DTE Gas Company
One Energy Plaza,1610 WCB
Detroit, MI 48226-1279

David S. Maquera
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May 28, 2021

Ms. Lisa Felice
Executive Secretary
Michigan Public Service Commission
7109 West Saginaw Highway
Lansing, MI 48917

RE: In the matter, on the Commission's own motion, regarding the regulatory reviews, revisions, determinations, and/or approvals necessary for DTE GAS COMPANY to fully comply with Public Act 295 of 2008, as amended by Public Act 342 of 2016.
MPSC Case No. U-20871

Dear Ms. Felice:

Attached for electronic filing in the above referenced matter is DTE Gas Company's Application for Approval of the Reconciliation of Its Energy Waste Reduction Plan Expenses for the Plan Year 2020 and Testimony and Exhibits of Witnesses, Reema A. Biel, Debbie Brannan, Jose N. Goncalves, Thomas W. Lacey, Rebecca M. Malfroid, Christopher M. Payne, Kenneth Randazzo, and Debra D. Stoudemire. Also attached is the Proof of Service.

Very truly yours,

David S. Maquera
Digitally signed by David S. Maquera
Date: 2021.05.28 10:45:48 -04'00'
David S. Maquera

DSM/kbk
Attachments
cc: Service List

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter, on the Commission's own motion, regarding the regulatory reviews, revisions, determinations, and/or approvals necessary for **DTE GAS COMPANY** to fully comply with Public Act 295 of 2008, as amended by Public Act 342 of 2016.	)	Case No. U-20871 (Paperless e-file)

DTE GAS COMPANY'S APPLICATION FOR APPROVAL OF THE RECONCILIATION OF ITS ENERGY WASTE REDUCTION PLAN EXPENSES FOR THE PLAN YEAR 2020

DTE Gas Company ("Applicant" or "DTE Gas"), files this Application pursuant to Michigan Clean, Renewable, and Efficient Energy Act, Public Act 295 of 2008 ("Act 295") as amended by Public Act 342 of 2016 ("Act 342"), MCL 460.1001 *et seq*, requesting approval of the reconciliation of DTE Gas's Energy Waste Reduction ("EWR") plan, for the plan year 2020, and authority to implement EWR surcharges, and other related relief. In support of the relief requested in this Application, DTE Gas states:

1. DTE Gas is a subsidiary of DTE Energy Company, a Michigan corporation with its principal offices located at One Energy Plaza, Detroit, Michigan 48226. DTE Gas is a public utility subject to the jurisdiction of the Michigan Public Service Commission ("Commission" or "MPSC") and is engaged in acquisition, storage, transportation, distribution and sale of natural gas and other related services to approximately 1.3 million residential, commercial and industrial customers within the State of Michigan.

2. Act 295 as amended by Act 342 requires certain electric providers and natural gas providers to file proposed EWR plans with the Commission for its review and approval. Act 295

as amended by Act 342 states that the overall goal of the EWR plan is to help a provider's customers reduce energy waste and to reduce the future costs of provider service to customers.

3. On July 1, 2019, DTE Gas filed its application in MPSC Case No. U-20429 with supporting testimony and exhibits requesting approval of its 2020-2021 EWR Plan pursuant to the provision of Act 295 as amended by Act 342.

4. On March 5, 2020, the Commission issued its order in MPSC Case No. U-20429 approving a partial settlement agreement for DTE Gas's 2020-2021 EWR Plan attached as Exhibit A to such order.

5. On November 19, 2020, the Commission issued its final order in MPSC Case No. U-20429 whereby capitalized costs were excluded from the performance incentive mechanism. The approved surcharges were implemented in December 2020.

6. On November 19, 2020, the Commission issued an Order in MPSC Case No. U-20871 ("U-20871 Order") directing DTE Gas to file the Company's 2020 EWR reconciliation by May 31, 2021.

7. Section 97 of Act 295 as amended by Act 342; MCL 460.1097 states that each provider whose rates are regulated by the Commission, " . . . shall submit to the Commission an annual report that provides information relating to the actions taken by the provider to comply with the energy waste reduction standards."

8. Section 74 of Act 295 as amended by Act 342; MCL 460.1074 provides that "Concurrent with the submission of each report under section 97, the Commission shall commence an annual proceeding, to be known as an energy waste reduction cost reconciliation, for each provider whose rates are regulated by the Commission."

9. The Commission's March 28, 2017 Order in case no. U-18268 instructed utilities to include complete annual evaluation, measurement and valuation ("EM&V") reports for the provider's entire portfolio of programs. DTE Gas will file its EM&V reports by July 15, 2021.

10. Consistent with the Commission's U-20871 Order and statutory requirements referenced above, DTE Gas has set forth in the testimony and exhibits attached to this Application the details of the reconciliation of its 2020 EWR performance and expenses.

11. During 2020, DTE Gas implemented and operated its approved 2020 EWR plan, which includes: (1) energy savings targets established by Act 295 as amended by Act 342; (2) offerings for each customer class, including low income residential; (3) specific funding levels; (4) cost recovery mechanisms allowing recovery of EWR plan costs; (5) EWR programs, excluding program offerings to low income residential customers, that are cost-effective; and (6) practical and effective administration of the programs.

12. DTE Gas's reconciliation shows that during 2020, its Commission-approved EWR plan achieved compliance with the requirements of Act 295 as amended by Act 342 of a utility system resource cost test ("USRCT") score of greater than one and the legislated energy savings of 0.75% of 2019 planned retail sales. DTE Gas considerably exceeded these requirements by accomplishing a USRCT score of 1.91 and by achieving 2,240 MMcf of verified net energy savings.

13. The performance incentive is calculated following the method approved by the Commission in its order issued March 5, 2020 and affirmed in its order issued November 19, 2020 in case No. U-20429. The Company earned the performance incentive approved by the Commission in its Order in Case No. U-20429, and earned the performance incentive for 2020 by exceeding or meeting the legislated minimum first year savings, lifetime savings targets,

Residential Low Income spend and Residential Low Income lifetime savings as outlined in case No. U-20429 (and the accompanying settlement agreement). The details of these energy savings figures and the computations of the performance incentive are discussed in the accompanying testimony.

14. In 2020, the planned EWR program spend was $39.1 million and the actual EWR program spend was $40.0 million.

15. Based on the operation of the surcharge during 2020, DTE Gas has calculated a net under-recovery of $19.2 million. DTE Gas is proposing that the calculated cumulative total net over-recovery for year end 2020 will be carried forward into 2021 on a customer class basis and used as beginning balances for the 2021 reconciliation.

16. DTE Gas maintains that the testimony and exhibits filed with this Application demonstrate that the reconciliation was conducted in a reasonable and prudent manner and consistent with the requirements of Act 295 as amended by Act 342, thus warranting Commission approval of the requested relief.

17. In support of its Application, DTE Gas is filing the direct testimony and exhibits of eight witnesses (Reema A. Biel, Debbie Brannan, Jose N. Goncalves, Thomas W. Lacey, Rebecca M. Malfroid, Christopher M. Payne, Kenneth Randazzo, and Debra D. Stoudemire) concurrently with this Application. The contents, recommendations and proposals set forth in the testimony and exhibits are attached to this Application and provide further support for the relief requested.

WHEREFORE, DTE Gas respectfully requests that the Michigan Public Service Commission:

A. Determine that DTE Gas's reconciliation for its 2020 EWR plan year is just and reasonable, and that it meets all relevant requirements of Act 295 as amended by Act 342;

B. Approve DTE Gas's reconciliation for the 2020 EWR plan year, the performance incentives, and the associated proposed tariffs;

C. Approve the necessary accounting authority described in DTE Gas's testimony; and

D. Grant such other and further relief as is just and reasonable.

Submitted by,

DTE GAS COMPANY

By: David S. Maquera Digitally signed by David S. Maquera Date: 2021.05.28 10:46:55 -04'00'

David S. Maquera (P66228)
Attorney for DTE Gas Company
One Energy Plaza, 1610 WCB
Detroit, Michigan 48226
(313) 235-3724

Dated: May 28, 2021

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter, on the Commission's own motion,	)	
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determinations, and/or approvals necessary for	)	Case No. U-20871
DTE GAS COMPANY	)	(Paperless e-file)
to fully comply with Public Act 295 of 2008,	)	
as amended by Public Act 342 of 2016.	)	
_____	)	

QUALIFICATIONS

AND

DIRECT TESTIMONY

OF

REEMA A. BIEL

DTE GAS COMPANY
QUALIFICATIONS OF REEMA A. BIEL

Line No.

Q1. What is your name, business address, and by whom are you employed?

A1. My name is Reema A. Biel (she/her/hers). My business address is DTE Energy, One Energy Plaza, Detroit, Michigan 48226. I am employed by DTE Energy Corporate Services, LLC.

Q2. On whose behalf are you testifying?

A2. I am testifying on behalf of DTE Gas Company (DTE Gas or Company).

Q3. What is your educational background?

A3. I earned a Bachelor of Accountancy from Walsh College in 1999 and earned my Certified Public Accounting License in 2003.

Q4. What work experience do you have?

A4. In 1995, I joined Coopers & Lybrand ("C&L") individual tax practice primarily working on income tax compliance. In 1998, C&L merged with Price Waterhouse, forming PricewaterhouseCoopers ("PwC") in which I began working in their Business Compliance Group. In 2005, I was promoted to Tax Manager responsible for the preparation and review of federal, state, and foreign income tax returns for multi-national corporations. In addition, I was responsible for the review of federal, state, and foreign quarterly and annual tax provision for multi-national companies. I joined DTE Energy Company's Tax Department in 2007 as a Tax Principal responsible for the preparation and review of the Company's federal income tax returns and forecasts. I was promoted to Regulatory Tax Manager in February 2016 responsible for federal, state, and local income tax accounting and tax forecasting for all regulatory filings.

Line No.

Q5. Have you previously sponsored testimony before the Michigan Public Service Commission (MPSC)?

A5. Yes, I have sponsored testimony in the following cases:

U-20364 – DTE Electric 2018 TRM Reconciliation

U-20366 – DTE Electric 2018 EWR Reconciliation

U-20369 – DTE Gas 2018 EWR Reconciliation

U-20373 – DTE Electric 2020 – 2021 EWR Plan

U-20429 – DTE Gas 2020 – 2021 EWR Plan

U-20711 – DTE Electric 2019 TRM Reconciliation

U-20703 – DTE Electric 2019 EWR Reconciliation

U-20987 – DTE Electric 2020 TRM Reconciliation

Line No.

Q6. What is the purpose of your testimony?

A6. The purpose of my testimony is to discuss and support the calculation of deferred taxes included in DTE Gas's 2020 Energy Waste Reduction (EWR) Reconciliation.

Q7. Are you sponsoring any exhibits in this proceeding?

A7. Yes. I am supporting the following exhibit:

Exhibit	Description
A-27	Deferred Income Tax Liability

Q8. Was this exhibit prepared by you or under your direction?

A8. Yes, it was.

Q9. How is the net deferred tax liability balance on Exhibit A-27 calculated?

A9. The monthly net deferred tax liability (DTL) balance is calculated on lines 22 through 25 of Exhibit A-27. The ending balance on line 25 is calculated by starting with the beginning balance on line 22 and adding the change during 2020 on lines 23 and 24.

Q10. How did you calculate deferred tax activity on Exhibit A-27?

A10. Deferred tax activity is calculated on lines 1 through 20. For each of the three customer classes, the deferred tax represents the difference between the book and tax treatment of Capitalized Program Costs multiplied by the composite tax rate of 26.2%. The monthly amounts calculated on lines 5, 10, 15, and 20, are used by Company Witness Mr. Lacey to adjust the monthly accumulated deferred tax balance for the corresponding customer class on line 9 of Exhibit A-20, pages 1-3.

Line No.

Q11. What is the difference between the book and tax treatment of Capitalized Program Costs?

A11. Program Costs are capitalized for book purposes and amortized over five (5) years. For tax purposes, these costs are "ordinary and necessary" business expenses that are deducted in the year they are incurred. A deferred tax liability is created when the costs are capitalized for book purposes and deducted for tax purposes. As the costs are amortized in subsequent years for book purposes, the deferred tax liability is reduced.

Q12. Does this complete your direct testimony?

A12. Yes, it does.

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_____	)	

EXHIBIT

OF

REEMA A. BIEL

Michigan Public Service Commission
DTE Gas Company
Energy Waste Reduction - 2020 Plan Reconciliation
Deferred Income Tax Liability
($)

Case No.: U-20871
Exhibit: A-27
Witness: R. A. Biel

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)
Line No.	**Description**	**Source**	**Jan-20**	**Feb-20**	**Mar-20**	**Apr-20**	**May-20**	**Jun-20**	**Jul-20**	**Aug-20**	**Sep-20**	**Oct-20**	**Nov-20**	**Dec-20**	**Total 2020**
1	Total 2020 Program Costs Capitalized - Residential	A-14, Page 2, Line 12	-	-	-	-	-	-	-	-	-	-	-	-	-
2	Book Amortization	A-14, Page 2, Line 13	-	-	-	-	-	-	-	-	-	-	-	-	-
3	Difference	Line 1 - Line 2	-	-	-	-	-	-	-	-	-	-	-	-	-
4	Tax Rate		26.20%	26.20%	26.20%	26.20%	26.20%	26.20%	26.20%	26.20%	26.20%	26.20%	26.20%	26.20%	26.20%
5	Deferred Tax - Residential	Line 3 x Line 4	-	-	-	-	-	-	-	-	-	-	-	-	-
6	Total 2020 Program Costs Capitalized - Commercial & Industrial	A-14, Page 3, Line 12	150,670	39,178	39,318	62,902	46,663	58,774	146,435	49,136	47,186	86,431	81,892	390,549	1,199,135
7	Book Amortization	A-14, Page 3, Line 13	-	-	-	-	-	-	-	-	-	-	-	16,076	16,076
8	Difference	Line 6 - Line 7	150,670	39,178	39,318	62,902	46,663	58,774	146,435	49,136	47,186	86,431	81,892	374,472	1,183,059
9	Tax Rate		26.20%	26.20%	26.20%	26.20%	26.20%	26.20%	26.20%	26.20%	26.20%	26.20%	26.20%	26.20%	26.20%
10	Deferred Tax - Commercial & Industrial	Line 8 x Line 9	39,476	10,265	10,301	16,480	12,226	15,399	38,366	12,874	12,363	22,645	21,456	98,112	309,961
11	Total 2020 Program Costs Capitalized - End-User Transportation	A-14, Page 4, Line 12	292,456	76,047	76,318	122,095	90,574	114,082	284,235	95,375	91,590	167,765	158,955	758,068	2,327,562
12	Book Amortization	A-14, Page 4, Line 13	-	-	-	-	-	-	-	-	-	-	-	31,205	31,205
13	Difference	Line 11 - Line 12	292,456	76,047	76,318	122,095	90,574	114,082	284,235	95,375	91,590	167,765	158,955	726,863	2,296,357
14	Tax Rate		26.20%	26.20%	26.20%	26.20%	26.20%	26.20%	26.20%	26.20%	26.20%	26.20%	26.20%	26.20%	26.20%
15	Deferred Tax - End-User Transportation	Line 13 x Line 14	76,624	19,924	19,995	31,989	23,730	29,889	74,470	24,988	23,997	43,955	41,646	190,438	601,645
16	Total 2020 Program Costs Capitalized - All Programs	Line 1 + Line 6 + Line 11	443,127	115,225	115,637	184,997	137,237	172,855	430,670	144,512	138,777	254,196	240,847	1,148,617	3,526,697
17	Total Book Amortization	Line 2 + Line 7 + Line 12	-	-	-	-	-	-	-	-	-	-	-	47,281	47,281
18	Difference	Line 16 - 17	443,127	115,225	115,637	184,997	137,237	172,855	430,670	144,512	138,777	254,196	240,847	1,101,336	3,479,416
19	Tax Rate		26.20%	26.20%	26.20%	26.20%	26.20%	26.20%	26.20%	26.20%	26.20%	26.20%	26.20%	26.20%	26.20%
20	Deferred Tax - All Programs Total	Line 18 x Line 19	116,099	30,189	30,297	48,469	35,956	45,288	112,836	37,862	36,360	66,599	63,102	288,550	911,607
21	**Deferred Tax Asset/(Liability) DTA/(DTL)**														
22	DTA/(DTL) Beginning Balance	A-20, pg 2 & pg 3, Col (c), Line 9	-	(116,099)	(146,288)	(176,585)	(225,054)	(261,010)	(306,299)	(419,134)	(456,996)	(493,356)	(559,955)	(623,057)	-
23	Change in Balance	Line 20	(116,099)	(30,189)	(30,297)	(48,469)	(35,956)	(45,288)	(112,836)	(37,862)	(36,360)	(66,599)	(63,102)	(288,550)	(911,607)
24	Rate Adjustment	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25	DTA/(DTL) Ending Balance	Line 22 + Line 23 + Line 24	(116,099)	(146,288)	(176,585)	(225,054)	(261,010)	(306,299)	(419,134)	(456,996)	(493,356)	(559,955)	(623,057)	(911,607)	(911,607)
26	**Net Deferred Taxes**	Line 25	(116,099)	(146,288)	(176,585)	(225,054)	(261,010)	(306,299)	(419,134)	(456,996)	(493,356)	(559,955)	(623,057)	(911,607)	(911,607)

Note -- EWR Program Costs were treated as O&M for book and tax purposes as of 12/31/2019. As a result, there was no deferred tax liability related to EWR Program Costs to re-measure as of 12/31/2017 resulting from 2017 Tax Cut and Jobs Act (TCJA).

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_____	)	

QUALIFICATIONS

AND

DIRECT TESTIMONY

OF

DEBBIE BRANNAN

DTE GAS COMPANY
QUALIFICATIONS OF DEBBIE BRANNAN

Line No.

Q1. What is your name, business address, and by whom are you employed?

A1. My name is Debbie Brannan (she/her/hers). My business address is Guidehouse Inc. (Guidehouse) 1375 Walnut Ave., Suite 100, Boulder, CO 80302. I am a Director in Guidehouse's Advanced Solutions group supporting the Energy, Sustainability & Infrastructure practice. Guidehouse is the independent energy program evaluation contractor for DTE Gas Company (DTE Gas or Company). On October 11, 2019, Guidehouse LLP completed its previously announced acquisition of Navigant Consulting Inc. In furtherance of integrating the Guidehouse and Navigant businesses, Navigant Consulting Inc. was renamed as Guidehouse Inc.

Q2. On whose behalf are you testifying?

A2. I am testifying on behalf of DTE Gas.

Q3. What is your educational background?

A3. I have a doctorate degree in Economics from the University of Colorado Boulder.

Q4. What is your professional experience?

A4. I have been working in the energy industry for twelve years, and specifically evaluating energy efficiency programs for eight years. I currently serve as Director-in-charge of DTE Gas's portfolio evaluation and have conducted dozens of evaluations of energy efficiency programs such as the programs currently being offered by DTE Gas and have supported the development of testimony and/or compliance filings in Michigan, Massachusetts, New York, Arizona and Hawaii. In Michigan, I had a leading role in supporting the development of Craig McDonald's

Line No.

testimony in the DTE Electric Company's 2013, 2014, 2015, and 2016 Energy Optimization (EO) Reconciliation Cases (Nos. U-17602, U-17832, U-18023, and U-18332 respectively) and in the DTE Gas Company's 2013, 2014, 2015, and 2016 EO Reconciliation Cases (Nos. U-17608, U-17841, U-18024, and U-18338 respectively).

Q5. What are your current job responsibilities?

A5. I direct energy efficiency and demand response program strategy and evaluation assignments for clients throughout the United States. In this role, I have overall responsibility for directing the technical data analytics, engineering, and market analysis evaluation efforts spanning all program types and customer segments.

Q6. Have you previously provided expert witness testimony before the Michigan Public Service Commission (Commission)?

A6. Yes, I provided testimony in the Company's 2017, 2018 and 2019 Energy Waste Reduction (EWR) Reconciliation Cases (Nos. U-20035, U-20369 and U-20703) and in the DTE Electric Company's 2017 and 2018 EWR Reconciliation Cases (Nos. U-20029, U-20366 and U-20708).

Line No.

Q7. What is the purpose of your testimony in this proceeding?

A7. The purpose of my testimony is to verify DTE Gas's 2020 EWR program energy savings calculations. The purpose of the verification is to confirm the energy savings claimed by DTE Gas and provide revised estimates where necessary. My testimony: (1) describes the verification process that was performed for DTE Gas's EWR programs; (2) states the verified energy savings achieved for the 2020 EWR programs; and (3) verifies the accuracy of the performance incentive attributes.

Q8. Were there any significant changes in the evaluation process used for program year 2020 compared to program year 2019?

A8. No. The evaluation process used the same approaches and methods as have been used in program years 2012 through 2019.

Q9. Were there any impacts to the evaluation process for program year 2020 from the Coronavirus Pandemic?

A9. Yes. The verification of some custom (non-prescriptive) programs require telephone surveys or site visits to calculate a Realization Rate. Due to Michigan Governor Whitmer's Executive Orders these activities were suspended from March through May. Guidehouse has since been able to resume and complete all anticipated evaluation activities.

Q10. Are you sponsoring any exhibits in this proceeding?

A10. Yes. I am sponsoring the following exhibits:

Exhibit	Description
A-11	2020 Energy Waste Reduction Validation Sample Selection

Line No.

A-12 2020 Energy Waste Reduction Energy Savings

A-13 2020 Energy Waste Reduction Performance Incentive Attributes & Emissions Reductions

Q11. Were these exhibits prepared by you or under your supervision?

A11. Yes, they were.

Verification Process for Prescriptive Programs

Q12. How were the EWR prescriptive program verified energy savings determined?

A12. Verified energy savings for 2020 EWR prescriptive programs were determined using a three-step approach: (1) the audit of reported EWR gross savings as reported by DTE Gas compared to the values in the Michigan Energy Measures Database (MEMD), including a review of a statistically valid sample of applications to determine the audited gross saving; (2) application of the 2018 Installation Rate Adjustment Factor (IRAF) to determine verified gross savings, with a few exceptions as described below; and (3) application of appropriate Net-to-Gross (NTGR) to each measure to determine verified net savings.

The audit step consists of two phases. In the first phase of the audit, DTE Gas program tracking data (from their Energy Optimization Program Tracker (EOPT)), were compared to the Implementation Contractor (IC) program tracking data to check for inconsistencies. Program tracking data consists of information about program participants, the number, type and size of energy efficiency measures installed, installation date, paid incentives, and expected energy savings. Once the

Line No.

program tracking data were compared and deemed consistent, DTE Gas's energy savings calculations were checked for use of the correct MEMD algorithm and associated inputs, or savings values. The second phase audit validation consisted of a review of a statistically significant sample of incentive applications for each EWR program, where applicable, to verify consistency with the data entered into program tracking databases. The findings from both phases were then used to calculate the total audited gross program savings.

Once the audited gross savings were calculated, the Evaluation Team applied measure-level IRAF values evaluated in 2018 to determine verified gross savings. IRAF values were developed via market research techniques including online surveys, telephone surveys and site visits to determine whether the measures listed in the program database for each customer were in place and in use. These procedures were agreed upon in the EWR Collaborative Evaluation Workgroup meetings organized by the Michigan Public Service Commission and were used in the reconciliation results presented in previous years. There are exceptions to applying the 2018 evaluated IRAF, including for new programs/measures, measures targeting a new market and/or using a new delivery mechanism, programs that underwent significant program design changes, and of certain thermostat measures.

Finally, a deemed NTGR of 0.92 was applied to the verified gross savings for all measures with some exceptions, including certain thermostat measures, and low income, pilots and education programs.

Line No.

Thus, the verified net savings include any adjustments for inconsistencies in program tracking data, corrections for MEMD algorithms and inputs, corrections based on any errors found in the application sample, as well as the application of IRAF and NTGR values.

Q13. What was the basis for the approach used to validate program savings for prescriptive programs?

A13. The approach developed for the validation of EWR program savings is based on the Fall 2009 savings validation recommendations from the EWR Collaborative Evaluation Workgroup, which include Data Tracking Validation and Application Tracking Validation as described below.

Phase I - Data Tracking Verification for Prescriptive Programs

Q14. What was the first step of the Phase I verification process?

A14. The first step in the Phase I verification process was to compare DTE Gas's program data to the data gathered by the ICs. Program savings, incentives, and quantities were analyzed for the DTE Gas and the IC databases. This analysis checked for consistency between DTE Gas and the IC. Any data entry errors, or other discrepancies were corrected in the EOPT.

Q15. How did the Evaluation Team ensure all savings claimed by DTE Gas occurred in 2020?

A15. As part of the database review, invoice dates were assessed. The invoice date was assumed to be the date at which an incentive was processed and therefore the date of installation, sale, or shipment of a measure. The review verified that all measures

Line No.

with savings attributed to program year 2020 were installed in 2020 based on invoice date.

Q16. What was the second step in the Phase I verification process?

A16. The second step in the Phase I verification process was to recalculate savings totals for the measures in DTE Gas's program tracking database using the appropriate savings value or algorithm from the DTE Gas measures database. The measures database is described below. This step was taken to ensure no entry or calculation errors occurred and to double check DTE Gas's program-level total savings estimates. The recalculated savings estimates were then compared to the DTE Gas EOPT.

Q17. What is the DTE Gas measures database?

A17. The measures database consists of a list of measures included in the MEMD with corresponding savings values, algorithms, and assumptions and a DTE Gas measure identification number.

Q18. Did you consider unit-level savings assumptions as part of the savings verification process?

A18. Yes. The unit-level savings assumptions (e.g., Therm savings per 1,000 BTU of installed boiler capacity) contained in the DTE Gas measures database were compared to corresponding assumptions from the MEMD. The unit-level savings assumptions are specific to a technology (e.g., high efficiency boiler), building type, and weather zone. They are expressed in terms of energy savings (e.g., Therms) per unit of measure used to describe the technology (e.g., 1,000 BTU of

Line No.

boiler capacity). In instances where DTE Gas's savings assumptions did not match the MEMD value, the MEMD value was assumed to be correct. Once differences in the unit-level savings assumptions were identified and corrected, program savings were recalculated based on MEMD unit-level assumptions.

Q19. How are custom measures handled during the second step of the Phase I validation process?

A19. Given that custom measure savings are not included in the MEMD, these measures were individually reviewed and validated. In 2020 this applied to selected measures in ENERGY STAR®, Energy Efficiency Assistance, Revolving Loan Program, Audit & Weatherization, Residential HVAC, Multifamily Residential, Multifamily Common Area, Business Energy Consultation, C&I Midstream HVAC (captured in C&I Emerging Measures & Approaches), C&I Midstream Food Service, and C&I Prescriptive programs. In addition to custom measures, there are quasi-custom measures, which are based on MEMD measure savings values. Examples include: (1) measures with assumptions tailored to the project site (e.g., site-specific hours of use), and (2) measures with inputs based on average program participation. In both cases, assumptions used to report savings by the implementation contractors for these custom measures are reviewed and validated.

Phase II - Application Verification for Prescriptive Programs

Q20. Which programs have applications that are reviewed and verified?

A20. The Evaluation Team reviewed and verified applications for programs with a paper (or non-electronic) application in which database transcription errors may be introduced. In 2020, the Evaluation Team reviewed applications for the following

Line No.

programs, ENERGY STAR, Energy Efficiency Assistance, Business Energy Consultation, Small Business Focus (captured in C&I Emerging Measures & Approaches), and C&I Prescriptive.

Q21. How were the application samples chosen?

A21. The Evaluation Team requested applications for each program, where applicable, using a stratified sampling approach. Using this approach, the population (i.e., all applications for a given program) was divided into separate groups and a random sample was then drawn from each group. Each program sample was stratified by application type. For example, within the ENERGY STAR Products Program, there are different application types for appliances as opposed to thermostats. As a result, in general, application type equates to a particular end-use such as space heating and thermostats.

Sampling was based on an equal probability of an application or database entry containing an error. The errors could be in transferring data to the database or applying inappropriate measure savings based on the information reported in the applications. For example, weather-sensitive measures require specific details regarding the dwelling in which they are installed (e.g., age of home, weather zone).

The samples were chosen to achieve a 90% confidence level and 10% precision rate for the energy savings estimates for program. For programs with no significant changes and stable IRAFs, the samples are designed to attain the targeted precision over a rolling three-year period. This means that the Evaluation Team can conclude with 90% confidence that the actual energy savings value for the population is +/-

Line No.

10% of the validated number. This level of confidence adheres to industry standards.

Exhibit A-11 titled "2020 Energy Waste Reduction Validation Sample Selection" shows the sample frame (i.e., the population from which the sample was drawn) and size for each EWR program (prescriptive and custom, where applicable).

Q22. Were separate samples taken for gas versus electric applications?

A22. The samples were drawn to simultaneously meet the statistical precision criteria for gas and electric measures. The sampling approach used for the review of program applications explicitly accounts for savings from both fuel types.

Q23. What information was checked for in the statistical review of the applications?

A23. The applications were reviewed and checked against the DTE Gas EOPT to confirm all information was correct and the correct measure savings (i.e., the savings associated with a particular piece of equipment, such as a clothes washer or HVAC system) were assigned. The Evaluation Team checked customer information, as well as project-level information to ensure consistency with the DTE Gas database. Project-level information includes measure types installed, quantity by measure (i.e., the number of measures installed or removed), per-unit energy savings, install dates, and incentive amount.

Q24. What types of errors did this review identify?

A24. Two types of errors were examined, random errors and systematic errors. Random errors refer generally to error of transcription or data entry ("typo") to an individual record. Systematic errors refer to similar errors that are made on many records.

Line No.

A realization rate was calculated for the sample of each application type based on errors or omissions identified as part of the review. The Evaluation Team then tested the hypothesis that the mean realization rate was equal to 100% with a realization rate of 100% indicating no discrepancies between reported and validated savings. If the sample mean did not significantly differ from 100%, the sample program tracking data was adjusted as necessary to correct any errors found in the sample of applications. If the sample mean did differ significantly from 100%, then the mean Phase II realization rate for the sample was applied to the savings for the sampled population as determined in Phase I of the verification process (i.e., the findings were extrapolated to the entire population). The difference in realization rate was deemed to be significant when a two-tailed t-test indicated the sample mean realization rate was significantly different from 100% at the 90% confidence level.

Q25. What was done after the review of the applications was completed?

A25. After reviewing applications, DTE Gas's total audited gross program savings were recalculated based on the adjusted program tracking data.

Q26. Did the results of your Phase I and Phase II audit activities change DTE Gas's savings values?

A26. Yes, albeit not substantially. The Audited Gross Realization Rates (Audited Gross Savings/Utility Reported Savings) were 101% for energy (Mcf). Exhibit A-12, titled "2020 Energy Waste Reduction Energy Savings," shows the Audited Gross Realization Rates by program in column (e) for energy.

Line No.

Determination of Verified Gross Savings for Prescriptive Programs

Q27. How were verified gross savings determined for prescriptive programs?

A27. Verified gross energy savings for the 2020 EWR prescriptive programs were determined by applying the appropriate IRAF values to determine the verified gross savings.

Q28. What was the basis for the approach used in the determination of verified gross savings?

A28. The approach developed for the determination of verified gross savings is based on recommendations from the EWR Collaborative Evaluation Workgroup.

Q29. How were the IRAF values developed?

A29. As part of the 2018 program year evaluation of DTE Gas's EWR programs, the Evaluation Team verified the installation and operation of individual program measures based on responses to participant online surveys, telephone surveys or site inspections. In general, the Evaluation Team first asked customers to confirm the specific measures they received based on program records. The Evaluation Team then divided the number of measures verified by the respondent by the number reported in the program tracking data to develop the first component of the IRAF (Installation Factor #1). Where applicable, the Evaluation Team followed up with a question about whether the measure was still installed and operating. Based on this question, the Evaluation Team developed Installation Factor #2, which is the number of measures in use divided by the number of verified measures. For some measures, subject to partial operation, as described below, a part-use factor was determined and used to adjust Installation Factor #2. We then developed a

Line No.

measure specific IRAF for each respondent by multiplying the two factors. Average IRAF values were developed at the measure-level by program and applied to the measure-specific 2020 audited gross savings for that program to calculate the verified savings for the program.

IRAF not only represents the verified installation but also the operation of program measures. The part-use factor (PUF) represents verification of operation. A PUF was applied to Tier 1 programmable thermostats reflecting the portion of thermostats where the programmable feature had been overridden.

There are several exceptions to when the 2018 evaluated IRAF is applied (for detail regarding these exceptions please refer to program-specific reconciliation reports submitted to the MPSC. In the instant case, the report will be filed July 15, 2021.) The exceptions include:

a. *Applying an IRAF of 1.00 during the first two program years.* An IRAF of 1.00 is also applied to new measures during the first two program years if the measure offers distinctly different attributes from existing measures offered in the portfolio (i.e., enhanced customer acceptance and is a significant improvement in performance).
b. *Applying an IRAF of 1.00 during the first program year.* An IRAF of 1.00 is applied to measures upon first introduction to a program if the measure is being delivered through a new delivery channel or is targeting a new market. In the second year, the evaluated IRAF with a one-year delay is applied.
c. *Applying an evaluated IRAF from another program.* In cases where a new measure is introduced to a program but does not offer distinctly different

Line No.

attributes from existing measures in the portfolio nor target a new market, the evaluation team applied an evaluated value from another program.

d. *Other exceptions.* In cases where the IRAF was not evaluated in PY2018 due to limited or no sample, the evaluation team applied a reasonable IRAF value based on evaluated IRAF from similar measures across the portfolio and expert judgement.

e. *Applying an IRAF of 1.00 to thermostats.* An IRAF is not applied to Tier 2 and Tier 3 Thermostats delivered by Residential programs as directed by the EWR Collaborative, and to thermostats delivered by C&I programs as savings represent verified net savings.

Q30. How was dual fuel savings accounted for?

A30. For those programs that offered measures that produce both electric and gas savings, the Evaluation Team applied the fuel-specific IRAF to both the gas and electric savings.

Q31. How were low-income savings for the Home Energy Consultation and Multi-family programs verified?

A31. The Evaluation Team reviewed and verified low-income savings calculations for the Home Energy Consultation and Multifamily Programs. If a participant had a low-income designation in the DTE billing system, the participant was located within a low-income qualified census tract as designated by the U.S. Department of Housing and Urban Development (HUD), and/or the participant resided in an income-qualified multifamily dwelling meeting HUD or Michigan State Housing

Line No.

Development Authority (MSHDA) guidelines, savings were attributed to the low-income component.

The Evaluation Team verified the designation of census tracts as low-income per HUD guidelines, and for Multifamily, reviewed and verified properties (not located in a low-income census tract) designated low-income due to participation in a federal or state affordable housing program (such as HUD and MSHDA).

Determination of Verified Net Savings for Prescriptive Programs

Q32. How were verified net savings determined for Prescriptive programs?

A32. Once the verified gross savings were determined, the deemed NTGR was applied to calculate the verified net savings values. These verified net savings represent the official savings achieved by DTE Gas's EWR programs that are used to determine the Company's performance versus mandated targets. For almost all prescriptive programs except low income, pilots, and education that are assigned a NTGR of 1.00, the deemed NTGR for 2020 was 0.92. The exceptions are a NTGR is not applied to Tier 2 and Tier 3 thermostats delivered through Residential programs, and Tier 1 thermostats delivered through C&I programs, as savings represent verified net savings.

Verification Process for Custom (Non-Prescriptive) Programs

Q33. Does the approach for determining verified energy savings for custom programs differ from the approach used for prescriptive programs?

A33. Yes. Programs delivering custom measures or measures included in the Behavior Resource Manual (BRM) require a different approach than the one outlined above

Line No.

to determine verified energy savings. In 2020, this applies to the Home Energy Reports Program, the DTE Insight Program, the Residential New Home Construction Program, the C&I Non-Prescriptive programs, the Retro-Commissioning Program, and the Strategic Energy Management Program.

Q34. How were verified energy savings determined for the Home Energy Report Program?

A34. For the Home Energy Report Program, average per participant savings are included in the BRM. Verified energy savings were determined through the validation of average annual energy use using billing data, and the number of active participants. The average per participant savings values included in the BRM represent verified net savings. Therefore, no separate IRAF value or NTGR value is applied.

As a final step, a Realization Rate of 91% was applied. The realization rate is a comparison of 2018 evaluated net adjusted percentage savings to the BRM savings assumptions.

Q35. How were verified energy savings determined for the DTE Insight Program?

A35. For the DTE Insight Program, verified net savings were estimated using regression analysis with pre-program matching. Using billing data, a matched comparison group was selected to serve as the counterfactual for participants during the program period. Regression analysis was used to estimate average per participant savings which were then adjusted down to remove savings associated with program uplift (i.e., savings resulting from participating in other EWR programs was removed to avoid double-counting). As the regression analysis uses billing data and

Line No.

a comparison group, the estimate of average per participant savings represents net savings. Therefore, no separate IRAF value or NTGR value is applied.

Q36. How were verified energy savings determined for the Residential New Home Construction Program, the C&I Non-Prescriptive programs, the Retro-Commissioning Program, and the Strategic Energy Management Program?

A36. Verified net savings were determined for each of these programs through a three-step approach: (1) the audit of program tracking data as reported by DTE Gas; (2) calculation of a Realization Rate (RR) based on an engineering review of project files and some combination of telephone surveys, site visits, and/or analysis of metering data of a statistically valid sample of projects to determine verified gross savings; and (3) application of appropriate NTGR to determine verified net savings.

1. The first step of the verification process is a Data Tracking Verification. DTE Gas program tracking data (from EOPT), were compared to the IC program tracking data to check for inconsistencies. Program tracking data consists of information about program participants, the number, type and size of energy efficiency measures installed, installation date, paid incentives, and expected energy savings. This analysis checked for consistency between DTE Gas' EOPT and the IC database. Any data entry errors, or other discrepancies were corrected.
2. The second step of the verification process began with an engineering review of a statistically valid sample of project files. Once project files are reviewed, a sample of projects may be selected for telephone surveys and/or site visits during which field engineers verified installations and determined

Line No.

any differences in parameters from those in the project files. In some cases, field engineers also gathered operational data by installing data loggers, performing site measurements, and verifying other operating parameters. Any adjustments made as a result of the visits and review of project files are then reflected in the calculation of verified gross savings. A Realization Rate (RR) is calculated by dividing verified energy savings by utility reported gross savings.

3. Finally, a deemed NTGR of 0.92 was applied to the verified gross savings.

Thus, the verified net savings include any adjustments for inconsistencies in program tracking data, corrections based on engineering review of project files and telephone surveys and/or site visits, as well as the application of NTGR values.

Q37. How was the sample for project files and site visits chosen?

A37. Custom projects were selected for engineering review and telephone surveys and/or site visits to achieve a 90% confidence level and 10% precision rate for the energy savings estimates at the program level.

For programs with no significant changes and stable RRs, the samples are designed to attain the targeted precision over a rolling three-year period. This means the Evaluation Team can conclude with 90% confidence that the actual energy savings value for the population is +/-10% of the validated number. This level of confidence adheres to industry standards.

1. For Residential New Home Construction, the sample was stratified by builder and was chosen to achieve a 90% confidence level and 10% precision for the

Line No.

program. This target level of confidence and sampling approach adheres to industry standards.

2. For C&I Non-Prescriptive, the sample was stratified by project size and chosen to achieve a 90% confidence level and 10% precision rate for the energy savings estimates using a three-year rolling average (i.e., over a three-year period) since RRs have been stable historically and there were no substantial program changes in 2020. This target level of confidence and sampling approach adheres to industry standards.

3. For Retro-commissioning and Strategic Energy Management, the samples were chosen to achieve a 90% confidence level and 10% precision for the program. This target level of confidence and sampling approach adheres to industry standards.

Exhibit A-11 titled "2020 Energy Waste Reduction Validation Sample Selection" shows the sample frame (i.e., the level at which the sample was drawn) and size for each EWR program (prescriptive and custom).

Q38. Were separate samples taken for gas versus electric projects?

A38. The samples were drawn to simultaneously meet the statistical precision criteria for gas and electric measures. The sampling approach used for the review of project files explicitly accounts for savings from both fuel types.

Q39. How did the Evaluation Team ensure all savings claimed by DTE Gas occurred in 2020?

Line No.

A39. As part of the database and project file reviews, invoice dates were assessed. The invoice date was assumed to be the date at which an incentive was processed and therefore the date of installation, sale or shipment of a measure. The review verified all measures with savings attributed to program year 2020 were installed in 2020 based on invoice date.

Q40. What was the basis for the approach used to validate program savings for custom programs?

A40. The approach used to verify savings for custom programs adhere to industry evaluation protocols including – the International Performance Measurement and Verification Protocol (IPMVP) and the Department of Energy's Uniform Methods Project (UMP).

2020 Verified Net Energy Savings

Q41. What are the verified net energy savings associated with the EWR Residential (excluding low-income) programs for 2020?

A41. Exhibit A-12 shows the total 2020 verified net energy savings from EWR Residential programs, excluding low-income, as well as totals at the portfolio level. As shown on Line 13, column (j) of these exhibits, the Evaluation Team validated the DTE Gas Residential EWR programs, excluding low income, produced verified net annual savings in 2020 of 819,455 Mcf as summarized in Table 1.

Line No.

Table 1: Final 2020 Verified Net Annual EWR Residential Program Savings

EWR Residential Program	Verified Net Annual Mcf Savings
ENERGY STAR Products	24,571
HVAC	271,343
Multifamily	4,446
Home Energy Consultation	60,885
Audit and Weatherization	37,423
School	72,568
Home Energy Efficiency Kits	44,703
Revolving Loan	397
New Home Construction	43,930
Home Energy Reports	216,811
DTE Insight	42,380
Emerging Measures & Approaches	0
Residential Total	**819,455**

Q42. What are the verified net savings achieved in low-income households?

A42. As shown on Line 17, column (j) of Exhibit A-12, Residential low-income net verified savings were determined to be 131,628 Mcf as summarized in Table 2 including the savings from the Energy Efficiency Assistance program as well as low-income components of the Multifamily and Home Energy Consultation programs.

Table 2: Final 2020 Verified Net Annual EWR Low Income Program Savings

EWR Low Income Program	Verified Net Annual Mcf Savings
Energy Efficiency Assistance	51,721
Multifamily	46,926
Home Energy Consultation	32,981
Low Income Total	**131,628**

Line No.

Q43. What are the verified net energy savings associated with the EWR C&I programs for 2020?

A43. As shown on Line 27, column (j) of Exhibit A-12 and in Table 3 below, the Evaluation Team verified that the DTE Gas C&I EWR programs produced verified net annual savings of 1,107,551 Mcf in 2020. Emerging Measures & Approaches includes the Small Business Focus and C&I Midstream HVAC programs.

Table 3: Final 2020 Verified Net Annual EWR C&I Program Savings

EWR C&I Program	Verified Net Annual Mcf Savings
Prescriptive	486,365
Non-Prescriptive	467,439
Retro-Commissioning	97
Strategic Energy Management	69,456
Business Energy Consultation	36,552
Mid-Stream Food Service	5,938
Multifamily Common Area	3,421
Emerging Measures & Approaches	38,283
Total C&I	**1,107,551**

Q44. What is the overall conclusion based on the Evaluation Team's evaluation processes as they pertain to DTE Gas's 2020 EWR program?

A44. The Evaluation Team has reviewed DTE Gas's 2020 savings claims and verifies DTE Gas's net verified savings claims are accurate.

2020 Performance Incentive

Q45. What additional tasks did the Evaluation Team perform for the 2019 program year to verify the Performance Incentive calculations?

A45. There were three key performance incentive attributes that required verification.

Line No.

1. Determination of base energy savings required that the Evaluation Team calculate first-year savings.
2. Determination of lifetime savings required that the Evaluation Team multiply total first-year savings by the weighted average measure life. The weighted average measure life is calculated by weighting measure life by first year verified net savings.
3. Determination of low-income lifetime savings required that the Evaluation Team multiply the first-year low income savings by the low-income weighted average measure life.

Q46. What are DTE Gas's EWR achievements relative to performance incentives?

A46. Table 4 summarizes DTE Gas's performance relative to the metrics established in the EWR Plan applicable to 2020. More detail pertaining to performance incentives is provided in Exhibit A-13 Page 1. In summary, as documented below, DTE Gas exceeded every performance attribute for 2020.

Table 4: DTE Gas's EWR 2020 Performance Summary

Performance Incentive Attribute	Achieved
First-Year Savings 0.75% - 1.00% first year verified net gas savings relative to Legislative Minimum Requirement (1,484,981 Mcf)	2,239,902 Mcf
Lifetime Savings 0.75% - 1.00% first year verified net gas savings relative to target (17,819,774 Mcf)	25,548,313 Mcf
Low-Income Lifetime Savings 0.75% - 1.00% first year verified net gas savings relative to target (811,502 Mcf)	1,628,735 Mcf

Line No.

DTE Gas achieved first year savings of 2,239,902 Mcf; this includes verified net gas savings associated with the pilots and education programs. This exceeds 1.00% of the legislative minimum requirement.

DTE Gas achieved lifetime savings of 25,548,313 Mcf, calculated by multiplying the weighted average measure life for the portfolio (11.41) by total first year savings.

DTE Gas achieved low-income lifetime savings of 1,628,735 Mcf, calculated by multiplying the low-income weighted average measure life (12.37) by total first year low-income savings.

2020 Greenhouse Gas Emissions Reductions

Q47. What tasks did the Evaluation Team perform to determine the greenhouse gas emissions reductions resulting from the verified savings associated with the 2020 EWR programs?

A47. Using greenhouse gas emissions reduction information available from the Environmental Protection Agency's Greenhouse Gas Emission Factors Hub, we calculated total emissions reductions for gas energy savings resulting from the 2020 EWR programs.[1] The report identifies 53.06 kilograms of carbon dioxide emissions reductions per MMBtu, or 0.05306 metric tons of carbon dioxide emissions reductions per Mcf as identified in column (c) of Exhibit A-13 Page 2.

[1] https://www.epa.gov/climateleadership/center-corporate-climate-leadership-ghg-emission-factors-hub

Line No.

To determine total verified net annual emissions reductions for the 2020 EWR programs, we multiply the marginal emissions factor by total gas energy savings (Mcf).

To determine total verified net lifetime emissions reductions for the 2020 EWR programs, we multiply annual emissions reductions by the weighted average measure life (11.41).

Q48. What are DTE Gas' verified net annual greenhouse gas emissions reductions associated with the 2020 EWR programs?

A48. As shown on Line 13 of Exhibit A-13 Page 2, the verified net annual greenhouse gas emissions reductions are: 118,849 metric tons of CO_2.

Q49. What are DTE Gas' verified net lifetime greenhouse gas emissions reductions associated with the 2020 EWR programs?

A49. As shown on Line 14 of Exhibit A-13 Page 2 the verified net lifetime greenhouse gas emissions reductions are: 1,355,593 metric tons of CO_2[2].

Q50. Does this complete your direct testimony?

A50. Yes, it does.

[2] Exact totals may not match due to rounding.

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter, on the Commission's own motion,	)	
regarding the regulatory reviews, revisions,	)	
determinations, and/or approvals necessary for	)	Case No. U-20871
DTE GAS COMPANY	)	(Paperless e-file)
to fully comply with Public Act 295 of 2008,	)	
as amended by Public Act 342 of 2016.	)	
_____	)	

EXHIBITS

OF

DEBBIE BRANNAN

Michigan Public Service Commission
DTE Gas Company
Energy Waste Reduction - 2020 Plan Reconciliation
2020 Energy Waste Reduction Validation Sample Selection

Case No.: U-20871
Exhibit: A-11
Witness: D. Brannan
Page: 1 of 1

		Number of Unique Applications	Sample Size
Residential Portfolio	Residential ENERGY STAR Products		
	Appliances		
	Air Purifier	6	2
	Clothes Washer	696	8
	Dehumidifier	85	8
	Clothes Dryer	215	8
	Pool Pump	4	1
	Thermostat	312	14
	Lighting	n/a	n/a
	Consumer Electronics[1]	12	3
	Appliance Recycling	n/a	n/a
	Heating, Ventilation & Air Conditioning (HVAC)	n/a	n/a
	Multifamily[2]	n/a	n/a
	Home Energy Consultation (HEC)	n/a	n/a
	Audit and Weatherization	n/a	n/a
	School Program	n/a	n/a
	Home Energy Efficiency Kits	n/a	n/a
	New Homes Construction	n/a	n/a
	Revolving Loans Program	n/a	n/a
	Home Energy Report	n/a	n/a
	DTE Insight	n/a	n/a
	Emerging Measures and Approaches[3]	n/a	n/a
	Low Income attributed to Energy Efficiency Assistance	4,722	46
	Residential Program Subtotal	**6,052**	**90**
C&I Portfolio	Prescriptive	2,507	43
	Non-Prescriptive		
	Custom and RFP	n/a	n/a
	Retro-Commissioning	n/a	n/a
	Mid-Stream Lighting	n/a	n/a
	Energy Star Retail Lighting	n/a	n/a
	Multifamily Common Areas	n/a	n/a
	Business Energy Consultation	163	23
	Mid-Stream Food Service	n/a	n/a
	Mid-Stream HVAC	n/a	n/a
	Strategic Energy Management	n/a	n/a
	Emerging Measures and Approaches[4]	418	28
	C&I Subtotal	**3,088**	**94**
	TOTAL PORTFOLIO	**9,140**	**184**

n/a = program did not have customer applications or applications were not reviewed

[1] Refers to the number of unique invoices that were audited, not a count of individual measure records.

[2] Multifamily Low Income is not sampled separately from the Residential Multifamily program

[3] No programs are categorized as "Residential Emerging Measures & Approaches" in PY2020

[4] Includes C&I Mid-Stream HVAC and Small Business Focus programs

Michigan Public Service Commission
DTE Gas Company
Energy Waste Reduction - 2020 Plan Reconciliation
2020 Energy Waste Reduction Energy Savings

Case No.: U-20871
Exhibit: A-12
Witness: D. Brannan
Page: 1 of 1

	(a)		(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
Line No.	**Description**	**Source**	**2020 Utility Reported Gross MCF Savings**	**Database Review: 2020 Phase I Audited Gross Annual MCF Savings**	**Application Review: 2020 Phase II MCF Adjusted**	**Audited Gross Realization Rate**	**2020 Audited Gross Savings**	**Installation Rate Adjustment Factor**	**2020 Verified Gross Savings**	**Net-to-Gross Ratio**	**2020 Verified Net Savings**
	Residential Programs										
1	Residential ENERGY STAR Products		25,293	10,899	14,398	100%	25,297	0.98	24,897	0.99	24,571
2	Heating, Ventilation & Air Conditioning (HVAC)		293,319	293,366	0	100%	293,366	1.00	292,985	0.93	271,343
3	Multifamily		6,466	6,465	0	100%	6,465	0.74	4,776	0.93	4,446
4	Home Energy Consultation (HEC)		77,166	77,166	0	100%	77,166	0.82	63,626	0.96	60,885
5	Audit & Weatherization		40,669	40,674	0	100%	40,674	1.00	40,674	0.92	37,423
6	School Program		170,692	170,692	0	100%	170,692	0.46	78,879	0.92	72,568
7	Home Energy Efficiency Kits		113,795	113,795	0	100%	113,795	0.43	48,590	0.92	44,703
8	Revolving Loan Program		430	431	0	100%	431	1.00	429	0.92	397
9	New Home Construction		48,232	48,232	0	100%	48,232	0.99	47,750	0.92	43,930
10	Home Energy Reports[1]		0	0	0	0%	0	0.00	0	0.00	216,811
11	DTE Insight		0	0	0	0%	0	0.00	0	0.00	42,380
12	Residential Emerging Measures and Approaches[2]		0	0	0	0%	0	0.00	0	0.00	0
13	**Residential Program Subtotal**	Sum L1 - L12	**776,063**	**761,721**	**14,398**	**102%**	**776,120**		**602,606**		**819,455**
	Low Income Programs										
14	Low Income attributed to Energy Efficiency Assistance		60,248	60,192	-12	100%	60,180	0.86	51,721	1.00	51,721
15	Low Income attributed to Multifamily Units		49,887	49,888	0	100%	49,888	0.94	46,926	1.00	46,926
16	Low Income attributed to Home Energy Consultation		45,173	45,174	0	100%	45,174	0.73	32,981	1.00	32,981
17	**Low Income Program Subtotal**	Sum L14 - L16	**155,308**	**155,254**	**-12**	**100%**	**155,242**		**131,628**		**131,628**
	Commercial Programs										
18	Prescriptive		495,292	528,657	0	107%	528,657	1.00	528,657	0.92	486,365
19	Non-Prescriptive[3]		493,287	493,287	0	100%	493,287	1.03	508,085	0.92	467,439
20	Retro-Commissioning		104	104	0	100%	104	1.01	105	0.92	97
21	Strategic Energy Management		80,917	80,917	0	100%	80,917	0.93	75,496	0.92	69,456
22	Business Energy Consultation		39,751	39,751	0	100%	39,751	0.96	38,049	0.96	36,552
23	Mid-Stream Food Service		6,472	6,472	0	100%	6,472	1.00	6,455	0.92	5,938
24	Multifamily Common Areas		3,793	3,793	0	100%	3,793	0.98	3,717	0.92	3,421
25	C&I Emerging Measures and Approaches[4]		41,949	41,949	0	100%	41,949	0.99	41,509	0.92	38,283
26	Self Direct[5]		0	0	0	0%	0	0.00	0	0.00	0
27	**C&I Program Subtotal**	Sum L18 - L26	**1,161,565**	**1,194,930**	**0**	**100%**	**1,194,930**		**1,202,073**		**1,107,551**
28	**Total**	L13 + L17 + L27	**2,092,936**	**2,111,906**	**14,386**	**101%**	**2,126,292**		**1,936,306**		**2,058,634**

Note: Totals may not match due to rounding.

[1] A realization rate of 0.91 was applied to calculated electric savings for the Home Energy Report program based on guidance from MPSC staff

[2] No programs are categorized as "Residential Emerging Measures & Approaches" in PY2020

[3] Includes C&I Custom and C&I RFP programs

[4] Includes Mid-Stream HVAC and Small Business Focus programs

[5] Self Direct energy savings were not evaluated by DTE or Guidehouse

Michigan Public Service Commission Case No.: U-20871
DTE Gas Company Exhibit: A-13
Energy Waste Reduction - 2020 Plan Reconciliation Witness: D. Brannan
2020 Energy Waste Reduction Performance Incentive Attributes & Emissions Reductions Page: 1 of 2

	(a)	(b)	(c)
Line No.	**Description**	**Source**	**2020 Verified Net Savings MCF**
	Residential Programs		
1	Residential ENERGY STAR Products		24,571
2	Heating, Ventilation & Air Conditioning (HVAC)		271,343
3	Multifamily		4,446
4	Home Energy Consultation (HEC)		60,885
5	Audit & Weatherization		37,423
6	School Program		72,568
7	Home Energy Efficiency Kits		44,703
8	Revolving Loan Program		397
9	New Home Construction		43,930
10	Home Energy Reports[1]		216,811
11	DTE Insight		42,380
12	Residential Emerging Measures and Approaches[2]		0
13	**Residential Program Subtotal**	Sum L1 - L12	**819,455**
	Low Income Programs		
14	Low Income attributed to Energy Efficiency Assistance		51,721
15	Low Income attributed to Multifamily Units		46,926
16	Low Income attributed to Home Energy Consultation		32,981
17	**Low Income Program Subtotal**	Sum L14 - L16	**131,628**
	Commercial Programs		
18	Prescriptive		486,365
19	Non-Prescriptive[3]		467,439
20	Retro-Commissioning		97
21	Strategic Energy Management		69,456
22	Business Energy Consultation		36,552
23	Mid-Stream Food Service		5,938
24	Multifamily Common Areas		3,421
25	C&I Emerging Measures and Approaches[4]		38,283
26	Self Direct[5]		0
27	**C&I Program Subtotal**	Sum L18 - L26	**1,107,551**
28	**Total without Non-Standard**	L13 + L17 + L27	**2,058,634**
29	Savings from Pilot	A2	124,632
30	Savings from Education	A3	56,636
31	**Total First Year Savings**	L28 + L29 + L30	**2,239,902**
32	Weighted Average Measure Life (Low Income)[6]		12.37
33	Weighted Average Measure Life (Portfolio)[7]		11.41
34	**Total Low Income Lifetime Savings[8]**		**1,628,735**
35	**Total Lifetime Savings[9]**		**25,548,313**

Note: Totals may not match due to rounding.

[1] A realization rate of 0.91 was applied to calculated gas savings for the Home Energy Report program based on guidance from MPSC staff

[2] No programs are categorized as "Residential Emerging Measures & Approaches" in PY2020

[3] Includes C&I Custom and C&I RFP programs

[4] Includes Mid-Stream HVAC and Small Business Focus programs

[5] Self Direct energy savings were not evaluated by DTE or Guidehouse

[6] Weighted average measure life based on first year savings for Low Income programs

[7] Weighted average measure life based on first year savings for all programs

Michigan Public Service Commission
DTE Gas Company
Energy Waste Reduction - 2020 Plan Reconciliation
2020 Energy Waste Reduction Performance Incentive Attributes & Emissions Reductions

Case No.: U-20871
Exhibit: A-13
Witness: D. Brannan
Page: 2 of 2

Line No.	(a) Year	Source	(b) 2020 Verified Net Savings	(c) Marginal Emissions Factor (metric tons/MCF): CO_2[1]	(d) Annual Emissions Reductions (metric tons): CO_2
1	2020		2,239,902	0.05306	118,849
2	2021		2,239,902	0.05306	118,849
3	2022		2,239,902	0.05306	118,849
4	2023		2,239,902	0.05306	118,849
5	2024		2,239,902	0.05306	118,849
6	2025		2,239,902	0.05306	118,849
7	2026		2,239,902	0.05306	118,849
8	2027		2,239,902	0.05306	118,849
9	2028		2,239,902	0.05306	118,849
10	2029		2,239,902	0.05306	118,849
11	2030		2,239,902	0.05306	118,849
12	2031[2]		2,239,902	0.05306	48,252
13	**Total Emissions Reductions (first year)**	L1			**118,849**
14	**Total Emissions Reductions (lifetime)[2]**	Sum L1 - L12			**1,355,593**

Note: Totals may not match due to rounding.

[1] https://www.epa.gov/sites/production/files/2020-04/documents/ghg-emission-factors-hub.pdf

[2] Values from the 2031 year represents 41% of the full year's projected reductions based on a calculated weighted average measure life of 11.41

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter, on the Commission's own motion,	)	
regarding the regulatory reviews, revisions,	)	
determinations, and/or approvals necessary for	)	Case No. U-20871
DTE GAS COMPANY	)	(Paperless e-file)
to fully comply with Public Act 295 of 2008,	)	
as amended by Public Act 342 of 2016.	)	
_____	)	

QUALIFICATIONS

AND

DIRECT TESTIMONY

OF

JOSE N. GONCALVES

DTE GAS COMPANY
QUALIFICATIONS OF JOSE N. GONCALVES

Line No.

Q1. What is your name, business address and by whom are you employed?

A1. My name is José N. Gonçalves (he/him/his). My business address is: One Energy Plaza, Detroit, MI 48226. I am employed by DTE Electric Company (DTE Electric) within the Business Planning and Development department; my title is Supervisor – Program Management Residential and Education Programs, Energy Waste Reduction (EWR).

Q2. On whose behalf are you testifying?

A2. I am testifying on behalf of DTE Gas Company (DTE Gas or Company).

Q3. What is your educational background?

A3. I graduated from the Central Michigan University with a Bachelor of Science in Biology in 2007. In 2010, I graduated from The College of Charleston with a Master of Science in Environmental Studies.

Q4. What is your employment experience at DTE?

A4. Prior to my employment at DTE Electric, I worked for ICF International from 2011 to 2017. In 2011, I was hired as an Analyst and held the title of Manager by the time I left in 2017. My responsibilities included managing implementation of multiple EWR programs such as in-home audit direct install programs, HVAC, Audit and Weatherization and overseeing field account management activities. In 2017, I was hired by DTE Electric as a Principal Marketing Specialist. My primary job responsibilities in this role included the program management of the Company's residential HVAC program, home performance program, insulation and windows program and the DTE Energy Marketplace.

Line No.

In 2019, I was promoted to Principal Supervisor in the Energy Waste Reduction (EWR) group.

Q5. What are your current job responsibilities?

A5. As the Principal Supervisor in EWR, I am responsible for the development of electric and gas product offerings within the residential market rate programs including the HVAC, Audit & Weatherization, New Homes Construction, ENERGY STAR Products and Appliance Recycling programs. Additionally, I am responsible for the delivery of the Education and Awareness program.

Q6. Are you a member of any professional organizations?

A6. I am a member of the Association of Energy Services Professionals (AESP). AESP is an organization that provides professional development programs, a network of energy practitioners, and promotes the transfer of knowledge and experience to promote energy efficiency programs. I am a member of the Consortium for Energy Efficiency (CEE) engaging on its Gas Topic Committee and HVAC initiative. CEE is the United States and Canadian consortium of gas and electric efficiency program administrators; whose goal is to accelerate the development and availability of energy efficient products and services.

Line No.

Q7. What is the purpose of your testimony in this proceeding?

A7. The purpose of my testimony in this proceeding is to describe the performance and accomplishments of the DTE Gas 2020 EWR Residential, Low Income and Education programs. My testimony will demonstrate that programs' objectives were met through various marketing tactics, community outreach, and delivery channels. My testimony will cover the following:

1. The objective of each residential EWR program that was deployed to increase customer awareness and demand for energy efficient products and services.
2. A description of the energy efficient measures and customer incentives that were offered in 2020. I will describe adjustments that were made to program delivery approaches and changes to incentive levels to respond to market conditions.
3. The energy savings achieved for each residential EWR program. The actual energy savings that are shown have been validated and provided by Company Witness Brannan. I will also show the participation (or applications) levels that were processed for each residential EWR program.
4. The actual amount spent on the residential EWR program and how the program costs compared the 2020 EWR expenses filed pursuant to Public Act 295 of 2008, as amended by Public Act 342 of 2016. The program costs that I will reflect were provided by Company Witness Ms. Stoudemire.
5. The actual spends and savings for residential emerging measures and approaches in 2020.
6. A description of the education program. I specifically provide examples of the types of actions and projects undertaken this program. I also detail the

Line No.

method for determining the energy savings attributed to the education program and the resulting calculated savings.

Q8. Are you sponsoring any exhibits in this proceeding?

A8. Yes. I am sponsoring the following exhibits:

Exhibit	Description
A-8	Residential, Low Income, and Education Program Cost and Energy Savings
A-9	Education Program Savings Calculation

Q9. Were the exhibits prepared by you or under your direction?

A9. Yes, they were.

Residential and low income Programs

Q10. What was the overall performance for DTE Gas's residential and low income EWR programs?

A10. In 2020, DTE Gas's residential EWR programs achieved 819,455 Mcf and low income EWR programs achieved 131,628 Mcf of gas savings, totaling 951,082 Mcf which is 109% of the plan. Also, in total, the residential EWR programs cost $14.0 million and low income EWR programs cost $10.5 million, totaling $24.5 million which is approximately the same as planned. The results are shown on Exhibit A-8 and are discussed in more detail below.

Q11. How did DTE Gas implement its residential EWR programs in 2020?

Line No.

A11. DTE Gas managed its programs using two methods. Specifically, DTE Gas managed the Home Energy Efficiency kits program internally, subcontracting certain aspects of its operations when necessary. In addition, DTE Gas used the following implementation contractors (ICs) in 2020 to implement its remaining residential programs, as listed respectively:

- Ignite – HVAC, Audit and Weatherization and New homes Construction programs
- Strategic Energy Efficient Logistics, LLC (SEEL) – residential and small business ENERGY STAR products, Appliance Recycling and Energy Efficiency Assistance programs.
- Nation Energy Foundation – Schools program
- Walker-Miller Energy Services, LLC – Multifamily and Home Energy Consultation (HEC) programs
- Oracle – Behavior program's Home Energy Reports (HER)
- Powerley – Behavior program's Smartphone Behavior Application
- Michigan Saves – Revolving Loan Fund

Q12. How were customers made aware of DTE Gas's residential EWR programs?

A12. The Company used various marketing tactics and community outreach events to promote and inform customers of its residential EWR programs. These marketing tactics included specific program information conveyed through the Company's website, e-mail, social media (Facebook and Twitter), direct mail, bill inserts, newsletters, radio and television ads, billboards, and advertisements in local newspapers. In addition, DTE Gas continued to deploy program-specific tactics, as it had in prior program years, and outreach to promote and educate customers on

Line No.

the benefits of purchasing energy efficient products. Examples of program-specific tactics included targeted marketing campaigns for select neighborhoods to promote in-home energy consultations with direct install measures, targeted social media campaigns to promote energy efficient measures through the DTE Energy Marketplace. In 2020, due to Covid-19 safety protocols implemented, the Company did not implement tactics such as home shows and in-store events and demonstrations.

Q13. Which residential EWR programs did Company implement in 2020?

A13. The Company implemented the following residential EWR programs: Residential ENERGY STAR Products, Appliance Recycling, HVAC, Multifamily, Home Energy Consultation (HEC), Residential Audit and Weatherization, School, Home Energy Efficiency Kits, Revolving Loan, New home Construction, DTE Insight, and Emerging Measures and Approaches. I will discuss each of these programs in more detail within my testimony.

Q14. What was the objective of the residential ENERGY STAR products program?

A14. The objective of the residential ENERGY STAR products program was to increase the awareness and sales of high efficiency ENERGY STAR products among residential customers. The program was designed to spur customer interest by providing educational information and incentives to customers who purchased qualified ENERGY STAR equipment. The primary means used to accomplish this objective were in-store marketing, digital and social marketing. The DTE Energy Marketplace (Marketplace) online retail store offered residential customers the opportunity to purchase energy efficient products and apply instant rebates in a single and seamless experience.

Line No.

Q15. What measures were offered in the residential ENERGY STAR products program?

A15. The program offered Wi-Fi enabled and smart thermostats, clothes washers, and clothes dryers along with water saving devices such as, faucet aerators and highly efficient showerheads, pipe insulation and weather stripping.

Q16. What level of incentives were offered under the residential ENERGY STAR products program?

