

2021 ANNUAL REPORT

Energy Efficiency

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CleanVision and its relationship to Energy Efficiency¹

CleanVision is our ambitious goal of net zero carbon emissions by 2050. DTE will achieve our clean vision through many different efforts including clean energy sources, infrastructure improvements and by promoting energy efficiency.

CleanVision is the bridge between DTE's legislative requirements for Michigan and our consumer and corporate efficiency initiatives. It ties everything in the Energy Efficiency (EE) portfolio together under one banner.

For both residential and business customers, CleanVision perfectly answers the question, "How do we make the world a cleaner, better place for future generations?" It clarifies and reinforces our shared understanding that the choices we make today will have an effect on the planet tomorrow. It is our collective responsibility to do whatever it takes to make positive and lasting changes for a healthier planet and the Energy Efficiency portfolio helps us achieve those goals.

CleanVision is why DTE has energy efficiency programs.

¹ Please note, the terminology Energy Waste Reduction as referenced in Michigan's Public Act 342 is synonymously referred to as Energy Efficiency throughout this annual report.



Executive Summary

This annual report highlights the results of DTE Energy's (DTE's) 2021 Energy Efficiency (EE) Portfolio and summarizes changes and achievements of the portfolio's programs. The EE Portfolio comprises many specific programs within the Residential, Commercial and Industrial (C&I), Education and Awareness and Pilot programs.




The EE Portfolio launched in June 2009 as a result of the Clean, Renewable and Efficient Energy Act, also known as Public Act 295 (PA 295), and as amended by Public Act 342 of 2016 (PA 342). Michigan's Energy Efficiency (EE) standard requires all gas and electric utilities in the state to implement programs to reduce overall energy usage by specified targets to reduce the future costs of gas and electric service to customers. This report complies with Section 97(1) of PA 295. Figure 1 highlights the energy savings targets required by this legislation.


DTE built on its momentum from the 2009 EE Portfolio launch by enhancing the scope of existing programs and adding new program options to the portfolio. Customers have upgraded equipment in their homes and businesses, helping them to become more energy efficient. DTE has also provided its customers with education, tips, strategies and tools to help save money on their energy bills. As a result, customers have seen many benefits throughout the portfolio's existence, as Figure 1 indicates.

Figure 1

Figure 1



Electric



Gas

PA 295 Legislation Energy Savings Target Requirements	2009	0.3%	0.1%
	2010	0.5%	0.25%
	2011	0.75%	0.5%
	2012-2021*	1%	0.75%

Cumulative Customer Benefits: 2009-2021	Participants	7.7 million	3.8 million
	Customer Savings	8,203 GWh	19,575 MMcf

DTE EE Portfolio Benefits: PY2021	Total Verified Savings	944 GWh	2,179 MMcf
	Minimum Legislative Requirement	457 GWh	1,487 MMcf
	Percent of Planned Retail Sales	2.06%	1.10%
	Lifecycle \$ Savings	\$347 million	\$71 million

* Beyond 2021, the level of electric energy efficiency savings is determined by the utility's integrated resource plan.

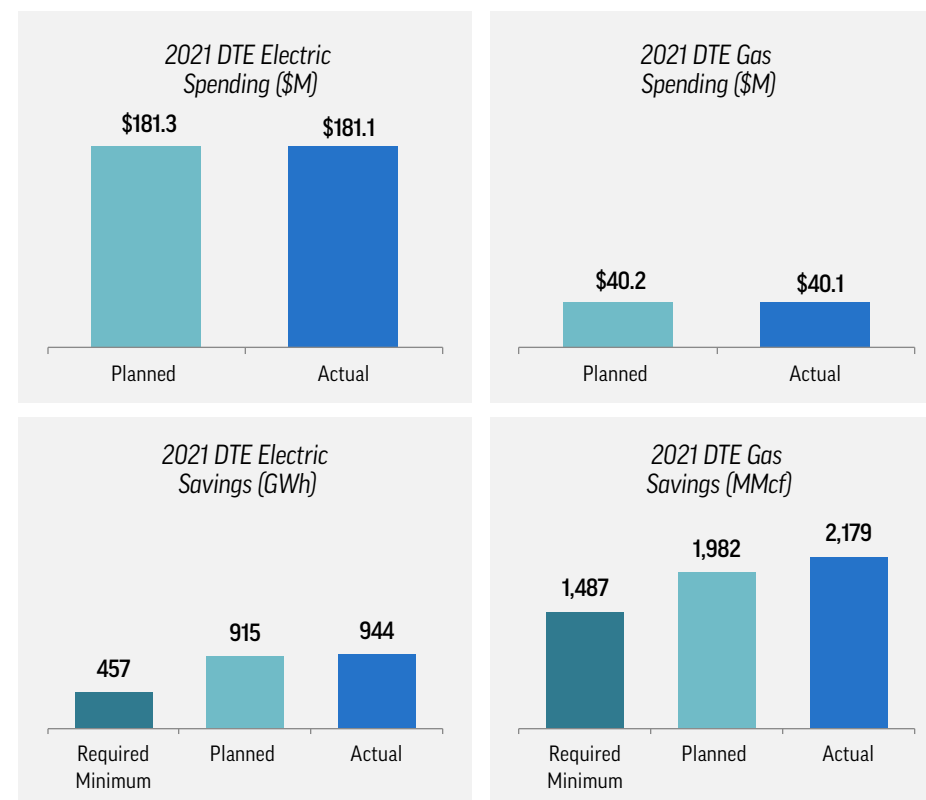
Chart 1 summarizes the overall EE Portfolio 2021 spending and verified net savings for DTE Electric and DTE Gas.

DTE performs cost-effectiveness tests to confirm the benefits of the EE Portfolio exceed the costs for DTE and its customers. DTE uses the Utility System Resource Cost Test (USRCT) to measure the effectiveness of the EE Portfolio. Specifically, the goal of the EE Portfolio (not including Low-Income programs) is to meet the minimum required USRCT ratio of 1.00.¹ In 2021, DTE Electric achieved a USRCT ratio of 1.88 and DTE Gas achieved a USRCT ratio of 1.94. In 2021, DTE's combined electric and gas savings equal lifetime greenhouse gas reductions of 6.8 million metric tons of carbon dioxide (CO₂), 3,218 metric tons of nitric oxide (NO_x), and 4,174 metric tons of sulfur dioxide (SO₂).

In 2021, DTE implemented its EE Portfolio as outlined in the 2020-2021 EE Plan. DTE used implementation contractors (ICs) and built strong networks to deliver energy efficiency programs throughout Michigan that focus on:

- Providing energy efficiency education and raising awareness of EE offerings by enhancing communications and messaging while leveraging new trends in digital and social media communication channels.
- Continuing to use targeted marketing to meet segment-specific needs for energy efficiency information while also using traditional mass media focused on the benefits of energy efficiency improvements.
- Increasing DTE's Pilot program productivity; over the years, DTE's ability to run the Pilot program effectively has continued to improve through maturity of systems and back-office processes.

Chart 1 – 2021 EE Portfolio Spending and Verified Net Savings



¹ The calculations exclude Low-Income programs per Section 71(4) (g) as amended by PA 342, which specifically excludes Low-Income in the cost-effectiveness requirement.



Portfolio Summary

Goals and Targets

The operational goal of DTE's 2021 EE Portfolio was to maintain the momentum the portfolio has achieved since its launch in 2009 by continuing to grow customer acceptance and adoption of EE measures. Specifically, the 2021 goals were to:

1. Achieve electric energy savings of 2% of 2020 planned retail sales, or 915 gigawatt-hours (GWh), and legislated gas energy savings of 1% of 2020, planned retail sales, or 1,982 million cubic feet (MMcf).
2. Ensure EE programs are cost-effective. DTE performs cost-effectiveness tests to confirm the benefits of the EE Portfolio exceed the costs for DTE and its customers. DTE uses the Utility System Resource Cost Test (USRCT) to measure the effectiveness of the various EE programs. Specifically, the EE Portfolio's goal (not including Low-Income programs) is to meet the minimum required USRCT ratio of 1.0.

Spending and Savings

Verified net energy savings are DTE's reported savings after they have been adjusted based on the results of an evaluation and analysis by its independent evaluation contractor, Guidehouse, and the installation rate adjustment factors (IRAFs) and net-to-gross ratios (NTGRs) have been applied.² An IRAF is applied to account for rebated measures that are no longer or were never installed and operational. A NTGR is applied to account for the difference in energy consumption with the program in place versus what consumption would have been without the program in place.

In 2021, DTE applied a 0.92 NTGR to most programs. DTE applied different NTGRs to some programs or measures, including:

- 1.00 for Low-Income, Pilots and Education and Awareness.
- 0.54 for standard and 0.67 for reflector light-emitting diode (LED) bulbs in the Residential ENERGY STAR® Products program as approved by the MPSC on September 10, 2020, for DTE's 2021-2022 EE Plan, Case No. U-20373.

A NTGR was not applied to the following programs or measures because savings represent verified net savings:

- Tier 1 thermostats delivered by Commercial and Industrial (C&I) programs
- Tier 2 and 3 thermostats delivered by Residential programs
- Home Energy Reports program

Evaluation, Measurement, and Verification

Michigan's EE construct requires independent verification of utilities' claimed energy savings. This work is performed by an independent evaluation, measurement and verification (EM&V) contractor and must be performed to industry standards and guidelines developed by the Evaluation Workgroup of the Michigan Public Service Commission (MPSC) EE Collaborative. Guidehouse Inc. (Guidehouse) fills this role for DTE.

DTE and its evaluation contractor are active participants in the Evaluation Workgroup, along with Consumers Energy, other cooperative and municipal utilities and their respective evaluation contractors as well as the MPSC staff. In addition to developing guidelines for evaluation, members of the Evaluation Workgroup established a statewide resource for technical energy savings values for thousands of energy efficient measures, the Michigan Energy Measures Database (MEMD). The MEMD enables fast and efficient entry, tracking and evaluation for most measures installed in Michigan EE programs regardless of program provider.

The MEMD is managed by the MPSC. The Technical Subcommittee oversees the management and updating of the MEMD. Updating measure values to reflect changes in standards, incorporating newer studies and making them more representative of Michigan follows a well-defined process involving all stakeholders. DTE and Consumers Energy work together with their evaluation contractors to conduct foundational research on important measures to develop up-to-date Michigan-based values. Since 2009, numerous additions and calibrations have been made to the MEMD to make the values more encompassing, accurate and Michigan-specific.

² The IRAF is typically applied based on a 2-year lag of an evaluated result. For example, in 2021, the 2019 evaluated measure-level IRAF is applied to audited gross savings to determine verified gross savings. Exceptions to this rule include new measures, custom programs, deemed programs (Pilots, Education and Awareness, etc.), and measures whose MEMD savings are verified net (Tier 1 commercial thermostats).

Chart 2 – 2021 EE Portfolio Spending and Verified Net Savings

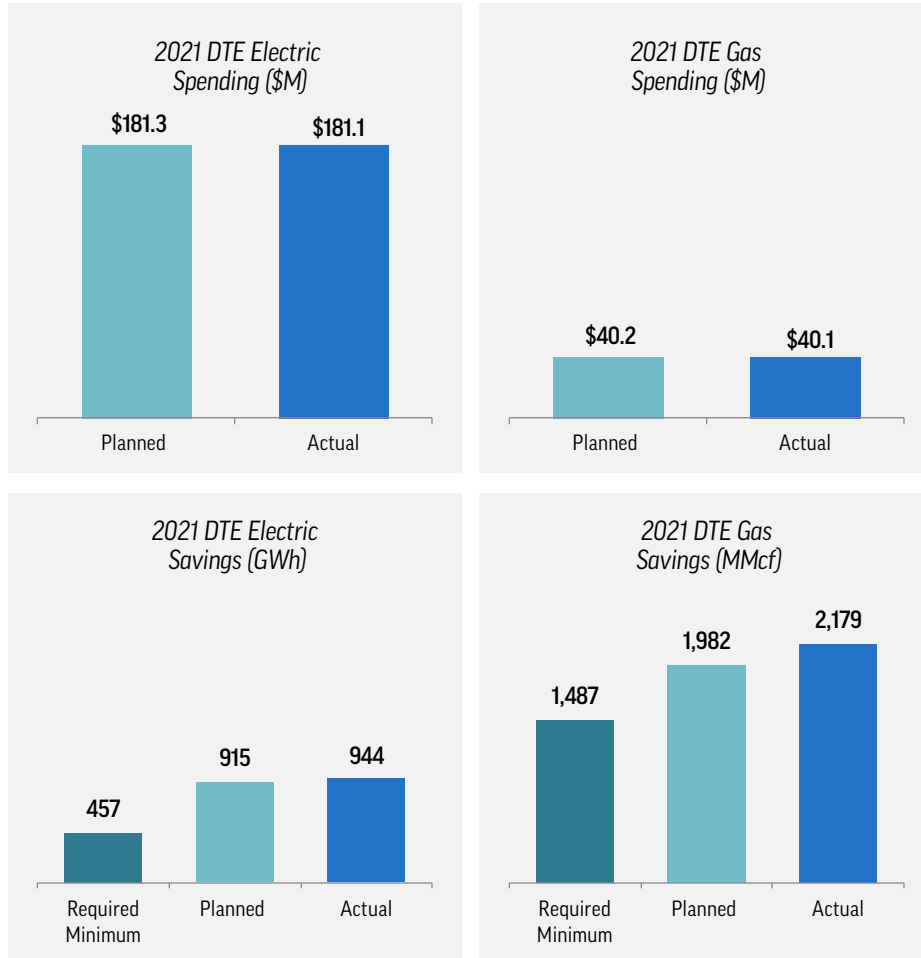
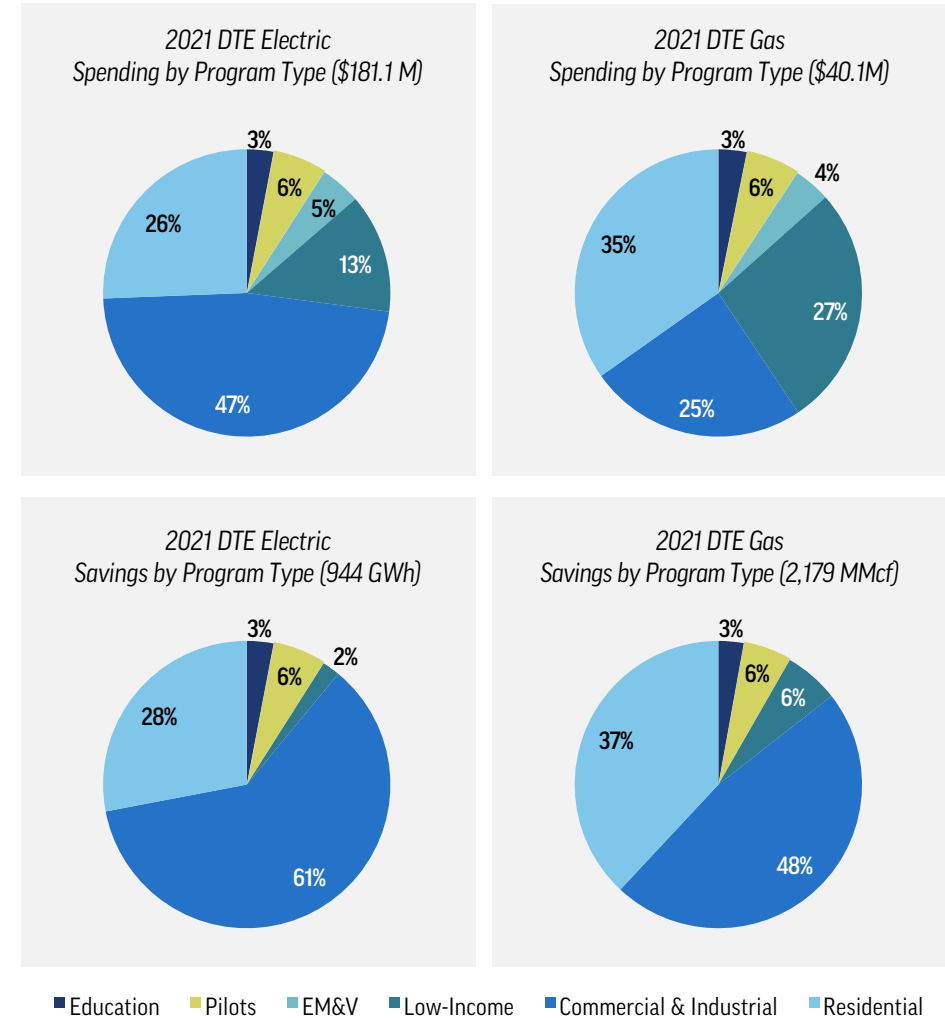


Chart 3 – 2021 EE Spending and Verified Net Energy Savings by Program Type



Long-Term EE Impacts

DTE also considers metrics beyond the first-year energy savings goals set out in Public Act 295 (PA 295 as amended by PA 342) toward longer-term impacts; these areas include overall lifecycle savings, both in dollars and energy; the average life of measures being installed; and reduction in future peak demand. This section provides definitions and the 2021 EE Portfolio results for these long-term metrics.

Lifecycle dollar savings: Represents the dollar savings resulting from current and future energy costs avoided as a result of an energy efficiency action over the effective life of that action. Lifecycle dollar savings may be presented for a collection of measures, an individual program or a portfolio of programs. The lifecycle dollar savings for DTE's programs are based on verified net savings. Lifecycle dollar savings are presented as the present value of those savings.³

Table 1 shows that DTE's 2021 EE programs produced significant dollar savings for its customers for future years.

Table 1 – DTE 2021 EE Portfolio – Lifecycle Dollar Savings (All Values in Dollars)

	Program	DTE Electric Present Value	DTE Gas Present Value
RESIDENTIAL	Appliance Recycling	\$10,792,831.80	-
	Audit and Weatherization	\$871,341.06	\$2,242,756.70
	DTE Insight	\$0.00	\$0.00
	ENERGY STAR® Products	\$24,200,132.09	\$597,950.01
	Heating, Ventilation, and Air Conditioning	\$4,227,486.07	\$11,574,236.72
	Home Energy Consultation	\$1,621,467.05	\$1,964,282.90
	Home Energy Efficiency Kits	\$1,375,511.76	\$1,322,726.79
	Home Energy Reports	\$3,823,266.25	\$785,191.26
	Multifamily	\$167,809.44	\$199,974.77
	New Home Construction	\$1,875,464.01	\$3,099,343.46
	Revolving Loan Fund	\$12,323.20	\$76,628.56
	School Program	\$1,290,155.61	\$2,759,590.73
	Residential Subtotal	\$50,257,788.33	\$24,622,681.89
LOW-INCOME	Low Income – Energy Efficiency Assistance	\$2,159,399.87	\$2,098,927.15
	Low Income – Multifamily	\$3,792,024.77	\$1,310,710.80
	Low Income – Home Energy Consultation	\$570,976.13	\$1,004,088.50
	Low-Income Subtotals	\$6,522,400.77	\$4,413,726.45
C & I	Prescriptive	\$122,829,440.28	\$16,678,837.39
	Non-Prescriptive	\$77,931,350.00	\$13,096,068.26
	ENERGY STAR Retail Lighting	\$5,231,435.90	-
	C&I Multifamily Common Areas	\$948,001.33	\$33,485.34
	Midstream Lighting	\$31,715,805.85	-
	Midstream Food Service	\$661,885.45	\$656,609.12
	Midstream HVAC	\$5,324,151.05	-
	Retro-Commissioning	\$1,190,920.97	\$142,536.84
	Strategic Energy Management	\$1,408,985.24	\$937,351.80
	Self-Direct Program	\$1,530,111.39	-
	Business Energy Consultation	\$1,806,818.17	\$942,412.66
	Emerging Measures and Approaches	\$9,021,014.50	\$3,380,402.61
	C&I Subtotal	\$259,599,920.11	\$35,867,704.02
	Pilot Programs	\$20,331,798.87	\$4,302,573.00
	Education and Awareness Program	\$10,761,139.84	\$2,239,137.57
	Portfolio	\$347,473,047.93	\$71,445,822.93

³ Lifecycle dollar savings is not net of program expenses and includes line losses.

Lifecycle energy savings: Represents the total cumulative program energy savings (GWh or MMcf) produced by the energy-saving actions taken for all years of the particular action's effective life. Lifecycle energy savings represent verified net energy savings.

Table 2 displays the long-term energy savings associated with the cost savings listed in Table 1.

Table 2 – DTE 2021 EE Portfolio – Lifecycle Energy Savings

	Program	DTE Electric MWh: Cumulative Savings (Losses Included)	DTE Gas Mcf: Cumulative Savings (Losses Included)
RESIDENTIAL	Appliance Recycling	268,771.92	-
	Audit and Weatherization	25,362.72	962,601.04
	DTE Insight	0.00	0.00
	ENERGY STAR® Products	564,506.60	194,760.83
	Heating, Ventilation, and Air Conditioning	98,103.15	4,248,567.72
	Home Energy Consultation	38,285.00	666,145.88
	Home Energy Efficiency Kits	35,580.09	470,264.10
	Home Energy Reports	75,194.71	206,442.39
	Multifamily	4,165.31	64,505.25
	New Home Construction	41,910.97	1,222,433.77
	Revolving Loan Fund	250.90	29,290.09
	School Program	34,714.63	960,395.45
	Residential Subtotal	1,186,846.00	9,025,406.54
LOW-INCOME	Low Income – Energy Efficiency Assistance	56,628.28	781,425.11
	Low Income – Multifamily	111,364.74	433,085.55
	Low Income – Home Energy Consultation	13,621.05	343,268.30
	Low-Income Subtotals	181,614.07	1,557,778.95
C & I	Prescriptive	3,518,681.57	6,435,518.60
	Non-Prescriptive	2,251,333.67	4,985,607.46
	ENERGY STAR Retail Lighting	109,302.96	-
	C&I Multifamily Common Areas	28,560.98	11,355.57
	Midstream Lighting	810,070.94	-
	Midstream Food Service	18,275.51	242,666.61
	Midstream HVAC	131,192.00	-
	Retro-Commissioning	31,049.16	41,191.41
	Strategic Energy Management	34,308.82	262,549.21
	Self-Direct Program	42,610.00	-
	Business Energy Consultation	46,329.46	313,085.23
	Emerging Measures and Approaches	253,351.97	1,296,807.67
	C&I Subtotal	7,275,067.04	13,588,781.75
	Pilot Programs	535,594.96	1,504,389.36
	Education and Awareness Program	263,109.28	782,575.82
	Portfolio	9,442,231.34	26,458,932.42

Cost of conserved energy: Expresses the measure, program or portfolio costs in per-unit terms based on the total energy savings over the effective lifecycle of the specific measures or actions taken. The starting point is net energy savings.

Table 3 summarizes the levelized cost of energy and demand saved for each EE program per unit of the energy savings achieved.

