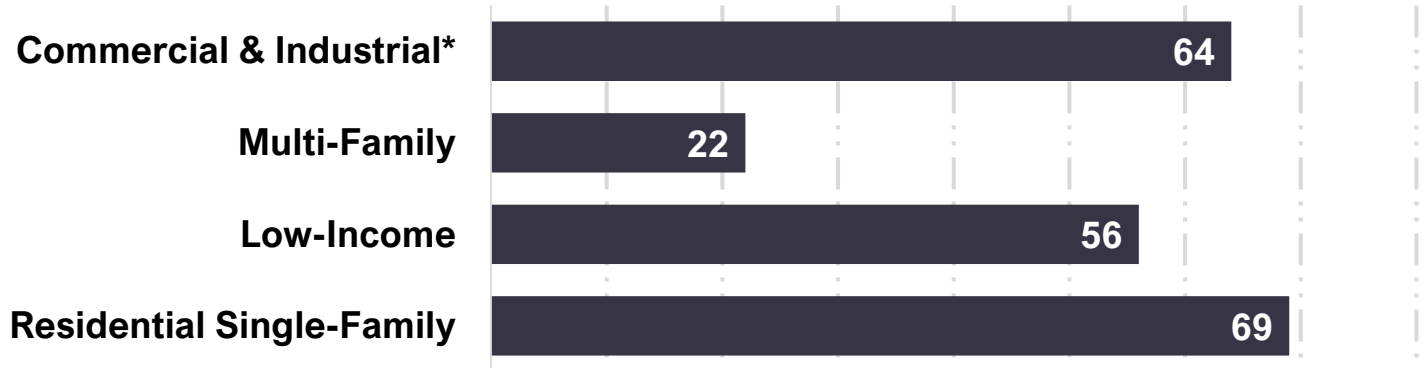
In addition, approximately 35 percent of respondents reported that they combined the participation numbers for the industrial and commercial sectors. Consequently, in an effort to ensure data accuracy and integrity, the participation figures and program counts for the industrial and commercial sectors have been consolidated in the subsequent table.

**Program Participants by Customer Segment
(2020 Data) – 72 Utility Respondents**

	Residential Single-Family Households	Low-Income	Multi- Family	Commercial & Industrial
2020 Programs	69	56	22	64
2020 Participants	6,137,182	226,707	38,363	142,209
2020 Average Participants Per Program	88,945	4,048	1,744	2,222
2019 Programs	91	70	26	N/A
2019 Participants	6,684,846	389,170	137,793	N/A
2019 Average Participants Per Program	73,460	5,560	5,300	N/A

Out of the respondents who track and reported their participation rates, 95 percent (69 out of 73) have residential efficiency programs, 86 percent (63 out of 73) have either commercial or industrial efficiency programs (or both), and 78 percent (57 out of 73) reported having low-income efficiency programs. 22 percent of respondents (16 out of 73) reported having programs for all four customer segments (residential, low-income, multi-family, commercial/industrial), and 75 percent (55 out of 73) of respondents reported having programs for at least three customer segments.

**Number of Natural Gas Energy Efficiency Programs by Customer Segment
(2020 Data) - 73 Utility Respondents**



Energy Efficiency Program Activities & Components

Survey participants were asked to provide a breakout of their 2020 expenditures into four activities, including:²

1. Administrative, marketing, other implementation costs.
2. Customer incentives (rebates, loans, and other financial incentives).
3. Evaluation, measurement, and verification (EM&V) and supporting research studies.³
4. Other costs.

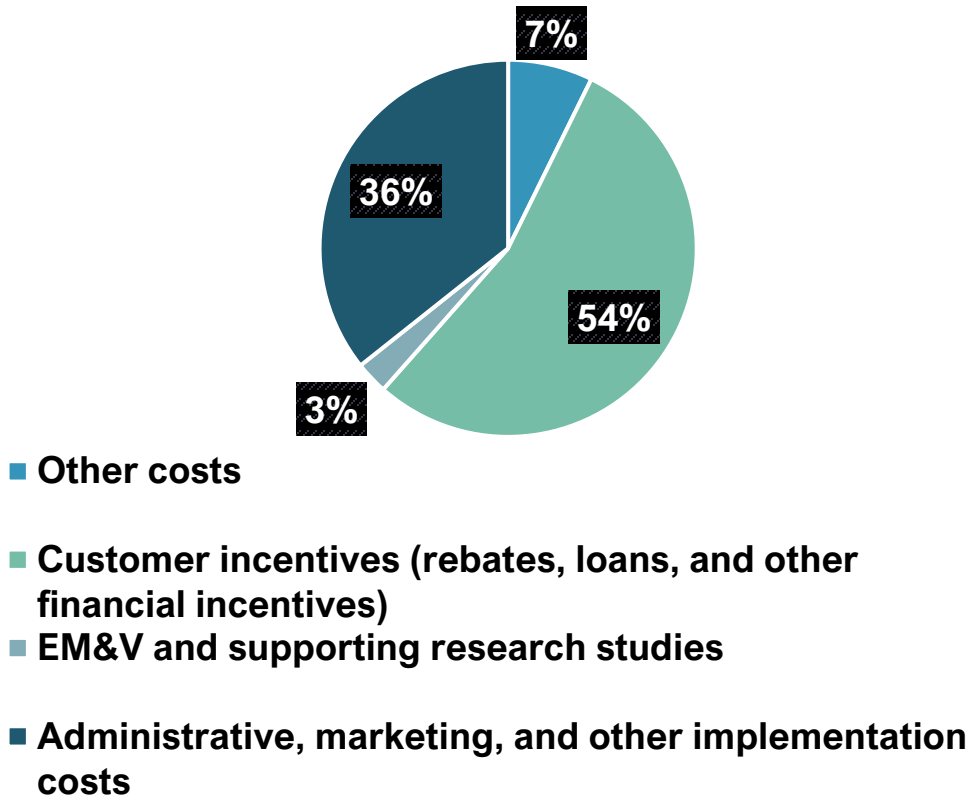
68 survey respondents participated in this portion. Respondents indicated that in 2020, a majority, 54 percent, of overall natural gas energy efficiency program expenditures were allocated to customer incentives such as rebates, loans, and other financial incentives; in 2019, this figure was 57 percent. Additionally, the survey results indicate that 36 percent of the expenditures were concentrated

² Expenditure breakdown in this section uses only 2020 program year survey data. No carryover method is utilized.