A16. DTE Gas offered $25 rebates for ENERGY STAR Qualified clothes washers and dryers. DTE offered $50 rebates on Wi-Fi enabled and smart thermostats. These rebates were available to customers by mail, online application or online retail.

Q17. What results were achieved for the residential ENERGY STAR products program in 2020?

A17. As shown in Exhibit A-8 (line 1, column (d)), DTE Gas saved 24,571 Mcf under the ENERGY STAR products program. In addition, line 23 of the exhibit shows that 10,959 applications were processed for qualified ENERGY STAR clothes washers, clothes dryers and Wi-Fi enabled and smart thermostats.

Q18. What amount did DTE Gas spend for the residential ENERGY STAR products program in 2020?

A18. As shown in Exhibit A-8 (line 1, column (e)), DTE Gas spent $0.3 million on the ENERGY STAR products program. This amount was approximately $0.1 million lower than the Company had planned to spend in 2020. The spend on line 1 includes the rebates for the ENERGY STAR measures; third party vendor costs to manage the program, such as call center activities; rebate processing and online

Line No.

fulfillment, marketing and field activity to verify that signage and pricing is correct and visible in retail stores.

Q19. What was the objective of the HVAC program?

A19. The objective of the HVAC program was to increase customer demand for energy efficient heating equipment, and high-efficiency water heating equipment. DTE Gas continued to leverage its active equipment seller and installer trade ally network to maintain the momentum in participation. In addition, DTE Gas continued discussions with HVAC dealers and distributors to stock, promote and sell high efficiency water heating and boiler equipment using midstream incentives.

Q20. What measures were offered in the HVAC program?

A20. The gas measures offered in the HVAC program included high efficiency furnace units; boiler units; Wi-Fi enabled and smart thermostats; and water heaters. In addition, the HVAC program also offered rebates for furnace or boiler tune-ups that included combustion analysis.

Q21. What were the typical incentives offered under the HVAC program?

A21. The incentive amounts were: $200-$400 for furnaces; $200-$900 for boilers; $50 for thermostats; $75-$100 for water heaters; and $50 per furnace or boiler tune-up.

Q22. What results were achieved for the HVAC program in 2020?

A22. As shown in Exhibit A-8 (line 2, column (d)), the Company saved 271,343 Mcf under the HVAC program, with most the gas measure savings from high efficiency furnaces. As shown on line 24, the Company processed 13,784 HVAC customer applications.

Line No.

Q23. What amount did DTE Gas spend for the HVAC program in 2020?

A23. As shown in Exhibit A-8 (line 2, column (e)), DTE Gas spent $5.2 million on the HVAC Program. This amount was $0.1 million less than what the Company had planned to spend in 2020. The variation in spend was a result of lower program adoption than planned. The spend on line 2 includes the rebates for the HVAC measures, third party vendor costs to manage the program, such as call center activities, rebate processing and fulfillment, field verification activities, and contractor training and support.

Q24. What was the objective of the multifamily program?

A24. The objective of the multifamily program was to produce gas energy savings in multifamily buildings with three or more units through the direct installation of energy saving measures in the individual living units and prescriptive customer rebates. Energy efficiency education was also delivered to property owners, managers, and individual tenants.

Q25. What measures were offered in the multifamily program?

A25. Typical in-unit measures included: programmable thermostats if the unit had gas heat; energy efficient shower heads; energy efficient kitchen and bath aerators; and pipe wrap insulation if the unit had gas water heating.

Q26. Were incentive payments directly paid to tenants under the multifamily program?

A26. The multifamily program is a direct-install program, so tenants did not receive incentive payments.

Line No.

Q27. What results were achieved for the multifamily program in 2020?

A27. As shown in Exhibit A-8 (line 3, column (d)) DTE Gas saved 4,446 Mcf through the multifamily program. Line 25 of this exhibit shows that during 2020, the Company completed 1,330 units.

Q28. What amount did DTE Gas spend for the multifamily program in 2020?

A28. As shown in Exhibit A-8 (line 3, column (e)), DTE Gas spent $0.1 million on the multifamily program. This amount was approximately $0.1 million lower than what the Company had planned to spend in 2020. The variation in spend was a result of lower than planned market rate Multifamily program participation. Program spend on line 3 includes the material cost for direct install measures and labor to install those measures, in addition to third party vendor costs to manage the program, such as call center activities, field verification activities, collateral and educational pieces designed for outreach events and program activities.

Q29. What was the objective of the HEC program?

A29. The objective of the HEC program has two parts: 1) provide direct install energy saving measures for single-family homes; and 2) during the installation process provide a customer specific energy saving consultation, identifying energy saving opportunities and program recommendations that are specific to the individual home.

Q30. What measures were offered in the HEC program?

A30. Typical measures included: programmable and smart thermostats, energy efficient shower heads, energy efficient kitchen and bath aerators, and pipe wrap insulation.

Line No.

Measures related to hot water savings and pipe wrap with gas energy savings were only claimed if customer had a gas water heater. Programmable thermostats were installed for customers with gas heat.

Q31. Were incentive payments directly paid to homeowners or tenants under the HEC program?

A31. No. Since the HEC program is a direct-install program, homeowners or tenants did not receive incentive payments.

Q32. What results were achieved for the HEC program in 2020?

A32. As shown in Exhibit A-8 (line 4, column (d)) DTE Gas saved 60,885 Mcf through the HEC program. Line 26 of this exhibit shows that during 2020, the Company completed approximately 9,761 homes.

Q33. What amount did DTE Gas spend for the HEC program in 2020?

A33. As shown in Exhibit A-8 (line 4, column (e)), DTE Gas spent $2.1 million on the HEC program. This amount was $0.3 million less than the Company had planned to spend in 2020. The variation in spend was a result of lower program participation than planned. Program spend on line 4 includes the material cost for direct install measures and labor to install those measures, in addition to third party vendor costs to manage the program, such as call center activities, field verification activities, collateral and educational pieces designed for outreach events and program activities.

Q34. What was the objective of the audit & weatherization program?

Line No.

A34. The objective of the audit and weatherization program was two-fold: (1) to encourage comprehensive energy audits, and (2) motivate customers by offering rebates for the installation of qualified weatherization measures in their homes.

Q35. What measures were offered in the audit & weatherization program?

A35. The audit and weatherization program provided weatherization rebates for insulation; window replacement; air sealing; and HVAC measures as part of the comprehensive home performance projects.

Q36. What were the incentive amounts offered under the audit & weatherization program in 2020?

A36. Incentive amounts of installed insulation varied between $25-$125 based on the type of measure. Window replacement incentives ranged from $15-$40. Air infiltration reduction measure incentives ranged from $75-$150. HVAC measure incentives ranged from $50-$900.

Q37. What results were achieved for the audit & weatherization program in 2020?

A37. As shown in Exhibit A-8 (line 5, column (d)), DTE Gas saved 37,423 Mcf. DTE processed 6,027 weatherization rebate applications as shown on line 27 of the exhibit.

Q38. What amount did DTE Gas spend in program cost for the audit & weatherization program in 2020?

A38. As shown in Exhibit A-8 (line 5, column (e)) DTE Gas spent approximately $1.6 million on the audit & weatherization program. This amount was approximately $0.3 million more than the Company had planned to spend in 2020. The variation

Line No.

in spend was a result of increased participation resulting from expansion of program offerings through retail and distributors and amounts included in the Emerging Measure and Approaches plan. Program spend on line 5 includes weatherization rebates, as well as third party vendor costs to manage the program, activities such as call center operations, rebate processing and fulfillment, field verification activities, contractor training and support, and community outreach efforts.

Q39. What was the objective of the School program?

A39. The objectives of the School Program are primarily to help develop and encourage a culture of energy efficiency in elementary students, teachers, schools, and families throughout the DTE Energy service territory through both public and private schools and to deliver real, measurable energy savings. Each participating teacher and student received 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 have been designed to correlate with to the State of Michigan English. math and science curriculum for 4th through 6th grade students, and the science and economics standards for 7th through 12th grades.

Q40. What measures were offered in the School program?

A40. Measures provided included were hot water pipe wrap, energy efficient shower heads and energy efficient kitchen and bath aerators in the kits. Measures related to hot water savings with gas energy savings were only claimed if the home had a gas water heater.

Line No.

Q41. Were incentive payments directly paid to homeowners or tenants under the School program?

A41. No. The School program distributes the energy savings measures directly to the students and they do not incur any costs.

Q42. What results were achieved for the School program in 2020?

A42. As shown in Exhibit A-8 (line 6, column (d)) DTE Gas saved 72,568 Mcf through the School program. Line 28 of this exhibit shows that during 2020, the Company distributed 26,267 kits.

Q43. What amount did DTE Gas spend for the School program in 2020?

A43. As shown in Exhibit A-8 (line 6, column (e)), DTE Gas spent approximately $0.7 million on the School program. This amount was approximately $0.1 million lower than the Company had planned to spend in 2020. The variation in spend was a result of the Company being able to identify efficiencies in the implementation costs of the program. Program spend on line 6 includes the material cost for measures included in the kit, labor to assemble kits and deliver them to the school and costs related to delivering the educational component of the program. This is in addition to third party vendor costs to manage the program, such as call center activities, field verification activities, collateral and educational pieces designed for outreach events and program activities.

Q44. What was the objective of the Home Energy Efficiency Kit program?

A44. The objective of the Home Energy Efficiency Kit program was to encourage customer adoption of energy efficiency in their homes by offering easy to install

Line No.

measures via free energy efficiency kits that are mailed to the participating customers.

Q45. What measures were offered in the Home Energy Efficiency Kit program?

A45. The measures mailed in the kit included: energy efficient showerhead, energy efficient kitchen and bath aerators, and pipe wrap insulation. Measures included in the kit were based on whether customer's water heater was fueled by DTE Energy. The measures related to pipe wrap or hot water savings with gas energy savings were only claimed if the home had a gas water heater.

Q46. Were incentive payments directly paid to homeowners or tenants under the Home Energy Efficiency Kit program?

A46. No. The Home Energy Efficiency Kit program mailed the energy savings measures at no cost to the participants, so homeowners or tenants did not receive incentive payments.

Q47. What results were achieved for the Home Energy Efficiency Kit program in 2020?

A47. As shown in Exhibit A-8 (line 7, column (d)) DTE Gas saved 44,703 Mcf through the Home Energy Efficiency Kit program. Line 29 of this exhibit shows that during 2020, the Company delivered over 28,335 kits to customers.

Q48. What amount did DTE Gas spend for the Home Energy Efficiency Kit program in 2020?

Line No.

A48. As shown in Exhibit A-8 (line 7, column (e)), DTE Gas spent $0.7 million on the Home Energy Efficiency Kit program. This amount was approximately the same as the Company had planned to spend in 2020. Program spend on line 7 includes the material cost for the measures, mailing costs, and kit assembly and processing costs, in addition to third party vendor costs to support the program, such as marketing, program participation and energy savings tracking.

Q49. What was the objective of the Revolving Loan Fund program?

A49. The objective of the program is to provide energy efficiency program participation opportunities for customers with incomes that are above 200% Federal Poverty Levels (FPL) but are below 300% FPL. This program is an attempt to help customers with this level of income overcome the financial barrier to becoming more energy efficient.

Q50. What is the program design of the Revolving Loan Fund program?

A50. The Revolving Loan Fund program will provide a combination of grants and loans to customers to cover the full costs of energy efficiency improvements to their home. The program is designed to have two tiers based on the customer's income as related to FPL.

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

Line No.

Q51. What amount did DTE Gas spend for Revolving Loan program in 2020?

A51. As shown in Exhibit A-8 (line 8, column (e)), DTE Electric spent $0.1 million on the Revolving Loan program. This amount was approximately the same as planned.

Q52. What was the objective of the New Homes Construction (NHC) program?

A52. The objective of the NHC program was to engage certified Michigan home builders and promote energy efficient upgrades to new construction single family home building in DTE's service territories. Builders were offered financial incentives to install high efficiency upgrades and building techniques above baseline building code in the State of Michigan.

Q53. What measures were offered in the NHC program?

A53. The gas measures offered in the NHC program included furnaces, air sealing, insulation, and water heaters.

Q54. What were the typical incentives offered under the NHC program?

A54. In order to qualify for an incentive, homes must meet a Home Energy Rating System (HERS) Index score of 65 or less. The NHC program incentives are structured into two categories - performance incentives and prescriptive. Builders can combine both incentive structures into a maximum incentive from DTE Gas of $1,000 per home. The performance incentive offered was $10/Mcf of natural gas saved over building code minimums. Savings are calculated based on the HERS Rater submission in the program's online incentive system. Prescriptive incentives were offered at the following ranges: Furnace for 96% AFUE+ rebates of $200-$250, Air Sealing of 3.25-2.75 ACH 50 or less rebates of $125-$200, Water Heaters

Line No.

0.66 UEF+ rebates of $75-$100. The New Homes Program also offered an Energy Star Bonus up to $350 for qualifying homes.

Q55. What results were achieved for the NHC program in 2020?

A55. As shown in Exhibit A-8 (line 9, column (d)), DTE Electric saved 43,930 Mcf. Line 31 of this exhibit shows that during 2020 DTE Electric processed 746 New Homes Construction rebate applications.

Q56. What amount did DTE Gas spend for the New Homes Construction program in 2020?

A56. As shown in Exhibit A-8 (line 9, column (e)) DTE Gas spent $0.9 million on the New Homes Construction program. This amount was $0.2 million lower than what the Company had planned to spend in 2020. The variation in spend was a result of larger homes being built, generating more cost-effective savings than planned. Program spend on line 9 includes program rebates, third party vendor costs to manage the program, activities such as call center operation, rebate processing and fulfillment, field verification activities, builder training support and outreach efforts.

Q57. What was the objective of Home Energy Report (HER) treatment?

A57. The objective of the Behavior program was to encourage select customers to be more energy efficient by the means of social competition and social norming. Encouragement was provided by way of a printed HER that displayed the customer's energy usage in comparison to average energy usage of approximately 100 similar homes (as determined by factors such as square footage, type of home,

Line No.

and heating fuel) and a second comparison with the most efficient similar homes nearby (the top 20%). The HER also contained the customer's individual ranking within the similar home set, energy savings tips, and promotions for other energy efficiency programs.

Q58. How were the Home Energy Reports delivered to the customer?

A58. Selected customers were mailed a HER and an abbreviated email version of the report was sent to customers if an email address was available.

Q59. What results were achieved for the Home Energy Reports program in 2020?

A59. As shown in Exhibit A-8 (line 10, column (d)) DTE Gas saved 216,811 Mcf through the Home Energy Reports Behavior program. Line 32 of this exhibit shows that during 2020, the Company provided HERs to 241,878 customers.

Q60. What amount did DTE Gas spend for the Home Energy Reports Behavior program in 2020?

A60. As shown in Exhibit A-8 (line 10, column (e)), DTE Gas spent approximately $0.3 million on the Home Energy Reports Behavior program. This amount was $0.2 million lower than the Company had planned to spend in 2020. The variation in spend was a result of reduced participation in program year 2020. Program spend in line 10 includes the printing and mailing costs, software as a service fees, as well as the additional third-party vendor costs to manage and support the program.

Q61. What was the objective of the DTE Insight program in 2020?

A61. DTE Insight program encouraged customers opting to participate in the program to be more energy efficient by providing customers with access to a variety of information and tools designed to motivate customers to take energy saving actions.

Line No.

Q62. How was the DTE Insight program provided to the customer?

A62. Various marketing, outreach and advertising channels were used to increase customer awareness and encourage them to opt-in to participating in this program by downloading the mobile application to either their iPhone or Android smartphone device.

Q63. Were incentive payments directly paid to homeowners or tenants under the Behavior program?

A63. No.

Q64. What results were achieved for the DTE Insight program in 2020?

A64. As shown in Exhibit A-8 (line 11, column (d)) DTE Gas saved 42,380 Mcf through the Smartphone Behavior Application (DTE Insight). Line 33 of this exhibit shows that during 2020 the Company saw participation in the DTE Insight program from 17,266 customers.

Q65. What amount did DTE Gas spend for the DTE Insight Behavior program in 2020?

A65. As shown in Exhibit A-8 (line 11, column (e)), DTE Gas spent approximately $0.1 million on the DTE Insight Behavior program. This amount was the same as the Company had planned to spend in 2020.

Q66. What was the objective of the Emerging Measures and Approaches program?

A66. The objective of this program was to enable the Company to commercialize piloted measures and approaches prior to the next plan filing.

Line No.

Q67. What programs were offered in the Emerging Measures and Approaches program?

A67. The Emerging Measures and Approaches program commercialized a new approach in the Audit and Weatherization program; expansion of insulation measures through retail channel.

Q68. What amount did DTE Gas spend for the Emerging Measures and Approaches program in 2020?

A68. While Line 12 of Exhibit A-8 lists Emerging Measures and Approaches, actual spend and savings is included in the individual program totals. As referenced in Q.67 above, a new approach was introduced to the commercialized Audit and Weatherization program. This new approach was responsible for approximately $0.4 million spend by DTE Gas.

Q69. What is the basis for the administration & infrastructure amounts shown on line 13 of your Exhibit A-8?

A69. The amount shown on line 13, column (e) of this exhibit represents the internal administration costs directly associated with the residential EWR programs and includes administration and infrastructure costs that Witness Stoudemire allocated to the residential EWR programs as shown on page 1, line 7, column (c) of her Exhibit A-14. The 2020 EWR Plan had an administration budget of approximately $1million. DTE Gas spent approximately $0.8million more on administration and infrastructure costs than planned. In addition, the higher than planned administration and infrastructure cost spend includes call center, organization memberships, additional informational resources, and additional research and benchmarking information.

Line No.

Q70. What was the objective of the Low Income program?

A70. The objective of the Low Income program was to provide no-cost savings measures and education to income-qualified DTE Gas customers to assist them in reducing their energy use and managing their utility costs. This was achieved through four components.

Energy Efficiency Assistance (EEA): The Non-profit Agencies component of the program leveraged 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. These vast networks of participating organizations not only administer the installation of energy efficiency measures, but also assist DTE Gas in identifying income qualified customers.

Low Income Multifamily: The Multifamily component of the program's objective is to produce immediate energy savings in multifamily buildings with three or more units through the direct installation of energy saving measures in the individual living units and prescriptive customer rebates, in the same manner as the Multifamily program.

Low Income Home Energy Consultation: The HEC component program's objective was two parts: 1) provide direct install energy saving measures for single-family homes; and 2) during the installation process provide a customer specific energy saving consultation, identifying energy saving opportunities that are specific

Line No.

to the individual home. This was delivered in the same manner as the HEC program.

The Behavior component of the program's objective was to encourage select low income customers to be more energy efficient by the means of social competition and social norming by providing the customer with Home Energy Reports.

Q71. What measures were offered in the low income program?

A71. The low income program offered various measures including pipe wrap; energy efficient showerheads; kitchen and bathroom aerators; attic, attic hatch, wall, basement wall, knee wall, band joist, duct and crawl space insulation; air sealing; water heaters; programmable and smart thermostats; boilers; high efficiency furnaces; furnace and boiler tune-ups; and Home Energy Reports.

Q72. Were incentive payments directly paid to customers under the low income program?

A72. No.

Q73. What results were achieved for the low income EEA program in 2020?

A73. As shown in Exhibit A-8 (line 16, column (d)), DTE Gas saved 51,721 Mcf through the EEA low income program. Line 36 of this exhibit shows that during 2020 the Company funded installations for 4,457 project requests, which were provided by non-profit agencies.

Line No.

Q74. What amount did DTE Gas spend in program cost for the low income EEA program in 2020?

A74. As shown in Exhibit A-8 (line 16, column (e)), DTE Gas spent approximately $6.7 million. This amount is approximately $0.1million lower than what DTE Gas had planned to spend in 2020. This variance is primarily due to an increase in spend in the Non-profit Agencies component of the program. Program spend on line 16 includes third-party vendor costs to manage the program, such as administrative coordination with local agencies, application processing and fulfillment, and field verification activities and internal cost directly associated with administering the residential low income program.

Q75. What was the objective of the Low Income Multifamily program?

A75. The objective of the Low Income Multifamily program was to produce gas energy savings in multifamily buildings with three or more units through the direct installation of energy saving measures in the individual living units and to provide prescriptive and custom rebates for larger projects at a much higher incentive rate than the market rate commercial program. Energy efficiency education was also delivered to property owners, managers, and individual tenants.

Q76. What measures were offered in the Low Income Multifamily program?

A76. Typical in-unit measures included: programmable thermostats if the unit had gas heat; energy efficient shower heads; energy efficient kitchen and bath aerators; and pipe wrap insulation if the unit had gas water heating. Typical prescriptive rebates include furnace, hot water tank and boiler replacements.

Line No.

Q77. Were incentive payments directly paid to tenants under the Low Income Multifamily program?

A77. No. The multifamily program is a direct-install program, so tenants did not receive incentive payments. Properties owners did receive prescriptive and custom rebates.

Q78. What results were achieved for the Low Income Multifamily program in 2020?

A78. As shown in Exhibit A-8 (line 17, column (d)) DTE Gas saved 46,926 Mcf through the Low Income Multifamily program. Line 37 of this exhibit shows that during 2020, the Company completed 1,781 units.

Q79. What amount did DTE Gas spend for the Low Income Multifamily program in 2020?

A79. As shown in Exhibit A-8 (line 17, column (e)), DTE Gas spent $2.5 million on the multifamily program. This amount was approximately $0.3 million higher than what the Company had planned to spend in 2020. The variation in spend was a result of higher participation than planned on Low Income Multifamily . Program spend on line 17 includes the material cost for direct install measures and labor to install those measures, prescriptive and custom rebates, and third-party vendor costs to manage the program, such as call center activities, field verification activities, collateral and educational pieces designed for outreach events and program activities.

Q80. What was the objective of the Low Income HEC program?

A80. The objective of the Low Income HEC program has two parts: 1) provide direct install energy saving measures for single-family homes; and 2) during the

Line No.

installation process provide a customer specific energy saving consultation, identifying energy saving opportunities and program recommendations that are specific to the individual home.

Q81. What measures were offered in the Low Income HEC program?

A81. Typical measures included: programmable and smart thermostats, energy efficient shower heads, energy efficient kitchen and bath aerators, and pipe wrap insulation. Measures related to hot water savings and pipe wrap with gas energy savings were only claimed if customer had a gas water heater. Programmable thermostats were installed for customers with gas heat.

Q82. Were incentive payments directly paid to homeowners or tenants under the Low Income HEC program?

A82. Since the Low Income HEC program is a direct-install program, homeowners or tenants did not receive incentive payments.

Q83. What results were achieved for the Low Income HEC program in 2020?

A83. As shown in Exhibit A-8 (line 18, column (d)) DTE Gas saved 32,981 Mcf through the Low Income HEC program. Line 38 of this exhibit shows that during 2020, the Company completed approximately 6,035 homes.

Q84. What did DTE Gas spend for the Low Income HEC program in 2020?

A84. As shown in Exhibit A-8 (line 18, column (e)), DTE Gas spent $1.1 million on the Low Income HEC program. This amount was approximately the same as the Company had planned to spend in 2020. Program spend on line 18 includes the material cost for direct install measures and labor to install those measures, in

Line No.

addition to third party vendor costs to manage the program, such as call center activities, field verification activities, collateral and educational pieces designed for outreach events and program activities.

Q85. What results were achieved for the combined total low income programs in 2020?

A85. As shown in Exhibit A-8 (line 20 column (d)) DTE Electric saved 131,628 Mcf through the low income programs.

Q86. What did DTE Gas spend for the combined total low income programs in 2020?

A86. As shown in Exhibit A-8 (line 20, column (e)), DTE Electric spent $10.5 million on the low income programs. This amount was approximately $0.2 million higher than planned. The variation in spend is explained in the low income program components above. The increased spend in this program component was part of the EWR plan filing settlement and was spent in accordance with said settlement.

Education Program

Q87. What was the objective of DTE Gas' EWR education program?

A87. The objective of the EWR education program was to provide DTE Gas residential and business customers with information and resources to help them learn how to utilize energy more efficiently and to better manage their energy costs. The DTE Energy website, mass media, social media, and outreach campaigns such as outbound mail, digital communications, community events and sponsorships and experiential activation were key channels to engage customers with energy efficiency information. In 2020, the Company continued to rely on our website,

Line No.

mass media and outreach campaigns targeting specific customer segments to increase their awareness of energy efficiency.

Q88. How did DTE Gas implement its Education program in 2020?

A88. The Company continued to provide energy efficiency education and raised awareness of EWR offerings through traditional mass media channels, community outreach events, sponsorships, digital media including web and social media, and direct outreach to increase awareness among DTE Gas customers. In 2020, the Company utilized target marketing to meet segment specific needs for energy efficiency information.

Q89. What projects and campaigns were performed under the education program in 2020?

A89. The following projects and campaigns were performed under the education program in 2020:

- Residential campaigns included radio, television, print, direct outreach, and digital advertising focused on low-cost or no-cost tips, ENERGY STAR appliance tips, heating and cooling messaging while providing estimated energy and money saving opportunities. Recommended temperature settings and other specific behaviors on managing energy use were also given when possible. In addition, we also continued to include messages highlighting the non-energy benefits of making energy efficiency improvements in and outside of their home, including improved comfort, convenience, health, and safety.

Line No.

- Small business campaigns included radio, television, print, direct mail, educational videos and digital advertising focusing on low-cost or no-cost tips, and case studies with suggestions that similar businesses could complete for energy efficiency improvements. In addition, we 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 satisfaction of their customers and employees.

- Sports sponsorships with the PGA, Detroit Tigers, Detroit Red Wings, Detroit Lions, West Michigan Whitecaps, Grand Rapids Griffins and Traverse City Pitspitters allowed opportunities to share energy-saving information in a fun and engaging way.

- Sponsorships with business chambers across our service area, the U.S. Green Building Council's Michigan Battle of the Buildings Competition, Small Business Association of Michigan (SBAM) and Detroit, Ann Arbor and Grand Rapids 2030 Districts were continued to reach businesses with additional energy efficiency education.

A contest for small business customers was also executed, allowing business owners to submit their energy efficiency story for a chance to be one of three (3) final prize winners. Submissions were reviewed and judged on a variety of criteria and three Michigan business from across the state were awarded energy efficiency prizing,

Line No.

allowing them to implement additional energy efficiency measures and share their story across a variety of marketing tactics.

The Education Program launched an online 3D Energy Efficient Interactive Home. The Interactive Home provides relatable and realistic room by room engagement where customers can discover tips, energy efficient products, rebates and EWR programs available while navigating it. The Interactive Home has been leveraged as an educational tool across a variety of marketing tactics and channels.

Employee outreach through the Company intranet, videos, virtual employee events, an internal Energy Efficiency page for employee resources and electronic newsletters. As in past years, new collateral with a fresh message was created to educate customers on energy efficiency. These included brochures, case studies, giveaways, ambassador cards, a carbon neutrality handout and energy-saving tips handouts. In addition, a print and digital magazine with in-depth information of how energy efficiency can be applied in businesses was developed in four editions. We also continued to utilize bill inserts, direct mail, email newsletters and digital tools and communications (online calculators, targeted videos, social media posts, and website information) to engage customers in learning.

Q90. What amount did DTE Gas spend for the education programs in 2020?

A90. As shown in Exhibit A-8, line 22, column (e), DTE Gas spent $1.1 million on the education program. Education funds were primarily spent on contracted services, media and materials for the various projects and campaigns implemented as well as on internal administration of the program.

Line No.

Q91. How were education program energy savings determined?

A91. Education energy savings were determined based on the method prescribed by the Commission's December 4, 2008 Temporary Order in Case No. U-15800. In that order, the Commission determined that EWR education programs may use up to three percent of the annual EWR budget. Any funds spent on education will be deemed to have generated a proportional amount of energy savings per dollar of spend to that of the overall portfolio, up to three percent during each program year. Given the spending completed on education projects and campaigns in 2020, energy savings per Exhibit A-8 were determined based on the above methodology to be 56,636 Mcf.

Q92. Does this conclude your direct testimony?

A92. Yes, it does.

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter, on the Commission's own motion,	)	
regarding the regulatory reviews, revisions,	)	
determinations, and/or approvals necessary for	)	Case No. U-20871
DTE GAS COMPANY	)	(Paperless e-file)
to fully comply with Public Act 295 of 2008,	)	
as amended by Public Act 342 of 2016.	)	
_____	)	

EXHIBIT

OF

JOSE N. GONCALVES

Michigan Public Service Commission
DTE Gas Company
Energy Waste Reduction - 2020 Plan Reconciliation
Residential, Low Income and Education Program Cost and Energy Savings

Case No.: U-20871
Exhibit: A-8
Witness: J. Goncalves
Page: 1 of 1

Line No.	(a) Description	(b) 2020 Planned Mcf Savings	(c) 2020 Planned Cost ($000)	(d) 2020 Actual 2020 Verified Net Savings	(e) 2020 Actual Cost ($000)	(f) Variance - Over / (Under) Mcf Savings	(g) Variance - Over / (Under) Cost ($000)
	Residential	(1)	(1)	(2)	(3)		
1	Residential ENERGY STAR Products	21,551	$369	24,571	$263	3,019	($106)
2	Residential HVAC	280,000	$5,308	271,343	$5,179	(8,657)	($129)
3	Multifamily	15,568	$208	4,446	$124	(11,122)	($84)
4	Home Energy Consultation (HEC)	62,407	$2,337	60,885	$2,070	(1,522)	($267)
5	Residential Audit and Weatherization	25,000	$1,275	37,423	$1,598	12,423	$323
6	School Program	80,616	$792	72,568	$733	(8,047)	($59)
7	Home Energy Efficiency Kits	33,310	$739	44,703	$689	11,393	($50)
8	Revolving Loan Program	449	$175	397	$117	(53)	($59)
9	New Home Construction	42,438	$1,049	43,930	$895	1,492	($154)
10	Home Energy Reports	196,081	$525	216,811	$343	20,730	($182)
11	DTE Insight	15,000	$110	42,380	$114	27,380	$4
12	Emerging Measures and Approaches	4,399	$367	-	0	(4,399)	($367)
13	Administration & Infrastructure		$1,043		$1,889		$846
14	**Residential Program Total**	**776,819**	**$14,298**	**819,455**	**$14,014**	**42,636**	**($285)**
15	**Low Income**						
16	Low Income attributed to Energy Efficiency Assistance	48,628	$6,806	51,721	$6,749	3,093	($57)
17	Low Income attributed to Multifamily	16,228	$2,215	46,926	$2,483	30,697	$267
18	Low Income attributed to Home Energy Consultation	33,483	$1,185	32,981	$1,142	(502)	($43)
19	Low Income Adminstrative and Infrastructure		$81		$107		$25
20	**Low Income Program Total (5)**	**98,339**	**$10,288**	**131,628**	**$10,480**	**33,288**	**$193**
21	**Residential and Low Income Program Totals**	**875,158**	**$24,586**	**951,082**	**$24,494**	**75,924**	**($92)**
22	**Education Total**	**59,399**	**$1,050**	**56,636**	**$1,144**	**(2,763)**	**$94**

		2020 Customer Applications (4)	
23	Residential ENERGY STAR Products	10,959	
24	Residential HVAC	13,784	
25	Multifamily	1,330	units (excludes low income multifamily units)
26	Home Energy Consultation (HEC)	9,761	units (excludes low income HEC units)
27	Residential Audit and Weatherization	6,027	
28	School Program	26,267	
29	Home Energy Efficiency Kits	28,335	
30	Revolving Loan Program	28	
31	New Home Construction	746	
32	Home Energy Reports	241,878	
33	DTE Insight	17,266	
34	Emerging Measures and Approaches	-	
35	**Residential Program Total**	356,381	
36	Low Income attributed to Energy Efficiency Assistance	4,457	
37	Low Income attributed to Multifamily	1,781	
38	Low Income attributed to Home Energy Consultation	6,035	
39	**Low Income Program Total**	12,273	
40	Total	368,654	

Note:
(1) U-20429, DTE Gas EWR Plan, Exhibit A-4, Columns (e) and (f)
(2) Exhibit A-12, Column (j)
(3) Exhibit A-3 p2, Column (d)
(4) Company Records
(5) Total Residential Portfolio savings inclusive of Residential Pilot and Residential Education savings is 1,072,926 Mcf. See Exhibit A-2 and A-9.

Michigan Public Service Commission
DTE Gas Company
Energy Waste Reduction - 2020 Plan Reconciliation
Education Program Savings Calculation

Case No.: U-20871
Exhibit: A-9
Witness: J. Goncalves
Page: 1 of 1

Line No.	(a) Source	(b) Item	(c) Amount
1	U-20429, DTE Gas EWR Plan Exhibit A-4, Col. (e), Line 35	Program Target in Mcf	1,979,975
2	Exhibit A-14, p.1, Column (f) Line 9 + Line 12	Program Spend	$ 39,982,411
3	Line 1 / Line 2	Mcf/$ of Spend	0.049521
4	Exhibit A-3, p. 2, Column (d), Line 40, Plus Exhibit A-3, p. 4, Column (d), Line 27	Education Spend	$ 1,143,676
5	Line 3 * Line 4	Education Savings Mcf (1)	**56,636**

Notes:
(1)
Residential education savings 47,574 Mcf (Line 5 * 84%)
C&I education savings 9,062 Mcf (Line 5 * 16%)

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter, on the Commission's own motion,	)	
regarding the regulatory reviews, revisions,	)	
determinations, and/or approvals necessary for	)	Case No. U-20871
DTE GAS COMPANY	)	(Paperless e-file)
to fully comply with Public Act 295 of 2008,	)	
as amended by Public Act 342 of 2016.	)	
_____	)	

QUALIFICATIONS

AND

DIRECT TESTIMONY

OF

THOMAS W. LACEY

DTE GAS COMPANY
QUALIFICATIONS OF THOMAS W. LACEY

Line No.

Q1. What is your name, title, business address and by whom are you employed?

A1. My name is Thomas W. Lacey (he/him/his). My business address is One Energy Plaza, Detroit, Michigan 48226. I am employed by DTE Energy Corporate Services, LLC (DTE Energy or DTE) as a Principal Financial Analyst in the Revenue Requirements Department of the Regulatory Affairs Organization.

Q2. On whose behalf are you testifying?

A2. I am testifying on behalf of DTE Gas Company (DTE Gas or the Company).

Q3. What is your educational background and business experience?

A3. I received a Bachelor of Science Degree in Accounting from Michigan State University in 1981 and a Masters in Business Administration from Wayne State University in 1992. From 1982 until 2001, I was employed by ANR Pipeline Company (ANR) in the Rates and Regulatory Affairs department. I had several positions of increasing responsibilities within the Rates area, ultimately rising to the position of Senior Rates Analyst. During my nineteen years with ANR, I worked on numerous rate proceedings and filings before the Federal Energy Regulatory Commission (FERC) including rate cases (FERC Docket Nos. RP82-80, RP83-79, RP86-169, RP89-161, RS92-1 and RP94-43). My work was primarily in the areas of cost-of-service and rate design. In 2002, I joined DTE as a Financial Analyst in the Load Research department of Regulatory Affairs. I worked in Load Research until December 2005. My responsibilities within Load Research included extensive work on the 2003 Michigan Consolidated Gas Company (MichCon) rate case (U-13898) and The Detroit Edison Company (Detroit Edison) rate filings. In December 2005, I accepted my current position.

Line No.

Q4. What are your responsibilities as a Principal Financial Analyst for both DTE Electric and DTE Gas?

A4. As a Principal Financial Analyst, my responsibilities include the preparation of revenue requirements, cost of service and rate design, testimony, exhibits and workpapers, in cases for both DTE Gas and DTE Electric. I am also responsible for managing certain MPSC filings such as the Reconciliation of the DTE Gas 2019 EWR Program (Case No. U-20708) and DTE Electric's most recent depreciation case (Case No. U-18150).

Q5. Have you previously sponsored testimony in cases before the Michigan Public Service Commission (MPSC or Commission)?

A5. Yes, I have. I have sponsored testimony in the following cases:

U-13898	MichCon's 2006 Uncollectible Expense True-up Mechanism and Safety and Training Related Expenditure Report
U-15985	MichCon's 2009 General Rate Case Proceeding
U-16290	Reconciliation of MichCon's 2010 Energy Optimization (EO) Program
U-16730	MichCon's 2011 Updated Energy Optimization Plan
U-16751	Reconciliation of the MichCon 2011 EO Program
U-16999	MichCon 2011 General Rate Case Proceeding
U-17288	Reconciliation of the DTE Gas 2012 EO Program
U-17602	Reconciliation of the DTE Electric 2013 EO Program
U-17608	Reconciliation of the DTE Gas 2013 EO Program
U-17632	Reconciliation of the DTE Electric 2013 REP Program
U-17762	DTE Electric 2016/2017 Energy Optimization Plan

Line No.

U-17763	DTE Gas 2016/2017 Energy Optimization Plan
U-17804	Reconciliation of the DTE Electric 2014 REP Program
U-17832	Reconciliation of the DTE Electric 2014 EO Program
U-17841	Reconciliation of the DTE Gas 2014 EO Program
U-18014	DTE Electric General Rate Case Proceeding
U-18111	DTE Electric REP Plan Proceeding
U-18232	DTE Electric REP (2018) Amended Plan Proceeding
U-18232	DTE Electric REP (2020) Amended Plan Proceeding
U-18248	DTE Electric Capacity Charge
U-18255	DTE Electric General Rate Case Proceeding
U-20029	Reconciliation of the DTE Electric 2017 EWR Program
U-20035	Reconciliation of the DTE Gas 2017 EWR Program
U-20105	DTE Electric Tax Credit A Proceeding
U-20162	DTE Electric General Rate Case Proceeding
U-20172	Reconciliation of the DTE Electric 2017 REP Program
U-20366	Reconciliation of the DTE Electric 2018 EWR Program
U-20369	Reconciliation of the DTE Gas 2018 EWR Program
U-20561	DTE Electric General Rate Case Proceeding
U-20723	Reconciliation of the DTE Electric 2019 REP Program
U-20851	DTE Electric REP (August 2020) Amended Plan Proceeding

Q6. Have you previously testified or submitted testimony in any other regulatory proceedings?

A6. Yes. I sponsored testimony in ANR's general rate case in FERC Docket No. RP94-43. I testified at a hearing before the FERC in Docket No. RP94-43.

Line No.

Q7. What is the purpose of your testimony in this proceeding?

A7. The purpose of my 2020 Energy Waste Reduction (EWR) reconciliation testimony is to:

1. Calculate and support the cumulative EWR program over/(under) cost recovery (based on the comparison of base surcharge revenue vs. defined program costs as discussed later in my testimony) in total and by customer class, including carrying costs, for the 12 months ended December 31, 2020 (Reconciliation Year).
2. I will show that at year-end, the Company had a cumulative under-recovery of $19.2 million for all customers, which includes total carrying costs of $0.1 million. This year-end cumulative total is summarized on Exhibit A-16 and includes a Residential class cumulative under-recovery of $8.6 million, and a combined Commercial and Industrial (C&I) and End User Transportation (EUT) class cumulative under-recovery of $10.6 million.
3. Calculate and support the cumulative over/(under) revenue recovery for the 2018 performance incentive and propose that any residual balance be combined with the 2020 performance incentive beginning balance. I will show that at the end of the 12-month recovery period approved by the MPSC for collection of the 2018 performance incentive there was a cumulative under-recovery of $1.0 million for all customers. This year-end cumulative total is summarized on Exhibit A-23 by class and in total.
4. Present and support how the Company proposes to recover the 2020 EWR Program Performance Incentive and the residual balances from the 2018 performance incentive surcharge. I will calculate the incremental surcharges needed, by class, to recover the 2020 performance incentive

Line No.

(combined with the 2018 performance incentive residual balance) by using the rate design methodology previously approved by the Commission. In addition to approved EWR base surcharges, customers would pay one incremental 12-month surcharge to recover the proposed 2020 performance incentive, net of the 2018 performance incentive residual balance, as follows (and calculated on Exhibit A-24):

Class	**Incremental Surcharge**
Residential	$0.00489/Ccf
C&I	$0.00286/Ccf
EUT	$0.00114/Ccf

Q8. Are you sponsoring any exhibits in this proceeding?

A8. Yes. I am sponsoring the following exhibits:

Exhibit	Description
A-16	Summary of Cumulative Over/(Under) Cost Recovery by Class
A-17	Monthly Over/(Under) Cost Recovery
A-18	Allocation of 2020 EWR Surcharge Revenue
A-19	Revenue Allocation Factor Calculations
A-20	Return on Capitalized Costs
A-21	Pre-Tax Rate of Return by Month
A-22	Revenue Conversion Factors
A-23	Performance Incentive Reconciliation
A-24	Calculation of Surcharges to Recover Performance Incentive
A-25	History of Billed Surcharges
A-26	Proposed Tariff Sheet

Line No.

Q9. Were these exhibits prepared by you or under your direction?

A9. Yes, they were.

Calculation of 2020 Cumulative EWR Program Over/(Under) Cost Recovery

Q10. How was DTE Gas's 2020 year-end EWR cumulative over/(under) cost recovery calculated?

A10. In general, this effort entails comparing base surcharge revenue to actual EWR program costs for the Reconciliation Year. "Base" surcharge revenue is total EWR actual revenue excluding the revenue recovery for authorized performance incentives. The actual EWR program costs include O&M expenses plus carrying charges on over/(under) recovered balances. The actual EWR program costs include: O&M expenses, pre-tax return on capitalized costs, and return of capitalized costs (amortization), plus carrying charges on over/(under) recovered balances. Specifically, as detailed later in my discussion regarding Exhibit A-17, DTE Gas's year-end cumulative EWR over/(under) cost recovery amount is calculated on a class-specific basis and is the net combination of: 1) the 2019 ending over/(under) cost recovery balance (i.e., 2020 beginning balance); 2) the incremental Reconciliation Year EWR program over/(under) cost recovery and 3) Reconciliation Year carrying charges. DTE Gas's Reconciliation Year year-end EWR program over/(under) cost recovery was calculated on a monthly basis as a comparison of the actual program costs incurred to actual billed base surcharge revenue. Carrying charges were calculated based on the average monthly cumulative over/(under) recovery balance.

Line No.

Q11. What is DTE Gas's 2020 year-end cumulative EWR over/(under) cost recovery balance in total and for each customer class?

A11. As summarized on Exhibit A-16, DTE Gas's EWR Program was under-recovered by $19.2 million at year-end. As shown on line 10 of Exhibit A-16, the Residential class was under-recovered by $8.6 million; the combined C&I class and EUT class was under-recovered by $10.6 million.

Q12. How are the class-specific over/(under) recoveries (referenced above) derived within Exhibit A-16 entitled "Summary of Cumulative Over/(Under) Cost Recovery by Class?"

A12. Exhibit A-16 shows DTE Gas's year-end summary of the cumulative EWR over/(under) cost recovery by customer class (columns (c) through (d)) and in total (column (e)) for the Reconciliation Year. Line 1 shows the 2020 beginning over/(under) recovery balances inclusive of accrued interest through the end of 2019. These over/(under) recovery balances are as of December 31, 2019 and were approved by the Commission in its order on December 9, 2020 in the Company's 2019 EWR Reconciliation Case (Case No. U-20708). Line 2 represents the actual base surcharge revenue for the Reconciliation Year. Line 4 represents the actual program costs that were expensed (O&M expenses) for the Reconciliation Year. Line 5 shows the Reconciliation Year pre-tax return on the program costs that were capitalized. Line 6 shows the amortization of the capitalized costs. Line 7 shows the total program costs for 2020 which is a summation of lines 4 through 6. The cumulative year-end EWR program over/(under) cost recovery is shown on line 8 as the sum of lines 1 and 2 minus line 7. Line 9 shows the carrying charges calculated on the EWR program over/(under) cost recovery shown on line 8. Line

Line No.

10 shows the year-end cumulative EWR program over/(under) cost recovery including carrying charges. The revenue, costs, and carrying charge amounts are carried forward from column (o) of the appropriate customer class monthly detail pages of Exhibit A-17.

Q13. What is shown on Exhibit A-17 entitled "Monthly Over/(Under) Cost Recovery?"

A13. Exhibit A-17 is a four-page exhibit which shows the calculation, on a monthly basis, of the 2020 EWR program over/(under) cost recovery for the three customer classes (Residential, C&I and EUT). This exhibit also calculates the carrying charges on the monthly cumulative over/(under) cost recovery. Page 1 of Exhibit A-17 shows the calculation of the over/(under)-recovery for the Residential class. Page 2 of Exhibit A-17 shows the calculation of the over/(under)-recovery for the C&I class. Page 3 of Exhibit A-17 shows the calculation of the over/(under)-recovery for the EUT class. Page 4 of Exhibit A-17 combines the calculations of the C&I and EUT classes from pages 2 and 3 to show the net over/(under)-recovery. Each page of Exhibit A-17 has the identical layout and line references, so all of the following information and responses apply to the residential, C&I and EUT respective pages. Lines 1 through 6 show the same revenue and program costs information as Exhibit A-16 lines 2 through 7 but on a monthly basis. Line 7 of Exhibit A-17 shows the monthly over/(under) recovery results and the total balance for calendar year 2020. Lines 9 through 12 calculate the average program over/(under) cost recovery balance that is used to calculate the monthly carrying charges shown on lines 14 and 15. The beginning balance for January 2020 on line 9, column (c) is the 2019 year-end balance. Line 16 reflects the 2020 cumulative

Line No.

over/(under) cost recovery balance which is the sum of the program over/(under) cost recovery ending balance (line 11) and the cumulative carrying charges (line 15). Line 17 shows the monthly short-term interest rate that is used in deriving the carrying charges.

Q14. What is the source of the line 1 base surcharge revenue data used in calculating the over/(under) cost recovery amounts on Exhibit A-17?

A14. The actual base surcharge revenues shown on line 1 are calculated on Exhibit A-18. Exhibit A-18, which is discussed in more detail later in my testimony, allocates the total EWR actual billed surcharge revenue provided by Witness Stoudemire between the program's EWR performance incentive revenue and the base surcharge revenue designed to recover the program costs.

Q15. What is the source of the cost data used in calculating the over/(under) cost recovery amounts on Exhibit A-17?

A15. The cost amounts shown on lines 3 and 5, O&M expenses and Return of Asset, respectively, are supported by Witness Stoudemire on Exhibit A-14. The pre-tax return on capitalized costs shown on line 4 was calculated on my Exhibit A-20.

Q16. How was the pre-tax return on capitalized costs shown on line 4 of Exhibit A-17 calculated?

A16. The pre-tax return on capitalized costs shown on line 4 of Exhibit A-17 is calculated on Exhibit A-20 by multiplying the average capitalized costs amount by the pre-tax rate of return.

Line No.

Q17. How are carrying charges on Exhibit A-17 calculated?

A17. Monthly carrying charges are calculated on line 14 of Exhibit A-17 by multiplying the simple average of the cumulative over/(under) recovery month end balances shown on line 12 by DTE Gas's monthly short-term incremental borrowing rate on line 18. The monthly rates shown on line 17 are based on the actual annual interest rates shown on line 18 as provided to me by DTE's Treasury Department.

Q18. Are the carrying charges compounded monthly?

A18. No, carrying charges are not added to the monthly program over/(under) cost recovery balance. Carrying charges are only compounded on an annual basis.

Q19. What is shown on Exhibit A-20?

A19. Exhibit A-20 is a three-page exhibit that calculates average capitalized costs and the pre-tax return on capitalized costs on a monthly basis, for each of the three customer classes. The calculated pre-tax return on capitalized costs is shown on line 4 of this exhibit and carried forward to Exhibit A-17, line 4 for the respective customer classes. Page 1 of the exhibit reflects the calculated amounts for the Residential class. Page 2 of the exhibit reflects the calculated amounts for the C&I class. Page 3 of the exhibit reflects the calculated amounts for the EUT class.

Q20. How are average capitalized costs derived?

A20. Capitalized costs are computed as gross capitalized costs less accumulated amortization and less accumulated deferred taxes as shown on lines 6 through 10 of Exhibit A-20. Column (c) of Exhibit A-20 shows the 2019 year-end balance for these components (which was zero for all classes) while columns (d) through (o)

Line No.

show the 2020 month-end balances for these same components. Line 11 represents the average capitalized costs balances that are based on a simple average of the beginning and ending month balances. Line 9 shows the monthly balances for accumulated deferred income taxes, are calculated by adjusting the prior month's balance by the monthly change, which were provided by Witness Biel for each customer class on Exhibit A-27.

Q21. What is the basis for the pre-tax rate of return you are using to calculate the return on capitalized costs?

A21. Exhibit A-21 titled "Pre-Tax Rate of Return by Month" shows the calculation of DTE Gas's pre-tax rate of return on permanent capital for each month and serves as the basis for the pre-tax rate of return used on Exhibit A-20. For 2020 this rate of return reflects the rate of return on equity and the debt-to-equity ratio authorized for the Company when the two EWR plans were approved and their respective active periods: (1) January 1, 2020 to November 30, 2020, U-18268, and (2) December 1, 2020 to December 31, 2020, U-20429. The monthly long-term debt rate component has been updated to reflect actual 2020 monthly values obtained from DTE's Treasury Department. The revenue conversion factors used to calculate the pre-tax rates are derived on Exhibit A-22.

Base Surcharge Revenue Determination

Q22. Why is it necessary to allocate EWR surcharge revenue on Exhibit A-18, "Allocation of 2020 EWR Surcharge Revenue"?

A22. Since all currently approved EWR surcharges are billed to customers as one charge (for 2019 this is the summation of the base surcharge and the 2017 performance

Line No.

incentive surcharge, as discussed later in my testimony), the revenues are recorded on the Company's books in total. Exhibit A-19 shows how the allocation percentages were calculated, and Exhibit A-18 uses these percentages to allocate the total 2020 billed EWR surcharge revenue (supported by Witness Stoudemire on Exhibit A-14) between the base surcharge revenue and the 2018 performance incentive revenue by class.

Q23. What EWR base surcharges were authorized for collection in 2020?

A23. During 2020, two different EWR base surcharges were authorized for collection: (1) from January 1, 2020 to November 30, 2020, per the Commission's April 12, 2018, order in Case No. U-18268 2018-2019 EWR Plan, and (2) from December 1, 2020 to December 31, 2020, per the Commission's November 19, 2020, order in Case No. U-20429 2020-2021 Plan.

Q24. What EWR performance incentive surcharges were authorized for collection in 2020?

A24. During January 2020 no performance incentive surcharge was in effect. On January 23, 2020, the Commission authorized the Company to begin billing an incremental surcharge to recover the 2018 EWR performance incentive that was awarded as a result of the 2018 DTE Gas EWR Reconciliation in Case No. U-20369. This surcharge was approved for a 11-month billing period beginning February 1, 2020, and it was added to the base surcharge and billed to customers as one EWR surcharge through December 31, 2020.

Line No.

Q25. How do you allocate the total 2020 billed surcharge revenue for the Residential class?

A25. Lines 1-6 of Exhibit A-18 shows the allocation of the total Residential EWR surcharge revenue into the individual surcharge revenue streams of which it is comprised. Total 2020 billed surcharge revenue, line 1, is multiplied by the appropriate allocation factors shown on line 3, resulting in the corresponding performance incentive surcharge revenue shown on line 4.

For 2020, three different allocation percentages were used. For January 2020: 0.00% of total revenue was allocated as 2018 performance incentive revenue as derived on Exhibit A-19 lines 1 through 3, column (d). For February-November 2020: 16.13% of total revenue was allocated as 2018 performance incentive revenue as derived on Exhibit A-19 lines 1 through 3, column (f). For December 2020: 11.55% of total revenue was allocated as 2018 performance incentive revenue as derived on Exhibit A-19 lines 1 through 3, column (h). The Residential base surcharge revenue for 2020 which is shown on line 6 of Exhibit A-18 is then calculated as the difference between the total 2020 billed surcharge revenue on line 1 and the total performance incentive revenue on line 4.

Q26. How were the Residential performance incentive allocation factors, shown on lines 1 and 2 of Exhibit A-19, columns (d), (f) and (h) derived?

A26. The allocation factors shown on lines 1 and 2, in columns (d), (f) and (h) of Exhibit A-19 are simply the ratio of the individual performance incentive surcharge to the total EWR surcharge in effect for 2020 for the Residential class. As shown on Exhibit A-19, column (e) the 2018 performance incentive surcharge was $0.00323

Line No.

per Ccf during February-November, 2020, and the 2020 base surcharge was $0.01680 per Ccf resulting in a total surcharge of $0.02003 per Ccf for the Residential class. As shown in column (f), the 2018 performance incentive surcharge (line 1, column (e)) divided by the total EWR surcharge (line 3, column (e)) is 16.13% for this period. As shown on Exhibit A-19, column (g) the 2018 performance incentive surcharge was $0.00323 per Ccf during December, 2020, and the 2020 base surcharge was $0.02476 per Ccf resulting in a total surcharge of $0.02799 per Ccf for the Residential class. As shown in column (h), the 2018 performance incentive surcharge (line 1, column (g)) divided by the total EWR surcharge (line 3, column (g)) is 11.55% for this period.

Q27. Were the allocation factors shown on lines 11 and 19 of Exhibit A-18, for C&I and EUT, derived in the same manner as Residential?

A27. Yes. The allocation factors for C&I and EUT are displayed on lines 11 and 19 of Exhibit A-18, respectively. These factors are derived on lines 6 through 13 of Exhibit A-19. The factors are simply the ratio of the 2018 performance incentive surcharges to the total EWR surcharge in effect for January through December of 2020 for each class.

Q28. What are the revenue conversion factors shown on Exhibit A-22?

A28. Given that DTE Gas's debt costs on line 2 of Exhibit A-21 are reflected on a pre-tax basis already the debt revenue multiplier as shown on line 9, column (c) of Exhibit A-22 is 1.0000. Revenue collected to cover the Company's equity return is subject to Michigan Corporate Income Taxes (MCIT), Municipal Taxes, and Federal Income Taxes. Line 9, column (d) of Exhibit A-22 shows DTE Gas's

Line No.

current equity revenue multiplier of 1.3545, which means that DTE Electric is required to collect $1.3545 in order to produce $1.00 of after-tax income. The revenue conversion factors are carried forward to Exhibit A-21 and used in the calculation of pre-tax rate of return.

Performance Incentive

Q29. What is the purpose of Exhibit A-23, "Performance Incentive Reconciliation"?

A29. The purpose of Exhibit A-23 is to calculate the over/(under) recovery, by class, for the 2018 performance incentive. In the Case No. U-20369 order, dated January 23, 2020, the MPSC authorized the Company to collect $5.2 million for its 2018 performance incentive. The surcharge to collect the 2018 performance incentive was authorized for 11 months starting February 1, 2020 and ending December 31, 2020.

Q30. What is shown on Exhibit A-23, "Performance Incentive Reconciliation"?

A30. Line 1 of Exhibit A-23 summarizes the revenue collected during 2020, as derived in this reconciliation case and calculated on Exhibit A-18. In total, the Company collected $4.2 million of revenue attributed to the 2018 performance incentive (line 1) compared to the $5.2 million (line 3) that the Company was authorized to recover. This results in a total net under-recovery of the 2018 performance incentive of $1.0 million, shown on line 5, column (f). Line 5, columns (c) through (e) show the over/(under) recovery by the respective customer classes.

Q31. Is interest included in the performance incentive over/(under) balances?

Line No.

A31. No. On page 8 of the Commission's order in Case No. U-16289 the Company was ordered to calculate the performance incentive balances without interest. Therefore, neither of the over/(under) recovery balances includes interest.

Q32. How do you recommend the net under-recovery balance for the 2018 performance incentive be treated?

A32. Consistent with the treatment of the residual balances from the 2009 through 2017 performance incentives approved by the Commission in Case Nos. U-17288, U-17608, U-17841, U-18024, U-18338, U-20035, U-20369, and U-20708 I recommend that the total net under-recovery of $1.0 million be added to the 2020 performance incentive awarded in this case, in order for the Company to eliminate these residuals balances in an expedited manner.

Q33. How did you calculate the proposed 2020 performance incentive surcharge on Exhibit A-24?

A33. I calculated the proposed surcharges for recovering the 2020 performance incentive portion by combining the $7.3 million performance incentive earned in 2020 as supported by Company Witness Payne with the $1.0 million under-recovery of the 2018 performance incentive. Lines 1 through 3 show the details of the net performance incentive to be recovered by class and in total. Line 5 provides the annual billing determinant detail for each class, which is used to calculate the surcharge amounts. For all three customer classes, line 5 reflects the projected 2022 billed volumes (in MMcf) for GCR, Gas Customer Choice (GCC), Aggregates, and EUT customers. The proposed 12-month incremental surcharges for the three classes are on line 7.

Line No.

Q34. In developing the incremental performance incentive surcharges on Exhibit A-24, did you use the same rate design methodology used in previous EWR/EO plan and reconciliation cases?

A34. Yes, I did. I followed the same rate design methodology that was approved by the Commission in each of the approved EWR/EO plans (U-15890, U-15890 amended, U-17050, U-17763, U-18268, and U-20429) as well as in the 2009 through 2019 EWR/EO Reconciliation Cases.

Q35. How will the 2020 EWR performance incentive surcharge be applied?

A35. The incremental surcharges calculated on Exhibit A-24 will be added to the approved EWR base surcharges, to be collected over a 12-month period beginning January 1, 2022.

Q36. What happens at the end of the proposed 12-month performance incentive recovery period?

A36. At the end of the 12-month proposed recovery period, the EWR surcharge would be reduced by any 2020 performance incentive surcharge amount approved in this case. The Company would then submit revised tariff sheets reflecting the EWR surcharge excluding the 2020 performance incentive component.

Q37. How will any remaining over/(under) recovery of the performance incentive be treated at the end of the proposed 12-month performance incentive collection period?

A37. Any over/(under) recovery of the 2020 performance incentive will be rolled into any future EWR performance incentive balance. If there is no future EWR

Line No.

performance incentive awarded, the Company will propose, at a future date, an appropriate mechanism for recovery of the over or under performance incentive balance.

Q38. What information is provided on Exhibit A-25?

A38. Exhibit A-25 shows the EWR surcharge rate history by class for the three customer classes (Residential, C&I and EUT) and for EUT Exploratory Program. Columns (c) through (j) of this exhibit show, by effective date, the surcharges approved by the Commission in every EWR/EO plan or reconciliation case approved for DTE Gas since 2018. For illustrative purposes, column (j) shows the surcharges that will be in effect in 2022 if the proposed 2020 performance incentive is approved and the 2020-2021 base surcharge approved on November 19, 2020 in Case No. U-20429 remains in place. The exhibit assumes, as discussed above, that any 2020 performance incentive awarded in this case would be effective for a 12-month period beginning January 1, 2022.

The source column (b) shows the case number and briefly describes the case type that resulted in the surcharges shown in columns (c) through (j).

Q39. What information is presented on Exhibit A-26?

A39. Exhibit A-26 is an illustrative example of the tariff sheet that would be effective upon implementation of the proposed EWR surcharges. This tariff sheet shows the EWR surcharges that will be included on customers actual bills after the proposed surcharges are implemented; however, it assumes the EWR base surcharges approved in Case No. U-20429 continue to bill in 2022 (consistent with the rates

Line No.

shown on Exhibit A-22, column (j)). As explained earlier in my testimony, the proposed EWR surcharges are the result of adding the 2020-2021 base surcharge approved on November 19, 2020 in Case No. U-20429 and the incremental surcharge rates calculated on Exhibit A-24. The Company will be filing the 2022/2023 EWR Plan on July 1, 2021 in Case No. U-20881; should the base surcharges proposed in that case be approved for January 2022 implementation they will be used to calculate the total EWR Surcharge on the final tariff sheet submitted for inclusion in the Company's rate book. I am proposing these surcharges be implemented on a bills rendered basis for all classes.

Q40. Does this complete your direct testimony?

A40. Yes, it does.