Table 3 – DTE 2021 EE Portfolio – DTE Cost of Conserved Energy

	Program	DTE Electric \$/Lifetime Savings (kWh)	DTE Gas \$/Lifetime Savings (CCF)
RESIDENTIAL	Appliance Recycling	\$0.03	-
	Audit and Weatherization	\$0.05	\$0.18
	DTE Insight	\$0.00	\$0.00
	ENERGY STAR® Products	\$0.03	\$0.16
	Heating, Ventilation, and Air Conditioning	\$0.05	\$0.11
	Home Energy Consultation	\$0.12	\$0.33
	Home Energy Efficiency Kits	\$0.05	\$0.14
	Home Energy Reports	\$0.04	\$0.19
	Multifamily	\$0.11	\$0.42
	New Home Construction	\$0.03	\$0.10
	Revolving Loan Fund	\$0.41	\$0.79
	School Program	\$0.04	\$0.10
	Residential Subtotal	\$0.04	\$0.20
LOW-INCOME	Low Income – Energy Efficiency Assistance	\$0.22	\$0.90
	Low Income – Multifamily	\$0.06	\$0.48
	Low Income – Home Energy Consultation	\$0.24	\$0.31
	Low-Income Subtotals	\$0.13	\$0.65
C & I	Prescriptive	\$0.01	\$0.05
	Non-Prescriptive	\$0.01	\$0.05
	ENERGY STAR Retail Lighting	\$0.01	-
	C&I Multifamily Common Areas	\$0.02	\$0.45
	Midstream Lighting	\$0.00	-
	Midstream Food Service	\$0.03	\$0.19
	Midstream HVAC	\$0.02	-
	Retro-Commissioning	\$0.10	\$0.59
	Strategic Energy Management	\$0.07	\$0.19
	Self-Direct Program	\$0.00	-
	Business Energy Consultation	\$0.05	\$0.23
	Emerging Measures and Approaches	\$0.03	\$0.12
	C&I Subtotal	\$0.01	\$0.09
	Pilot Programs	\$0.02	\$0.15
	Education and Awareness Program	\$0.02	\$0.15
	Portfolio	\$0.02	\$0.14

Weighted average measure life: Represents the average life, in years, of all measures installed or actions taken in a program or the entire portfolio when each measure's life is weighted by the energy savings it produces relative to the total energy savings in the program or portfolio.

Table 4 summarizes the weighted average measure life for the various 2021 EE programs at the individual program level and for the program as a whole.

Greenhouse gas reductions: In 2021, DTE's combined electric and gas verified net savings from EE programs equal lifetime greenhouse gas reductions of 6.8 million metric tons of carbon dioxide (CO₂), 3,218 metric tons of nitric oxide (NO_x), and 4,174 metric tons of sulfur dioxide (SO₂).

Table 4 – DTE 2021 EE Portfolio – DTE Weighted Average Measure Life

	Program	DTE Electric (kWh) Program Weighted Life	DTE Gas (CCF) Program Weighted Life
RESIDENTIAL	Appliance Recycling	7.99	-
	Audit and Weatherization	24.20	23.40
	DTE Insight	0.00	-
	ENERGY STAR® Products	3.96	9.07
	Heating, Ventilation, and Air Conditioning	12.22	14.24
	Home Energy Consultation	4.27	10.44
	Home Energy Efficiency Kits	6.00	12.38
	Home Energy Reports	1.00	1.00
	Multifamily	4.71	5.50
	New Home Construction	17.55	18.00
	Revolving Loan Fund	10.90	16.29
	School Program	8.17	11.46
	Residential Subtotal	4.20	10.84
LOW-INCOME	Low Income – Energy Efficiency Assistance	5.67	14.99
	Low Income – Multifamily	11.37	7.57
	Low Income – Home Energy Consultation	4.31	10.74
	Low-Income Subtotals	7.91	11.03
C & I	Prescriptive	12.82	13.63
	Non-Prescriptive	14.56	14.98
	ENERGY STAR Retail Lighting	3.38	-
	C&I Multifamily Common Areas	12.60	4.75
	Midstream Lighting	10.57	-
	Midstream Food Service	12.49	13.86
	Midstream HVAC	16.08	-
	Retro-Commissioning	4.34	3.00
	Strategic Energy Management	2.27	2.06
	Self-Direct Program	9.40	-
	Business Energy Consultation	8.21	9.97
	Emerging Measures and Approaches	8.10	13.54
	C&I Subtotal	11.87	12.43
	Pilot Programs	9.40	11.69
	Education and Awareness Program	9.40	11.69
	Portfolio	9.40	11.69

Peak Demand Reduction (kilowatts, or kW)

Electric EE programs can deliver peak demand reductions to minimize the need for future power plants. Peak demand reduction represents the aggregate reduction from EE program participants in DTE Electric's service area load at the time of the Michigan zone of the Midwest Independent System Operator market's expected peak demand.

Table 5 shows that the DTE Electric 2021 EE programs achieved significant demand reductions and energy savings.⁴

⁴ Line losses are not included.

Table 5 – DTE 2021 EE Portfolio – DTE Electric Peak Demand Savings

	Program	2021 Verified Net Peak Demand Savings (MW)
RESIDENTIAL	Appliance Recycling	3.82
	Audit and Weatherization	0.28
	DTE Insight	-
	ENERGY STAR® Products	13.38
	Heating, Ventilation, and Air Conditioning	2.16
	Home Energy Consultation	0.87
	Home Energy Efficiency Kits	0.51
	Home Energy Reports	15.98
	Multifamily	0.06
	New Home Construction	1.32
	Revolving Loan Fund	0.01
	School Program	0.36
	Residential Subtotal	38.76
LOW-INCOME	Low Income – Energy Efficiency Assistance	0.94
	Low Income – Multifamily	0.48
	Low Income – Home Energy Consultation	0.30
	Low-Income Subtotals	1.73
C & I	Prescriptive	43.41
	Non-Prescriptive	21.42
	ENERGY STAR Retail Lighting	5.64
	C&I Multifamily Common Areas	0.07
	Midstream Lighting	19.70
	Midstream Food Service	0.26
	Midstream HVAC	3.54
	Retro-Commissioning	0.00
	Strategic Energy Management	0.00
	Self-Direct Program	0.76
	Business Energy Consultation	0.68
	Emerging Measures and Approaches	2.67
	C&I Subtotal	98.15
	Pilot Programs	8.97
	Education and Awareness Program	4.41
	Portfolio	152.01

Cost-Effectiveness

Per Section 97(1) of PA 295, electric and gas utility providers must offer a cost-effective EE portfolio to customers; while the portfolio must include low-income programs, these programs are not included in the cost-effectiveness tests. Cost-effectiveness tests are performed to confirm the benefits of DTE's EE portfolio exceed the costs for DTE and its customers. Providers must demonstrate the EE programs (excluding offerings to low-income customers) meet the USRCT and are reasonable and prudent.

DTE used the DSM⁵ cost analysis tool to calculate the USRCT cost-effectiveness at the program level and for groups of programs, including the Low-Income programs, Residential programs, and C&I programs. USRCT is a cost-effectiveness test that measures cost-effectiveness from the viewpoint of DTE and ensures the benefits for all programs will exceed the costs.

Two major groups of inputs are used in DSM⁵: utility input assumptions and program inputs.

- Utility input assumptions contain information specific to DTE and include items such as load shape, the commodity and non-commodity cost of energy, customer energy rates, line losses, weather and discount rates. The utility input assumptions used are primarily the same as those used to develop DTE Electric's and DTE Gas's approved 2021-2022 EE Plans.
- Program inputs include measure-level electric and gas energy savings, measure-level coincident peak demand reductions, the number of measures adopted by participants, incremental participant costs, customer incentive costs, program costs, performance incentive costs, education costs and pilot costs.

⁵ Demand Side Management Option Risk Evaluator (DSM⁵) is a financial analysis tool designed to evaluate the costs, benefits, and risks of demand side management programs, including energy efficiency, demand response, and smart grid programs and services.

Table 6 – Cost-Effectiveness Values

	Program	DTE Electric (USRCT)	DTE Gas (USRCT)
RESIDENTIAL	Appliance Recycling	1.47	-
	Audit and Weatherization	0.62	1.26
	DTE Insight	0.00	0.00
	ENERGY STAR® Products	1.62	1.93
	Heating, Ventilation, and Air Conditioning	0.88	2.38
	Home Energy Consultation	0.35	0.88
	Home Energy Efficiency Kits	0.86	1.99
	Home Energy Reports	1.18	1.95
	Multifamily	0.38	0.73
	New Home Construction	1.59	2.42
	Revolving Loan Fund	0.12	0.33
	School Program	0.87	3.02
	Residential Subtotal	0.97	1.35
LOW-INCOME	Low Income – Energy Efficiency Assistance	0.17	0.30
	Low Income – Multifamily	0.54	0.63
	Low Income – Home Energy Consultation	0.18	0.93
	Low-Income Subtotals	0.29	0.43
C & I	Prescriptive	4.13	5.55
	Non-Prescriptive	2.95	5.00
	ENERGY STAR Retail Lighting	6.33	-
	C&I Multifamily Common Areas	1.50	0.66
	Midstream Lighting	7.84	-
	Midstream Food Service	1.04	1.43
	Midstream HVAC	2.39	-
	Retro-Commissioning	0.38	0.59
	Strategic Energy Management	0.60	1.91
	Self-Direct Program	32.63	-
	Business Energy Consultation	0.76	1.32
	Emerging Measures and Approaches	1.14	2.12
	C&I Subtotal	2.46	2.94
	Pilot Programs	1.96	1.89
	Education and Awareness Program	2.12	1.89
	Portfolio	1.88	1.94

Portfolio Revenue (Surcharges)

Base surcharge revenue reflects EE actual revenue realized excluding the revenue recovery for authorized performance incentives. These surcharges appear within the Other Delivery Surcharges line item on a customer's monthly bill statement.

The amount of the surcharge depends on the rate class – Residential, C&I Secondary or C&I Primary and End Use Transportation (EUT). Residential customers pay a volumetric rate, so a customer's individual surcharge depends on how much energy they use. For C&I electric customers, the total amount paid is also based on the number of meters because they pay a monthly per-meter charge determined by their monthly consumption. Funds received from a customer class – Residential, C&I Secondary and C&I Primary – should, to the extent possible, be spent on EE programs that benefit that rate class. All classes contribute to the Low-Income Residential program.

Chart 4 displays the actual amounts billed to DTE customers (excluding the performance incentive) in 2021 through the EE surcharges approved by the MPSC by customer type. Chart 5 displays revenue collected for the EE Portfolio in 2021 by customer type.

The actual electric revenue from the Residential class is higher than the plan due to the variance between actual and forecasted sales. This is primarily driven by continued increased usage due to people working from home and general changes in usage patterns compared to the plan case. C&I revenue variances are due to a fluctuation in the consumption level break points for the surcharge in the C&I classes and variances in forecasted meter counts, with C&I secondary revenue slightly lower and C&I primary revenue slightly higher. The actual gas revenue from all customer classes varies slightly from the plan due to the variance between actual and forecasted sales, with Residential revenue slightly higher and C&I/EUT revenue slightly lower.

Chart 4 – 2021 EE Portfolio Revenue Collected (Surcharges)

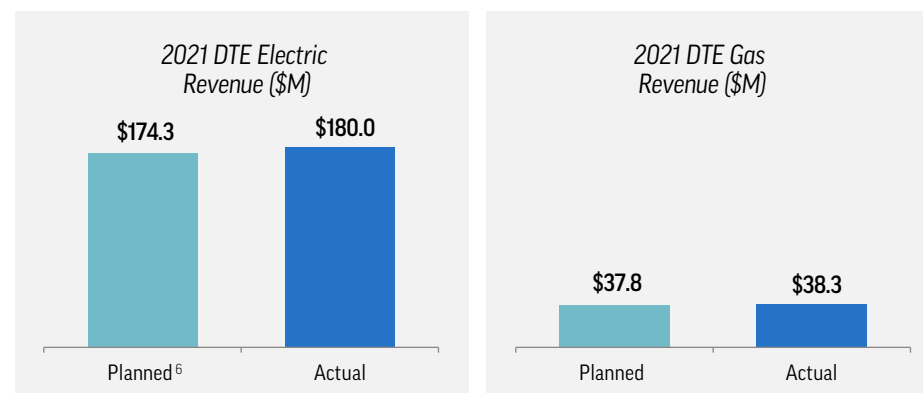
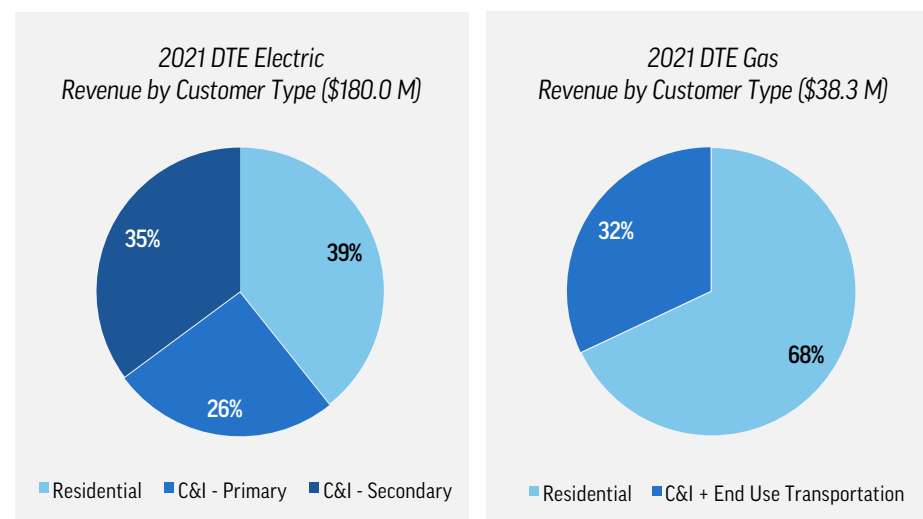


Chart 5 – Revenue Collected for EE Portfolio in 2021 by Customer Type



⁶ Planned revenue amounts derived from approved Settlement Agreement dated September 10, 2020 in Case No. U-20373 Amended

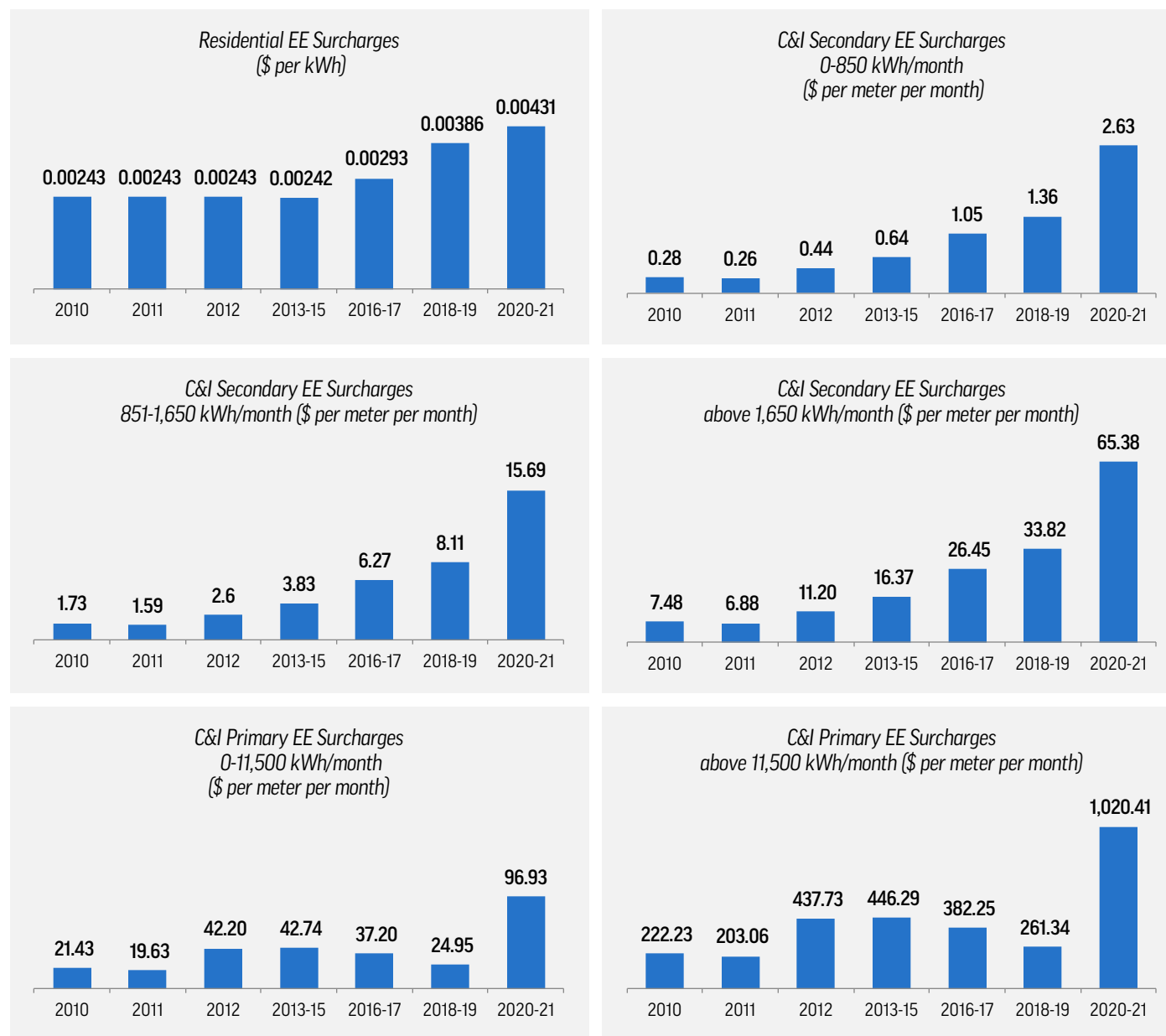
Electric Surcharge

During 2021, one EE electric base surcharge was authorized for collection:

- January 1, 2021 to December 31, 2021, per the Commission's September 10, 2020 order in Case No. U-20373 (Amended 2020-2021 EE Plan)

Chart 6 outlines the 2021 EE base electric surcharges compared to previous years. These charts exclude the performance incentive.

Chart 6 – DTE Electric Surcharges



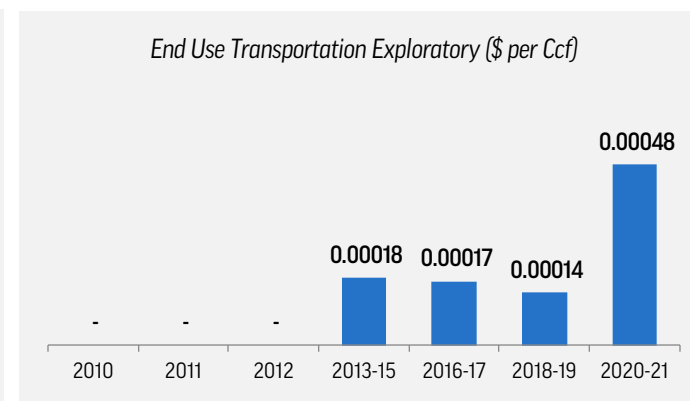
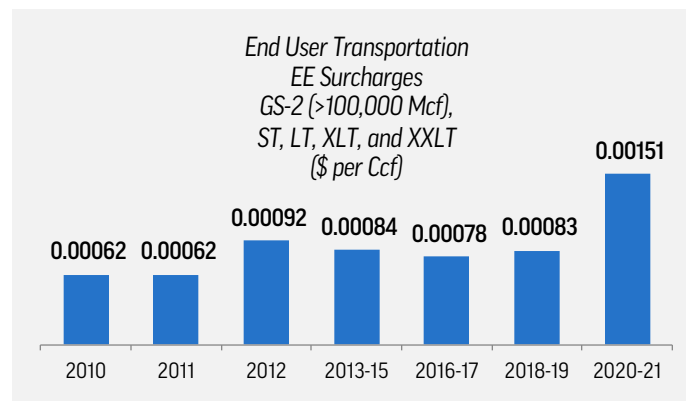
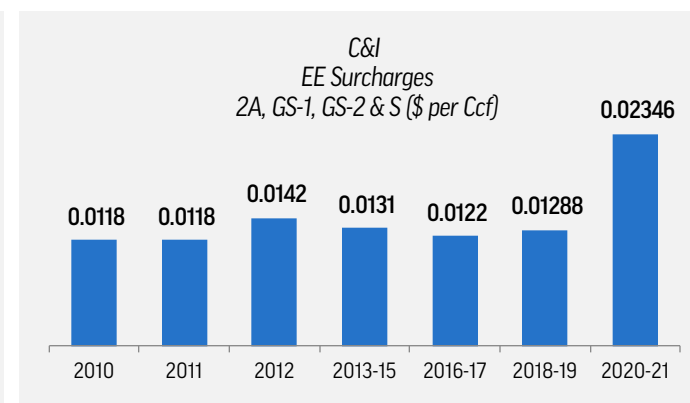
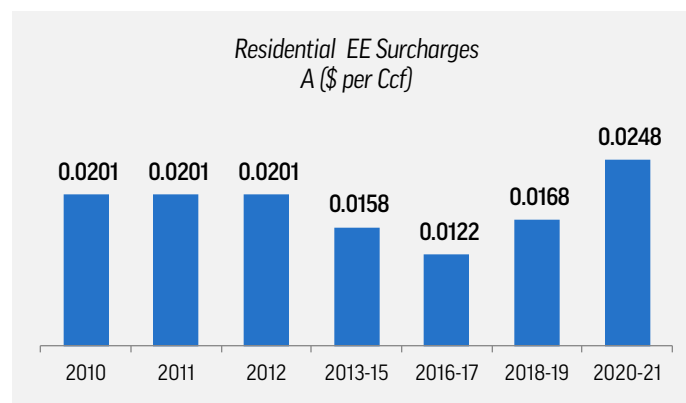
Gas Surcharge

During 2021, DTE Gas billed one base surcharge:

- January 1, 2021 to December 31, 2021, approved by the Commission on November 19, 2020 in Case No. U-20429 (2020-2021 EE Plan)

Chart 7 outlines the 2021 EE base gas surcharges compared to previous years. These charts exclude the performance incentive.

Chart 7 – DTE Gas Surcharges



Program Participation

EE programs have experienced strong participation each year since 2009, with over 7.7 million electric and over 3.8 million gas customers directly participating in DTE's energy efficiency programs.⁷

Chart 8 and Chart 9 summarize the number of customers participating in the EE Portfolio by year.

