DTE Electric Company
One Energy Plaza, 1635 WCB
Detroit, MI 48226-1279

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June 28, 2024

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

RE: In the matter of the application of **DTE ELECTRIC COMPANY** for reconciliation of its 2023 Demand Response program costs.
MPSC Case No. U-21658

Dear Ms. Felice:

Attached for electronic filing in the above referenced matter is DTE Electric Company's Application, Direct Testimony and Exhibits of Witnesses, Ryan M. DeKimpe, William J. Kuspa and Kirk M. Vangilder. Also Attached is the Proof of Service.

Very truly yours,

John A. Janiszewski

Digitally signed by John A. Janiszewski
Date: 2024.06.28 15:14:02 -04'00'

John A. Janiszewski

JAJ/erb
Encl.

cc: Service List

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application of **DTE ELECTRIC COMPANY** for reconciliation of its 2023 Demand Response program costs.	))))	Case No. U-21658

APPLICATION

DTE Electric Company ("Company," or "DTE Electric"), files this Application pursuant to the Michigan Clean, Renewable, and Efficient Energy Act, Public Act 295 of 2008 ("Act 295"), MCL 460.1001 *et seq*., as amended, Section 6a of 1939 PA 3 ("Act 3"), and all other applicable law, requesting Michigan Public Service Commission ("MPSC" or "Commission") approval of the reconciliation of DTE Electric's Demand Response ("DR") program costs for 2023. In support of the relief requested in this Application, DTE Electric states the following:

1. DTE Electric is a subsidiary of DTE Energy Company, a Michigan corporation with its principal offices located at One Energy Plaza, Detroit, Michigan 48226. DTE Electric is a public utility subject to the jurisdiction of the Commission and is engaged in the generation and distribution of electricity and other related services to approximately two million residential, commercial, and industrial customers within the State of Michigan.

2. In Case No. U-18369, the Commission approved a "three-phase" approach for approval, recovery, and reconciliation of DR expenditures on a going forward basis.[1]

3. The three-phase approach is a multi-step process where evaluation of DR proposals begins with the Company's Integrated Resource Planning ("IRP") plan.[2]

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[1] See *In re On the Commission's Own Motion*, Case No. U-18369, Order dated Sept. 15, 2017, p. 8.
[2] *Id.*

4. Recognizing that utilities were not required to file an IRP until 2019, the Commission provided an interim mechanism for reconciliation to bridge the gap between the prior rate case-centered and future IRP-based DR regulatory framework.[3]

5. Specifically, the Commission stated that until an IRP is approved, there shall be annual, stand-alone reconciliation cases that will match actual spending on DR programs with amounts approved in the previous general rate cases.[4]

6. The Commission also stated this interim mechanism applies to DR activities in ongoing rate cases.[5]

7. In its December 1, 2023, Case No. U-21297 Order, the Company's last general rate case, the Commission approved DR programs and pilots through November 30, 2024 with rates becoming effective December 15, 2023. Case No U-20836 utilized a projected test period of November 1, 2022 through October 31, 2023 and was approved by the Commission on November 18, 2022 with rates becoming effective on November 25, 2022. Rates paid by customers for the first 348 days of 2023 were based on the authorized projected test period O&M and capital expenditures from Case U-20836. Rates paid by customers for the final 17 days of 2023 were based on the authorized projected test period O&M and capital expenditures from Case No. U-21297.

8. In support of its Application, the Company is filing the Direct Testimony and Exhibits of three witnesses: Mr. DeKimpe, Mr. Kuspa and Mr. Vangilder. 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.

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[3] *Id.* at 9.
[4] *Id.* at 9-10.
[5] *Id.* at 10.