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter, on the Commission's own motion,	)	
regarding the regulatory reviews, revisions,	)	
determinations, and/or approvals necessary for	)	Case No. U-20871
DTE GAS COMPANY	)	(Paperless e-file)
to fully comply with Public Act 295 of 2008,	)	
as amended by Public Act 342 of 2016.	)	
_____	)	

EXHIBITS

OF

THOMAS W. LACEY

Michigan Public Service Commission
DTE Gas Company
Energy Waste Reduction - 2020 Plan Reconciliation
Summary of Cumulative Over/(Under) Cost Recovery by Class
($)

Case No.: U-20871
Exhibit: A-16
Witness: T. W. Lacey
Page: 1 of 1

	(a)	(b)	(c)	(d)	(e)
Line No.	**Description**	**Source**	**Residential**	**C&I/EUT**	**Total**
					Col. (c) + (d)
1	Beginning Over/(Under) Recovery balance	A-17 pgs 1 & 4 line 7 col (c)	(3,875,581)	(5,216,954)	(9,092,535)
2	Base Surcharge Revenue	A-17, Pg 1 & 4, L1	19,143,254	7,460,207	26,603,461
3	Program Costs:				
4	O&M Expenses	A-17, Pg 1 & 4, L3	23,806,869	12,648,844	36,455,713
5	Pre-Tax Return on Capitalized Costs	A-17, Pg 1 & 4, L4	(0)	90,653	90,653
6	Return of Capitalized Costs - Amortization	A-17, Pg 1 & 4, L5	-	47,281	47,281
7	Total - 2020 Program Costs	Sum lines 4 thru 7	23,806,869	12,786,779	36,593,648
8	Program Over/(Under) Cost Recovery	Line1+ Line 2 - Line 7	(8,539,196)	(10,543,526)	(19,082,722)
9	Carrying Charges	A-17, Pg 1 & 4, L12	(26,734)	(63,937)	(90,671)
10	Cumulative Program Over/(Under) Cost Recovery	Line 8 + Line 9	(8,565,930)	(10,607,463)	(19,173,393)

Michigan Public Service Commission
DTE Gas Company
Energy Waste Reduction - 2020 Plan Reconciliation
Monthly Over/(Under) Cost Recovery
Residential
($)

Case No.: U-20871
Exhibit: A-17
Witness: T. W. Lacey
Page: 1 of 4

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)
Line No.	**Description**	**Source**	**Jan-20**	**Feb-20**	**Mar-20**	**Apr-20**	**May-20**	**Jun-20**	**Jul-20**	**Aug-20**	**Sep-20**	**Oct-20**	**Nov-20**	**Dec-20**	**Total 2020**
1	Base Surcharge Revenue	A-18, pg 1 Line 6	3,112,178	2,686,387	2,769,210	1,874,579	1,422,901	608,829	332,535	315,944	369,587	713,272	1,350,093	3,587,740	19,143,254
2	Program Costs:														
3	O&M Expenses	A-14, pg 2 Line 9	2,184,785	1,556,723	1,502,406	1,344,949	964,999	1,596,726	1,704,898	2,163,049	1,730,602	2,633,102	2,907,785	3,516,845	23,806,869
4	Pre-tax Return on Capitalized Costs	A-20, pg 1 Line 4	(0)	-	-	-	-	-	-	-	-	-	-	-	(0)
5	Return of Asset - Amortization	A-14, pg 2 Line 13	-	-	-	-	-	-	-	-	-	-	-	-	-
6	Total - Program Costs		2,184,785	1,556,723	1,502,406	1,344,949	964,999	1,596,726	1,704,898	2,163,049	1,730,602	2,633,102	2,907,785	3,516,845	23,806,869
7	Monthly Over (Under) Cost Recovery	Line 1 - Line 6	927,392	1,129,663	1,266,804	529,630	457,902	(987,897)	(1,372,363)	(1,847,105)	(1,361,015)	(1,919,830)	(1,557,691)	70,895	(4,663,615)
8	Program Over/(Under) Cost Recovery														
9	Over (Under) Recovery Beg.Bal.	Line 11 Prior Month (1)	(3,875,581)	(2,948,189)	(1,818,525)	(551,722)	(22,091)	435,811	(552,086)	(1,924,449)	(3,771,554)	(5,132,569)	(7,052,399)	(8,610,091)	(3,875,581)
10	Change in Balance	Line 7	927,392	1,129,663	1,266,804	529,630	457,902	(987,897)	(1,372,363)	(1,847,105)	(1,361,015)	(1,919,830)	(1,557,691)	70,895	(4,663,615)
11	Over (Under) Recovery Ending Bal.	Line 9 + Line 10	(2,948,189)	(1,818,525)	(551,722)	(22,091)	435,811	(552,086)	(1,924,449)	(3,771,554)	(5,132,569)	(7,052,399)	(8,610,091)	(8,539,196)	(8,539,196)
12	Over (Under) Recovery Average Bal.	(Line 9 + Line 11)/2	(3,411,885)	(2,383,357)	(1,185,123)	(286,906)	206,860	(58,138)	(1,238,268)	(2,848,001)	(4,452,061)	(6,092,484)	(7,831,245)	(8,574,643)	
13	Carrying Charges														
14	Carrying Charges, Monthly	L12 x L18	(5,127)	(3,438)	(2,006)	(469)	243	(57)	(1,189)	(2,687)	(4,290)	(5,822)	(838)	(1,055)	(26,734)
15	Carrying Charges, Cumulative	Cumul. Line 14	(5,127)	(8,565)	(10,570)	(11,039)	(10,796)	(10,853)	(12,043)	(14,729)	(19,019)	(24,841)	(25,679)	(26,734)	(26,734)
16	Cumulative Program Over/(Under) Cost Recovery	L11 + L15	(2,953,315)	(1,827,090)	(562,292)	(33,130)	425,015	(562,939)	(1,936,492)	(3,786,283)	(5,151,588)	(7,077,240)	(8,635,770)	(8,565,930)	(8,565,930)
17	Annual Short Term Interest Rate	(2)	1.80%	1.73%	2.03%	1.96%	1.41%	1.19%	1.15%	1.13%	1.16%	1.15%	0.13%	0.15%	
18	Monthly Short Term Interest Rate	Line 17 / 12 mo.	0.15%	0.14%	0.17%	0.16%	0.12%	0.10%	0.10%	0.09%	0.10%	0.10%	0.01%	0.01%	

Notes:
(1) January 2020 beginning balance is the December 2019 cumulative ending balance approved in U-20708 (A-17 Revised Page 1 col. (o) line 13)
(2) Provided by DTE Treasury Department: WP TWL-1

Michigan Public Service Commission
DTE Gas Company
Energy Waste Reduction - 2020 Plan Reconciliation
Monthly Over/(Under) Cost Recovery
Commercial & Industrial
($)

Case No.: U-20871
Exhibit: A-17
Witness: T. W. Lacey

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)
Line No.	**Description**	**Source**	**Jan-20**	**Feb-20**	**Mar-20**	**Apr-20**	**May-20**	**Jun-20**	**Jul-20**	**Aug-20**	**Sep-20**	**Oct-20**	**Nov-20**	**Dec-20**	**Total 2020**
1	Base Surcharge Revenue	A-18, pg 1 Line 14	1,007,285	849,094	914,864	554,402	380,494	182,160	123,010	107,981	126,772	208,347	397,602	1,288,861	6,140,872
2	Program Costs:														
3	O&M Expenses	A-14, pg 3 Line 9	246,058	295,405	413,269	268,060	219,701	284,751	270,638	332,595	349,765	433,127	418,345	1,393,206	4,924,920
4	Pre-tax Return on Capitalized Costs	A-20, pg 2 Line 4	426	964	1,186	1,475	1,785	2,084	2,665	3,183	3,442	3,814	4,284	5,516	30,824
5	Return of Asset - Amortization	A-14, pg 3 Line 13	-	-	-	-	-	-	-	-	-	-	-	16,076	16,076
6	Total - Program Costs		246,485	296,369	414,455	269,535	221,486	286,834	273,302	335,777	353,207	436,941	422,629	1,414,798	4,971,820
7	Monthly Over (Under) Cost Recovery	Line 1 - Line 6	760,801	552,724	500,409	284,867	159,007	(104,674)	(150,293)	(227,797)	(226,434)	(228,594)	(25,027)	(125,936)	1,169,052
8	Program Over/(Under) Cost Recovery														
9	Over (Under) Recovery Beg.Bal.	Line 11 Prior Month (1)	27,192,020	27,952,821	28,505,545	29,005,954	29,290,821	29,449,828	29,345,154	29,194,861	28,967,064	28,740,630	28,512,036	28,487,009	27,192,020
10	Change in Balance	Line 7	760,801	552,724	500,409	284,867	159,007	(104,674)	(150,293)	(227,797)	(226,434)	(228,594)	(25,027)	(125,936)	1,169,052
11	Over (Under) Recovery Ending Bal.	Line 9 + Line 10	27,952,821	28,505,545	29,005,954	29,290,821	29,449,828	29,345,154	29,194,861	28,967,064	28,740,630	28,512,036	28,487,009	28,361,072	28,361,072
12	Over (Under) Recovery Average Bal.	(Line 9 + Line 11)/2	27,572,420	28,229,183	28,755,750	29,148,387	29,370,324	29,397,491	29,270,008	29,080,963	28,853,847	28,626,333	28,499,522	28,424,040	
13	Carrying Charges														
14	Carrying Charges, Monthly	L12 x L18	41,429	40,722	48,662	47,609	34,510	29,049	28,115	27,433	27,805	27,353	3,050	3,497	359,235
15	Carrying Charges, Cumulative	Cumul. Line 14	41,429	82,151	130,814	178,423	212,933	241,982	270,097	297,530	325,335	352,688	355,738	359,235	359,235
16	Cumulative Program Over/(Under) Cost Recovery	L11 + L15	27,994,250	28,587,697	29,136,768	29,469,243	29,662,761	29,587,136	29,464,958	29,264,594	29,065,965	28,864,724	28,842,747	28,720,307	28,720,307
17	Annual Short Term Interest Rate	(2)	1.80%	1.73%	2.03%	1.96%	1.41%	1.19%	1.15%	1.13%	1.16%	1.15%	0.13%	0.15%	
18	Monthly Short Term Interest Rate	Line 17 / 12 mo.	0.15%	0.14%	0.17%	0.16%	0.12%	0.10%	0.10%	0.09%	0.10%	0.10%	0.01%	0.01%	

Notes:
(1) January 2020 beginning balance is the December 2019 cumulative ending balance approved in U-20708 (A-17 Revised Page 2 col. (o) line 13)
(2) Provided by DTE Treasury Department: WP TWL-1

Michigan Public Service Commission
DTE Gas Company
Energy Waste Reduction - 2020 Plan Reconciliation
Monthly Over/(Under) Cost Recovery
End-User Transportation
($)

Case No.: U-20871
Exhibit: A-17
Witness: T. W. Lacey
Page: 3 of 4

Line No.	(a) Description	(b) Source	(c) Jan-20	(d) Feb-20	(e) Mar-20	(f) Apr-20	(g) May-20	(h) Jun-20	(i) Jul-20	(j) Aug-20	(k) Sep-20	(l) Oct-20	(m) Nov-20	(n) Dec-20	(o) Total 2020
1	Base Surcharge Revenue	A-18, pg 1 Line 22	188,206	76,381	132,606	106,947	88,011	88,590	108,267	127,561	103,041	86,154	93,502	120,068	1,319,335
2	Program Costs:														
3	O&M Expenses	A-14, pg 3 Line 9	340,140	444,956	601,853	397,832	352,142	425,097	424,556	500,034	574,851	836,006	667,667	2,158,790	7,723,924
4	Pre-tax Return on Capitalized Costs	A-20, pg 3 Line 4	828	1,871	2,302	2,864	3,465	4,045	5,172	6,178	6,680	7,404	8,316	10,706	59,830
5	Return of Asset - Amortization	A-14, pg 4 Line 13	0	0	0	0	0	0	0	0	0	0	0	31,205	31,205
6	Total - Program Costs		340,968	446,827	604,155	400,696	355,607	429,142	429,728	506,212	581,532	843,410	675,983	2,200,700	7,814,959
7	Monthly Over (Under) Cost Recovery	Line 1 - Line 6	(152,762)	(370,446)	(471,550)	(293,749)	(267,596)	(340,551)	(321,461)	(378,650)	(478,490)	(757,255)	(582,481)	(2,080,632)	(6,495,624)
8	Program Over/(Under) Cost Recovery														
9	Over (Under) Recovery Beg.Bal.	Line 11 Prior Month (1)	(32,408,974)	(32,561,736)	(32,932,182)	(33,403,731)	(33,697,481)	(33,965,077)	(34,305,629)	(34,627,089)	(35,005,739)	(35,484,230)	(36,241,485)	(36,823,966)	(32,408,974)
10	Change in Balance	Line 7	(152,762)	(370,446)	(471,550)	(293,749)	(267,596)	(340,551)	(321,461)	(378,650)	(478,490)	(757,255)	(582,481)	(2,080,632)	(6,495,624)
11	Over (Under) Recovery Ending Bal.	Line 9 + Line 10	(32,561,736)	(32,932,182)	(33,403,731)	(33,697,481)	(33,965,077)	(34,305,629)	(34,627,089)	(35,005,739)	(35,484,230)	(36,241,485)	(36,823,966)	(38,904,598)	(38,904,598)
12	Over (Under) Recovery Average Bal.	(Line 9 + Line 11)/2	(32,485,355)	(32,746,959)	(33,167,957)	(33,550,606)	(33,831,279)	(34,135,353)	(34,466,359)	(34,816,414)	(35,244,984)	(35,862,857)	(36,532,725)	(37,864,282)	
13	Carrying Charges														
14	Carrying Charges, Monthly	L12 x L18	(48,811)	(47,240)	(56,129)	(54,799)	(39,752)	(33,731)	(33,106)	(32,844)	(33,964)	(34,268)	(3,910)	(4,658)	(423,210)
15	Carrying Charges, Cumulative	Cumul. Line 14	(48,811)	(96,050)	(152,179)	(206,979)	(246,730)	(280,461)	(313,568)	(346,411)	(380,375)	(414,643)	(418,552)	(423,210)	(423,210)
16	Cumulative Program Over/(Under) Cost Recovery	L11 + L15	(32,610,546)	(33,028,232)	(33,555,911)	(33,904,459)	(34,211,808)	(34,586,090)	(34,940,657)	(35,352,150)	(35,864,604)	(36,656,127)	(37,242,518)	(39,327,809)	(39,327,809)
17	Annual Short Term Interest Rate	(2)	1.80%	1.73%	2.03%	1.96%	1.41%	1.19%	1.15%	1.13%	1.16%	1.15%	0.13%	0.15%	
18	Monthly Short Term Interest Rate	Line 17 / 12 mo.	0.15%	0.14%	0.17%	0.16%	0.12%	0.10%	0.10%	0.09%	0.10%	0.10%	0.01%	0.01%	

Notes:
(1) January 2020 beginning balance is the December 2019 cumulative ending balance approved in U-20708 (A-17 Revised Page 3 col. (o) line 13)
(2) Provided by DTE Treasury Department: WP TWL-1

Michigan Public Service Commission
DTE Gas Company
Energy Waste Reduction - 2020 Plan Reconciliation
Monthly Over/(Under) Cost Recovery
Commercial & Industrial/End User Transportation
($)

Case No.: U-20871
Exhibit: A-17
Witness: T. W. Lacey
Page: 4 of 4

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)
Line No.	**Description**	**Source**	**Jan-20**	**Feb-20**	**Mar-20**	**Apr-20**	**May-20**	**Jun-20**	**Jul-20**	**Aug-20**	**Sep-20**	**Oct-20**	**Nov-20**	**Dec-20**	**Total 2020**
1	Base Surcharge Revenue	Page 2 + Page 3	1,195,491	925,475	1,047,470	661,348	468,505	270,750	231,277	235,542	229,814	294,502	491,104	1,408,930	7,460,207
2	Program Costs:														
3	O&M Expenses	Page 2 + Page 3	586,198	740,362	1,015,122	665,892	571,843	709,848	695,194	832,629	924,617	1,269,133	1,086,012	3,551,995	12,648,844
4	Pre-tax Return on Capitalized Costs	Page 2 + Page 3	1,254	2,835	3,488	4,339	5,251	6,128	7,837	9,360	10,122	11,218	12,600	16,222	90,653
5	Return of Asset - Amortization	Page 2 + Page 3	-	-	-	-	-	-	-	-	-	-	-	47,281	47,281
6	Total - Program Costs	Page 2 + Page 3	587,452	743,196	1,018,610	670,231	577,094	715,976	703,030	841,989	934,738	1,280,351	1,098,612	3,615,498	12,786,779
7	Monthly Over (Under) Cost Recovery	Line 1 - Line 3	609,293	185,113	32,347	(4,544)	(103,338)	(439,097)	(463,916)	(597,087)	(694,803)	(974,631)	(594,909)	(2,143,066)	(5,326,572)
8	Program Over/(Under) Cost Recovery														
9	Over (Under) Recovery Beg.Bal.	Page 2 + Page 3 (1)	(5,216,954)	(4,608,915)	(4,426,637)	(4,397,777)	(4,406,660)	(4,515,249)	(4,960,475)	(5,432,228)	(6,038,675)	(6,743,600)	(7,729,449)	(8,336,957)	(5,216,954)
10	Change in Balance	Line 7	608,039	182,278	28,859	(8,883)	(108,589)	(445,226)	(471,753)	(606,447)	(704,925)	(985,849)	(607,509)	(2,206,569)	(5,326,572)
11	Over (Under) Recovery Ending Bal.	Line 9 + Line 10	(4,607,661)	(4,423,802)	(4,394,289)	(4,402,321)	(4,509,998)	(4,954,346)	(5,424,391)	(6,029,314)	(6,733,478)	(7,718,230)	(8,324,357)	(10,480,023)	(10,480,023)
12	Over (Under) Recovery Average Bal.	(Line 9 + Line 11)/2	(4,912,307)	(4,516,358)	(4,410,463)	(4,400,049)	(4,458,329)	(4,734,798)	(5,192,433)	(5,730,771)	(6,386,076)	(7,230,915)	(8,026,903)	(9,408,490)	
13	Carrying Charges														
14	Carrying Charges, Monthly	L12 x L18	(7,381)	(6,515)	(7,464)	(7,187)	(5,239)	(4,679)	(4,988)	(5,406)	(6,154)	(6,909)	(859)	(1,157)	(63,937)
15	Carrying Charges, Cumulative	Cumul. Line 14	(7,381)	(13,896)	(21,360)	(28,547)	(33,785)	(38,464)	(43,451)	(48,857)	(55,011)	(61,921)	(62,780)	(63,937)	(63,937)
16	Cumulative Program Over/(Under) Cost Recovery	L11 + L15	(4,615,042)	(4,437,698)	(4,415,649)	(4,430,868)	(4,543,783)	(4,992,810)	(5,467,842)	(6,078,172)	(6,788,489)	(7,780,151)	(8,387,137)	(10,543,960)	(10,543,960)
17	Annual Short Term Interest Rate	(2)	1.80%	1.73%	2.03%	1.96%	1.41%	1.19%	1.15%	1.13%	1.16%	1.15%	0.13%	0.15%	
18	Monthly Short Term Interest Rate	Line 17 / 12 mo.	0.15%	0.14%	0.17%	0.16%	0.12%	0.10%	0.10%	0.09%	0.10%	0.10%	0.01%	0.01%	

Notes:
(1) January 2020 beginning balance is the December 2019 cumulative ending balance approved in U-20708 (A-17 Revised Page 4 col. (o) line 13)
(2) Provided by DTE Treasury Department: WP TWL-1

Michigan Public Service Commission
DTE Gas Company
Energy Waste Reduction - 2020 Plan Reconciliation
Allocation of 2020 EWR Surcharge Revenue
($)

Case No.: U-20871
Exhibit: A-18
Witness: T. W. Lacey
Page: 1 of 1

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)
Line No.	**Description**	**Source**	**Jan-20**	**Feb-20**	**Mar-20**	**Apr-20**	**May-20**	**Jun-20**	**Jul-20**	**Aug-20**	**Sep-20**	**Oct-20**	**Nov-20**	**Dec-20**	**Total 2020**
	Residential														
1	Total 2020 Billed Revenue	A-14, pg 2 Line 1	3,112,178	3,203,171	3,301,927	2,235,194	1,696,626	725,950	396,505	376,723	440,685	850,485	1,609,813	4,056,121	22,005,377
2															
3	2018 PI Allocator	A-19, col. (d,f,h) Line 1	0.00%	16.13%	16.13%	16.13%	16.13%	16.13%	16.13%	16.13%	16.13%	16.13%	16.13%	11.55%	
4	Total Performance Incentive Revenue	Line 1 X Line 3	-	516,784	532,717	360,615	273,725	117,121	63,970	60,779	71,098	137,213	259,719	468,381	2,862,122
5															
6	**Residential Base Surcharge Revenue**	Line 1 - Line 4	3,112,178	2,686,387	2,769,210	1,874,579	1,422,901	608,829	332,535	315,944	369,587	713,272	1,350,093	3,587,740	19,143,254
7															
8	**C&I**														
9	Total 2020 Billed Revenue	A-14, pg 3 Line 1	1,007,285	952,624	1,026,414	622,001	426,888	204,371	138,009	121,147	142,230	233,751	446,082	1,375,133	6,695,936
10															
11	2018 PI Allocator	A-19, col. (d,f,h) Line 6	0.00%	10.87%	10.87%	10.87%	10.87%	10.87%	10.87%	10.87%	10.87%	10.87%	10.87%	6.27%	
12	Total Performance Incentive Revenue	Line 9 X Line 11	-	103,531	111,550	67,599	46,394	22,211	14,999	13,166	15,458	25,404	48,480	86,272	555,064
13															
14	**C&I Base Surcharge Revenue**	Line 9 - Line 12	1,007,285	849,094	914,864	554,402	380,494	182,160	123,010	107,981	126,772	208,347	397,602	1,288,861	6,140,872
15															
16	**EUT**														
17	Total 2020 Billed Revenue	A-14, pg 4 Line 1	188,206	131,640	228,541	184,318	151,683	152,682	186,595	219,847	177,588	148,484	161,146	167,767	2,098,496
18															
19	2018 PI Allocator	A-19, col. (d,f,h) Line 11	0.00%	41.98%	41.98%	41.98%	41.98%	41.98%	41.98%	41.98%	41.98%	41.98%	41.98%	28.43%	
20	Total Performance Incentive Revenue	Line 17 X Line 19	-	55,259	95,935	77,372	63,672	64,092	78,327	92,286	74,546	62,329	67,645	47,698	779,162
21															
22	**EUT Base Surcharge Revenue**	Line 17 - Line 20	188,206	76,381	132,606	106,947	88,011	88,590	108,267	127,561	103,041	86,154	93,502	120,068	1,319,335
23															
24	**Total**														
25	Performance Incentive Revenue	Lines 4, 12 and 20	-	675,574	740,202	505,586	383,792	203,424	157,296	166,231	161,102	224,947	375,844	602,351	4,196,348
26	Base Surcharge revenue	Lines 6, 14 and 22	4,307,669	3,611,861	3,816,680	2,535,928	1,891,406	879,579	563,812	551,486	599,401	1,007,774	1,841,197	4,996,669	26,603,461
27	Total Billed Revenue	Sum Lines 25-26	4,307,669	4,287,435	4,556,882	3,041,514	2,275,197	1,083,003	721,109	717,717	760,502	1,232,720	2,217,041	5,599,021	30,799,809

Michigan Public Service Commission
DTE Gas Company
Energy Waste Reduction - 2020 Plan Reconciliation
EWR Revenue Allocation Factor Calculations

Case No.: U-20871
Exhibit: A-19
Witness: T. W. Lacey
Page: 1 of 1

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
			Jan-20		Feb-Nov 2020		Dec-20	
Line No.	**Description**	**Source Exhibit A-25**	**Surcharge $/Ccf**	**% of total**	**Surcharge $/Ccf**	**% of total**	**Surcharge $/Ccf**	**% of total**
	Allocation Factors to allocate total revenue to base revenue and incentive revenue							
	Residential							
1	2018 Performance Incentive Surcharge	col. (g and h) line 5	-	0.00%	0.00323	16.13%	0.00323	11.55%
2	2020 Base Surcharge 1/	col. (f, g, h) lines 3 and 6	0.01680	100.00%	0.01680	83.87%	0.02476	88.45%
3	Total Surcharge in effect		0.01680	100.00%	0.02003	100.00%	0.02799	100.00%
4								
5	**C&I**							
6	2018 Performance Incentive Surcharge	col. (g and h) line 15	-	0.00%	0.00157	10.87%	0.00157	6.27%
7	2020 Base Surcharge 1/	col. (f, g, h) lines 13 and 16	0.01288	100.00%	0.01288	89.13%	0.02346	93.73%
8	Total Surcharge in effect		0.01288	100.00%	0.01445	100.00%	0.02503	100.00%
9								
10	**EUT**							
11	2018 Performance Incentive Surcharge	col. (g and h) line 25	-	0.00%	0.00060	41.98%	0.00060	28.43%
12	2020 Base Surcharge 1/	col. (f, g, h) lines 23 and 26	0.00083	100.00%	0.00083	58.02%	0.00151	71.57%
13	Total Surcharge in effect		0.00083	100.00%	0.00143	100.00%	0.00211	100.00%

1/- Base surcharge January-November 2020 per U-18268, December 2020 per U-20429

Michigan Public Service Commission
DTE Gas Company
Energy Waste Reduction - 2020 Plan Reconciliation
Return on Capitalized Costs
Residential
($)

Case No.: U-20871
Exhibit: A-20
Witness: T. W. Lacey
Page: 1 of 3

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)
Line No.	**Description**	**Source**	**2019 Year -End Balance (1)**	**Jan-20**	**Feb-20**	**Mar-20**	**Apr-20**	**May-20**	**Jun-20**	**Jul-20**	**Aug-20**	**Sep-20**	**Oct-20**	**Nov-20**	**Dec-20**
1	Return on Capitalized Costs														
2	Average Capitalized Costs	Line 11		(0)	-	-	-	-	-	-	-	-	-	-	-
3	Monthly Pre-Tax Rate of Return	A-21 line 10		0.767%	0.767%	0.767%	0.767%	0.767%	0.767%	0.767%	0.759%	0.756%	0.756%	0.756%	0.751%
4	Return on Capitalized Costs	Line 2 x Line 3		(0)	-	-	-	-	-	-	-	-	-	-	-
5	Ending Capitalized Costs														
6	Gross Plant	A-14 pg 2 Line 18	(0)	-	-	-	-	-	-	-	-	-	-	-	-
7	Accumulated Amortization	A-14 pg 2 Line 19 & 20	0	-	-	-	-	-	-	-	-	-	-	-	-
8	Net Plant	Line 6 + Line 7	(0)	-	-	-	-	-	-	-	-	-	-	-	-
9	Accumulated Deferred Taxes	Prior Bal. - A-27 Line 5	-	-	-	-	-	-	-	-	-	-	-	-	-
10	Ending Capitalized Costs	Line 8 + Line 9	(0)	-	-	-	-	-	-	-	-	-	-	-	-
11	Average Capitalized Costs	Simple avg of Line 10		(0)	-	-	-	-	-	-	-	-	-	-	-

Notes:
(1) Values in column (c) were all zero in 2019

Michigan Public Service Commission
DTE Gas Company
Energy Waste Reduction - 2020 Plan Reconciliation
Return on Capitalized Costs
Commercial & Industrial
($)

Case No.: U-20871
Exhibit: A-20
Witness: T. W. Lacey
Page: 2 of 3

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)
Line No.	**Description**	**Source**	**2019 Year -End Balance (1)**	**Jan-20**	**Feb-20**	**Mar-20**	**Apr-20**	**May-20**	**Jun-20**	**Jul-20**	**Aug-20**	**Sep-20**	**Oct-20**	**Nov-20**	**Dec-20**
1	Return on Capitalized Costs														
2	Average Capitalized Costs	Line 11		55,597	125,652	154,617	192,336	232,766	271,672	347,394	419,560	455,103	504,408	566,519	734,917
3	Monthly Pre-Tax Rate of Return	A-21 line 10		0.767%	0.767%	0.767%	0.767%	0.767%	0.767%	0.767%	0.759%	0.756%	0.756%	0.756%	0.751%
4	Return on Capitalized Costs	Line 2 x Line 3		426	964	1,186	1,475	1,785	2,084	2,665	3,183	3,442	3,814	4,284	5,516
5	Ending Capitalized Costs														
6	Gross Plant	A-14 pg 3 Line 18	-	150,670	189,849	229,167	292,069	338,732	397,506	543,941	593,077	640,264	726,695	808,587	1,199,135
7	Accumulated Amortization	A-14 pg 3 Line 19 & 20	-	-	-	-	-	-	-	-	-	-	-	-	(16,076)
8	Net Plant	Line 6 + Line 7	-	150,670	189,849	229,167	292,069	338,732	397,506	543,941	593,077	640,264	726,695	808,587	1,183,059
9	Accumulated Deferred Taxes	Prior Bal. - A-27 Line 10	-	(39,476)	(49,740)	(60,042)	(76,522)	(88,748)	(104,147)	(142,513)	(155,386)	(167,749)	(190,394)	(211,850)	(309,961)
10	Ending Capitalized Costs	Line 8 + Line 9	-	111,195	140,108	169,126	215,547	249,984	293,359	401,428	437,691	472,515	536,301	596,737	873,098
11	Average Capitalized Costs	Simple avg of Line 10		55,597	125,652	154,617	192,336	232,766	271,672	347,394	419,560	455,103	504,408	566,519	734,917

Notes:
(1) Values in column (c) were all zero in 2019

Michigan Public Service Commission
DTE Gas Company
Energy Waste Reduction - 2020 Plan Reconciliation
Return on Capitalized Costs
EUT
($)

Case No.: U-20871
Exhibit: A-20
Witness: T. W. Lacey
Page: 3 of 3

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)
Line No.	**Description**	**Source**	**2019 Year -End Balance (1)**	**Jan-20**	**Feb-20**	**Mar-20**	**Apr-20**	**May-20**	**Jun-20**	**Jul-20**	**Aug-20**	**Sep-20**	**Oct-20**	**Nov-20**	**Dec-20**
1	Return on Capitalized Costs														
2	Average Capitalized Costs	Line 11		107,916	243,894	300,117	373,331	451,806	527,324	674,303	814,379	883,370	979,072	1,099,632	1,426,499
3	Monthly Pre-Tax Rate of Return	A-21 line 10		0.767%	0.767%	0.767%	0.767%	0.767%	0.767%	0.767%	0.759%	0.756%	0.756%	0.756%	0.751%
4	Return on Capitalized Costs	Line 2 x Line 3		828	1,871	2,302	2,864	3,465	4,045	5,172	6,178	6,680	7,404	8,316	10,706
					828										
5	Ending Capitalized Costs														
6	Gross Plant	A-14 pg 4 Line 18	-	292,456	368,503	444,821	566,916	657,491	771,572	1,055,807	1,151,183	1,242,773	1,410,538	1,569,493	2,327,562
7	Accumulated Amortization	A-14 pg 4 Line 19 & 20	-	-	-	-	-	-	-	-	-	-	-	-	(31,205)
8	Net Plant	Line 6 + Line 7	-	292,456	368,503	444,821	566,916	657,491	771,572	1,055,807	1,151,183	1,242,773	1,410,538	1,569,493	2,296,357
9	Accumulated Deferred Taxes	Prior Bal. - A-27 Line 15	-	(76,624)	(96,548)	(116,543)	(148,532)	(172,263)	(202,152)	(276,622)	(301,610)	(325,607)	(369,561)	(411,207)	(601,645)
10	Ending Capitalized Costs	Line 8 + Line 9	-	215,833	271,955	328,278	418,384	485,228	569,420	779,186	849,573	917,167	1,040,977	1,158,286	1,694,711
11	Average Capitalized Costs	Simple avg of Line 10		107,916	243,894	300,117	373,331	451,806	527,324	674,303	814,379	883,370	979,072	1,099,632	1,426,499

Notes:
(1) Values in column (c) were all zero in 2019

Michigan Public Service Commission
DTE Gas Company
Energy Waste Reduction - 2020 Plan Reconciliation
Pre-Tax Rate of Return by Month

Case No.: U-20871
Exhibit: A-21
Witness: T. W. Lacey
Page: 1 of 1

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)
Line No.	**Description**	**Source**	**Jan-20**	**Feb-20**	**Mar-20**	**Apr-20**	**May-20**	**Jun-20**	**Jul-20**	**Aug-20**	**Sep-20**	**Oct-20**	**Nov-20**	**Dec-20**
1	Debt Ratio	(1)	48.02%	48.02%	48.02%	48.02%	48.02%	48.02%	48.02%	48.02%	48.02%	48.02%	48.02%	48.00%
2	Debt Cost	(2)	4.36%	4.36%	4.36%	4.36%	4.36%	4.36%	4.36%	4.15%	4.09%	4.09%	4.09%	4.09%
3	Revenue Conversion Factor	A-22 Col c, L9	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
4	Debt Component	L1 x L2 x L3	2.09%	2.09%	2.09%	2.09%	2.09%	2.09%	2.09%	1.99%	1.96%	1.96%	1.96%	1.96%
5	Equity Ratio	(1)	51.98%	51.98%	51.98%	51.98%	51.98%	51.98%	51.98%	51.98%	51.98%	51.98%	51.98%	52.00%
6	Equity Cost	(1)	10.10%	10.10%	10.10%	10.10%	10.10%	10.10%	10.10%	10.10%	10.10%	10.10%	10.10%	10.00%
7	Revenue Conversion Factor	A-22 Col d, L9	1.3545	1.3545	1.3545	1.3545	1.3545	1.3545	1.3545	1.3545	1.3545	1.3545	1.3545	1.3545
8	Equity Component	L5 x L6 x L7	7.11%	7.11%	7.11%	7.11%	7.11%	7.11%	7.11%	7.11%	7.11%	7.11%	7.11%	7.04%
9	Annual Pre-Tax Rate of Return	Line 4 + Line 8	9.20%	9.20%	9.20%	9.20%	9.20%	9.20%	9.20%	9.10%	9.07%	9.07%	9.07%	9.01%
10	Monthly Pre-Tax Rate of Return	Line 9/12	0.767%	0.767%	0.767%	0.767%	0.767%	0.767%	0.767%	0.759%	0.756%	0.756%	0.756%	0.751%

Source
(1) For cols, (c-m) ROE and debt/equity ratios in effect at time U-18268 approved (April 2018) and column (n) per Commission Order in DTE Gas's EWR 2020-2021 Plan U-20429
(2) Provided by DTE Treasury Department

Michigan Public Service Commission
DTE Gas Company
Energy Waste Reduction - 2020 Plan Reconciliation
Revenue Conversion Factors

Case No.: U-20871
Exhibit: A-22
Witness: T. W. Lacey
Page: 1 of 1

	(a)	(b)	(c)	(d)
Line No.	**Description**	**Source**	**Debt Conversion Percent**	**Equity Conversion Percent**
1	Base		100.00%	100.00%
2	MCIT	(1)	0.00%	6.00%
3	Municipal Tax Base	(L1 - L2)	100.00%	94.00%
4	Municipal Tax Rate	(1)		0.55%
5	FIT Base	(L3 - L4)	100.00%	93.45%
6	FIT Rate	(1)		21.00%
7	FIT Tax	(L5 x L6)	0.00%	19.62%
8	Income	(L5 - L7)	100.00%	73.83%
9	Revenue Conversion Factor (Revenue Multiplier)	(L1 / L8)	1.0000	1.3545
10	Composite Federal, State, and Local Tax Rate	L1 - L8		26.20%

(1) Provided by DTE Tax Department

Michigan Public Service Commission
DTE Gas Company
Energy Waste Reduction - 2020 Plan Reconciliation
Performance Incentive Reconciliation
All Classes
($)

Case No.: U-20871
Exhibit: A-23
Witness: T. W. Lacey
Page: 1 of 1

	(a)	(b)	(c)	(d)	(e)	(f)
Line No.	**Description**	**Source**	**Residential**	**C&I**	**EUT**	**Total**
						Col. (c)+(d)+(e)
	2018 Performance Incentive (PI)					
1	PI Revenue Collected in 2020	Exhibit A-18 Col. (o)	2,862,122	555,064	779,162	4,196,348
2						
3	Approved 2018 PI Revenue	Order U-20369	3,604,152	694,437	903,888	5,202,477
4						
5	Over/(Under) Recovery of 2018 PI	Line 1 - Line 3	(742,030)	(139,373)	(124,727)	(1,006,130)

Michigan Public Service Commission
DTE Gas Company
Energy Waste Reduction - 2020 Plan Reconciliation
Calculation of Surcharges to Recover Performance Incentive

Case No.: U-20871
Exhibit: A-24
Witness: T. W. Lacey
Page: 1 of 1

	(a)	(b)	(c)	(d)	(e)	(f)
Line No.	**Description**	**Source**	**Residential**	**C&I**	**EUT**	**Total**
1	2020 Performance Incentive (PI)	(1)	$ 4,761,374	$ 984,984	$ 1,544,785	$ 7,291,143
2	2018 PI Over/(Under) Recovery	A-20, Line 5	(742,030)	(139,373)	(124,727)	(1,006,130)
3	Total Performance Incentive	Line 1 Less Line 2	$ 5,503,404	$ 1,124,357	$ 1,669,511	$ 8,297,272
4						
5	2022 Billing Determinants (MMcf)	(2)	112,583	39,365	146,219	
6						
7	Twelve Month Surcharge per Ccf	L3/L5/10,000	$ 0.00489	$ 0.00286	$ 0.00114	

(1) Total Spend per Exhibit A-14 for respective rate class X performance incentive % (Exhibit A-5)
(2) 2022 Billing determinants per U-20940, Exhibit A-16, Schedule F1.2, Page 2.

Michigan Public Service Commission
DTE Gas Company
Energy Waste Reduction - 2020 Plan Reconciliation
History of Billed Surcharges
($/Ccf)

Case No.: U-20871
Exhibit: A-25
Witness: T. W. Lacey
Page: 1 of 1

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
Line No.	**Description**	**Source**	**1/1/2018 to 4/30/2018**	**5/1/2018 to 12/31/2018**	**1/1/2019 to 12/31/2019**	**1/1/2020 to 1/31/2020**	**2/1/2020 to 11/30/2020**	**12/1/2020 to 12/31/2020**	**1/1/2021 to 12/31/2021**	**1/1/2022 to 12/31/2022**
1	Residential	(1) U-17763 - Base EO Surcharges	$ 0.01220	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2	Rate A	(2) U-18338 - 2016 Performance Incentive	0.00248	0.00248						
3		(3) U-18268 - 2018-2019 Base EWR Surcharge		0.01680	0.01680	0.01680	0.01680			
4		(4) U-20035 - 2017 Performance Incentive			0.00308					
5		(5) U-20369 - 2018 Performance Incentive					0.00323	0.00323		
6		(6) U-20429 - 2020-2021 Base EWR Surcharge						0.02476	0.02476	0.02476
7		(7) U-20708 - 2019 Performance Incentive							0.00338	
8		(8) U-20871 - 2020 Performance Incentive	-	-	-	-	-	-	-	0.00489
9		Sum of Line 1 through Line 8	$ 0.01468	$ 0.01928	$ 0.01988	$ 0.01680	$ 0.02003	$ 0.02799	$ 0.02814	$ 0.02965
10										
11	Commercial & Industrial	(1) U-17763 - Base EO Surcharges	$ 0.01216	$ -	$ -	$ -	$ -	$ -	$ -	$ -
12	Rates 2A, GS-1, GS-2	(2) U-18338 - 2016 Performance Incentive	0.00080	0.00080						
13	(<100,000 Mcf), and S	(3) U-18268 - 2018-2019 Base EWR Surcharge		0.01288	0.01288	0.01288	0.01288			
14		(4) U-20035 - 2017 Performance Incentive			0.00170					
15		(5) U-20369 - 2018 Performance Incentive					0.00157	0.00157		
16		(6) U-20429 - 2020-2021 Base EWR Surcharge						0.02346	0.02346	0.02346
17		(7) U-20708 - 2019 Performance Incentive							0.00166	
18		(8) U-20871 - 2020 Performance Incentive	-	-	-	-	-	-	-	0.00286
19		Sum of Line 11 through Line 18	$ 0.01296	$ 0.01368	$ 0.01458	$ 0.01288	$ 0.01445	$ 0.02503	$ 0.02512	$ 0.02632
20										
21	End User Transportation	(1) U-17763 - Base EO Surcharges	$ 0.00078	$ -	$ -	$ -	$ -	$ -	$ -	$ -
22	Rates GS-2 (>100,000 Mcf),	(2) U-18338 - 2016 Performance Incentive	0.00055	0.00055						
23	ST, LT, XLT and XXLT	(3) U-18268 - 2018-2019 Base EWR Surcharge		0.00083	0.00083	0.00083	0.00083			
24		(4) U-20035 - 2017 Performance Incentive			0.00044					
25		(5) U-20369 - 2018 Performance Incentive					0.00060	0.00060		
26		(6) U-20429 - 2020-2021 Base EWR Surcharge						0.00151	0.00151	0.00151
27		(7) U-20708 - 2019 Performance Incentive							0.00070	
28		(8) U-20871 - 2020 Performance Incentive	-	-	-	-	-	-	-	0.00114
29		Sum of Line 21 through Line 28	$ 0.00133	$ 0.00138	$ 0.00127	$ 0.00083	$ 0.00143	$ 0.00211	$ 0.00221	$ 0.00265
30										
31	EUT Exploratory Program	(1) U-17763 - Base EO Surcharges	$ 0.00017	$ -	$ -	$ -	$ -	$ -	$ -	$ -
32		(2) U-18338 - 2016 Performance Incentive	0.00055	0.00055						
33		(3) U-18268 - 2018-2019 Base EWR Surcharge		0.00014	0.00014	0.00014	0.00014			
34		(4) U-20035 - 2017 Performance Incentive			0.00044					
35		(5) U-20369 - 2018 Performance Incentive					0.00060	0.00060		
36		(6) U-20429 - 2020-2021 Base EWR Surcharge						0.00048	0.00048	0.00048
37		(7) U-20708 - 2019 Performance Incentive							0.00070	
38		(8) U-20871 - 2020 Performance Incentive	-	-	-	-	-	-	-	0.00114
39		Sum of Line 31 through Line 38	$ 0.00072	$ 0.00069	$ 0.00058	$ 0.00014	$ 0.00074	$ 0.00108	$ 0.00118	$ 0.00162

(1) 2018/2019 Base Surcharge (Reflects 2016/2017 Base Surcharge until 2018/2019 Plan is effective) approved September 15, 2017
(2) 2016 Performance Incentive Approved December 20, 2017 - billed beginning on January 1, 2018
(3) 2018/2019 Base Surcharge approved April 12, 2018, billed beginning 5/01/2018
(4) 2017 Performance Incentive Approved December 20, 2018 - billed beginning on January 1, 2019
(5) 2018 Preformance Incentive Approved January 23, 2020 - billed beginning on February 1, 2020 (effective thru December 2020)
(6) 2020/2021 Base Surcharge approved November 19, 2020 - billed beginning December 1, 2020
(7) 2019 Preformance Incentive Approved December 9, 2020 - billed beginning on January 1, 2021 (effective thru December 2021)
(8) 2020 Preformance Incentive pending approval

M.P.S.C. No. 1 – Gas
DTE Gas Company
(Revised pursuant to Case No. U-20871)

_____ Revised Sheet No. D-2.00
Cancels _____ Revised Sheet No. D-2.00

D2. SURCHARGES

	Rate Schedule No.		Energy Waste Reduction Surcharge $/Ccf
A	Residential		***$0.02965***
2A	Residential Multiple Family Dwelling Class I		***$0.02965***
2A	Residential Multiple Family Dwelling Class II		***$0.02965***
GS-1	Non-Residential General Service		***$0.02632***
GS-2	Large Volume		
	<100,000 Mcf		***$0.02632***
	>100,000 Mcf		***$0.00265***
S	School		***$0.02632***
ST	Small Volume Transportation		***$0.00265***
LT	Large Volume Transportation		***$0.00265***
XLT	Extra Large Volume Transportation		***$0.00265***
XXLT	Double Extra Large Volume Transportation		***$0.00265***
	C&I/EUT Exploratory Program		***$0.00162***

The Energy Waste Reduction Surcharge is implemented on a "bills rendered" basis and is effective for a ___ month period commencing on _____ and ending _____.

This is only the proposed incremental language for the EWR surcharge. This language would be added to the current Sheet D-2 in effect at the time the surcharge was approved. Because the surcharge(s) currently in effect may change between the time this sheet is proposed and its approval, only the language and rates at issue in this case are included. DTE Gas proposes this incremental language tariff to avoid confusion at the time of final tariff issuance.

Issued _____, 202__
C. Serna
Vice President
Regulatory Affairs

Detroit, Michigan

Effective for bills rendered on and after the first billing cycle of _____, 202_

Issued under authority of the
Michigan Public Service Commission
Dated _____, 202_
In Case No. U-20871

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter, on the Commission's own motion,	)	
regarding the regulatory reviews, revisions,	)	
determinations, and/or approvals necessary for	)	Case No. U-20871
DTE GAS COMPANY	)	(Paperless e-file)
to fully comply with Public Act 295 of 2008,	)	
as amended by Public Act 342 of 2016.	)	
_____	)	

QUALIFICATIONS

AND

DIRECT TESTIMONY

OF

REBECCA M. MALFROID

DTE GAS COMPANY
QUALIFICATIONS OF REBECCA M. MALFROID

Line No.

Q1. What is your name, business address and by whom are you employed?

A1. My name is Rebecca M. Malfroid (she/her/hers). My business address is: One Energy Plaza, Detroit, MI 48226.

Q2. On whose behalf are you testifying?

A2. I am testifying on behalf of DTE Gas Company (DTE Gas or Company).

Q3. What is your educational background?

A3. I graduated from the Wayne State University with a Bachelor of Science Degree in Mathematics in 2014.

Q4. What is your work experience?

A4. In January 2014, I was hired by DTE Electric as a Student Co-op in the Energy Optimization (EO) Evaluation Measurement and Verification (EM&V) team, and in September 2014, I was hired as an Associate Marketing Analyst for the same team within the Business Planning and Development Department. My responsibilities included supporting the evaluation of the EO programs through impact and process evaluation, participating in the state EO Collaborative, and internal reporting. In 2017, I was promoted to the position of Marketing Analyst for the Energy Waste Reduction (formerly EO) EM&V and my responsibilities included leading the EM&V efforts for the residential programs, supporting EWR regulatory filings, participating in the state EWR Collaborative and technical subcommittee, running cost-effectiveness testing using DSMore, Demand Side Management Option/Risk Evaluator. In 2018 I was promoted to Principal Marketing Analyst for the EWR Strategy team. My responsibilities in this role

Line No.

included running cost-effectiveness testing, and building EWR models for plan filings. One of my key responsibilities was providing support for EWR witnesses in regulatory filings such as EWR reconciliations, EWR Plans, as well as the Company's most recent IRP. My duties included drafting testimony, preparing exhibits, researching and providing analysis for audit and discovery requests in such cases.

Q5. What is your current position?

A5. In 2021, I became a Principal Marketing Specialist. I am responsible for developing EWR plan modeling sensitivities, running cost-effectiveness testing for EWR filings, and strategic planning.

Q6. Are you a member of any professional organizations?

A6. I am a member of the Association of Energy Services Professionals (AESP). AESP is an organization that provides professional development programs, a network of energy practitioners, and promotes the transfer of knowledge and experience to promote energy efficiency programs.

Line No.

Q7. What is the purpose of your testimony?

A7. The purpose of my testimony is to support the approach used by DTE Gas for determining cost-effectiveness including details concerning the method used to determine cost-effectiveness and the tools used for its calculation. I also provide the calculation results showing the 2020 EWR program was cost-effective.

Q8. Are you sponsoring any exhibits in this proceeding?

A8. Yes, I am sponsoring the following exhibit:

Exhibit	Description
A-7	Cost-effectiveness Test Summary

Q9. Were these exhibits prepared by you or under your direction?

A9. Yes, it was.

Cost-effectiveness Tests

Q10. What is the purpose of the cost-effectiveness tests?

A10. Cost-effectiveness tests (CETs) are performed to ensure that energy savings are achieved in a cost-effective manner for the utility and its customers. DTE Gas uses the Utility System Resource Cost Test (USRCT) to measure the cost-effectiveness of its EWR programs. Additionally, the Company displays the results of the Total Resource Cost (TRC) Test, which is commonly used to measure cost effectiveness as well.

Line No.

Q11. How did the Company determine the cost-effectiveness of the 2020 EWR programs?

A11. The DSMore cost analysis tool was used to calculate and report the cost-effectiveness of the 2020 EWR programs using the USRCT. Consistent with PA 342, the USRCT is defined as the total net present value of life cycle avoided costs, divided by the sum of program costs.

Additionally, a TRC Test was calculated for the DTE Gas EWR programs. The TRC Test is defined as the total avoided costs, divided by the sum of program costs, plus the participant's costs. Incentives paid to the customer are included in both the cost and the benefits sides of the equation.

Q12. What inputs are used in running DSMore?

A12. There are two major groups of inputs used in DSMore. These include the utility input assumptions and the program inputs.

Utility input assumptions contain information that is specific to the utility and include items such as load shape, the commodity and non-commodity cost of natural gas, customer energy rates, gas losses, weather, and discount rates. The utility input assumptions used in this reconciliation analysis are primarily the same as those used in developing DTE Gas's approved 2020-2021 EWR Plan.

Program inputs contain specific information about individual energy efficiency measures that were installed as a result of the EWR programs. The major program inputs consist of the measure type, measure unit, measure size, deemed savings

Line No.

from the Michigan Energy Measures Database (MEMD), the operations/implementation costs, incentive costs, participant costs, participation levels, measure life, assumed hours, and applicable time of day or seasonal impact.

Q13. Where did you obtain the measure installation, measure life, and energy savings data used in DSMore?

A13. Guidehouse provided the number of verified measure units that were installed for each measure used in DSMore. They also provided the measure life information, total CCF savings per measure, IRAF, NTGR, incremental cost, and installation cost information.

Q14. Where did you obtain the cost data used in DSMore?

A14. All DTE Gas's EWR-related costs are separately identified and recorded in the Company's accounting systems. Witness Stoudemire discusses the detailed financial data in her testimony.

Line No.

Q15. What cost data was used in the CETs?

A15. CET measures are calculated using participant costs, customer incentive costs, program administrative and implementation costs, performance incentive costs, education costs, pilot costs, and evaluation costs. Customer incentive costs are the amounts that were paid to the customer in the form of a discount or rebate. Program administrative and implementation costs are incurred by DTE Gas and third parties in order to execute the EWR programs. Performance incentive costs are the incentive earned by the utility for over-achieving energy savings legislative goals and achieving other targets that make up the incentive determination. The education, pilot, and evaluation costs were also provided and factored into the entire DTE Gas program portfolio level of the USRCT and TRC Test results. Pursuant to the Commission-approved settlement agreement in Case No. U-18268, the associated program evaluation costs were also included in the program level USRCT and TRC test results for the Home Energy Reports and DTE Insight programs.

Q16. At what level of detail were the CETs calculated?

A16. CETs were performed at the entire DTE Gas EWR portfolio level and at the program levels. The portfolio level analysis includes all EWR programs except for the low-income programs. Other levels tested include the aggregation of: 1) residential programs (without low-income), 2) C&I programs, 3) pilot programs, and 4) education programs. The low-income programs were excluded from the aggregations as Section 71(4)(G) of PA 342 specifically excludes low-income in the requirement for cost-effectiveness.

Line No.

As indicated above, the CETs were also calculated at program levels. These levels included the low-income programs, twelve residential program groups, and eight C&I program groups. The twelve residential program groups include: 1) ENERGY STAR® products, 2) Heating, ventilation, and air conditioning (HVAC), 3) Multifamily, 4) Home Energy Consultation, 5) Audit and Weatherization, 6) Schools Program, 7) Home Energy Efficiency Kits, 8) Revolving Loan Program, and 9) New Home Construction, 10) Home Energy Reports, 11) DTE Insight, 12) Emerging Measures and Approaches. The eight C&I groups include: 1) Prescriptive, 2) Non-Prescriptive, 3) Retro-Commissioning, 4) Strategic Energy Management, 5) Business Energy Consultation, 6) Mid-Stream Food Service, 7) Multifamily Common Areas, and 8) Emerging Measures and Approaches.

Q17. Was the 2020 DTE Gas EWR program cost-effective?

A17. Yes. DTE Gas's approved 2020-2021 EWR Plan was designed to exceed legislated energy savings minimums at a specific cost. Based on the analysis performed using DSMore, the DTE Gas EWR portfolio of programs passed the CETs in accordance with the guidelines outlined by Attachment E, Section 2f of the MPSC's December 4, 2008 Temporary Order, in Case No. U-15800.

As shown in Exhibit A-7, line 2, column (b), the USRCT score for the portfolio without low-income was 1.91. The CETs results are: (1) aggregated by the entire portfolio of DTE Gas EWR programs (without low-income) in column (b); (2) aggregated by customer classes residential and C&I/EUT, pilot and education in columns (c), (d), (e), and (f) respectively. The results are also aggregated by programs specific to the customer classes. The CET results for the residential

Line
No.

programs are shown on lines 5 and 6, and the CET results for C&I programs are shown on lines 8 and 9. The low-income program's cost-effectiveness results are provided individually on lines 11 and 12.

Q18. Does this conclude your direct testimony?

A18. Yes, it does.

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter, on the Commission's own motion,	)	
regarding the regulatory reviews, revisions,	)	
determinations, and/or approvals necessary for	)	Case No. U-20871
DTE GAS COMPANY	)	(Paperless e-file)
to fully comply with Public Act 295 of 2008,	)	
as amended by Public Act 342 of 2016.	)	
_____	)	

EXHIBITS

OF

REBECCA M. MALFROID

Michigan Public Service Commission
DTE Gas Company
Energy Waste Reduction - 2020 Plan Reconciliation
Cost-Effectiveness Test Summary

Case No.: U-20871
Exhibit: A-7
Witness: R. M. Malfroid
Page: 1 of 1

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)
Line No.	**Description**	**Portfolio - No Low Income Include Incentive**	**Residential - ALL No Low Income**	**C&I Programs - ALL**	**Pilot - ALL**	**Education - ALL**							
1	All Programs												
2	USRCT	**1.91**	**1.22**	**3.03**	**1.74**	**1.74**							
3	TRC Test	**1.05**	**0.92**	**1.16**	**1.74**	**1.74**							
		Energy Star Products	**HVAC**	**Audit & Weatherization**	**Multifamily Residential**	**Home Energy Consultation**	**Schools**	**Home Energy Efficiency Kits**	**Home Energy Reports**	**DTE Insight**	**New Homes Construction**	**Revolving Loan Program**	**Res Emerging Measures and Approaches**
4	Residential												
5	USRCT	**2.62**	**2.05**	**1.22**	**0.70**	**0.90**	**3.33**	**1.21**	**2.10**	**0.86**	**2.23**	**0.14**	**N/A**
6	TRC Test	**2.57**	**1.27**	**0.37**	**0.70**	**0.90**	**3.33**	**1.21**	**2.10**	**0.86**	**1.94**	**0.24**	**N/A**
		C&I Prescriptive	**C&I Non Prescriptive**	**Business Energy Consultation**	**Retro-Commissioning**	**C&I Emerging Measures and Approaches**	**C&I Multifamily Common Areas**	**Strategic Energy Management**	**Midstream Food Service**				
7	Commercial & Industrial Programs												
8	USRCT	**3.94**	**10.70**	**1.72**	**0.02**	**0.74**	**2.59**	**0.56**	**0.48**				
9	TRC Test	**1.45**	**1.50**	**3.30**	**0.02**	**0.36**	**1.63**	**0.15**	**0.26**				
		Low Income GAS ALL	*Multifamily Low Income*	*Energy Efficiency Assistance*	*Home Energy Consultation Low Income*								
10	Low Income Programs												
11	USRCT	**0.47**	**0.60**	**0.33**	**1.00**								
12	TRC Test	**0.47**	**0.60**	**0.33**	**1.00**								

Source: Company Records (Option Value DSMore)

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter, on the Commission's own motion,	)	
regarding the regulatory reviews, revisions,	)	
determinations, and/or approvals necessary for	)	Case No. U-20871
DTE GAS COMPANY	)	(Paperless e-file)
to fully comply with Public Act 295 of 2008,	)	
as amended by Public Act 342 of 2016.	)	

QUALIFICATIONS

AND

DIRECT TESTIMONY

OF

CHRISTOPHER M. PAYNE

DTE GAS COMPANY

DIRECT TESTIMONY OF CHRISTOPHER M. PAYNE

Line No.

Q1. What is your name, business address and by whom are you employed?

A1. My name is Christopher M. Payne (he/him/his). My business address is: One Energy Plaza, Detroit, MI 48226. I am employed by DTE Electric Company (DTE Electric).

Q2. On whose behalf are you testifying?

A2. I am testifying on behalf of DTE Gas Company (DTE Gas or Company).

Q3. What is your educational background?

A3. I graduated from University of Detroit Mercy in 2008 with a Bachelor of Science in Business Administration Degree in Accounting. In 2018, I earned a Master of Business Administration Degree from the Mike Ilitch School of Business at Wayne State University.

Q4. What is your work experience?

A4. In 2008, I began my professional career employed with PricewaterhouseCoopers as an Associate working on domestic tax engagements for Fortune 500 companies and high-net-worth clients.

In 2010, I was hired by Ford Motor Company as a Financial Reporting Analyst in the Corporate Financial Reporting department within Ford Motor Credit Corporation. In this position I served as the monthly, quarterly, and annual global accounting close coordinator and prepared and presented worldwide financial statements to the Vice President of Accounting.

Line No.

My employment with DTE Energy began in 2011 as a Financial Analyst on the External Reporting team in the Controller's organization. In this role I was responsible for the preparation of corporate financial statements, and I also analyzed and reported financial information for publication in U.S. Securities and Exchange Commission filings, Federal Energy Regulatory Commission filings, as well as Michigan Public Service Commission filings.

In 2013, I joined the internal Audit Services for a rotation on the Operations Audit team. In my role as a Senior Auditor I had the opportunity to learn about various organizations within the Company from a field operations perspective and report findings to management.

In 2014, I joined DTE Electric Company's Renewable Energy Business Development team as a Senior Strategist. In this role I was the owner of various complex financial models underpinning DTE's Renewable Energy Program. In addition, I prepared and reviewed regulatory filings to comply with Michigan's applicable Public Acts. Also, for a time concurrent with this role, I facilitated DTE Electric's Weekly Operational Review meetings supporting DTE Electric's executive leadership team, including the President and COO. I was responsible for compiling and presenting over 80 operational metrics throughout the electric company's operations.

Q5. What are your current job responsibilities?

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A5. In 2019, I accepted the position of Principal Marketing Specialist of Energy Waste Reduction Strategy. My current responsibilities include supporting the long-term strategic development and planning of EWR programs, conducting ad hoc financial analyses, preparing executive management presentations, and preparing and reviewing regulatory filings to comply with Michigan's applicable Public Acts.

Q6. Do you hold any certifications and are you a member of any professional organizations?

A6. I am a Certified Public Accountant and a member of the Association of Energy Services Professionals (AESP).

Q7. Have you previously testified before the Michigan Public Service Commission (MPSC or Commission)?

A7. Yes. I provided testimony in the following case:

U-18403	2018 DTE Electric Power Supply Cost Recovery Plan

Line No.

Q8. What is the purpose of your testimony?

A8. The purpose of my testimony is to support the overall results of the DTE Gas 2020 EWR program, provide policy overview and confirm compliance with the various critical reporting requirements for the reconciliation process. Specifically, I address the following matters related to the 2020 EWR program year:

1. The reconciliation process required by Public Act 342 of 2016 (PA 342) and the steps that were performed to assure DTE Gas's 2020 energy savings and spending met the requirements of the law. I also provide a review of the goals for the 2020 EWR program year including energy savings, program spend, and cost-effectiveness.
2. A high-level review of program implementation and how the implemented programs compare to the Company's EWR Plan in Case No. U-20429 approved by the Commission on March 5, 2020. This plan covers the time period for calendar years 2020 and 2021 and will be referred to throughout my testimony as the approved 2020-2021 EWR Plan. In addition, I provide a summary of the implementation differences from the approved 2020-2021 EWR Plan. I also summarize the savings and objectives of the programs and demonstrate that, for the 2020 program year, the programs were effective and met the overall EWR goals.
3. A description and objective of EWR pilot programs. I detail the method for determining the energy savings attributed to the pilot program and the resulting calculated savings.

Line No.

4. Results of the program including billed revenue, program spend, and energy savings as compared with the approved 2020-2021 EWR Plan amounts. In addition, I will provide results for lifetime energy savings resulting from the Company's EWR programs.
5. Provide a summary of the cost-effectiveness results showing the 2020 EWR program was cost effective.
6. The EWR credits schedule, which shows how many EWR credits are generated and how the excess credits will be used towards the performance incentive.
7. The performance incentive calculations by customer class based on actual EWR program spend and other items.
8. The Company's proposal to roll the 2020 over/(under) recovery of EWR program costs into the 2021 over/(under) cost recovery balance, by customer class.
9. The 2018 performance incentive collected in 2020 compared to the amount awarded.
10. The status of various actions regarding the settlement for the approved 2020-2021 EWR Plan.
11. The 2020 EWR Annual Report.

Q9. Are you sponsoring any exhibits in this proceeding?

A9. Yes, I am sponsoring the following exhibits:

Exhibit	Description
A-1	Pilot and EM&V Program Costs and Energy Savings

Line No.

A-2	Pilot Program Savings Calculation
A-3	Program Reallocation Limit Calculation
A-4	Energy Credits
A-5	Performance Incentive
A-6	2020 EWR Annual Report

Q10. Were these exhibits prepared by you or under your direction?

A10. Yes, they were.

Q11. How did DTE Gas implement its EWR program in 2020?

A11. DTE Gas implemented its EWR program as outlined in the approved 2020-2021 EWR Plan. The Company utilized implementation contractors and strong networks it has built over the past 12 years to deliver energy efficiency programs throughout the State of Michigan.

Detailed descriptions of the ongoing implementation of EWR programs are provided in the testimony sponsored by Company Witnesses Mr. Goncalves and Mr. Randazzo. Witness Goncalves provides detail for residential, low-income, and education programs. Witness Randazzo provides detail for the Commercial & Industrial (C&I) programs.

Q12. What reconciliation process did you use for the 2020 EWR program year?

A12. The process DTE Gas used consisted of the following steps:

1. Compile actual 2020 EWR surcharge revenue billed by customer class;

Line No.

2. Compile all relevant program costs related to the approved 2020-2021 EWR Plan;
3. Reconcile actual billed base surcharge revenue with actual cost for the 2020 EWR program year;
4. Compile the results of the 2020 EWR programs, including first year annual incremental and lifetime energy savings;
5. Obtain third-party evaluation and verification of the resulting savings and other results related to achievement of the performance incentive mechanism;
6. Calculate the resulting Utility System Resource Cost Test (USRCT) for the 2020 EWR program portfolio;
7. Determine the level of 2020 performance incentive earned; and
8. Assemble the 2020 EWR Annual Report.

Q13. What were the goals of DTE Gas' 2020 EWR program?

A13. The overall objective of the 2020 EWR program was to reduce customer usage through wide and varied opportunities to participate in EWR programs. The 2020 goals were to: (1) achieve legislated energy savings of 0.75% of 2019 planned retail sales, or 1,485 MMcf, and (2) meet the minimum required USRCT score of 1.0. Specifically, the projected savings for 2020, outlined in the approved 2020-2021 EWR Plan, was 1,980 MMcf, which exceeds the required minimum savings for the year. The planned spend outlined in the approved 2020-2021 EWR Plan was $39.1 million. Spend, as used in this testimony, refers to the cash expenditures or commitments by DTE Gas in implementing its EWR program.

Line No.

Spend does not contemplate the eventual treatment of costs such as operations and maintenance or capitalization.

Q14. Did DTE Gas meet its goals?

A14. Yes. DTE Gas achieved 2,240 MMcf in verified net energy savings equating to 1.13% of 2019 planned retail sales. A USRCT score of 1.91 was achieved based on the 2,240 MMcf verified net energy savings as detailed in Witness Malfroid's testimony and shown on her Exhibit A-7. The details of these accomplishments will be discussed throughout my testimony.

Q15. What is meant by verified net energy savings?

A15. Verified net energy savings are DTE Gas's reported savings after they have been adjusted based on an audit by our independent evaluation contractor, Guidehouse Inc. (Guidehouse), the application of an Installation Rate Adjustment Factor (IRAF), and the application of Net-to-Gross Ratios (NTGR). The determination of the verified net energy savings is further discussed in Company Witness Ms. Brannan's testimony. Unless otherwise indicated by a witness, all savings values presented in the Company's testimony are verified net savings values.

Q16. What Installation Rate Adjustment Factor (IRAF) was utilized to calculate achieved verified net energy savings?

A16. The IRAFs primarily used were program, measure, and fuel-specific based on historical results. Witness Brannan explains the determination and application of the IRAFs in her testimony.

Line No.

Q17. What Net-to-Gross Ratio (NTGR) was utilized to calculate achieved verified net energy savings?

A17. As required by the Commission's EWR Plan Order in Case No. U-20429, the Company applied a 0.92 net-to-gross factor to most programs. The only exception, also approved within the same Order, is the application of a NTGR of 1.00 for low-income, pilots, and education. A NTGR is not applied to: (1) Tier 1 Thermostats delivered by Commercial & Industrial programs; (2) Tier 2 and Tier 3 Thermostats delivered by Residential programs; (3) the Residential Home Energy Report program; and (4) DTE Insight; as savings represent verified net savings. The testimony of Witness Brannan explains the determination and application of NTGRs.

Q18. Were there any deviations to the program execution compared to the EWR Plan approved for 2020?

A18. Yes. DTE acted quickly to ensure the safety of customers, employees and contractors while navigating new challenges posed by the COVID-19 pandemic. Witnesses Goncalves and Randazzo outline more specific actions implemented at the program level in their respective testimonies.

Pilot Program

Q19. What was the objective of DTE Gas's EWR pilot program in 2020?

A19. The objective of the pilot program was to explore technologies and approaches not included in the commercialized programs described in the approved 2020-2021 EWR Plan. The pilot program also enabled the Company to measure energy

Line No.

savings and test 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. For additional detail on pilots performed under the pilot programs in 2020 please see Exhibit A-6, page 86-89.

Q20. Did some of the DTE Gas pilots have a shared budget with DTE Electric?

A20. Yes. Pilot projects with a shared budget are recorded in the relevant gas and/or electric cases.

Q21. What amount did DTE Gas spend for the pilot programs and how did this compare against the approved 2020-2021 EWR Plan?

A21. As shown in Exhibit A-1, line 1, column (e), DTE Gas spent approximately $2.5 million on the entire EWR pilot program. As approved in the 2020-2021 EWR Plan in Case No. U-20429, Pilot spending was calculated as 6% of the overall EWR program costs or $2.3 million[1]. Pilot program funds were primarily spent on contracted services and incentives for the projects described in Exhibit A-6, as well as on the cost of internal administration to manage the portfolio of projects.

Q22. How were pilot program energy savings determined?

A22. Pilot program energy savings were determined based on the method prescribed by the Commission's December 4, 2008 Temporary Order in Case No. U-15800. In

[1] The 2020-2021 EWR Gas Plan was originally filed with a Pilot spend amount of five percent of total spend or $1.9 million. However, the partial Settlement Agreement dated March 5, 2020, allowed Pilot spend to increase to six percent of total spend or $2.3 million.

Line No.

that order the Commission determined utilities may designate up to five percent of their EWR budget for pilot programs, future EWR program development or assessment of emerging technologies and that the pilot funds will be deemed to generate proportionate energy savings per dollar of spend to that of the overall portfolio up to five percent during each program year. Subsequently, in Case No. U-18268 the Commission stated, "…the 5% spending limitation on pilot programs may be reevaluated in the context of plans or plan amendments. In other words, if a provider can demonstrate that additional spending for pilot programs is reasonable, such spending may be approved."

Q23. Did the low-income health and safety pilot result in total pilot program spend exceeding the 5% spend limit described in Temporary Order, Case No. U-15800?

A23. Yes. The approved low-income health and safety pilot included projects that are more costly than traditional EWR measures and were provided at no cost to the customer. To ensure DTE Gas may continue investing in emerging technologies that make the current program as effective as possible, the Company increased its pilot program spend from 5% of total EWR spend to 6% of total EWR spend in 2020; the increased pilot spend was used to fund the low-income health and safety pilot. Given the spending on Pilot projects and campaigns in 2020, energy savings per Exhibit A-2 were determined to be 124.6 MMcf.

Revenue

Q24. What surcharges were billed for the EWR program for 2020?

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A24. During 2020, DTE Gas billed two different base surcharges. The Base surcharges billed for the period January-November 2020, were originally approved by the Commission on April 12, 2018 in Case No. U-18268. The Base surcharges billed for the month of December 2020, were approved by the Commission on November 19, 2020 in Case No. U-20429. In addition, the Commission's January 23, 2020 Order in Case No. U-20369, the 2018 DTE Gas EWR Reconciliation, authorized an incremental surcharge to recover the 2018 EWR plan performance incentive. From February 1, 2020 through December 31, 2020, this incremental amount was added to the base surcharge and billed to customers as one combined EWR surcharge. The detail of the billing components is provided on Company Witness Lacey's Exhibit A-25, line 2.

Q25. Did actual base surcharge revenue meet the projection in the EWR Plan approved for 2020?

A25. The table below compares the planned revenue as per U-20429 Exhibit A-20 versus the actual base surcharge revenue as detailed on Witness Lacey's Exhibit A-16:

Revenue Class ($Million)	Plan	Actual	Over / (Under)
Residential	$30.5	$19.1	$(11.4)
C&I/EUT	12.6	7.5	(5.1)
Total Revenue	$43.2	$26.6	$(16.6)

Note: Totals may not match due to rounding.

Line
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As discussed above, the 2020-2021 base rates proposed in Case No. U-20429 were not approved until November 19, 2020 meaning they were not implemented until December 2020. This delay caused the actual revenue to be less than planned, since the (lower) base rates approved in Case No. U-18268 continued to be billed until December 2020.

Q26. How did the actual program spend compare to the planned expenditures identified in the EWR Plan approved for 2020?

A26. For 2020, the approved EWR planned spend was $39.1 million per U-20429, Exhibit A-4, line 35, column (f). The actual spend was $40.0 million, a difference of 2.3%. Below is a table outlining the spend by program categories:

Line No.

Total Program Spend

Category ($Million)	Plan Spend	Actual Spend	Over / (Under)
Residential Programs	$14.3	$14.0	$(0.3)
C&I & EUT Programs	9.4	10.0	0.6
Low-income	10.3	10.5	0.2
Pilot	2.0	2.5	0.5
Education	1.2	1.1	(0.1)
EM&V	2.0	1.8	(0.2)
Total Spend	**$39.1**	$40.0	$0.9

Note: Totals may not match due to rounding.

Witness Goncalves describes the details of the residential program spend on Exhibit A-8 and Witness Randazzo describes the details of the C&I program spend on Exhibit A-10.

Q27. Were the spending revisions among programs within the allowed reallocation limits?

A27. Yes. Per the Commission's June 3, 2010 Order in the Amended EWR Plan Case No. U-15890 (Amended EWR Plan), on page 15, the Commission stated it agreed that the 20% limit on spending revisions did not provide sufficient flexibility for the Company and found that the cap should be raised to 30%. Exhibit A-3 provides a calculation showing reallocation limits. Exhibit A-3, pages 3 and 5, provide the method for allocating planned administrative costs to residential and C&I programs, respectively, for the purpose of determining program-level

Line No.

reallocation of costs. Exhibit A-3, pages 2 and 4, calculate the amount of actual spend that was reallocated for the residential and C&I programs, respectively. Page 1 of Exhibit A-3 calculates the allowable reallocation by customer class and compares the actual reallocation to the maximum allowed, calculated at 30%. Exhibit A-3, page 1, lines 5 and 10, column (c) shows that the amount of available reallocation remaining was $6.9 million for the residential class and $0.7 million for the C&I customer classes. Thus, DTE Gas remained within the 30% reallocation limit as ordered by the Commission.

Q28. To the extent feasible, were dollars collected from a customer class spent on EWR programs for that customer class?

A28. Yes. DTE Gas separated spending and revenue between residential and C&I programs. Witness Lacey performs the over/(under) cost recovery calculations by class, based on the class expenses and revenue provided to him by Company Witness Stoudemire.