Chart 8 – EE Portfolio Electric Participation

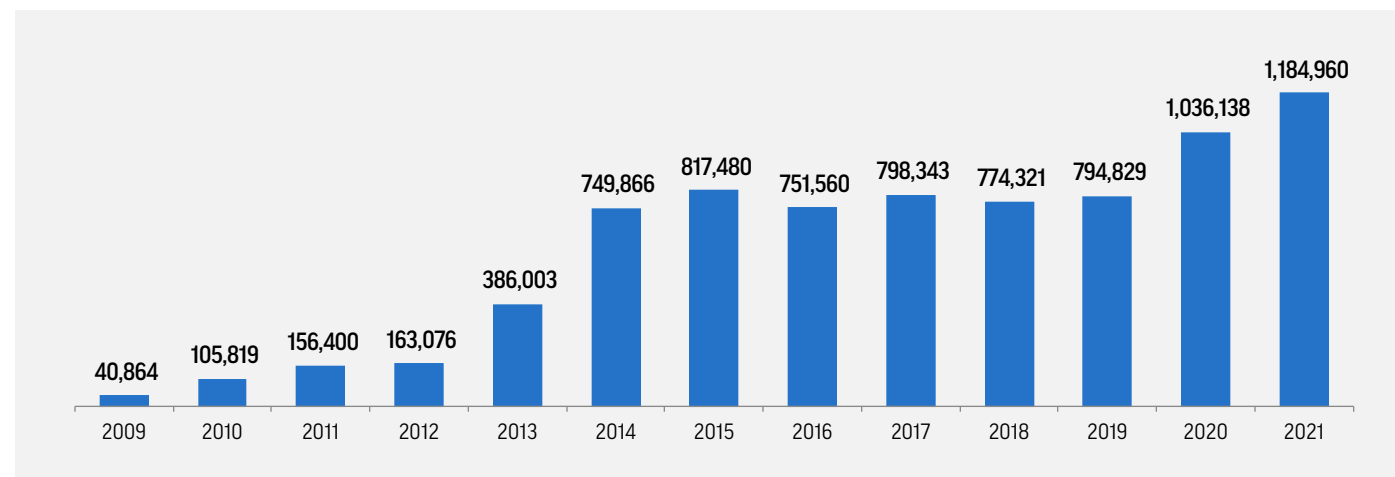
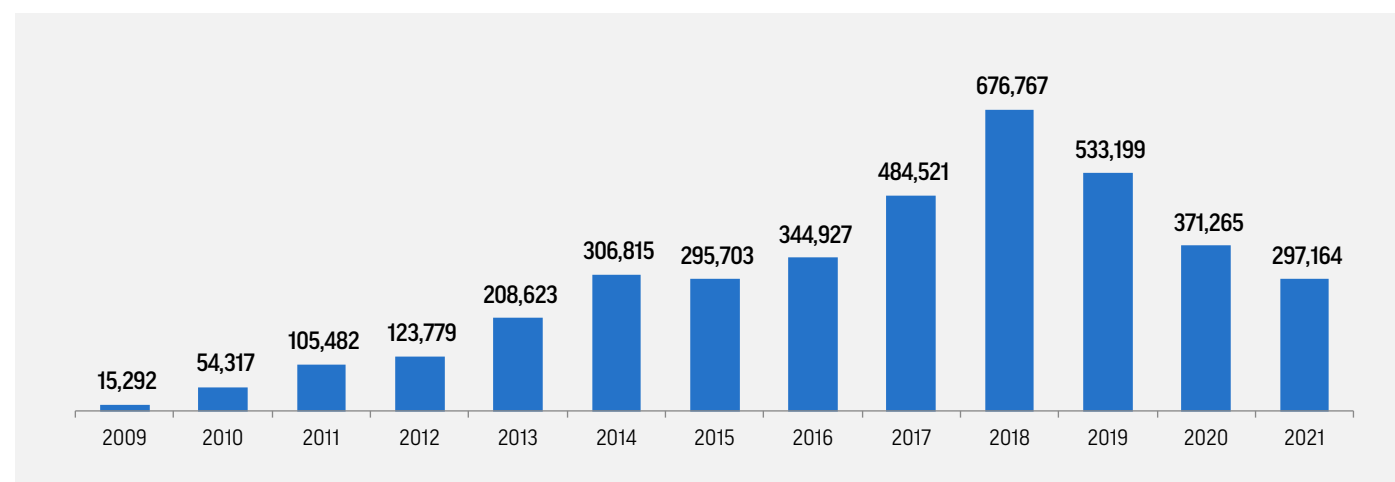
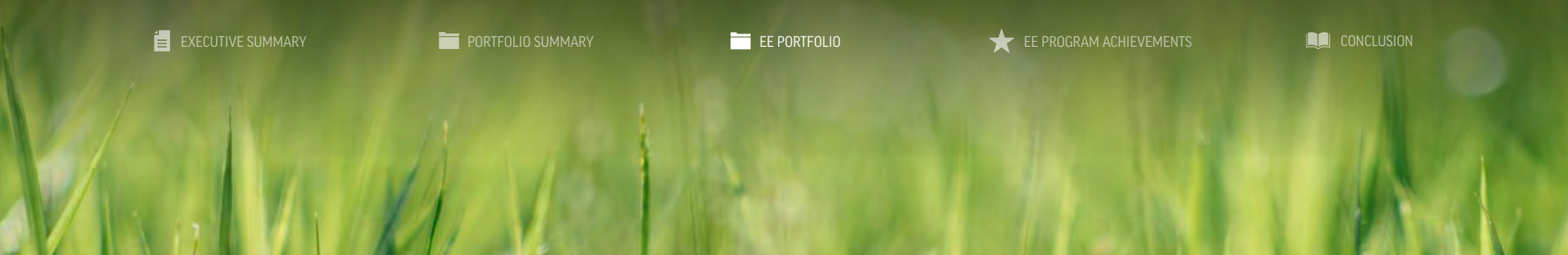


Chart 9 – EE Portfolio Gas Participation



⁷ Customers may participate in more than one EE program.



EE Portfolio

DTE's EE Portfolio is designed to help reduce customer energy use by increasing customer awareness and use of energy-saving technologies. The portfolio provides products and services such as rebates, tips, tools, strategies and energy efficiency education to help customers make informed energy-saving decisions.

Many of the 2021 programs were continuations of programs launched in prior years, but several new programs were also implemented. DTE continually works to offer EE programs that ensure all customer segments are encouraged to participate. Programs are designed to capture electric and natural gas savings. For customers with only electric or only natural gas service, DTE coordinates and aligns with other utilities so these customers can easily participate in energy efficiency program offerings across both fuel types.

Portfolio Offerings

The EE Portfolio includes offerings available to residential and C&I customers as well as pilot and general education and awareness programs. The DTE EM&V function verifies net energy savings reported by the EE Portfolio. The programs are managed by DTE program managers and operated by implementation contractors (ICs), primarily using local labor and products.

Each program offers a combination of energy efficiency products, customer incentives or rebates and education. The following is an overview of each program category:

- Residential programs offer homeowners products, services and rebates including appliance recycling; lighting; appliances; heating, ventilating and air conditioning (HVAC); weatherization; home energy assessments; and low-income, energy education and behavioral programs.
- C&I programs offer businesses products and services; prescriptive rebates for specific equipment replacement such as lighting, boilers, pumps and compressors; custom programs providing rebates per kilowatt-hour (kWh) of electricity savings or per thousand cubic feet (Mcf) of natural gas savings for a comprehensive system or industrial process improvement; and operational improvement programs.
- Pilot programs focus on new and emerging experimental programs to fit longer-term program portfolio needs, test the cost-effectiveness of emerging technologies and assess customer adoption of new technologies and market acceptance of existing technologies using new approaches.

- Education and Awareness programs are designed to raise customer energy efficiency awareness to help save energy and reduce energy costs. These programs also aim to raise awareness of the DTE website and other social media, which provide channels for customers to engage in specific EE programs.

New program options continue to be added to the EE Portfolio each year. Figure 2 lists all the programs offered in 2021.

Figure 2– Programs in the EE Portfolio Offered in 2021

Appliance Recycling	RESIDENTIAL PROGRAMS
Audit and Weatherization	
DTE Insight	
ENERGY STAR® Products	
Heating, Ventilation, and Air Conditioning	
Home Energy Consultation	
Home Energy Efficiency Kits	
Home Energy Reports	
Low-Income	
Multifamily	
New Home Construction	
Revolving Loan Fund	C&I PROGRAMS
School Program	
Downstream Platform	
Midstream Platform	
Operational Platform	
Self-Direct Program	
Small Business Platform	EDUCATION PROGRAMS
Emerging Measures and Approaches	
Residential	
Commercial & Industrial	
Residential	PILOT PROGRAMS
Commercial & Industrial	

Residential Programs

The Residential EE programs increase customer awareness and demand for energy efficient products and services. Details of each offering are provided in later sections of this report.



In 2021, DTE's Residential programs performed well and exceeded planned savings. Customer satisfaction was at 91% or higher for all but three programs in 2021.

Chart 10 summarizes the electric and gas spending and verified net energy savings for the 2021 EE Residential and Low-Income programs.

Chart 10 – 2021 Residential and Low-Income Programs Spending and Verified Net Savings

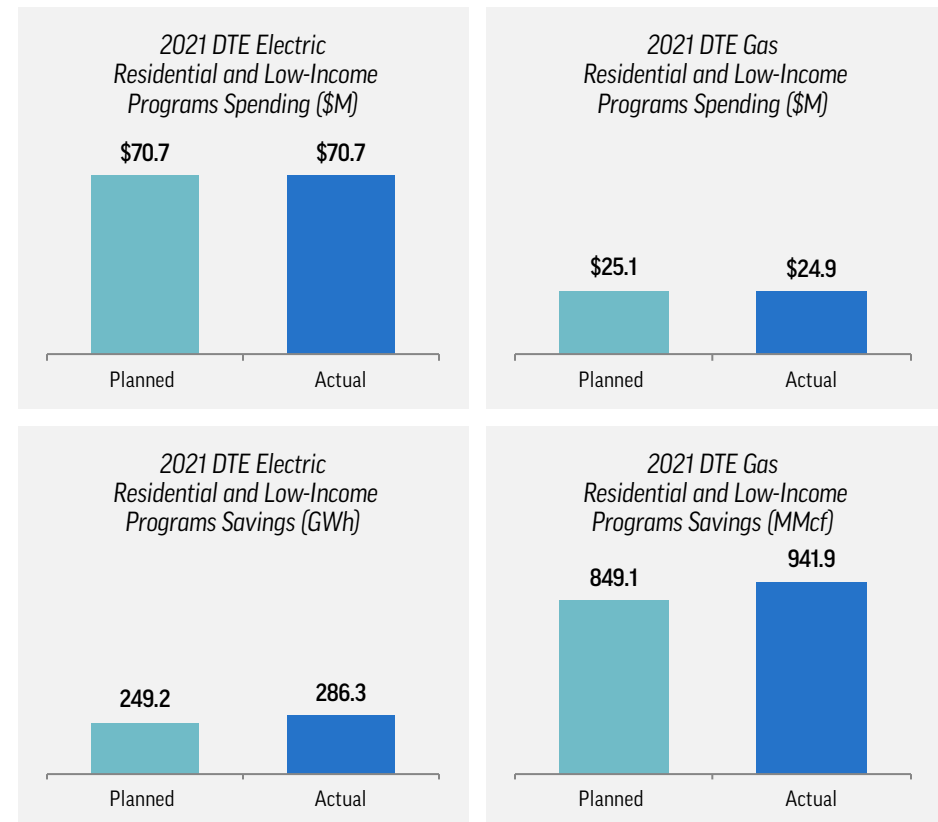
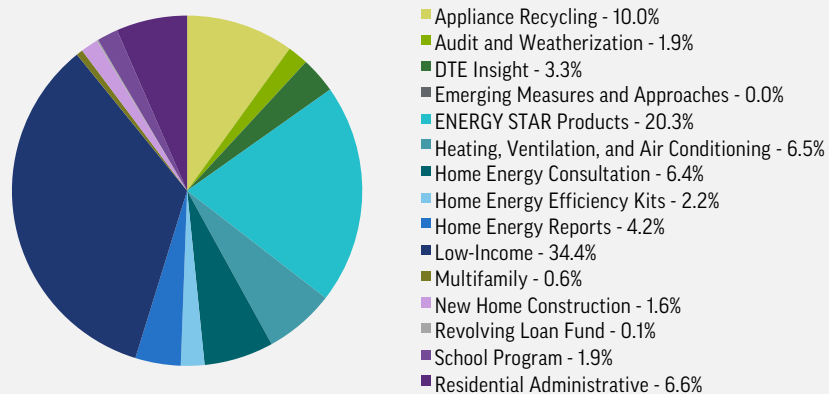
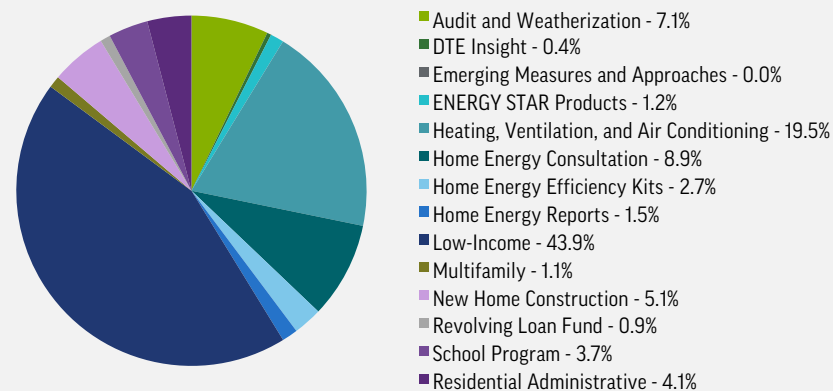


Chart 11 – 2021 Spending and Verified Net Savings by Residential and Low-Income Programs

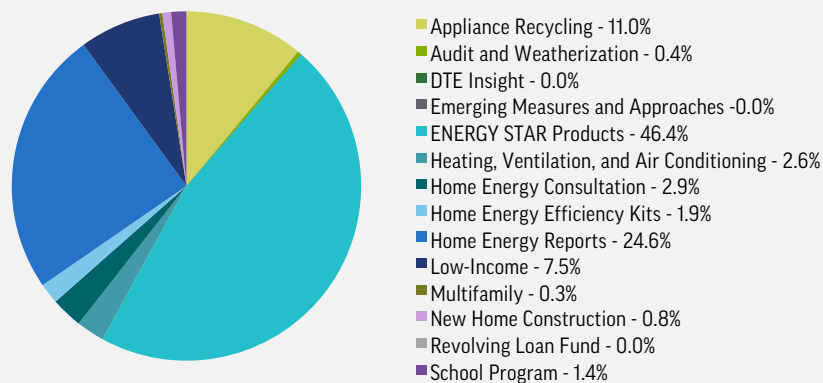
2021 DTE Electric Residential and Low-Income Spend by Program (\$70.7M)



2021 DTE Gas Residential and Low-Income Spend by Program (\$24.9M)



2021 DTE Electric Savings by Residential and Low-Income Programs (286.3 GWh)



2021 DTE Gas Savings by Residential and Low-Income Programs (941.9 MMcf)

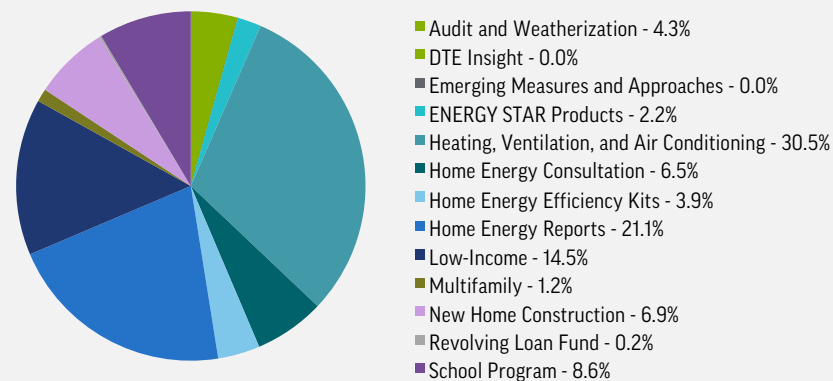


Chart 11 summarizes the spending and verified net energy savings achieved by each Residential and Low-Income program in 2021.

Chart 12 – 2021 Residential and Low-Income Customer Participation by Program

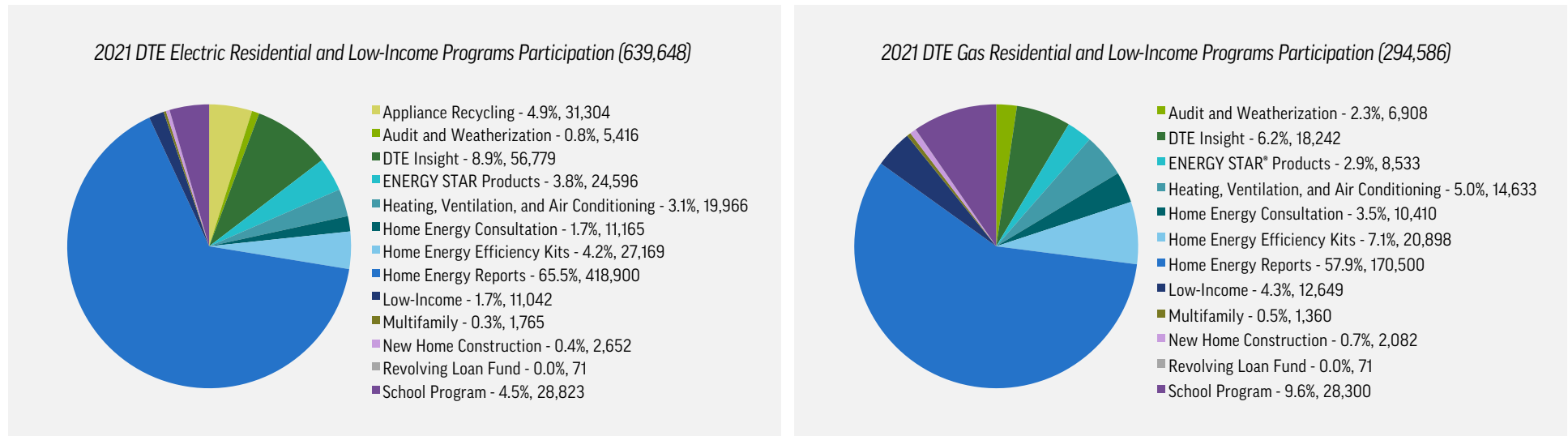


Chart 12 summarizes the number of customers that participated in the Residential and Low-Income programs in 2021.

DTE ELECTRIC ONLY

Appliance Recycling Program

The Appliance Recycling program produces cost-effective, long-term annual energy savings by promoting the early retirement and recycling of operable, inefficient and secondary appliances from DTE Electric households in an environmentally safe manner. Programs like this are imperative to helping DTE achieve its CleanVision goals.



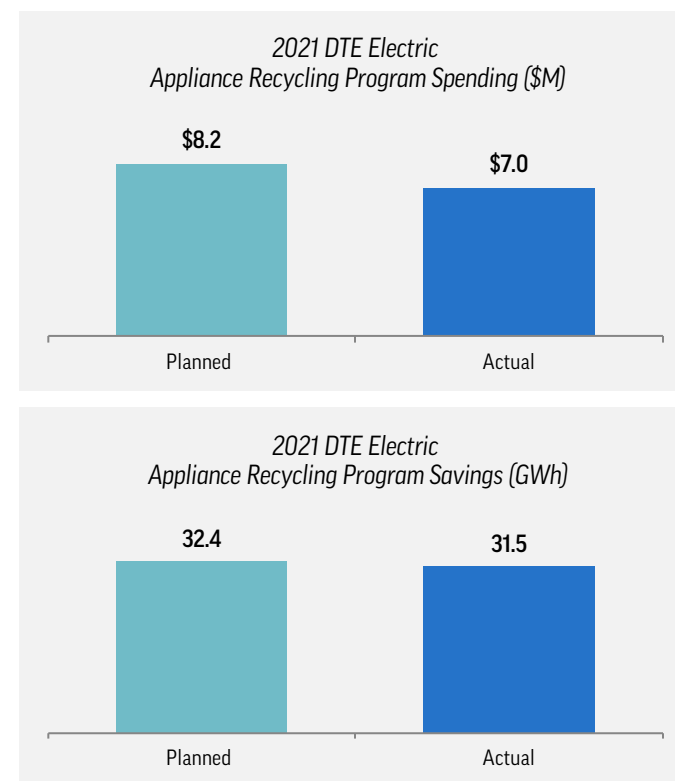
Program Description

The program removes older inefficient working refrigerators and freezers and recycles 95% of the appliances. Customers can also recycle smaller appliances when a larger appliance is picked up. Smaller appliances include dehumidifiers, room air conditioners, small refrigerators and freezers under 10 cubic feet. Drop-off events allow customers to recycle smaller appliances without a large freezer or refrigerator.

Key Takeaways

- DTE conducted four appliance drop-off events during 2021. Customers who brought appliances to a drop-off event earned a larger rebate (\$100 for a large appliance and \$30 for small appliance) as compared to if appliances were picked up from their home (\$50 and \$20 for large and small appliances, respectively).
- Customers recycled 1,060 appliances at the drop-off events.
- Staffing challenges through Q3 led to reduced personnel numbers and fewer crews at pickup appointments, resulting in longer wait times for customers. Employee training helped reduce damage to customer residences during pickups.
- Customers participating through ABC Warehouse decreased by over 50% compared to pre-pandemic participation levels due to limited retail inventory and customers opting to retain their second appliance.
- In 2021, customer satisfaction was 96%.

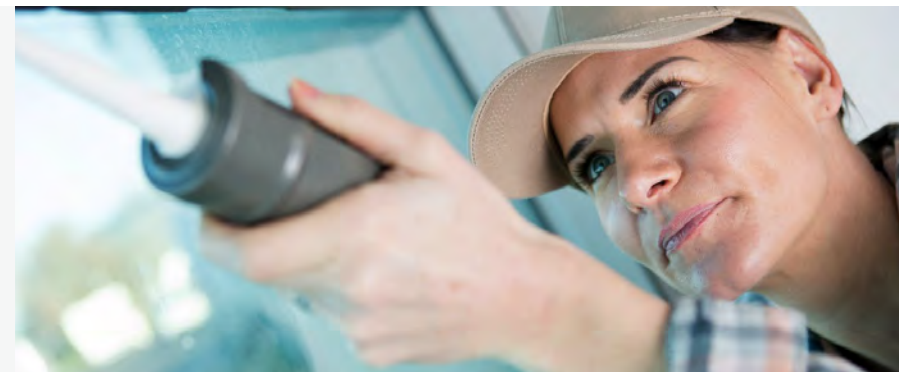
Chart 13 – 2021 Appliance Recycling Program Spending and Savings



DTE ELECTRIC AND DTE GAS

Audit and Weatherization Program

The Audit and Weatherization program motivates customers by offering rebates to install qualified weatherization measures in their homes.



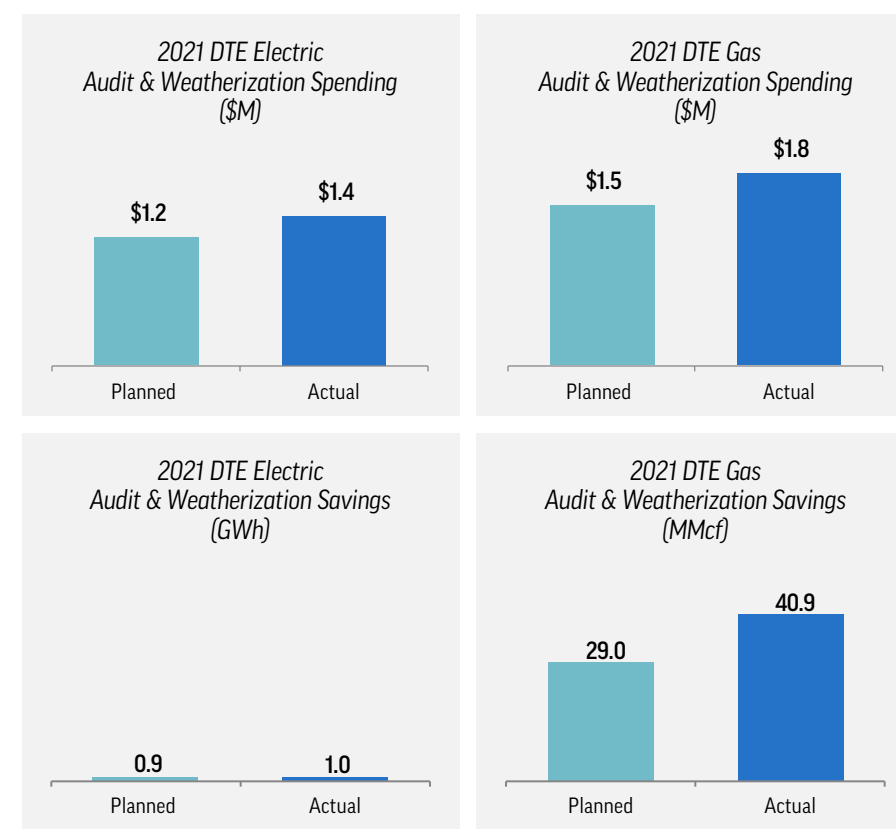
Program Description

The Audit and Weatherization program offers many products and services to DTE customers, including Home Performance, Insulation and Windows and Hybrid Windows. Home Performance offers customers incentives for insulation, windows, HVAC and air sealing measures. Home Performance customers are encouraged to have one of DTE's participating contractors perform a detailed energy assessment. Insulation and Windows allows customers who do not wish to perform a detailed energy assessment to receive rebates for insulation and window improvements either by using a licensed contractor or by doing it themselves. In Hybrid Windows, the windows contractor fills out the application form, after which the rebate is mailed directly to the customer.