³ Evaluation, Measurement and Verification (EM&V) is the collection of methods and processes used to assess the performance of energy efficiency activities so that planned results can be achieved with greater certainty and future activities can be more effective according to the U.S. Department of Energy.

on administrative, marketing, and other implementation costs, a similar percentage as the year prior.

2020 Natural Gas Efficiency Program Expenditures by Activity in North America



Survey respondents were also asked to identify the efficiency components they offered in each of the four customer segments: Residential single-family, residential multi-family, residential low-income, and combined commercial and industrial.

2020 Utility-Implemented Gas Efficiency Program Activities by Customer Segments (2020 Data) – 74 Utility Respondents

Energy Efficiency Activities	Residential Low-Income	Residential Multi-Family	Residential Single-Family	Commercial & Industrial
Number of Programs	65	57	71	60
<i>Weatherization</i>	52	26	48	N/A
Indirect Impact Programs				
Certification	20	14	20	18
Education	54	42	65	54
Online Tools	34	28	47	36
Technical Assessment	42	27	44	44
Training	28	19	37	41
Direct Impact Programs - Existing Buildings	48	40	63	56
Direct Impact Programs - New Construction/Expansions	18	26	40	40
Other	2	3	7	2

A look at specific efficiency activities shows that of indirect impact programs, **education outreach is the most adopted program across all segments.** Education outreach was adopted by 83 percent of respondents who have low-income energy efficiency programs, and 91 percent of respondents who have single family programs. This may involve community workshops, educational

In 2020, 75 percent of utilities reported provided some sort of outreach or education to low-income customers as part of their typical energy efficiency activities.

materials, and media campaigns, highlighting the emphasis on informing and enabling these communities towards energy-efficient practices.

Results indicate that technical assessments, also known as energy audits, offer evaluations of a customer's energy use and seek to pinpoint specific inefficiencies. These assessments have increased in popularity among a wider range of programs compared to years prior, specifically in the industrial customer offerings, where they are prevalent in 73 percent of total industrial and commercial efficiency programs.

Like years prior, direct impact activities in existing homes or buildings remain a popular activity in respondents' energy efficiency portfolio. Respondents indicate direct impact activities in 93 percent of commercial and industrial programs, 74 percent of residential single-family programs, 89 percent of residential low-income programs, and 70 percent of residential multi-family programs. These activities may include energy efficiency audits and targeted implementation of energy-efficient upgrades.

Many programs also include other types of indirect impact activities, like online tools for energy usage/savings calculators and technical assessments such as on-site energy audits. Efficiency training and certifications for contractors, installers, and building operators tend to lag compared to other programs.

A relatively small amount (3-10 percent of respondents, depending on the segment) indicated that they utilize other forms of activities that are not listed as options in the survey. Most respondents mentioned the unlisted activities are behavioral programs and grade school outreach programs.

Through energy efficiency programs, energy consumers are empowered with the tools and resources they need to enhance their efficiency, thereby significantly reducing their carbon footprints. As energy utilization becomes more efficient, individual emissions are reduced, fostering a cleaner, greener environment. This commitment to efficiency reflects the natural gas industry's broader vision to deliver energy efficient solutions to customers.

Natural Gas Efficiency Program Funding & Impacts

While most of the funding for natural gas efficiency programs is derived from ratepayers, some efficiency program funds originate from utility shareholders.⁴ 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.⁵

Respondents were asked to categorize their 2020 expenditures and 2021 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.

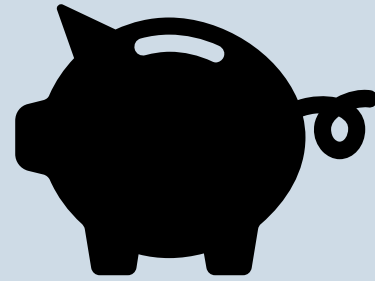
Expenditure and budget figures in this section utilize carryover methodology described in the methodology section to account for respondents who were unable to answer by survey release.

⁴ This section describes utility funding for natural gas efficiency programs in the United States and Canada and the resulting annual energy saving impacts. The program year 2020 expenditures correspond to funding by 125 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.

⁵ Budget data were collected during summer and fall 2021; 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 2020 represent carry-over of unspent funds from 2019.

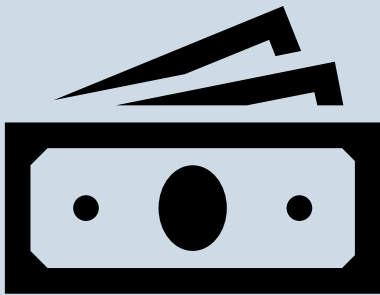
In 2020, \$1.57 billion was spent on natural gas efficiency programs.