Energy Savings

Q29. Did the savings from the 2020 EWR programs exceed the required energy savings?

A29. Yes. In total, the verified net energy savings DTE Gas achieved from the 2020 EWR program was 2,240 MMcf compared to the minimum requirement of 1,485 MMcf. Collectively, the residential and low-income programs provided 951 MMcf of verified net energy savings as shown in Witness Goncalves's Exhibit A-8. C&I and End User Transportation (EUT) programs provided 1,108 MMcf of

Line No.

energy savings as shown in Witness Randazzo's Exhibit A-10. DTE Gas achieved 124.6 MMcf savings from the pilot programs and 56.6 MMcf savings from the education program, as shown in Exhibit A-1 and Exhibit A-9, respectively.

Q30. Did the energy savings achieved in 2020 exceed the planned verified net savings from the approved 2020-2021 EWR plan?

A30. Yes. The approved EWR plan included verified net energy savings of 1,980 MMcf and the Company achieved verified net energy savings of 2,240 MMcf. The table below compares planned savings to 2020 verified net savings by program:

Category	Plan Net Savings (MMcf)	2020 Verified Net Savings (MMcf)	Over / (Under) (MMcf)
Residential Programs	777	819	42
C&I & EUT Programs	946	1,108	162
Low-income	98	132	34
Pilot	99	125	26
Education	59	57	(2)
Total Savings	**1,980**	**2,240**	260

Note: Totals may not match due to rounding.

Q31. Were the 2020 EWR program savings validated by a third-party?

Line No.

A31. Yes. In 2020, DTE Gas worked with third-party EM&V firm, Guidehouse (formerly Navigant), to review the EWR program results. Guidehouse evaluated and verified the energy savings associated with DTE Gas's Residential and C&I programs. Witness Brannan describes the process Guidehouse underwent to evaluate and verify program savings in her testimony**.**

Q32. Were other EWR program results validated by a third-party?

A32. Yes. In addition to the verification of energy savings, Guidehouse was engaged to validate the results of the EWR program pertaining to the performance incentive goals approved by the Commission in its March 5, 2020 Order in Case No. U-20429 (2020-2021 EWR Plan). Specifically, Guidehouse validated both first year annual incremental and lifetime energy savings.

Cost-Effectiveness Tests

Q33. What is the purpose of the cost-effectiveness tests?

A33. Cost-effectiveness tests (CETs) are performed to ensure that energy savings are achieved in a cost-effective manner for the utility and its customers. DTE Gas uses the Utility System Resource Cost Test (USRCT) to measure the cost-effectiveness of its EWR programs. Additionally, the Company displays the results of the Total Resource Cost (TRC) Test, which is commonly used to measure cost effectiveness as well.

Q34. Was the 2020 DTE Gas EWR program cost-effective?

Line No.

A34. Yes. DTE Gas's approved 2020-2021 EWR Plan was designed to exceed legislated energy savings minimums at a specific cost. Based on the analysis performed using DSMore, the DTE Gas EWR portfolio of programs passed the USRCT CET in accordance with the guidelines outlined by Attachment E, Section 2f of the MPSC's December 4, 2008 Temporary Order, in Case No. U-15800.

As shown in Witness Malfroid's Exhibit A-7, line 2, column (b), the USRCT score for the portfolio without low-income was 1.91. Please refer to Witness Malfroid's testimony for additional details regarding the USRCT calculation.

Energy Credits

Q35. What information is shown on Exhibit A-4 entitled "Energy Credits"?

A35. Exhibit A-4 displays the summary of EWR credits for 2020 that DTE Gas earned through its EWR program. The calculation provides the number of EWR credits measured in MMcf that were utilized towards the 2020 EWR standard compliance and performance incentive.

Performance Incentive

Q36. How is the performance incentive calculated?

A36. The performance incentive is calculated following the method approved by the Commission in its order issued March 5, 2020 in Case No. U-20429. The details of the calculation are shown on Exhibit A-5.

Line No.

Q37. Did DTE Gas earn a performance incentive in 2020?

A37. Yes. Exhibit A-5 outlines the resulting performance incentive earned. As shown in Exhibit A-5, the Company earned the maximum performance incentive of 20% by exceeding legislated minimum first year savings, lifetime savings, low-income spend, and low-income lifetime savings as outlined in Case No. U-20429 (and the accompanying settlement agreement).

Q38. What is the performance incentive amount?

A38. The performance incentive amount is calculated by multiplying actual O&M EWR program spend by 20%. The table below shows the performance incentive amounts by customer class:

Customer Class ($000,000)	Actual O&M Spend	Performance Incentive
Residential	$23.8	$4.8
C&I	$4.9	$1.0
EUT	$7.7	$1.5
Total	**$36.4**	**$7.3**

Net Under-recovery of EWR Program Costs

Q39. Are you proposing an adjustment to the EWR base surcharge for the cumulative under-recovery of $19.2 million calculated by Witness Lacey on Exhibit A-16?

A39. No.

Line No.

Q40. Why are you not recommending any adjustment to the EWR base surcharge for the net under-recovery for the 2020 EWR program that was calculated by Witness Lacey?

A40. On November 19, 2020, the Commission issued an Order in Case No. U-20429 approving a partial settlement agreement in the Company's 2020-2021 EWR Plan and the proposed EWR base surcharges. The surcharges approved in this Order were implemented beginning with bills rendered on December 1, 2020. For each customer class, the 2020 balance will be a factor in the program costs for the 2022-2023 EWR Plan (to be filed July 1, 2021) so there is no need to adjust the base surcharges at this time.

Q41. How will DTE Gas handle the $19.2 million net under-recovery?

A41. The calculated under-recovery for 2020 will be carried forward into 2021 on a customer class basis and used as beginning balances for the 2021 EWR reconciliation. As stated above, the anticipated balance for each customer class will be a factor in the program costs used to derive the surcharge in the 2022-2023 EWR Plan.

Q42. What is the status of the 2018 performance incentive?

A42. DTE Gas began collecting the 2018 performance incentive in January 2020. As shown on Witness Lacey's Exhibit A-23, as of December 31, 2020 the Company had collected a total of $4.2 million: $2.9 million from the residential class, $0.6 million from the C&I class, and $0.8 million from the EUT class. The total amount awarded was $5.2 million. As shown in Witness Lacey's Exhibit A-24,

Line No.

the Company is proposing to add the $1.0 million net under collection to the $7.3 million 2020 performance incentive earned by the Company.

Settlement Agreement Case No. U-20429

Q43. What is the status of the activities promised from the settlement agreement in Case No. U-20429?

A43. Both DTE Electric and DTE Gas performed several functions and actions regarding the settlement for the 2020-2021 EWR Plan filing including, but not limited to;

1. DTE Gas implemented the Multi-Family Low-Income Program enhancements as set forth in the Settlement Agreement Attachment A.
2. DTE Gas implemented the program and evaluation outlined in Attachment B to target payment troubled low-income customers.
3. The Company's performance incentive mechanism targets for 2020 are primarily based on lifetime savings targets and secondarily on low-income spend and low-income lifetime savings.
4. DTE Gas limited behavior savings as a percentage of the residential portfolio to a maximum of 25% for 2020.
5. DTE Gas implemented a Low-Income Health and Safety Pilot as proposed in the Direct Testimony of Witness Kupser in Case No. 20373 Amended. The Health and Safety Pilot was funded from Pilot Program spend, which increased from 5% to 6% of total EWR spend in 2020. The Low-Income Health and Safety Pilot primarily targeted low-income single-family homes. The amount of $9,000 of pilot spend was allocated for multi-family

Line No.

housing. The Low-Income Health and Safety Pilot included reporting on both single-family and multi-family inclusive of the following information: Number of participating properties; types of repairs identified; cost of repairs identified; repairs completed; repairs not completed; reason repairs not completed; and energy efficiency measures that were able to be installed as a result of the repairs and associated savings values. In addition, the Company is researching the impacts of the health and safety pilot on appropriate non-energy impacts.

6. The Company hosted a kick-off meeting and quarterly check-in meetings to update interested parties on progress and discuss possible project refinements regarding Low-Income Payment Troubled Customers Program, Multi-Family Low-Income Program, and the Low-Income Health and Safety Pilot. The Company also hosted annual check-in meetings after its launch to the MPSC Low-Income EWR Collaborative.

2020 EWR Annual Report

Q44. What is Exhibit A-6 entitled "2020 Annual Report on Energy Waste Reduction"?

A44. PA 295, as amended by PA 342 requires that EWR providers publish an annual report for the energy waste reduction programs offered. Exhibit A-6 contains a combined report including results for DTE Electric and DTE Gas.

Q45. Does this conclude your direct testimony?

A45. Yes, it does.

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter, on the Commission's own motion,	)	
regarding the regulatory reviews, revisions,	)	
determinations, and/or approvals necessary for	)	Case No. U-20871
DTE GAS COMPANY	)	(Paperless e-file)
to fully comply with Public Act 295 of 2008,	)	
as amended by Public Act 342 of 2016.	)	
_____	)	

EXHIBITS

OF

CHRISTOPHER M. PAYNE

Michigan Public Service Commission
DTE Gas Company
Energy Waste Reduction - 2020 Plan Reconciliation
Pilot and EM&V Program Costs and Energy Savings

Case No.: U-20871
Exhibit: A-1
Witness: C. M. Payne
Page: 1 of 1

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
Line		**2020 Planned**		**2020 Actual**		**Over / (Under)**	
No.	**Program**	**Mcf Savings**	**Cost ($000)**	**Mcf Savings**	**Cost ($000)**	**Mcf Savings**	**Cost ($000)**
		(1)	(2)	(3)	(4)		(5)
1	Pilot	98,999	$1,953	124,632	$2,517	25,633	$563
2	EM&V	-	1,953	-	1,837	-	(117)
3	**Total**	**98,999**	**$3,907**	**124,632**	**$4,354**	**25,633**	**$447**

Notes:

(1) U-20429, DTE Gas EWR Plan, Exhibit A-4, Line 30, Col. (e)
(2) Company records
(3) Line 1: Exhibit A-2 Line 5
(4) Line 1: Exhibit A-3 p2 Line 39, Column (d) + Exhibit A-3 p4 Line 26, Column (d)
Line 2: Exhibit A-3 p2 Line 41, Column (d) + Exhibit A-3 p4 Line 28, Column (d)
(5) The Company received approval to increase Pilot spend for its Health & Safety Pilot in MPSC Case No.: U-20429

Michigan Public Service Commission
DTE Gas Company
Energy Waste Reduction - 2020 Plan Reconciliation
Pilot Program Savings Calculation

Case No.: U-20871
Exhibit: A-2
Witness: C. M. Payne
Page: 1 of 1

Line No.	(a) Source	(b) Item	(c) Amount
1	U-20429, DTE Gas EWR Plan Exhibit A-4, Col. (e), Line 35	Program Plan in Mcf	1,979,975
2	Exhibit A-14, p.1, Column (f) Line 9 + Line 12	Program Spend	$ 39,982,411
3	Line 1 / Line 2	Mcf/$ of Spend	0.049521
4	Exhibit A-1, Column (e), Line 1	Pilot Spend	$ 2,516,750
5	Line 3 * Line 4	Pilot Savings Mcf (1)	**124,632**

Notes:
(1)
Residential pilot savings 74,270 Mcf (Line 5 * Exhibit A-15, Column (b) Line 8)
C&I/EUT pilot savings 50,362 Mcf (Line 5 * Exhibit A-15, Column (b) Line 9)

Michigan Public Service Commission
DTE Gas Company
Energy Waste Reduction - 2020 Plan Reconciliation
Program Reallocation Limit Calculation

Case No.: U-20871
Exhibit: A-3
Witness: C. M. Payne
Page: 1 of 5

Line No.	(a) Description	(b) As Filed (1)	Source	(c) Limits Details	(d) Source
1	Residential - O&M (plus Low Income in C&I & EUT)	$ 27,949,343	(1)	$ 8,384,803	30% of Column (b) Line 1
2	Capital	-		-	30% of Column (b) Line 2
3	Total Residential	$ 27,949,343		8,384,803	Line 1 + Line 2
4	Spend defined as Reallocation			1,517,353	Exh A-3 P2, Column (e) Line 43
5	**Remaining Allocation - Residential**			**$ 6,867,450**	Line 3 - Line 4
6	C&I & End User Transportation (EUT) - O&M (less Res Low Income)	$ 7,563,090	(2)	$ 2,268,927	30% of Column (b) Line 6
7	Capital	3,557,291	(3)	1,067,187	30% of Column (b) Line 7
8	Total C&I-EUT	$ 11,120,381		$ 3,336,114	Line 6 + Line 7
9	Spend defined as Reallocation			$ 2,596,140	Exh A-3 P4, Column (e) Line 30
10	**Remaining Allocation - C&I and C&I EUT**			**$ 739,975**	Line 8 - Line 9
11	Total Residential, C&I and C&I EUT	$ 39,069,724			Line 3 + Line 8

Note:
(1) U-20429, DTE Gas EWR Plan, Exhibit No. A-11, Col. (d), Line 8 plus Exhibit No. A-14, Col.(d), Line 5
(2) U-20429, DTE Gas EWR Plan, Exhibit No. A-14, Col. (d), Line 8 minus Line 5
(3) U-20429, DTE Gas EWR Plan, Exhibit No. A-14, Col. (d), Line 1

Michigan Public Service Commission
DTE Gas Company
Energy Waste Reduction - 2020 Plan Reconciliation
Program Reallocation Limit Calculation

Case No.: U-20871
Exhibit: A-3
Witness: C. M. Payne

	(a)	(b)	(c)	(d)	(e)
Line No.	**Residential - Capital & O&M**	**Source**	**As Filed**	**Actuals (1)**	**Col (d) - Col (c)**
1	ENERGY STAR	A-3, Pg 3, Line 1	$ 368,597	$ 262,756	$ (105,841)
2	Adminstration & Infrastructure	A-3, Pg 3, Line 30	29,013	24,950	(4,063)
3	Total		$ 397,610	$ 287,706	$ (109,904)
4	HVAC	A-3, Pg 3, Line 2	$ 5,308,404	$ 5,179,452	$ (128,952)
5	Adminstration & Infrastructure	A-3, Pg 3, Line 31	417,834	491,815	73,981
6	Total		$ 5,726,238	$ 5,671,267	$ (54,971)
7	Multifamily (MF) Standard	A-3, Pg 3, Line 3	$ 208,231	$ 124,191	$ (84,040)
8	Adminstration & Infrastructure	A-3, Pg 3, Line 32	16,390	53,583	37,193
9	Total		$ 224,621	$ 177,773	$ (46,847)
10	Home Energy Consultation (HEC)	A-3, Pg 3, Line 4	$ 2,336,794	$ 2,069,576	$ (267,218)
11	Adminstration & Infrastructure	A-3, Pg 3, Line 33	183,933	215,765	31,832
12	Total		$ 2,520,727	$ 2,285,341	$ (235,386)
13	Audit & Weatherization	A-3, Pg 3, Line 5	$ 1,274,560	$ 1,597,586	$ 323,026
14	Adminstration & Infrastructure	A-3, Pg 3, Line 34	100,323	155,639	55,316
15	Total		$ 1,374,883	$ 1,753,225	$ 378,342
16	School Program	A-3, Pg 3, Line 6	$ 792,261	$ 733,357	$ (58,904)
17	Adminstration & Infrastructure	A-3, Pg 3, Line 35	62,360	69,636	7,276
18	Total		$ 854,621	$ 802,993	$ (51,628)
19	Home Energy Efficiency Kits	A-3, Pg 3, Line 7	$ 739,035	$ 688,845	$ (50,190)
20	Adminstration & Infrastructure	A-3, Pg 3, Line 36	58,171	736,157	677,986
21	Total		$ 797,206	$ 1,425,002	$ 627,797
22	Revolving Loan Program	A-3, Pg 3, Line 8	$ 175,495	$ 116,667	$ (58,828)
23	Adminstration & Infrastructure	A-3, Pg 3, Line 37	13,814	11,078	(2,735)
24	Total		$ 189,309	$ 127,745	$ (61,564)
25	New Home Construction	A-3, Pg 3, Line 9	$ 1,049,437	$ 895,135	$ (154,301)
26	Adminstration & Infrastructure	A-3, Pg 3, Line 38	82,603	32,555	(50,048)
27	Total		$ 1,132,040	$ 927,690	$ (204,349)
28	Home Energy Reports	A-3, Pg 3, Line 10	$ 525,101	$ 342,845	$ (182,256)
29	Adminstration & Infrastructure	A-3, Pg 3, Line 39	41,332	84,998	43,666
30	Total		$ 566,432	$ 427,842	$ (138,590)
31	DTE Insight	A-3, Pg 3, Line 11	$ 109,680	$ 113,658	$ 3,978
32	Adminstration & Infrastructure	A-3, Pg 3, Line 40	8,633	13,258	4,625
33	Total		$ 118,313	$ 126,915	$ 8,602
34	Emerging Measures and Approaches	A-3, Pg 3, Line 12	$ 367,395	$ -	$ (367,395)
35	Adminstration & Infrastructure	A-3, Pg 3, Line 41	28,918	-	(28,918)
36	Total		$ 396,313	$ -	$ (396,313)
37	Low Income (includes A&G and Low Income Multifamily & Low Income Audit-Wx)	(2)	$ 10,287,727	$ 10,480,273	$ 192,547
38	**Total Residential before Pilot, Education and EM**	**L3 + L6 + L9 + L12 + L15 + L18 +L21 + L24 + L27 + L30 + L33 + L36 + L37**	**$ 24,586,039**	**$ 24,493,774**	**$ (92,266)**
39	Pilot (includes A&G)	(3)	1,188,489	1,498,554	310,065
40	Education (includes A&G)	(4)	986,325	960,687	(25,637)
41	EM&V (includes A&G)	(5)	1,188,489	1,093,782	(94,707)
42	**Total Residential**	**L38 + L39 + L40 + L41**	**$ 27,949,343**	**$ 28,046,798**	**$ 97,455**
43	**Reallocated Value Residential (Sum of positives. Lines 15, 21, 33, 37, 39)**				$ 1,517,353

Source:

(1) Company Records
(2) U-20429, DTE Gas EWR Plan, Exhibit No: A-4, Col. (f), Line 19
(3) U-20429, DTE Gas EWR Plan, Exhibit No: A-11, Col. (d), Line 3
(4) U-20429, DTE Gas EWR Plan, Exhibit No: A-11, Col. (d), Line 4
(5) U-20429, DTE Gas EWR Plan, Exhibit No: A-11, Col. (d), Line 7

Michigan Public Service Commission Case No.: U-20871
DTE Gas Company Exhibit: A-3
Energy Waste Reduction - 2020 Plan Reconciliation Witness: C. M. Payne
Program Reallocation Limit Calculation Page: 3 of 5

Line No.	(a) Program Cost As Filed	(b) Amount	(c) Source
1	ENERGY STAR	$ 368,597	(1)
2	HVAC	$ 5,308,404	(2)
3	Multifamily (Standard)	$ 208,231	(3)
4	Home Energy Consultation (HEC)	$ 2,336,794	(4)
5	Audit & Weatherization	$ 1,274,560	(5)
6	School Program	$ 792,261	(6)
7	Home Energy Efficiency Kits	$ 739,035	(7)
8	Revolving Loan Program	$ 175,495	(8)
9	New Home Construction	$ 1,049,437	(9)
10	Home Energy Reports	$ 525,101	(10)
11	DTE Insight	$ 109,680	(11)
12	Emerging Measures and Approaches	$ 367,395	(12)
13	Total	$ 13,254,988	Sum Lines 1 thru 12
14	**Allocation Percentage**		
15	ENERGY STAR	3%	Line 1 / Line 13
16	HVAC	40%	Line 2 / Line 13
17	Multifamily (Standard)	2%	Line 3 / Line 13
18	Home Energy Consultation (HEC)	18%	Line 4 / Line 13
19	Audit & Weatherization	10%	Line 5 / Line 13
20	School Program	6%	Line 6 / Line 13
21	Home Energy Efficiency Kits	6%	Line 7 / Line 13
22	Revolving Loan Program	1%	Line 8 / Line 13
23	New Home Construction	8%	Line 9 / Line 13
24	Home Energy Reports	4%	Line 10 / Line 13
25	DTE Insight	1%	Line 11 / Line 13
26	Emerging Measures and Approaches	3%	Line 12 / Line 13
27	Total	100%	Sum Lines 15 thru 26
28	Administrative & Infrastructure costs	$ 1,043,324	(13)
29	**Admin & Infrastructure Allocation**		
30	ENERGY STAR	$ 29,013	Line 15 * Line 28
31	HVAC	$ 417,834	Line 16 * Line 28
32	Multifamily (Standard)	$ 16,390	Line 17 * Line 28
33	Home Energy Consultation (HEC)	$ 183,933	Line 18 * Line 28
34	Audit & Weatherization	$ 100,323	Line 19 * Line 28
35	School Program	$ 62,360	Line 20 * Line 28
36	Home Energy Efficiency Kits	$ 58,171	Line 21 * Line 28
37	Revolving Loan Program	$ 13,814	Line 22 * Line 28
38	New Home Construction	$ 82,603	Line 23 * Line 28
39	Home Energy Reports	$ 41,332	Line 24 * Line 28
40	DTE Insight	$ 8,633	Line 25 * Line 28
41	Emerging Measures and Approaches	$ 28,918	Line 26 * Line 28
42	Total Admin & Infrastructure Allocated	$ 1,043,324	Sum Lines 30 thru 41

Source:

(1) U-20429, DTE Gas EWR Plan, Exhibit No: A-4, Col. (f), Line 1
(2) U-20429, DTE Gas EWR Plan, Exhibit No: A-4, Col. (f), Line 2
(3) U-20429, DTE Gas EWR Plan, Exhibit No: A-4, Col. (f), Line 3
(4) U-20429, DTE Gas EWR Plan, Exhibit No: A-4, Col. (f), Line 4
(5) U-20429, DTE Gas EWR Plan, Exhibit No: A-4, Col. (f), Line 5
(6) U-20429, DTE Gas EWR Plan, Exhibit No: A-4, Col. (f), Line 6
(7) U-20429, DTE Gas EWR Plan, Exhibit No: A-4, Col. (f), Line 7
(8) U-20429, DTE Gas EWR Plan, Exhibit No: A-4, Col. (f), Line 8
(9) U-20429, DTE Gas EWR Plan, Exhibit No: A-4, Col. (f), Line 9
(10) U-20429, DTE Gas EWR Plan, Exhibit No: A-4, Col. (f), Line 10
(11) U-20429, DTE Gas EWR Plan, Exhibit No: A-4, Col. (f), Line 11
(12) U-20429, DTE Gas EWR Plan, Exhibit No: A-4, Col. (f), Line 12
(13) U-20429, DTE Gas EWR Plan, Exhibit No: A-4, Col. (f), Line 13

Michigan Public Service Commission
DTE Gas Company
Energy Waste Reduction - 2020 Plan Reconciliation
Program Reallocation Limit Calculation

Case No.: U-20871
Exhibit: A-3
Witness: C. M. Payne
Page: 4 of 5

Line No.	(a) Commercial and Industrial (C&I) - Capital & O&M	(b) Source	(c) As Filed	(d) Actuals (1)	(e) Col (d) - Col (c)
1	Prescriptive	A-3, Pg 5, Line 1	$ 3,674,191	$ 3,570,611	$ (103,580)
2	Adminstration	A-3, Pg 5, Line 22	211,279	351,839	140,559
3	Total		$ 3,885,471	$ 3,922,450	$ 36,979
4	Non-Prescriptive	A-3, Pg 5, Line 2	$ 1,896,801	$ 1,727,857	$ (168,944)
5	Adminstration	A-3, Pg 5, Line 23	109,073	170,259	61,186
6	Total		$ 2,005,873	$ 1,898,115	$ (107,758)
7	Retro-Commissioning	A-3, Pg 5, Line 3	$ 13,924	$ 62,200	$ 48,276
8	Adminstration	A-3, Pg 5, Line 24	801	6,129	5,328
9	Total		$ 14,725	$ 68,329	$ 53,604
10	Strategic Energy Management	A-3, Pg 5, Line 4	$ 188,844	$ 498,112	$ 309,268
11	Adminstration	A-3, Pg 5, Line 25	10,859	49,083	38,224
12	Total		$ 199,703	$ 547,195	$ 347,492
13	Business Energy Consultation	A-3, Pg 5, Line 5	$ 1,213,555	$ 633,853	$ (579,703)
14	Adminstration	A-3, Pg 5, Line 26	69,784	62,458	(7,326)
15	Total		$ 1,283,339	$ 696,311	$ (587,028)
16	Mid-Stream Food Service	A-3, Pg 5, Line 6	$ 1,354,276	$ 471,258	$ (883,018)
17	Administration	A-3, Pg 5, Line 27	77,876	46,437	(31,439)
18	Total		$ 1,432,152	$ 517,695	$ (914,457)
19	Multifamily Common Areas	A-3, Pg 5, Line 7	$ 201,947	$ 61,807	$ (140,140)
20	Administration	A-3, Pg 5, Line 28	11,613	4,692	(6,921)
21	Total		$ 213,559	$ 66,498	$ (147,061)
22	Emerging Measures and Approaches	A-3, Pg 5, Line 8	$ 349,689	$ 2,070,628	$ 1,720,939
23	Adminstration	A-3, Pg 5, Line 29	20,108	204,034	183,926
24	Total		$ 369,797	$ 2,274,662	$ 1,904,865
25	**Total C&I before Pilot, Education and EM&V**	**L3 + L6 + L9 + L12 + L15 + L18 + L21 + L24**	**$ 9,404,621**	**$ 9,991,256**	**$ 586,636**
26	Pilot (includes A&G)	(2)	764,997	1,018,196	253,199
27	Education (includes A&G)	(3)	185,767	182,988	(2,779)
28	EM&V (includes A&G)	(4)	764,997	743,173	(21,824)
29	**Total C&I**	**L25 + L26 + L27 + L28**	**$ 11,120,381**	**$ 11,935,613**	**$ 815,232**
30	**Reallocated Value C&I (Sum of positives. Lines 3, 9, 12, 24, 26)**				**$ 2,596,140**

Source:

(1) Company Records
(2) U-20429, DTE Gas EWR Plan, Exhibit No: A-14, Col. (d), Line 3
(3) U-20429, DTE Gas EWR Plan, Exhibit No: A-14, Col. (d), Line 4
(4) U-20429, DTE Gas EWR Plan, Exhibit No: A-14, Col. (d), Line 7

Michigan Public Service Commission Case No.: U-20871
DTE Gas Company Exhibit: A-3
Energy Waste Reduction - 2020 Plan Reconciliation Witness: C. M. Payne
Program Reallocation Limit Calculation Page: 5 of 5

Line No.	(a) Program Cost As Filed	(b) Amount	(c) Source
1	C&I Prescriptive	$ 3,674,191	(1)
2	C&I Non-Prescriptive	$ 1,896,801	(2)
3	Retro-Commissioning	$ 13,924	(3)
4	Strategic Energy Management	$ 188,844	(4)
5	Business Energy Consultation	$ 1,213,555	(5)
6	Mid-Stream Food Service	$ 1,354,276	(6)
7	Multifamily Common Areas	$ 201,947	(7)
8	Emerging Measures and Approaches	$ 349,689	(8)
9	Total	$ 8,893,228	Sum Lines 1 thru 8
10	**Allocation Percentage**		
11	C&I Prescriptive	41%	Line 1 / Line 8
12	C&I Non-Prescriptive	21%	Line 2 / Line 8
13	Retro-Commissioning	0%	Line 3 / Line 8
14	Strategic Energy Management	2%	Line 4 / Line 8
15	Business Energy Consultation	14%	Line 5 / Line 8
16	Mid-Stream Food Service	15%	Line 6 / Line 8
17	Multifamily Common Areas	2%	Line 7 / Line 8
18	Emerging Measures and Approaches	4%	Line 8 / Line 8
19	Total	100%	Sum Lines 11 thru 18
20	Administrative & Infrastructure costs	$ 511,393	(9)
21	**Admin & Infrastructure Allocation**		
22	C&I Prescriptive	$ 211,279	Line 22 * Line 29
23	C&I Non-Prescriptive	$ 109,073	Line 23 * Line 29
24	Retro-Commissioning	$ 801	Line 24 * Line 29
25	Strategic Energy Management	$ 10,859	Line 25 * Line 29
26	Business Energy Consultation	$ 69,784	Line 26 * Line 29
27	Mid-Stream Food Service	$ 77,876	Line 27 * Line 29
28	Multifamily Common Areas	$ 11,613	Line 28 * Line 29
29	Emerging Measures and Approaches	$ 20,108	Line 29 * Line 29
30	Total Admin & Infrastructure Allocated	$ 511,393	Sum Lines 22 thru 29

Source:

(1) U-20429, DTE Gas EWR Plan, Exhibit No: A-4, Col. (f), Line 20
(2) U-20429, DTE Gas EWR Plan, Exhibit No: A-4, Col. (f), Line 21
(3) U-20429, DTE Gas EWR Plan, Exhibit No: A-4, Col. (f), Line 22
(4) U-20429, DTE Gas EWR Plan, Exhibit No: A-4, Col. (f), Line 23
(5) U-20429, DTE Gas EWR Plan, Exhibit No: A-4, Col. (f), Line 24
(6) U-20429, DTE Gas EWR Plan, Exhibit No: A-4, Col. (f), Line 25
(7) U-20429, DTE Gas EWR Plan, Exhibit No: A-4, Col. (f), Line 26
(9) U-20429, DTE Gas EWR Plan, Exhibit No: A-4, Col. (f), Line 28
(8) U-20429, DTE Gas EWR Plan, Exhibit No: A-4, Col. (f), Line 28

Michigan Public Service Commission
DTE Gas Company
Energy Waste Reduction - 2020 Plan Reconciliation
Energy Credits

Case No.: U-20871
Exhibit: A-4
Witness: C. M. Payne
Page.: 1 of 1

	(a)	(b)	(c)
Line No.	**Description**	**Source**	**EWR Credits (1 EWR Credit = 1 Mcf saved)**
1	EWR Credit Beginning year balance	(1)	-
2	Credits earned in current year	(2)	2,239,902
3	Credits needed for EWR standard compliance	(3)	1,484,981
4	**EWR Credit Excess (deficiency) relative to standard**	L1 + L 2 - L 3	**754,921**
5	Credits used for Performance Incentive	Line 4	754,921
6	Credits substituted for Renewable Energy Credits	N/A	
7	**EWR Ending year Credit Balance**	L4 - L5	**-**

Source:
(1) U-20708, Exhibit A-5, Line 7, Column (c)
(2) Exhibit A-13 p1, Column (c), Line 31
(3) U-20429, Exhibit A-4, line 37, Column (e)

Michigan Public Service Commission
DTE Gas Company
Energy Waste Reduction - 2020 Plan Reconciliation
Performance Incentive

Case No.: U-20871
Exhibit: A-5
Witness: C. M. Payne
Page No.: 1 of 1

Line No.		(a)		Source:
	First Year Savings			
1	Legislated Minimum First Year Savings	1,484,981	Mcf	(1)
2	First Year Savings at 1.0%	1,979,975	Mcf	(2)
3	Verified First Year Savings	2,239,902	Mcf	(3)
4	Performance Incentive Earned	20%		(4)
	Lifetime Savings			
5	Verified First Year Savings	2,239,902	Mcf	Line 3
6	Weighted Average Measure Life	11.41	Years	(5)
7	Verified Lifetime Savings (line 5 x line 6)	25,548,313	Mcf	(6)
8	Lifetime Energy Savings required for Maximum Performance Incentive	23,759,698	Mcf	(4)
9	Performance Incentive Earned	16%		(4)
	Low-Income Spend			
10	Low-Income Spend Target required for Maximum Performance Incentive	$ 10,290,299		(4)
11	Low-Income Spend	10,480,273		(7)
12	Performance Incentive Earned	3%		(4)
	Low-Income Lifetime Savings			
13	Low-Income Lifetime Savings Target for Maximum Performance Incentive	1,082,002	Mcf	(4)
14	Low-Income Lifetime Savings	1,628,735	Mcf	(8)
15	Performance Incentive Earned	2%		(4)
16	Total Performance Incentive Earned	20%		(9)

Source:
(1) U-20429, Exhibit A-4, line 37, Column (e)
(2) U-20429, Exhibit A-4, line 35, Column (e)
(3) Exhibit A-13 p1, line 31, Column (c)
(4) Attachment C of settlement for case U-20429
(5) Exhibit A-13 p1, line 33, Column (c)
(6) Exhibit A-13 p1, line 35, Column (c)
(7) Exhibit A-8, line 20, Column (e)
(8) Exhibit A-13 p1, line 34, Column (c)
(9) Attachment C of settlement for case U-20429; Lesser of L4 or (L9+L12+L15)

DTE

2020 ANNUAL REPORT

Energy Waste Reduction

Table of Contents

Executive Summary 3

Program Portfolio Summary 6

Legislative Requirements 19

EWR Portfolio 21

Residential Programs *23*
Commercial and Industrial Programs *55*
Education and Awareness Program *83*
Pilot Programs *86*

EWR Program Achievements 91

Conclusion 94

Case: U-20871
Exhibit: A-6
Witness: C. M. Payne
Page 3 of 95

Executive Summary

Case: U-20871
Exhibit: A-6
Witness: C. M. Payne
Page 4 of 95

This annual report highlights the results of DTE Energy's (DTE's or the Company's) 2020 Energy Waste Reduction (EWR) Portfolio, provides a policy overview, and summarizes program changes and achievements. The EWR Portfolio comprises many specific programs within the Residential, Commercial and Industrial (C&I), Education and Awareness, and Pilot programs.

The EWR 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). DTE built on its momentum from the 2009 launch by enhancing the scope of existing programs and adding new program options to the portfolio. Since its inception in 2009, more than 5.7 million electric customers and 3.7 million gas customers have directly participated in DTE's energy efficiency programs.[1]

Customers have upgraded equipment in their homes and businesses, helping them to become more energy efficient. DTE has also provided customers with education, tips, strategies, and tools to help save money on their energy bills. As a result, DTE customers have saved approximately 6,500 gigawatt-hours (GWh) and over 15,000 million cubic feet (MMcf) since the program started. In 2020, measures installed by DTE customers will result in over $306 million in electric lifecycle dollar savings and nearly $75 million in gas lifecycle dollar savings.

In 2020, DTE's EWR Portfolio resulted in total verified net electric savings of 770 GWh–1.67% of 2019 planned retail sales–as compared to the minimum legislative requirement of 462 GWh. For DTE Gas, the total verified net gas energy savings was 2,240 MMcf–1.13% of 2019 planned retail sales–as compared to the minimum legislative requirement of 1,485 MMcf.

In 2020, DTE Electric spent $128.8 million compared to the planned $128.1 million, and DTE Gas spent $40.0 million compared to the planned $39.1 million.

1 Customers may participate in more than one EWR program.

Case: U-20871
Exhibit: A-6
Witness: C. M. Payne
Page 5 of 95

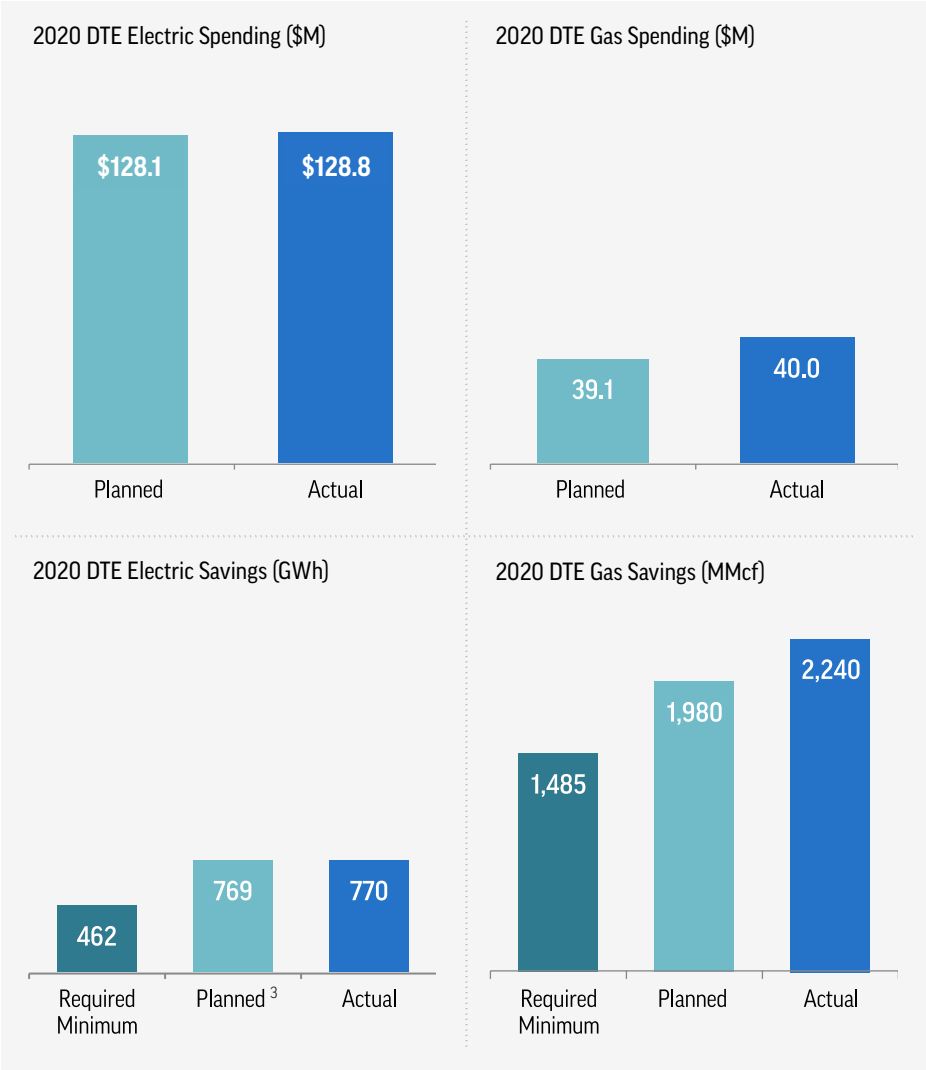
Chart 1 summarizes the overall EWR Portfolio 2020 spending and verified net savings for DTE Electric and DTE Gas.

DTE performs cost-effectiveness tests (CETs) to ensure energy savings are achieved in a cost-effective manner for the company and its customers. Cost-effectiveness tests measure whether the investment's benefits exceed its costs. DTE uses the Utility System Resource Cost Test (USRCT) to measure the effectiveness of the EWR Portfolio. Specifically, the goal of the EWR Portfolio (not including Low-Income) is to meet the minimum required USRCT ratio of 1.0.[2] DTE Electric achieved a USRCT ratio of 2.21 based on the 770 GWh verified net energy savings. DTE Gas achieved a USRCT ratio of 1.91 based on the 2,240 MMcf verified net energy savings. In 2020, DTE's combined electric and gas verified net savings from EWR programs equate to annual greenhouse gas reductions of 6.1 million metric tons of CO_2, 2,835 metrics tons of NOx and 3,728 metrics tons of SO_2.

During 2020, DTE implemented its EWR Portfolio as outlined in the 2020-2021 EWR Plan. The Company uses implementation contractors and has built strong networks to deliver energy efficiency programs throughout the State of Michigan that focus on:

- Providing energy efficiency education and raising awareness of EWR 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 non-energy benefits of energy efficiency improvements.
- Ensuring the Pilot program process works well, including increasing the Company's Pilot program productivity; over the years, DTE's ability to run the Pilot program effectively has continued to improve through further maturity of systems and back-office processes.

CHART 1 – 2020 EWR PORTFOLIO SPENDING AND VERIFIED NET SAVINGS



2 The calculations exclude Low-Income programs per Section 71(4) (g) of PA 295 as amended by PA 342, which specifically excludes Low-Income in the cost-effectiveness requirement.

3 The Amended 2020-2021 EWR Plan was filed to reflect an increase in the overall savings target from 1.50% to 1.75% in 2020 to be prorated based on the date of the final Order in the Company's revised EWR Plan. The Amended filing included a prorated savings target of 770 GWh for 2020 based on the premise that a final Order would be received by September 1, 2020. However, the final Order was filed September 10, 2020, which reduced the prorated planned savings target from 770 GWh to 769 GWh.

Case: U-20871
Exhibit: A-6
Witness: C. M. Payne
Page 6 of 95

Program Portfolio Summary

Case: U-20871
Exhibit: A-6
Witness: C. M. Payne
Page 7 of 95

Goals and Targets

The operational goal of the 2020 Energy Waste Reduction (EWR) Portfolio was to maintain the momentum the program has achieved since its launch in 2009 by continuing to grow customer acceptance and adoption of EWR measures. Specifically, the 2020 goals were to:

1. Achieve legislated electric energy savings of 1% of 2019 planned retail sales, or 462 gigawatt-hours (GWh), and achieve legislated gas energy savings of 0.75% of 2019 planned retail sales, or 1,485 million cubic feet (MMcf).
2. Ensure EWR programs are cost-effective. DTE performs cost-effectiveness tests (CETs) to ensure the overall goal of reducing energy use in a cost-effective manner for the company and its customers is being achieved. DTE Energy (DTE) uses the Utility System Resource Cost Test (USRCT) and the Total Resource Cost (TRC) test to measure the effectiveness of the various EWR programs. Specifically, the goal of the EWR Portfolio (not including Low-Income) 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 Inc. (Guidehouse), and the installation rate adjustment factors (IRAFs) and net-to-gross ratios (NTGRs) have been applied.[4] The IRAF is applied to account for rebated measures that are no longer or were never installed and operational. The 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 2020, DTE applied a 0.92 NTGR to most programs. The Company applied different NTGRs to some programs or measures, including a NTGR of 1.00 for Low-Income, Pilots, and Education and Awareness; 0.57 for standard and 0.71 for reflector light-emitting diode (LED) bulbs within the Residential ENERGY STAR® Products program, as approved by the Michigan Public Service Commission (MPSC) on September 10, 2020 for the Company's 2020-2021 EWR 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 Tier 3 thermostats delivered by Residential programs
- Home Energy Reports program
- DTE Insight

Spend, as used in this annual report, refers to the cash expenditures or commitments made by DTE to implement the EWR Portfolio. Spend does not contemplate the eventual treatment of costs such as operations and maintenance (O&M) or capitalization. In 2020, DTE Electric spent $128.8 million compared to the planned $128.1 million, and DTE Gas spent $40.0 million compared to the planned $39.1 million.

The EWR Portfolio resulted in total verified net electric savings of 770 GWh–1.67% of 2019 planned retail sales–as compared to the minimum legislative requirement of 462 GWh. For DTE Gas, the total verified net gas energy savings was 2,240 MMcf–1.13% of 2019 planned retail sales–as compared to the minimum legislative requirement of 1,485 MMcf.

4 The IRAF is typically applied based on a two year lag of an evaluated result. For example, in PY2020 the PY2018 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 measures or programs (Pilots, Education and Awareness, etc.), and measures whose MEMD savings are verified net (Tier 1 commercial thermostats).

Case: U-20871
Exhibit: A-6
Witness: C. M. Payne
Page 8 of 95

CHART 2 – 2020 EWR PORTFOLIO SPENDING AND VERIFIED NET SAVINGS

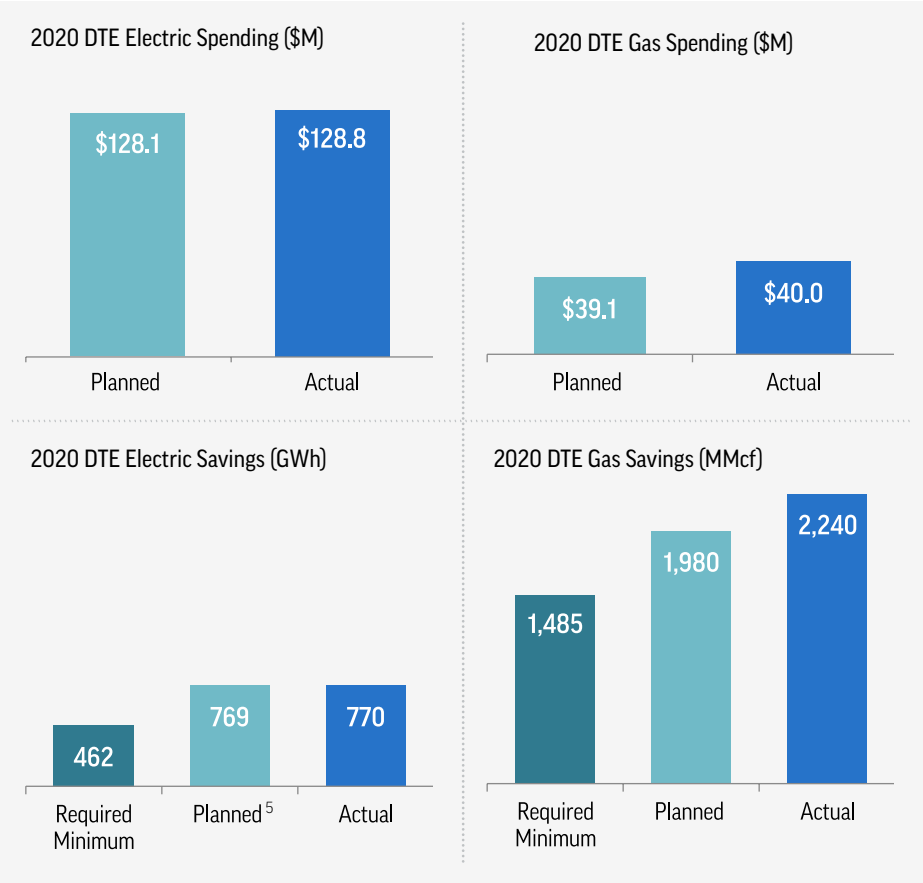


CHART 3 – 2020 EWR SPENDING AND VERIFIED NET ENERGY SAVINGS BY PROGRAM TYPE

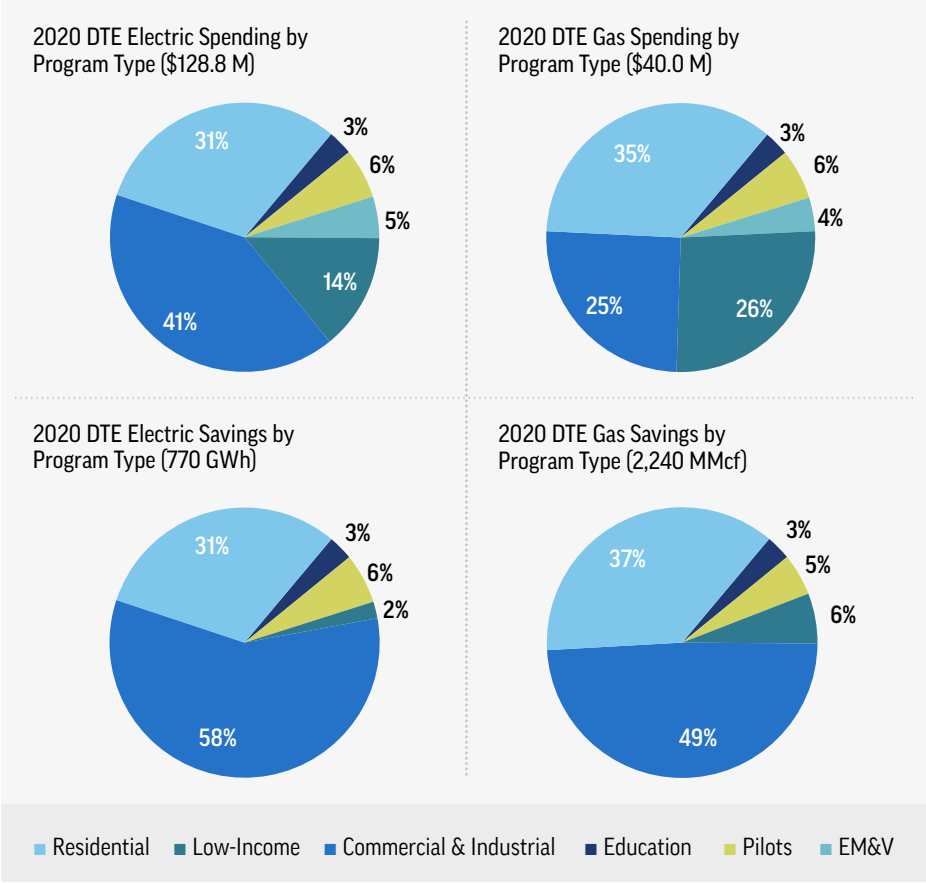


Chart 2 summarizes the overall EWR Portfolio 2020 spending and verified net savings for DTE Electric and DTE Gas.

Each EWR Portfolio sets its own spending and verified net saving goals. For DTE Electric, the Residential and Low-Income programs collectively provided 256 GWh of verified net energy savings, and C&I programs, including Self-Direct, provided 448 GWh. DTE Electric achieved 67 GWh savings from the Education and Awareness and Pilot programs. For DTE Gas, the Residential and Low-Income programs collectively provided 951 MMcf of verified net energy savings, and C&I programs provided 1,108 MMcf. DTE Gas achieved 181 MMcf savings from the Education and Awareness and Pilot programs.

Chart 3 displays program spending and verified net savings for the various EWR programs in 2020.

5 The Amended 2020-2021 EWR Plan was filed to reflect an increase in the overall savings target from 1.50% to 1.75% in 2020 to be prorated based on the date of the final Order in the Company's revised EWR Plan. The Amended filing included a prorated savings target of 770 GWh for 2020 based on the premise that a final Order would be received by September 1, 2020. However, the final Order was filed September 10, 2020, which reduced the prorated planned savings target from 770 GWh to 769 GWh.

Long-Term EWR Impacts

DTE also considers performance 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 2020 EWR Portfolio results for several of 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.[6]

Table 1 shows that DTE's 2020 EWR programs produced significant dollar savings for its customers for future years.

TABLE 1 – DTE 2020 EWR PORTFOLIO – LIFECYCLE DOLLAR SAVINGS (ALL VALUES IN DOLLARS)

	Program	DTE Electric Present Value	DTE Gas Present Value
RESIDENTIAL	Appliance Recycling	$9,765,903.43	-
	Audit and Weatherization	$842,011.06	$2,143,815.30
	DTE Insight	$637,985.53	$173,433.53
	ENERGY STAR Products	$24,019,758.51	$755,178.49
	Heating, Ventilation, and Air Conditioning	$8,175,181.13	$11,642,033.57
	Home Energy Consultation	$1,891,902.03	$2,062,706.17
	Home Energy Efficiency Kits	$2,261,762.94	$1,717,883.16
	Home Energy Reports	$3,104,379.16	$887,268.04
	Multifamily	$92,791.65	$124,690.08
	New Home Construction	$1,377,127.46	$2,187,855.85
	Revolving Loan Fund	$6,570.21	$17,923.58
	School Program	$1,333,771.60	$2,671,976.93
	Residential Subtotal	***$53,509,144.70***	***$24,384,764.71***
C & I	Prescriptive	$116,094,310.76	$15,439,862.56
	Non-Prescriptive	$57,132,240.68	$20,310,364.84
	ENERGY STAR Retail Lighting	$5,243,117.46	-
	C&I Multifamily Common Areas	$684,202.97	$172,014.89
	Midstream Lighting	$24,741,785.86	-
	Midstream Food Service	$716,256.49	$246,312.78
	Midstream HVAC	$2,918,623.48	-
	Retro-Commissioning	$468,881.18	$1,106.12
	Strategic Energy Management	$592,804.43	$305,426.62
	Self-Direct Program	$150,119.21	-
	Business Energy Consultation	$5,244,227.17	$1,200,764.84
	Emerging Measures and Approaches	$3,303,968.50	$1,677,207.03
	C&I Subtotal	***$217,290,538.18***	***$39,353,059.71***
	Pilot Programs	***$19,056,469.97***	***$4,376,823.08***
	Education and Awareness Program	***$11,378,719.66***	***$1,990,370.29***
	Low-Income Programs – All[7]	***$5,147,523.99***	***$4,900,827.33***
	Portfolio	**$306,382,396.51**	**$75,005,845.12**

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

7 Includes the Energy Efficiency Assistance program, Low-Income Multifamily program component, and Low-Income Home Energy Consultation program component.

Case: U-20871
Exhibit: A-6
Witness: C. M. Payne
Page 10 of 95

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 2020 EWR PORTFOLIO – LIFECYCLE ENERGY SAVINGS

	Program	DTE Electric MWh: Impact and Savings Cumulative (Losses Included)	DTE Gas Mcf: Impact and Savings Cumulative (Losses Included)
RESIDENTIAL	Appliance Recycling	232,968.89	-
	Audit and Weatherization	23,618.13	898,202.97
	DTE Insight	11,122.97	43,973.62
	ENERGY STAR Products	549,398.17	233,756.61
	Heating, Ventilation, and Air Conditioning	188,729.92	4,112,560.96
	Home Energy Consultation	43,527.07	666,759.14
	Home Energy Efficiency Kits	56,873.85	582,810.76
	Home Energy Reports	58,204.27	224,964.48
	Multifamily	2,145.78	39,354.04
	New Home Construction	29,004.41	820,469.25
	Revolving Loan Fund	150.50	6,547.60
	School Program	34,435.71	891,963.19
	Residential Subtotal	***1,230,179.66***	***8,521,362.61***
C & I	Prescriptive	3,339,946.57	5,633,851.39
	Non-Prescriptive	1,509,479.73	7,275,265.61
	ENERGY STAR Retail Lighting	108,773.42	-
	C&I Multifamily Common Areas	20,208.32	67,731.47
	Midstream Lighting	608,784.93	-
	Midstream Food Service	18,355.31	86,714.55
	Midstream HVAC	66,050.42	-
	Retro-Commissioning	11,430.15	301.27
	Strategic Energy Management	14,693.67	79,378.34
	Self-Direct Program	3,332.91	-
	Business Energy Consultation	139,822.41	381,111.63
	Emerging Measures and Approaches	90,458.77	626,075.48
	C&I Subtotal	***5,931,336.59***	***14,150,429.72***
	Pilot Programs	***460,240.66***	***1,422,514.02***
	Education and Awareness Program	***251,427.39***	***646,426.64***
	Low-Income Programs – All[8]	***136,655.67***	***1,689,987.56***
	Portfolio	**8,009,839.97**	**26,430,720.56**

8 Includes the Energy Efficiency Assistance program, Low-Income Multifamily program component, and Low-Income Home Energy Consultation program component.

Peak demand reduction (kilowatts, or kW): Electric EWR programs can deliver peak demand reductions to minimize the need for future power plants. Peak demand reduction represents the aggregate reduction from EWR 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 3 shows that the DTE Electric 2020 EWR programs achieved significant demand reductions and energy savings.[9]

TABLE 3 – DTE 2020 EWR PORTFOLIO – DTE ELECTRIC PEAK DEMAND SAVINGS

	Program	2020 Verified Net Peak Demand Savings (MW)
RESIDENTIAL	Appliance Recycling	3.30
	Audit and Weatherization	0.29
	DTE Insight	3.56
	ENERGY STAR Products	10.88
	Heating, Ventilation, and Air Conditioning	2.85
	Home Energy Consultation	0.85
	Home Energy Efficiency Kits	0.71
	Home Energy Reports	14.39
	Multifamily	0.03
	New Home Construction	0.94
	Revolving Loan Fund	0.00
	School Program	0.35
	Residential Subtotal	***38.17***
C & I	Prescriptive	24.07
	Non-Prescriptive	23.15
	ENERGY STAR Retail Lighting	4.39
	C&I Multifamily Common Areas	0.08
	Midstream Lighting	13.65
	Midstream Food Service	0.31
	Midstream HVAC	1.98
	Retro-Commissioning	0.00
	Strategic Energy Management	0.00
	Self-Direct Program	0.49
	Business Energy Consultation	0.81
	Emerging Measures and Approaches	0.86
	C&I Subtotal	***69.77***
	Pilot Programs	***6.71***
	Education and Awareness Program	***3.66***
	Low-Income Programs – All[10]	***1.48***
	Portfolio	**119.79**

9 Line losses are not included.

10 Includes the Energy Efficiency Assistance program, Low-Income Multifamily program component, and Low-Income Home Energy Consultation program component.

Case: U-20871
Exhibit: A-6
Witness: C. M. Payne
Page 12 of 95

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

Table 4 summarizes the levelized cost of energy and demand saved for each EWR program per unit of the energy savings achieved.

TABLE 4 – DTE 2020 EWR PORTFOLIO – DTE COST OF CONSERVED ENERGY

	Program	DTE Electric $/Lifetime Savings (kWh)	DTE Gas $/Savings (CCF)
RESIDENTIAL	Appliance Recycling	$0.03	$0.00
	Audit and Weatherization	$0.05	$0.20
	DTE Insight	$0.28	$0.46
	ENERGY STAR Products	$0.02	$0.12
	Heating, Ventilation, and Air Conditioning	$0.03	$0.14
	Home Energy Consultation	$0.11	$0.34
	Home Energy Efficiency Kits	$0.03	$0.24
	Home Energy Reports	$0.05	$0.19
	Multifamily	$0.06	$0.45
	New Home Construction	$0.03	$0.12
	Revolving Loan Fund	$0.37	$1.95
	School Program	$0.03	$0.09
	Residential – All	***$0.04***	***$0.24***
C & I	Prescriptive	$0.01	$0.07
	Non-Prescriptive	$0.01	$0.03
	ENERGY STAR Retail Lighting	$0.01	$0.00
	C&I Multifamily Common Areas	$0.03	$0.10
	Midstream Lighting	$0.01	$0.00
	Midstream Food Service	$0.03	$0.60
	Midstream HVAC	$0.02	$0.00
	Retro-Commissioning	$0.08	$22.68
	Strategic Energy Management	$0.09	$0.69
	Self-Direct Program	$0.02	$0.00
	Business Energy Consultation	$0.02	$0.18
	Emerging Measures and Approaches	$0.02	$0.36
	C&I – All	***$0.01***	***$0.09***
	Pilot Programs	***$0.02***	***$0.18***
	Education and Awareness Program	***$0.02***	***$0.18***
	Low-Income Programs – All[11]	***$0.13***	***$0.62***
	Portfolio (Low-Income Excluded, Performance Incentive Included)	**$0.02**	**$0.15**

11 Includes the Energy Efficiency Assistance program, Low-Income Multifamily program component, and Low-Income Home Energy Consultation program component.

Case: U-20871
Exhibit: A-6
Witness: C. M. Payne
Page 13 of 95

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 5 summarizes the weighted average measure life for the various 2020 EWR programs at the individual program level and for the program as a whole.

In 2020, DTE's combined electric and gas verified net savings from EWR programs equate to annual greenhouse gas reductions of 6.1 million metric tons of CO_2, 2,835 metrics tons of NOx and 3,728 metrics tons of SO_2.

Since 2009, the cumulative lifetime environmental benefits from the electric and gas savings are equivalent to the following:[12]

- Greenhouse gas emissions avoided by recycling more than 228,000 tons of waste instead of sending it to the landfill, which is equivalent to 32,000 garbage trucks of waste
- Annual carbon emissions reduction from over 80,000 homes' energy use for one year
- Reduction in the greenhouse gas emissions equivalent to more than 146,000 cars driven in one year
- Carbon sequestered by over 823,000 acres of forest in one year

TABLE 5 – DTE 2020 EWR 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	24.14	23.13
	DTE Insight	1.00	1.00
	ENERGY STAR Products	4.76	9.17
	Heating, Ventilation, and Air Conditioning	10.71	14.61
	Home Energy Consultation	4.98	10.67
	Home Energy Efficiency Kits	6.79	12.56
	Home Energy Reports	1.00	1.00
	Multifamily	4.72	8.53
	New Home Construction	18.00	18.00
	Revolving Loan Fund	12.09	15.91
	School Program	8.31	11.85
	Residential Subtotal	***4.81***	***10.02***
C & I	Prescriptive	13.13	11.17
	Non-Prescriptive	15.34	15.00
	ENERGY STAR Retail Lighting	4.33	-
	C&I Multifamily Common Areas	13.29	19.08
	Midstream Lighting	10.95	-
	Midstream Food Service	12.11	14.07
	Midstream HVAC	15.00	-
	Retro-Commissioning	3.00	3.00
	Strategic Energy Management	1.00	1.00
	Self-Direct Program	1.00	-
	Business Energy Consultation	8.96	10.05
	Emerging Measures and Approaches	11.55	8.72
	C&I Subtotal	***12.39***	***12.31***
	Pilot Programs	***10.00***	***11.00***
	Education and Awareness Program	***10.00***	***11.00***
	Low-Income Programs – All[13]	***8.03***	***12.37***
	Portfolio	**9.71**	**11.40**

12 Projected lifetime greenhouse gas savings converted using the U.S. Environmental Protection Agency Equivalency Calculator.

13 Includes the Energy Efficiency Assistance program, Low-Income Multifamily program component, and Low-Income Home Energy Consultation program component.

Case: U-20871
Exhibit: A-6
Witness: C. M. Payne
Page 14 of 85

Cost-Effectiveness

CETs are performed to ensure that the overall goal of reducing costs in a cost-effective manner for the company and its customers is being achieved. DTE used the DSMore[14] cost analysis tool to calculate the USRCT cost-effectiveness and report results for the 2020 programs. The USRCT is a CET that measures cost-effectiveness from the viewpoint of DTE and ensures that the benefits to ratepayers for all programs will exceed the costs.

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

- **Utility input assumptions** contain information specific to the company 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' approved 2020-2021 EWR Plan.
- **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.

DTE calculated the USRCT at the program level and for groups of programs, including the Low-Income programs, Residential programs, and C&I programs.

The 13 Residential programs for which the USRCT were calculated include the following:

(1) Appliance Recycling, **(2)** Audit and Weatherization, **(3)** DTE Insight, **(4)** ENERGY STAR Products, **(5)** Heating, Ventilation, and Air Conditioning, **(6)** Home Energy Consultation, **(7)** Home Energy Efficiency Kits, **(8)** Home Energy Reports, **(9)** Multifamily, **(10)** New Home Construction, **(11)** Revolving Loan Fund, **(12)** School program, **(13)** Emerging Measures and Approaches

The 12 C&I programs for which the USRCT were calculated include the following:

(1) Prescriptive, **(2)** Non-Prescriptive, **(3)** Midstream Lighting, **(4)** Midstream Food Service, **(5)** Midstream HVAC, **(6)** Retro-Commissioning, **(7)** Strategic Energy Management, **(8)** Self-Direct, **(9)** Business Energy Consultation, **(10)** Emerging Measures and Approaches, **(11)** C&I ENERGY STAR Retail Lighting, **(12)** C&I Multifamily Common Areas

DTE Electric overspent its EWR Plan spend by $0.7 million and exceeded the legislated energy savings minimum by 308 GWh, or 67% (770 GWh vs. the legislated minimum of 462 GWh). While DTE Gas overspent its EWR Plan spend by $6.9 million, it exceeded the legislated energy savings minimum by 755 MMcf, or 53% (2,240 MMcf vs. the legislated minimum of 1,485 MMcf). Based on the analysis performed using the DSMore cost analysis tool, DTE Electric achieved a USRCT ratio of 2.21 based on the 770 GWh verified net energy savings. DTE Gas achieved a USRCT ratio of 1.91 based on the 2,240 MMcf verified net energy savings.

14 Demand Side Management Option Risk Evaluator (DSMore) 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.

Case: U-20871
Exhibit: A-6
Witness: C. M. Payne
Page 15 of 95

Portfolio Revenue (Surcharges)

Chart 4 displays the 2020 EWR Portfolio revenue collected.

In 2020, DTE Electric and DTE Gas collected $144.4 million and $26.6 million, respectively, in base EWR surcharge revenue. Base surcharge revenue reflects EWR actual revenue realized excluding the revenue recovery for authorized performance incentives. Revenues identified in Chart 4 and Chart 5 are the actual amounts billed to DTE customers (excluding the performance incentive) in 2020 through the EWR surcharges approved by the MPSC. These surcharges appear as a line item on a customer's monthly bill statement.

Chart 5 displays revenue collected for the EWR Portfolio in 2020 by customer type.

The actual electric revenue from the residential class is slightly higher than plan due to the variance between actual and forecasted sales. This is primarily driven by increased usage due to people working from home and in general spending more time at home during the pandemic. C&I revenue variances are due to fluctuation within the consumption level break points for the surcharge in the C&I classes and variances in forecasted meter counts. The actual gas revenue from all customer classes is lower than plan due to the 2020-2021 base rates proposed in Case No. U-20429 not being approved until November 19, 2020, delayed rates changing until December 2020. Thus, this delay caused the actual revenue to be less than planned, since the (lower) base rates approved in Case No. U-18268 continued to be billed until December 2020.