Key Takeaways

- Customers showed increased interest in energy efficient replacement windows and home insulation upgrades.
- Hybrid Windows provided energy efficient window rebates to customers in a shorter timeframe than DTE's traditional downstream program channels. This service saw increased participation in 2021.
- Collaboration with Consumers Energy focused on Insulation and Windows and identified opportunities to better align programs for customers and began collaborations around the Home Performance program.
- The program achieved savings targets despite insulation supply chain issues temporarily halting the retail program.
- Customer surveys indicate a positive impression of the program and the rebate application process. In 2021, customer satisfaction was 94%.

Chart 14 – 2021 A&W Program Spending and Savings



DTE ELECTRIC AND DTE GAS

DTE Insight

DTE Insight is an app designed to encourage customers to be more aware of and engaged with their home energy usage by providing customers with data and feedback on their energy consumption.



Program Description

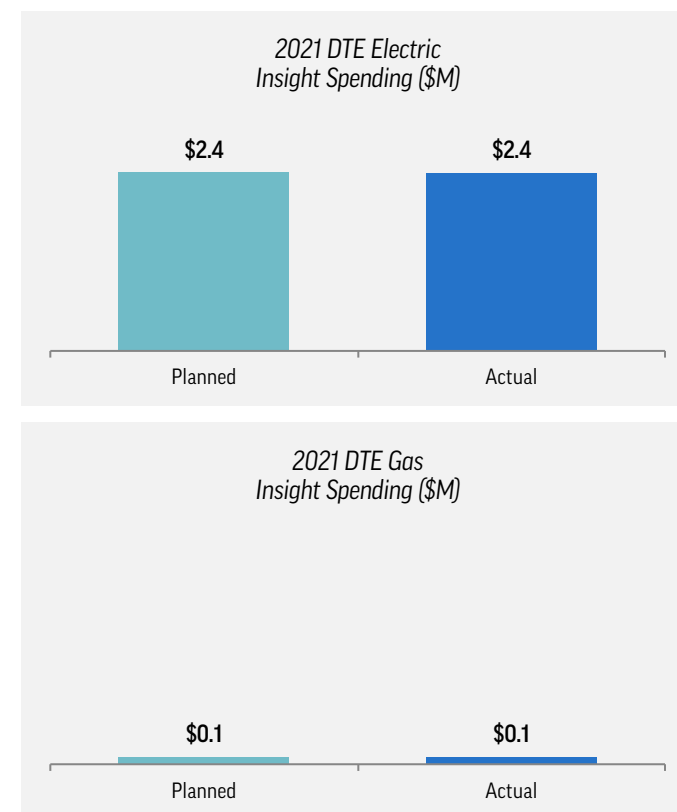
DTE Insight allows customers to view their energy usage data on a monthly, weekly and daily basis; set targets and budgets; and participate in behavioral challenges. It provides customers tips for completing various home projects that can save energy and result in bill savings. By downloading and using the app, customers are empowered to better understand, manage and control the energy that powers their homes. When paired with an Energy Bridge,⁸ the app shows customers their electricity usage in real time. And, when connected with compatible smart devices, it allows customers to manage those devices remotely. For example, setting a schedule and controlling lighting from a mobile phone.

Key Takeaways

- In 2021, 120,000 DTE Electric and Gas customers used the app, with 56,779 using the app at least 5 days during the calendar year. The summer cooling season in particular saw strong app engagement as part of a challenge and reward promotion.
- Over 50% of app installations were attributed to multi-channel paid media throughout 2021.
- DTE added embedded links to the DTE Energy Marketplace to drive customers to purchase smart home devices and other energy efficient products.
- The Insight program supported the MIGreenPower renewable energy program by enabling customers to sign up for MIGreenPower directly through the Insight app.
- Additional growth was achieved through over 15 new cross-marketing opportunities with other programs across DTE between September and December 2021.

⁸ The DTE Insight Energy Bridge is a hardware add-on that provides real-time energy usage information through the app. Once a customer receives their Energy Bridge in the mail, they must link it to their advanced metering infrastructure (AMI) meter to begin seeing real-time data in the app.

Chart 15 – 2021 DTE Insight Spending



DTE ELECTRIC AND DTE GAS

ENERGY STAR® Products Program

The ENERGY STAR Products program increases the awareness and sales of high efficiency ENERGY STAR products among residential customers.



Program Description

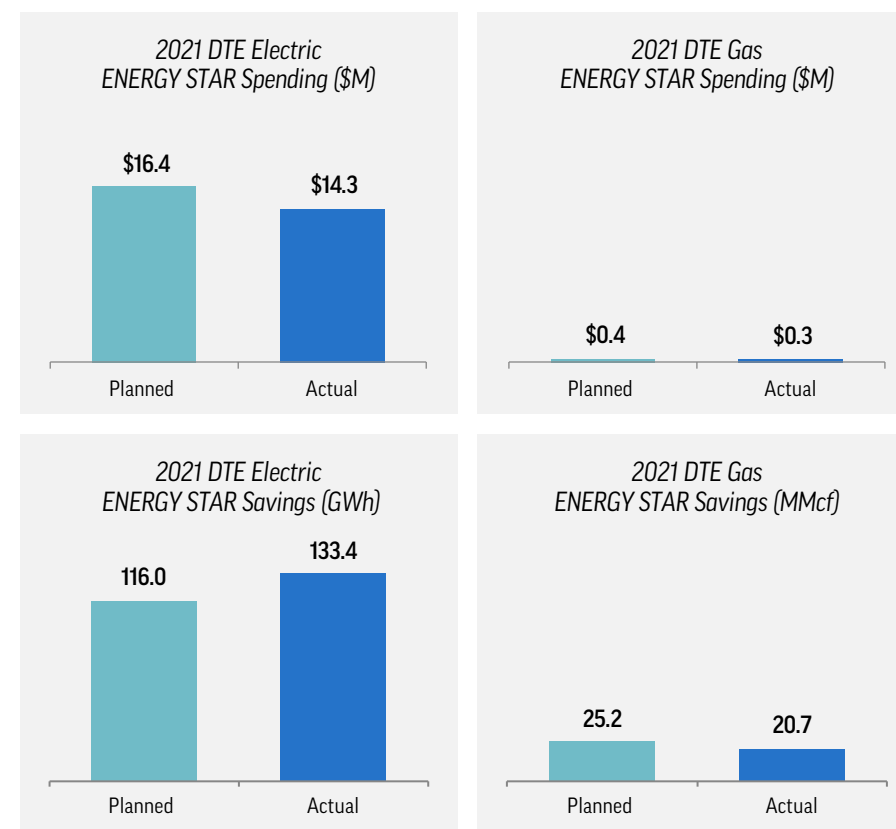
The program intends to spur customer interest by providing educational information and incentives to customers who purchase qualified ENERGY STAR equipment. In-store site visits, point-of-purchase material and digital and email campaigns help accomplish this objective.

The program helps customers reduce the cost of being energy efficient by providing rebates or discounts on ENERGY STAR-certified products via DTE's Marketplace website. It also provides upstream discounted LED light bulbs at over 400 retailer outlets. Midstream incentives are provided for personal computers and monitors and small appliances such as room air conditioners, air purifiers and dehumidifiers. Downstream rebates are offered on certified appliances, such as clothes washers, clothes dryers, dehumidifiers, air purifiers, room air conditioners, Wi-Fi and smart thermostats and pool pumps.

Key Takeaways

- DTE increased its pool pump rebate from \$350 to \$400 for 2021. No other changes were made to rebate offerings compared to 2020.
- DTE expanded its relationship with The Home Depot beyond air conditioners with the addition of air purifiers and dehumidifiers in summer 2021.
- In 2021, DTE expanded its product offerings through the DTE Marketplace. New products included air purifiers, window insulation kits, additional Wi-Fi thermostat models and (for a limited time) dehumidifiers. This expansion allowed for a wide-ranging shopping experience for purchasing energy-saving products.
- The Marketplace team used a more targeted email advertising and promotional campaign approach in 2021 compared to recent years. This approach increased awareness and expanded the share of the residential customer market.
- In 2021, customer satisfaction was 93%.

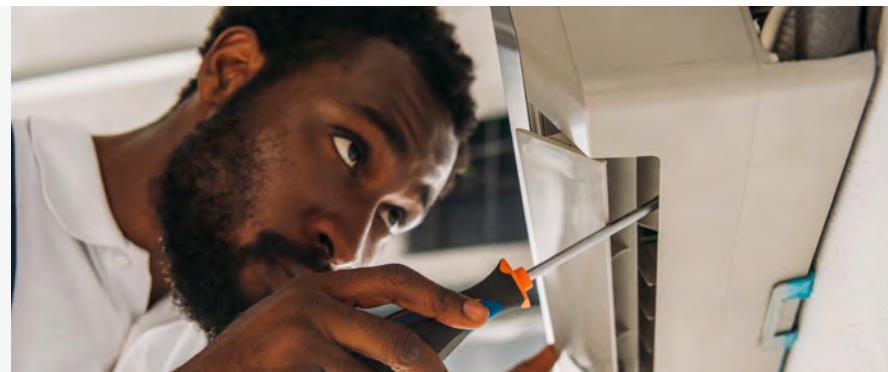
Chart 16 – 2021 ENERGY STAR Products Program Spending and Savings



DTE ELECTRIC AND DTE GAS

Heating, Ventilation, and Air Conditioning (HVAC)

The HVAC program increases demand for energy efficient heating and cooling equipment and high efficiency water heating equipment.



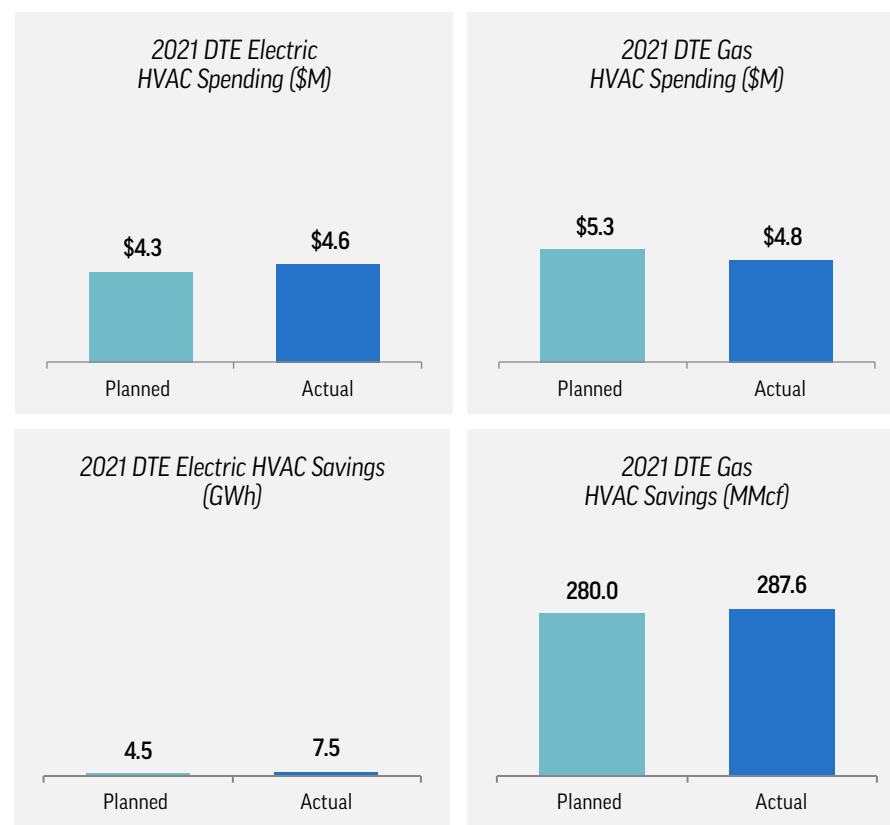
Program Description

The program serves residential customers in single-family dwellings of less than three units who purchase new high efficiency heating and cooling equipment. Electric measures offered in the residential HVAC program include high efficiency central air conditioning units and Wi-Fi-enabled thermostats. Gas measures include high efficiency natural gas heating equipment, Wi-Fi-enabled thermostats and water heaters. DTE established and uses a network of well-informed and educated HVAC industry professionals who understand the benefits of energy efficient products.

Key Takeaways

- DTE expanded collaboration with the Consumers Energy Residential HVAC program on the midstream delivery channel including potential future rebate changes due to MEMD changes.
- DTE leveraged its active trade contractor network to maintain momentum in 2021, and the Downstream program continued to perform well despite part shortages and supply challenges.
- DTE continues to use the Contractor Performance Report Card for greater visibility into contractors' participation in the program.
- Personalized emails and phone calls continued even as COVID-19 impacts decreased (such as shortages and supply challenges); these were well-received by customers.
- Boilers and water heaters moved to the midstream channel to expand the reach of these measures to a higher volume of customers.
- In 2021, customer satisfaction was 94%.

Chart 17 – 2021 HVAC Program Spending and Savings



DTE ELECTRIC AND DTE GAS

Home Energy Consultation Program (HEC)

The Home Energy Consultation program provides a no-cost energy education program to all residential customers with a single-family home, duplex or condominium.



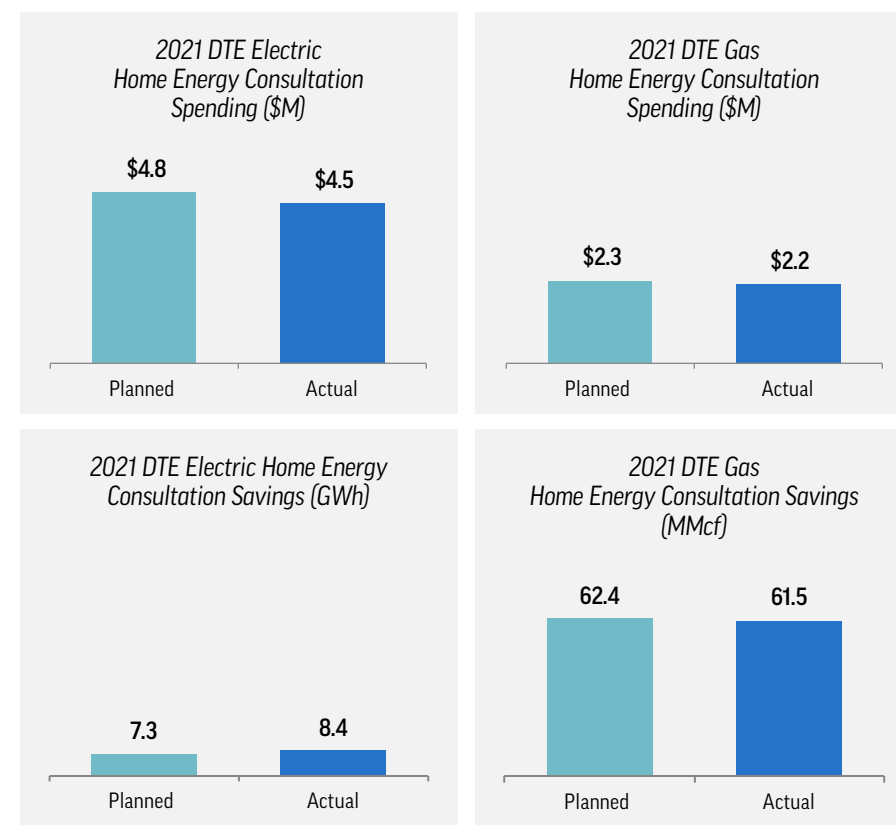
Program Description

The program aims to produce immediate energy savings through the direct installation of energy-saving measures in the home. An energy specialist does a basic walkthrough of the home and creates a personalized home energy profile that shows where the home uses and loses the most energy. During the walkthrough, the energy specialist identifies free products that can be installed in the home. Typical in-unit measures include LEDs, energy efficient showerheads, energy efficient kitchen and bath aerators, advanced power strips, programmable and Wi-Fi thermostats and pipe wrap insulation.

Key Takeaways

- DTE developed virtual outreach methodologies to better reach residents throughout the COVID-19 pandemic. These included virtual kickoffs and other virtual events.
- The program installed a record number of Wi-Fi thermostats during 2021.
- In 2021, DTE developed enhanced safety processes and safety messaging for the program. This included messaging about masks and scripting around situations that might arise related to COVID-19 while program staff were in a home or in a home where a resident exhibited associated symptoms.
- The program achieved a record high of eight months of 100% customer satisfaction throughout the year.

Chart 18 – 2021 Home Energy Consultation Program Spending and Savings



DTE ELECTRIC AND DTE GAS

Home Energy Efficiency Kits

The Home Energy Efficiency Kits (HEEK) program provides residential customers with a no-cost energy program to help them save money while producing electric and gas energy savings.



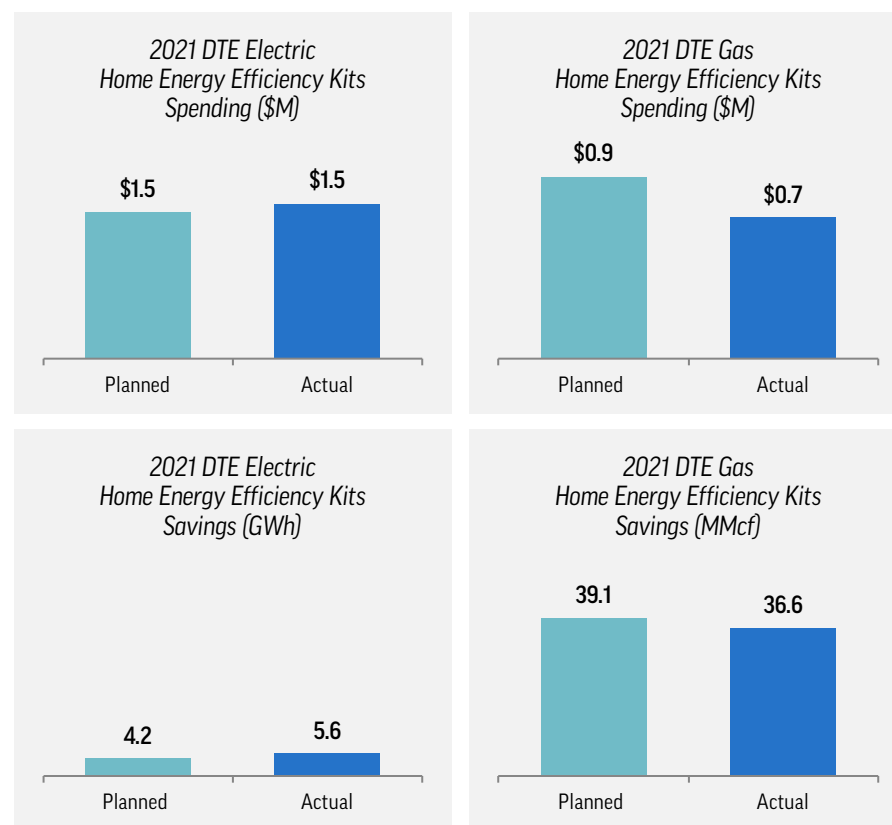
Program Description

The program mails a kit containing easy-to-install energy-saving measures to homes. The measures in the kit include LEDs, energy efficient showerheads, energy efficient kitchen and bath faucet aerators, advanced power strips and pipe wrap insulation. The measures in the kit depend on the type of DTE service the customer receives.

Key Takeaways

- The validation process improved in 2021; the number of days between the request for a kit and the shipment decreased.
- Kits included MIGreenPower and Outdoor Protective Lighting promotional literature.
- The program donated 200 electric kits to an outdoor community event held in Detroit's City Council District 6.
- Attempts to automate the kit request proved to be cost-prohibitive and lacked the resources needed to be completed.
- The kit return rate went from 1% to 2% in 2021; a higher number of customers reported their kit as undelivered, even when US Postal Service (USPS) tracking showed the kits as delivered at the premise.
- In 2021, customer satisfaction was 89%.

Chart 19 – 2021 HEEK Program Spending and Savings



DTE ELECTRIC AND DTE GAS

Home Energy Reports

The Home Energy Reports (HER) program encourages select customers to be more energy efficient by providing them with feedback about their energy use, comparing their energy use to other similar homes and more efficient homes and providing energy-saving tips.



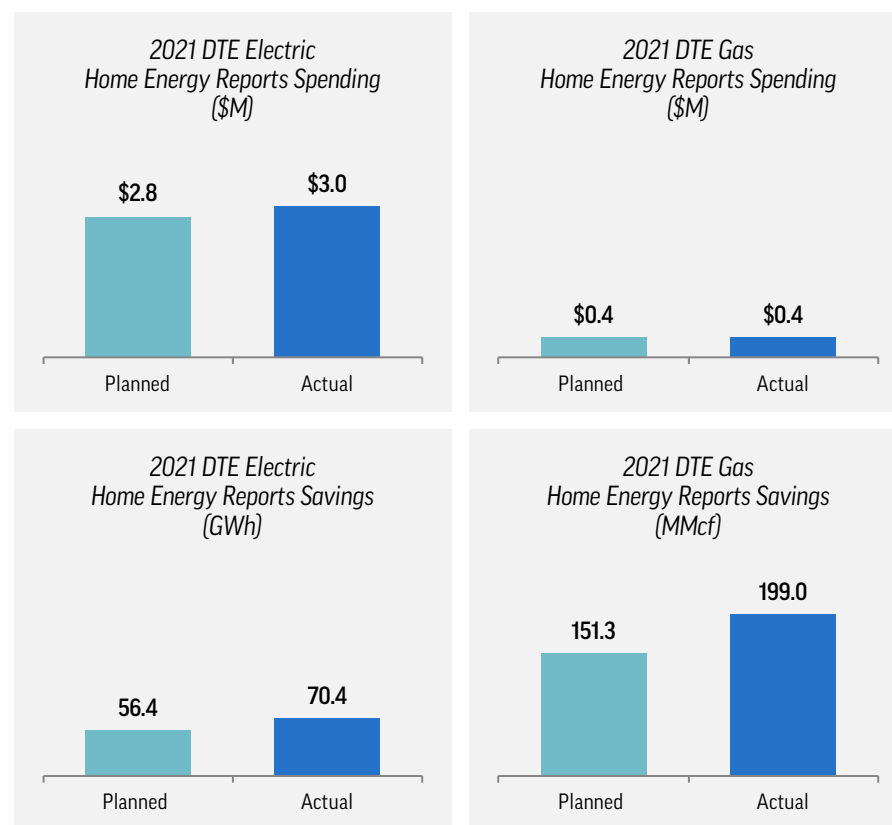
Program Description

The HER program offers printed and electronic reports that display a customer's energy usage compared to the average energy usage of approximately 100 nearby similar homes and a second comparison to the customer's most efficient nearby similar homes (the top 20%). The report also contains energy-saving tips and promotions for other DTE EE programs. The customer is sent the HER via the USPS; an abbreviated email of the HER is sent to customers with an available email address. Deemed energy savings are based exclusively on printed reports.