This includes \$1.41 billion in the United States and \$166 million in Canada

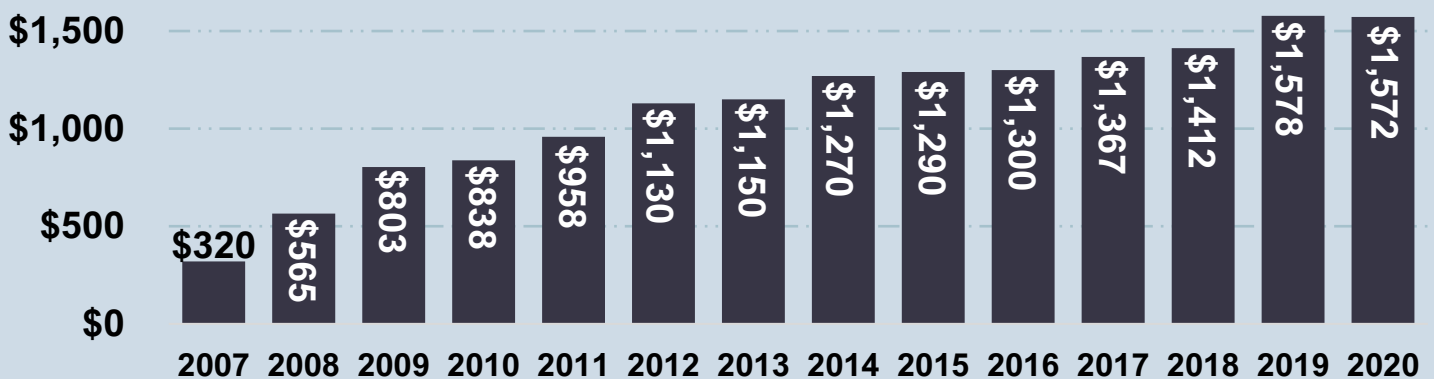


In 2020, \$1.6 billion was budgeted for natural gas efficiency programs.

This includes \$1.45 billion in the United States and \$151 million in Canada



Yearly Natural Gas Efficiency Program Investments United States*
(Millions of Dollars)

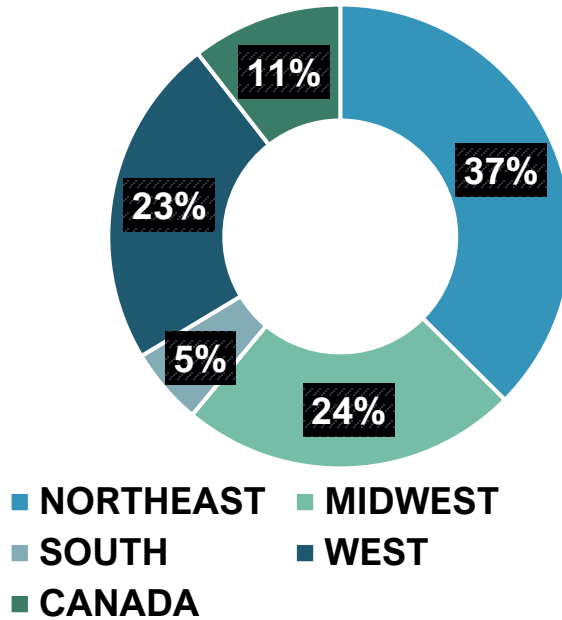


*The COVID-19 Pandemic presented a myriad of uncertainty and challenges in 2020; from supply chain shocks, substantial and sudden shifts in energy demand, to personnel shortages. The pandemic's impact on energy efficiency expenditures is unique to each situation. A shift in expenditures is not to be reflective of long-term trends or industry commitment and investment in energy efficiency.

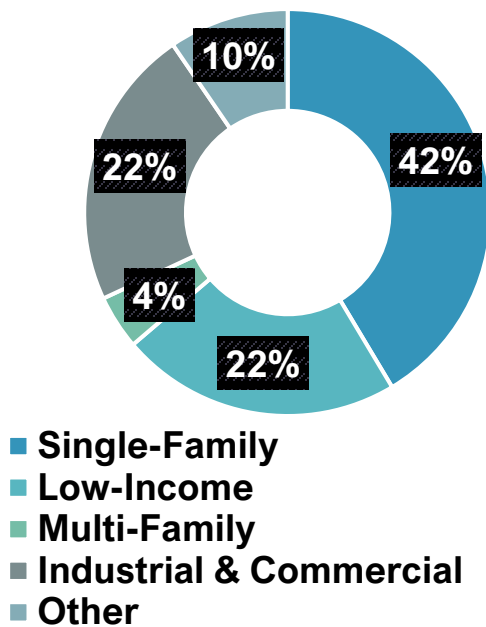
The regional breakout of expenditures (shown below) shows that the Northeast region comprised the majority, 37 percent, of all the 2020 participant expenditures: totaling nearly \$589 million.

Additionally, the West region accounted for 23 percent of expenditures at \$559 million, the US - Midwest region comprised of another 24 percent of expenditures at over \$370 million, the South region

2020 Natural Gas Efficiency Program Expenditures by Region in North America



2020 Natural Gas Efficiency Program Expenditures in North America by Sector



made up about 5 percent of expenditures at over \$84 million, and finally Canada comprised 11 percent of all expenditures with nearly \$166 million in energy efficiency expenditures.

A look at 2020 natural gas efficiency program expenditures across sectors shows that North American utilities allocated 42 percent of total natural gas efficiency program funding for residential, single-family programs, 22 percent (351 million) for low-income, 22 percent for commercial and industrial, 4 percent for multifamily and 10 percent on other program activities

as seen in the figure above and on the right.

The sectoral spending allocation is fairly constant with previous years' expenditures. The "other" category includes expenditures that were not provided by the customer segment.

The other category includes expenditures that were not provided by the customer segment. Likewise, in this category are programs that cross-cut residential and non-residential customers segments. These include baseline studies and market research (including technology and market trials and pilot programs), planning and project development, consultation and cost effectiveness analyses, EM&V, market transformation programs, marketing (including statewide marketing and special projects such as non-profit kits), non-program specific administration costs (e.g., salaries, transportation, rebate processing), information systems upgrades (including tracking systems), conservation and efficiency education (e.g., school-based, online calculators, community education pilot), efficiency and technology training, and regulatory and state oversight expenses (e.g., third- party alternative filings).

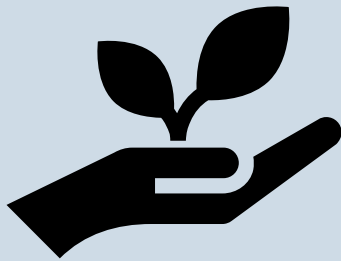
Also, included under other expenses are carry-over funds from prior program year, government partnerships, codes and standards, product development, emerging technologies, demand-side management coordination and integration, workforce education and training, state home improvement and conservation loan subsidies, financing programs, financial audit fees, building operator certification, solar thermal water heating, renewable energy, and agricultural programs.