CHART 4 – 2020 EWR PORTFOLIO REVENUE COLLECTED (SURCHARGES)

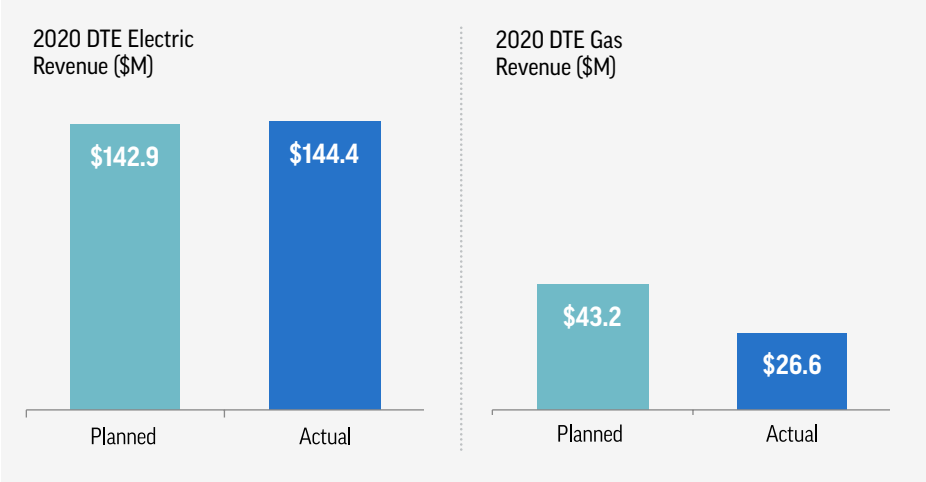


CHART 5 – REVENUE COLLECTED FOR EWR PORTFOLIO IN 2020 BY CUSTOMER TYPE

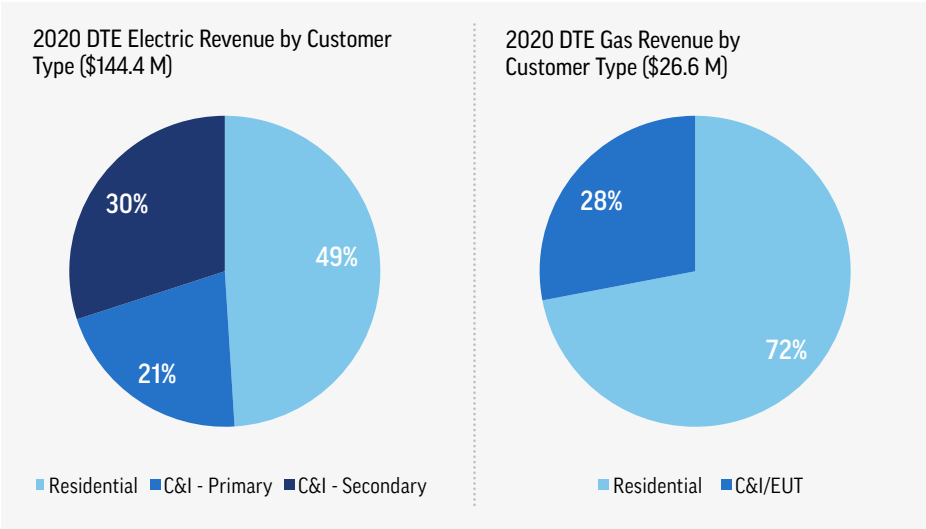


Chart 6 and Chart 7 outline the 2019 EWR base surcharges compared to previous years. These charts exclude the performance incentive.

Electric Surcharge

During 2020, three different EWR base surcharges were authorized for collection: **(1)** from January 1, 2020 to March 5, 2020, per the Commission's April 12, 2018 order in Case No. U-18262 (2018-2019 EWR Plan); **(2)** from March 6, 2020 to September 30, 2020, per the Commission's March 5, 2020 order in Case No. U-20373 (2020-2021 EWR Plan); and **(3)** from October 1, 2020 to December 31, 2020, per the Commission's September 10, 2020 order in Case No. U-20373 (Amended 2020-2021 Plan).

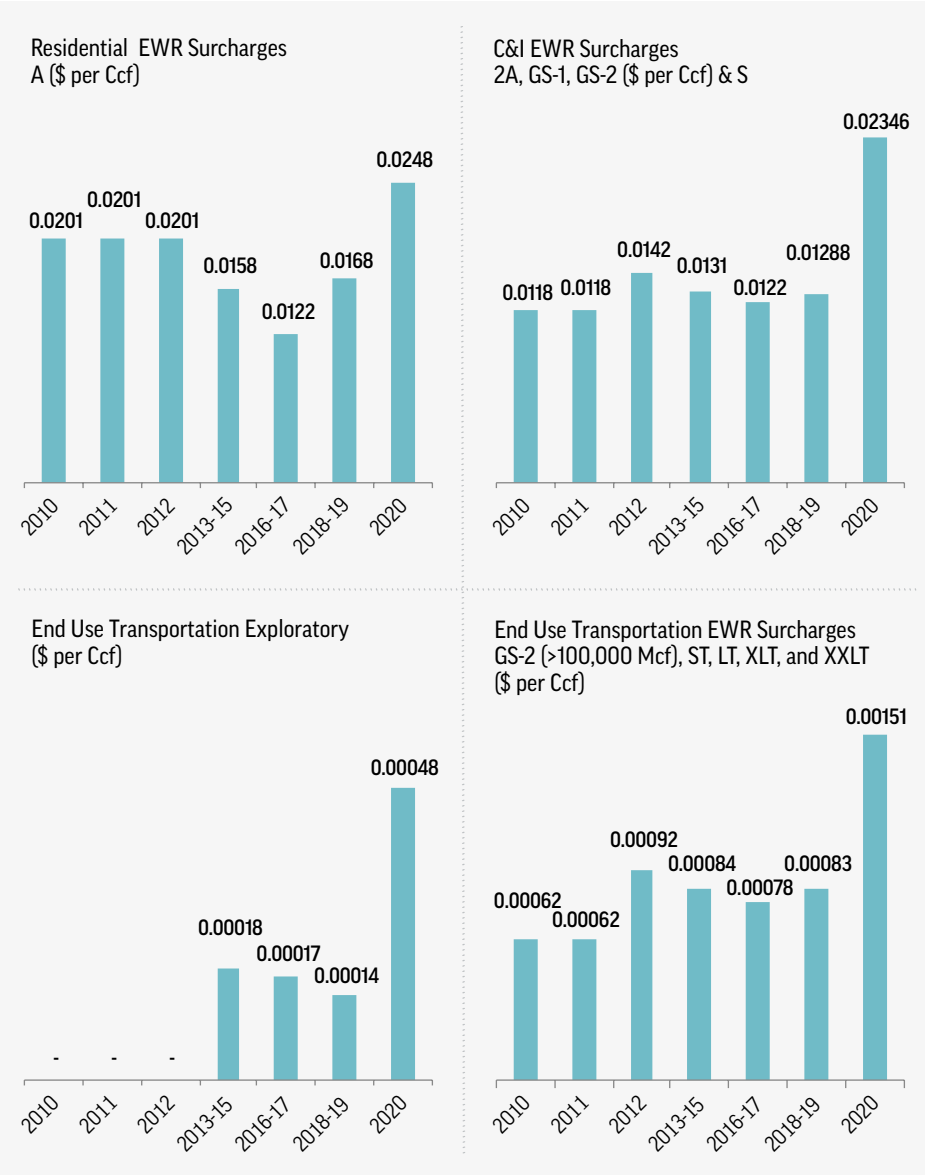
Gas Surcharge

During 2020, DTE Gas billed two different base surcharges. The Base surcharges billed for the period January-November 2020, were originally approved by the Commission on April 12, 2018 in Case No. U-18268 (2018-2019 EWR Plan). The Base surcharges billed for the month of December 2020, were approved by the Commission on November 19, 2020 in Case No. U-20429 (2020-2021 EWR Plan).

CHART 6 – DTE ELECTRIC SURCHARGES

Case: U-20871
Exhibit: A-6
Witness: C. M. Payne
Page 17 of 95

CHART 7 – DTE GAS SURCHARGES



Program Participation

The number of customers participating in EWR programs has experienced strong participation each year since 2009, resulting in over 5.7 million electric and 3.7 million gas participants in Residential and C&I programs.[15] In 2020, 1,036,138 electric and 371,268 gas customers participated in the EWR Portfolio.

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

CHART 8 – EWR PORTFOLIO ELECTRIC PARTICIPATION

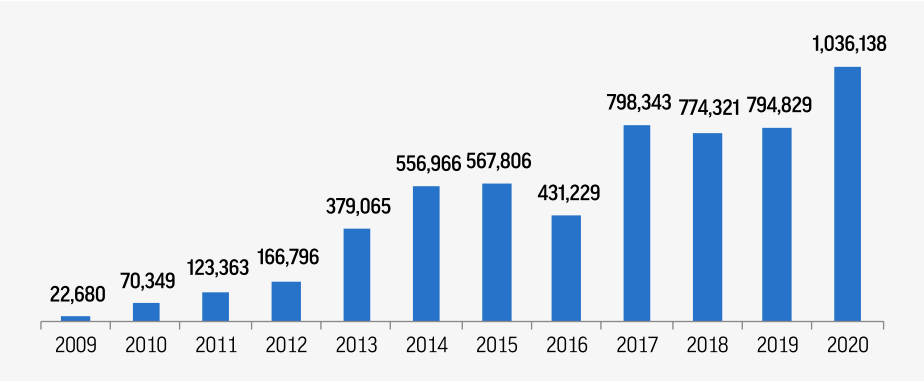
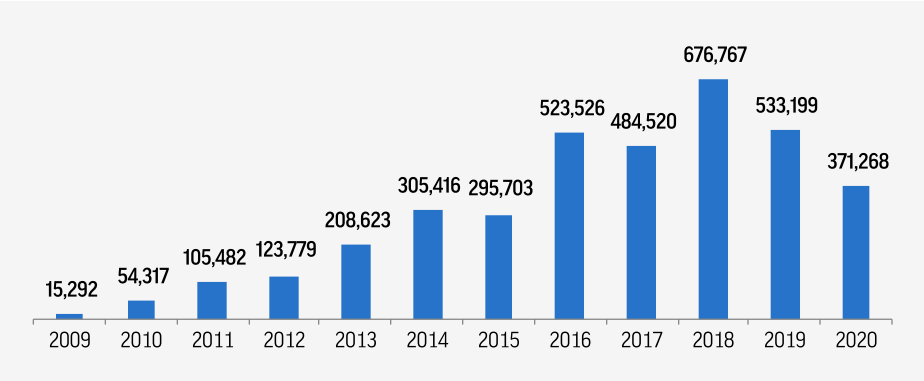


CHART 9 – EWR PORTFOLIO GAS PARTICIPATION



15 Customers may participate in more than one EWR program.

Case: U-20871
Exhibit: A-6
Witness: C. M. Payne
Page 18 of 95

COVID-19 Pandemic Impacts

To implement the EWR Portfolio's program offerings, DTE and its contractors often interact closely with customers, including in-person visits to their facilities and homes. DTE was able to act quickly to navigate the new challenges posed by the COVID-19 pandemic and took the following steps to safeguard customers, employees, and contractors throughout the pandemic:

- Pausing in-person program delivery, including energy audits and direct installations, at the onset of the pandemic. Many programs resumed normal operations by June 1, 2020, after making adjustments and implementing additional safety measures.
- Implementing remote work policies for all DTE energy efficiency personnel.
- Conducting safety training with all energy efficiency contractors consistent with Centers for Disease Control guidance and best practices as programs ramped back up after the pause and contractors returned to the field.

DTE adjusted typical program operations to adapt to challenges faced by the pandemic including changing incentive levels to optimize support provided to customers, shifting activities such as inspections and events to virtual settings, and adjusting messaging to emphasize online and digital tools as well as behavioral tips and educational resources.

DTE took additional steps to support moderate-income and low-income customers by:

- Partnering with the City of Detroit on its door-to-door outreach and restorative case management intervention to provide leads to the Energy Efficiency Assistance program.
- Partnering with DTE Revenue Management and Protection to distribute LED light bulbs at multiple customer events throughout Metro Detroit and the surrounding areas for customers in arrears due to impacts from the pandemic. The Energy Efficiency Assistance program prepared LED light bulb kits to be distributed to customers at the events; over 20,500 kits containing more than 200,000 LED bulbs were distributed.

DTE effectively adjusted to this new operating environment and took steps to ensure the safety of all stakeholders while continuing to support customers in minimizing their energy bills and achieving Residential and C&I savings targets.

Case: U-20871
Exhibit: A-6
Witness: C. M. Payne
Page 19 of 95

Legislative Requirements

Case: U-20871
Exhibit: A-6
Witness: C. M. Payne
Page 20 of 95

Michigan's EWR standard, created under PA 295 as amended by PA 342, 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. Key elements of this legislation include the following:

Energy Savings Targets

- Electric utilities were required to achieve 0.3% savings in 2009, 0.5% in 2010, 0.75% in 2011, and 1.0% in 2012 and each year thereafter until the end of 2021. Beyond 2021, the level of electric energy efficiency savings is determined by the utility's integrated resource plan.
- Natural gas utilities were required to achieve 0.1% savings in 2009, 0.25% in 2010, 0.5% in 2011, and 0.75% in 2012 and each year thereafter.

Compliance

- Electric and gas utility providers must offer a cost-effective EWR portfolio to customers; while the portfolio must include low-income programs, these programs are not included in CETs.
- Providers can operate their own EWR compliance programs or fund a state program.
- EWR plans must be filed, reviewed, and approved or rejected by the MPSC.

Funding

- Providers must demonstrate the EWR programs, excluding offerings to low-income customers, meet the USRCT and are reasonable and prudent.
- Funds received from a customer class—Residential, C&I Secondary, and C&I Primary—should, to the extent possible, be spent on EWR programs that benefit that rate class. All classes contribute to the Low-Income Residential program.

Performance Incentive

- Energy providers can earn a financial incentive for exceeding the EWR performance standards.
- PA 342 states the earned financial award be calculated as a function of the net present value of lifecycle cost reductions generated during the annual period or based on total program spending, tiered based on annual incremental savings.
- The cap for the performance incentive was 20% of the provider's actual EWR portfolio expenditures.

EWR Surcharges

- The EWR programs are paid for by all customers via a surcharge placed on their electric and natural gas bills.
- The amount of the surcharge depends on the rate class—Residential, C&I Secondary, or C&I Primary and 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.

Case: U-20871
Exhibit: A-6
Witness: C. M. Payne
Page 21 of 95

EWR Portfolio

Case: U-20871
Exhibit: A-6
Witness: C. M. Payne
Page 22 of 95

DTE's EWR Portfolio is designed to help reduce customer energy use by increasing customer awareness and use of energy-saving technologies. The program 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 2020 programs were continuations of programs launched in prior years, but several new programs were also implemented. DTE continually works to offer EWR 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 made efforts to coordinate and align with other utilities so these customers could easily participate in energy efficiency program offerings across both fuel types.

Program Offerings

The EWR Portfolio includes offerings available to residential and C&I customers, pilot programs, and general education and awareness programs. The DTE evaluation, measurement, and verification (EM&V) function verifies net energy savings reported by the EWR Portfolio. The programs are managed by DTE program managers and operated by implementation contractors, 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:

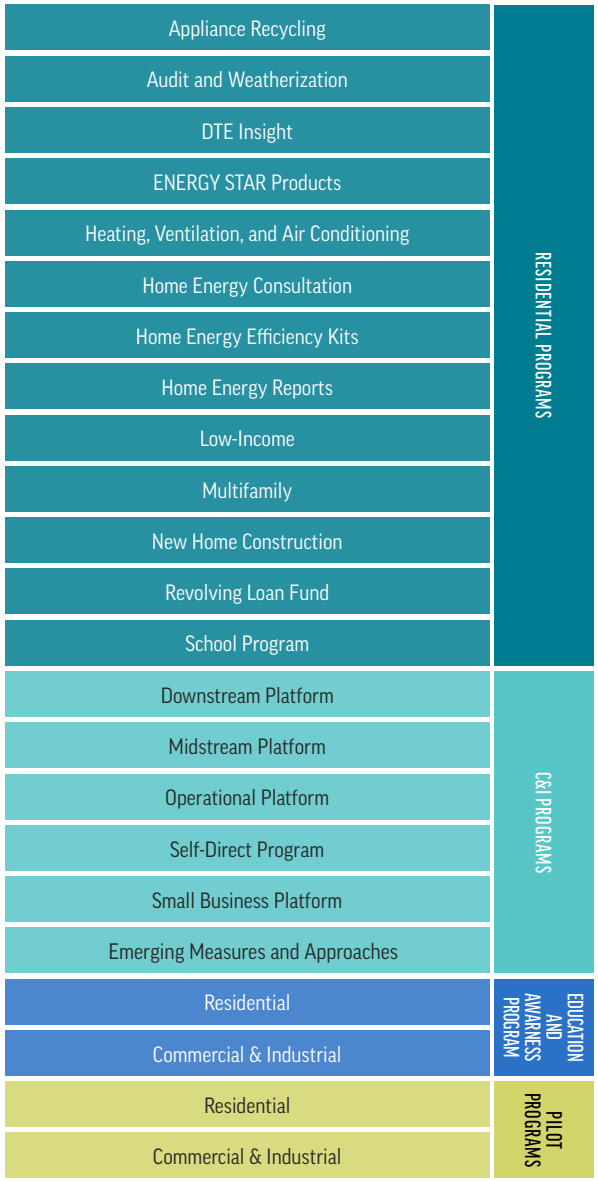
- **Residential programs** offer homeowners products, services, and rebates including appliance recycling; lighting; heating, ventilating, and air conditioning (HVAC); weatherization; home energy assessments; low-income; energy education; and behavioral programs.
- **C&I programs** offer businesses products; 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. A secondary objective of these programs is to raise awareness of the DTE website and other social media, which provide channels for customers to engage in specific EWR programs.

EWR programs require independent verification of utilities' claimed energy savings. This work is performed by an independent EM&V contractor and must be performed to industry standards and guidelines developed by the Evaluation Workgroup of the MPSC Energy Waste Reduction Collaborative (EWR Collaborative). Guidehouse currently fills this role for DTE.

New program options continue to be added to the EWR Portfolio each year. **Figure 1 lists the programs offered in 2020.**

The following sections summarize each EWR program and provide a description, highlights, achievements, challenges, and overall program results from 2020.

FIGURE 1 – PROGRAMS IN THE EWR PORTFOLIO OFFERED IN 2020



Residential Programs

The objective of the Residential EWR programs is to increase customer awareness and demand for energy efficient products and services.

In 2020, the Residential EWR programs used various marketing tactics and community outreach events to promote and inform customers of program offerings. These marketing tactics included specific program information conveyed through DTE's website, email, social media, direct mail, bill inserts, newsletters, radio and television ads, billboards, advertisements in local newspapers, in-store events, and home shows. Furnace testing and replacement program options were continued in the Low-Income segment. DTE adjusted rebate amounts to meet market demand and budget constraints. Details of each offering are provided in later sections of this report.

Case: U-20871
Exhibit: A-6
Witness: C. M. Payne
Page 24 of 95

In 2020, DTE's Residential programs performed well. These programs achieved 256 GWh of verified net electric savings, which is 110% of the plan, and 951 MMcf of verified net gas savings, which is 109% of the plan. In a recent internal benchmarking study, DTE's Residential programs ranked well with respect to cost-effectiveness and savings compared to other utility companies. Customer satisfaction was at 91% or higher for all but two programs in 2020.

Chart 10 summarizes the electric and gas spending and verified net energy savings for all the 2020 EWR Residential and Low-Income programs.

CHART 10 – 2020 RESIDENTIAL AND LOW-INCOME PROGRAMS SPENDING AND VERIFIED NET SAVINGS

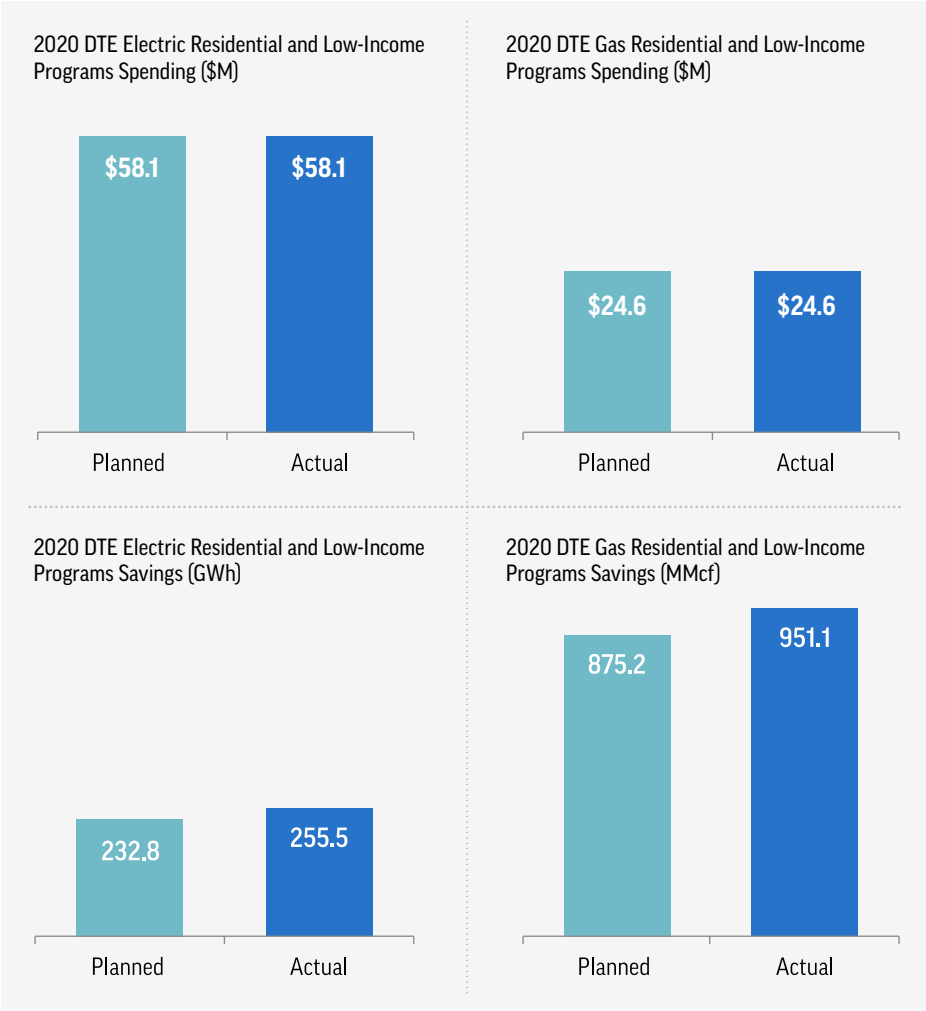
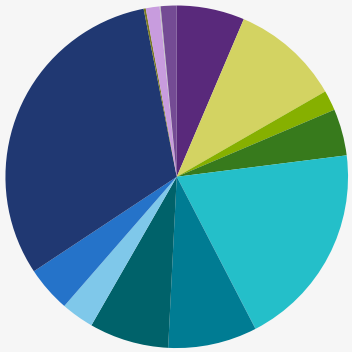


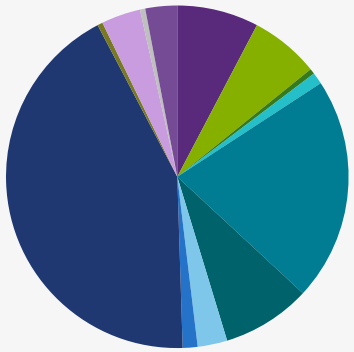
CHART 11 – 2020 SPENDING AND VERIFIED NET SAVINGS BY RESIDENTIAL AND LOW-INCOME PROGRAMS

2020 DTE Electric Residential and Low-Income Spend by Program ($58.4M)



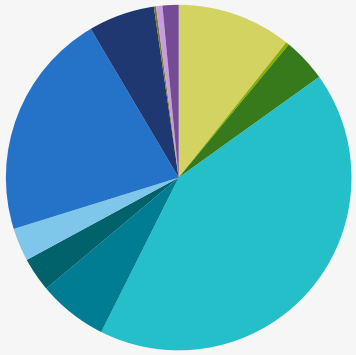
- Administrative - 6.4%
- Appliance Recycling - 10.3%
- Audit and Weatherization - 1.9%
- DTE Insight - 4.4%
- ENERGY STAR Products - 19.4%
- Emerging Measures and Approaches - 0.0%
- Heating, Ventilation, and Air Conditioning - 8.4%
- Home Energy Consultation - 7.5%
- Home Energy Efficiency Kits - 3.1%
- Home Energy Reports - 4.3%
- Low-Income - 31.2%
- Multifamily - 0.2%
- New Home Construction - 1.3%
- Revolving Loan Fund - 0.1%
- School Program - 1.5%

2020 DTE Gas Residential and Low-Income Spend by Program ($24.5M)



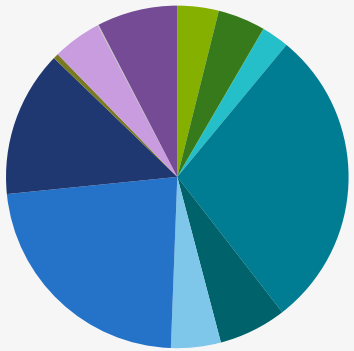
- Administrative - 7.7%
- Audit and Weatherization - 6.5%
- DTE Insight - 0.5%
- Emerging Measures and Approaches - 0.0%
- ENERGY STAR Products - 1.1%
- Heating, Ventilation, and Air Conditioning - 21.1%
- Home Energy Consultation - 8.4%
- Home Energy Efficiency Kits - 2.8%
- Home Energy Reports - 1.4%
- Low-Income - 42.8%
- Multifamily - 0.5%
- New Home Construction - 3.7%
- Revolving Loan Fund - 0.5%
- School Program - 3.0%

2020 DTE Electric Savings by Residential and Low-Income Programs (255.5 GWh)



- Appliance Recycling - 10.7%
- Audit and Weatherization - 0.3%
- DTE Insight - 4.1%
- Emerging Measures and Approaches -0.0%
- ENERGY STAR Products - 42.3%
- Heating, Ventilation, and Air Conditioning - 6.5%
- Home Energy Consultation - 3.2%
- Home Energy Efficiency Kits - 3.1%
- Home Energy Reports - 21.3%
- Low-Income - 6.2%
- Multifamily - 0.2%
- New Home Construction - 0.6%
- Revolving Loan Fund - 0.0%
- School Program - 1.5%

2020 DTE Gas Savings by Residential and Low-Income Programs (951.1 MMcf)



- Audit and Weatherization - 3.9%
- DTE Insight - 4.5%
- Emerging Measures and Approaches - 0.0%
- ENERGY STAR Products - 2.6%
- Heating, Ventilation, and Air Conditioning - 28.5%
- Home Energy Consultation - 6.4%
- Home Energy Efficiency Kits - 4.7%
- Home Energy Reports - 22.8%
- Low-Income - 13.8%
- Multifamily - 0.5%
- New Home Construction - 4.6%
- Revolving Loan Fund - 0.1%
- School Program - 7.6%

Chart 11 summarizes the spending and verified net energy savings achieved by each Residential and Low-Income program in 2020.

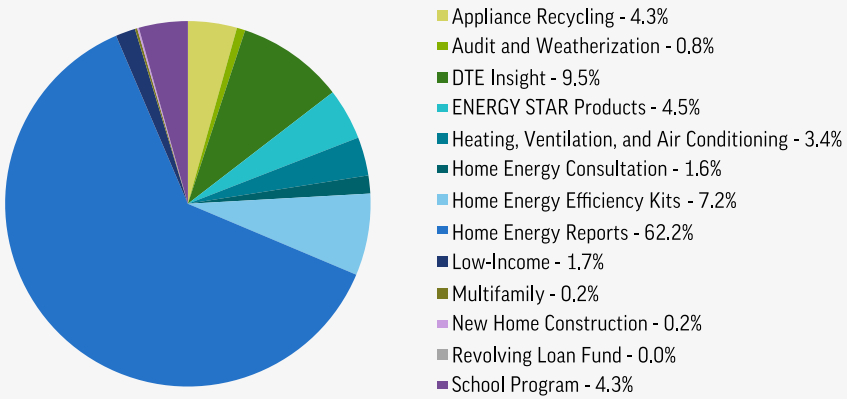
Case: U-20871
Exhibit: A-6
Witness: C. M. Payne
Page 26 of 95

In 2020, over 626,000 electric customers and over 368,000 gas customers participated in the Residential programs.

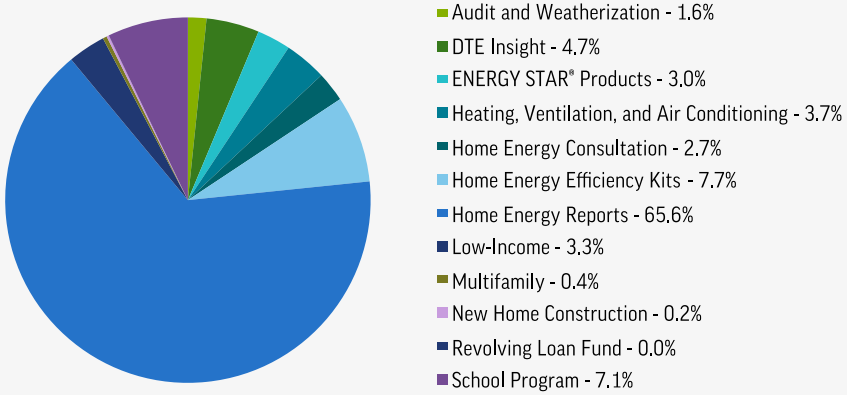
Chart 12 summarizes the number of customers that participated in the Residential and Low-Income programs in 2020.

CHART 12 – 2020 RESIDENTIAL AND LOW-INCOME CUSTOMER PARTICIPATION BY PROGRAM

2020 DTE Electric Residential and Low-Income Programs Participation (626,680)



2020 DTE Gas Residential and Low-Income Programs Participation (368,654)



Case: U-20871
Exhibit: A-6
Witness: C. M. Payne
Page 27 of 95

Appliance Recycling Program (DTE Electric Only)

The objective of the Appliance Recycling program is to produce cost-effective, long-term annual energy savings by promoting the early retirement and recycling of operable, inefficient appliances from DTE Electric households in an environmentally safe manner.

Program Description

The program removes older inefficient working refrigerators and freezers and recycles 95% of the appliances. Customers can also recycle smaller appliances such as dehumidifiers, room air conditioners, small refrigerators, and small freezers when having a standard refrigerator or freezer picked up.

Highlights

- In 2020, the program had 27,152 electric participants.
- Customers are now eligible to receive a $20 rebate for each refrigerator and freezer smaller than 10 ft^3 that is recycled when picked up with a standard size refrigerator and freezer.
- DTE commercialized small appliance recycling in June 2020 and customers are now eligible to recycle dehumidifiers, room air conditioners, small refrigerators, and small freezers when having a standard refrigerator or freezer picked up.[16]

Challenges

- Finding a new retailer who sells and delivers new refrigerators and freezers while picking up the old units continues to be a challenge. Many national retailers prefer a nationwide recycling program instead of a local recycling program.
- The number of reservations for appliance recycling pickup was lower in 2020 due to supply chain issues with new appliances at retailers. Many customers recycle their primary appliance; however, if they are unable to secure a new refrigerator, they will not participate in the program.

Accomplishments

- Savings targets were nearly met for 2020.
- Staffing challenges in late summer led to longer wait times and increased customer dissatisfaction; however, the program was able to recover in the fall and winter. Overall satisfaction for the year was 96%.

Collaboration Efforts

- DTE collaborated with ABC Warehouse to pick up old refrigerators and freezers when delivering new ones.
- DTE worked with Guidehouse to develop a workpaper to include refrigerators and freezers less than 10 ft^3 in the Michigan Energy Measures Database (MEMD). These measures are included in the 2021 MEMD.

Lessons Learned

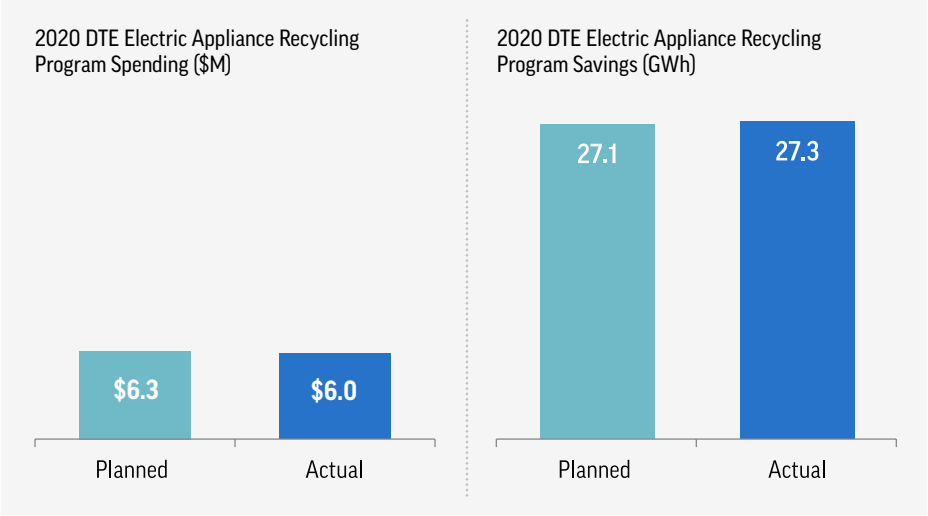
- Providing staffing bonuses to individual crew members helps increase retention, resulting in more frequent appliance pickups.
- Ensure processes are in place to streamline the customer experience and that those processes are followed.

16 The small appliance recycling offering was a pilot that concluded in Q1 2020.

Spending and Verified Net Savings Results

Chart 13 summarizes 2020 DTE Electric spending and verified net savings results for the Appliance Recycling program.

CHART 13 – 2020 APPLIANCE RECYCLING PROGRAM SPENDING AND VERIFIED NET SAVINGS



Audit and Weatherization Program (DTE Electric and DTE Gas)

The objective of the residential Audit and Weatherization (A&W) program is to motivate customers by offering rebates for the installation of qualified weatherization measures in their homes.

Program Description

DTE expanded the A&W program to offer many diverse products and services to DTE customers. The following summarizes the program offerings:

- **Home Performance (HP):** Offers customers incentives for insulation, windows, HVAC, and air sealing measures. HP customers are encouraged to have a comprehensive energy assessment performed by a participating contractor listed on DTE's website.
- **Insulation and Windows (INWIN):** Allows customers who do not wish to perform a comprehensive energy assessment to still receive rebates for insulation and window improvements.
- **Insulation and Windows Retail:** Offers customers the opportunity to deliver savings for batt insulation and foamboard insulation by offering instant rebates. DTE is also piloting instant rebates for spray foam products at nine select The Home Depot stores in the DTE Electric and Gas territory and DTE Gas-only territory.

Highlights

- In 2020, the program had 4,665 electric and 6,027 gas participants.
- DTE continued to work on refining the rebate process for the INWIN and HP programs to decrease the cycle time of customer rebate checks.
- Customers have demonstrated an increased interest in energy efficient replacement windows and home insulation upgrades. Customer surveys indicate a positive impression of the program and the rebate application process.

Challenges

- Many customers are still not searching for HP directly–they are searching for the specific improvements they think are needed.
- The comprehensive energy assessment is still a complex offering, and the improvements suggested often require significant financial investment.
- Customers' low interest in home air sealing continues to be a challenge to obtaining energy savings.
- One challenge was system limitations in working with window contractors to implement an instant rebate solution.

Accomplishments

- The rebate application processing cycle time was reduced, resulting in a 15% improvement compared to 2019.
- DTE launched a midstream windows program that provided energy efficient window rebates to customers in a much shorter timeframe than its traditional downstream program.

Collaboration Efforts

- DTE performed customer outreach by attending events with organizations such as Michigan Saves.
- The HP program's online application tool used by participating contractors is shared with Consumers Energy, ensuring consistency for contractors.

Lessons Learned

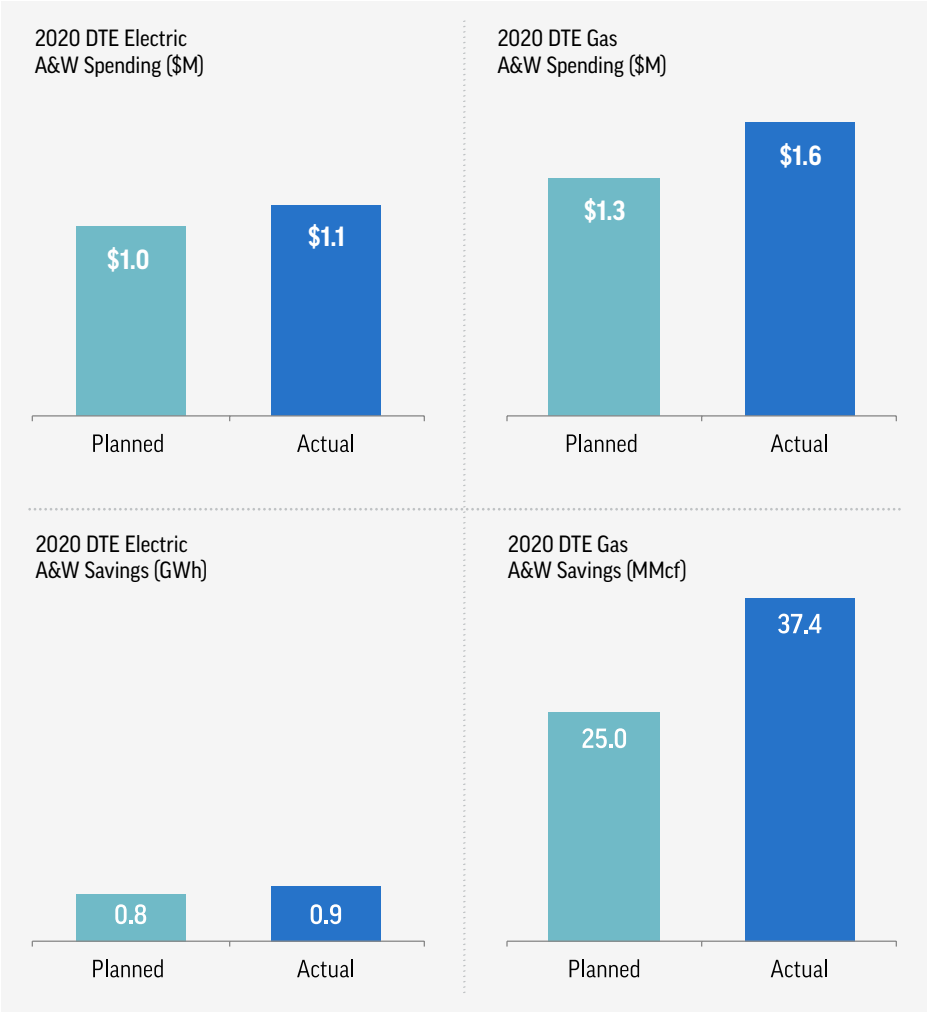
- Testing of new channels such as Retail and Midstream have been received with positive results. Continuing strong relationships with trade allies and DTE customers has been vital to collecting feedback and making program adjustments where necessary.

Case: U-20871
Exhibit: A-6
Witness: C. M. Payne
Page 30 of 95

Spending and Verified Net Savings Results

Chart 14 summarizes the spending and verified net savings results for the A&W program.

CHART 14 – 2020 A&W PROGRAM SPENDING AND VERIFIED NET SAVINGS



DTE Insight (DTE Electric and DTE Gas)

DTE Insight is an app to encourage customers to be more energy efficient and engaged by providing customers with feedback on their energy consumption, creating social competition, and using social norms.

Program Description

The app allows customers to view their energy usage data on a monthly, weekly, and daily basis; set targets and budgets; and participate in behavioral challenges. The app also provides customers with tips for completing various home projects that can save customers 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 the Energy Bridge,[17] the app allows customers to view their electricity usage in real time and, when paired with smart devices, allows customers to change thermostat settings, turn off lights, and manage electronics remotely.

Highlights

- More than 110,000 customers used the app in 2020.
- In 2020, the number of engaged users increased 29%, Energy Bridge requests increased 52%, and the customer base increased 42% compared to the prior year.

Challenges

- The program continued to encourage energy savings when possible but more in the context of comfort while taking health and safety into consideration. Forecasting energy savings can be challenging. As a result, DTE invested in the development of an energy savings dashboard to better estimate average energy savings per participant.
- The lingering impacts of the COVID-19 pandemic made it more difficult for the program to support customers in the field and help resolve technical issues. So, DTE had to explore non-traditional approaches including developing more tools for the client service representatives and proactively reaching out to help customers.

Accomplishments

- New features were added to the app including advisor cards, customer profiles, goal setting, and customized messaging based on the customer's expressed values.
- In 2020, the DTE Insight app introduced automated transactional communications to help educate customers on how the app can be used to achieve a smoother onboarding and Energy Bridge setup process.
- DTE revamped the challenges section of the app to increase customer engagement.
- DTE started sending helpful tips and reminders to customers on a weekly basis through push notifications, which resulted in a higher engagement level that was sustained throughout the year.
- Response time for Energy Bridge requests was shortened from 2 days to 1 day.

17 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.

Case: U-20871
Exhibit: A-6
Witness: C. M. Payne
Page 32 of 95

Collaboration Efforts

- Late in 2020, DTE established a collaboration with MIGreenPower[18] to encourage and allow customers to enroll in MIGreenPower from within the Insight app.
- Throughout 2020, DTE Insight was part of more than 20 cross-promotional opportunities with other DTE programs. The DTE Insight app was featured in emails, mailer kits, letters, employee communications, press releases, blog posts, social media, and in various locations across the DTE website. To that end, Insight featured MIGreenPower, the DTE Interactive Home, and other programs in the app and marketing materials.

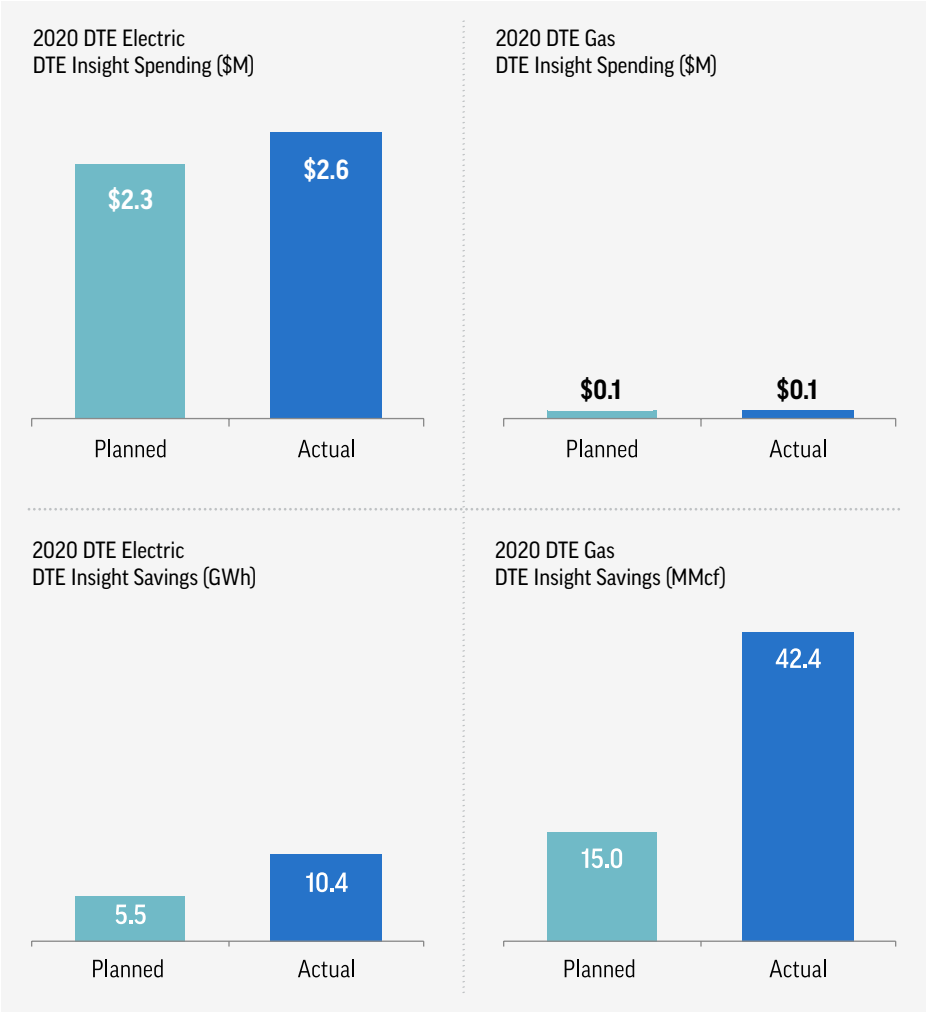
Lessons Learned

- Customer engagement appears to be related to the relevance of the app content and the freshness of the marketing content. Highlighting more relevant content in the app and providing fresh marketing content drives higher customer engagement.
- Analyzing the customer journey is helpful in identifying and resolving communication gaps.
- Identifying the types of customers most likely to download the app allows for more targeted marketing and higher adoption rates.

Spending and Verified Net Savings Results

Chart 15 summarizes the spending and verified net savings results for DTE Insight.

CHART 15 – 2020 DTE INSIGHT SPENDING AND VERIFIED NET SAVINGS



18 MIGreenPower is a simple and affordable program that enables DTE electric customers to reduce their carbon footprint by attributing more (up to 100%) of their energy use to Michigan-based wind and solar projects.

ENERGY STAR Products Program (DTE Electric and DTE Gas)

The objective of the residential ENERGY STAR Products program is to increase the awareness and sales of high efficiency ENERGY STAR products among residential customers.

Program Description

The program was designed to spur customer interest by providing educational information and incentives to customers who purchase qualified ENERGY STAR equipment. The primary means used to accomplish this objective were in-store site visits, point-of-purchase material, and digital and email campaigns. Customers can also access instant rebates on qualifying products via DTE's Marketplace website.

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

Highlights

- DTE Electric offered $25 rebates for ENERGY STAR qualified clothes washers, dryers, dehumidifiers, and air purifiers. Wi-Fi-enabled and smart thermostats had $50 rebates and ENERGY STAR variable pool pumps had $350 rebates. All of these rebates were available to customers by mail or online application. In-store markdown discounts for LED bulbs were between $0.75 and $7.50 per bulb. Midstream consumer electronics incentives were $5 per qualified item, and midstream room air conditioner incentives were $25.
- DTE Gas offered $25 rebates for ENERGY STAR-qualified clothes washers and dryers. Wi-Fi-enabled and smart thermostats had $50 rebates. All of these rebates were available to customers by mail or online application.
- The downstream Appliances program provided rebates for approximately 11,400 gas and electric appliances.
- The midstream Consumers Electronics program provided incentives on over 5,000 electronics.
- The DTE Marketplace program provided rebates for approximately 85,000 items.
- The program achieved its 2020 targets.

Challenges

- Due to ENERGY STAR testing guidelines, there were no television incentives or savings in 2020.
- Some customers reported challenges with receiving rebates and the application process.

Accomplishments

- Instead of requiring customers to complete an online or mail-in rebate application, DTE had room air conditioners offered via a midstream channel where the customer receives an instant markdown on the product. This transition resulted in an increase in rebated energy efficient room air conditioners from an average of about 250 to over 3,000.
- DTE pursued a variety of email marketing campaigns for the Marketplace, which helped the Company continue to provide offerings to customers.

Case: U-20871
Exhibit: A-6
Witness: C. M. Payne
Page 34 of 95

Collaboration Efforts

- DTE pursued additional partnerships with independent hardware and grocery stores to increase access to rebated upstream LEDs for hard-to-reach customers.
- DTE partnered with The Home Depot to transition room air conditioners to the midstream channel.
- DTE partnered with retailers and manufacturers, including Costco Wholesale, Walmart, GE, and Lowe's Home Improvement, on in-store lighting promotions that used end caps, special product placements, and special drop pallets.

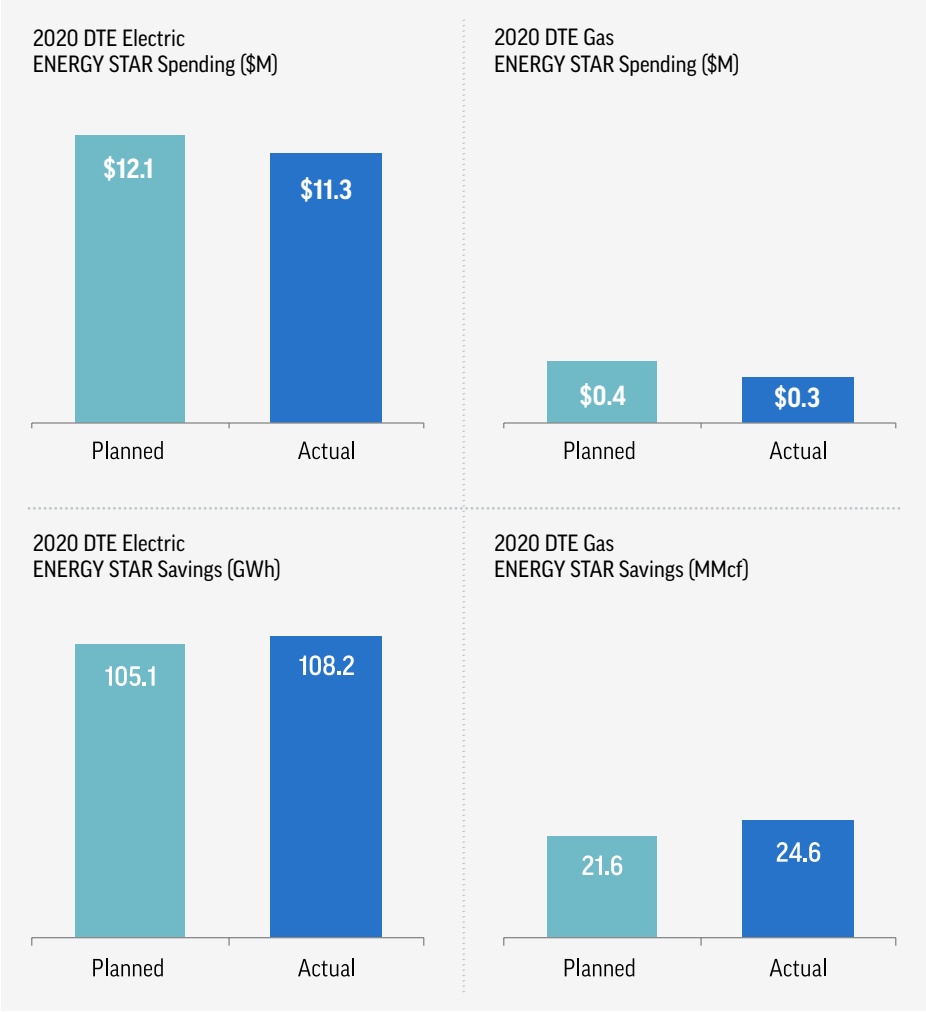
Lessons Learned

- Participating in the online Marketplace can help improve the marketing effectiveness for other EWR programs by helping to target the right customers, at the right time, with the right messaging. This campaign achieved two times the email open rate compared to the average email marketing campaign open rate.
- Offering midstream incentives is a successful channel for increasing participation.
- Suggesting an add-on promotional product to a customer's initial cart on the Marketplace has been successful in increasing sales across a variety of energy efficient product types.

Spending and Verified Net Savings Results

Chart 16 summarizes spending and verified net savings results for the ENERGY STAR Products program.

CHART 16 – 2020 ENERGY STAR PRODUCTS PROGRAM SPENDING AND VERIFIED NET SAVINGS



Case: U-20871
Exhibit: A-6
Witness: C. M. Payne
Page 35 of 95

Heating, Ventilation, and Air Conditioning Program (DTE Electric and DTE Gas)

The objective of the Heating, Ventilation, and Air Conditioning (HVAC) program is to increase the demand for energy efficient heating and cooling equipment and high efficiency water heating equipment.

Program Description

The electric measures offered in the residential HVAC program include high efficiency central air conditioning units, Wi-Fi-enabled thermostats, and electronically commutated motors (ECMs). Gas measures include high efficiency natural gas heating equipment, Wi-Fi-enabled thermostats, and water heaters. DTE developed and uses a network of well-informed and educated HVAC industry professionals who understand the benefits of energy efficient products.

The program serves residential customers in single and multifamily dwellings of less than three units who purchase new high efficiency central air conditioning units, high efficiency natural gas furnaces or boilers, or water heating equipment.

Highlights

- In 2020, the program had 21,389 electric and 13,784 gas participants.
- The DTE HVAC program was well-received by both homeowners and the participating contractors. Electric measures included Seasonal Energy Efficiency Ratio (SEER) 15 and above central air conditioners, ECMs, Wi-Fi-enabled thermostats, heat pumps, and central air conditioning diagnostic tests and tune-ups.
- DTE expanded collaboration with the Consumers Energy Residential HVAC program through a combined rebate bonus promotion.

Challenges

- The continued growth of midstream applications created challenges due to measures being offered in both a midstream and downstream delivery channel and the need to ensure customers did not receive incentives from both channels.
- The MEMD continues to exhibit a gap in how the use case and baseline requirements align with emerging best practices in the HVAC industry related to requiring replacement of an existing air source heat pump to be eligible for savings. More customers are replacing air conditioning systems with air source heat pumps and investing in ductless mini split technology, but these situations are not addressed in the MEMD.
- As heating and cooling technology continues to evolve with changing baselines and adjustments to rebate eligibility due to cost-effectiveness or other external factors, some customers can be confused when they do not receive a rebate for making an energy efficient purchase.

Accomplishments

- DTE continued to leverage its active trade ally network to maintain momentum in 2020.
- More than 29,000 HVAC customer applications were processed.
- Electric measures continue to be a positive factor for the program.
- Introducing the furnace/air conditioner/thermostat combined promotion was successful in bolstering application volume during what is typically a slower time of year due to seasonal industry trends.
- The program continues to use the Contractor Performance Report Card for contractors to have greater visibility into their participation in the program.
- The HVAC midstream channel successfully onboarded 14 distributors.

Case: U-20871
Exhibit: A-6
Witness: C. M. Payne
Page 36 of 95

TABLE 6 – HVAC PROGRAM COLLABORATION EFFORTS

Event	Number of Events	Attendance
New Contractor Trainings	23	85
Conferences	2	~50,000
Tune-Up Trainings	12	~120

Collaboration Efforts

- Collaboration with Consumers Energy increased through initiatives such as the whole system bonus promotion, continued efforts on the Residential HVAC midstream program offerings, and a new online intake tool.
- Meetings were held virtually to inform and train the trade ally network. These meetings included furnace and air conditioner tune-up training to ensure a high quality of network awareness, expertise rollout training, combustion analysis furnace tune-up training, new contractor training, and one-on-one site training with trade allies.

Table 6 summarizes the collaboration efforts.

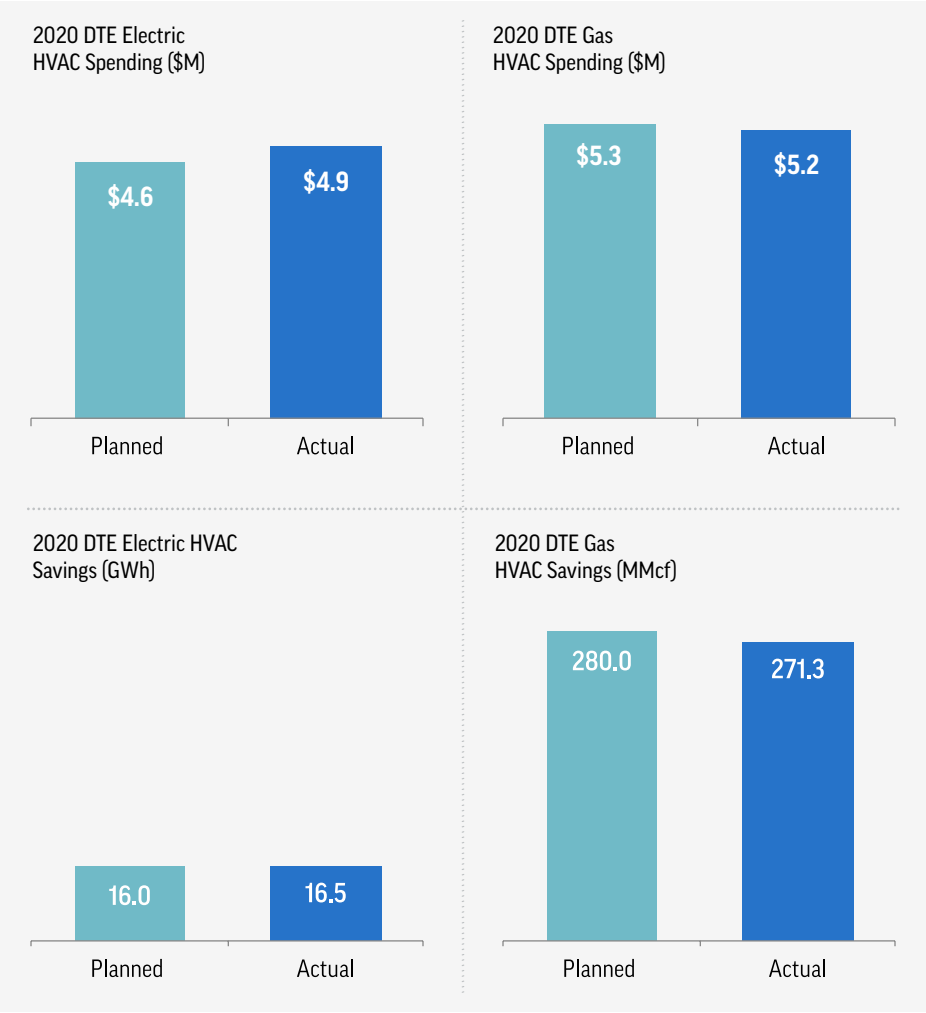
Lessons Learned

- Contractors and customers continued to respond well to whole system incentives.
- Alignment between DTE and Consumers Energy helps reduce customer barriers to participating in the program.
- Having a single participation channel available to contractors is important to midstream success.

Spending and Verified Net Savings Results

Chart 17 summarizes the spending and verified net savings results for the HVAC program.

CHART 17 – 2020 HVAC PROGRAM SPENDING AND VERIFIED NET SAVINGS



Home Energy Consultation Program (DTE Electric and DTE Gas)

The objective of the Home Energy Consultation (HEC) program is to provide 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 walk-through of the home (which is known as an HEC) and creates a personalized home energy profile that shows where the home uses the most energy. During the walk-through, the energy specialist also identifies free products that can be installed in the home. Typical in-unit measures include LEDs, LED nightlights, energy efficient showerheads, energy efficient kitchen and bath aerators, advanced power strips, programmable and Wi-Fi thermostats, and pipe wrap insulation.

Highlights

- Over 19,000 non-low-income HECs were completed throughout the DTE service territory in 2020. Low-income customers are included in the Low-Income program section of this report.
- The program achieved high customer satisfaction throughout the year.
- Close to 1,000 HECs were completed per week once the HEC program was back in the field after a two-month pause due to the COVID-19 pandemic.
- After being piloted in 2019, DTE added advanced power strips to the list of products offered through the program in 2020.

Challenges

- The program spent additional funding on marketing in 2020 because traditional outreach, in-person marketing, was limited.
- One of the main challenges for the HEC program is increasing demand in DTE's western gas territory. To create higher visibility and awareness, the program produced a television commercial in 2020 to run in 2021.
- The program has been running since 2010, and the market is becoming saturated.

Accomplishments

- Customer satisfaction was 100% for seven months in 2020 and averaged 99% for the year. As customers are staying home more, they are appreciative of the energy-saving advice and free products.
- The program implemented same-day rescheduling for appointments to fill in canceled appointments. DTE also attended drive-through events to recruit customers to participate in HEC.

Collaboration Efforts

- To promote the HEC program, the DTE program team collaborated with the DTE Revenue Management and Protection to refer customers to the program.
- The program collaborates with community groups to refer their constituents to schedule and complete an HEC. For each completed appointment, the community group (e.g., Girl Scouts, churches) receives a referral bonus.
- The program collaborates with the American Red Cross to install smoke alarms in homes that need them.

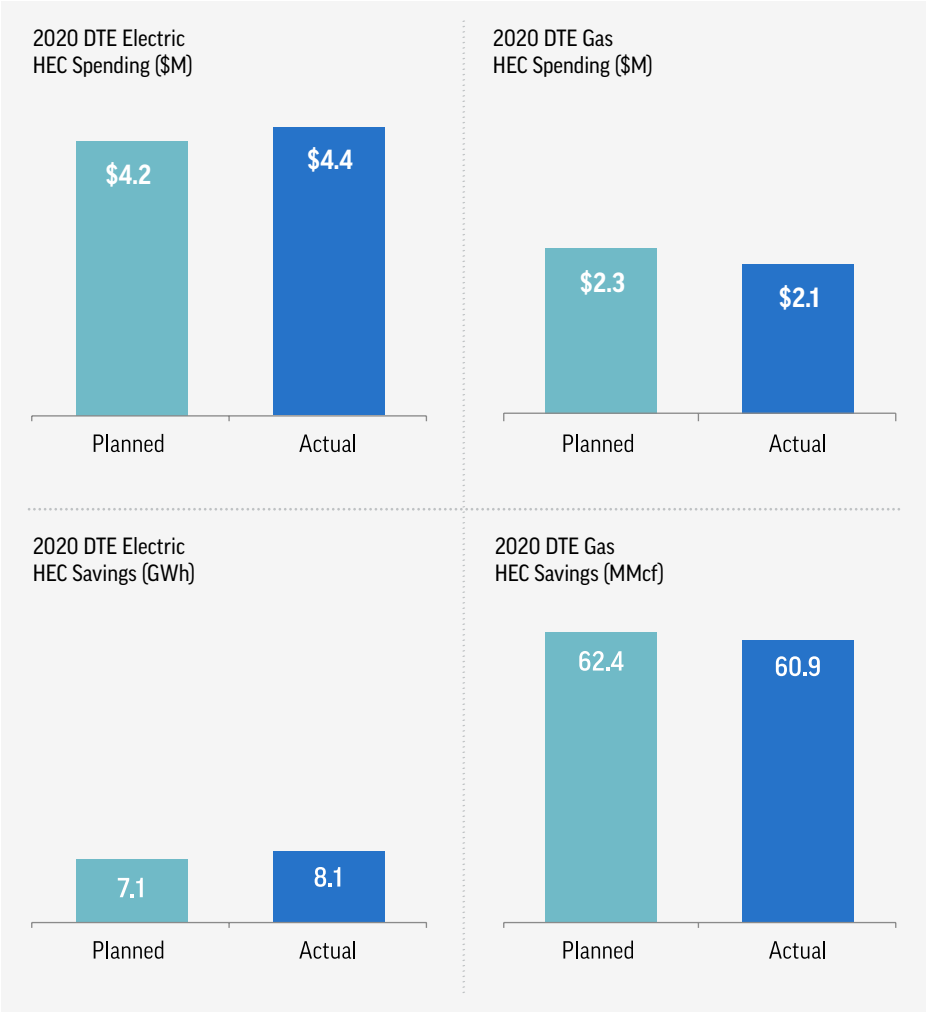
Lessons Learned

- The program developed flexible strategies for planned marketing and communications.
- The program is nimble—it can adapt and change processes to meet the needs of customers and employees.

Spending and Verified Net Savings Results

Chart 18 summarizes the spending and verified net savings results for the HEC program. The results do not include low-income homes.

CHART 18 – 2020 HEC PROGRAM SPENDING AND VERIFIED NET SAVINGS



Case: U-20871
Exhibit: A-6
Witness: C. M. Payne
Page 39 of 95

Home Energy Efficiency Kits Program (DTE Electric and DTE Gas)

The objective of the Home Energy Efficiency Kits (HEEK) program is to provide 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, LED nightlights, energy efficient showerheads, energy efficient kitchen and bath faucet aerators, advanced power strips, and pipe wrap insulation.

Highlights

- In 2020, the program had 45,361 electric and 28,335 gas participants.
- The HEEK program removed the Energy Savvy survey in 2020 increasing program participation. In this survey, respondents entered information about their home and its characteristics; in return, they received energy savings information customized to their home's energy needs. The program met its savings and participation goals ahead of schedule. This large influx of program activity required DTE and the implementation teams to coordinate and overcome a variety of challenges.

Challenges

- The increase in program demand and the cadence of that demand made it hard to validate, process, and fulfill kit requests.
- Additional complexities in the validation and fulfillment of kits included additional manual verification, shipping challenges, and supply chain issues.

Accomplishments

- The HEEK program met demand that would otherwise be directed to the HEC program, which experienced a brief pause in operations in 2020.
- The program doubled the kits it fulfilled over its projections from the beginning of the year.

Collaboration Efforts

- There are no utility collaboration efforts for this program.

Lessons Learned

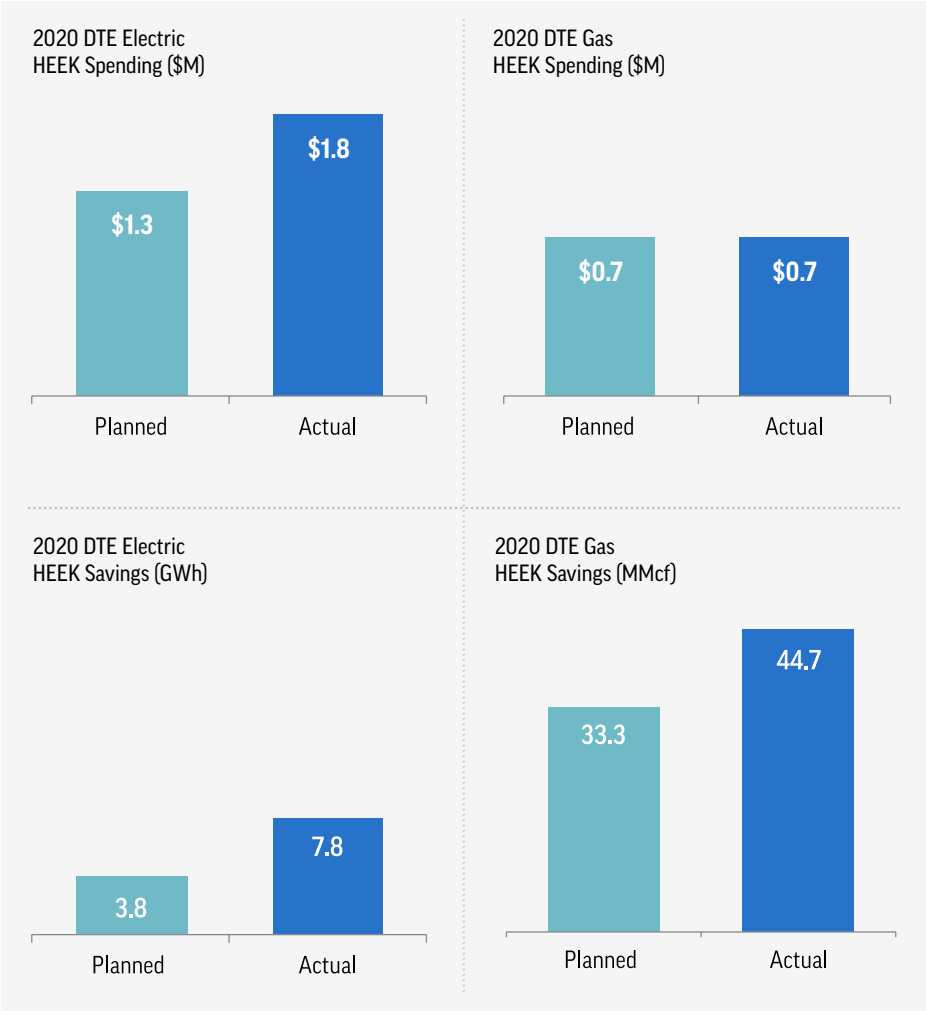
- Maintaining quality is a focus, with implementors bringing fulfillment in-house by purchasing and operating their own warehouses and experimenting with different shipping materials to determine optimal packaging.
- The program is reassessing its marketing needs considering the overwhelming demand for kits.