Key Takeaways

- The program designed savings targets prior to a Michigan Behavior Resource Manual recalibration, resulting in overestimating achieved savings in 2021.
- The program released HER 3.0, which includes the following enhancements: customers receive a quick personalized summary of their energy usage; the layout of the similar homes comparison replaced the efficient homes bar with an efficiency zone background against the customer and similar homes usage bars; and explained how similar homes are compared.
- An online home energy survey was introduced to learn more about recipients' energy-using equipment and behaviors to increase the personalization of the tips in the report.
- The HER program collaborates with other DTE programs by highlighting those program initiatives in the HER. Home Energy Consultation and the Insight app received regular promotions throughout 2021.
- In 2021, customer satisfaction was 74%.

Chart 20 – 2021 HER Program Spending and Savings



DTE ELECTRIC AND DTE GAS

Low-Income Program

The Low-Income program provides low-income DTE customers recommendations, direct installation of qualified EE measures, major appliance replacements, weatherization measures and education to assist them in reducing their energy use and managing their utility costs.



Program Description

DTE's Low-Income program includes the Energy Efficiency Assistance (EEA) program, the Payment Troubled Customers Initiative (PTCI), and the Income-Qualified Heat Pumps Initiative as well as the low-income components of the Multifamily and HEC programs. The program leverages the services provided by member agencies of the Michigan Community Action Agency Association, municipalities, counties, public housing commissions, faith-based institutions, community development corporations and nonprofit organizations with existing housing and energy programs. The Income-Qualified Multifamily program offers generous incentives to property owners and managers to encourage installation of energy efficient measures. The program also works with a select number of independent contractors to offer Premium Direct Installation of certain measures.

Instead of paying direct incentives, the EEA Low-Income program delivers in-kind services to these customers, including deep savings measures such as weatherization, furnace tune-up and replacement, insulation, high efficiency mini-split cold climate heat pumps (CCHPs) and water heater replacement.

Key Takeaways

EEA

- New measures were added in 2021, including ENERGY STAR® clothes washers, clothes dryers, dishwashers, air purifiers, dehumidifiers, storm windows and duct sealing. These additions provided customers with more detailed efficiency upgrades.
- The EEA program increased incentive amounts for air sealing, insulation and windows to encourage a focus on a whole home weatherization approach. The whole home bonus of \$500 for homes that receive a heating system, air sealing and insulation remained in 2021, and participation increased from 2020.

- With tightening supply chains, the EEA program increased the rebate amount for refrigerators from \$1,100 to \$1,500 to help participating partners to continue to provide this item to households in need. Window supply was also constrained in 2021, and many window installers had long waiting lists. To address this need, the program added storm windows as a new measure.
- DTE continued collaborations with Consumers Energy to help customers whose utilities are split between the two companies and with the City of Detroit Community Health Corps to help Detroit residents negatively affected by COVID-19 make their homes more energy efficient and replace failing heating systems.
- The EEA program introduced new partnerships and collaborations with Humble Design to provide interior design and home furnishing solutions to customers previously without homes or furniture.

Income-Qualified Heat Pumps

- High efficiency whole home mini-split CCHPs were installed in 44 multifamily and 20 single-family homes with electric baseboard heat at no cost to the customer.
- The program overcame customer recruitment challenges by collaborating with the EEA program partner agencies to recruit single-family customers with electric heat.
- CCHPs reduced the average heating season energy consumption of multifamily and single-family homes by 36% and 7%, respectively, and cooling season energy consumption by 10% and 27%, respectively.
- Heat pump installations were designed to heat an entire home including areas not previously heated. Several participants continued to use baseboard electric heaters post CCHP installation, which reduced the energy savings for single-family customers.
- Educational material for heat pump operation and contractor education on installation procedures are key to a successful program.

PTCI

- PTCI aims to help payment troubled customers better manage their energy burden through the coordinated combination of low-income payment plans and energy efficiency services. This initiative is a partnership between DTE's Revenue Management and Protection group and EE services to offer targeted services to payment troubled customers. The EE services are delivered through the EEA and Multifamily programs.
- DTE served approximately 60% more customers than required by the settlement agreement. Approximately 21% of EEA funding was used to support PTCI customers.
- DTE successfully managed outreach efforts for PTCI through various community partner agencies.

HEC

- The HEC program provides in-home consultation and installation of energy efficient measures for Low-Income program customers.
- The HEC program achieved high customer satisfaction throughout the year; satisfaction was a record 100% for eight out of the 12 months that the program was in the field, with 99% overall satisfaction in 2021.

Multifamily

- The Low-Income Multifamily program expanded its measure offerings to include more expensive items such as refrigerators, also at no cost to the customer. Low-income property owners can also receive substantial rebates for a variety of measures, which can be up to 10 times the amount of non-low-income rebates.
- The program offered a deep-dive energy coaching component to income-qualified buildings. This included an American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) Level 2 Audit, with the intent of uncovering as many energy-saving opportunities as possible for the properties.
- The program also introduced a Premium Direct Install component, which offers large air sealing and insulation projects, refrigerators, heat pump water heaters and other major measures at no cost to the customer.
- The income-qualified prescriptive offerings attracted customers and participating contractors due to the high incentive rates on lighting and HVAC equipment. The program became fully allocated during 2021 and required a waitlist to be started.

Chart 21 – 2021 Low-Income Program Spending and Savings

DTE ELECTRIC AND DTE GAS

Multifamily Program

The Multifamily program produces energy savings in multifamily buildings with three or more units under one contiguous roof through a robust offering of incentives and the direct installation of energy-saving measures.



Program Description

The Multifamily program offers property owners, managers, and/or contractors direct installation of energy saving measures, and prescriptive and custom rebates for in-unit and in common areas.

Typical in-unit measures include LEDs, energy efficient showerheads, energy efficient kitchen and bath aerators, Wi-Fi thermostats and pipe wrap insulation depending on eligibility. There is no cost to customers for the in-unit installations. Energy efficiency education is also delivered throughout the project to property owners and managers and to individual tenants. The Multifamily program serves two channels (direct install and rebates – both prescriptive and custom), tenants do not receive incentive payments.

In 2021, the Multifamily program introduced two new offerings:

- A Premium Direct Install component of the Low-Income Multifamily program was offered, which included large air sealing and insulation projects, refrigerators, heat pumps, heat pump water heaters and other major measures at no cost to the customer.
- Energy coaching and analysis for income-qualified properties including an ASHRAE Level 2 Audit, with the intent of uncovering as many energy-saving opportunities as possible for the properties.

Key Takeaways

- The Multifamily program operated safely throughout the continuing COVID-19 pandemic, with zero safety incidents with the Multifamily team in 2021.
- Customers and participating contractors were enticed by the income-qualified prescriptive offerings due to the high incentive rates on lighting and HVAC equipment. The program was fully allocated during 2021 and required a waitlist to be started.
- Market saturation, combined with challenges related to the pandemic, accelerated the transition away from direct install projects as a source of savings for the program. Major contributors to the program's success are rebated/custom projects and the introduction of the Premium Direct Install component.
- The program achieved high satisfaction from tenants and property managers throughout the year, with multiple months achieving a 100% customer satisfaction rating.
- In 2021, customer satisfaction was 95%.

Chart 22 – 2021 Multifamily Program Spending and Savings



DTE ELECTRIC AND DTE GAS

New Home Construction

The New Home Construction program promotes construction of energy efficient homes in the DTE service territory.



Program Description

The program provides participating builders with technical, marketing and training support as well as financial incentives. Participating builders construct energy efficient homes and work with certified Home Energy Rating System (HERS) raters. HERS raters upload home specifications to Ekotrope, a home design and energy rating software program, to confirm eligibility by achieving a HERS score of 60 or lower and to initiate processing through the program.

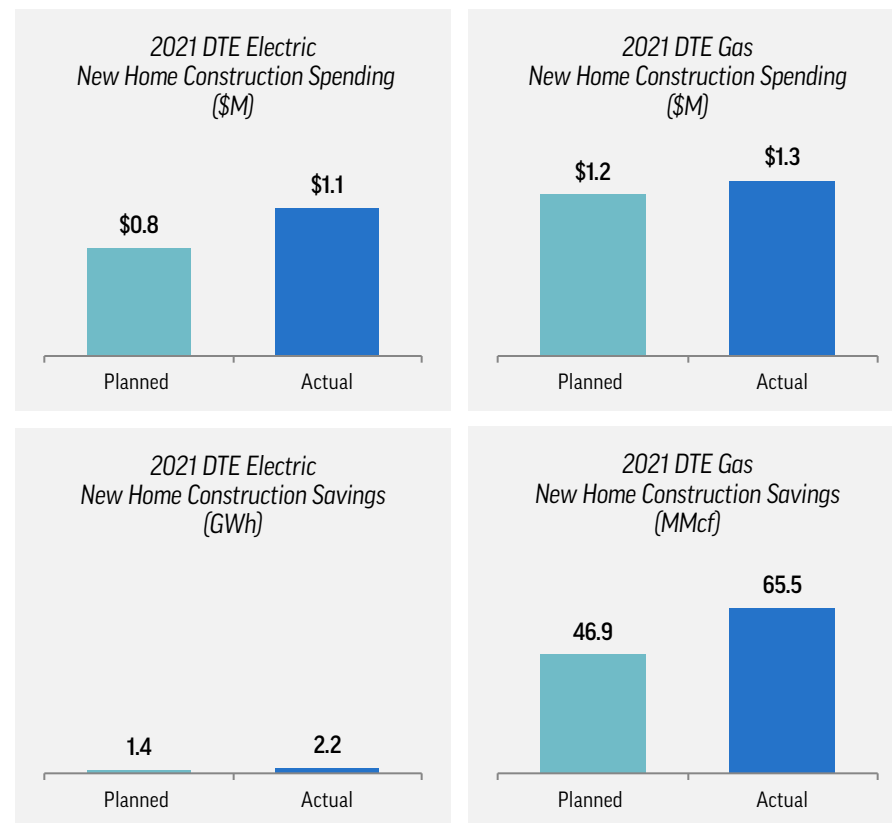
After meeting the HERS score prerequisite, builders are eligible for a performance-based incentive and tiered incentives for specific measures including furnaces, water heaters and air sealing techniques. Savings are claimed on the difference between modeled energy usage for a standard code-built baseline home and the newly constructed efficient home.

Builders can receive incentives up to \$1,500 for a DTE Electric account, \$1,300 for a DTE Gas account, and \$2,100 for a combo DTE account. Builders that construct ENERGY STAR®-rated homes are eligible for an additional incentive of \$300-350. In 2021, the program also added increased incentives for homes built with a HERS score of 45 or less and use a cold climate heat pump as the primary heating and cooling equipment. 2021 was the second full year of commercialization for the New Home Construction program.

Key Takeaways

- The program doubled the number of participating builders in 2021. This participation growth helped the program meet its 2021 savings targets early and created an opportunity to expand the program to more builders.
- The program shares information with participating builders through monthly technical bulletins. Collaboration with the Consumers Energy program also assists in disseminating information.
- The program added welcome kits for the new homeowners; these kits consist of information highlighting the energy efficiency of their home, maintenance tips, information about DTE's Insight app as well as an advanced power strip and LED night light to help save additional energy.

Chart 23 – 2021 New Home Construction Program Spending and Savings



DTE ELECTRIC AND DTE GAS

Revolving Loan Fund

The Revolving Loan Fund program serves customers not eligible to participate in the Low-Income program but that still face financial challenges in participating in other EE programs.



Program Description

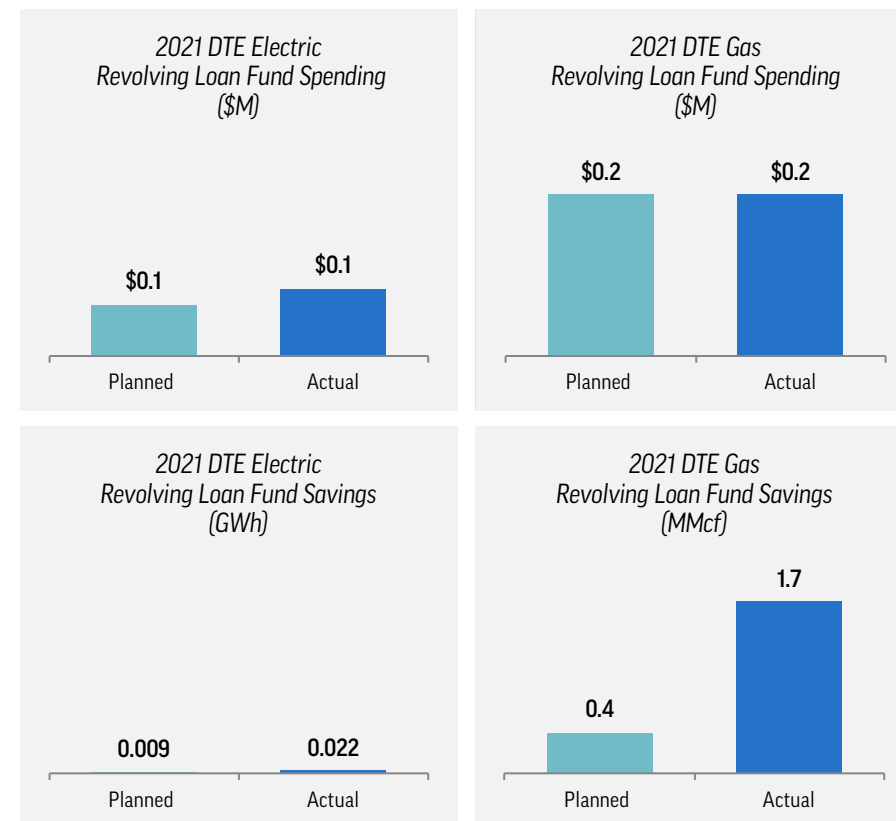
This program targets customers above 200% of the Federal Poverty Level (FPL) but below 300% FPL. The program launched in 2019 in Washtenaw County and expanded to include Wayne County in 2020.

Customers with incomes over 200% FPL but less than 250% FPL had a customized grant/loan split that allowed the customer to make major energy efficiency upgrades and be cash flow-neutral annually between the energy savings and the loan payment. Customers with incomes over 250% FPL but less than 300% FPL were provided a grant/loan split of 50% each.

Key Takeaways

- The program continued its collaboration with Michigan Saves and Walker-Miller to complete projects in Washtenaw County and Wayne County. The program serviced seven more customers in 2021 compared to 2020.
- The Revolving Loan Fund program serviced its final projects in December 2021.

Chart 24 – 2021 Revolving Loan Fund Program Spending and Savings



DTE ELECTRIC AND DTE GAS

School Program

The School program develops a culture of energy efficiency with third through twelfth grade students, teachers, schools and families throughout the DTE service territory in the public and private sectors to deliver real, measurable energy savings.



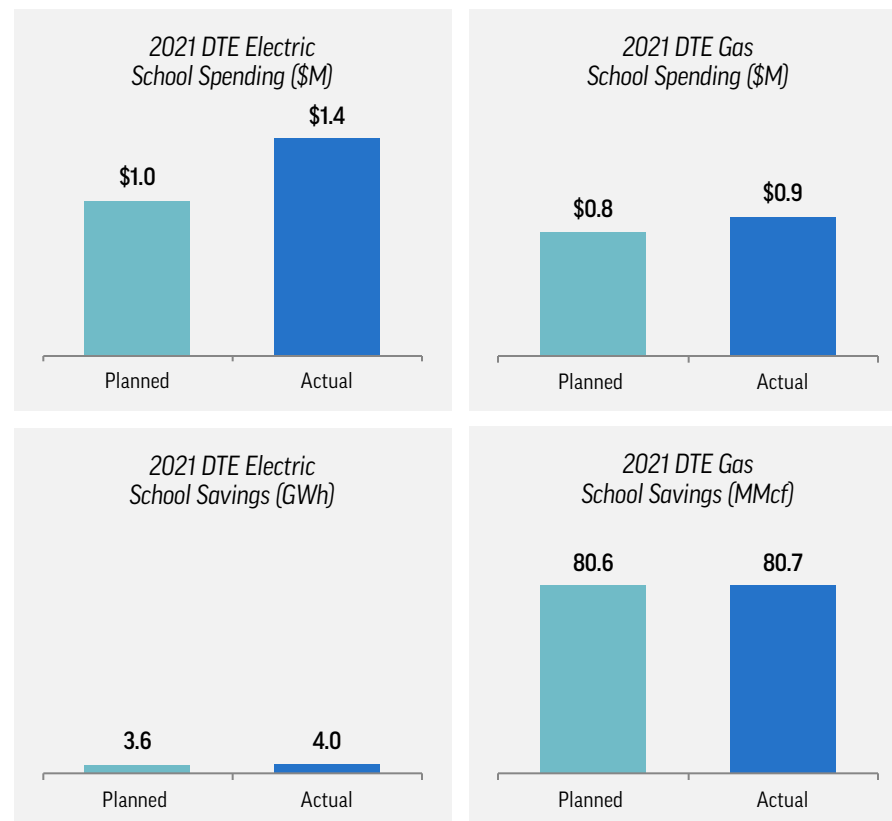
Program Description

The School program provides non-traditional opportunities to raise awareness and encourage the adoption of energy efficiency measures and behaviors to help the environment. It also contributes to DTE's ambitious CleanVision goal of net zero carbon emissions by 2050. Each participating teacher and student receive a kit filled with energy efficient technologies and a guide with information on energy resources and energy-saving tips. Students are instructed to install all products with adult supervision in their residence. Instructional materials are designed to correlate with the State of Michigan English, Math and Science curriculum for fourth through sixth grade students and the science and economics standards for seventh through twelfth grade students. ICs provide educational materials through online and in-person delivery channels.

Key Takeaways

- DTE expanded the program offering to eighth through twelfth grade levels with the DTE Innovation program in 2021. It offered short, interactive mini-webinars to schools that did not receive in-person presentations.
- Collaborations to deliver programs across Michigan included Consumers Energy, SEMCO Gas, Energy United and UPPCO.
- The program provided community outreach presentations and representation at special events including the DTE Empower Girls event, the Michigan Education Association Conference and the Taylor School District summer camp.
- Teacher material links were added to program emails for easy access to the family letter and steps for success guide, and the program added a new video to in-person and virtual presentations to encourage students to complete their surveys.
- The program decided to include additional education on aerator and showerhead installation, dual-threaded bathroom faucet aerators (to increase usability), and advanced power strips in the 2021 kits.
- In 2021, customer satisfaction was 96%.

Chart 25 – 2021 School Program Spending and Savings



C&I Programs

(DTE Electric and DTE Gas)

The goal of the C&I programs is to provide incentives that encourage customers to install energy efficient equipment to reduce their overall energy consumption and save on their energy bills.



The C&I EE programs provide incentives that encourage customers to install energy efficient equipment to reduce their overall energy consumption and save on their energy bills. Programs like this are also imperative to making DTE's CleanVision goal a reality. DTE customers can take advantage of incentives for energy efficient upgrades tailored to reduce energy use in their business, improving their bottom line. The C&I programs offer customers incentives to replace existing equipment and fixtures with new energy efficient equipment and incentives for designing and building new or remodeling projects that are energy efficient.

The C&I programs are categorized under five platforms:

- **The C&I Downstream Platform** offers incentives to customers following the installation of prescriptive measures from the MEMD or nonstandard equipment and controls not contained in the MEMD. This platform includes the Prescriptive (including Multifamily Commercial, ENERGY STAR® Retail Lighting) and Non-Prescriptive programs.
- **The C&I Midstream Platform** offers a simplified delivery channel that targets equipment distributors, dealers and manufacturer representatives and offers customers instant discounts at the time of purchase. This platform includes the Midstream Lighting, Midstream Food Service and Midstream HVAC programs.
- **The C&I Operational Platform** consists of programs developed to control energy consumption through a systematic approach to identify and improve building deficiencies and processes. This platform includes the Retro-Commissioning and Strategic Energy Management programs.
- **The C&I Small Business Platform** provides small business customers with a path to energy savings and a means to begin their energy efficiency journey. This platform includes the Business Energy Consultation program.
- **The C&I Emerging Measures and Approaches Platform** promotes the installation of energy efficient technologies and delivery channel strategies to validate pilot programs recently commercialized and support new ideas or concepts that support DTE's C&I program offerings. Programs included were Small Business Focus (electric and gas), Telecom (electric), Find and Fix Compressed Air (electric) and Find and Fix Steam Traps (gas) and Midstream HVAC (gas).

- To encourage equitable distribution of funds and wide and varied participation among as many DTE customers as possible, incentives are subject to annual limits and caps. To further ensure incentive funds are used by many customers, special offers have funding participation limits and a time duration.

Table 7 displays the program year incentive limits. Actual payments per customer determine incentive limits regardless of whether the incentive is paid directly to the customer or to an intermediate party, such as the contractor performing the service for the customer.

Table 7 – 2021 C&I Incentive Caps

	Electric	Gas
Customer	\$1,000,000	\$300,000

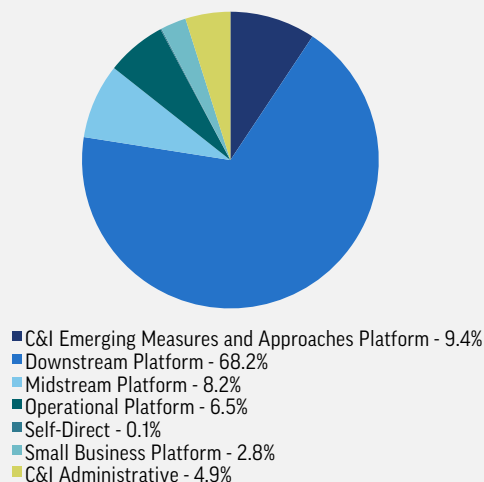
DTE launched several special offerings in 2021 to create broader customer participation. These specials included commercial energy audits, enhancing the offer related to the Michigan Saves program, and boiler tune-ups and stream trap surveys.

Chart 26 summarizes the spending and verified net energy savings achieved by each C&I program in 2021.

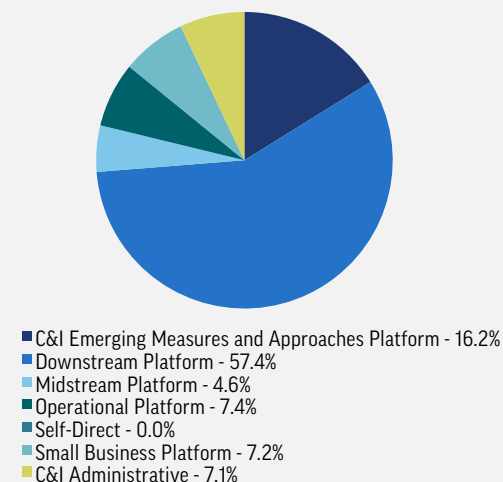
The C&I programs received 92% or higher customer satisfaction scores across all programs but one in 2021.