9. As detailed further in its direct testimony, the Company's actual capital expenditures for the year 2023 were $6,646,384, which is $702,199 lower than $7,348,583 amount authorized by the Commission.[6] The actual O&M expense was $2,395,040, which is $501,488 lower than the $2,896,528 amount authorized by the Commission.[7]

10. Testimony further describes the revenue requirement difference is calculated as a net amount between the revenue requirement resulting from using the Company's actual capital and O&M expenditures and the revenue requirement resulting from using the capital and O&M expenditures authorized. The resulting revenue requirement difference for the year 2023 amounts to $1,729,906 less than authorized. The Company requests that it be recovered as a regulatory liability.

11. DTE Electric's proposal for the recovery of the financial incentive mechanism in the amount of $544,823 for 2023 is more fully described in the filed testimony.

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

A. Approve the Company's 2023 DR reconciliation capital expenditures and O&M expenses incurred above in the amounts authorized in the Commission's Order in Case Nos. U-21297 and U-20836;

B. Approve that the resulting revenue requirement difference of $1,729,906 for the year 2023 be booked as a regulatory liability that shall be included in the Company's next general rate case;

[6] Authorized capital amounts are prorated between Case Nos. U-21297 and U-20836 based on when the authorized rates were in effect.

[7] Authorized operation and maintenance amounts are prorated between Case Nos. U-21297 and U-20836 based on when the authorized rates were in effect.

C. Approve DTE Electric's proposal for recovery of the financial incentive mechanism in the amount of $544,823 for 2023;

D. Approve any other proposal discussed in the filed testimonies; and

E. Grant DTE Electric such further additional relief and authority as the Commission may deem necessary, suitable, and appropriate.

Respectfully submitted,

DTE ELECTRIC COMPANY

By: John A. Janiszewski

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Date: 2024.06.28 15:15:08 -04'00'

John A. Janiszewski (P74400)
Attorney for DTE Electric Company
One Energy Plaza, 1635 WCB
Detroit, Michigan 48226
(313) 235-7309

Dated: June 28, 2024

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application of **DTE ELECTRIC COMPANY** for reconciliation of its 2023 Demand Response program costs.	)))	Case No. U-21658

QUALIFICATIONS

AND

DIRECT TESTIMONY

OF

WILLIAM J. KUSPA

DTE ELECTRIC COMPANY
QUALIFICATIONS AND DIRECT TESTIMONY OF WILLIAM J. KUSPA

Line No.

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

A1. My name is William J. Kuspa (he/him). My business address is: One Energy Plaza, Detroit, Michigan 48226. I am employed by DTE Energy Corporate Services, LLC, a subsidiary of DTE Energy Company (DTE Energy).

Q2. On whose behalf are you testifying?

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

Q3. What is your educational background?

A3. I graduated from the University of Michigan-Dearborn with a Bachelor of Business Administration degree in Finance in 2000. I graduated from Boston College with a Master of Business Administration degree with a Corporate Finance specialization in 2010.

Q4. What work experience do you have?

A4. In 2015, I joined DTE Energy as a Senior Financial Analyst in the Controllers Organization. This was in a decision support capacity for various Staff groups and Customer Service. In 2019, I accepted a position as a Principal Supervisor in the Controllers Organization. I have held several supervisory roles in Controllers. In addition to my current role, these include decision support for Distribution Operations and Energy Supply.

Q5. What was your work experience prior to your employment with DTE Energy?

A5. I have over twenty years of finance experience in the Utility, Banking, and Automotive fields. My previous position was at Ally Financial, specializing in IT finance and decision support. Other employers include Comerica, JP Morgan Chase, and the Ford Motor Company.

Q6. What are your current duties and responsibilities?

A6. Currently, I am the Principal Supervisor of the decision support team for Electric Sales and Marketing and Business Planning and Development. In this role, I assist the business unit in making decisions based on their financial performance and budget targets.

Section I. Purpose of Testimony

Q7. What is the purpose of your testimony?

A7. The purpose of my direct testimony is to support the actual 2023 capital expenditures and Operations and Maintenance ("O&M") expenses related to DTE Electric's Demand Response (DR) program.