Case: U-20871
Exhibit: A-6
Witness: C. M. Payne
Page 40 of 95

Spending and Verified Net Savings Results

Chart 19 summarizes the spending and verified net savings for the HEEK program.

CHART 19 – 2020 HEEK PROGRAM SPENDING AND VERIFIED NET SAVINGS



Home Energy Reports Program (DTE Electric and DTE Gas)

The objective of the Home Energy Reports (HER) program is to encourage 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 in comparison with the average energy usage of approximately 100 nearby similar homes and a second comparison with the customer's most efficient nearby similar homes (the top 20%). The report also contains energy-savings tips and promotions for other energy efficiency programs. The customer is sent the HER via the USPS; an abbreviated email version of the HER is sent to customers with an available email address. Deemed energy savings are based exclusively on printed reports.

Highlights

- In 2020, the program mailed HERs to more than 500,000 customers throughout DTE's service territory.
- Customers reduced their electricity consumption by an estimated 54,000 MWh and gas consumption by an estimated 217,000 Mcf.[19]

Challenges

- A data validation issue resulted in some customers not receiving their HERs in 2020.

Accomplishments

- In April 2020, the HER program added a new wave of 115,000 electric customers to meet the program year savings goals.
- Customer satisfaction increased by 11% from 68% to 79%[20] by the end of 2020, exceeding the satisfaction target of 72%. The increase in customer satisfaction may be related to a 2020 initiative that invited customers to provide more information about themselves or ask questions by calling the customer service center.

Collaboration Efforts

- In 2020, DTE and Oracle discussed exploring a possible collaboration with SEMCO Energy Gas Company (SEMCO). A portion of SEMCO gas customers are also DTE electric customers. SEMCO started an HER program for a select group of its natural gas customers in 2020. Given there are approximately 28,000 DTE HER recipients in the shared service territory, the discussions are focused on possibly combining reports.
- The HER program collaborates with other DTE programs by highlighting those program initiatives in the report. The Insight app received regular promotion throughout 2020.

Lessons Learned

- Giving customers the ability to provide DTE with more information about their household appears to increase customer confidence in the content of the reports and may also increase customer satisfaction.

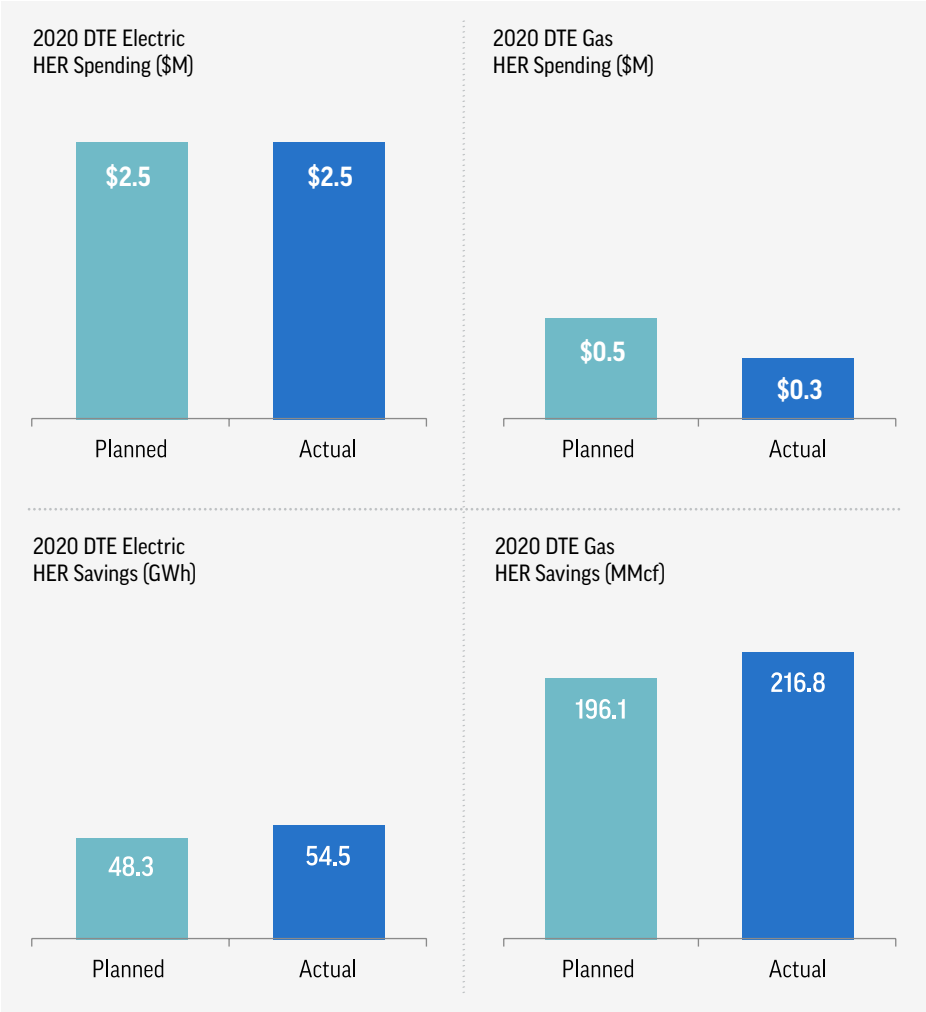
19 These estimates represent verified net savings for the program.
20 Customer satisfaction scores reported here are unweighted and may not reflect scores reported in the final evaluation report.

Case: U-20871
Exhibit: A-6
Witness: C. M. Payne
Page 42 of 95

Spending and Verified Net Savings Results

Chart 20 summarizes the spending and verified net savings results of the HER program.

CHART 20 – 2020 HER PROGRAM SPENDING AND VERIFIED NET SAVINGS



Low-Income Program (DTE Electric and DTE Gas)

The objective of the Low-Income program is to provide recommendations, direct installation of qualified EWR measures, and education to low-income DTE customers 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. It also works with a select number of independent contractors when needed. This vast network of participating organizations offers comprehensive assistance and assists DTE in identifying qualified customers. The residential Low-Income program also includes customers residing in designated low-income multifamily units. In 2020, the Low-Income program had 10,926 electric and 12,273 gas participants.

DTE does not pay incentives directly to its low-income residential customers. Instead, the Low-Income program delivers incentive funding to these customers through a variety of in-kind services. The services include deep savings measures such as:

- Weatherization
- Furnace tune-up and replacement
- Insulation
- Water heater replacement

It also includes the replacement of inefficient refrigerators with ENERGY STAR model refrigerators in single-family homes and low-income multifamily dwellings, and in-home consultation and installation of energy efficient measures through the HEC program.

Low-cost measures such as LEDs, pipe wrap, energy efficient showerheads, and faucet aerators are installed at no cost to low-income multifamily tenants. 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. Rebates can be up to 10 times the amount of non-low-income rebates.

DTE launched the PTCI in 2020; this initiative aimed 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 EWR services to offer targeted services to payment-troubled customers. The EWR services are delivered through the EEA and Multifamily programs.

Highlights

EEA

- New measures were added in 2020, including window air conditioning units, heat pump water heaters, tankless water heaters, Wi-Fi thermostats, and advanced power strips. These additions provided customers with more comprehensive efficiency upgrades.
- DTE was honored with an Inspiring Efficiency Impact Award at the 2021 Midwest Energy Solutions Conference for its work supporting the limited income community in Detroit through the EEA program. The Inspiring Efficiency Awards recognize Midwest leaders who deliver groundbreaking advancements in energy efficiency and the Impact award is presented to an organization that has made a significant and measurable impact based on their target market.

HEC

- The HEC program achieved high customer satisfaction throughout the year; satisfaction was 100% for 7 out of the 10 months the program was in the field, with 99% overall satisfaction in 2020.

Multifamily

- The program doubled furnace rebates in the new construction segment.
- The program added pool heaters as a new measure.
- The program partnered with Lowe's Home Improvement to add natural gas water heaters to the program in 2020. Old tank-style water heaters were replaced with new ENERGY STAR water heaters through Lowe's as a subcontractor at no cost to the customer.

Income-Qualified Heat Pumps

- High efficiency, whole home, cold climate heat pumps were installed in 40 multifamily and 20 single-family homes with electric 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.

PTCI

- DTE was successful in getting the initiative running in August 2020.
- In 2020, PTCI staff worked collaboratively with multiple partners and interveners to identify customers and provide targeted EWR services.
- The initiative served 736 customers in 2020 (567 single-family and 169 multifamily), more than the target of 500 customers identified in the settlement agreement.

Challenges

EEA

- Rebate amounts had to be adjusted due to limited supply options and to find partners willing to provide measures such as windows and refrigerators.

Income-Qualified Heat Pumps

- The limited inventory of low-income single-family homes with electric baseboard heat within DTE's territory makes recruitment difficult.
- Because heat pumps are not a drop-in replacement to homes with electric baseboard heat, the installation is more complex and costly. Some homes required expensive repairs or the addition of electric panels, further increasing the cost.

PTCI

- As the initiative was rolled out, email served as the only means of engaging with customers (no direct mail); these communications were not co-branded with contractors, resulting in skepticism from customers.
- Reaching out to customers is a new practice for EEA contractors working on PTCI. Contractors have had to learn how to identify and reach out to eligible customers.
- Trying to find ways to get the initiative to work for multifamily customers has been particularly challenging given the Multifamily program is focused on working with property owners rather than tenants and the bulk of the energy savings are received by property owners rather than multifamily residents.

Accomplishments

EEA

- EEA continued to build its network of partners and included Detroit 21, a group of nonprofits, which has led to reaching more customers in need.
- The implementer, Solutions for Energy Efficient Logistics (SEEL), pivoted to more intense virtual quality assurance/quality control of installation by partners, which helped resolve some of the IRAF issues seen in the Wave 1 field work.

HEC

- In 2020, the program completed nearly 12,000 low-income HECs throughout the DTE service territory.
- DTE began conducting outreach events virtually instead of in-person, including attending drive-through events, approaching vehicles at food banks for recruitment.

Case: U-20871
Exhibit: A-6
Witness: C. M. Payne
Page 45 of 95

Multifamily

- The program completed 3,646 direct install installations and 178 prescriptive projects.
- The program increased incentives for several lighting measures and for space heating boilers.

Income-Qualified Heat Pumps

- Despite recruitment challenges, the program successfully installed high efficiency, whole home, cold climate heat pumps in 40 multifamily and 20 single-family homes with electric heat at no cost to the customer.
- The new cold climate heat pump units were well-received by the customers and they appreciated DTE's efforts to provide these units free of cost.

PTCI

- The PTCI has been working to establish an approach to market the program through EEA partners to a specific demographic of EEA customers.

Collaboration Efforts

EEA

- DTE is collaborating with Consumers Energy when a customer's utilities are split between the two companies. Specifically, DTE is referring customers to participate in Consumers Energy programs for a more comprehensive efficiency upgrade for their home.
- DTE partnered with the Detroit Community Housing Network to upgrade efficiency measures in recently sold eligible housing.
- DTE partnered with the City of Detroit to assist customers negatively impacted by COVID-19 as part of the Detroit Community Health Corps program.
- The EEA program collaborated with DTE's Revenue Management and Protection (RM&P) department to provide LED light bulbs at events to support customers negatively impacted by the COVID-19 pandemic.

HEC

- To promote the HEC program, the DTE program team collaborated with the DTE Revenue Management and Protection group to refer customers to the program.
- The program collaborates with community groups to refer their constituents to schedule and complete an HEC. For each completed appointment the community group (e.g., Girl Scouts, churches) receives a referral bonus.
- The program collaborates with the American Red Cross to install smoke alarms in homes that need them.

Multifamily

- The program collaborates closely with Michigan Saves and edited its catalogue so multifamily customers can participate in low interest loans from Michigan Saves. There was no participation in 2020, but customers have the option to work with a Michigan Saves contractor to secure the right loan, ensure their project qualifies, and receive either a 0% or low interest loan. The incentive from the program is used to buy the interest down. The outreach team has begun promoting this part of the program to customers.
- The program performs optional Level 1 property assessments for multifamily properties. For those customers that have one DTE fuel and one Consumers fuel, recommendations from the assessment include rebates from both utilities.

Income-Qualified Heat Pumps

- The program collaborated with Mitsubishi, a major mini-split, cold climate heat pump manufacturer, to understand the technology and review equipment sizing to ensure required heat pump models would be available to the program customers. This collaboration was especially important because cold climate heat pumps are not a drop-in replacement for homes with electric baseboard heat.
- The program worked with the EEA program partner agencies to recruit single-family customers with electric heat, which were difficult to find.

PTCI

- DTE has been collaborating with stakeholders throughout the rollout of the initiative, providing regular reporting to improve program design and delivery.
- DTE is also collaborating internally with Revenue Management and Protection to bring together multiple data sources to track key metrics.

Lessons Learned

EEA

- The largest lesson learned was to be flexible—whether with the amount of contact during an installation process or switching measure models due to supply chain constraints, the goal is to do whatever is necessary to get people the help they need through the program.
- Due to the pandemic, normal avenues of communication were not possible, so quick action needed to be taken to ensure that community agencies were kept up to speed regarding program activities and protocols.

HEC

- The program learned quickly to pivot and be flexible in 2020. Sudden and new energy company and internal guidelines needed to be followed and adopted to keep the program running.

Case: U-20871
Exhibit: A-6
Witness: C. M. Payne
Page 46 of 95

Multifamily

- Customers are interested in the low-income portion of the program because the incentives are higher and because trade allies are actively recruiting low-income projects.

Income-Qualified Heat Pumps

- The program found that customers were reluctant to participate in the program if they had to pay for a portion of the heat pump installation cost. The program had to switch to paying 100% of the equipment and installation cost to increase customer participation.
- Low- and medium-income homes with electric baseboard heat were difficult to find and do not represent a large portion of customers in DTE's territory.
- Heat pump equipment and installation cost was much higher for single-family customers than initially anticipated by the program.

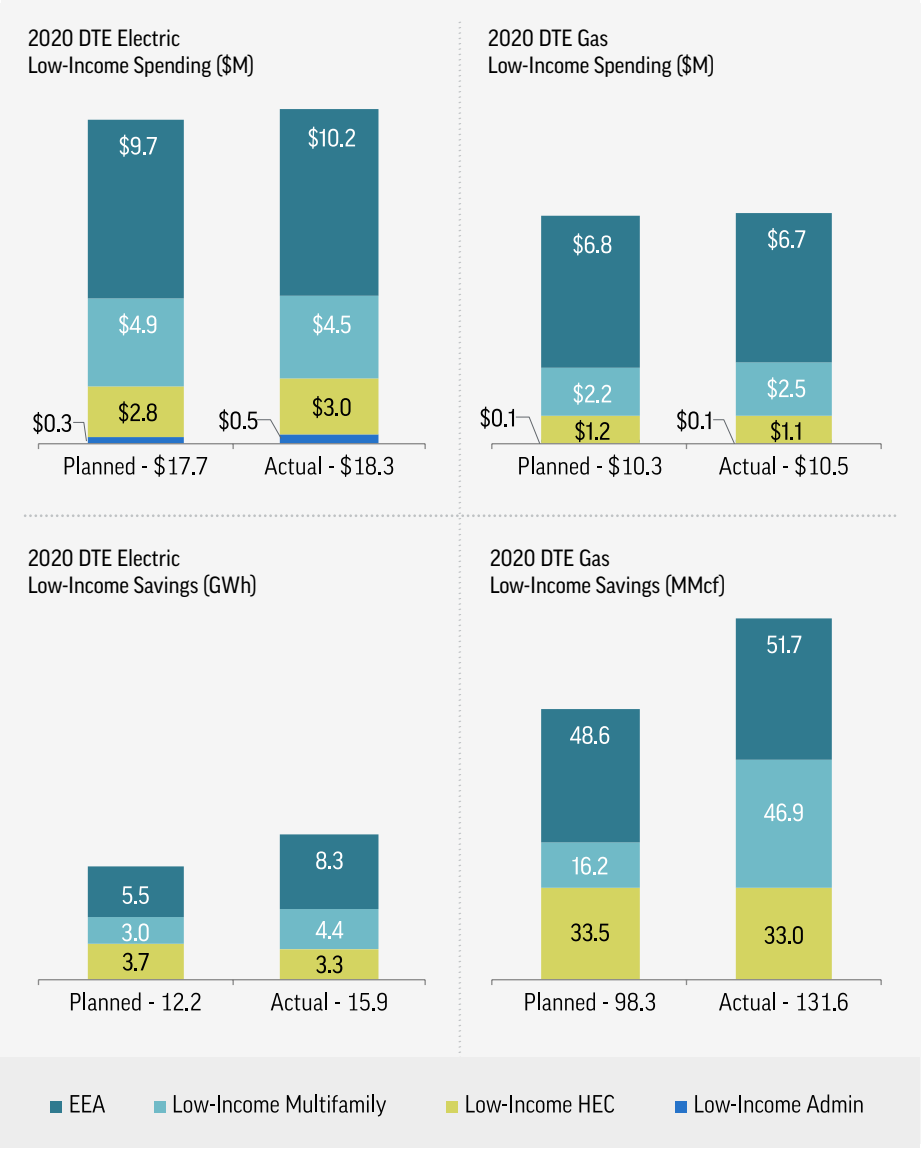
PTCI

- A need exists to develop a better strategy to ensure customers receive the full breadth of measures required for them to achieve the desired energy savings and make bills more affordable. The measures provided to customers in 2020 will not meet the desired levels for many customers.
- The initiative is better suited to single-family customers than customers living in multifamily buildings because DTE's Multifamily program is focused on providing services that typically result in energy savings that reduce energy costs for property owners rather than tenants. While some property owners may choose to install new energy efficient equipment such as refrigerators in rental units, the types of measures provided to tenants in the Multifamily program are unlikely to make a meaningful impact on the affordability of customer bills.

Spending and Verified Net Savings Results

Chart 21 summarizes the spending and verified net savings results for the Low-Income program, which includes the EEA program (including PTCI and Income-Qualified Heat Pumps), and the low-income components of the Multifamily (including Income-Qualified Heat Pumps) and HEC programs.

CHART 21 – 2020 LOW-INCOME PROGRAM SPENDING AND VERIFIED NET SAVINGS



Multifamily Program (DTE Electric and DTE Gas)

The objective of the Multifamily program is to produce energy savings in multifamily buildings with three or more units under one contiguous roof through the direct installation of energy-saving measures.

Program Description

Typical in-unit measures include LEDs, LED nightlights, energy efficient showerheads, energy efficient kitchen and bath aerators, Wi-Fi thermostats, and pipe wrap insulation where the units have electric water heating. There is no cost to customers for the in-unit installations. Energy efficiency education is also delivered at all phases of the project to property owners and managers and to individual tenants. Because the Multifamily program is a direct install program, tenants do not receive incentive payments.

The Multifamily program also has common area rebates (for HVAC, lighting, and envelope upgrades and other custom projects) and direct installations (including LEDs, incandescent exit sign bulb replacements, faucet aerators, and pipe wrap) for property owners. Typically, building owners receive rebates and are responsible for paying a portion of the cost of the installed common area measures.

Highlights

- The program completed 2,710 non-low-income direct install units and 72 prescriptive projects.
- The Multifamily program achieved its savings and budget goals in 2020.
- The program achieved high satisfaction from tenants and property managers throughout the year.
- The program added package terminal heat pumps, air source heat pumps, package terminal air conditioners, LED internal occupancy sensors, and vertical package HVAC units to the suite of products offered through the program.

Challenges

- Marketing efforts for the program are costly due to data purchases and face-to-face marketing.
- Due to the maturation of the program, market saturation has been a challenge for the direct installation of measures offered through the program.
- Growing the trade ally network is a challenge. The program would like to grow the network with more diverse trade ally participation and see more trade allies adjust their sales model to account for and promote program incentives. More than fifty trade allies participated in the program in 2020.

Accomplishments

- The program concentrated on common area pipe wrap and steam traps in the second half of 2020 to meet savings targets.
- The program offered a double bonus on several lighting measures (interior linear LED, exterior high intensity discharge to LED, and interior and exterior mobile-based high intensity discharge to LED) in mid-July to increase participation with prescriptive lighting measures in common areas.
- The program increased the incentives for space heating boilers. These bonuses helped the program achieve its goals for the year.

Case: U-20871
Exhibit: A-6
Witness: C. M. Payne
Page 48 of 95

Collaboration Efforts

- The program continued to collaborate with Consumers Energy in 2020. This collaboration involves monthly joint meetings and a joint annual meeting with trade allies to roll out the program at the beginning of each program year. The monthly meetings are a general forum to talk about what is going on in both programs, collaborate on direct install properties, and collaborate on marketing.
- Consumers Energy started using the same online application as DTE. Trade allies can now use one website and portal to login for applications to both utility programs. Consumers Energy also began marketing DTE-specific measures.

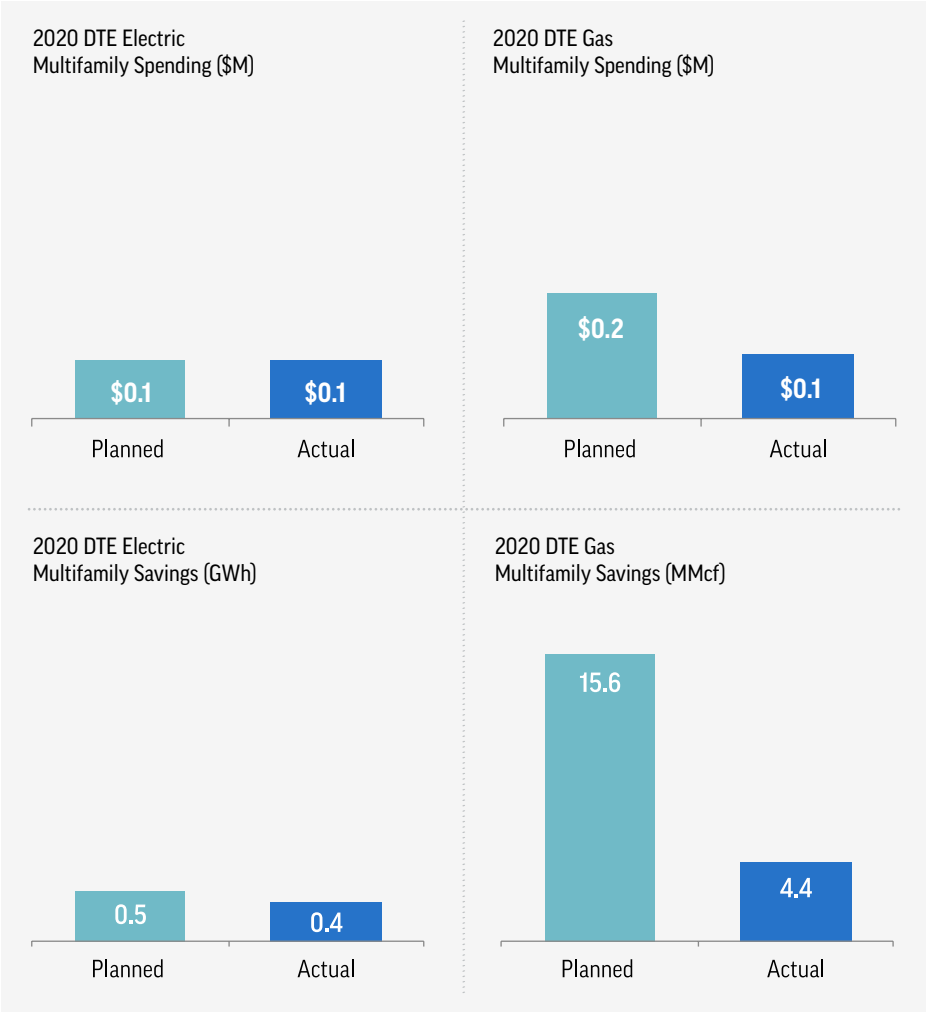
Lessons Learned

- The program is nimble—it can adapt and change processes to meet the needs of customers and employees.

Spending and Verified Net Savings Results

Chart 22 summarizes the 2020 DTE Electric and DTE Gas spending and verified net savings results for the Multifamily program. The results do not include low-income multifamily units or multifamily common areas.

CHART 22 – 2020 MULTIFAMILY PROGRAM SPENDING AND VERIFIED NET SAVINGS



New Home Construction Program (DTE Electric and DTE Gas)

The objective of the New Home Construction (NHC) program is to promote construction of energy efficient homes in DTE service territory.

Program Description

Participating builders must achieve a Home Energy Rating Score (HERS) of at least 60 for a new construction home to be eligible for the program. Builders partner with participating HERS raters who confirm program requirements are met. Savings are claimed on the difference between modeled energy usage for a baseline home and the newly constructed efficient home.

Builders are eligible for tiered incentives for specific measures including furnaces, water heaters, and air sealing techniques. Builders are also eligible for pay-for-performance incentives based on modeled energy savings. 2020 was the first full year of commercialization for the NHC program.

Highlights

- In 2020, the program had 915 electric and 746 gas participants.
- Builders can receive incentives up to $750 for a DTE Electric account, $1,000 for a DTE Gas account, and $1,400 for a combo DTE account.
- Builders that construct ENERGY STAR-rated homes are eligible for an additional incentive of $350.

Challenges

- Recruiting builders to construct ENERGY STAR certified homes was difficult because the checklists are comprehensive and require more steps for HERS raters to complete.
- Program staff had difficulty reaching builders for status updates or to respond to potential errors.
- This program is heavily influenced by economic factors, which could increase or decrease participation in a given year. Understanding builders' forecasts for the next 1-2 years can help to plan and mitigate risk.

Accomplishments

- The number of participating builders increased from 25 in 2019 to 40 in 2020.
- The program maintains a healthy pipeline of builders, which was important in helping the program meet its 2020 targets.

Collaboration Efforts

- DTE developed co-branded material with Consumers Energy for customers served by both utilities.
- Consumers Energy and DTE collaborated to facilitate channeling of builders between their new construction programs.

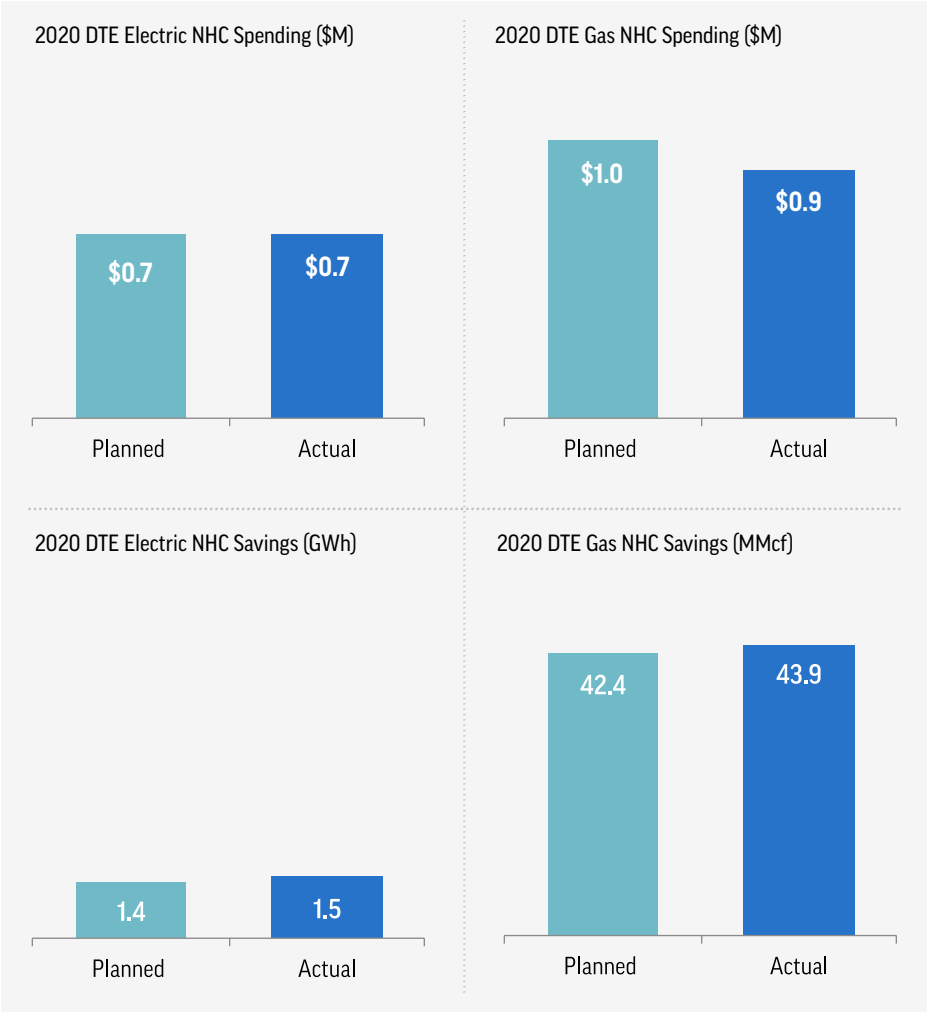
Lessons Learned

- Constant communication is critical to ensure effective program implementation.
- Maintaining a strong builder network and healthy pipeline can help to mitigate any potential dips in the new construction market.

Spending and Verified Net Savings Results

Chart 23 summarizes the 2020 DTE Electric and DTE Gas spending and verified net savings results for the NHC program.

CHART 23 – 2020 NHC PROGRAM SPENDING AND VERIFIED NET SAVINGS



Revolving Loan Fund Program (DTE Electric and DTE Gas)

The Revolving Loan Fund program is designed to serve customers not eligible to participate in the Low-Income program but still facing financial challenges in participating in other EWR programs.

Program Description

This program targets customers above 200% of the Federal Poverty Level (FPL) but below 300% FPL. In 2019, the program was only in Washtenaw County, but it expanded to include Wayne County in 2020.

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

Highlights

- In 2020, the program had 29 electric and 28 gas participants.
- Projects were completed in both Washtenaw and Wayne Counties in 2020. Prior to 2020, the program was restricted to Washtenaw County using Habitat for Humanity as an implementer.
- The program exceeded the kWh savings goal by 134% and achieved 88% of natural gas goals. The program completed 31 projects, meeting its targeted number of projects.

Challenges

- Onboarding Walker-Miller Energy Services (Walker-Miller) as an implementer in Wayne County has been challenging due to issues with the required paperwork for the program application process.

Accomplishments

- Michigan Saves implemented continuous improvements to program application and implementation processes to give greater administrative responsibility to the agency partner.
- The program implemented at least six efficiency measures per home, providing a comprehensive approach for customers.

Collaboration Efforts

- Michigan Saves worked with Walker-Miller to engage customers in Wayne County.

Lessons Learned

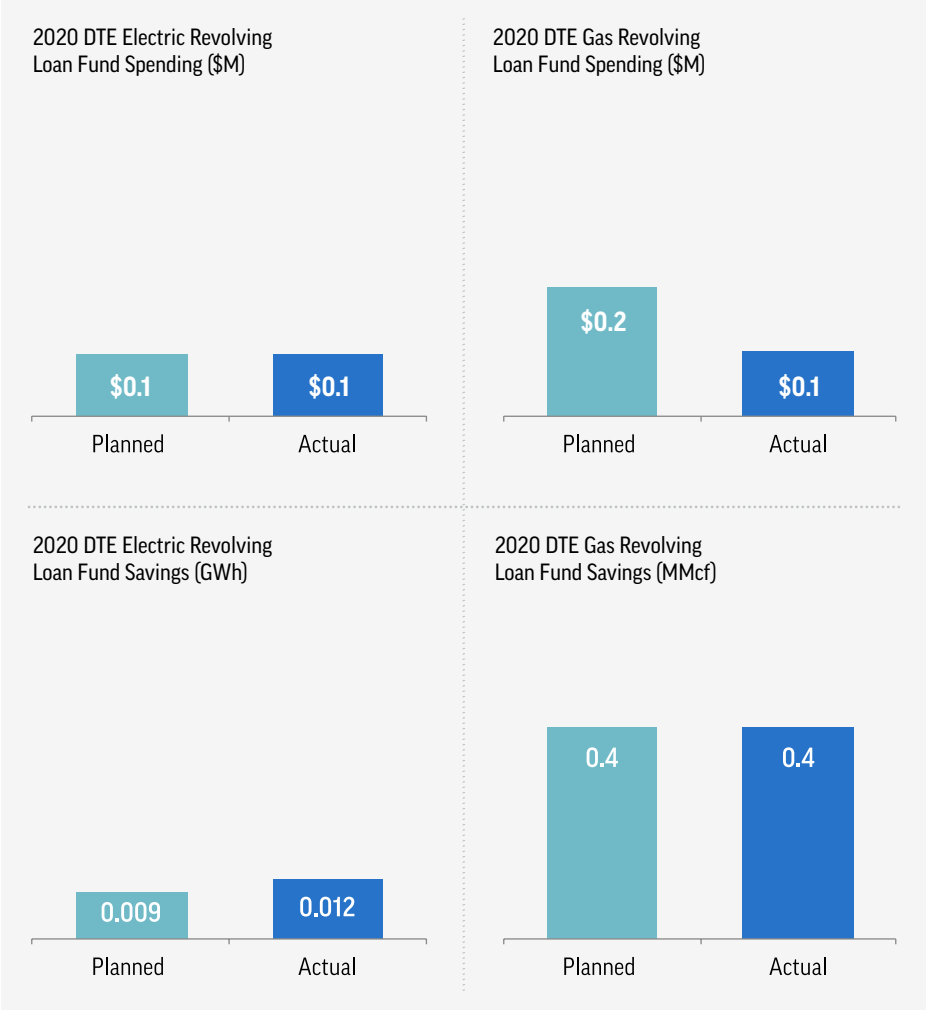
- Expanding partnerships can result in increased access to the program for residents in DTE's service territory; the program was exclusive its first year (2019) to Washtenaw County, but expanded into Wayne County in 2020 through a new partnership with Walker-Miller.
- The growth in the program resulted in a growing administrative burden for Michigan Saves. This issue was addressed by restructuring responsibilities and increasing communication between Michigan Saves and agency partners.

Case: U-20871
Exhibit: A-6
Witness: C. M. Payne
Page 52 of 95

Spending and Verified Net Savings Results

Chart 24 summarizes the 2020 DTE Electric and DTE Gas spending and verified net savings results for the Revolving Loan Fund program.

CHART 24 – 2020 REVOLVING LOAN FUND PROGRAM SPENDING AND VERIFIED NET SAVINGS



School Program (DTE Electric and DTE Gas)

The School program's objective is to develop a powerful culture of energy efficiency with K-12 school students, teachers, schools, and families throughout the DTE service territory in both the public and private sectors to deliver real, measurable energy savings.

Program Description

The School program provides nontraditional opportunities to raise awareness and the adoption of energy efficiency measures and behaviors to help the environment. Each participating teacher and student received 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 have been 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. Implementers provide educational materials through online and in-person delivery channels.

Highlights

- The program developed and offered virtual components of the instructional materials, and delivered materials through three channels: Energy Champions independent e-learning course, in-person presentations, and pre-recorded presentations shown by the teacher.
- The program sent out a similar number of kits in 2020 as compared with 2019. The program distributed 16,957 combo kits, 10,162 electric-only kits, and 9,310 gas-only kits to students.
- The program improved the website by making it more user-friendly, providing more concise information and making it more organized overall.
- The program developed a gamified presentation for secondary students, expanding the reach of the program and allowing more complex products to be introduced to participants.

Challenges

- The Think! Energy website had room for improvement and needed to be updated to include the changes made to the program due to the pandemic. As a result, DTE invested to improve the website, make it more user friendly, and update content to reflect pandemic-related program changes.
- Unexpected school closures and fluctuations between virtual and face-to-face learning due to the pandemic impacted teachers' abilities to distribute kits and participate in the program. Program staff responded by rapidly developing a pre-recorded presentation and independent e-learning course from the in-person presentation traditionally used.
- Verifying that kits had been sent home so that savings could be properly attributed was more challenging since teachers were not in direct contact with a presenter to redistribute kits as needed. Increased communication with teachers and limited shipments to homes allowed all kits to be placed and distribution confirmed.

Accomplishments

- The program adjusted its grant model to provide more funds to more teachers who were able to foster high engagement with the program.
- The program increased its delivery channels by adding virtual components and a home shipment option.
- New virtual offerings made it easier for teachers to assign follow-up activities whether the initial presentation was in school or at home. The virtual offerings also helped the program expand to areas it could not cost-effectively reach with the traditional in-person program model.

Collaboration Efforts

- The program has a formal relationship with the Detroit Public Schools district and provided kits to every fourth-grade student in the district.
- NEF now has a formal relationship with UPPCO as an independent collaborator. UPPCO was part of the Efficiency United[21] School program but broke out the DTE School program from its portfolio to work with the program directly. This direct relationship allows NEF to cost-effectively deliver more gas kits in the Upper Peninsula for DTE and allows for more program participants than when UPPCO was a part of the Efficiency United bundle.

Lessons Learned

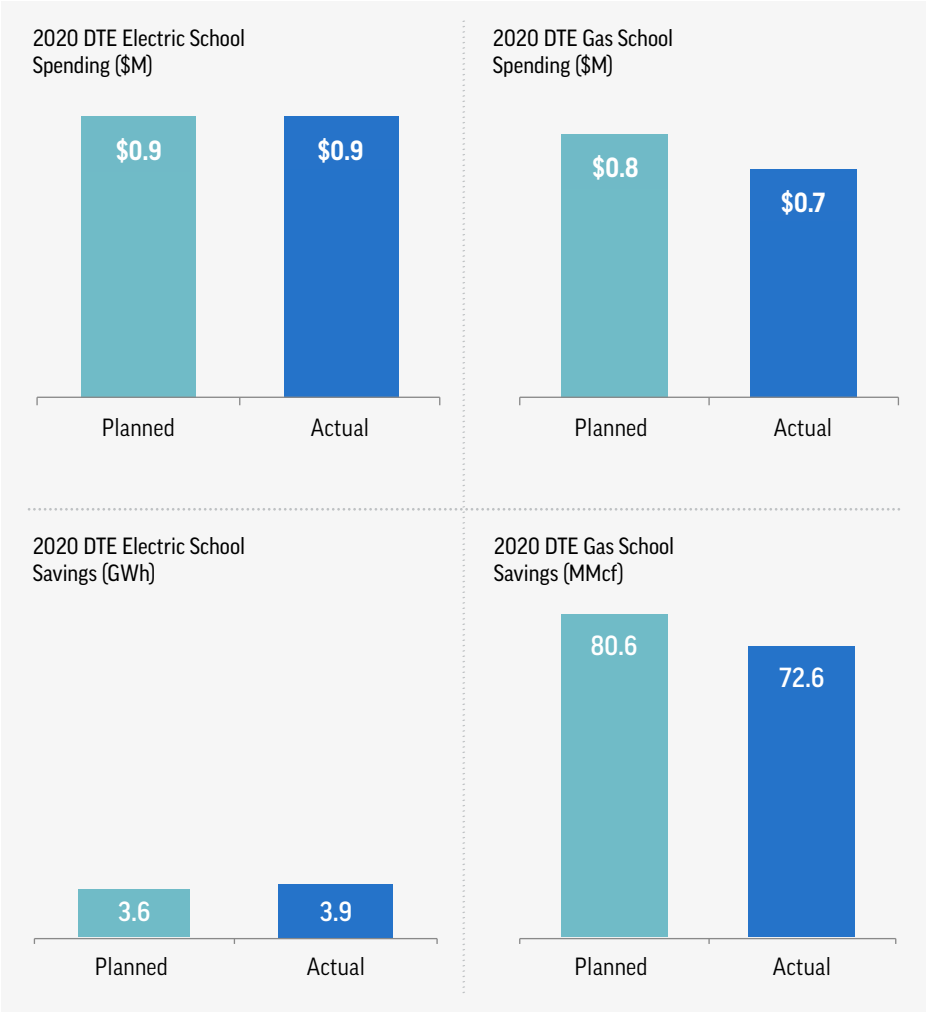
- Incorporating the educational component of the program into district-mandated curriculum presented a problem. The implementer currently provides guidance on how to tie the program to Michigan state standards and coordinate with teachers on when to present material related to the School program to help overcome this challenge.
- Virtual options can be tailored for a variety of learning levels and styles which increased teacher satisfaction.
- The School program provides marketing materials for other DTE programs, though there is not much channeling from other programs to the School program at this time. Because the program is limited to School participants, it is challenging to cross-market with other residential programs. However, there may be an opportunity to further explore and identify opportunities for increased channeling.

21 Efficiency United is a partnership between multiple energy providers to offer energy efficiency measures to residential and commercial customers across Michigan.

Spending and Verified Net Savings Results

Chart 25 summarizes the spending and verified net savings results for the School program.

CHART 25 – 2020 SCHOOL PROGRAM SPENDING AND VERIFIED NET SAVINGS



Case: U-20871
Exhibit: A-6
Witness: C. M. Payne
Page 55 of 95

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.

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 marketing approach 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 electric 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, Strategic Energy Management, and Self-Direct 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** program promotes the installation of energy efficient technologies or delivery channel strategies to validate pilot programs recently commercialized and support new ideas or concepts that support DTE's C&I program offerings.

Case: U-20871
Exhibit: A-6
Witness: C. M. Payne
Page 56 of 95

Key C&I marketing channels included DTE account managers responsible for assigned C&I business customer relationships, energy partnership and services' energy managers, product knowledge workshops, and trade allies that market energy efficiency technology directly to customers. Other materials and mechanisms used to educate and drive awareness were the DTE Energy website, training seminars, technical support, press, and periodicals. Throughout the year, DTE made program presentations to customers; associations/organizations; city, state, and federal government agencies; and vendors, contractors, and engineering and architecture firms. During 2020, most of the program presentations, training sessions, and customer site visits were held virtually due to the State of Michigan stay-at-home orders. Customer and contractor feedback was generally positive regarding the virtual channel; many attendees were pleased with the ease of access to information.

For the Prescriptive and Non-Prescriptive programs, DTE used the same implementation contractor in 2020 as was used to implement the C&I EWR programs from 2009 to 2019, DNV. As the C&I implementation contractor, DNV provides operational support including application review and processing, rebate fulfillment, call center operations and tracking of results, and customer satisfaction surveys for the program.

To encourage an equitable distribution of funds among as many DTE customers as possible, incentives are subject to annual limits and caps. Customers can receive payments up to the cap but not more than $1,000,000 per customer for electric customers and $300,000 per customer for natural gas customers within a single program year. To further ensure incentive funds are used by many customers, special offers also have funding participation limits and a time duration.

Table 7 displays the program year incentive limits. Actual payments per customer facility 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.

DTE launched several special offerings in 2020 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.

In 2020, the C&I programs performed well, achieving 447.6 GWh of verified net electric savings (96% the 2020 plan of 468.2 GWh) and 1,107.6 MMcf of verified net gas savings (approximately 17% more than the 946.4 MMcf plan).

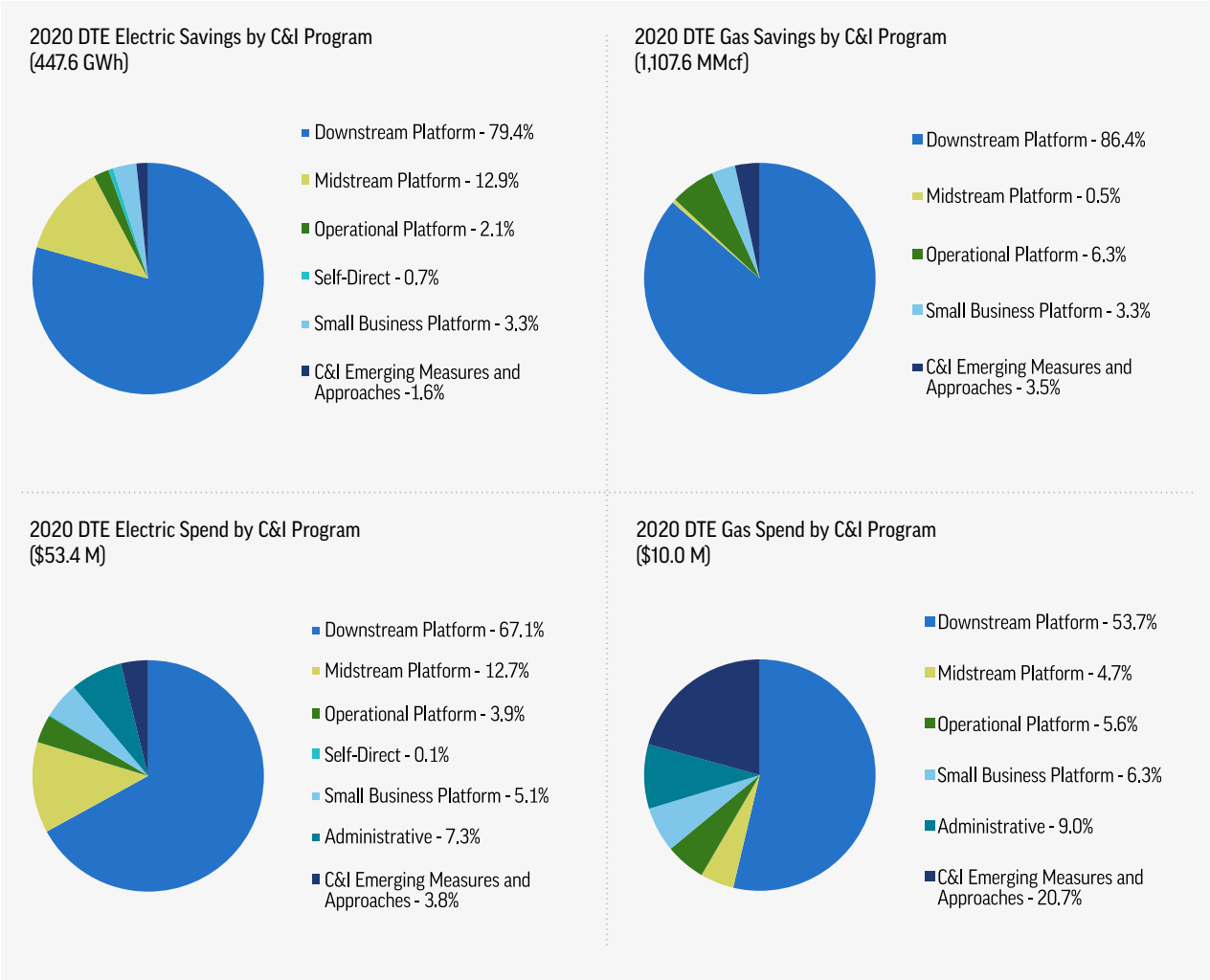
TABLE 7 – 2020 C&I INCENTIVE CAPS

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

Chart 26 summarizes the spending and verified net energy savings achieved by each C&I program in 2020 with the following assumptions:

- DTE Electric includes spending and verified savings for the Downstream Platform (Prescriptive, Multifamily Commercial, ENERGY STAR Retail Lighting, and Non-Prescriptive); Midstream Platform (Midstream Lighting, Midstream Food Service, and Midstream HVAC); Operational Platform (Retro-Commissioning and Strategic Energy Management); Small Business Platform (Business Energy Consultation), and Emerging Measures and Approaches (includes Small Business Focus). Planned savings and spend for the Self-Direct program are discussed in the C&I Operational Platform section.
- DTE Gas includes spending and verified savings for the Downstream Platform (Prescriptive, Non-Prescriptive, and Multifamily); Midstream Platform (Midstream Food Service); Operational Platform (Retro-Commissioning and Strategic Energy Management); Small Business Platform (Business Energy Consultation); and Emerging Measures and Approaches (includes Midstream HVAC Gas and Small Business Focus). No customers participated in the gas Self-Direct option.

CHART 26 – 2020 C&I PROGRAMS SPENDING AND VERIFIED NET SAVINGS



Case: U-20871
Exhibit: A-6
Witness: C. M. Payne
Page 58 of 83

Chart 27 summarizes the electric and gas spending and verified net energy savings for the 2020 C&I programs combined.

The C&I programs received 92% or higher customer satisfaction scores across all programs. In 2020, 412,069 customer applications were processed within the C&I Electric and Gas programs.

CHART 27 – 2020 C&I PROGRAM SPENDING AND VERIFIED NET SAVINGS

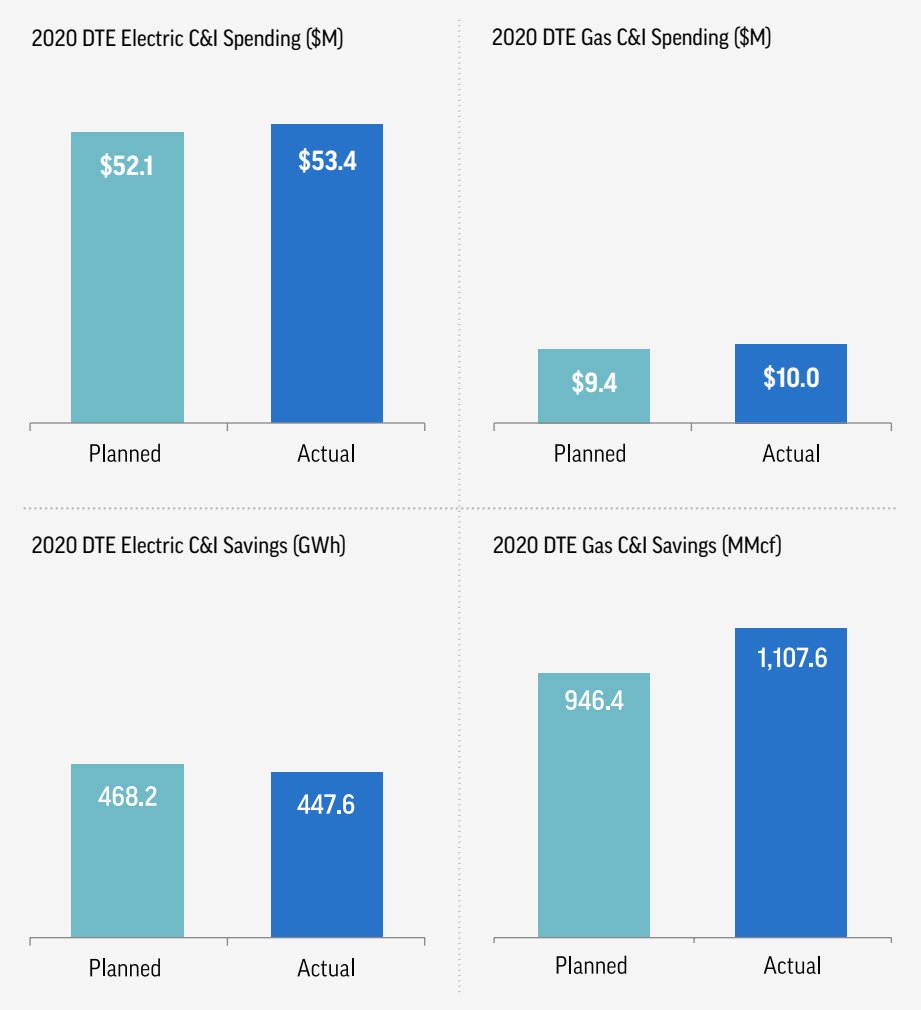
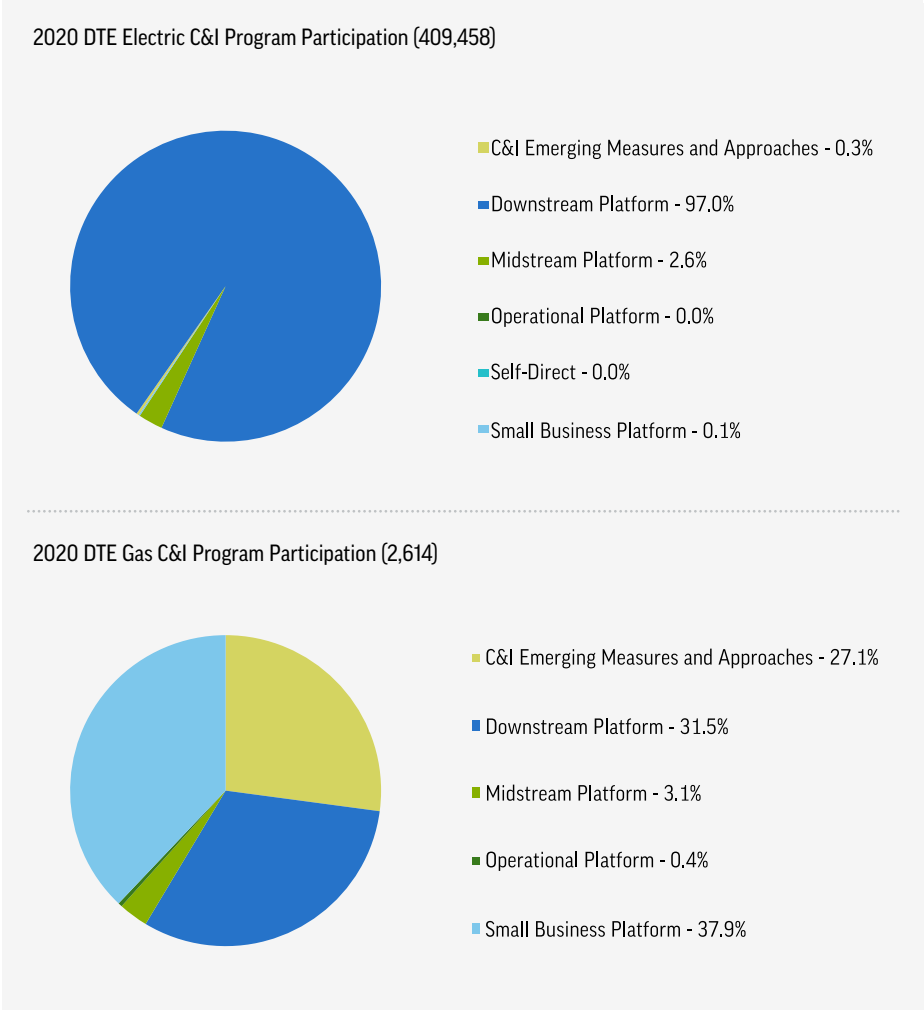


Chart 28 summarizes the number of customers that participated in each of the C&I program categories.

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.

Case: U-20871
Exhibit: A-6
Witness: C. M. Payne
Page 60 of 95

Prescriptive Program (DTE Electric and DTE Gas)

The objective of the Prescriptive program is to provide predetermined measures and incentives to C&I customers for energy efficient equipment installation.

Program Description

These incentives were designed 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.

Prescriptive categories of energy efficient equipment cover numerous applications including but not limited to LED lighting and fixtures, control systems, HVAC, refrigeration, and food service equipment. 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 take the form of 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.

Highlights

- In 2020, the program had 2,091 electric and 621 gas participants. (not including participation in the commercial common areas of the Multifamily program and the ENERGY STAR Retail Lighting program).
- DTE launched the deemed measure worksheet, providing trade allies a way to suggest criteria for new measures for the Prescriptive program. This worksheet gives trade allies a voice in the types of projects the program incentivizes going forward and leads to better collaboration and buy-in from contractors.
- The program added new measures including evaporator controls with demand defrost, process boiler sequencing, and outdoor air intake for air compressors, among others, in 2020.

Challenges

- The diversification of program offerings for C&I customers increases the number of channels in which customers may participate in the DTE programs. Outreach, marketing, and customer support has increased the focus on customer marketing to ensure the delivery channels are clear to the customer. Customers require support to understand which program they are eligible for, which program will suit their needs best, and how to engage DTE staff with questions on their specific program.

Accomplishments

- DTE amended the interior LED lighting measures to reflect hours of use and enable customers and contractors to determine more appropriate incentive levels based on typical lighting usage.
- The program increased the incentives for several measures, including economizers, floating head pressure controls, and attic roof insulation, among others.

Collaboration Efforts

- DTE's independent evaluation contractor, Guidehouse, developed a prototypical, web-based, hourly, utility electric data viewer, including temperature dependence plots, to help the implementation team remotely identify potential prescriptive measure opportunities at C&I premises.

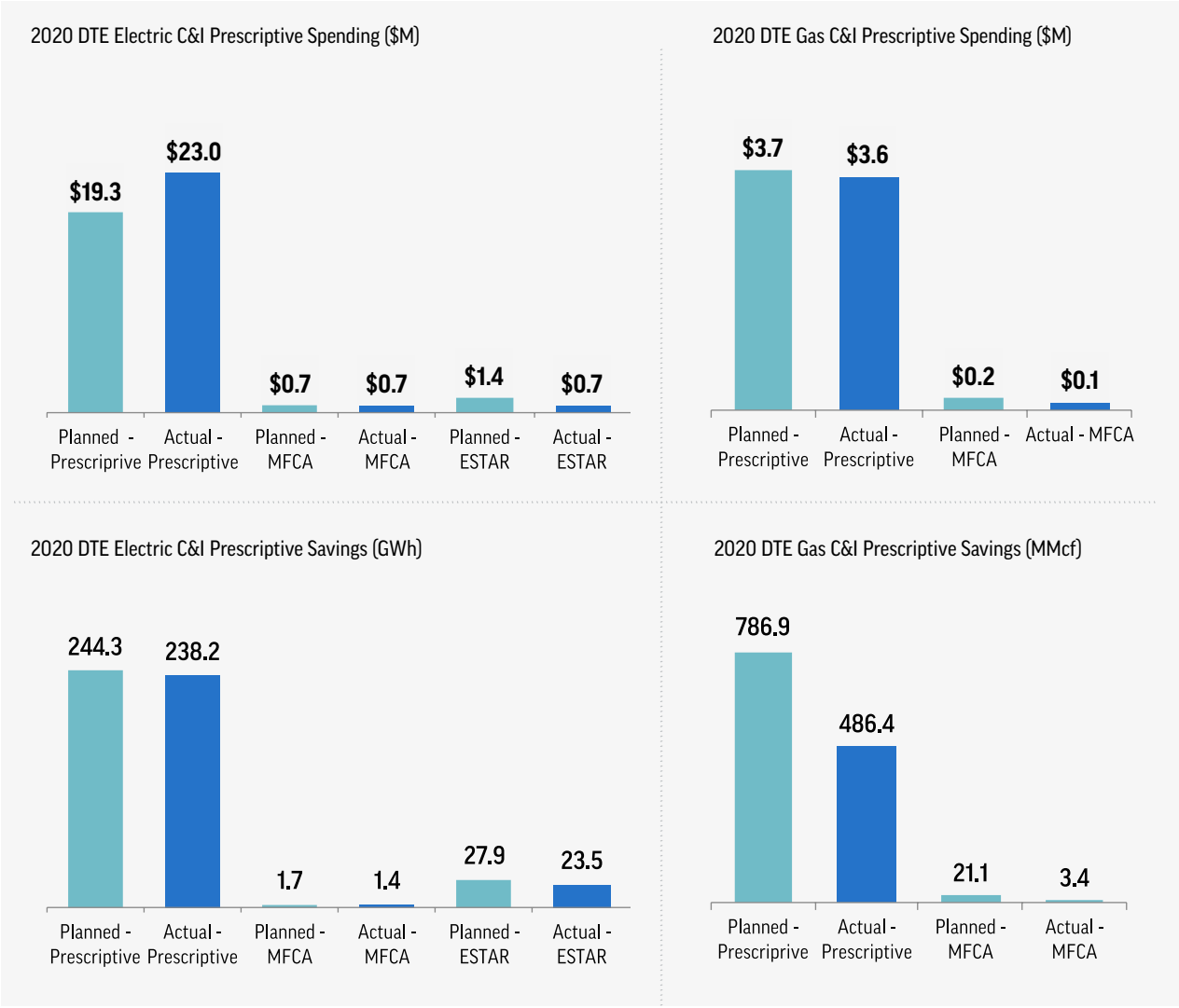
Lessons Learned

- DTE identified building/measure type combinations that may be good candidates for the MEMD based on actual projects implemented in 2020.

Spending and Verified Net Savings Results

Chart 29 summarizes the spending and verified net savings results for the Prescriptive program and includes the C&I portion of the Multifamily (MFCA) and ENERGY STAR Retail Lighting programs.

CHART 29 – 2020 PRESCRIPTIVE PROGRAM SPENDING AND VERIFIED NET SAVINGS



Non-Prescriptive Program (DTE Electric and DTE Gas)

The Non-Prescriptive program promotes the installation of energy efficient technologies among DTE's customers.

Program Description

The program's components include custom measures and requests for proposals. The program provides incentives to customers for measures 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.

The objective of the Non-Prescriptive program is to provide customized incentives to C&I customers for the installation of innovative and unique energy efficiency equipment and controls that decrease electricity or gas consumption. Examples of Non-Prescriptive program measures implemented during 2020 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.

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 1- to 8-year simple payback for electric and a minimum of 1-year simple payback for both gas and electric projects, and a maximum of 8-year payback for electric-only projects. Incentives are capped at 50% of the total project cost.

Highlights

- In 2020, the program had 832 electric and 183 gas participants.
- DTE made improvements to the approval process for Non-Prescriptive applications, allowing faster turnaround times for custom projects.

Challenges

- The diverse number of program offerings for C&I customers should be marketed to various customer segments as applicable. The DTE C&I program portfolio offers a wide range of programs for all sized businesses, from the very small to the large industrial customers. Outreach, marketing, and customer support is critical to help business customers understand which program will best serve their needs. Increased customer education and awareness is necessary to assist customers with determining which programs they are eligible for.

Accomplishments

- The program increased the proportion of non-lighting savings.
- DTE improved engineering oversight for high complexity projects.
- DTE continued to maintain a relevant trade ally directory.

Lessons Learned

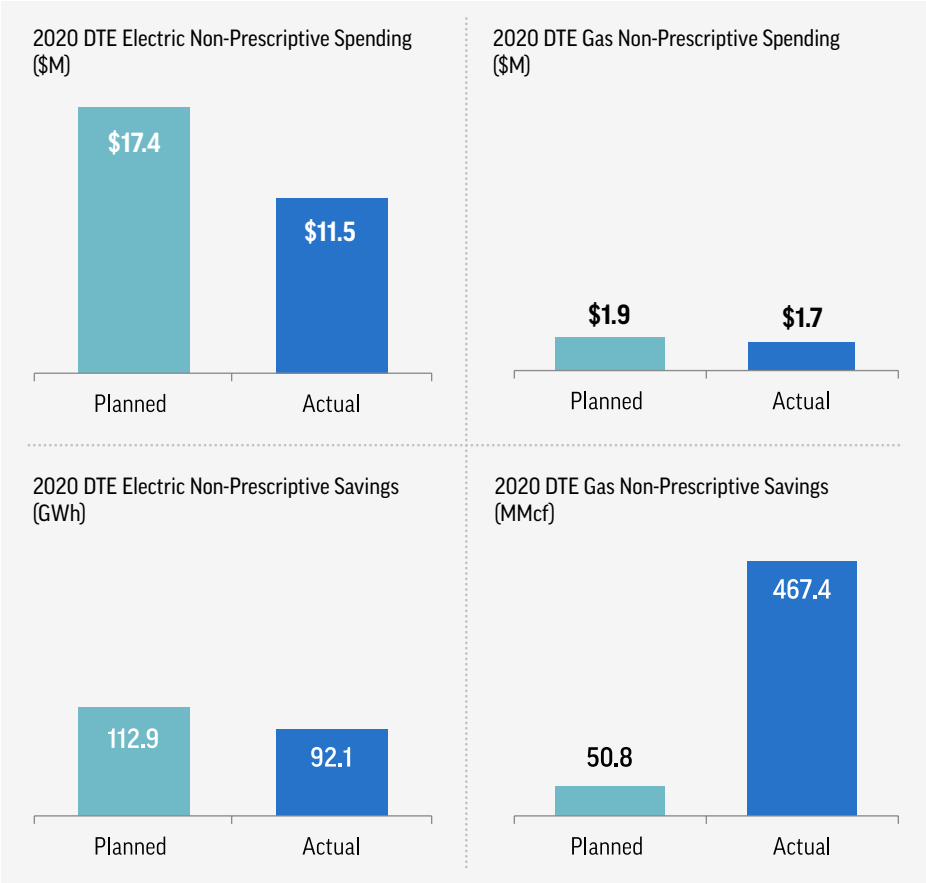
- Hours of use differences for different spaces within a facility can result in adjustments to project savings.
- Robust project documentation for complex projects, including a detailed project overview, is recommended for quality control.

Case: U-20871
Exhibit: A-6
Witness: C. M. Payne
Page 63 of 95

Spending and Verified Net Savings Results

Chart 30 summarizes the spending and verified net savings results for the Non-Prescriptive program.

CHART 30 – 2020 NON-PRESCRIPTIVE PROGRAM SPENDING AND VERIFIED NET 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.

Case: U-20871
Exhibit: A-6
Witness: C. M. Payne
Page 65 of 95

Midstream Lighting Program (DTE Electric)

The Midstream Lighting (MSL) program targets C&I customers of all sizes. The primary goals of the program is to achieve energy savings through the sale of discounted energy efficient lighting and lighting control products to C&I customers in the DTE service territory, increase customer satisfaction with DTE's EWR programs and DTE overall, and encourage participation in additional DTE EWR programs.

Program Description

To achieve these goals, the MSL program works with commercial lighting distributors across the state to offer discounts on energy efficient lighting products. 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.

Highlights

- In 2020, the program processed 9,684 projects.
- Midyear changes to incentive amounts due to portfolio-wide leveling was unpopular, but end-of-year incentive bonuses to key measures helped recoup savings.
- Ongoing communications with distributors were well-received. Distributors reported that DTE did an excellent job of making them feel cared about as individuals and not just businesses.

Challenges

- The leveling of lighting incentives across DTE programs was not well-received by all distributors because some incentives were reduced. Ensuring distributors understood why it was happening and that their concerns were being heard was a priority.
- The launch of the Business Marketplace pilot required careful handling to ensure distributors were not being undercut. Involving distributors in the design process was crucial.