Natural Gas Efficiency Program Savings Impact

The savings data collected in this annual survey cycle was for programs active in 2020. This survey cycle, only savings data from programs within the United States was reported. Respondents were asked to report energy savings realized by gas efficiency measures during the 2020 program year. Savings include calendar-year savings from natural gas efficiency measures already in place on the first day of the year (i.e., installed before 2020) as well as incremental savings realized from new measures implemented during the year. Some

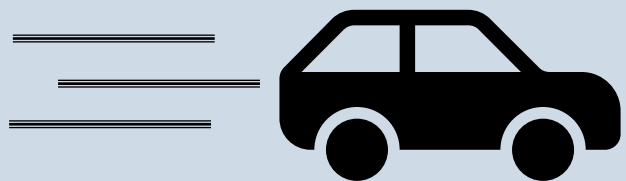
respondents were limited by how they track and report energy savings and thus did not provide annualized savings as defined above but instead reported only incremental, or first-year therms savings.

In 2020, U.S. natural gas efficiency programs saved 325 million therms of energy!



That's 1.7 million metric tons of greenhouse gas emissions saved

The equivalent of 4.6 billion miles by car!



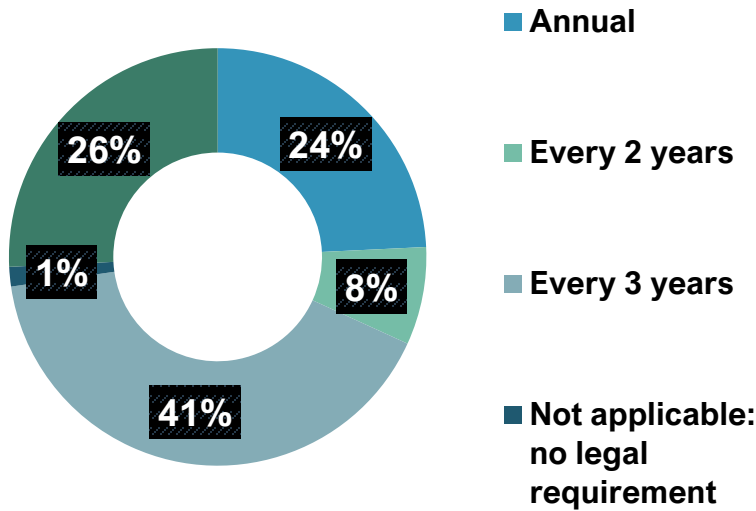
Natural Gas Efficiency Regulatory Requirements & Cost Recovery Treatment

This section describes some of the regulatory and legislative requirements and allowances that govern natural gas efficiency programs in the United States. Such requirements could include state potential studies, efficiency program spending requirements, recovery of direct program costs, lost margin recovery, financial incentives for well-performing programs, carbon offset programs, and fuel switching to natural gas. Respondents provided data for 76 programs, although not all respondents answered every question. All data in this section is solely from the 2020 program year survey.

Many state policy makers have mandated that utilities invest in natural gas efficiency programs. Of the total 72 utilities in 36 states and 1 Canadian province which responded to this survey question, 53 utilities reported their state to have some kind of requirement for funding efficiency programs either via regulation or legislation. Thirty-eight utilities reported that program funding was required via state legislation while 42 reported that program funding was required via regulation. Twenty-seven utilities stated that they are required both by legislation and by regulation to fund energy efficiency programs.

Respondents were then asked what cycle their funding is approved by a regulator or appropriate legal authority. Sixty-six utilities in the U.S. responded to this portion of the survey, and 16 of the 66 reported having their funding approved annually, 27 utilities have their funding approved every 3 years and 17 participants indicated “other” which includes an approval cycle of 4-5 year or sector specific approval. Only 5 participating utilities had a funding approval cycle of every 2 years.

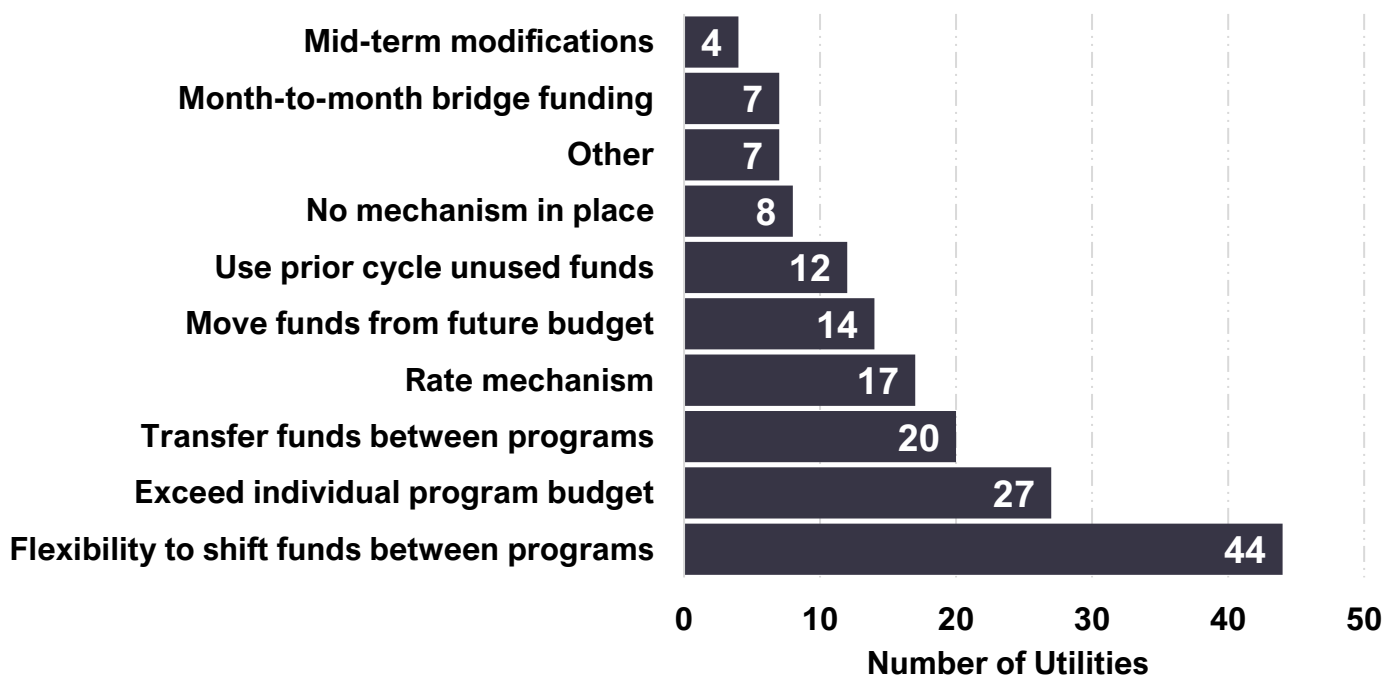
Regulator or Legal Authority Cycle of Efficiency Funding Approval - 2020 (66 Utilities)