Q8. Are you sponsoring any exhibits in this proceeding?

A8. Yes. I am sponsoring the following exhibits:

Exhibit	Description
A-1	Actual 2023 Capital Expenditures
A-2	Actual 2023 O&M Expenses

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

A9. Yes, they were.

Section II. Actual Costs

Q10. How is the Company operating and investing in its DR portfolio?

A10. The Company is currently operating and investing in its established DR portfolio, which combines a diverse set of programs and pilots that are available to residential, commercial, and industrial customers. Company Witness DeKimpe describes the Company's DR portfolio and provides details regarding the status and performance of the programs and pilots for the calendar year 2023 that are subject to this reconciliation proceeding.

Q11. Where did you get the data displayed on your exhibits?

Line
No.

A11. The O&M expenses and capital expenditures are separately identified and recorded in the Company's accounting system.

Q12. What DR portfolio costs are included in this filing?

A12. The costs for the DR portfolio are capital expenditures in the amount of $6,646,384 (Exhibit A-1) and O&M expenses in the amount of $2,395,040 (Exhibit A-2).

Q13. Does this conclude your testimony?

A13. Yes, it does.

STATE OF MICHIGAN

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EXHIBITS

OF

WILLIAM J. KUSPA

Michigan Public Service Commission
DTE Electric Company
Demand Response - 2023 Program Reconciliation
Actual 2023 Capital Expenditures

Case No.: U-21658
Exhibit: A-1
Witness: W. Kuspa
Page: 1 of 1

Line No.	(a) Description	(b) Actual Amount	(c) Authorized Amount	(d) Actual H/(L) Authorized
1	CoolCurrents	$ 1,007,109	$ 3,218,282	$ (2,211,173)
2	SmartCurrents	4,389,705	3,481,097	908,608
3	Other DR Programs and Pilots	1,249,570	649,203	600,367
4	**Total DR Capital Expenditures**	**$ 6,646,384**	**$ 7,348,583**	**$ (702,199)**

Source: Company's general ledger

Michigan Public Service Commission
DTE Electric Company
Demand Response - 2023 Program Reconciliation
Actual 2023 O&M Expenses by Category

Case No.: U-21658
Exhibit: A-2
Witness: W. Kuspa

Line No.	(a) Description	(b) Amount
1	Labor	$ 35,647
2	Contractors/Outside Service	2,307,349
3	Other Non-Labor	52,044
4	**Total O&M Expense**	**$ 2,395,040**
5	Authorized O&M	2,896,528
6	**Total O&M Higher / (Lower) than Authorized**	**$ (501,488)**

Source: Company's general ledger

Michigan Public Service Commission Case No.: U-21658
DTE Electric Company Exhibit: A-2
Demand Response - 2023 Program Reconciliation Witness: W. Kuspa
Actual 2023 O&M Expenses by Program Page: 2 of 2

Line No.	(a) Description	(b) Amount
1	Smart Savers	**$ 2,173,924**
2	Smart Savers - Contractors/Outside Service	2,161,717
3	Smart Savers - Other Non-Labor	12,207
4	Smart Charge	**$ 122,306**
5	Smart Charge - Contractors/Outside Service	121,631
6	Smart Charge - Other Non-Labor	675
7	Peak Time Rebate O&M	**$ 48,087**
8	Peak Time Rebate - Contractors/Outside Service	9,350
9	Peak Time Rebate - Other Non-Labor	38,737
10	Other DR Programs and Pilots	**$ 50,723**
11	Other DR Programs - Labor	35,647
12	Other DR Programs - Contractors/Outside Service	14,651
13	Other DR Programs - Other Non-Labor	425
14	**Total O&M Expense**	**$ 2,395,040**

Source: Company's general ledger

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QUALIFICATIONS

AND

DIRECT TESTIMONY

OF

KIRK M. VANGILDER

DTE ELECTRIC COMPANY
QUALIFICATIONS AND DIRECT TESTIMONY OF KIRK M. VANGILDER

Line No.