Chart 26 – 2021 C&I Program Spending and Verified Net Savings

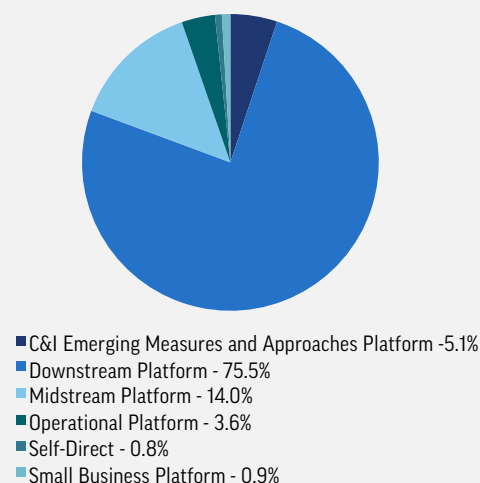
2021 DTE Electric Spend by C&I Program (\$85.7M)



2021 DTE Gas Spend by C&I Program (\$9.9 M)



2021 DTE Electric Savings by C&I Program (574.8 GWh)



2021 DTE Gas Savings by C&I Program (1,053.5 MMcf)

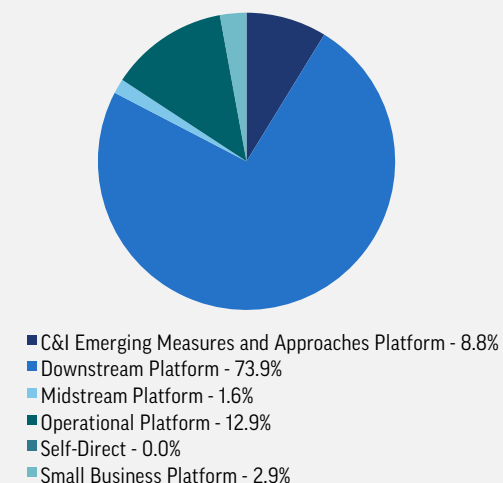


Chart 27 – 2021 C&I Program Spending and Verified Net Savings

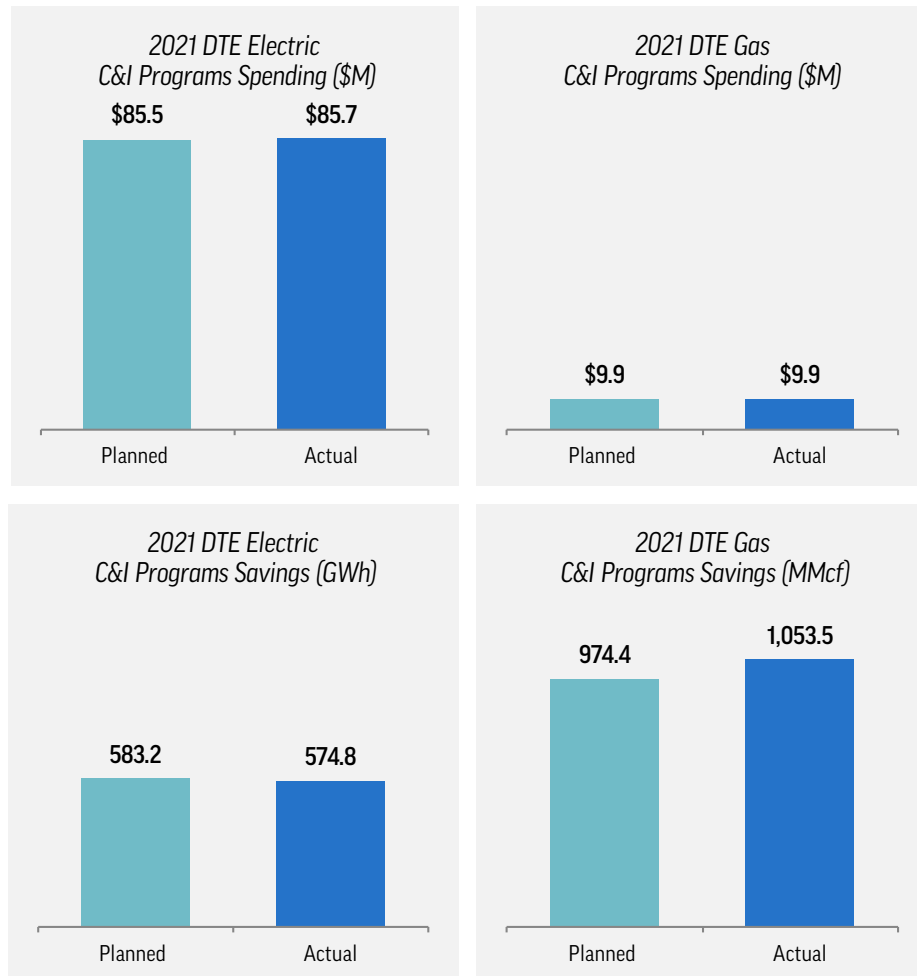
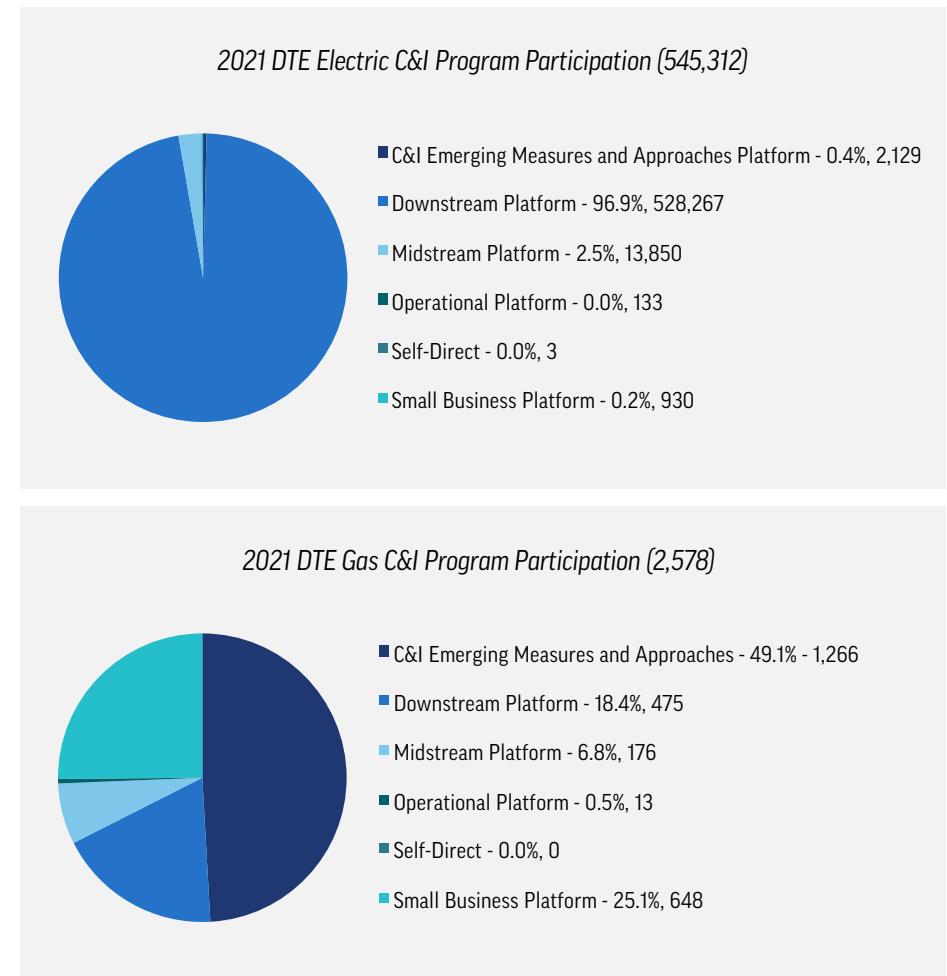


Chart 28 – C&I Program Participation



C&I Downstream Platform

The C&I Downstream Platform offers incentives to customers following the installation of prescriptive measures from the MEMD or nonstandard equipment and controls not contained in the MEMD. DTE has used DNV as its implementation contractor to implement C&I EE programs from 2009 through 2021.



DTE ELECTRIC AND DTE GAS

Prescriptive Program

The Prescriptive program provides predetermined measures and incentives to C&I customers for energy efficient equipment installation.



Program Description

The Prescriptive program designed incentives to encourage C&I business customers to install energy efficient measures in existing facilities to reduce overall energy consumption and save money on energy bills. Incentives apply to qualified equipment commonly installed in a retrofit or equipment replacement project and are paid based on the quantity, size and efficiency of the technology installed. Prescriptive incentives are rebates paid after the installation of eligible measures.

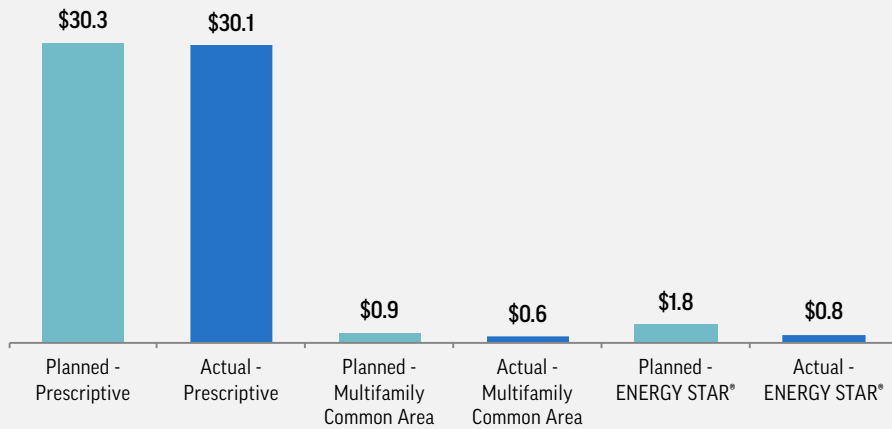
The Electric and Gas Prescriptive programs include more than 400 prescriptive measures. Specifically, primary measures implemented include lighting fixtures, lamps, LED lighting systems and controls, motors and variable speed drives, food service and refrigeration equipment, air conditioning and ventilation equipment, boiler tune-ups and other common energy efficient equipment. The savings and spend for commercial common areas of the Multifamily program and the ENERGY STAR® Retail Lighting program are also included as Prescriptive components.

Key Takeaways

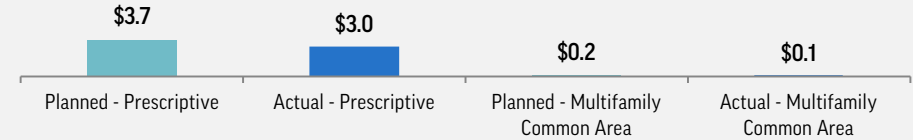
- Despite the challenging business environment in 2021, the C&I Downstream Platform program office continued operations virtually without interruption. The Downstream Platform remained agile and efficient, conducted virtual meetings and adapted to a new way of doing business.
- Over the past year, DTE began to shift to an online application by offering project bonuses to encourage contractors and trade contractors to use the online tool.
- In 2021, the Prescriptive program conducted five industrial energy audits with large industrial customers, gaining valuable insight to target participation in 2022.
- During 2021, DTE saw a shift in the measure mix away from lighting projects, which historically accounted for 70%-80% of project savings. In 2021, project savings from lighting projects was down to just 62%. This reveals that some of the simple lighting retrofits the program historically captured are no longer being completed.
- The program partnered with the US Green Building Council and the 2030 Districts of Detroit and Grand Rapids to market to the hard-to-reach new construction market segment.
- Two events were held in Detroit and Grand Rapids to recruit participants and reenergize awareness of the incentives available.

Chart 29 – 2021 Prescriptive Program Spending and Verified Net Savings

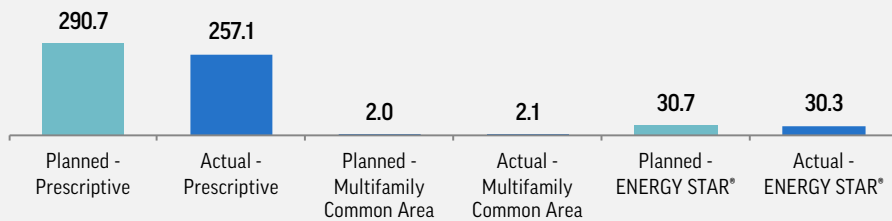
2021 DTE Electric
C&I Prescriptive Spending (\$M)



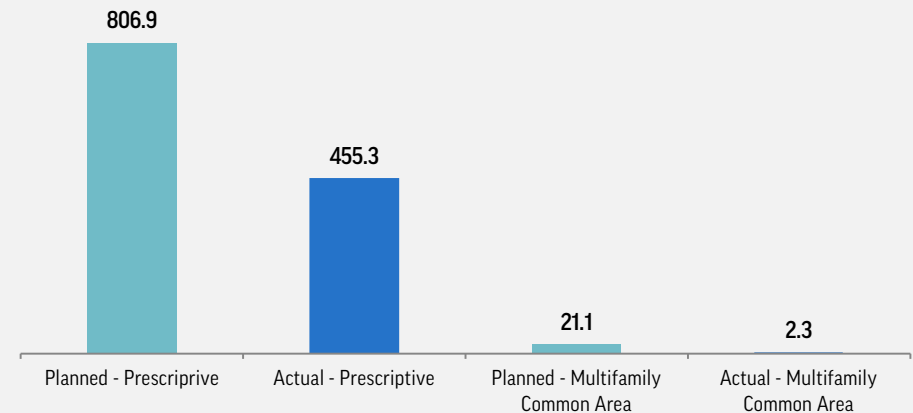
2021 DTE Gas
C&I Prescriptive Spending (\$M)



2021 DTE Electric
C&I Prescriptive Savings (GWh)



2021 DTE Gas
C&I Prescriptive Savings (MMcf)



DTE ELECTRIC AND DTE GAS

Non-Prescriptive Program

The Non-Prescriptive program provides customized incentives to C&I customers for the installation of innovative energy efficiency equipment and controls that decrease electricity or gas consumption.



Program Description

The program's components include custom measures that provide incentives to customers for measures they installed in qualified projects that are less common or more complex than prescriptive measures. As with prescriptive incentives, the custom incentive payment occurs after the equipment is installed and operational at the customer location.

Measure incentives were based on the estimated energy savings for the first 12 months.

- The Electric Non-Prescriptive program incentive was \$0.05 per kWh.
- The Gas Non-Prescriptive program incentive was \$3.50 per Mcf.

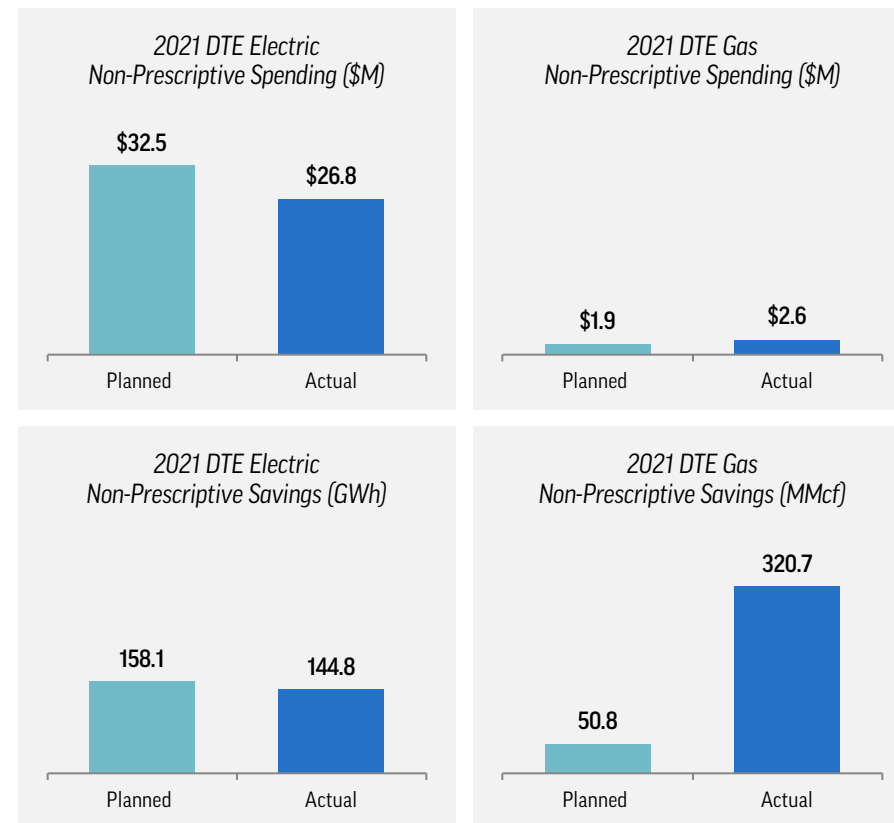
To qualify for the incentive, projects required a one to eight-year simple payback for electric, a minimum of one-year simple payback for both gas and electric projects and a maximum of eight-year payback for electric-only projects. Incentives are capped at 50% of the total project cost.

Examples of Non-Prescriptive program measures implemented during 2021 include energy management system controls, energy efficient motors and variable frequency drives, industrial process equipment improvements and custom lighting projects with extended hours of use. Measures not eligible for an incentive include fuel switching (i.e., electric to gas or gas to electric); changes in operational or maintenance practices or simple controls modifications not involving capital costs; onsite electricity generation; and projects that involve peak shifting but no kWh savings, renewable energy or those in which the payback did not meet the Non-Prescriptive requirements.

Key Takeaways

- Despite the challenging business environment in 2021, the C&I Downstream Platform program office continued operations virtually without interruption. The Downstream Platform remained agile and efficient, conducted virtual meetings and adapted to a new way of doing business.
- Over the past year, DTE began to shift to an online application by offering project bonuses to encourage contractors and trade contractors to use the online tool.
- Strong customer and program relationships are critically important to foster, which can result in multi-year project participation.

Chart 30 – 2021 Non-Prescriptive Program Spending and Savings



C&I Midstream Platform

The C&I Midstream Platform offers a simplified marketing approach that targets equipment distributors, dealers, and manufacturer representatives to encourage participating distributors to stock more energy efficient products and offer customers instant discounts at the time of purchase.

For all midstream programs in 2021, the IC's ongoing communications with distributors were well-received, and the program achieved high distributor satisfaction. Distributors reported that DTE did an excellent job making them feel cared for as individuals as opposed to businesses.



DTE ELECTRIC

Midstream Lighting Program

To achieve its goals, the program works with commercial lighting distributors across the state to offer discounts on energy efficient lighting products to C&I customers of all sizes.



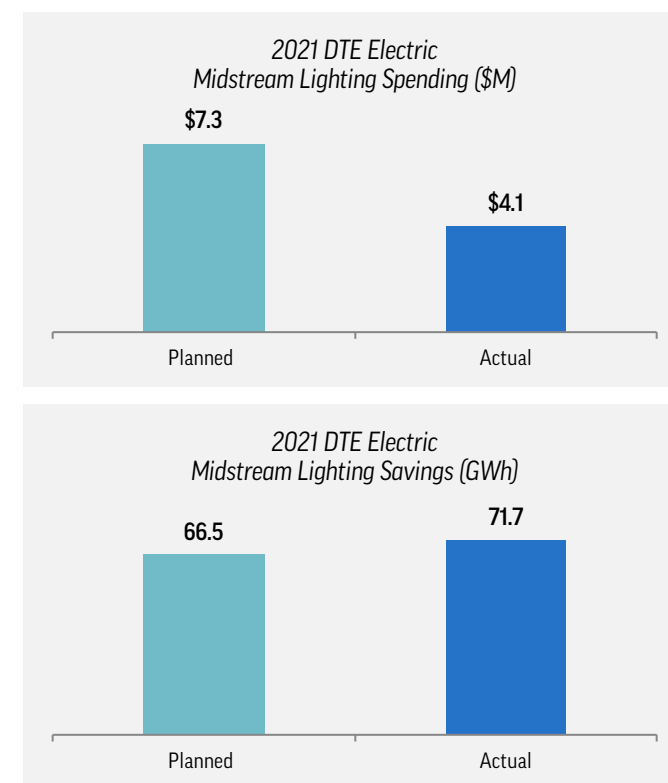
Program Description

Program incentives encourage energy savings by allowing customers to receive instant rebates on energy efficient lighting measures, including a variety of different LED lamp types and occupancy sensors. By reducing the purchase price of energy efficient lighting products at the register instead of requiring an application or scheduled appointment to participate, DTE hopes to capture program participation for customers that might not participate in other DTE C&I programs. The program also includes customer education and awareness about discounts through signage and other online means through which customers engage in the program.

Key Takeaways

- Despite supply chain and shipping delays due to the COVID-19 pandemic and related shutdowns, the program achieved high savings levels.
- The program introduced several new measures in 2021 and went on to exceed its program savings goals while staying under budget.
- The program revamped its thank you letter to customers with a QR code so they could provide feedback about the program through an online survey. This letter was shared with customers after their purchase.
- In 2021, customer satisfaction was 94%.

Chart 31 – 2021 Midstream Lighting Program Spending and Savings



DTE ELECTRIC AND DTE GAS

Midstream Food Service Program

The Midstream Food Service program targets food service cooking equipment distributors and provides point-of-purchase incentives to C&I customers of all sizes that purchase and install energy efficient food service equipment.



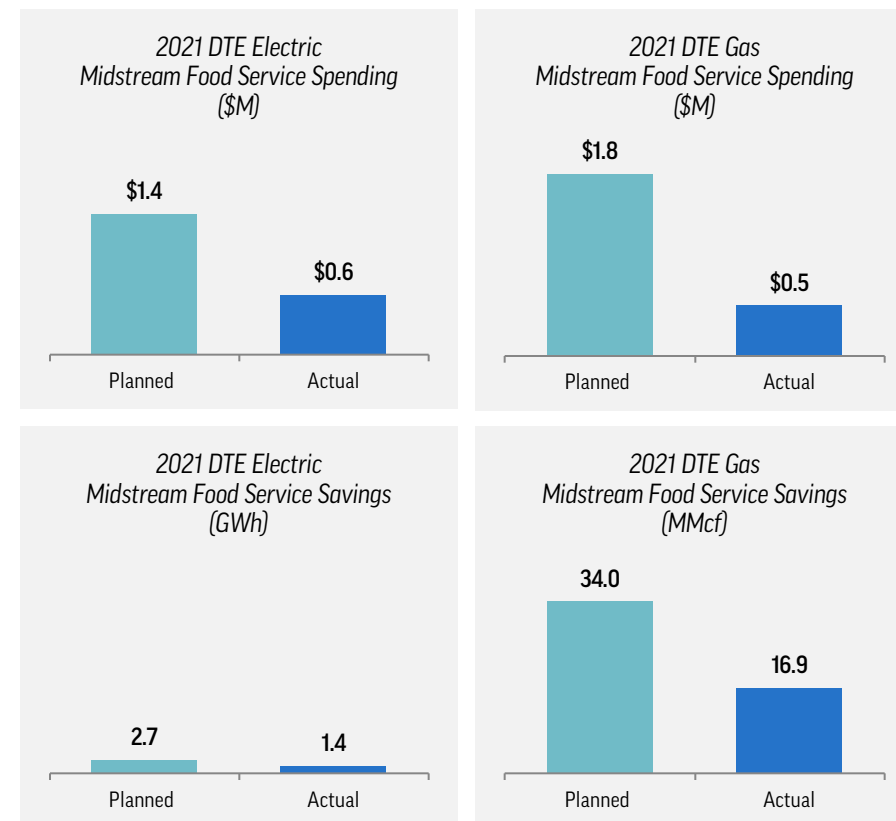
Program Description

The Midstream Food Service program works with commercial food service dealers to offer instant discounts on energy efficient (ENERGY STAR®-rated) food service equipment. Instant discounts encourage energy savings by reducing the purchase price of equipment at the point of purchase instead of requiring an application or scheduled appointment to participate. DTE hopes to capture program participation for customers that might not participate in other DTE C&I programs. Signage and an online portal promote discounts.