Respondents were asked if there are existing mechanisms built in to prevent intra-year program funding disruptions. Results indicate 64 utilities, or 89% had, at least one mechanism in place. Four utilities had over 5 mechanisms in place for prevent intra-year program funding disruptions, while 24 utilities had three or more mechanisms in place. Twenty utilities had just 1

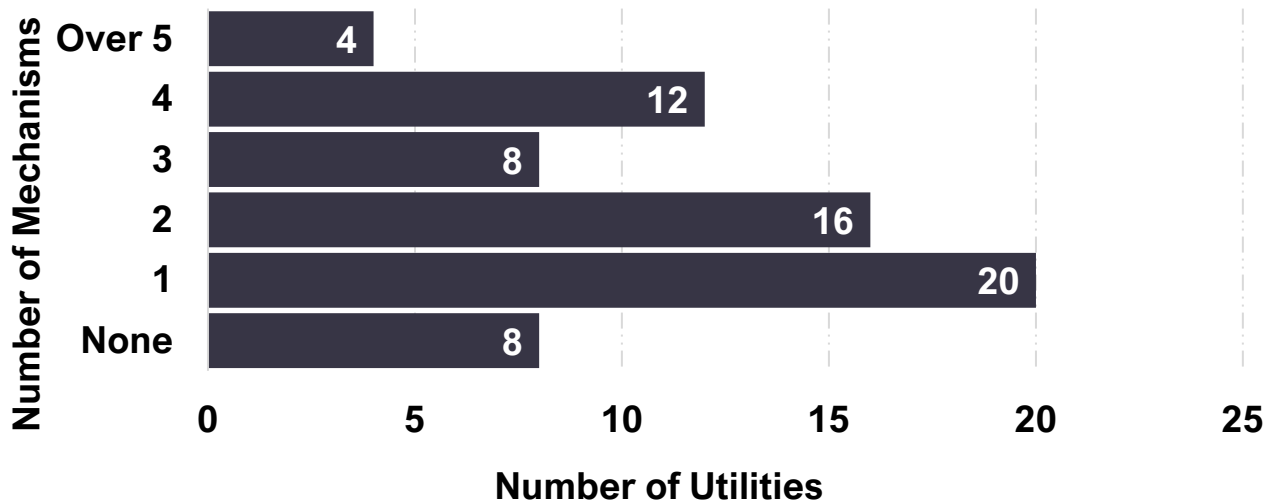
mechanism in place to avert intra-year program funding disruptions. Most utilities, 44 respondents, reported having flexibility to shift funds between

Built-in Mechanisms to Prevent Intra-year Program Funding Disruptions in The U.S. 68 utilities in 2020



programs, while 27 participants were allowed to exceed individual program budget, provided the portfolio as whole is cost-effective.

Number of Built In Mechanisms to Prevent Intra-year Program Funding Disruptions in The U.S. per Utility
68 utilities in 2020



There are various goals that drive efficiency program funding requirements within the U.S. and Canada. Respondents of the 2020 survey indicated that some of the top goals among stakeholders included holistic energy conservation and reducing the costs for all customers segments (particularly low-income). Nearly all 70 utilities which responded to this section of the survey have set more than one goal. Twelve utilities reported pursuing 10 or more targets. Additional policy goals and program breakdown data are provided in the table on the following page.

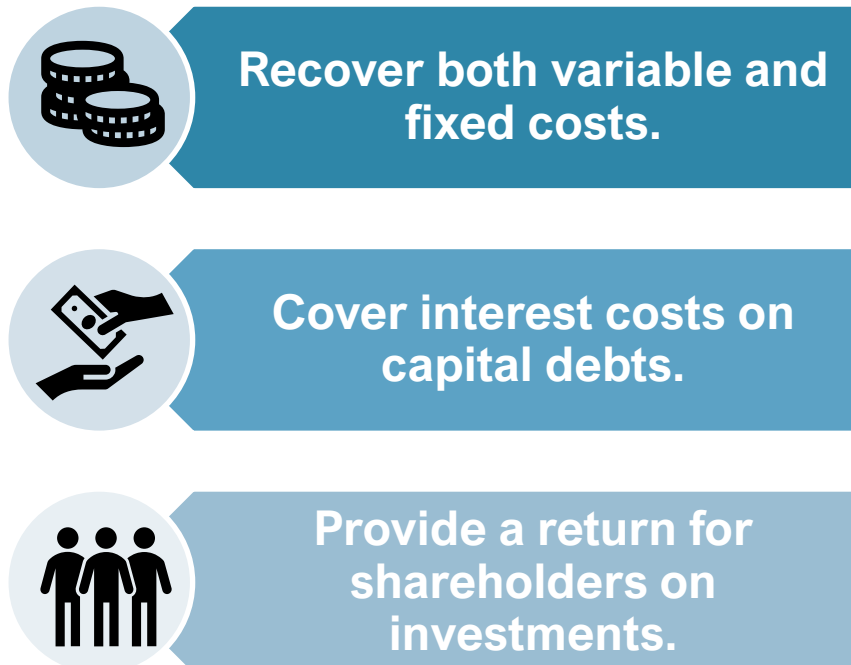
**Policy Goals Governing Efficiency Program Implementation
Number of Programs by Goal/Target
(2020 Data) - 70 Responses**