Accomplishments

- Given the larger context of the pandemic and related shutdowns, high savings levels were accomplished.
- While reforecasting became necessary midway through the year, the program achieved a high level of savings for the year.
- Staying flexible with program design through efforts such as instituting limited-time savings bonuses helped ensure the program could respond to market changes and better support distributors.

Collaboration Efforts

- Limited collaboration efforts were available in 2020.

Lessons Learned

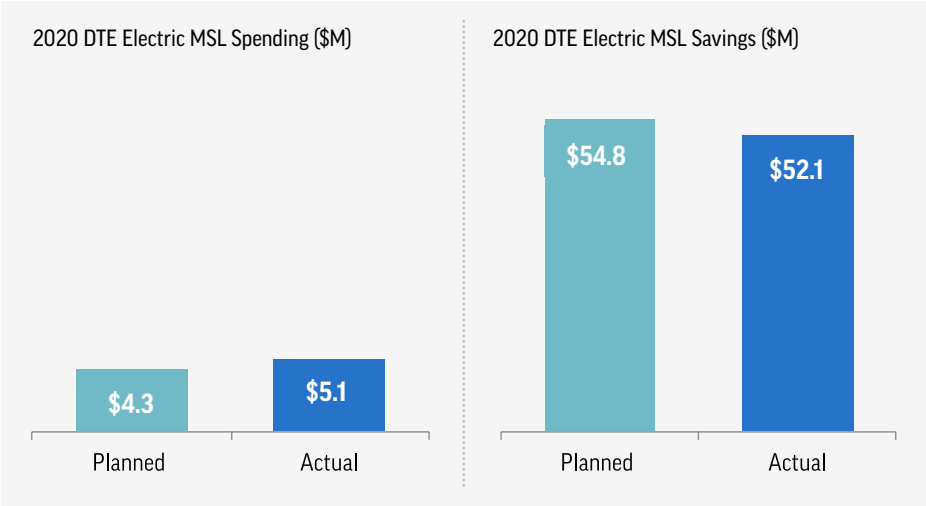
- Communication with distributors is key—ensuring distributors feel engaged and heard means they stay engaged with the program.
- Allowing flexibility with the program design (e.g., the October bonuses enacted in 2020) can help the program respond to a variety of market trends.

Case: U-20871
Exhibit: A-6
Witness: C. M. Payne
Page 66 of 95

Spending and Verified Net Savings Results

Chart 31 summarizes the 2020 DTE Electric spending and verified net savings results for the MSL program.

CHART 31 – 2020 MSL PROGRAM SPENDING AND VERIFIED NET SAVINGS



Midstream Food Service Program (DTE Electric and DTE Gas)

The Midstream Food Service program uses a simplified marketing approach to target food service cooking equipment distributors that provide a point of purchase incentive to the customer for purchasing and installing energy efficient, certified food service equipment.

Highlights

- In 2020, the program processed 330 projects.
- A partnership with a predominant food service sales software has streamlined the program on the distributor side, making it easier for distributors to keep track of what rebates are available.
- Changes in outreach methods and ensuring inquiries were not strictly business was well-received by distributors, who reported that it helped strengthen their working relationship with DTE.

Challenges

- Frequent staff turnover for end customers and distributors, as well as a new implementation contractor for the program year, caused difficulties. Some confusion over lists of qualified measures led to distributors offering rebates on nonqualified equipment.

Accomplishments

- Adding a national distributor allowed a large project with Detroit Public Schools to move forward and captured one-third of total electric program savings for the year.
- DTE launched a new customer-facing website in the second half of the year.

Collaboration Efforts

- Of food service equipment sales, 95% go through a third-party food service sales software. All purchases qualifying for the program will now include a marker in the software that rebates may be available, ensuring that distributors are aware of all possible qualifying measures.
- Large projects with Detroit Public Schools and Meijer grocery stores helped ensure program savings goals were reached.

Lessons Learned

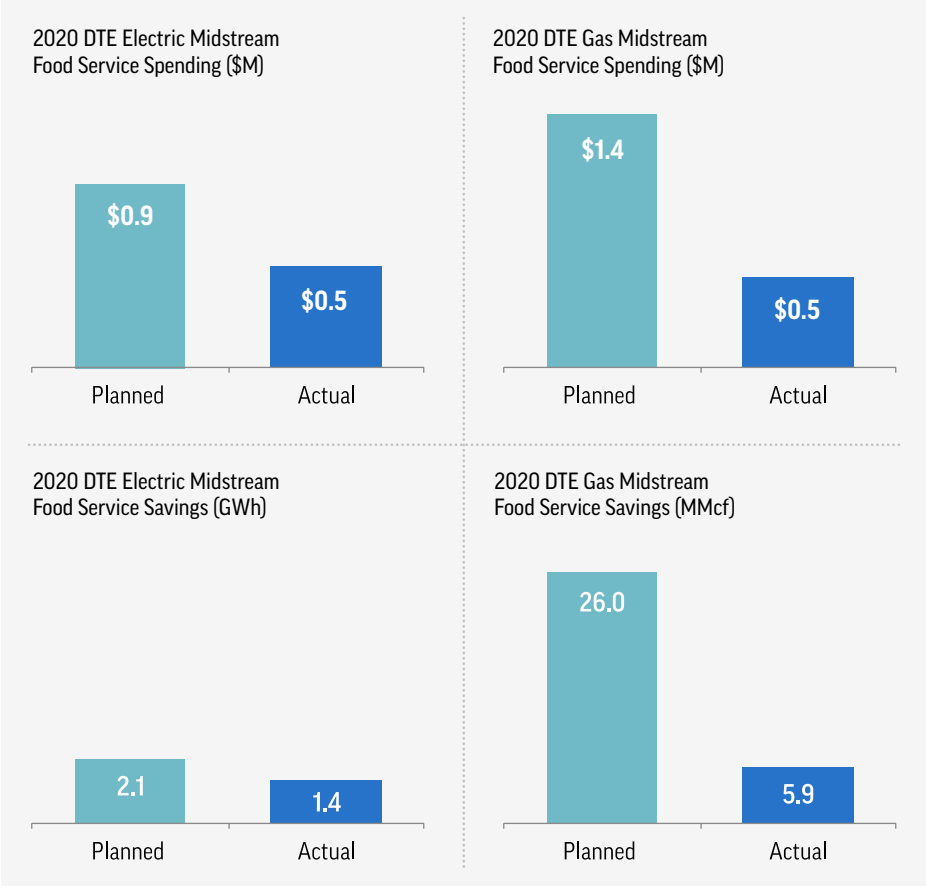
- Across the border (i.e., Ohio, Wisconsin, and Windsor) equipment sales and used equipment comprises a larger than average proportion of sales in the DTE region. Market research is underway to evaluate the used sales, and DTE is pursuing adding distributors outside of Michigan to the program.
- Flexibility is key across all aspects of the program. DTE successfully adapted communication channels and outreach methods. DTE adapted incentives and measures to the changing market to ensure the program remains comprehensive.

Case: U-20871
Exhibit: A-6
Witness: C. M. Payne
Page 68 of 95

Spending and Verified Net Savings Results

Chart 32 summarizes the 2020 spending and verified net savings results for the Midstream Food Service program.

CHART 32 – 2020 MIDSTREAM FOOD SERVICE PROGRAM SPENDING AND VERIFIED NET SAVINGS



Midstream HVAC Program (DTE Electric)

The Midstream HVAC Electric program was designed to increase the market share of efficient HVAC systems, accelerating the adoption of rooftop air conditioning by providing streamlined incentives to distributors, who in turn leverage their sales and outreach capabilities.

Program Description

The program is designed to test and expedite a simple solution for C&I customers, providing an instant discount at the point of sale with the distributor. Paperwork is virtually eliminated for the end use customer and DTE. DTE commercialized the electric Midstream HVAC program on August 1, 2019.

Highlights

- In 2020, the Midstream HVAC program processed 421 projects.
- Water source heat pumps were successfully added to the program, and four projects were completed over the course of the program year. Completing four projects is especially successful given that water source heat pumps had been available in the C&I Downstream Platform programs for some time without any projects being completed.
- The number of participating distributors has tripled from eight in 2019 to 25 in 2020.

Challenges

- DTE is investigating potential new opportunities across the program. Water source heat pumps required significant research prior to launching in 2020.
- Turnover in distributor staff resulted in inconsistent points of contact and a need for continual onboarding.

Accomplishments

- The addition of water source heat pumps has been successful. While heat pumps were available in the C&I Downstream Platform, no incentives had been redeemed and no projects completed. When distributors were informed of the upcoming addition of this measure to the Midstream HVAC program, several projects were submitted for consideration, one within a month of launch.
- Distributor outreach and onboarding was effective, with the number of participating distributors more than doubling from 11 in the start of 2020 to 25 at the start of 2021.

Collaboration Efforts

- Much of the research efforts to add heat pumps to the program were the result of collaboration with other programs and industry-specific data. Historical knowledge from other programs ensures all considerations are taken into account in the program design and provides practical insights on how to successfully launch new measures.

Lessons Learned

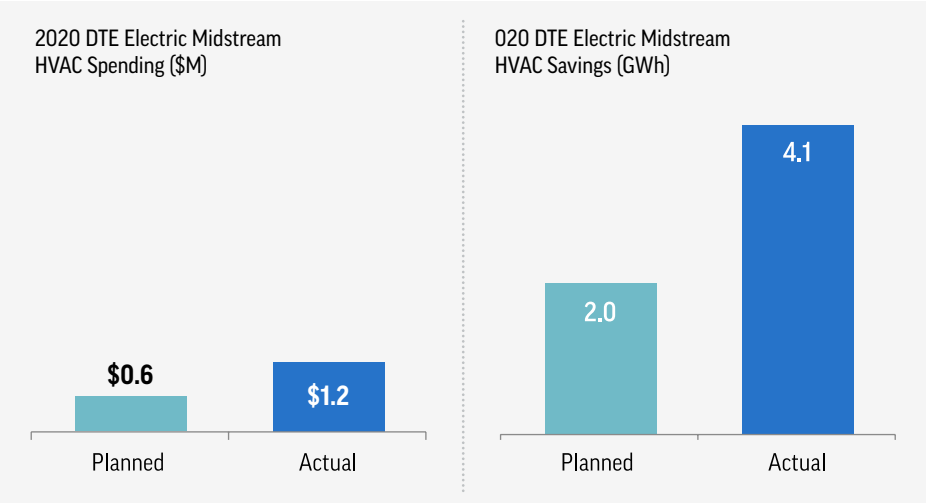
- DTE updated forecasting strategies to account for new measures. Efforts are underway to work with distributors to better understand the status of each project to ensure there is an effective margin of safety in forecasting and to account for any risk of projects remaining incomplete.

Case: U-20871
Exhibit: A-6
Witness: C. M. Payne
Page 70 of 95

Spending and Verified Net Savings Results

Chart 33 summarizes the 2020 spending and verified net savings results for the Midstream HVAC program.

CHART 33 – 2020 MIDSTREAM HVAC PROGRAM SPENDING AND VERIFIED NET 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.

Retro-Commissioning Program (DTE Electric and DTE Gas)

The Retro-Commissioning program targets commercial buildings by providing a detailed energy audit and evaluation that identifies operational low-cost or no-cost recommendations.

Program Description

Property managers and building owners can implement these recommendations and reduce their operational energy consumption. 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. The Retro-Commissioning evaluation report also provides customers with recommendations for energy efficient capital investments they can implement and receive an incentive through the Prescriptive or Non-Prescriptive programs.

Highlights

- In 2020, the program had 19 participants.
- DTE developed a virtual verification track focused on using advanced metering infrastructure (AMI) data to identify energy-saving opportunities for medium to large commercial customers.

Challenges

- Customers that did not have in-house capabilities to make changes to their building management system required help from contractors and service providers to visit the facilities to make these changes.

Accomplishments

- The program achieved its goals by adapting from a hands-on approach to a virtual audit-based approach to identify cost-effective operational savings.
- The program's participants included some customers that also participated in 2019. These customers were interested in achieving additional operational savings because they had a positive experience from participating in 2019.

Collaboration Efforts

- DTE implemented an operational bank to encourage customers to participate in its Prescriptive program. For every kWh and therm saved from participating in the Retro-Commissioning program, DTE offered customers an additional bonus rebate of $0.01 and $0.10, respectively. Customers can use this bonus to obtain additional rebates for participating in the Prescriptive program. This approach ensured collaboration between the programs and provided additional incentives for customers to participate in both programs.
- DTE collaborated with chambers of commerce, local municipalities, the Building Owners and Managers Association, and Detroit 2030 to increase program awareness.
- DTE leveraged tools developed during the Find and Fix Compressed Air pilot to offer leak surveys to industrial facilities. This effort helped to reduce facilities' energy use by approximately 500,000 kWh.

Lessons Learned

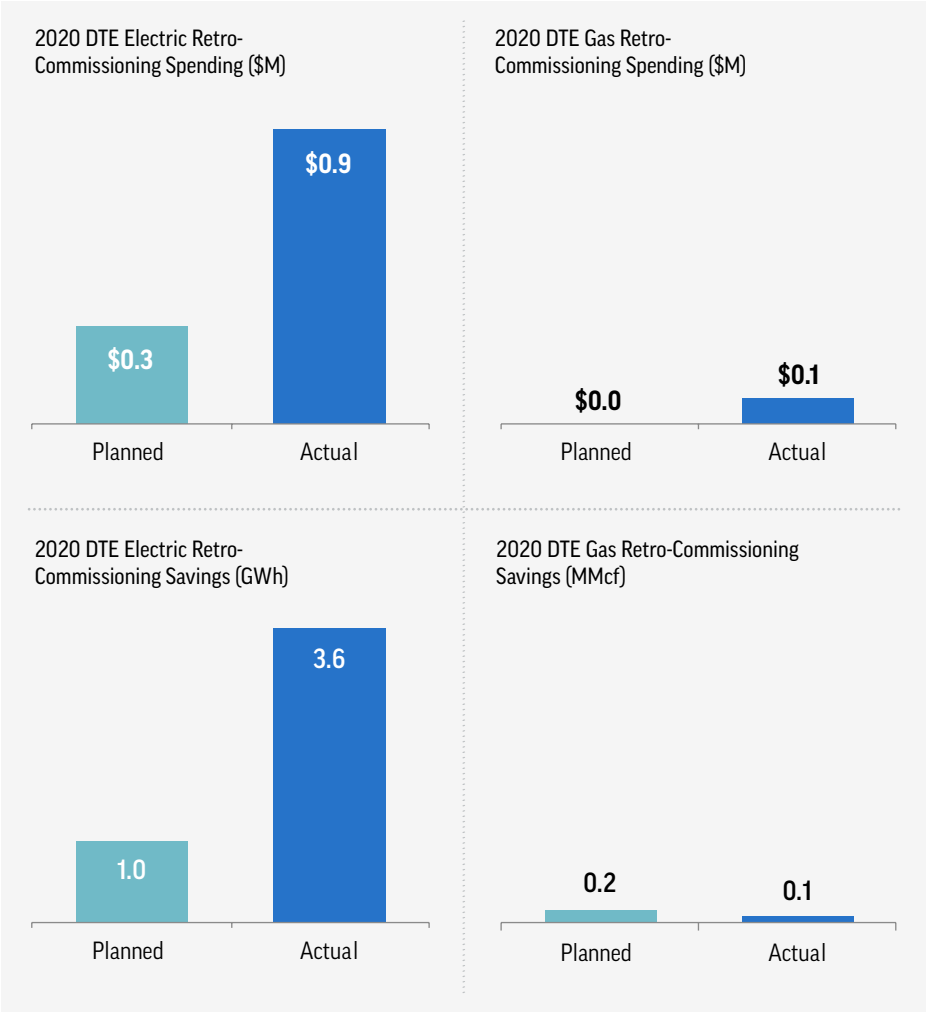
- DTE identified small commercial customers as a new customer segment to target during 2021 to help grow its project pipeline.
- Customers appreciated the program offering an express path where contractors audit and make operational changes to the site during a single visit. This quick audit added flexibility to serve customers that did not require a comprehensive energy audit.

Case: U-20871
Exhibit: A-6
Witness: C. M. Payne
Page 73 of 95

Spending and Verified Net Savings Results

Chart 34 summarizes the Retro-Commissioning program's spending and verified net savings.

CHART 34 – 2020 RETRO-COMMISSIONING SPENDING AND VERIFIED NET SAVINGS



Strategic Energy Management Program (DTE Electric and DTE Gas)

The Strategic Energy Management (SEM) program provides technical support and financial incentives for customers interested in moving beyond project-by-project energy savings to managing energy continuously in a holistic approach through SEM. This program offers up to 24 months of technical support plus unique incentives.

Program Description

The incentives are paid on verified operational changes primarily involving process related systems that result in energy use reductions.

Highlights

- In 2020, the program had 53 participants.
- The program started offering virtual audits to access a customer's building management system virtually to identify opportunities for energy savings.
- The program's participants included customers that also participated in 2019. They were interested in achieving additional operational savings because they had a positive experience from participating in 2019.

Accomplishments

- The program achieved and surpassed its goals by adapting from a hands-on approach to a virtual audit-based approach to identify cost-effective operational savings.
- DTE built a pipeline of projects to position the program for success in 2021 and 2022.

Collaboration Efforts

- DTE implemented an operational bank to encourage customers to participate in its C&I Prescriptive program. For every kWh and therm saved from participating in the SEM program, DTE offered customers an additional bonus rebate of $0.01 and $0.10, respectively. Customers can use this bonus to obtain additional rebates for participating in the C&I Prescriptive program. This tactic ensured collaboration between the programs and provided additional incentives for customers to participate in both programs.

Lessons Learned

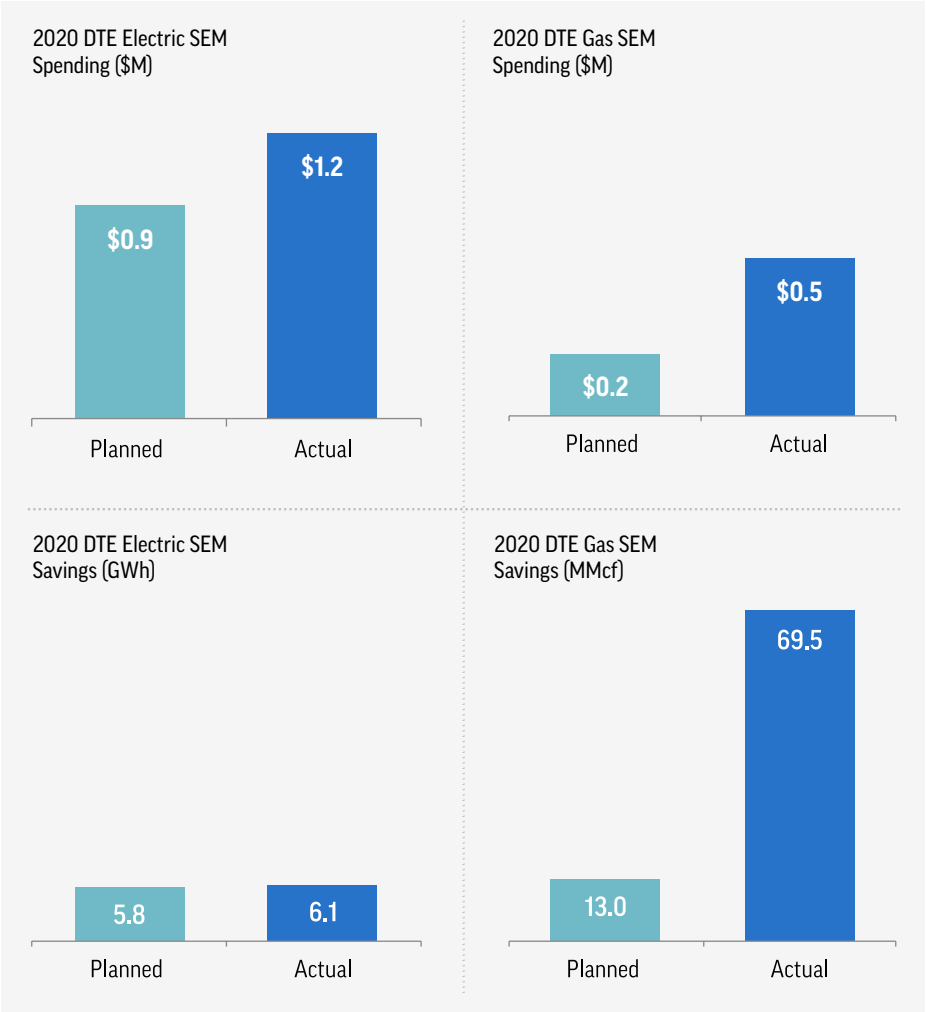
- AMI data-based analytics present a significant energy-saving opportunity for C&I customers in DTE's territory.
- Virtual energy audits provided by the program ensured more customers could participate in the program without the need for in-person site visits.

Case: U-20871
Exhibit: A-6
Witness: C. M. Payne
Page 75 of 95

Spending and Verified Net Savings Results

Chart 35 summarizes the 2020 spending and verified net savings results for the SEM program.

CHART 35 – 2020 SEM PROGRAM SPENDING AND VERIFIED NET SAVINGS



Self-Direct Program (DTE Electric and DTE Gas)

Program Description

In this program, DTE C&I customers are able to choose to self-direct and implement their own EWR plan. In 2020, three electric customers applied to the Self-Direct program. The main features of the Electric and Gas Self-Direct programs are similar. Customers who choose to self-direct are exempt from the mandatory EWR electric surcharge(s), except for the portion of the surcharge that funds the Low-Income program and the cost to administer the program.

For its 2020 Self-Direct program, DTE Electric placed a bill message on all commercial customer bills notifying them about the program and how to subscribe to the program. All existing self-directed customers were sent personalized letters to inform them 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.

DTE Gas established a Self-Direct program for C&I End Use Transportation (EUT) customers in 2013. A bill message was placed on all EUT customer bills notifying them about the program and how to subscribe to the program. Account managers followed up with a phone call after the letters were sent out to address customer questions. Program information and the required energy plan templates for customers to use to apply to the program were placed on the DTE website. No EUT customers participated in this offering in 2020.

Highlights

- Three electric customers participated in the 2020 Electric Self-Direct program.
- No gas EUT customers participated in the 2020 Gas Self-Direct program.
- 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 EWR rebate or incentive from an electric provider and are within the calculated waiting period in a Self-Direct plan.[22]
- If the waiting period lapses after the Self-Direct plan filing deadline but before the Self-Direct plan year begins on January 1, a customer may include those sites or accounts during the upcoming plan period.

Lessons Learned

- Customers adhere to the program requirements, submitting plans and annual reports.
- Account managers assist in communication to customers.
- DTE Gas spending and savings are not applicable because no EUT customers chose to participate in Gas Self-Direct program.

Challenges

- DTE has experienced challenges communicating the program requirements to applicable customers.
- Self-direct participants often require DTE assistance to complete customer annual reports.

Accomplishments

- All three customer's reports were received on time.
- All three customers reported meeting or exceeding their energy savings goal.

22 The waiting period in months is equal to the total rebate amount divided by the current month's EWR surcharge.

Case: U-20871
Exhibit: A-6
Witness: C. M. Payne
Page 77 of 95

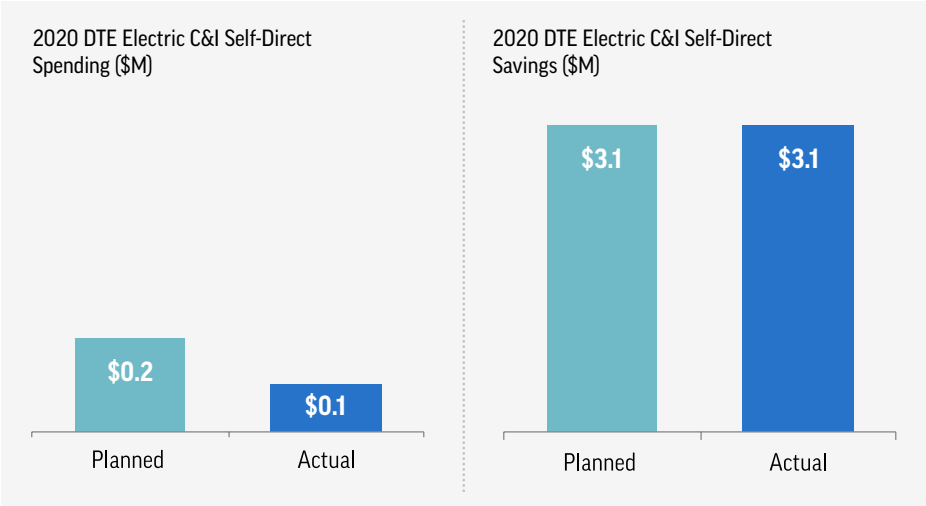
Collaboration Efforts

- DTE collaborated with Consumers Energy on the reporting requirements to ensure program consistency.

Spending and Verified Net Savings Results

Chart 36 summarizes the C&I Self-Direct program's spending and verified net savings.

CHART 36 – 2020 C&I SELF-DIRECT PROGRAM SPENDING AND VERIFIED NET 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.

Case: U-20871
Exhibit: A-6
Witness: C. M. Payne
Page 79 of 95

Business Energy Consultation Program (DTE Electric and DTE Gas)

The Business Energy Consultation (BEC) program targets small business customers by providing a walk-through energy assessment evaluation, 3 to 6 prescriptive direct install measures such as a programmable thermostat or LED screw-in lamps, and a report outlining the findings of the walk-through evaluation.

Program Description

The BEC energy assessment report provides customers with leading practice energy efficiency recommendations as well as information on incentives and next steps. Upon completion of the assessment and report, the program uses a concierge model to help customers complete their project. The program staff provides additional resources by assisting with finding a Trade Ally and/or financing. 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 have little to no energy experience.

Highlights

- In 2020, the program had 531 electric and 990 gas participants.
- The BEC program completed its first full year of administering a trade ally offer to small business customers. This component allows electric customers to complete lighting projects beyond the suite of direct install measures provided.
- With the introduction of a trade ally network, the BEC program created market-specific strategies and rebates to provide a seamless and tailored approach.

Challenges

- The BEC program struggles to connect with non-direct install gas customers, a customer group that has proven difficult to engage.
- During 2020, it was difficult to gain entry to customer premises to conduct audits due to pandemic-related concerns.
- Upon completion of the audit, many customers do not have the capital to move to the next step and implement an energy efficiency project.
- The addition of a Trade Ally network has introduced new processes for the team to implement.
- As the program matures, a lack of awareness of energy efficiency and doubt about potential energy bill savings has continued to be a barrier for many customers.

Accomplishments

- The BEC Direct Install component continues to hit high realization rates.
- In 2020, the BEC Direct Install component of the program reached 94% satisfaction, an increase of three percentage points since 2019. The Trade Ally component reached 100% satisfaction in its first full year of commercialization.
- In 2020, over 150 customers submitted rebate applications for the BEC Trade Ally program.
- DTE streamlined rebate and project completion processing through the creation of a digital platform for contractors to receive leads and project information.

Case: U-20871
Exhibit: A-6
Witness: C. M. Payne
Page 80 of 95

Collaboration Efforts

- BEC has partnered with the Small Business Association of Michigan (SBAM) on small business-focused webinars, program marketing, and the promotion of emerging pilots. SBAM has also offered customer leads to the BEC program.
- For customers who are too large for BEC, DTE implemented a new process to share leads with the Downstream Platform contractor and/or DTE's Energy Partnership team.

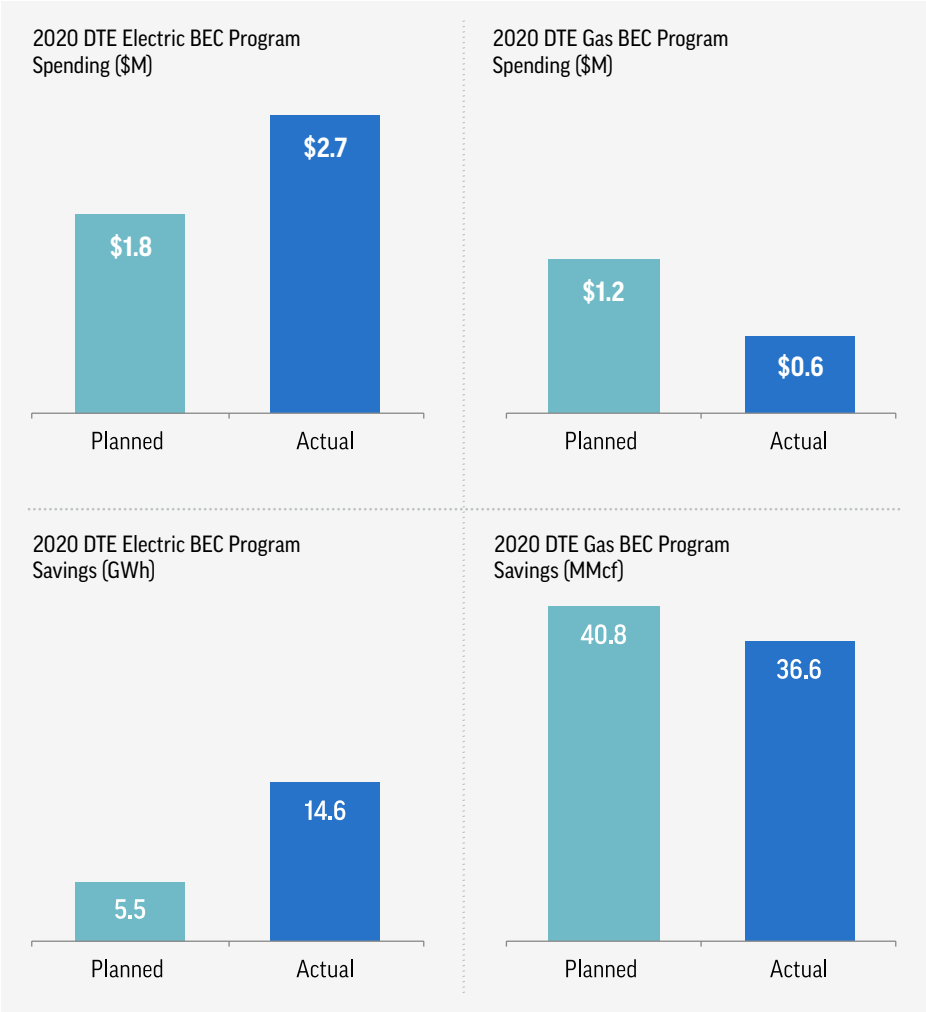
Lessons Learned

- Understanding the customers being served and providing a segment-specific approach is imperative to a successful and strategic marketing approach.
- Continuing to implement a 100% quality control procedure for all projects ensures savings accuracy in reporting.
- Engaging customers past direct install takes a considerable amount of time and effort. The team utilized best practices for communication to reduce handoffs and overall rebate processing time, resulting in a cycle time of 14 days from QA/QC.
- Meet customers where they are – in 2020, that was mostly virtual. The BEC program offered several webinars and virtual opportunities for engagement with EWR.

Spending and Verified Net Savings Results

Chart 37 summarizes the BEC program's spending and verified net savings.

CHART 37 – 2020 BEC PROGRAM SPENDING AND VERIFIED NET SAVINGS



C&I Emerging Measures and Approaches Program (DTE Electric and DTE Gas)

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

Program Description

In 2020, the EM&A program consisted of the Midstream HVAC Gas program and Small Business Focus program.

The Midstream HVAC program was designed to increase the market share of efficient HVAC systems, accelerating the adoption of boilers by providing streamlined incentives to distributors, who in turn leverage their sales and outreach capabilities. The program is designed to test and expedite a simple solution for C&I customers, providing an instant discount at the point of sale with the distributor. Paperwork is virtually eliminated for the end-use customer and the energy company. DTE commercialized the Midstream HVAC Gas program on March 1, 2020.

Small Business Focus (SBF) is similar to the BEC program and targets small business customers by providing an energy assessment, installation of direct install measures, and a final energy assessment report outlining energy efficiency best practices. The SBF energy assessment report provides recommendations and next steps for the customer to implement their project. The program aims to connect customers with trade allies who will complete the project and submit a rebate application on the customer's behalf.

Highlights

- In 2020, the Midstream HVAC program had 53 gas participants.
- The Midstream HVAC program was launched successfully due to the efforts and connections of the implementer. DTE launched the program without piloting and surpassed initial savings estimates for condensing boilers.
- In 2020, the SBF program had 1,085 electric and 655 gas participants.
- With the introduction of a trade ally network, the SBF program created market-specific strategies and rebates to provide a seamless and tailored approach.

Challenges

- Midstream HVAC condensing boilers were the first measure added to the Midstream and Downstream Platforms simultaneously, which required careful handling to ensure projects were not receiving rebates from both programs.
- Due to pandemic restrictions within the state of Michigan, the Midstream HVAC program was not implemented until June 1, 2020. The delayed launch resulted in a shortened program year to gain lessons learned and experience.
- The SBF program is working to gain new trade allies who have not participated with DTE EWR programs.
- Creating the program tools and processes necessary required significant IT assistance.
- Managing a new program staff virtually (safety, program training, etc.) during the pandemic presented new barriers to implementation.

Accomplishments

- The Midstream HVAC program launched successfully, with outreach efforts continuing throughout the program year.
- Midstream HVAC condensing boilers achieved their initial savings expectations without the need to reduce goals.
- The SBF program reached 90% customer satisfaction for both the Direct Install and Trade Ally components of the program in its first few months of commercialization.
- In total, there were over 400 rebate applications submitted for Trade Ally projects.

Case: U-20871
Exhibit: A-6
Witness: C. M. Payne
Page 82 of 95

Collaboration Efforts

- Midstream HVAC collaborated closely with the Downstream Platform to ensure a smooth launch of condensing boilers.
- SBF has partnered with the SBAM on small business-focused webinars, program marketing, and the promotion of emerging pilots. SBAM has also offered customer leads to the SBF program.
- Worked with Michigan Saves to offer low finance rates to help customers finance projects.

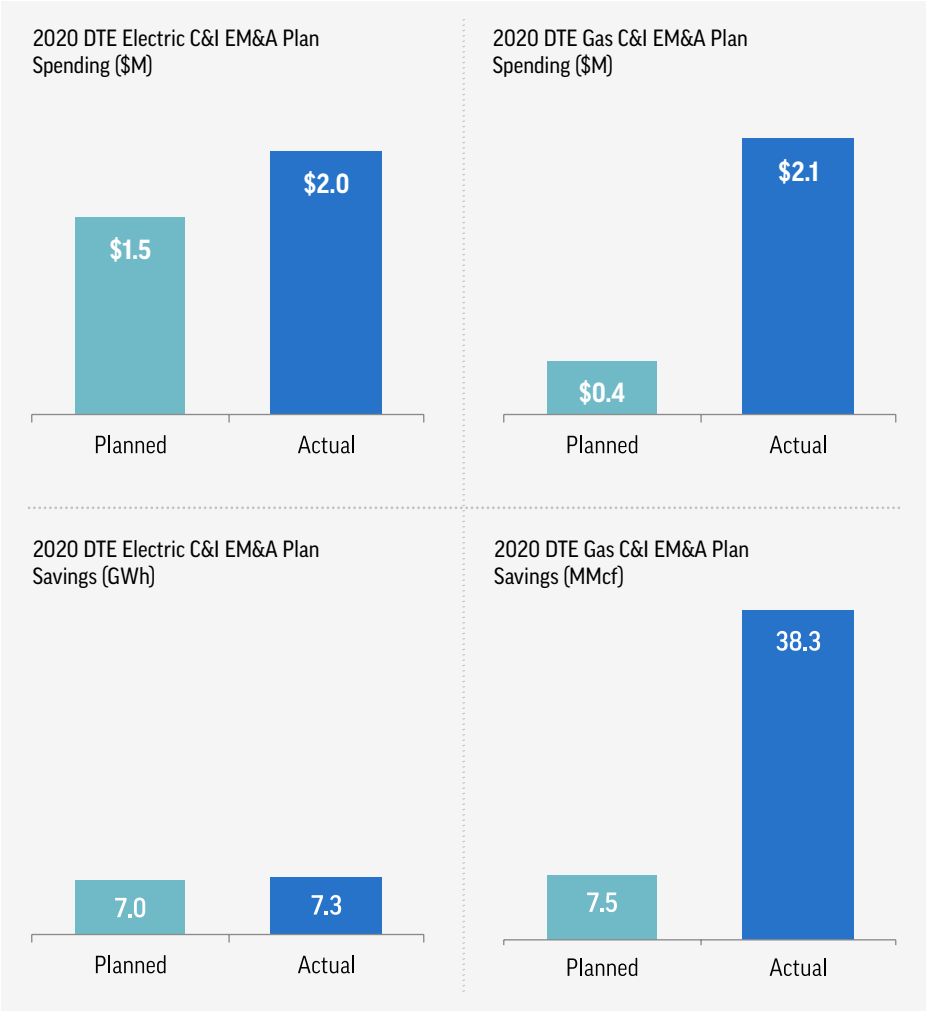
Lessons Learned

- DTE updated Midstream HVAC forecasting strategies to account for new measures. Efforts are underway to work with distributors to better understand the status of each project to ensure there is an effective margin of safety in forecasting and to account for any risk of projects remaining incomplete.
- Engaging in strategic marketing is key to program success. The SBF team utilized a tactical calendar cross functionally to ensure program marketing was successful.
- The SBF program introduced additional bonuses and incentives for rebated projects to help increase interest among customers.
- Partnering with specialized Trade Allies provided a holistic solution for customers interested in more than one type of project.

Spending and Verified Net Savings Results

Chart 38 summarizes the EM&A program's spending and verified net savings.

CHART 38 – 2020 C&I EM&A PROGRAM SPENDING AND VERIFIED NET SAVINGS



Case: U-20871
Exhibit: A-6
Witness: C. M. Payne
Page 83 of 95

Education and Awareness Program

(DTE Electric and DTE Gas)

The objective of the Education and Awareness (E&A) program is to provide 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.

Photo taken prior to 2020 and the COVID-19 pandemic.

Program Description

The DTE energy efficiency-specific website, mass media, social media, and outreach campaigns (e.g., outbound mail, digital communications, community events, sponsorships, and experiential activations) are key channels to engage customers with energy efficiency information. In 2020, DTE continued to rely on its website and mass media campaigns to target specific customer segments to increase their awareness of energy efficiency.

Highlights

The following are key campaigns conducted in 2020:

- Residential campaigns included radio, television, social media, print, email, direct mail, and digital advertising focused on low-cost or no-cost tips, ENERGY STAR appliance tips, heating and cooling season messaging, estimated energy- and money-saving opportunities, and calls to action. Beyond energy efficiency, messaging themes to encourage home improvements included improved comfort and a more efficiently running household.
- Small business campaigns included radio, television, social media, print, email, direct mail, and digital advertising focused on low-cost or no-cost tips and case studies with suggestions that similar businesses could complete for energy efficiency improvements. 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.
- DTE won numerous awards for its E&A campaigns in 2020, including a dotCOMM Platinum award, a MUSE Creative Awards Gold award, a Hermes Creative Awards Platinum award, a Creativity International Silver award, and a W3 Awards Gold award.

- DTE launched a new energy efficiency website that included program, rebate and tips pages, a comparison tool resource, and the engaging and immersive 3D Energy Efficient Interactive Home experience, which gives customers a real-life room-by-room demonstration of ways to save energy in their homes.
- Various contests and promotions were promoted through online events, sponsorship partnerships, and social campaigns to educate and engage customers about energy efficiency.
- Every year since 2015, DTE sponsorships have included the U.S. Green Building Council's Michigan Battle of the Buildings Competition and the Detroit Energy Challenge to reach businesses.
- DTE conducted employee outreach via a virtual event highlighting internal initiatives and an energy efficiency day where employees had the opportunity to pledge to be energy efficient on a dedicated intranet site that also included tools and resources related to energy efficiency.

As in previous years, DTE updated collateral with fresh messaging to educate customers on energy efficiency. These updates included videos, brochures, case studies and white papers, ambassador cards, and energy-saving tips handouts. In addition, the Company developed four editions of a print and digital magazine, Energy Smarts, that contained in-depth information on how energy efficiency can be applied in businesses. DTE also continued to use bill inserts, direct mail, email newsletters, and digital tools and communications (online calculators, targeted and bilingual videos, social media posts, and website information) to engage customers in learning.

Challenges

- In 2020, overall customer satisfaction with DTE among residential and business customers remained a top priority. To help maintain and improve customer satisfaction, increasing awareness of DTE's energy efficiency information and tools is key to helping customers achieve higher value from the energy they consume. As energy efficiency communications continue to drive key messaging, DTE is always striving to find new ways to engage and break through the awareness barriers. Continuing messaging related to improving comfort and other non-energy benefits such as safety, environment, and productivity was leveraged to keep customers engaged. This engagement was accomplished by maintaining a steady state of outreach communications and relying on marketing trends and the latest program offerings to engage DTE's customers on energy efficiency education.
- Measuring program achievements via metrics such as program awareness was challenging in 2020 because the program's focus shifted away from in-person events where data for these metrics can be collected via a post-event survey. However, DTE did rely on digital marketing metrics and social media engagement and reach to drive positive perception of its efforts and positive brand awareness.

Accomplishments

In 2020, DTE acted to increase electric residential customer familiarity with energy efficiency programs. Energy efficiency efforts were considered highly impactful drivers of residential customer satisfaction.

Residential

- DTE launched an Interactive Home online tool in June 2020 that includes an immersive and engaging 3D demonstration of a home along with energy-saving tips and links to relevant EWR programs.
- DTE executed numerous cross-channel direct outreach tactics through direct mail, various email communications, DTE Energy blog articles, and bill inserts.
- The Company posted energy efficiency tips, sponsorship messaging and promoted contests on social media using Twitter and Facebook.

Business

- DTE continued the Business Pride contest among customers, allowing them to tell their story of energy efficiency improvements and why they are proud of their business via a virtual format. DTE selected three winners and provided them with a free energy consultation through the BEC program, prize money to put toward implementing energy efficiency upgrades recommended in the consultation, and a package with $500 of personal protective equipment.
- Executed an increased number of direct outreach tactics through direct mail, energy efficiency articles in the Company's e-newsletter and blog, and the *Energy Smarts* magazine.
- Posted energy efficiency tips and promoted contests and partnership activities through social media using LinkedIn, Twitter, and Facebook.

Collaboration Efforts

- DTE partnered with towns, cities, and communities across the state on education and awareness campaigns with tailored messaging to fit the needs of individual communities. For example, DTE worked with the City of Ann Arbor to develop a collateral piece focused on reducing carbon emissions through energy efficiency.
- In 2020, DTE received 15 times more entries to the Business Pride contest than in prior years as a result of pursuing digital and social media outreach and partnerships with third parties such as the SBAM and District 2030 groups.
- The Company held webinars with local municipalities and townships in lieu of in-person events to educate residents on how they can save energy in their homes, including an energy efficiency session with residents and city council members from Chesterfield Township.

Case: U-20871
Exhibit: A-6
Witness: C. M. Payne
Page 85 of 95

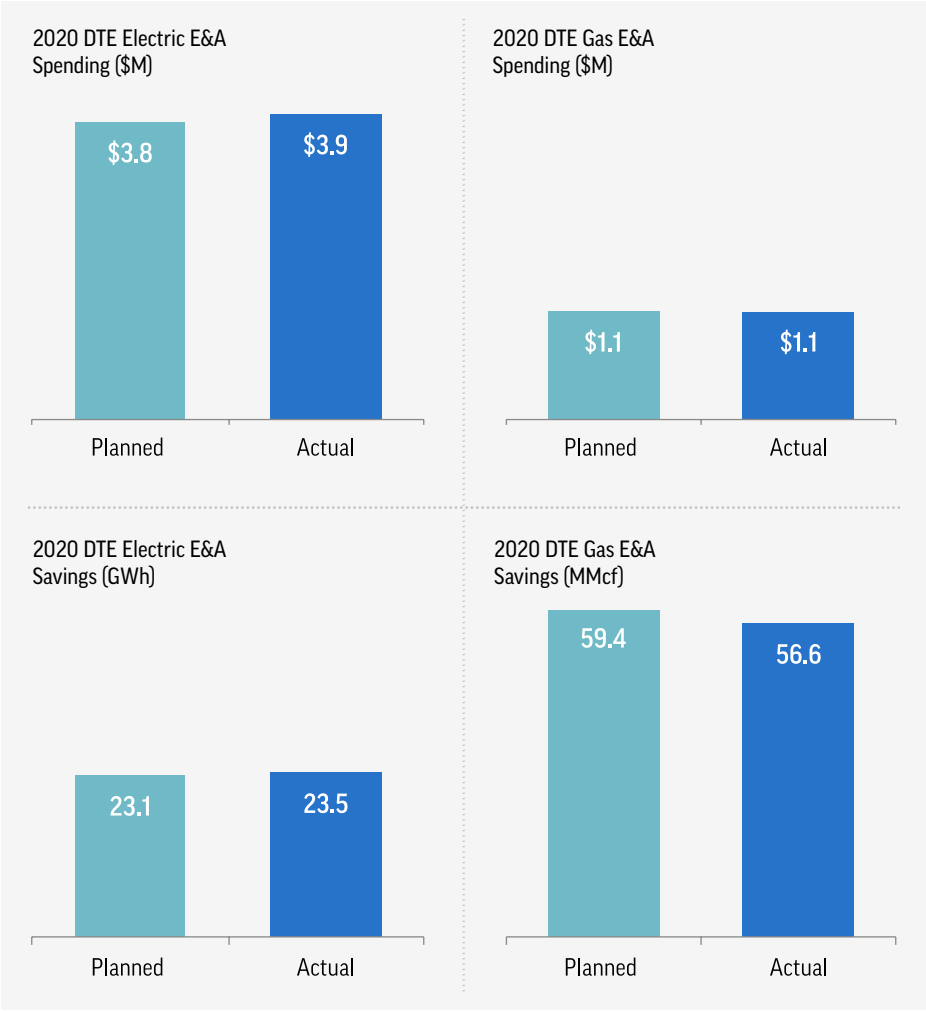
Lessons Learned

- Partnering with business organizations such as chambers of commerce and associations creates advocates for the programs and a greater reach for information to be shared.
- Mass media and digital tactics are key to raising overall awareness of the program.
- Proactive communications are desired by DTE's customers to help them manage their energy consumption.
- Personalized or tailored messages and offerings are meaningful to customers and have a higher positive impact on customer awareness and satisfaction.
- Developing a resilient program that can easily integrate new tactics and support testing of creative, innovative approaches will enable sustained success.

Spending and Verified Net Savings Results

Chart 39 summarizes the spending and associated verified net savings results for the E&A program.

CHART 39 – 2020 E&A SPENDING AND VERIFIED NET 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 2020-2021 EWR 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

Electric New Home Construction
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 within new construction buildings such as cold climate heat pumps, the market response for market rate and low-income builders, and customer and builder interest in all-electric homes.

Gas Automatic Meter Reading
Ongoing, launched Q1 2020

The Gas Automatic Meter Reading (AMR) pilot provides DTE Gas customers the ability to visualize, control, and optimize their gas usage through the DTE Insight app using a standalone AMR device embedded into the existing power supply of the Energy Bridge. The objectives of this pilot are to achieve additional energy savings, increased customer satisfaction, and heightened general awareness of energy efficiency and engagement with the Insight app. By implementing this pilot, DTE found that engagement is low during the cooling months. DTE is still determining energy savings.

Case: U-20871
Exhibit: A-6
Witness: C. M. Payne
Page 87 of 95

Health and Safety
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 (walkaways) 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.

High School
Concluded Q4 2020

The High School pilot concluded in Q4 2020 and is being commercialized. The program encourages students to explore the energy they use every day and devise innovative ways to generate real energy savings. Students and their teachers (2,500 in 2020) attend a 45-minute presentation on energy literacy and energy efficiency. The presentation includes hands-on learning activities and a DTE Insight app demonstration activity; instructions on how to download the app, set up an energy budget, and other features are also demonstrated with screenshots during the presentation.

An energy efficiency kit is distributed to each participating teacher and student to take home; these kits include a smart power strip, a high efficiency showerhead, faucet aerators, LED light bulbs, an LED nightlight, and pipe insulation. Teachers receive a mini-grant from DTE for participating and completing the home energy worksheet. Students also have the chance to enter into a sweepstakes.

Non-Wires Alternative
Ongoing, launched Q1 2019

Phase I of the Non-Wires pilot developed criteria to select a substation and geographically target and optimize a set of energy efficiency measures and programs offering customer participants measures to lower peak load at targeted substations. The overall goal of this pilot is to test participation in reducing overall peak load on the substation to understand the potential for cost-effectively deferring a distribution system capital investment. Phase I of this pilot was successful at driving customer participation to achieve peak load reduction goals and enabled DTE to develop a cost-benefit model and distributed energy resources (DER) estimator tool for Phase II. This pilot is also offered to customers in the C&I sector.

Codes and Standards Study
Ongoing, launched Q3 2020

The purpose of this pilot is to initiate a framework for Michigan to develop utility codes and standards activities, objectives, and policy considerations associated with implementing and evaluating pilot and program initiatives. This pilot will help DTE understand the potential value of supporting code adoption or improving code compliance and supporting the adoption or enhancement of standards, including accelerated adoption of future standards.

HVAC Midstream Enhancement
Ongoing, launched Q3 2020

This pilot develops and deploys IT solutions to consolidate program points of entry for distributor-based HVAC rebate applications for products such as boilers, heat pump water heaters, hydronic ECM circulating pumps, and natural gas water heaters. The pilot objectives include increasing flexibility in contractor promotions and incentives and decreasing administrative costs for contractors.

HVAC Retail
Ongoing, launched Q3 2020

This pilot delivers instant manufacturer rebates on heat pump water heaters at select The Home Depot, Lowe's Home Improvement, and Menards stores in DTE Electric territory. The pilot program objectives include increasing flexibility in contractor promotions and incentives and decreasing administrative costs for contractors.

HVAC Tune-Up
Concluded Q4 2020

This pilot includes completing benchmarking studies, surveys, and roundtable discussions with DTE trade allies to understand market dynamics for diagnostic tune-ups. The goal of this pilot is to determine incremental energy savings potential for residential HVAC tune-ups. The pilot aims to understand how services offered during furnace/air conditioner tune-up visits may identify additional savings opportunities. If adequate potential is identified, program enhancements may be piloted to test the impact on the number of contractors who cost-effectively complete diagnostic tune-ups.

Midstream Appliances
Ongoing, launched Q2 2020

The goal of this pilot is to increase the cost-effectiveness, sales, and stocking of high efficiency ENERGY STAR appliances via dealers of the Nationwide Marketing Group, a network of independent appliance retailers. The pilot provides midstream incentives and training to Nationwide to validate how effectively a midstream approach can increase customer measure adoption, test how a midstream model can reduce overhead compared to downstream programs, and influence retailers such as Nationwide to stock and promote higher efficiency products to accelerate product market adoption over time.

Appliance Recycling Drop Off
Concluded Q4 2020

This pilot offers customers the opportunity to receive an increased incentive for dropping off appliances to be recycled, as opposed to DTE picking up the appliance at the customer's home. The objectives of this pilot are to measure the cost-effectiveness of hosting drop-off events instead of in-home pickups for customers to recycle inefficient and secondary appliances. Around 50 participants came for a drop off; cold weather may have prevented more drop offs from occurring.

C&I Pilots

Your Energy Performance Report
Ongoing, launched Q4 2020

This pilot comprises a published report that compares customers' energy use history. A mailed printed document provides select small business customers their year-to-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 Your Business Energy Reports mailed documents were introduced to select small and medium businesses in the 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 2021.

Business Marketplace
Ongoing, launched Q4 2020

The Business Marketplace provides DTE customers an online retail resource for energy efficient products that receive instant discounts at the time of purchase. The objective of the Marketplace is to provide an easy and convenient avenue for customers to learn about and purchase energy efficient products from the comfort of their business. The products are delivered by mail for self-installation. The pilot launched in Q4 2020. Awareness of the Business Marketplace has been increasing and participation has grown, with customers purchasing and installing measures to achieve savings.

Cohort Sustainability
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 minimize 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 developoment phase with an expected customer-facing launch date in Q1 2021.

Find and Fix – Compressed Air and Steam Trap
Commercializing Q1 2021 (Compressed Air)
Commercializing Q4 2021 (Steam Traps)

Compressed air and 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 trade allies in response to low participation for existing measures. By reducing the customer's funding commitment and disaggregating incentives for identifying leaks from those for making repairs, DTE is testing the hypothesis that this new incentive structure will increase customer participation.

The Find and Fix Compressed Air program will target small-to-medium commercial and light industrial electric customers. For steam traps, the program will initially target dry cleaners within the small-to-medium business segment.

The program is intended to provide energy savings through the identification and repair of compressed air leaks and faulty steam traps through an established service provider network, using a service-based incentive approach. The program shall focus on those customers who normally do not participate in current incentive programs and will be designed to eliminate known barriers and increase savings.

Case: U-20871
Exhibit: A-6
Witness: C. M. Payne
Page 89 of 95

The measure savings will be claimed through a custom calculator developed in tandem with DTE, Energy Sciences, and Guidehouse. The methodology for determining energy savings will be based on ultrasonic leak detectors using a sound decibel reading, which will result in increased savings versus claiming deemed measure savings from the MEMD.

Key lessons learned include the following:

- Make it easy for customers to understand and participate in the program. The application should be handled by the trade ally and the process should be straightforward (e.g., fix leaks then claim incentive). Leave the technical information out of the process for customers.
- The custom calculator was successfully developed, resulting in 40% more savings than deemed MEMD values.
- The program needs to confirm the hours of operation prior to finalizing the custom savings calculation. The customer and trade ally were often not in alignment.
- Audit-based programs are typically conducted through open trade ally networks, but DTE was successful with a closed network. It is worth exploring the concept of an open trade ally network.
- The key challenges faced by the steam trap program includes lack of customer and trade ally awareness. The program focused on non-energy benefits, which seemed to resonate with customers.
- It is important to work with the evaluation contractor to ensure the approach is approved and understood prior to program implementation.

Virtual Assessment
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.

Grocery Program
Ongoing, launched Q4 2019

The Grocery program provides grocery and convenience stores free custom assessments that identify opportunities to save energy and money. The program provides custom recommendations accompanied by assistance for measure implementation. The recommendations include details on available incentives to offset recommendation implementation costs. With the high level of energy consumption in refrigeration, a concerted focus on grocery and convenience stores has been implemented to secure savings, particularly in the smaller business category, which has not seen significant participation. The program tests a cost-effective means to secure greater customer engagement, particularly in refrigeration measures, through assistance, education, and incented proposed measures. The program has seen greater customer participation in Q4 2020 after early reluctance due to uncertainties associated with the pandemic.

Onsite Energy Manager
Ongoing, launched Q4 2020

The Onsite Energy Manager pilot assigns a DTE energy manager to a customer's site(s) for 6 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 Downstream, Midstream, SEM, Retro-Commissioning, and other relevant C&I offerings. Moreover, the pilot will track low-to-no cost O&M measures (not associated or captured by other C&I offerings) that are identified by the energy manager and implemented within the customer's facilities.

Power TakeOff
Ongoing, launched Q4 2020

Power TakeOff is a pay-for-performance concept delivered through a virtual commissioning (VCx) process. The concept uses AMI data and performs proprietary analytics to identify where energy efficiency opportunities exist within customer facilities. VCx is similar to the Retro-Commissioning program; the major difference is VCx will be done totally remotely.

The pilot will provide customers with services to allow them to better manage their energy usage, identify O&M energy-saving opportunities, and achieve energy savings through performing energy conservation measures. This program is designed to leverage the investment that DTE has made in AMI deployment through data analytics and customer engagement to achieve energy savings. The program's approach, like that of a monitoring-based commissioning program, follows a step-by-step process to identify high opportunity customers with significant potential for O&M energy savings. Trained program consultants engage targeted customers to better understand their operations, enroll them in the VCx program, and generate energy savings and demand reduction at their facilities through O&M changes.

Key lessons learned from pilot implementation include the following:

- Pay for performance reduces the energy company's evaluation risk.
- The program continues to monitor participating customers over time and re-engages if savings erode.

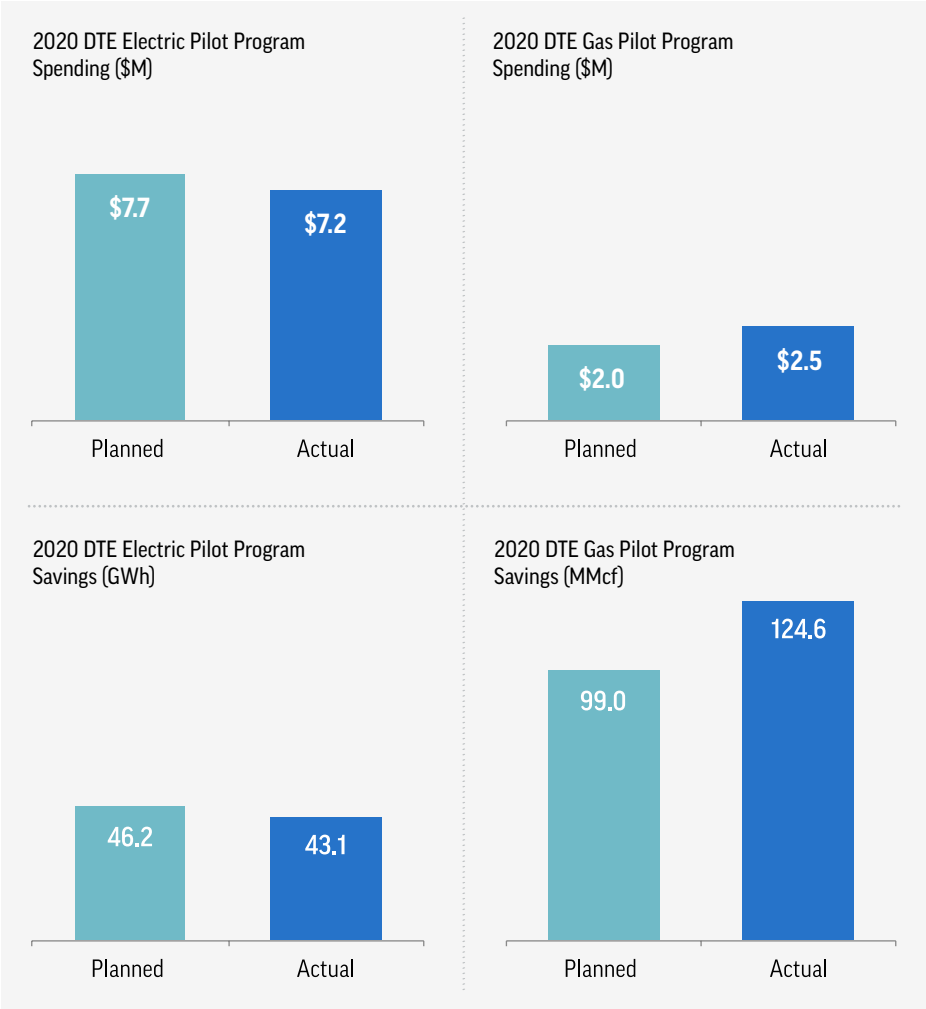
Case: U-20871
Exhibit: A-6
Witness: C. M. Payne
Page 90 of 95

Spending and Verified Net Savings Results

Pilot program funds were primarily spent on contracted services and incentives for the projects previously outlined and on the cost of internal administration to manage the portfolio of projects.

Chart 40 summarizes the spending and associated verified net savings results of the Pilot program.

CHART 40 – 2020 PILOT SPENDING AND VERIFIED NET SAVINGS



Case: U-20371
Exhibit: A-6
Witness: C. M. Payne
Page 91 of 95

EWR Program Achievements

Energy Savings

- Since its inception in 2009, more than 5.7 million electric customers and 3.7 million gas customers have directly participated in DTE's energy efficiency programs.[23] DTE customers have saved approximately 6,600 GWh and over 15,000 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 563,000 homes for one year.[24]
- The gas savings are equivalent to the energy required to power over 99,000 homes for one year.[25]

Monetary Savings

- DTE's customers have benefited as a result of its energy efficiency offerings. Residential customers pay an average of $54 annually, or less than 3% of their total bill for combined energy efficiency gas and electric surcharges. Electric customers pay, on average, $36 and gas customers pay, on average, $18.

Economic Development Benefits

- DTE's EWR Portfolio resulted in implementation contractors establishing local offices (in Detroit, Livonia, Lansing, and Grand Rapids) and the hiring of local talent to operate and manage their respective programs.
- Through 2020, 336 Michigan-based jobs have been created by the implementation contractors under contract with DTE, as Table 8 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.

Program Offerings and Participation

While many of the EWR 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 2020 that will be commercialized in 2021. 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 a continuing basis.

- In 2020, over 1 million DTE Electric customers and over 371,000 DTE Gas customers took control of their energy use through the EWR Portfolio and saved millions of dollars as a result.

TABLE 8 – IMPLEMENTATION CONTRACTOR JOBS

IC Name	Michigan-Based Jobs
Bradley + Company	14
CLEAResult	3
DNV	25
DP+	1
DTE	37
Energy Sciences	6
Energy Solutions	2
Franklin	28
ICF	39
Ignite	8
Leidos	2
Michigan Saves	4
NEF	7
Powerley	9
SEEL	60
Walker Miller - Franklin	84
Guidehouse	7
Total	**336**

To give some perspective on the magnitude of this effort, the following are some of DTE's 2020 accomplishments:

- DTE successfully commercialized programs including the Small Business Focus program and gas component of the Midstream HVAC program.
- The Company continued to expand the channels through which customers can participate in the EWR programs including the expansion of both residential and commercial midstream program offerings.

23 Customers may participate in more than one EWR program.
24 Equivalent home energy use is calculated using the U.S. Environmental Protection Agency Equivalency Calculator.
25 Equivalent home energy use is calculated using the U.S. Environmental Protection Agency Equivalency Calculator.

Case: U-20871
Exhibit: A-6
Witness: C. M. Payne
Page 93 of 95

- The Residential programs served over 626,000 electric households and over 368,000 gas households.
- The Company invested over $28 million on Low-Income programs and launched new offerings in 2020 to target this segment; these offerings include the Payment Trouble Customer Initiative, Revolving Loan Fund, Income-Qualified Heat Pumps, and Health and Safety programs.
- The EEA program provided over 4,300 low-income customers with measures to achieve energy savings.
- DTE completed nearly 12,000 low-income HECs throughout the DTE service territory.
- The Multifamily low-income component completed 3,646 direct install installations and 178 prescriptive projects.
- DTE installed high efficiency, whole home, cold climate heat pumps in low-income multifamily and low-income single-family homes with electric heat at no cost to the customer through the Income-Qualified Heat Pumps initiative.
- The C&I programs served over 409,000 electric households and over 2,600 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.

Evaluation, Measurement & Verification (EM&V)

Michigan's EWR construct requires independent verification of utilities' claimed energy savings. This work is performed by an independent EM&V contractor and must be performed to industry standards and guidelines developed by the Evaluation Workgroup of the MPSC EWR Collaborative. Guidehouse currently fulfills this role for DTE.

DTE and its evaluation contractor are active participants in the Evaluation Workgroup, along with Consumers Energy and cooperative and municipal utilities, as well as their respective evaluation contractors and 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, known as the MEMD. The MEMD enables fast and efficient entry, tracking, and evaluation for the vast majority of measures installed in Michigan EWR programs, regardless of program provider.

The MEMD is managed by Morgan Marketing Partners under contract to the MPSC. The Technical Subcommittee oversees the management and updating of the MEMD. Updating measure values to reflect changes in standards, incorporate newer studies, and make 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.

Challenges

Beyond 2020, achieving current savings levels will become more challenging as codes and standards change and technology evolves. DTE will need to reach more customer markets and segments to increase participation. The Company may face other challenges such as the following:

- The Company's EWR Portfolio is in its twelfth year and is experiencing some saturation of existing programs.
- Many unknowns are associated with the Energy Independence and Security Act lighting standards, as well as upgrades to building codes and the rollout of increasingly strict appliance efficiency standards. Old planning assumptions about what portfolios can achieve based on high levels of LED residential lighting savings are no longer applicable.
- Customer baseline installed efficiency keeps increasing as energy efficiency programs and other factors make customers more energy-conscious. This will continue to decrease NTGRs.
- Non-incentive costs will likely increase when attempting to capture hard-to-reach segments, further increasing cost to DTE's customers, necessitating higher rates.
- There is uncertainty around design and delivery of emerging and future pilot programs.

Case: U-20871
Exhibit: A-6
Witness: C. M. Payne
Page 94 of 95

Conclusion

Conclusion

2020 was another successful year for DTE's EWR 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 improving the content of the website, 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 2020, as 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.

2021 will be another pivotal year for DTE's EWR Portfolio as the Company is focused on continuing to work with key stakeholders on securing Michigan's energy future in light of unprecedented industry and energy policy changes. As the EWR Portfolio continues to mature, DTE will continue to innovate to become the best operated energy efficiency program in North America.

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter, on the Commission's own motion,	)	
regarding the regulatory reviews, revisions,	)	
determinations, and/or approvals necessary for	)	Case No. U-20871
DTE GAS COMPANY	)	(Paperless e-file)
to fully comply with Public Act 295 of 2008.	)	
as amended by Public Act 342 of 2016.	)	
_____	)	

QUALIFICATIONS

AND

DIRECT TESTIMONY

OF

KENNETH RANDAZZO

DTE GAS COMPANY
QUALIFICATIONS OF KENNETH RANDAZZO

Line No.

Q1. What is your name, business address and by whom are you employed?

A1. My name is Kenneth Randazzo (he/him/his). My business address is: One Energy Plaza, Detroit, MI 48226. I am employed by DTE Electric Company.

Q2. On whose behalf are you testifying?

A2. I am testifying on behalf of DTE Gas Company (DTE Gas or Company).

Q3. What is your educational background?

A3. I graduated from Oakland University, Rochester Hills MI, receiving a Bachelor of Science Degree in Mechanical Engineering.

Q4. What is your work experience?

A4. I was hired by DTE Electric Company in June 1978 as an engineer in the Generation Engineering Department. In this role I was responsible for energy production engineering analyses and evaluations. I worked in the Project Management Organization on the Belle River Power Plant.

In 1985, I moved into the Company's Marketing & Sales organization performing energy assessments and analyzes, building energy simulations, product development and energy-related economic comparisons for customers.