Key Takeaways

- The program increased its outreach by adding more field staff and sending email blasts to DTE's 30,000 food service customers.
- The program achieved higher savings than last year for both gas and electric. The IC conducted a market survey and introduced some promotions that brought additional savings.
- Supply chain and shipping delays were the greatest barriers during the program year.
- The program revamped its outreach efforts and added some manufacturers directly to participate in the program.
- The program introduced handing out a thank you postcard with a QR code at the time of sale to recruit for an online customer feedback survey. The approach did not see any success with customer recruitment. For 2022, the program will mail postcards directly to customer installation addresses and will provide an incentive to customers who complete the survey to increase participation.
- In 2021, customer satisfaction was 100%.

Chart 32 – 2021 Midstream Food Service Program Spending and Savings



DTE ELECTRIC

Midstream HVAC Program

The Midstream HVAC program was designed to increase the market share of efficient HVAC systems by providing streamlined incentives to distributors, who leverage their sales and outreach capabilities.



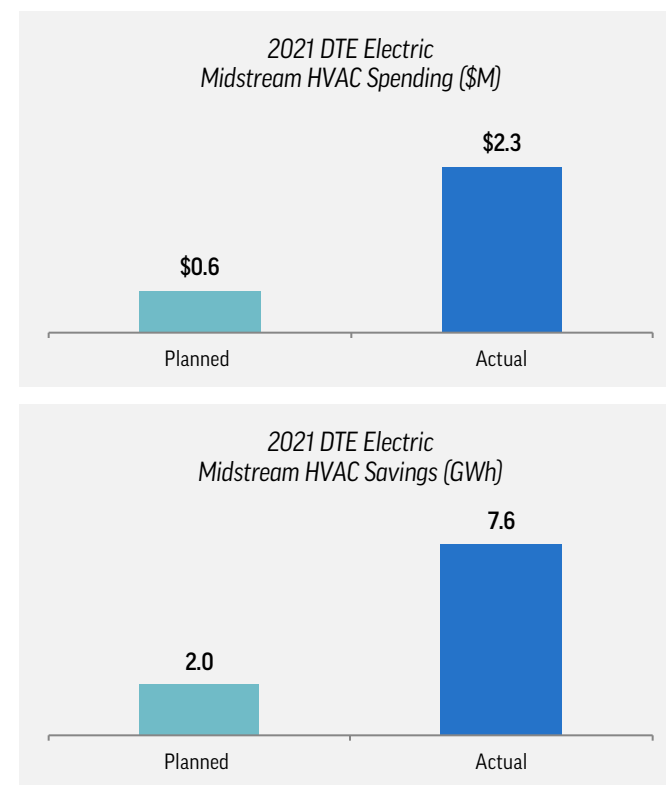
Program Description

The Midstream HVAC program works with commercial distributors across the state to offer discounts on energy efficient products. Incentives encourage energy savings by allowing customers to receive instant rebates on qualifying energy efficient Midstream HVAC equipment. By reducing the purchase price of energy efficient Midstream HVAC products at the register instead of requiring an application or scheduled appointment to participate, DTE hopes to capture program participation for customers that might not participate in other DTE C&I programs.

Key Takeaways

- In 2021, the program introduced new distributors and achieved its electric savings goal.
- The program added water heaters and pumps and saw success with these measures during 2021. The water heater measure saw significant supply chain delays and price fluctuations during the program year, which was identified as a barrier to increasing program participation and savings.

Chart 33 – 2021 Midstream HVAC Program Spending and Savings



C&I Operational Platform

The C&I Operational Platform consists of programs developed to control energy consumption through a systematic approach to identify and improve building deficiencies and processes.



DTE ELECTRIC AND DTE GAS

Retro-Commissioning Program

The Retro-Commissioning program targets C&I buildings by providing a detailed energy audit and evaluation that identifies operational low-cost or no-cost, highly customized solutions to reduce operational energy consumption based on building specific needs.



Program Description

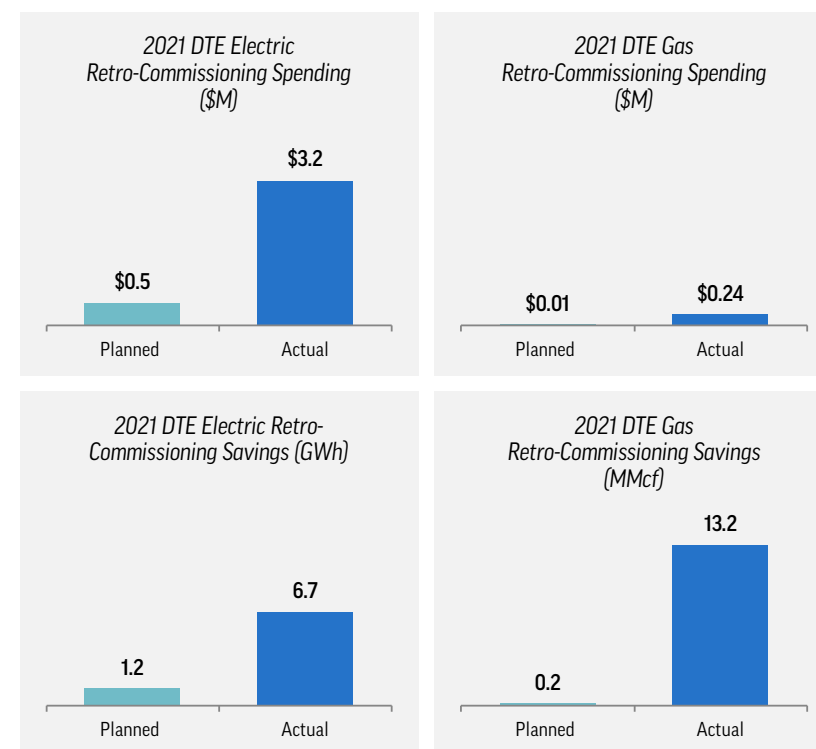
The program offers energy expertise and valuable incentives to help offset the initial cost of investment to make improvements to the customer's building. The Retro-Commissioning program provides customers with recommendations for energy efficient capital investments they can implement and receive an incentive through the Prescriptive or Non-Prescriptive programs. The program increased coordination efforts with the Strategic Energy Management program to ensure specific customers participated in the most beneficial program for their needs. Retro-Commissioning program customers are expected to have a building management system, to provide a nominal commitment, and to implement recommendations that have an 18-month simple payback or less.

DTE offers a Bonus Bank to encourage participation in DTE's C&I Prescriptive and Non-Prescriptive programs. For every kWh and therm saved from participating in the Retro-Commissioning program, DTE offered an additional bonus rebate of \$0.01 and \$0.10, respectively. Customers can use this bonus to obtain additional rebates for participating in these programs. The program increased the electric savings customer incentive from \$0.02/kWh to \$0.04/kWh in 2021. Additionally, the electric incentive cap increased from \$20,000 to \$40,000, and the gas incentive cap increased from \$5,000 to \$10,000.

Key Takeaways

- Utility-reported savings for the program in 2021 was over 45% greater for electric energy compared to 2020. The program reported over 160 times growth in 2021 for gas savings compared to 2020, representing a substantial increase over 2020.
- In 2021, the program successfully expanded to serve industrial customers using a targeted customer outreach approach while continuing to serve the commercial sector.
- In the C&I sectors, the program focused on driving participation in vertical markets such as outpatient healthcare, medical office buildings, automotive facilities and hotels.
- The program continued to offer an express path where contractors audit and make operational changes to the site during a single visit. In 2021, this express path was successfully adapted to serve the secondary education market by using a targeted customer outreach approach.
- DTE expanded the project pre-qualification process for ease of customer participation and mitigation of COVID-19 concerns. The program's remote pre-qualification data collection approach proved to be efficient and effective.
- The program collaborated with the 2030 Districts Network to showcase the customer benefits of the Retro-Commissioning program.

Chart 34 – 2021 Retro-Commissioning Program Spending and Savings



DTE ELECTRIC AND DTE GAS

Strategic Energy Management Program

The Strategic Energy Management program provides technical support and financial incentives for C&I customers interested in managing energy continuously in a holistic approach through Strategic Energy Management.



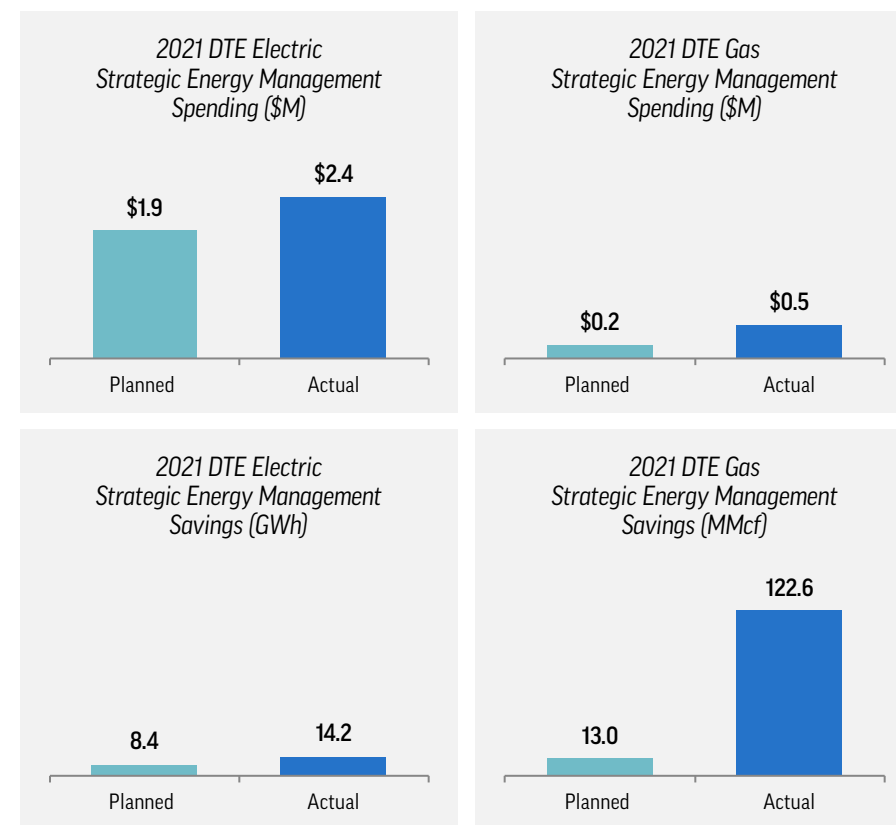
Program Description

The program provides incentives to C&I customers for making operational changes at their facilities. These operational changes primarily include HVAC process-related system adjustments that result in energy use reductions. This program offers up to 24 months of technical support, incentives for kWh and Mcf verified as well as major milestone achievement incentives.

Key Takeaways

- In 2021, the program's utility-reported savings were over 250% greater for electric energy compared to 2020. For gas savings, the program's reported savings were 20% less in 2021 compared to 2020.
- The program's 2021 participants included customers that also participated in 2020 and 2019. They were interested in achieving additional operational savings because they had a positive experience from participating in previous years.
- Several long-time participants enrolled additional facilities in their corporate portfolio to expand their participation in the Strategic Energy Management program.
- As long-time participants progress past 24-months enrolled in the program, operational savings opportunities trended toward smaller but more numerous energy savings measures.
- The program continued to offer virtual audits to access a customer's building management system remotely to identify opportunities for energy savings.

Chart 35 – 2021 Strategic Energy Management Program Spending and Savings



DTE ELECTRIC

Self-Direct Program

This program gives DTE C&I electric customers the opportunity to choose to self-direct and implement their own EE Plan.



Program Description

DTE Electric placed a bill message on all commercial customer bills notifying them about the program and how to subscribe. All existing self-directed customers were sent personalized letters when it was time to reapply. Account managers followed up with a phone call after the letters were mailed to address customer questions. Program information was placed on the DTE website along with the required energy plan templates for customers to use to apply to the program. Customers choosing to self-direct are exempt from the mandatory EE electric surcharge(s), except for the portion of the surcharge that funds the Low-Income program and program administration costs.

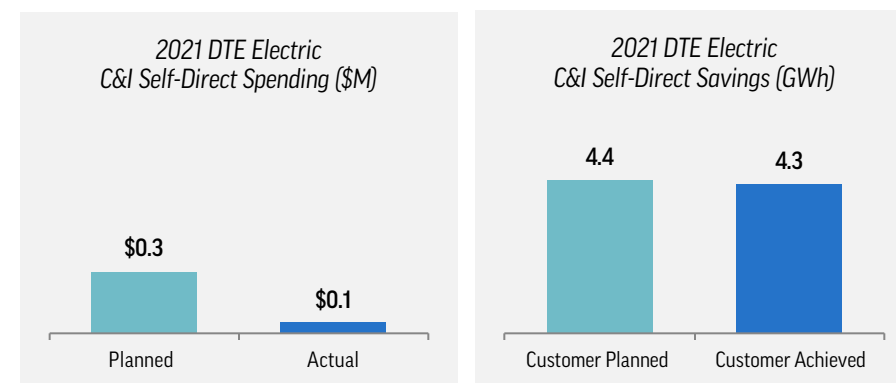
Key Takeaways

- In 2021, three electric customers enrolled in the Self-Direct program. All participating customers submitted annual reports, in compliance with program requirements. Two out of the three Self-Direct customer plans for 2021 met or exceeded their total required savings targets.
- To be eligible, customers must have an annual peak demand of 1 MW or greater per single site or annual peak demand of 5 MW or greater per aggregated sites of customers. Customers cannot include sites or accounts that have received an EE rebate or incentive from an electric provider and are in the calculated waiting period in a Self-Direct plan.
- If the waiting period lapses after the Self-Direct plan filing deadline but before its plan year begins on January 1, a customer may include those sites or accounts during the upcoming plan period.
- The plan shall provide aggregate energy savings that for each year meet or exceed the energy optimization performance standards based on the electricity purchases in the previous year for the site or sites it covered.
- Table 8 summarizes DTE Electric's Self-Direct Program for 2021.

Table 8 – Summary of the 2021 DTE Electric Self-Directed Program

Customers	Admin	Term of Self-Direct	Total Meters Associated		Annual Report Summary		
		Years	Total Primary Meters	Total Secondary Meters	Supplied Annual Report	2021 MWh Savings Planned	2021 MWh Savings Achieved
Customer		5	6	0	✓	332	198
Customer		3	150	0	✓	2,390	2,390
Customer		5	18	0	✓	1,711	1,711
Totals:	\$50,000		174	0		4,433	4,299

Chart 36 – 2021 C&I Self-Direct Program Spending and Savings



C&I Small Business Platform

The Small Business Platform provides small business customers with a path to energy savings and a means to begin their energy efficiency journey.



DTE ELECTRIC AND DTE GAS

Business Energy Consultation Program

The Business Energy Consultation program targets small businesses by providing a no-cost energy assessment, direct install prescriptive measures, a report with energy savings recommendations and referrals to the appropriate program to complete projects.



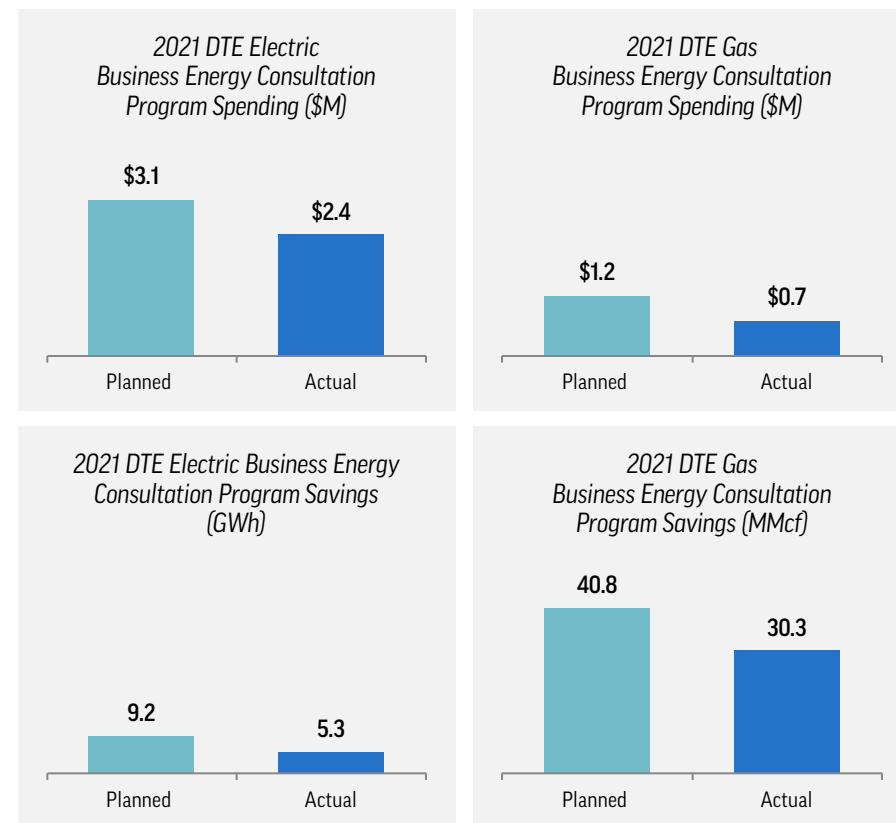
Program Description

Through the no-cost assessment, customers may receive prescriptive measures such as a programmable thermostat or LED bulbs at no cost. The Business Energy Consultation energy assessment report provides customers with energy efficiency recommendations and information on incentives and next steps. After completing the assessment, the program uses a concierge model to help customers finish their project by providing referrals to the appropriate program or contractor. The goal of the program is to create engagement with energy efficiency by providing an easy-to-follow process and eliminating barriers for customers who may have little energy experience.

Key Takeaways

- The program strengthened its focus on serving small nonprofits by offering lighting solutions and measures that have low barriers to participation.
- The program partners with local organizations to increase small business participation by focusing programming on industries within the area and providing resources such as financing and education through community programming.
- The IC offered several webinars and panels dedicated to energy efficiency and different delivery channels for small businesses in 2021.
- The direct installation portion of the program is expensive but necessary to build relationships with customers to help them understand where they are in their energy journey.
- Given the challenges in the economy and continuing effects of the COVID-19 pandemic, small business customers' energy efficiency needs have never been more important.
- In 2021, customer satisfaction was 94%.

Chart 37 – 2021 Business Energy Consultation Program Spending and Savings



DTE ELECTRIC AND DTE GAS

C&I Emerging Measures & Approaches Program

The C&I Emerging Measures and Approaches (EM&A) Platform promotes the installation of energy efficient technologies or delivery channel strategies that were recently commercialized in DTE's C&I program offerings.



Program Description

In 2021, the EM&A Platform consisted of Small Business Focus, the Telecom program, the Find and Fix Compressed Air program, the Find and Fix Steam Traps program and the gas portion of the Midstream HVAC program.

Key Takeaways

Small Business Focus (DTE Electric and DTE Gas)

- The Small Business Focus program is similar to the Business Energy Consultation program but targets medium business customers and focuses on the contractor network. It provides an energy assessment, installation of direct install measures and a final energy assessment report outlining energy efficiency best practices.
- In 2021, the Small Business Focus program collaborated with Consumers Energy to better coordinate the distribution of smart thermostats for Consumers Energy/DTE combination customers.
- The program has also been working with Michigan Saves to buy down rates for small business customers that seek financing for their energy efficiency projects through the program.
- The Small Business Association of Michigan provided referrals for the program and offered further collaboration efforts through outreach, marketing campaigns and other possible avenues to encourage customer participation.

C&I Telecom (DTE Electric)

- This first-year program achieved the savings goals set in the third quarter of the 2021 program year and engaged customers previously not participating in DTE rebate programs.
- The program created an onsite assessment and report of facilities to search for rebate opportunities and a unique application with telecom-specific measure and custom energy savings.
- Challenges included the need to develop a sense of trust with telecom facilities engaged in customer-sensitive business segments prior to enticing them to the program. Historically, these customers have not participated in DTE programs, so awareness and education proved important.

Find and Fix Compressed Air (DTE Electric)

- The Find and Fix Compressed Air program delivered the expected savings volume in its first commercialized year, fixed 15% of system volume on average, and built a significant pipeline for the upcoming program year while ensuring no safety incidents occurred throughout the year.
- The program collaborated with DTE's Retro-Commissioning program, receiving referrals from the Retro-Commissioning program and referring large customers to the Retro-Commissioning program.
- Before surveying the compressed air system, transparency about expectations for participation was crucial to ensure customers understood the commitment they were making to the program and what the next steps would be.

Find and Fix Steam Traps (DTE Gas)

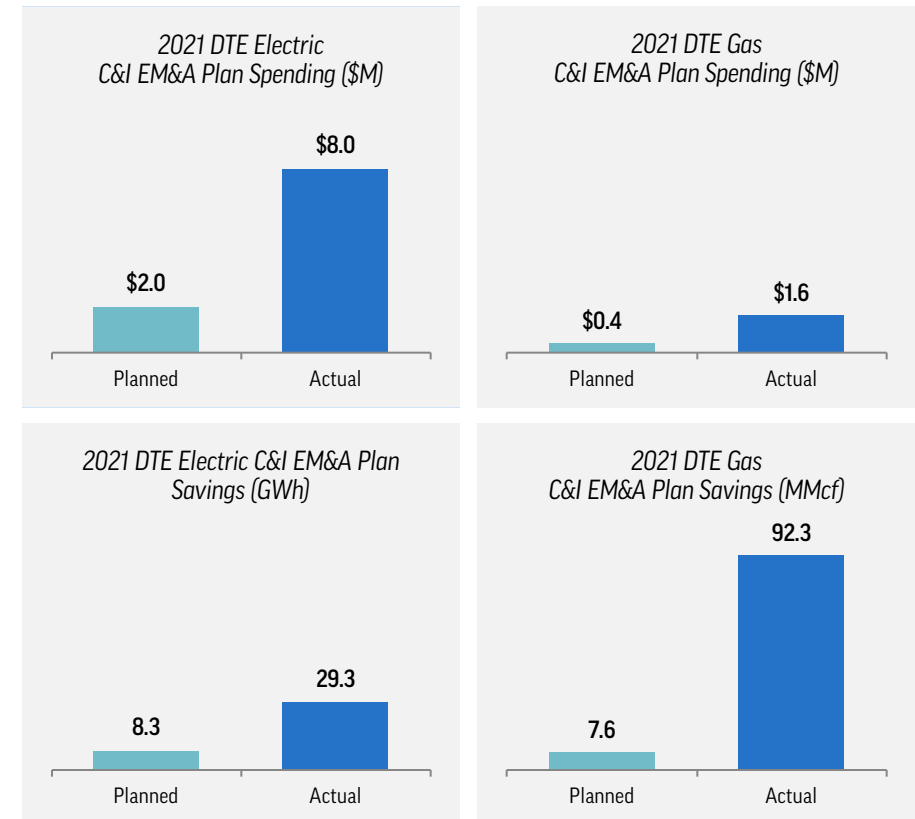
- The Find and Fix Steam Traps program went from pilot to commercial in July 2021. It delivered the expected savings volume while also building a pipeline for 2022.
- Conversion rates are high, and customers find value in the program as evidenced by the rate of referrals. The program received dry cleaner referrals from existing Find and Fix Gas customers.
- The program found that other industries including breweries, distilleries and food processing could more cost-effectively deliver savings. As a result, the incentive model was modified for 2022.