Target / Path	Program Provider	Policy Target in Legislation	Regulator Goal
Reduce Peak/Off-Peak Electric Generation Needs and Electric Infrastructure Costs	14	13	16
Minimize Arrears and Uncollectibles	27	5	23
Behavioral Change	46	16	29
Encourage Combined Heat and Power Usage	10	8	8
Customer Bill Savings	54	21	27
Customer Service Value Added	48	5	13
Economic Development and Job Creation	23	17	22
Meet State EERS or Renewable Portfolio Standards Targets	15	17	22
Meet Electric DSM Targets	15	15	17
Energy Conservation	56	29	35
Reduce Natural Gas Supply and Infrastructure Costs	29	15	24
GHG Emissions Reductions	26	18	17
Reduce Low Income Cost Burden	49	27	37
Improve Low Income Safety Comfort	37	12	24
Market Transformation	39	13	21
Other	1	3	2

Rate Structures & Regulatory Treatment Aligned with Utility & Energy Efficiency Goals

An investor-owned utility employs a complex accounting and rate-setting methodology to recover its costs. While many resources delve deeply into utility accounting and rate design, this report offers a simplified, concise description. This background is provided to elucidate the policies progressively adopted to shield utilities from losses tied to energy conservation practices and to incentivize their investment in energy efficiency programs.

When setting rates, an investor-owned utility negotiates with its regulator (typically a public utility/service commission) to determine permissible charges to customers. This ensures the utility can fulfill its obligation to serve its customer base. The rates are designed to meet the utility's revenue requirement, enabling it to:



The profit margin is sanctioned by the regulator, which determines the rate of return (or percentage) the utility can earn on its equity (known as a return on equity or ROE).

In traditional rate designs, a portion of fixed costs is recouped through a volumetric charge or a price per Therm. Given this structure, and because energy consumption can vary while infrastructure costs stay fixed in the short term, the utility faces the risk of under-recovering its fixed costs if customers decrease their gas consumption. Over the long term, it's believed that reductions in usage should lead to decreased natural gas supply capacity requirements and, consequently, reduced capital costs, benefiting customers. However, reduced energy usage due to successful efficiency program implementation can dent the utility's revenues, further discouraging utilities from promoting energy efficiency.

With a rising focus on energy conservation and demand-side management, policymakers are increasingly sanctioning mechanisms that let utilities recover both the direct costs and margin losses tied to energy efficiency program implementation. Policymakers also greenlight financial rewards for shareholders investing in energy efficiency programs, thereby recognizing the value of these demand-side initiatives, and equating them to supply-side resource investments, such as distribution infrastructure, transportation capacity, and underground storage.

Recovery of Energy Efficiency Costs

Energy efficiency program costs are divided into two categories: direct costs and margin costs. Direct costs may be recovered in three ways: Through base rates, trackers (e.g., tariff riders, bill surcharges), or deferral accounts. Margin losses (and gains) are adjusted and recovered in one of two ways: Deferred and recovered via base rates (e.g., revenue decoupling, straight fixed variable rates, and rate stabilization) and/or via margin trackers (e.g., lost revenue adjustment mechanisms or LRAMs). These mechanisms are discussed in more details in the following sections.

Direct Program Cost Recovery

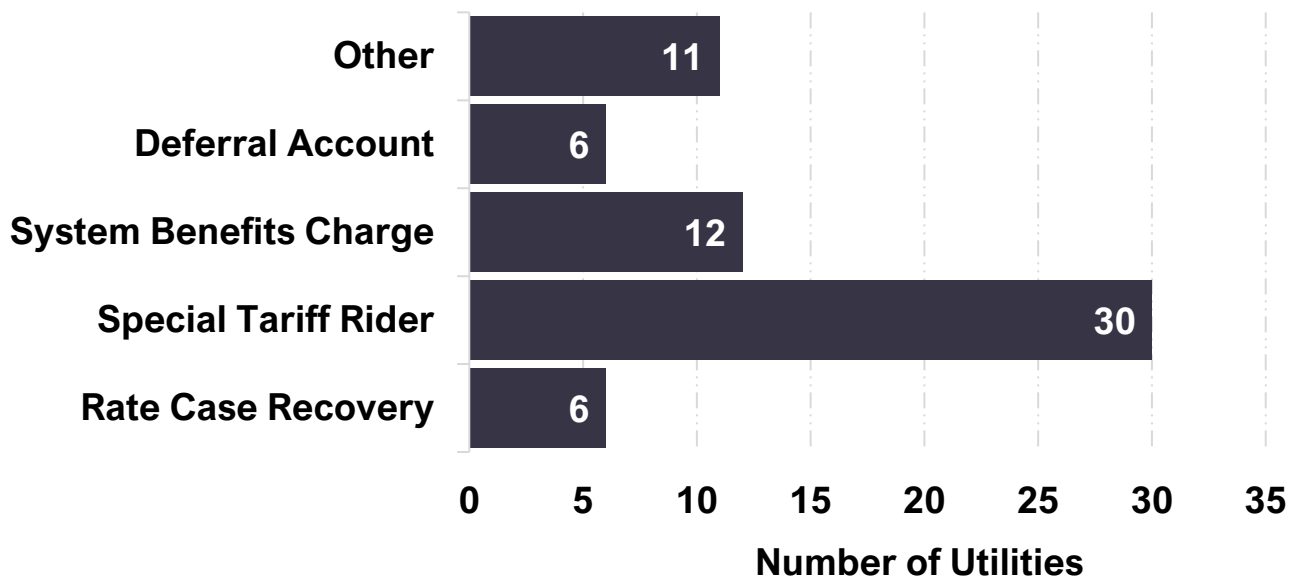
Direct cost recovery allows utilities to pass through efficiency costs to customers in one of three ways:

1. Program costs are treated as expenses that are embedded in base rates (or the charge per Therm) in a general rate case.
2. Efficiency program costs are recovered via a separate tariff rider or a surcharge on customer bills (also known as system benefits charge), and the surcharge amount may be adjusted periodically to correct for over or under-recovery of efficiency costs.
3. Program expenditures accrue and are tracked in a balancing account for amortization and later recovery from customers over a period of time.