In 1992, I moved into an account manager position in the Oakland Division. My responsibilities including managing customer relationships with hospitals, schools and commercial office buildings owners/developers in Oakland County.

Line No.

In 1995, I became program manager for DTE's geothermal program. My responsibilities included developing marketing strategies, promotional material, developing a geothermal infrastructure, providing technical knowledge on geothermal and Heating Ventilation and Air Conditioning (HVAC) economic system comparisons and partnered with two lending institutions to develop and implement an energy efficient home mortgage product. I was the Company member in the Geothermal Heat Pump Consortium. I represented the Company at the Department of Energy's (DOE) efforts to establish geothermal as viable HVAC option. Through these efforts, DTE was selected by DOE as the model geothermal program for all other utilities to follow.

From 1997 to mid-2011 I was Major Account Services where I held various leadership and management positions working with all commercial and industrial customers. From 2000 – 2001 I worked on the DTE Energy and MCN Energy merger. In 2005 started I started the Midsize Business account management group that focused on improving relationships and interactions with small to medium business customers. In 2007 I was Manager of National Accounts group that focused on the largest national chain account customers.

In July 2011, I moved to Energy Waste Reduction (EWR) as Manager of the commercial and industrial (C&I) customer programs, the Energy Partnership & Services group and the Michigan Energy Efficiency Conference presented by DTE Energy and Engineering Society of Detroit.

Q5. What are your current job responsibilities?

Line No.

A5. As Manager of the EWR C&I Program team, I am responsible for developing electric and gas strategies and product offerings for all DTE C&I customers supporting DTE Gas's overall EWR strategies. I am also Manager of the Energy Partnership & Services group, which provides energy consulting services to DTE's commercial and business customers. The Energy Partnership group is also responsible for implementing DTE's Strategic Energy Plan.

Q6. Are you affiliated with any professional organizations?

A6. Yes. I am affiliated with the Association of Energy Services Professionals, Consortium for Energy Efficiency, Michigan Energy Efficiency Contractors Association, Small Business Association of Michigan and Detroit 2030 District. I have served as an expert speaker on utility energy efficiency programs at both national and regional conferences.

Q7. Have you previously provided testimony or supported cases before the Michigan Public Service Commission (Commission)?

A7. I have provided testimony in numerous DTE Electric and DTE Gas cases; DTE Electric EO/EWR Reconciliation Cases in 2012, 2013, 2014, 2015, 2016 and 2017 (U-17282, U-17602, U-17832, U-18023, U-18332 and U-20029 respectively); DTE Gas EO/EWR Reconciliation Cases in 2012, 2013, 2014, 2015, 2016 and 2017 (U-17288, U-17608, U-17481, U-18024, U-18338 and U-20035, respectively); DTE Electric Amended EO Plan Case U-17762 and DTE Gas Amended EO Plan Case U-17763; DTE Electric EWR 2018-2019 Plan Case U-18262; DTE Gas 2018-2019 Plan Case U-18268; DTE Electric EWR 2020-2021 Plan Case U-20373 and U-20373 Amended Case and DTE Gas 2020-2021 Plan Case U-20429.

Line No.

Q8. What is the purpose of your testimony?

A8. The purpose of my testimony is to present the results of the DTE Gas 2020 EWR C&I programs and the gas Self-Direct program. My testimony will describe the following:

1. The overall implementation of EWR C&I programs;
2. The 2020 performance of DTE Gas's EWR C&I Platforms and how the customers were made aware of these programs. This will include a discussion of the measures, incentives, spend, and energy savings achieved for the C&I Downstream Platform's Prescriptive and Non-Prescriptive programs, C&I component of the Multifamily and the Energy Star Retail Lighting programs, Operational Platform, Small Business Platform, and C&I Midstream Platform;
3. The C&I Emerging Measures and Approaches programs and results;
4. The continued implementation of the C&I Strategic Energy Plan;
5. The impact of the End Use Transportation Exploratory Offer;
6. The Administration & Infrastructure cost allocated to the C&I Portfolio.

Q9. Are you sponsoring any exhibits in this proceeding?

A9. Yes. I am sponsoring the following exhibits:

Exhibit	Description
A-10	Commercial and Industrial and End User Transportation Program Cost and Energy Savings

Q10. Was this exhibit prepared by you or under your direction and supervision?

A10. Yes, it was.

Line No.

2020 EWR Plan C&I Portfolio Summary

Q11. What was the overall performance of DTE Gas's EWR C&I portfolio in 2020?

A11. DTE Gas exceeded its C&I energy savings and was slightly over its cost allocation in 2020. The EWR Plan C&I portfolio was expected to achieve 946,419 Mcf of energy savings at a cost of $9.4 million. The C&I portfolio achieved 1,107,551 Mcf of savings and at a cost of approximately $10 million. The energy savings achieved was more than the planned natural gas energy savings by 161,132 Mcf, as shown on Exhibit A-10, column (f), line 10 and spent $0.6 million more than planned on customer incentives. For the total C&I portfolio, 2,611 customer applications were processed as shown on line 19, column (b), Exhibit A-10. Additional details regarding the C&I Platform will be discussed further in this testimony.

Q12. How did DTE Gas implement its EWR C&I programs?

A12. DTE Gas retains implementation contractors to implement its commercial and industrial programs. DTE Gas has worked with DNV (formerly known as DNV-GL) to implement the Downstream Platform's prescriptive & non-prescriptive programs since 2009. DNV currently provides operational support including trade ally training, application review and processing, rebate fulfillment, operations call center, tracks Downstream program results, and trade ally satisfaction surveys for the program. Guidehouse Inc. supplies customer satisfaction surveys for the program.

Q13. How did DTE Gas inform customers of the C&I programs?

A13. DTE Gas used several marketing channels to inform its business customers about the energy efficiency programs available to them. Key marketing channels included DTE account managers who are directly responsible for business

Line No.

relationships with assigned C&I customers, Energy Partnership & Services' energy managers and trade allies who were marketing energy efficiency technologies directly to business customers. In prior years, DTE Gas has also used the annual DTE Energy/Engineering Society of Detroit Michigan Energy Conference to promote the program. However, because of the Governor's Executive Orders related to the coronavirus pandemic, DTE Gas did not present at the Michigan Energy Conference in 2020. Other marketing materials and mediums that are used include TV and radio advertisement, DTE Energy website, training seminars, technical product knowledge workshops, press releases and periodicals. Throughout the year, program presentations were made to customers; professional associations/organizations; city, state, and federal government agencies; and vendors, contractors, engineering and architecture firms.

C&I Downstream Platform

Q14. What is the objective of the Downstream Platform?

A14. The objective of a downstream program is to provide business customers with incentives for installing standard or new custom energy-efficient measures for numerous applications including but not limited to furnaces, boilers, insulation, etc. Downstream programs enroll trade allies to participate because of their design and installation expertise for the products or measures that they sell. By targeting the trade ally network, DTE Gas can focus on contractors that could impact a greater number of business customers. DTE Gas business customers will also participate directly in downstream programs using their employees to design and install the measures. Trade allies or the customer will submit a program application, DTE Gas will review the application and approve it for installation. When the project is

Line No.

complete, DTE Gas will approve the final application and the customer receives their incentive for the project.

Q15. What programs are included in the C&I Downstream Platform?

A15. DTE Gas's C&I Downstream Platform consists of two programs: Prescriptive and Non-Prescriptive. Details of each program's objectives and accomplishments will now be discussed.

Prescriptive Program

Q16. What was the objective of the C&I prescriptive program?

A16. The objective of the C&I prescriptive program is to encourage C&I business customers to install energy efficient measures in their existing facilities. It provides predetermined measures and incentives that are in the State of Michigan's approved Michigan Energy Measures Database (MEMD) to business customers for the installation of energy efficient equipment. The MEMD incentives were designed to reduce the customers installations cost thereby removing barriers to participation.

Q17. What measures were included in the C&I prescriptive program?

A17. The C&I prescriptive program included more than 75 prescriptive measures from the MEMD. The primary measures include but are not limited to control systems, HVAC equipment, insulation, and other common natural gas energy efficient measures that business customers could install.

Q18. What incentives were offered under the C&I prescriptive program?

Line No.

A18. EWR C&I incentive levels varied for the list of MEMD prescriptive measures. For example, incentives for approved boilers and furnaces ranged from $0.20 to $0.85 per input MBH, water heaters ranged from $60 to $125 per heater and roof insulation ranged from $10 to $25 per 1,000 square foot.

Q19. How were the natural gas prescriptive program energy savings calculated?

A19. The gas prescriptive energy savings are calculated based on the MEMD deemed savings for each type of measure within the prescriptive program. Measures are specific devices or practices that reduce the amount of natural gas use when installed in a business. The deemed energy savings included in this program were determined from the state approved MEMD and have been validated by Guidehouse Inc. and supported in the testimony of Company Witness Ms. Brannan.

Q20. What energy savings and customer participation were achieved in the prescriptive program?

A20. As shown in Exhibit A-10, line 1, column (d), DTE Gas achieved 486,365 Mcf of energy savings in the C&I prescriptive program. The C&I Multi-family common areas, Exhibit A-10, lines 7, column (d) contributed an additional 3,421 Mcf towards the overall C&I prescriptive energy savings. 621 customer applications were processed in the prescriptive program, as shown on line 11, column (b), Exhibit A-10 and the Multifamily Common Areas customer participation was 18, as shown in line 17 column (b) of Exhibit A-10.

Q21. What amount did DTE Gas spend on the C&I prescriptive program?

Line No.

A21. As shown in Exhibit A-10, line 1, column (e), DTE Gas spent $3.6 million on the C&I prescriptive program. Spend, as used in this testimony, refers to the O&M and capital expenditures by DTE Gas in implementing the C&I program. It includes the implementation costs, customer incentives and marketing costs. The EWR Plan approved for 2020 had an anticipated C&I prescriptive cost of approximately $3.7 million. DTE Gas spent approximately $0.1 million less than the plan for the C&I prescriptive program. The prescriptive underspend was allocated to Emerging Measures and Approaches to fund new programs.

Q22. Why does the Multifamily program have a component within the C&I Downstream Platform?

A22. Energy savings and costs for measures installed in multifamily common areas are included in the C&I prescriptive program because they are commercial facilities. Property managers and building owners were encouraged to install energy efficient equipment in their facility common areas such as hallways, stairwells, lobbies and parking lots by providing them specific incentives for those measures.

Q23. What measures were offered in common areas of the Multifamily program?

A23. The measures included in the Multifamily common areas are found in the MEMD. Examples of common area measures may include but are not limited to heating controls and water heating.

Q24. What incentives were offered for common area measures in the Multifamily program?

Line No.

A24. The incentive levels varied based on the type of energy efficient equipment or retrofits that the property managers or building owners may install. The incentive amounts varied between lower cost heating controls to higher cost measures such as central system water heating.

Q25. Are there unique challenges in marketing energy efficient measures to the Multifamily vertical market?

A25. Yes, penetrating the multifamily market with energy efficient measures is challenging since decision-makers of these properties are often hesitant to invest in energy saving products when the benefits are shared among the tenants and property owners, but the investment is wholly made by the owner. However, installing energy efficient measures as an investment helps multifamily property owners and managers enhance the value and marketability of their properties while reducing their energy-related operating expenses.

Q26. What C&I Multifamily Common Area results were achieved?

A26. DTE Gas's multifamily commercial customers saved 3,421 Mcf by installing energy efficient measures in their common areas, which is included in the C&I program energy savings on line 7, column (d) of Exhibit A-10. 18 customer applications were processed in the C&I Multifamily program, as shown on line 17, column (b), Exhibit A-10.

Q27. What amount did DTE Gas spend on the C&I component of the Multifamily program?

A27. DTE Gas spent approximately $0.06 million on the C&I component of multifamily program on line 7, column (e) of Exhibit A-10. The spend includes common area

Line No.

measures only and includes implementation costs to maintain the C&I component of the program, such as call center activities, rebate processing and fulfillment for common areas, field verification activities, collateral and educational pieces designed for outreach events and program activities, and contractor training and support.

Non-Prescriptive Program

Q28. What was the objective of the C&I non-prescriptive program?

A28. The non-prescriptive program provided custom incentives to C&I customers for installing measures that are generally not considered a prescriptive installation or innovative and unique energy efficiency equipment and controls that decrease natural gas use.

Q29. What measures were included in the C&I non-prescriptive program?

A29. The C&I non-prescriptive program components include custom measures and Request for Proposal (RFP), which are special offerings designed to increase customer participation. Examples of C&I non-prescriptive program measures could include process boilers or HVAC systems with extended hours of operation or was not a one to one replacement.

Q30. Were any measures excluded from the C&I non-prescriptive program?

A30. Yes. Measures that were not eligible for a non-prescriptive incentive included fuel switching (e.g., electric to gas or gas to electric), changes in operational and/or maintenance practices or simple control modifications, on-site standby electric generators and Combined Heat and Power systems. Project applications must also meet the non-prescriptive program requirements.

Line No.

Q31. What incentives were offered under the C&I non-prescriptive program?

A31. Measure incentives were based on twelve months engineering calculated energy savings paid a rate of $3.50 per Mcf. To participate in the non-prescriptive program and be eligible for an incentive, a pre and post inspection is required. Additionally, incentives were capped at 50% of the project cost.

Q32. What energy savings and customer participation were achieved in the C&I non-prescriptive program?

A32. As shown in Exhibit A-10, line 2, column (d), DTE Gas's C&I non-prescriptive program achieved 467,439 Mcf of reduced natural gas use. The 2020 EWR Plan goal was 50,843 Mcf. The gas energy savings were 416,596 Mcf more than the plan as shown in Exhibit A-10, line 2, column (f). The introduction of an alternate delivery channel for custom projects was a major contributor to exceeding the goal. This delivery channel, the Energy Efficiency Revere Auction, will be discussed in more detail in the Emerging Measures and Approaches section. In total, 183 non-prescriptive customer applications were processed as shown in Exhibit A-10, line 12, column (b).

Q33. What amount did DTE Gas spend on the C&I non-prescriptive program?

A33. As shown in Exhibit A-10, line 2, column (e), DTE Gas spent approximately $1.7 million on the C&I non-prescriptive program. The non-prescriptive program spend includes customer incentives, program implementation and marketing costs. The EWR Plan had an anticipated cost of approximately $1.9 million. The non-prescriptive program spend was approximately $0.2 million less than planned as

Line No.

shown in Exhibit A-10, line 2, column (g). The non-prescriptive program under spend was allocated to new programs in Emerging Measures and Approaches.

C&I Operational Platform

Q34. What is the objective of the Operational Platform?

A34. The Operational Platform's objective is to provide a comprehensive approach whereby businesses systematically manage energy use to continuously improve energy performance. The programs' purpose is to identify low cost/no cost operating change measures that customers can implement that will reduce their energy consumption and improve the facilities operating performance. The programs focus on changing business practices and operating schedules while establishing an organizational culture to reduce energy waste, improve energy efficiency and verify the results.

Q35. What programs are included in the Operational Platform?

A35. The C&I Operational Platform consists of two programs: Retro-Commissioning and Strategic Energy Management. Details of each program's objectives and accomplishments will now be discussed.

Retro-Commissioning Program

Q36. What was the objective of the Retro-Commissioning program?

A36. Retro-Commissioning (RCx) targets commercial buildings by providing a detailed energy audit and evaluation that identifies low cost/no cost operating change measure recommendations. Property managers and building owners could then implement these recommendations, thereby reducing the facilities operational energy consumption. Customers are expected to have a building management

Line No.

system, to provide a nominal commitment and to implement recommendations that have an 18-month simple payback or less. In addition to the operational energy saving recommendations, the Retro-Commissioning evaluation report provides customers with recommendations for energy efficient capital investments that the customer could implement and receive an incentive through the Downstream Platform.

Q37. What energy savings and customer participation were achieved in the Retro-Commissioning program?

A37. DTE Gas saved 97 Mcf through the Retro-Commissioning program as shown on line 3, column (d) of Exhibit A-10. The EWR Plan energy savings objective was 181 Mcf. The RCx program's energy savings were slightly below Plan by 84 Mcf as shown on line 3, column (f) of Exhibit A-10. One customer participated in the Retro-Commissioning program, as shown on line 13, column (b) of Exhibit A-10.

Q38. What amount did DTE Gas spend on the Retro-Commissioning program?

A38. DTE Gas spent $0.06 million on the Retro-Commissioning program as shown on line 3, column (e) of Exhibit A-10. The EWR Plan cost was $0.01 million. The RCx program exceeded the planned cost by $0.05 million as shown on line 3, column (g) of Exhibit A-10.

Strategic Energy Management Program

Q39. What was the objective of the Strategic Energy Management program?

A39. Strategic Energy Management (SEM) targets commercial and industrial facilities by providing a holistic view of the customer's energy performance. Strategic Energy Management engages and commits executives and facility managers to

Line No.

develop and implement long term strategic energy performance plan. The program provides coaching and training for 12-24 months to build the foundation of a continual improvement structure for driving year over year improved energy performance. Customers are expected to have a building management system, provide a commitment to implement recommendations that have a nominal simple payback. In addition to the operational energy saving recommendations, the Strategic Energy Management evaluation provides customers recommendations for capital energy efficient investments that the customer could implement and receive an incentive through the Downstream Platform.

Q40. What energy savings and customer participation were achieved in the Strategic Energy Management program?

A40. DTE Gas saved 69,456 Mcf through the Strategic Energy Management program, as shown on line 4, column (d) of Exhibit A-10. The EWR Plan energy savings objective was 13,029 Mcf. The SEM program exceeded the target energy savings by 56,427 Mcf as shown on line 4, column (f) of Exhibit A-10. In total, 10 customers participated in the Strategic Energy Management program as shown on line 14, column (b) of Exhibit A-10.

Q41. What amount did DTE Gas spend on the Strategic Energy Management program?

A41. DTE Gas spent $0.5 million on the SEM program as shown on line 4, column (e) of Exhibit A-10. The EWR Plan cost was approximately $0.2 million. SEM program cost was $0.3 million more than planned as shown on line 4, column (g) of Exhibit A-10. The overspend was directly related to customer savings

Line No.

verification and incentives paid for the additional 56,427 Mcf the program achieved.

C&I Small Business Platform

Q42. What is the objective of the Small Business Platform?

A42. The objective of the Small Business Platform is to provide very small to medium business customers with an opportunity to participate in DTE Gas's energy efficiency programs. Small Business Platform is segmented to strategically develop and implement programs for these business customers. For example, a direct install program will focus on very small business customers that usually cannot justify installing energy efficient measures, or another program will enroll trade allies that agree to focus on small-medium businesses to design and install energy efficient measures. Targeting the trade ally network allows DTE to focus on contractors that could impact a greater number of small-medium business customers. Small-medium business customers can also participate directly in small business programs using their employees to design and install the measures. These business customers generally install the most common natural gas energy-efficient measures including but not limited to thermostats, furnaces, insulation, etc. When the project is completed, DTE Gas will approve the application and the customer will receive their incentive for the project.

Q43. What programs are included in the C&I Small Business Platform?

A43. DTE Gas's C&I Small Business Platform consists of one program: Business Energy Consultation. Details of this program's objectives and accomplishments will now be discussed.

Line No.

Business Energy Consultation Program

Q44. What was the objective of the Business Energy Consultation (BEC) program?

A44. The objective of the BEC program is to meet small business customers at their facilities to educate them about energy efficiency options and opportunities. The BEC team provides a walk-through energy assessment along with best practice recommendations. It then helps the small business customer understand that by installing the recommendations they can reduce their energy use and operating costs. The most basic objective is to help small business customers begin their energy efficiency journey.

Q45. What measures were included in the Business Energy Consultation Program?

A45. The BEC program's most common natural gas measures include but are not limited to programmable thermostat, pipe wrap, low flow faucet, etc.

Q46. What energy savings and customer participation were achieved in the Business Energy Consultation program?

A46. DTE Gas saved 36,552 Mcf through the Business Energy Consultation program, shown on line 5, column (d) of Exhibit A-10. The EWR Plan energy savings expectation was 40,803 Mcf. The BEC program was under the target energy savings by 4,251 Mcf as shown on line 5, column (f) of Exhibit A-10 because of the governor's executive orders that basically shut the State down for nearly three months. The saving was made up through the Downstream Platform and Emerging Measures and Approach. In total, 990 customers participated in the Business Energy Consultation program, as shown on line 15, column (b) of Exhibit A-10.

Line No.

Q47. What amount did DTE Gas spend on the Business Energy Consultation program?

A47. DTE Gas spent $0.6 million on the Business Energy Consultation program, shown on line 5, column (e) of Exhibit A-10. The EWR Plan budget was $1.2 million. The BEC program cost was $0.6 million less than Plan as shown on line 5, column (g) of Exhibit A-10. The under spend was allocated to the Operational Platform.

C&I Midstream Platform

Q48. What is the objective of a midstream delivery channel?

A48. The objective of a midstream delivery channel is to develop and implement a simplified product procurement method and delivery channel. Midstream programs enroll distributors to participate because of their expertise and the fact that they sell the products. By targeting the distributor delivery channel, DTE Gas can focus on fewer players that could impact a greater number of business customers. Simplified product procurement method does not require the customer to submit a program application, and the customer receives a point of purchase incentive. Successful midstream programs can change the distributor's stocking habits to include more readily available energy efficient products in the warehouse which they can sell to their customers.

Q49. What programs are included in the C&I Midstream Platform?

A49. DTE Gas's C&I Midstream Platform consists of one program: Midstream Food Service. Details of that program's objectives and accomplishments will now be discussed.

Line No.

Midstream Food Service

Q50. What was the objective of the Midstream Food Service program?

A50. The Midstream Food Service program's objective is to enroll distributors and dealers that have a mix of energy efficient products that are Energy Star® rated that include but are not limited to fryers, griddles, combination ovens, rack ovens and conveyor ovens.

Q51. What energy savings and customer participation were achieved in the Midstream Food Service program?

A51. DTE Gas saved 5,938 Mcf through the C&I Midstream Food Service program, shown on line 6, column (d) of Exhibit A-10. The EWR Plan energy savings was 26,000 Mcf. The Midstream Food Service was 20,062 Mcf less than targeted energy savings for two reasons. Michigan's executive orders severely impacted this program is two ways; (1) food service distributors' and dealers' walk-in counter sales were closed for nearly three months, therefore no equipment was sold during that time through the walk-in counter; (2) the retail food vertical market impacts were because the establishments were closed and when re-opened had restricted occupancy levels requiring owners to conserve their cash. However, this program's energy saving were made up by the Downstream Platform and in Emerging Measures and Approaches. In total, 80 customers participated in the Midstream Food Service program, as shown on line 16, column (b) of Exhibit A-10.

Q52. What amount did DTE Gas spend on the Midstream Food Service program?

A52. DTE Gas spent $0.5 million on the Midstream Food Service program, shown on line 6, column (e) of Exhibit A-10. The EWR Plan cost was $1.4 million. The Midstream Food Service program under spent the 2020 budget by $0.9 million as

Line No.

shown on line 6, column (g) of Exhibit A-10. The under spend was allocated to Emerging Measures and Approaches.

C&I Emerging Measures & Approaches Programs

Q53. What C&I Emerging Measures and Approaches were developed and offered to DTE Gas customers?

A53. In the 2020 EWR program year, DTE Gas introduced three C&I Emerging Measures and Approaches consisting of Small Biz Focus, C&I Midstream HVAC, and Energy Efficiency Reverse Auction. An explanation of each will follow.

Small Biz Focus; This program is designed to concentrate on small-medium business customers that require additional guidance on their energy efficiency journey. This program's process is to engage small-medium business customers through an energy assessment and provide energy efficiency recommendations based on the assessment findings. The outreach team explains the assessment and recommendations encouraging the customer to implement the recommendations. If the customer agrees to implement the recommendations, the customer is provided a list of trade allies that can design the project, provide project costs and complete the installation. The customer will then select the trade ally to complete the project, submit a completed application, DTE will approve the application and the customer will then receive their project incentives.

Midstream HVAC; The objective of a midstream delivery channel is to develop and implement a simplified product procurement method and delivery channel. The Midstream HVAC program enrolls HVAC distributors and manufacturing representatives with the objective of having a mix of energy efficient products that

Line No.

are certified by Air-Conditioning, Heating and Refrigeration Institute that include but are not limited to condensing and domestic hot water boilers.

Energy Efficiency Reverse Auction; The objective of an energy efficiency auction delivery channel is to allow customers and service providers to competitively bid for incentives. This delivery channel focused on the large customer segment that had large energy efficiency projects that could provide the greatest savings to the C&I portfolio. In this auction, all bidders were prequalified to participate, the auction started with an established a bid ceiling price per Mcf, it had a limited auction time, and lowest cost per Mcf bid price were considered the winner.

Q54. What were the Emerging Measures and Approaches energy saving and customer participation results?

A54. As shown in Exhibit A-10, line 8, column (d), the Emerging Measures & Approaches programs saved DTE Gas 38,283 Mcf and were attributable to the Small Biz Focus and Midstream HVAC programs. The EWR Plan energy savings objective was 7,541 Mcf. These savings were 30,742 Mcf more than planned, as shown in Exhibit A-10, line 8, column (f). The Energy Efficiency Reverse Auction applications were processed through the Downstream Platform's Non-prescriptive program and, therefore the energy savings were included in the Non-prescriptive program as discussed earlier in my testimony. As shown in Exhibit A-10, line 18, column (b), 708 customer applications were processed.

Q55. What were the Emerging Measures and Approaches spend results?

Line No.

A55. The Emerging Measures and Approaches program spend includes customer incentives, implementation costs and marketing costs. As shown in Exhibit A-10, line 8, column (e), DTE Gas spent approximately $2.1 million on the Emerging Measures and Approaches programs. The EWR Plan cost was approximately $0.4 million. The Emerging Measures and Approaches programs spent $1.7 million more, as shown on line 8, column (g) of Exhibit A-10. The additional spend was directly related to customer incentives and implement for the Small Biz Focus and Midstream HVAC programs.

C&I Strategic Energy Plan

Q56. Has DTE Gas continued to implement the C&I Strategic Energy Plan with its business customers?

A56. Yes, in 2016 DTE Gas created and implemented the Strategic Energy Plan (SEP) to assist business customers. The Strategic Energy Plan is a comprehensive energy assessment tool that is designed to provide customers with the necessary information and knowledge to create and implement a five-year energy efficiency plan that meets their needs. DTE Gas is continuing to assist companies in developing and implementing a Strategic Energy Plan for their facilities so that they can create a continuous energy efficiency mindset at their company.

C&I EUT (End Use Transportation) Exploratory Offer

Q57. What was the objective in developing the EUT Exploratory offer?

A57. The objective for creating an EUT Exploratory offer was to continue to build customer awareness regarding the benefits of energy efficiency and for customers to make a long-term commitment to reduce their energy use. By having EUT customers' create and implement their own energy efficiency plans, these

Line No.

customers would make a long term commitment to developing energy efficiency strategies that best suited their business needs.

Q58. How were EUT customers notified of their eligibility to file their own energy efficiency plan?

A58. DTE Gas placed a bill message on all EUT customer bills to notify them about the program and explain how to subscribe to the program. Account managers followed up with their EUT customers after the letters were sent out to address customer questions. The program information was also placed on the DTE Energy website along with the required energy plan templates for customers to use to apply to the program.

Q59. How many EUT customers participated in the EUT Exploratory offer?

A59. Zero (0) customers elected to participate in the EUT Exploratory offer.

Q60. If a customer would have participated would they have been required to submit a report of their energy efficiency activities?

A60. Yes

C&I Administration & Infrastructure

Q61. What is the basis for the administration & infrastructure amounts shown on line 9, column (e), Exhibit A-10?

A61. The amount shown in Exhibit A-10, line 9, column (e), approximately $0.9 million, represents internal administration and infrastructure costs directly associated with the overall C&I portfolio implementation. It is the administration and infrastructure costs that Company Witness Ms. Stoudemire allocated to the C&I Portfolio as shown in Exhibit A-14, Page 1 of 4 on line 7, columns (d) and (e). The 2020 EWR

Line No.

Plan had an administration & infrastructure cost of approximately $0.5 million. DTE Gas spent approximately $0.4 million more than planned on administration and infrastructure costs. The spend was used for technology and infrastructure program improvements as well as research for potentially new programs that could be incorporated into the C&I Portfolio.

Q62. Does this complete your direct testimony?

A62. Yes, it does.

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter, on the Commission's own motion,	)	
regarding the regulatory reviews, revisions,	)	
determinations, and/or approvals necessary for	)	Case No. U-20871
DTE ELECTRIC COMPANY	)	(Paperless e-file)
to fully comply with Public Act 295 of 2008,	)	
as amended by Public Act 342 of 2016.	)	
_____	)	

EXHIBITS

OF

KENNETH RANDAZZO

Michigan Public Service Commission
DTE Gas Company
Energy Waste Reduction - 2020 Plan Reconciliation
Commercial and Industrial and End User Transportation Program Cost and Energy Savings

Case No.: U-20871
Exhibit: A-10
Witness: K. Randazzo
Page: 1 of 1

Line No.	(a) Description	(b) 2020 Planned Mcf Savings	(c) 2020 Planned Cost ($000)	(d) 2020 Actual 2020 Verified Net Savings	(e) 2020 Actual Cost ($000)	(f) Variance - Over / (Under) Mcf Savings	(g) Variance - Over / (Under) Cost ($000)
		(1)	(1)	(2)	(3)		
1	C&I Prescriptive	786,882	$3,674	486,365	$3,571	(300,517)	($104)
2	C&I Non-Prescriptive	50,843	$1,897	467,439	$1,728	416,596	($169)
3	Retro-Commissioning	181	$14	97	$62	(84)	$48
4	Strategic Energy Management	13,029	$189	69,456	$498	56,427	$309
5	Business Energy Consultation	40,803	$1,214	36,552	$634	(4,251)	($580)
6	Mid-Stream Food Service	26,000	$1,354	5,938	$471	(20,062)	($883)
7	Multifamily Common Areas	21,140	$202	3,421	$62	(17,719)	($140)
8	Emerging Measures and Approaches	7,541	$350	38,283	$2,071	30,742	$1,721
9	Administration & Infrastructure		$511		$895		$384
10	**Total (5)**	**946,419**	**$9,405**	**1,107,551**	**$9,991**	**161,132**	**$587**

		2020 Customer Applications (4)
11	C&I Prescriptive	621
12	C&I Non-Prescriptive	183
13	Retro-Commissioning	1
14	Strategic Energy Management	10
15	Business Energy Consultation	990
16	Mid-Stream Food Service	80
17	Multifamily Common Areas	18
18	Emerging Measures and Approaches	708
19	Total	2,611

Notes:
(1) U-20429, DTE Gas EWR Plan, Exhibit A-4, Columns (e) and (f)
(2) Exhibit A-12, Column (j)
(3) Exhibit A-3 p4, Column (d)
(4) Company Records
(5) Total C&I/EUT Portfolio savings inclusive of C&I/EUT Pilot and C&I/EUT Education savings is 1,166,975 Mcf. See Exhibit A-2 and A-9.

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter, on the Commission's own motion,	)	
regarding the regulatory reviews, revisions,	)	
determinations, and/or approvals necessary for	)	Case No. U-20871
DTE GAS COMPANY	)	(Paperless e-file)
to fully comply with Public Act 295 of 2008,	)	
as amended by Public Act 342 of 2016.	)	
_____	)	

QUALIFICATIONS

AND

DIRECT TESTIMONY

OF

DEBRA D. STOUDEMIRE

DTE GAS COMPANY
QUALIFICATIONS OF DEBRA D. STOUDEMIRE

Line No.

Q1. What is your name, business address, and by whom are you employed?

A1. My name is Debra Stoudemire. My business address is One Energy Plaza, Detroit, MI 48226. I am employed by DTE Energy Corporate Services LLC, within the Controllers Organization.

Q2. On whose behalf are you testifying?

A2. I am testifying on behalf of DTE Gas Company (DTE Gas or the Company).

Q3. What is your educational background?

A3. I graduated from Saginaw Valley State University with a Bachelor of Business Administration in Business Management and Marketing.

Q4. What is your work experience?

A4. I was hired by Michigan Consolidated Gas Company (MichCon) in May 1995 as a Financial Analyst to the Controllers Division. I supported the Legal, Regulatory, and Design departments. My duties included completing budgets, forecasting, and month-end close those departments, I also served as the Budget Coordinator for the group. A portion of my duties included consolidating data to provide support for Senior Management Board Reports. Other reporting included Operations & Maintenance (O&M), Capital, and Salvage Reports with commentary. During this time I taught various system software and trained interns.

In 2001, I transferred to a different group within Controller's that included the responsibility to consolidate Gas Reporting and budgeting for MichCon's Stations Operations. This included external reporting of Federal Energy Regulatory

Line No.

Commission (FERC) and Michigan Public Service Commission (MPSC or Commission) data. Other duties included responsiblility for training new hires, contract employees and the After Action Review facilitator.

In September 2007, I was promoted to Senior Financial Analyst. I was assigned to the Controllers Distribution Operations Decision Support Team. My primary responsibilities included providing financial support to the various service stations, engineering, Restoration and Line Clearance, capital, and damage claim reporting. I was responsible for preparing the O&M budget for different Distribution Operations and facilitating forecasting for the organization. Also served on special projects for creating and implementation for Customer Payment Analysis, Line of Business Reporting, Unit Costing, and Retention.

In April 2013, I transferred to Energy Optimization. My duties involved supporting various programs and Gas Reporting for month-end. I also supported various reconciliations by completing various audit and discovery questions.

Q5. What is your current position?

A5. I am currently a Principal Supervisor in the Controllers Organization, supporting Business Planning & Development for EWR. My current responsibilities include leading a finance team in providing budgeting, forecasting, reporting and analysis on the performance of the DTE Electric and DTE Gas EWR programs.

Q6. Have you previously supported cases filed with the Commission?

Line
No.

A6. Yes. I have completed supporting documents for the DTE Electric 2018 EWR Reconciliation Case (U-20366) and the DTE Gas 2018 EWR Reconciliation Case (U-20369).

Line No.

Q7. What is the purpose of your testimony in this proceeding?

A7. The purpose of my testimony is to present the for DTE Gas's 2020 EWR program by each customer class: residential, commercial and industrial (C&I), and end user transportation (EUT). This information is used by Company Witness Mr. Lacey in the calculation of the over/(under) cost recovery by customer class, as shown on his Exhibit A-16. I also present the mechanism that is used to allocate costs to each of the customer classes. My testimony covers the following:

1) Brief description of the revenue and program costs included within each customer class.
2) Types of costs that are capitalized and the method in which these capitalized costs are amortized.
3) Calculation and utilization of allocation factors used to assign pilot program costs; education and awareness program costs; Low Income program costs; Administrative and Infrastructure costs; and Evaluation, Measurement & Verification (EM&V) costs to each customer class.

Q8. Are you sponsoring any exhibits in this proceeding?

A8. Yes. I am sponsoring the following exhibits:

Exhibit	Description
A-14	Surcharge Revenue, Program Costs, and Plant Balance (By Class and Total)
A-15	Allocation Factors

Line No.

These exhibits are presented in a manner consistent with DTE Gas's previous EWR reconciliation cases approved by the Michigan Public Service Commission (Commission).

Q9. Were these exhibits prepared by you or under your supervision?

A9. Yes, they were.

Q10. What is the source of the data displayed on your exhibits?

A10. DTE Gas's EWR revenues and expenses are separately identified and recorded in the Company's billing and accounting systems. The revenues identified on my exhibits are the actual results from the Commission-approved EWR surcharges billed to DTE Gas's customers in 2020. The expenses shown in my exhibits reflect the amounts recorded by the Company and identified as EWR expenses during 2020. In this case, Company Witnesses Mr. Payne, Mr. Goncalves and Mr. Randazzo explain and support the details related to each type of EWR expense. In circumstances where the EWR expenses are not recorded directly to a customer class, the related amounts are allocated. Later in my testimony I will support how the Company allocates these expenses to the residential, C&I and EUT customer classes.

Q11. What are the 2020 financial results for each customer class?

A11. Exhibit A-14 is a five page exhibit which shows the 2020 financial results pertaining to: surcharge revenue, program expenses, capitalized program costs, amortization of capitalized costs and the 2020 year-end plant balance for each customer class. Page 1 of this exhibit is a summary of the full year financial results

Line No.

for all customer classes, and pages 2 through 4 provide monthly detail of the 2020 financial results by individual customer class. The layout of Pages 1 through 4 is identical, so my descriptions as to the nature of the data provided on each line applies to each of those pages. Page 5 of the exhibit provides additional detail on the capitalized costs, by program.

Q12. What is the purpose of providing these costs by customer class?

A12. This information is utilized by Witness Lacey for purposes of calculating DTE Gas's over/(under) cost recovery amounts for each customer class.

Q13. What does line 1 of Exhibit A-14 entitled "Surcharge Revenue" represent?

A13. The surcharge revenue on line 1 in Exhibit A-14 represents the amount billed in 2020 to each of the customer classes through the EWR surcharges.

Q14. What is included in these surcharge revenue values?

A14. The surcharge values include both base surcharge revenue and performance incentive revenue. The total billed revenues within Exhibit A-14 are provided to Witness Lacey so he can allocate the revenue amounts between base surcharge revenue and performance incentive revenue by customer class.

Q15. What does line 3 of Exhibit A-14 entitled "Program Costs Expensed" represent?

A15. The program costs expensed on line 3 in Exhibit A-14 represent the direct program costs expensed during 2020. Direct program costs include customer incentives and rebates, and third party implementation contractor (IC) costs. Witness Goncalves provides detail regarding the types of costs associated with EWR residential

Line No.

programs and Witness Randazzo provides detail regarding the types of costs associated with EWR C&I programs.

Q16. What does line 4 of Exhibit A-14 entitled "Pilot Programs" represent?

A16. The Pilot programs costs on line 4 in Exhibit A-14 represent services, materials and administrative costs associated with the EWR pilot programs. Witness Payne provides detail regarding the types of costs associated with EWR pilot programs.

Q17. What does line 5 of Exhibit A-14 entitled "Education and Awareness Programs" represent?

A17. The Education and Awareness programs costs on line 5 in Exhibit A-14 represent services, materials and administrative costs associated with customer education and awareness. Witness Goncalves provides detail regarding the types of costs associated with EWR education and awareness programs.

Q18. What does line 6 of Exhibit A-14 entitled "Low Income Programs" represent?

A18. The Low Income programs costs on line 6 in Exhibit A-14 represent customer incentives (grants), third party administrator costs and administrative costs associated with low income programs. Witness Goncalves provides detail regarding the types of costs associated with Low Income programs.

Q19. What does line 7 of Exhibit A-14 entitled "Administrative and Infrastructure" represent?

A19. The Administration and Infrastructure costs on line 7 in Exhibit A-14 represent internal EWR labor costs, information technology (IT) activities, and products,

Line No.

materials and services such as EWR consultants. These administration and infrastructure costs are associated with the program costs expensed.

Q20. What does line 8 of Exhibit A-14 entitled "Evaluation, Measurement, and Verification" represent?

A20. The EM&V costs on line 8 in Exhibit A-14 represent the activities associated with the third party evaluation of energy savings realized. In addition, administrative costs associated with EM&V are also included on line 8. Witness Payne provides detail regarding the types of costs associated with EM&V.

Q21. What does line 10 of Exhibit A-14 entitled "Program Costs Unitized" represent?

A21. The program costs unitized on line 10 in Exhibit A-14 represent customer incentives and rebates, and third-party IC costs deemed to be capitalized. Costs incurred were deemed to be capital based on the capitalization policy described in the Company's Amended EO Plan, Case No. U-15806 approved by the Commission on June 3, 2010 (Amended EO Plan).

Q22. What criteria did DTE Electric use in 2020 to determine which costs would be capitalized?

A22. For 2020, capitalized costs under the capitalization policy included measures that result in the installation of a tangible asset with an economic life greater than one year and with a total incentive cost for that measure of $10,000 or more.

Line No.

Q23. What does line 11 of Exhibit A-14 entitled "Construction Work in Progress" represent?

A23. The construction work in progress costs on line 11 in Exhibit A-14 represent an estimate of approved costs deemed to be capital but not unitized by year-end.

Q24. What does the Amortization Expense that is shown on line 13 of Exhibit A-14 represent?

A24. The amortization expense on line 13 in Exhibit A-14 represents the amortization associated with program costs capitalized during 2020. Capitalized costs are amortized over a five-year amortization period with costs being amortized for a half-year period in the year that the costs were incurred and the final year the costs are fully amortized. This is consistent with the policy established in the Company's Amended EO Plan Case No. U-15806.

Q25. What does the Plant Balance section on lines 15 through 21 of Exhibit A-14 represent?

A25. The plant balance section on lines 15 through 21 in Exhibit A-14 represents the capitalized cost components utilized by Witness Lacey in deriving the return on capitalized costs.

Q26. What information is shown on Page 5 of Exhibit A-14?

A26. This page of the exhibit details the capital spending for each program. The Commission's Order issued on December 17, 2020 in Case No. U-20703 required the Company to provide the capitalized cost related to each individual program offering and the proportion of those costs related to customer incentives and

Line No.

implementation costs. Although this Order was specific to the electric EWR Programs, we are presenting the same data in this proceeding for the gas programs. Column (b) shows the amount related to customer incentives, column (c) shows the amount related to implementation costs, and the total in column (d) agrees to the total program costs across all customer classes as provided on Page 1, Line 12 of this same exhibit.

Q27. What information is shown on Exhibit A-15?

A27. This exhibit shows the derivation of the allocation factors used to allocate certain costs which are not directly assigned to the customer classes. Pilot program costs, education and awareness program costs, Low Income program costs, administrative and infrastructure costs, and EM&V costs were all allocated to the individual customer classes.

Q28. Were all of the **costs mentioned above allocated the same way?**

A28. No. The education and awareness program costs were allocated using different allocation factors than the factors used for allocating the remaining costs. First, the education and awareness program costs were allocated as 84% to the residential class (as shown on Line 2 of Exhibit A-15), and 16% to the C&I/EUT class (as shown on Line 5) based on the methodology supported in DTE Gas's EWR Reconciliation Case U-20369 and approved by the Commission as shown on lines 1-10 of Exhibit A-15. The costs allocated to the C&I/EUT class were then further allocated between C&I (40.2%) and EUT (59.8%) classes based on the incentive costs incurred for these classes in 2020. The derivation of the C&I/EUT class allocation factors are shown on Exhibit A-15, lines 11-16. This methodology is

Line No.

consistent with DTE Gas's previous EWR reconciliation cases approved by the Commission.

Q29. How were the remaining costs allocated to the customer classes?

A29. Pilot program costs, low income program costs, administrative and infrastructure costs and EM&V costs were allocated to each of the customer classes using a two step allocation process. The first step of the allocation process allocated 59.5% of these costs to the residential class and 40.5% of these costs to the C&I/EUT class as shown on lines 1-10 of Exhibit A-15. This first allocation was based on program incentive costs, program implementation costs, direct program administration costs and education and awareness program costs. The costs allocated to the C&I class were further allocated between C&I (40.2%) and EUT (59.8%) classes based on the incentive costs incurred for these classes in 2020. The derivation of these allocation factors are shown on lines 11-16 on Exhibit A-15. This methodology is consistent with the Company's previous EWR reconciliation cases approved by the Commission.

Q30. How are over or under recovery EWR balances, calculated by Witness Lacey, being treated by the Company?

A30. DTE Gas calculates the cumulative net amount of base revenues compared to expenses. If the cumulative amount is an over recovery, a regulatory liability is accrued. If the cumulative amount represents an under recovery, then a regulatory asset is recognized. Witness Lacey provides detail regarding how these balances are calculated and the associated carrying charges recorded by the Company for these balances.

Line
No.

1 **Q31. Does this conclude your direct testimony?**

2 A31. Yes, it does.

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter, on the Commission's own motion,	)	
regarding the regulatory reviews, revisions,	)	
determinations, and/or approvals necessary for	)	Case No. U-20871
DTE GAS COMPANY	)	(Paperless e-file)
to fully comply with Public Act 295 of 2008,	)	
as amended by Public Act 342 of 2016.	)	
_____	)	

EXHIBITS

OF

DEBRA D. STOUDEMIRE

Michigan Public Service Commission
DTE Gas Company
Energy Waste Reduction - 2020 Plan Reconciliation
Surcharge Revenue, Program Costs and Plant Balance
By Class and Total

Case No.: U-20871
Exhibit: A-14
Page: 1 of 4
Witness: D. Stoudemire

	(a)	(b)	(c)	(d)	(e)	(f)
Line No.	**Description**	**Source**	**Residential**	**C&I**	**EUT**	**Total Col (c)+(d)+(e)**
1	Surcharge Revenue (5)	A-14 pgs 2-4, L1 Col (p)	$ 22,005,377	$ 6,695,936	$ 2,098,496	$ 30,799,809
2	Program Expenses:					
3	Program Costs Expensed	A-14 pgs 2-4, L3 Col (p)	$ 12,124,067	$ 2,243,946	$ 3,325,683	$ 17,693,696
4	Pilot Programs (1)	A-14 pgs 2-4, L4 Col (p)	1,498,554	385,602	632,594	2,516,750
5	Education and Awareness Programs (2)	A-14 pgs 2-4, L5 Col (p)	960,687	69,300	113,689	1,143,676
6	Low Income Programs (3)	A-14 pgs 2-4, L6 Col (p)	6,240,293	1,605,726	2,634,255	10,480,273
7	Administration & Infrastructure	A-14 pgs 2-4, L7 Col (p)	1,889,485	338,900	555,978	2,784,363
8	Evaluation, Measurement, and Verification (4)	A-14 pgs 2-4, L8 Col (p)	1,093,782	281,447	461,725	1,836,954
9	Total Program Expenses	Sum of lines 3 through 8	$ 23,806,869	$ 4,924,920	$ 7,723,924	$ 36,455,713
10	Program Costs Unitized	A-14 pgs 2-4, L10 Col (p)	$ -	$ 1,199,135	$ 2,327,562	$ 3,526,697
11	Construction Work in Progress	A-14 pgs 2-4, L11 Col (p)	-	-	-	-
12	Total Program Costs Capitalized	Sum of lines 10 and 11	$ -	$ 1,199,135	$ 2,327,562	$ 3,526,697
13	Amortization Expense	A-14 pgs 2-4, L13 Col (p)	$ -	$ 16,076	$ 31,205	$ 47,281
14	Plant Balance					
15	Plant in Service	A-14 pgs 2-4, L15 Col (o)	$ -	$ 1,199,135	$ 2,327,562	$ 3,526,697
16	Retired Plant in Service	A-14 pgs 2-4, L16 Col (o)	-	-	-	-
17	Construction Work in Progress	A-14 pgs 2-4, L17 Col (o)	-	-	-	-
18	Gross Plant	Sum of lines 15,16 and 17	$ -	$ 1,199,135	$ 2,327,562	$ 3,526,697
19	Accumulated Amortization (3)	A-14 pgs 2-4, L19 Col (o)	-	(16,076)	(31,205)	(47,281)
20	Retired Accumulated Amortization	A-14 pgs 2-4, L20 Col (o)	-	-	-	-
21	Net Plant	Sum of lines 18,19 and 20	$ -	$ 1,183,059	$ 2,296,357	$ 3,479,415

Notes:

Administrative Costs included above:	
(1) Pilot	$ 254,214
(2) Education and Awareness	392,168
(3) Low Income	106,542
(4) Evaluation, Measurement, and Verification	59,053
Total	$ 811,977

(5) Base EWR surcharge revenue and EWR performance incentive revenue

Michigan Public Service Commission
DTE Gas Company
Energy Waste Reduction - 2020 Plan Reconciliation
Surcharge Revenue, Program Costs and Plant Balance
Residential

Case No.: U-20871
Exhibit: A-14
Page: 2 of 4
Witness: D. Stoudemire

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)
Line No.	**Description**	**Source**	**2019 Ending Balance**	**Jan-20**	**Feb-20**	**Mar-20**	**Apr-20**	**May-20**	**Jun-20**	**Jul-20**	**Aug-20**	**Sep-20**	**Oct-20**	**Nov-20**	**Dec-20**	**Total 2020**
1	Surcharge Revenue (1)	WP DS-1, Line 1		$ 3,112,178	$ 3,203,171	$ 3,301,927	$ 2,235,194	$ 1,696,626	$ 725,950	$ 396,505	$ 376,723	$ 440,685	$ 850,485	$ 1,609,813	$ 4,056,121	$ 22,005,377
2	Program Expenses:															
3	Program Costs Expensed	WP DS-2, Line 8		$ 1,779,718	$ 921,525	$ 618,038	$ 744,340	$ 413,167	$ 863,443	$ 1,117,043	$ 1,074,646	$ 783,879	$ 1,361,688	$ 1,654,213	$ 792,365	$ 12,124,067
4	Pilot Programs	WP DS-2, Line 9		33,956	50,874	87,776	72,850	56,132	122,819	86,719	140,523	146,501	121,773	214,118	364,514	1,498,554
5	Education and Awareness Programs	WP DS-2, Line 10		15,766	21,684	62,556	33,066	35,542	48,639	55,791	137,144	140,283	148,789	115,728	145,699	960,687
6	Low Income Programs	WP DS-2, Line 11		87,617	407,483	522,362	264,162	163,233	383,211	248,904	465,048	422,075	853,041	687,620	1,735,536	6,240,293
7	Administration & Infrastructure	WP DS-2, Line 12		208,599	81,449	123,345	110,818	171,515	116,670	119,867	269,734	136,215	71,724	159,666	319,884	1,889,485
8	Evaluation, Measurement, and Verification	WP DS-2, Line 13		59,129	73,707	88,329	119,713	125,410	61,944	76,574	75,954	101,649	76,086	76,440	158,846	1,093,782
9	Total Program Expenses	Sum of Lines 3 through 8		$ 2,184,785	$ 1,556,723	$ 1,502,406	$ 1,344,949	$ 964,999	$ 1,596,726	$ 1,704,898	$ 2,163,049	$ 1,730,602	$ 2,633,102	$ 2,907,785	$ 3,516,845	$ 23,806,869
10	Program Costs Unitized	WP DS-2, Line 4		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
11	Construction Work in Progress	WP DS-2, Line 5		-	-	-	-	-	-	-	-	-	-	-	-	-
12	Total Program Costs Capitalized	Sum of Lines 10 and 11		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
13	Amortization Expense	WP DS-3, Line 1		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
14	Plant Balance															
15	Plant in Service (2)	Prior Bal. + L10	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
16	Retired Plant in Service			$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
17	Construction Work in Progress	Prior Bal. + L11	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	Gross Plant	Sum of Lines 15,16 and 17	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
19	Accumulated Amortization (3)	Prior Bal. + L13	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	Retired Accumulated Amortization		-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	Net Plant	Sum of Lines 18, 19 and 20	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -

Notes:
(1) Base EO surcharge revenue and EO performance incentive revenue
(2) 2019 Ending Balance Line 15 col (c) Source: U-20708, Exhibit A-14 p.2, Line 15, col (o)
(3) 2019 Ending Balance Line 19 col (c) Source: U-20708, Exhibit A-14 p.2, Line 19, col (o)

Michigan Public Service Commission
DTE Gas Company
Energy Waste Reduction - 2020 Plan Reconciliation
Surcharge Revenue, Program Costs and Plant Balance
Commercial & Industrial

Case No.: U-20871
Exhibit: A-14
Page: 3 of 4
Witness: D. Stoudemire

Line No.	(a) Description	(b) Source	(c) 2019 Ending Balance	(d) Jan-20	(e) Feb-20	(f) Mar-20	(g) Apr-20	(h) May-20	(i) Jun-20	(j) Jul-20	(k) Aug-20	(l) Sep-20	(m) Oct-20	(n) Nov-20	(o) Dec-20	(p) Total 2020
1	Surcharge Revenue (1)	WP DS-1, Line 2		$ 1,007,285	$ 952,624	$ 1,026,414	$ 622,001	$ 426,888	$ 204,371	$ 138,009	$ 121,147	$ 142,230	$ 233,751	$ 446,082	$ 1,375,133	$ 6,695,936
2	Program Expenses:															
3	Program Costs Expensed	WP DS-2, Line 22		$ 169,939	$ 134,333	$ 207,284	$ 120,485	$ 107,428	$ 111,906	$ 134,281	$ 125,934	$ 144,996	$ 132,280	$ 132,508	$ 722,572	$ 2,243,946
4	Pilot Programs	WP DS-2, Line 23		8,737	13,091	22,586	18,745	14,444	31,603	22,314	36,159	37,697	31,334	55,096	93,795	385,602
5	Education and Awareness Programs	WP DS-2, Line 24		1,137	1,564	4,513	2,385	2,564	3,509	4,024	9,893	10,119	10,733	8,348	10,510	69,300
6	Low Income Programs	WP DS-2, Line 25		22,545	104,852	134,412	67,973	42,002	98,606	64,047	119,664	108,607	219,501	176,935	446,581	1,605,726
7	Administration & Infrastructure	WP DS-2, Line 26		28,485	22,599	21,746	27,667	20,993	23,188	26,268	21,401	22,190	19,701	25,789	78,874	338,900
8	Evaluation, Measurement, and Verification	WP DS-2, Line 27		15,215	18,966	22,729	30,804	32,270	15,939	19,704	19,544	26,156	19,578	19,669	40,874	281,447
9	Total Program Expenses	Sum of Lines 3 through 8		$ 246,058	$ 295,405	$ 413,269	$ 268,060	$ 219,701	$ 284,751	$ 270,638	$ 332,595	$ 349,765	$ 433,127	$ 418,345	$ 1,393,206	$ 4,924,920
10	Program Costs Unitized	WP DS-2, Line 18		$ 150,670	$ 39,178	$ 39,318	$ 62,902	$ 46,663	$ 58,774	$ 146,435	$ 49,136	$ 47,186	$ 86,431	$ 81,892	$ 390,549	$ 1,199,135
11	Construction Work in Progress	WP DS-2, Line 19		-	-	-	-	-	-	-	-	-	-	-	-	-
12	Total Program Costs Capitalized	Sum of Lines 10 and 11		$ 150,670	$ 39,178	$ 39,318	$ 62,902	$ 46,663	$ 58,774	$ 146,435	$ 49,136	$ 47,186	$ 86,431	$ 81,892	$ 390,549	$ 1,199,135
13	Amortization Expense	WP DS-3, Line 2		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 16,076	$ 16,076
14	Plant Balance															
15	Plant in Service (2)	Prior Bal. + L10	$ -	$ 150,670	$ 189,849	$ 229,167	$ 292,069	$ 338,732	$ 397,506	$ 543,941	$ 593,077	$ 640,264	$ 726,695	$ 808,587	$ 1,199,135	
16	Retired Plant in Service		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
17	Construction Work in Progress	Prior Bal. + L11	-	-	-	-	-	-	-	-	-	-	-	-	-	
18	Gross Plant	Sum of Lines 15,16 and 17	$ -	$ 150,670	$ 189,849	$ 229,167	$ 292,069	$ 338,732	$ 397,506	$ 543,941	$ 593,077	$ 640,264	$ 726,695	$ 808,587	$ 1,199,135	
19	Accumulated Amortization (3)	Prior Bal. + L13	-	-	-	-	-	-	-	-	-	-	-	-	(16,076)	
20	Retired Accumulated Amortization		-	-	-	-	-	-	-	-	-	-	-	-	-	
21	Net Plant	Sum of Lines 18, 19 and 20	$ -	$ 150,670	$ 189,849	$ 229,167	$ 292,069	$ 338,732	$ 397,506	$ 543,941	$ 593,077	$ 640,264	$ 726,695	$ 808,587	$ 1,183,059	

Notes:

(1) Base EO surcharge revenue and EO performance incentive revenue
(2) 2019 Ending Balance Line 15 col (c) Source: U-20708, Exhibit A-14 p.3, Line 15, col (o)
(3) 2019 Ending Balance Line 19 col (c) Source: U-20708, Exhibit A-14 p.3, Line 19, col (o)

Michigan Public Service Commission
DTE Gas Company
Energy Waste Reduction - 2020 Plan Reconciliation
Surcharge Revenue, Program Costs and Plant Balance
End-User Transportation

Case No.: U-20871
Exhibit: A-14
Page: 4 of 4
Witness: D. Stoudemire

Line No.	(a) Description	(b) Source	(c) 2019 Ending Balance	(d) Jan-20	(e) Feb-20	(f) Mar-20	(g) Apr-20	(h) May-20	(i) Jun-20	(j) Jul-20	(k) Aug-20	(l) Sep-20	(m) Oct-20	(n) Nov-20	(o) Dec-20	(p) Total 2020
1	Surcharge Revenue (1)	WP DS-1, Line 3		$ 188,206	$ 131,640	$ 228,541	$ 184,318	$ 151,683	$ 152,682	$ 186,595	$ 219,847	$ 177,588	$ 148,484	$ 161,146	$ 167,767	$ 2,098,496
2	Program Expenses:															
3	Program Costs Expensed	WP DS-2, Line 36		$ 215,263	$ 180,712	$ 263,926	$ 155,731	$ 167,954	$ 141,538	$ 200,857	$ 160,998	$ 238,920	$ 342,455	$ 198,740	$ 1,058,590	$ 3,325,683
4	Pilot Programs	WP DS-2, Line 37		14,334	21,476	37,053	30,752	23,695	51,846	36,607	59,320	61,843	51,405	90,387	153,875	632,594
5	Education and Awareness Programs	WP DS-2, Line 38		1,866	2,566	7,403	3,913	4,206	5,756	6,602	16,230	16,601	17,608	13,695	17,242	113,689
6	Low Income Programs	WP DS-2, Line 39		36,986	172,014	220,508	111,512	68,907	161,767	105,071	196,314	178,173	360,100	290,269	732,633	2,634,255
7	Administration & Infrastructure	WP DS-2, Line 40		46,730	37,075	35,676	45,389	34,439	38,040	43,094	35,109	36,404	32,320	42,308	129,395	555,978
8	Evaluation, Measurement, and Verification	WP DS-2, Line 41		24,960	31,114	37,287	50,535	52,940	26,149	32,325	32,063	42,910	32,119	32,268	67,055	461,725
9	Total Program Expenses	Sum of Lines 3 through 8		$ 340,140	$ 444,956	$ 601,853	$ 397,832	$ 352,142	$ 425,097	$ 424,556	$ 500,034	$ 574,851	$ 836,006	$ 667,667	$ 2,158,790	$ 7,723,924
10	Program Costs Unitized	WP DS-2, Line 32		$ 292,456	$ 76,047	$ 76,318	$ 122,095	$ 90,574	$ 114,082	$ 284,235	$ 95,375	$ 91,590	$ 167,765	$ 158,955	$ 758,068	$ 2,327,562
11	Construction Work in Progress	WP DS-2, Line 33		-	-	-	-	-	-	-	-	-	-	-	-	-
12	Total Program Costs Capitalized	Sum of Lines 10 and 11		$ 292,456	$ 76,047	$ 76,318	$ 122,095	$ 90,574	$ 114,082	$ 284,235	$ 95,375	$ 91,590	$ 167,765	$ 158,955	$ 758,068	$ 2,327,562
13	Amortization Expense	WP DS-3, Line 3		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 31,205	$ 31,205
14	Plant Balance															
15	Plant in Service (2)	Prior Bal. + L10	$ -	$ 292,456	$ 368,503	$ 444,821	$ 566,916	$ 657,491	$ 771,572	$ 1,055,807	$ 1,151,183	$ 1,242,773	$ 1,410,538	$ 1,569,493	$ 2,327,562	
16	Retired Plant in Service		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
17	Construction Work in Progress	Prior Bal. + L11	-	-	-	-	-	-	-	-	-	-	-	-	-	
18	Gross Plant	Sum of Lines 15,16 and 17	$ -	$ 292,456	$ 368,503	$ 444,821	$ 566,916	$ 657,491	$ 771,572	$ 1,055,807	$ 1,151,183	$ 1,242,773	$ 1,410,538	$ 1,569,493	$ 2,327,562	
19	Accumulated Amortization (3)	Prior Bal. + L13	-	-	-	-	-	-	-	-	-	-	-	-	(31,205)	
20	Retired Accumulated Amortization		-	-	-	-	-	-	-	-	-	-	-	-	-	
21	Net Plant	Sum of Lines 18, 19 and 20	$ -	$ 292,456	$ 368,503	$ 444,821	$ 566,916	$ 657,491	$ 771,572	$ 1,055,807	$ 1,151,183	$ 1,242,773	$ 1,410,538	$ 1,569,493	$ 2,296,357	

Notes:

(1) Base EO surcharge revenue and EO performance incentive revenue
(2) 2019 Ending Balance Line 15 col (c) Source:U-20708, Exhibit A-14 p.4, Line 15, col (o)
(3) 2019 Ending Balance Line 19 col (c) Source:U-20708, Exhibit A-14 p.4, Line 19, col (o)

Michigan Public Service Commission
DTE Gas Company
Energy Waste Reduction - 2020 Plan Reconciliation
Capital Detail by EWR Program

Case No.: U-20871
Exhibit: A-14
Witness: D. Stoudemire

	(a)	(b)	(c)	(d)
		2020	**2020**	**2020**
Line No.	**Energy Waste Reduction Programs**	**Capital - Incentive[1]**	**Capital - Implementation[1]**	**Capital - Total**
	Residential			
1	Residential ENERGY STAR Products	$ -	$ -	$ -
2	Residential HVAC	-	-	-
3	Multifamily	-	-	-
4	Home Energy Consultation (HEC)	-	-	-
5	Residential Audit and Weatherization	-	-	-
6	School Program	-	-	-
7	Home Energy Efficiency Kits	-	-	-
8	Revolving Loan Program	-	-	-
9	New Home Construction	-	-	-
10	Home Energy Reports	-	-	-
11	DTE Insight	-	-	-
12	Emerging Measures and Approaches	-	-	-
13	Administration & Infrastructure	-	-	-
14	**Residential Program Total**	$ -	$ -	$ -
	Low Income			
15	Low Income attributed to Energy Efficiency Assistance	$ -	$ -	$ -
16	Low Income attributed to Multifamily Units	-	-	-
17	Low Income attributed to Home Energy Consultation	-	-	-
18	Low Income Adminstrative and Infrastructure	-	-	-
19	**Low Income Program Total**	$ -	$ -	$ -
	Commercial & Industrial (C&I)			
20	C&I Prescriptive	$ 684,141	$ 644,244	$ 1,328,385
21	C&I Non-Prescriptive	1,209,356	585,276	1,794,632
22	Retro-Commissioning	-	-	-
23	Strategic Energy Management	-	-	-
24	Business Energy Consultation	-	-	-
25	Mid-Stream Food Service	-	-	-
26	Multifamily Common Areas	-	-	-
27	Emerging Measures and Approaches	382,694	20,986	403,680
28	Administration & Infrastructure	-	-	-
29	**C&I Program Total**	$ 2,276,191	$ 1,250,506	$ 3,526,697
	Other Programs and Costs			
30	Pilot Program	$ -	$ -	$ -
31	Education Program	-	-	-
32	Evaluation, Measurement & Verification (EM&V)	-	-	-
33	Administrative and Infrastructure	-	-	-
34	**Other Programs and Costs Total**	$ -	$ -	$ -
35	**Total Costs & Energy Savings**	$ 2,276,191	$ 1,250,506	$ 3,526,697
36	**Portfolio USRCT & CCE**			

Notes:
(1) Company Records

Michigan Public Service Commission
DTE Gas Company
Energy Waste Reduction - 2020 Plan Reconciliation
Allocation Factors

Case No.: U-20871
Exhibit: A-15
Page: 1 of 1
Witness: D. Stoudemire

Line No.	(a) Allocation 1 - Residential and Commercial & Industrial (C&I) / End User Transport (EUT) Rate Class Allocation	(b) Actuals	(c) Source
1	Residential (1)	$ 13,201,260	(6)
2	84% of Education (2)	960,687	(6)
3	Total Residential	$ 14,161,948	Line 1 + Line 2
4	C&I & EUT (1)	$ 9,439,378	(6)
5	16% of Education (2)	182,988	(6)
6	Total C&I / EUT	$ 9,622,366	Line 4 + Line 5
7	Total	$ 23,784,314	Line 3 + Line 6
	Allocation Percentage		
8	Residential (3)	59.5%	Line 3 / Line 7
9	C&I / EUT(3)	40.5%	Line 4 / Line 7
10	Total	100.0%	Line 8 + Line 9

	Allocation 2 - C&I and EUT Rate Class Allocation	**Company Records**	
11	C&I (4)	2,260,022	(6)
12	EUT (4)	3,356,888	(6)
13	Total	$5,616,910	Line 11 + Line 12
	Allocation Percentage		
14	C&I (5)	40.2%	Line 11 / Line 13
15	EUT (5)	59.8%	Line 12 / Line 13
16	Total	100.0%	Line 14 + Line 15

Notes:

(1) Line 1 & Line 4 are all program incentive costs, program implementation costs and direct program administration costs
(2) Line 2 & Line 5 are Education costs allocated at the noted percentages in DTE Gas's Plan
(3) Percentages on Lines 8 & 9 were used to allocate Pilot, EM&V, Low Income and administrative costs between Residential & C&I / EU
(4) Line 11 & Line 12 are incentive costs for C&I and EUT customers
(5) Percentages on Lines 14 & 15 were used to allocate Pilot, EM&V, Low Income and administrative costs between C&I and EUT
(6) Company Records

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter, on the Commission's own motion, regarding the regulatory reviews, revisions, determinations, and/or approvals necessary for **DTE GAS COMPANY** to fully comply with Public Act 295 of 2008, as amended by Public Act 342 of 2016.	)	Case No. U-20871 (Paperless e-file)

PROOF OF SERVICE

KARYN B. KAZYAKA served a copy of DTE Gas Company's Application for Approval of the Reconciliation of its Energy Waste Reduction Plan Expenses for the Plan Year 2020, and Testimony and Exhibits of Reema A. Biel, Debbie Brannan, Jose N. Goncalves, Thomas W. Lacey, Rebecca M. Malfroid, Christopher M. Payne, Kenneth Randazzo, and Debra D. Stoudemire, via electronic mail upon the persons referred to in the attached service list.

Karyn B. Kazyaka Digitally signed by Karyn B. Kazyaka Date: 2021.05.28 10:49:00 -04'00'

KARYN B. KAZYAKA

MPSC Case No. U-20871
SERVICE LIST

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