- Having a single point of contact throughout the entirety of the project improved the customer experience.
- The Find and Fix Steam Traps program continues to find significant opportunities for energy savings.

Midstream HVAC (DTE Gas)

- The program's goal is to meet savings target and improve cost-effectiveness.
- Savings were slower than anticipated but greater than 2020. The gas goals were relatively new for the program, and the COVID-19 pandemic interrupted the in-person outreach efforts introduced to increase program participation.
- The Midstream HVAC program included gas boilers in the program in 2020, the measure saw more success in 2021 with an overall growth for the gas side of the program.
- The program saw supply change delays and minimal availability of equipment, which was a barrier to meeting the program savings goal.

Chart 38 – 2021 C&I EM&A Program Spending and Savings



DTE ELECTRIC AND DTE GAS

Education & Awareness Program

The Education and Awareness (E&A) program provides DTE residential and business customers with information and resources to help them learn how to use energy more efficiently and to better manage their energy costs. Promoting energy efficiency will also help DTE achieve its CleanVision goal.



Program Description

The DTE energy efficiency-specific website, mass media, social media and outreach campaigns engage customers with energy efficiency information. In 2021, DTE continued to rely on such campaigns to target specific customer segments to increase their awareness of energy efficiency.

Residential campaigns focused on low-cost or no-cost tips, ENERGY STAR® appliance tips, heating and cooling season messaging, estimated energy- and money-saving opportunities, and environmentally focused calls to action. Messaging themes also encouraged energy efficient home improvements. Small business campaigns focused on how local small businesses used energy efficiency tactics to improve operations. DTE continued to highlight the non-energy benefits of making energy efficiency improvements to increase the comfort, environment and safety of their business and to improve the satisfaction of their customers and employees.

Key Takeaways

- DTE implemented targeted campaigns focused on energy efficiency messaging to niche customer audiences delivering educational information.
- DTE increased electric residential customer familiarity with energy efficiency programs. Energy efficiency efforts were highly impactful drivers of residential customer satisfaction.
- DTE focused on better understanding the business customer satisfaction drivers of energy efficiency programs and dedicated targeted research and marketing efforts toward achieving this objective.

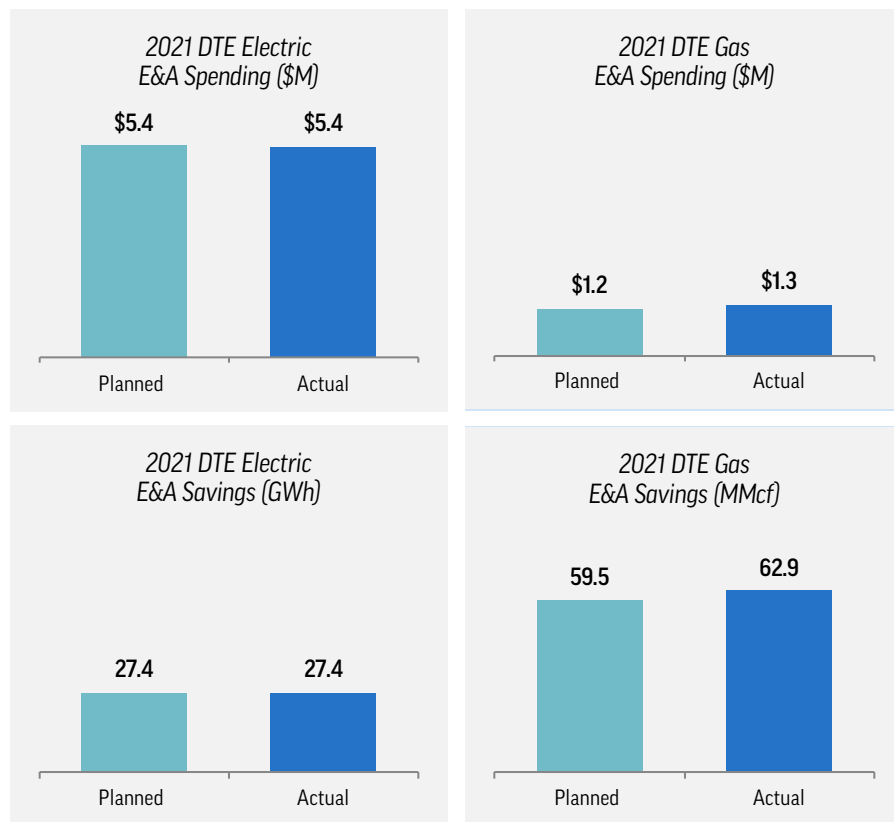
Residential

- DTE launched the Higher or Lower Comparison Tool game, a new onsite event used to educate customers on the factors that contribute to overall increased energy efficiency with ENERGY STAR-certified appliances and electronics.
- DTE executed its first ever ENERGY STAR day sweepstakes and fully integrated campaign, giving two customers a chance to win new ENERGY STAR appliances for their home. This effort drew increased engagement and exceeded expected benchmarking metrics.
- DTE created several educational video series to target customers with focused energy efficiency information.

Small Business

- DTE continued the Business Pride contest, helping customers tell their story of energy efficiency improvements and share pride in their business via a virtual format. DTE selected three winners and provided them with a free energy consultation through the Small Business program, prize money to put toward implementing energy efficiency upgrades and opportunities to be featured in future DTE marketing efforts.
- DTE delivered a suite of new small business-focused educational videos and case studies featuring program promotions, energy savings tips and calls to action and local customer interviews and testimonials.

Chart 39 – 2021 E&A Spending and Savings



Pilot Program

(DTE Electric and DTE Gas)

The purpose of DTE's Pilot program is to explore technologies and approaches not included in the commercialized programs described in the approved 2021-2022 EE Plan.



Program Description

The program enabled the Company to measure energy savings and test the cost-effectiveness of emerging technologies. This program also tested customer adoption of new technologies and market adoption of existing technologies using new approaches. As designed, this program supported both Residential and C&I programs.

Residential Pilots

Codes and Standards Study (DTE Electric and DTE Gas)

Ongoing, launched Q3 2020

Phase 1 of this pilot, code adoption, is underway. In this phase, DTE is actively participating in Michigan's Building Energy Code update. The goal of this participation is to positively affect the codes and standards to be later codified in a measurable way.

Ekotrope Upgrade (DTE Electric and DTE Gas)

Completed 2021, commercialized Q1 2022

Ekotrope's Automated Design Assistance pilot is designed to enhance DTE's New Home Construction program. The Automated Design Assistance tool helps new construction programs achieve deeper savings and more program participation by suggesting tailored recommendations in the HERS software. Tailored recommendations include upgrades expected to result in the greatest savings for homeowners and maximize the New Home Construction program's financial incentives for builders. The tool suggests these energy conservation improvements during HERS raters' normal workflow and provides HERS raters with Automated Design Assistance summary reports to send to their builders.

Electric New Home Construction (DTE Electric)

Ongoing, launched Q1 2020

DTE's Electric New Home Construction pilot targets market rate and affordable housing builders throughout Michigan to build all-electric homes with a cold climate heat pump and a highly efficient building envelope. To encourage participation and adoption of these higher efficiency standards, DTE offers rebates to participating builders. A third-party HERS rater inspects the home and determines if program requirements were met. The objectives of this pilot are to test new technologies in new construction buildings such as CCHPs, the market response for market rate and low-income builders, and customer and builder interest in all-electric homes.

Gas Automatic Meter Reading (DTE Gas)

Concluded in Q1 2021, this pilot will not be commercialized at this time

The Gas Automatic Meter Reading pilot provided DTE Gas customers the ability to visualize, control and improve their gas usage through the DTE Insight app using a standalone automatic meter reading device embedded into the existing power supply of the Energy Bridge. The objectives of this pilot were to achieve additional energy savings, increase customer satisfaction and heighten general awareness of energy efficiency and engagement with the Insight app.

Health and Safety (DTE Electric and DTE Gas)

Ongoing, launched Q3 2018

The Health and Safety pilot's goal is to provide funding through EEA program partners and trade allies to overcome health and safety issues that prevent the delivery of energy efficient products and services (walkways) for single-family and multifamily buildings. DTE delivers measures to owner-occupied households, with a standard approval limit of \$7,500 per household and requires pre- and post-photographs as part of the quality assurance and control process. Additional resources may be leveraged to assist customers in greater need.

Non-Wires Alternative (DTE Electric)

Ongoing, launched Q1 2019

The Non-Wire Alternatives pilot established the selection of a second substation and pilot design planning required to begin field testing the effectiveness of a mix of EE programs as a non-wires solution starting in 2022.

C&I Pilots

Business Marketplace (DTE Electric and DTE Gas)

Launched Q4 2020, ended Q3 2021

The Business Marketplace provides DTE small business customers an online retail resource for energy efficient products that receive instant discounts at the time of purchase. The Marketplace's objective was to provide an easy and convenient avenue for small business customers to learn about and purchase energy efficient products. The products are delivered by mail for self-installation. The Marketplace was unsuccessful in obtaining small business customer attention and was ended.

C&I DIY (DTE Electric and DTE Gas)

Ongoing, launched in 2021

Do It Yourself (DIY) is a pilot DTE is exploring outside of the participating contractor network model. It is geared directly toward commercial customers featuring simple, self-installed energy-saving measures that are easy to implement, require a minimal time investment and have no need for specialized tools or permits.

The pilot is being rolled out in three phases. Phase one included testing, learning, and adjusting the DIY instructional materials with a small group of customers and was completed at the end of 2021. The next phase will include testing the DIY infrastructure with a limited number of customers through targeted marketing after the website goes live. The last phase will include testing the infrastructure with a larger number of customers.

Energy Data Hub (DTE Electric and DTE Gas)

Ongoing, launched Q3 2020

This pilot provides building owners with an energy data hub that offers a simple, streamlined way to access and aggregate their building data for submission to an ENERGY STAR® Portfolio Manager. The energy data hub provides monthly whole building electric and gas usage totals for DTE-metered sites. The objective of the pilot is to increase satisfaction by helping customers save time with manual data entry and reduce the number of requests for data. The pilot aims to provide DTE customers a platform to receive energy usage data updates automatically. The pilot is still in the development phase.

Find and Fix Steam Traps (DTE Gas)

Commercialized Q3 2021

Steam production systems are energy-intensive and most have significant energy efficiency opportunities. The Find and Fix pilot is designed to eliminate known barriers and increase savings by removing customer upfront costs and incentivizing low participation for existing measures. By reducing the customer's funding commitment and disaggregating incentives for identifying leaks from those for making repairs, DTE was testing the hypothesis that this new incentive structure would increase customer participation.

The program is intended to provide energy savings by identifying and repairing faulty steam traps using a service-based incentive approach. The program focuses on customers that do not participate in current incentive programs and is designed to eliminate known barriers and increase savings.

C&I Telecom (DTE Electric)

Commercialized Q3 2021

Telecom and data processing systems are energy-intensive using specialized equipment. The program created an onsite assessment and report of facilities to search for rebate opportunities and a unique application with telecom-specific measure and custom energy savings. These measures would be considered non-traditional energy efficiency opportunities. DTE was testing the hypothesis that this new set of measures would translate into other vertical markets besides the Telecom vertical market adopting them.

The program focused on Telecom customers that typically did not participate with their data processing facilities. Challenges included the need to develop trust with telecom facilities engaged in customer-sensitive business segments prior to enticing them to the program. Historically, these customers have not participated in DTE programs, so awareness and education proved important.

Grocery Program (DTE Electric and DTE Gas)

Launched Q4 2019, ended Q3 2021

The Grocery program provided grocery and convenience stores with free custom assessments that identified opportunities to save energy and money. The program also provided custom recommendations (including details on available incentives to offset recommendation implementation costs) and assistance for measure implementation. With the high level of energy consumption in refrigeration, a concerted focus on grocery and convenience stores was implemented to secure savings, particularly in the smaller business category, which had not seen significant participation. The program tested a cost-effective means to secure greater customer engagement, particularly in refrigeration measures, through assistance, education and incented proposed measures. The program proved successful and turned into the Refrigeration program in the downstream platform for 2022.

Onsite Energy Manager (DTE Electric and DTE Gas)

Ongoing, launched Q4 2020

The Onsite Energy Manager pilot assigns a DTE energy manager to a customer's site(s) for six to 24 months. The energy manager assists the customer in creating an energy management plan and in identifying, developing and managing energy efficiency projects. The objectives of the pilot are to assist the customer in creating a world-class energy management program and to identify projects and incentives associated with other DTE C&I programs to increase participation in the Downstream, Midstream, Operational and other relevant C&I offerings. Moreover, the pilot will track low-to-no-cost operations and maintenance measures (not associated or captured by other C&I offerings) that are identified by the energy manager and implemented in the customer's facilities.

Small Rural Customer Trade Ally (DTE Electric and DTE Gas)

Launched Q4 2020, ended Q4 2021

The Small Rural Customer Trade Ally pilot was designed to determine how DTE could drive greater participation in rural service territories. Overall participation varied, with small and medium customer participation relatively low compared to more populated areas. The desired result of this pilot was to create a contractor network so customers had the resources to assist in facilitating energy efficiency projects.

This pilot was rolled out to customers in Q2 2021 and ended in Q4 2021. The pilot was offered to electric and gas customers in DTE's rural service territory. Over 1,000 phone calls were initiated but only a few leads were secured. Numerous customers stated the incentives offered were too low to motivate participation. While the COVID-19 pandemic significantly affected small businesses and rural trades allies, the pilot was successful in training and securing over 50 new trade allies to support the C&I Small Business Platform.

Virtual Assessment (DTE Electric)

Ongoing, launched Q4 2020

The BEC program launched a Virtual Assessment pilot that offers gas direct install measures to traditionally hard-to-reach customers. Interested customers receive an interactive survey paired with education. Customers are prescribed one or more measures based on their energy efficiency needs.

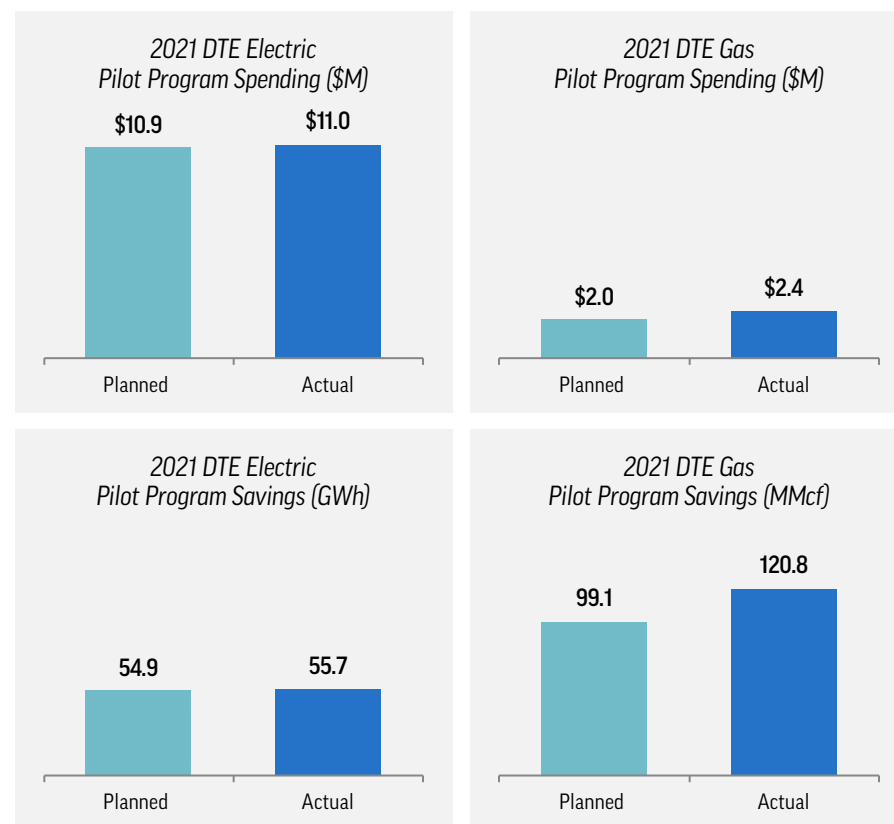
Your Energy Performance Report (DTE Electric and DTE Gas)

Ongoing, launched Q4 2020

This pilot comprises a published report that compares a customer's energy use history. A mailed printed document provides select small business customers their year-over-year energy use profile accompanied by a pie chart breakout of the primary energy applications for their type of business. This document also includes recommendations on specific solutions that will help save energy once implemented. The objective of the pilot is to increase satisfaction by helping customers save energy and reduce costs through an improved understanding of how their energy is used. The pilot directs customers to specific incentivized measures and solutions to increase adoption and achieve the associated savings.

The mailed documents were introduced to select small and medium businesses in Q4 2020. DTE's preliminary finding is that customers are adopting some of the recommended measures to achieve savings. The reports will continue to be mailed on a bimonthly basis through December 2023.

Chart 40 – 2021 Pilot Program Spending and Savings





EE Program Achievements

Energy Savings

- Since the Portfolio's inception in 2009, over 7.7 million electric customers and over 3.8 million gas customers have directly participated in DTE's energy efficiency programs. DTE customers have saved over 8,200 GWh and over 19,500 MMcf since the program started. The savings achieved so far will continue to lead to savings for years into the future.
- The electric savings are equivalent to the energy required to power over 560,000 homes for 1 year.⁹
- The gas savings are equivalent to the energy required to power over 100,000 homes for 1 year.⁹
- DTE's EE programs will help make CleanVision a reality.

Monetary Savings

- DTE's customers have benefited as a result of its energy efficiency offerings. Residential customers pay an average of \$68 annually, or less than 3% of their total bill for combined energy efficiency gas and electric surcharges. Electric customers pay, on average, \$39 and gas customers pay, on average, \$29.

Economic Development Benefits

- DTE's EE Portfolio resulted in ICs establishing local offices (in Detroit, Livonia, Lansing and Grand Rapids) and the hiring of local talent to operate and manage their respective programs.
- Through 2021, 390 Michigan-based jobs have been created by the ICs under contract with DTE, as Table 9 summarizes. These jobs include field operations staff, appliance pickup drivers, call center representatives and program managers.
- Customers and communities benefit from the new jobs and investment in the community.

Table 9 – IC Jobs

IC Name	Michigan-Based Jobs
Bradley+Company	16
CLEAResult	15
DNV	23
DTE	40
Energy Sciences	19
Energy Solutions	3
Franklin	28
Guidehouse	9
ICF	31
Ignite	7
Leidos	3
Michigan Saves	21
NEF	10
Powerley	3
SEEL	81
Walker-Miller - Franklin	82
Total¹⁰	390

⁹ Equivalent home energy use is calculated using the US Environmental Protection Agency Equivalency Calculator.

¹⁰ Total may not be exact due to rounding.

Diversity and Inclusion

- DTE is committed to powering diversity. The collective efforts bring new businesses and jobs to Michigan, while strengthening the vitality of our communities. Using innovative approaches to create meaningful business opportunities for minority- and women-owned firms, DTE Energy has contributed to the growth of some of these firms now servicing the utility industry. DTE Energy continues to provide minority and women-owned firms with advocacy, training, mentoring, and business opportunities and development experiences.

Program Offerings and Participation

While many of the EE programs are mature and functioning well in the market, DTE continues to innovate and develop new program offerings. DTE expanded its commercialized program offerings and offered pilots in 2021 that will be commercialized in 2022. Customers have upgraded equipment, enabling them to be more energy efficient year after year. They have also been educated on simple actions they can take to save on their energy use on an ongoing basis. In 2021, over 1.1 million DTE Electric customers and over 297,000 DTE Gas customers took control of their energy use through the EE Portfolio and saved millions of dollars as a result.

To give some perspective on the magnitude of this effort, the following are some of DTE's 2021 accomplishments:

- DTE successfully commercialized the Find and Fix Steam Traps program.
- DTE continued to expand the channels through which customers can participate in the EE programs including the expansion of residential and commercial midstream program offerings.
- The Residential programs served over 639,000 electric households and over 294,000 gas households.
- DTE invested over \$35 million on Low-Income programs and continued programs launched in 2020 to target this segment; these offerings include the PTCI, Revolving Loan Fund, Income-Qualified Heat Pumps and Health and Safety programs.
- The C&I programs served over 545,000 electric households and over 2,500 gas businesses.
- Business applications served included lighting, lighting controls, HVAC and heating controls, food services and process electric.
- Most C&I markets were served, including light and heavy industry, retail, grocery, hospital, hotel and educational institutions.

Table 10 – Diverse Suppliers

Name	Actual Spend	% Actual Spend
Bradley Company	\$1,598,646	0.7%
Dunamis Clean Energy Partners, LLC	\$712,387	0.3%
Energy Sciences Resource Partners, LLC	\$8,189,533	3.7%
Group O, Inc.	\$1,007,489	0.5%
Ignite Social Media	\$17,358,081	7.8%
PES Group, Inc.	\$331,412	0.1%
REGROUP, Inc.	\$2,442,836	1.1%
SEEL, LLC	\$81,884,211	37.0%
SHI International Corp.	\$1,676	0.0%
Strategic Staffing Solutions	\$1,288,669	0.6%
The Harmon Group, LLC	\$380,558	0.2%
Walker-Miller Energy Services	\$22,217,845	10.0%
Total	\$137,413,343	62.1%



Conclusion

2021 was another successful year for DTE's EE Portfolio in all key areas: energy savings, spending, and participation. Customers were made aware of energy efficiency benefits and the programs offered by DTE via innovative approaches and targeted marketing campaigns.



Customer experience was enhanced by creating new educational tools and resources and expanding social media and contests. Programs were upgraded and delivered with high quality, meeting the ever-rising level of customer expectations. Promising pilot programs were transitioned to full program offerings, and additional pilots were undertaken to stay ahead of the technology curve and to test innovative market approaches. Continuous improvement activity increased again in 2021 – several efforts were undertaken to eliminate defects and improve process efficiency. Collaboration with other utilities and the energy efficiency community at large provided additional benefit to DTE's customers.

Opportunities and challenges lie ahead, and DTE is well-positioned to continue to provide value to its customers and other stakeholders through a robust and well-run energy efficiency program. DTE's strategic efforts have resulted in increased awareness, improved experiences and higher satisfaction among its customers.

In light of unprecedented industry and energy policy changes, 2022 will be another pivotal year for the EE Portfolio as DTE continues to work with key stakeholders on securing Michigan's energy future. These programs are also imperative because without them, we will not achieve our CleanVision goal of net zero carbon emissions by 2050. As the EE Portfolio continues to mature, DTE will continue to innovate to become the best operated energy efficiency program in North America.