According to 66 survey respondents, special tariffs or efficiency riders are currently the most common method for recovering program costs, which is consistent with previous years of this survey since 2011.

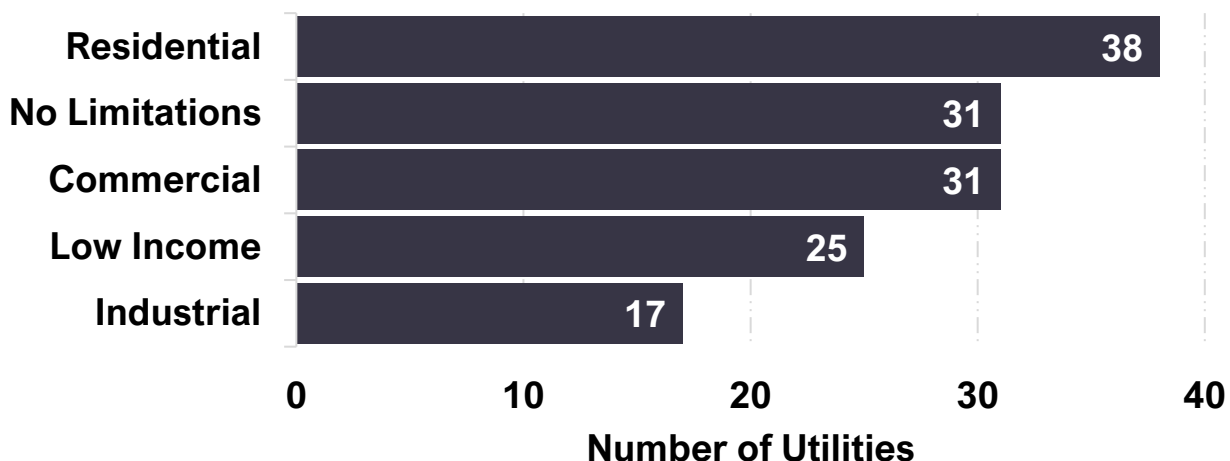
Thirty utilities use a special efficiency or conservation tariff rider, 12 apply a mandated system benefits (or public goods) surcharge to customer bills, 6 embed natural gas efficiency program costs in base rates, and 7 utilities track expenditures in a balancing account for amortization and later recovery over a period of time as seen in the figure below. Eleven companies used other methods to recover program costs of which 6 implement a combination of up to 3 recovery mechanisms. Other methods used include conservation adjustment mechanisms, annual true-up and collection rate adjustments and local distribution adjustment charges.

Regulator-Approved Gas Efficiency Direct Program Cost Recovery Mechanisms - 2020 (66 Utilities)



For some utilities, the recovery of energy efficiency program costs applies only to specific rate classes within their programs. Out of the 71 respondents to this question, 31 respondents reported not having any limitations, however this was not the case for the others. According to 38 respondents, residential programs had the highest applicability for the recovery of energy efficiency program costs. Commercial programs came tied for second with 31 responses. Industrial programs had 25 utility respondents reporting cost recovery, and industrial programs had 17.

Recovery of Energy Efficiency Program Costs by Rate Class- 2020 (71 Utilities)

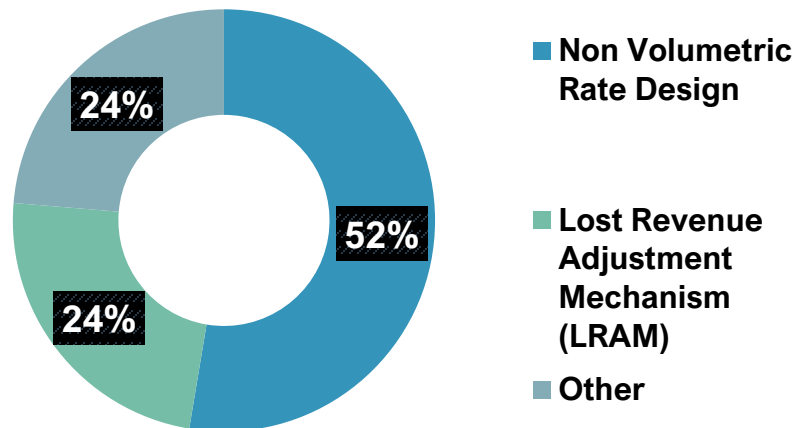


Lost Margin Recovery

More states are increasingly allowing the recovery of margin losses and revenue shortfalls resulting from the implementation of energy efficiency programs. This trend removes the disincentive for companies to invest in natural gas efficiency programs due to potential revenue

declines. Of the 67 companies which responded to this portion of the survey, 57 percent or 38 total respondents reported having an authorized mechanism for recovering lost margins correlating to energy efficiency program implementation. 28 respondents reported that they are not allowed to recover the revenue losses resulting from implementing efficiency programs. Methods for recovering efficiency-related lost margins vary. However, non-volumetric rate structures are the most common mechanism for recovery, utilized by over half of respondents who reported recovering these costs.

Approved Mechanisms for Recovering Lost Margins - 2020 (38 Utilities)



Revenue decoupling mechanisms may have different names, such as conservation enabling tariff, conservation incentive program, conservation margin tracker, conservation rider, and so on. Decoupling breaks the link between utility revenues or profits and gas throughput (or delivered volumes). It may be applied to total revenues or on a revenue-per-customer basis. When the recovered revenue varies from the allowed recovery amount, it is trued up via periodic rate adjustments to adjust for under or over-recovery. Revenue variances specific to efficiency may be tracked in a separate balancing or adjustment account and applied to the next rate adjustment. Decoupling takes on different forms:

1. Full revenue decoupling.
2. Partial revenue decoupling - where only a portion of losses are recovered.
3. Revenue decoupling with certain restrictions.

In some cases, the margin shortfall or surplus, specific to efficiency investments, is allowed to accrue in a deferral account, treated as a regulatory asset, and the recovery is amortized over a period of time, and normally applied to the class of customers benefiting from efficiency savings. Sometimes utilities may charge an annual interest rate on the unamortized balances, thus recovering the carrying cost on the deferred margins.

Partial revenue decoupling limits margin recovery to a specific percentage of revenues or must be equal to the achieved natural gas cost saving. Revenue decoupling with restrictions may involve caps on the authorized ROE or other limits on regulated earnings.

A revenue stabilization mechanism (also known as rate stabilization) is another form of non- volumetric rates, where utility revenues are de-linked from the amount of gas throughput. Rate stabilization combines lost margin recovery and recovery of operating costs within one mechanism. Here rates are adjusted periodically to adjust for variances in returns from the regulator-authorized return on equity (ROE) and for utility cost variances since the last rate adjustment.

With straight fixed variable rates, there are no revenue impacts resulting from efficiency programming, because most or all fixed costs are recovered via a non-volumetric charge. The per- customer charge remains stable regardless of consumption variances, approximating a flat monthly fee.

Non-Volumetric Rate Structures in the US 2020 (29 Utilities)	
Mechanism	Number of Companies
Full Revenue Decoupling	20
Partial Revenue Decoupling	2
Revenue Decoupling with Restrictions	6
Straight Fixed Variable	1

Utility Performance-Based Incentives

Performance targets are often conditions for capturing earnings on efficiency investments. The pre-determined goals may be set at certain investment levels, total energy savings, or the extent of cost-effective savings. Financial awards may be tiered according to performance thresholds: for example, for attaining at least a proportion of goals, meeting the target, or exceeding them. Penalties may apply if the utility falls short of the minimum requirements and incentives may be capped even if performance surpasses the maximum threshold and may involve a dead band where incentives are suspended within this performance range.

Rate of return incentives allows earnings on natural gas efficiency expenditures either equal to the utility's authorized return on equity (ROE) or at an enhanced level—an added or bonus ROE applied to efficiency investments. Incentive structures may involve a combination of these three mechanisms, making performance targets a prerequisite to shared savings or returns on efficiency investments.

Twenty-seven gas efficiency programs were identified as having utility performance-based incentives. When asked to identify all mechanisms that formed their incentives, respondents indicated having one of the following mechanisms: 4 utilities have a shared saving mechanism one had a rate of return (ROR) mechanism, and 17 companies have a bonus opportunity for meeting performance targets. Five reported having some other kind of mechanism, which includes those that have a combination of 2 or more different

kinds of incentives. The table below shows the various arrangements as reported by companies.

Utility Financial Incentive Structure Specific to Natural Gas Efficiency Program Implementation and Performance - 2020 Data	
Financial Incentive Mechanism	Number of Programs
Shared Savings	4
Rate of Return Incentive	1
Financial Reward or Bonus Opportunity for Meeting Specific Performance Targets or Goals	17
Other	5
Pending	1

Fuel Switching

Twenty-nine percent of respondents (19 of the 65 respondents to this section) reported that their regulator-approved natural gas efficiency program encourages fuel switching through financial incentives (e.g., rebates, loans and other benefits) to customers who install natural gas equipment in new homes, convert to natural gas from other fuels, or replace old equipment with new higher-efficiency natural gas equipment.

The programs that offered fuel conversion incentives to their customers varied by rate class. Thirteen utilities offered residential program incentives while 10 utilities offered commercial incentives. Seven utility participants offered fuel conversion incentives for the low-income rate class and 4 offered industrial customers the incentive as well. Seven respondents indicated that they did not offer fuel conversion incentives at all.

Thirteen respondents reported offering 2 or more rate classes the opportunity for fuel switching incentives of which 2 utilities were offering all four rate classes

incentives in their program. Three utilities indicated offering 3 rate classes the incentive and 8 utility participants offered 2 customer classes the fuel conversion incentives.

Four utilities were offering higher rebates for converting to natural gas and 6 participants offered the same rebate level to upgrade to a gas appliance. Three utilities offered other financial incentives including covering installment costs and rebates.

In this case, fuel switching can apply for electric, fuel oil, propane, or other energy sources to natural gas. Eleven utility programs offered the financial switching incentive to switch from two or more of the energy sources previously mentioned. The types of equipment that were included in the fuel switching incentives programs included a range of technologies from boilers, furnaces, water heaters, stoves/cooking ranges, dryers, HVAC, and space heating to combined heat & power. In addition to the numerous technologies that were included in the fuel switching program, there were also conditions/limitations that programs needed to work within. The most common constraint, according to utility participants, was that installed equipment must meet minimum efficiency levels followed by fuel switching being limited to certain applications or measures. Other limitations included cost-effectiveness requirements, customer cost-sharing, and city/state fuel substitution requirements.

The other 23 percent of participants (21 of 92 respondents) reported that they can encourage fuel switching through financial incentives, but not through their efficiency programs. When fuel switching was allowed utilities offered the financial incentive through other state-sponsored energy programs, voter-approved bonds, or other regulatory authorities.

According to 12 of 37 respondents, promoting fuel switching/converting to natural gas is expressly prohibited in their states. Seven of the twelve respondents are prohibited by regulators, while 2 utilities are limited by statute and 3 by both regulator and statute.

Green House Gas or Carbon Emissions Targets & Credits

Of the sixty-eight respondents, 32 percent confirmed that their state has a clear and measurable goal for greenhouse gas (GHG) or carbon reduction. When asked about regulator-approved methods to earn credits for GHG-reduction projects, such as renewable energy certificates or supporting wind farms, only 4 affirmed. Two respondents indicated they earn credits through program cost recovery, while the remaining two earn through return on investment. Additionally, 6 utilities mentioned that similar credit mechanisms are under consideration. Out of 83 respondents, 7 have obtained regulatory approval for cost recovery or earnings on projects primarily aimed at GHG emissions reduction, while 11 are considering such opportunities.

Appendices