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

A1. My name is Kirk M. Vangilder (he/him/his). My business address is One Energy Plaza, Detroit, Michigan 48226. I am employed by DTE Energy Corporate Services, LLC, a subsidiary of DTE Energy Company (DTE Energy).

Q2. On whose behalf are you testifying?

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

Q3. What is your educational background?

A3. I received a Bachelor of Arts Degree in Accounting from Michigan State University's Eli Broad College of Business in 2004 and a Master of Science Degree in Accounting from Michigan State University's Eli Broad Graduate School of Management in 2006.

Q4. Have you completed any seminars or other training courses?

A4. Yes, I have. I completed a utility finance and ratemaking course taught by Excidian, LLC. Additionally, I attended training hosted by Electric Utility Consultants, Inc, (EUCI) on utility cost of service and ratemaking. I also completed the ratemaking program conducted by the Institute of Public Utilities at Michigan State University.

Q5. What is your work experience?

A5. From 2006 to 2011, I practiced public accounting with the international accounting firm Grant Thornton LLP where I held positions of increasing responsibility.

During this time, I received my Certified Public Accountant license. In October 2011, I joined DTE Energy as a Financial Auditor in the Audit Services department. In March 2013, I was promoted to Senior Financial Auditor, where I performed substantive testing and controls testing to support DTE Energy's financial statement audits and regulatory filings process. In August 2014, I accepted a position within DTE Energy's Controllers organization as a Senior Business Financial Analyst with responsibility for various accounting, budgeting, and reporting activities for DTE Gas Company, including financial and revenue requirement modeling. In 2018, I transferred to Regulatory Affairs as a Senior Rates Analyst in their Revenue Requirements group, and in 2019, I was promoted to my current position as Principal Financial Analyst.

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

A6. I received my Certified Public Accountant license in 2008 and am currently a registered accountant within the State of Michigan.

Q7. What are your duties and responsibilities in your current position?

A7. As Principal Financial Analyst for Revenue Requirements within DTE Energy's Regulatory Affairs organization, I am responsible for revenue requirement studies for regulatory filings, regulatory analysis and research, and for supporting certain Michigan Public Service Commission (MPSC or Commission) filings such as general rate cases.

Q8. Have you previously sponsored testimony in cases before the MPSC?

Line No.

A8. Yes, I have. I have sponsored testimony in the following cases:

Case No.	Description
U-20373	DTE Electric 2020-2021 Energy Waste Reduction (EWR) Plan
U-20373-A	DTE Electric 2020-2021 Amended EWR Plan
U-20429	DTE Gas 2020-2021 EWR Plan
U-20642	DTE Gas 2019 General Rate Case
U-20703	DTE Electric 2019 EWR Reconciliation
U-20708	DTE Gas 2019 EWR Reconciliation
U-20711	DTE Electric 2019 PLD/TRM Reconciliation
U-20836	DTE Electric 2022 General Rate Case
U-20876	DTE Electric 2022-2023 EWR Plan
U-20881	DTE Gas 2022-2023 EWR Plan
U-20940	DTE Gas 2021 General Rate Case
U-20987	DTE Electric 2020 PLD/TRM Reconciliation
U-21206	DTE Electric & DTE Gas 2021 EWR Reconciliation
U-21242	DTE Electric 2021 Demand Response Reconciliation
U-21291	DTE Gas 2024 General Rate Case
U-21297	DTE Electric 2023 General Rate Case
U-21307	DTE Electric 2021 & 2022 PLD/TRM Reconciliations
U-21313	DTE Electric & DTE Gas 2022 EWR Reconciliation
U-21403	DTE Electric 2022 Demand Response Reconciliation
U-21534	DTE Electric 2024 General Rate Case

Line No.

Section I. Purpose of Testimony

Q9. What is the purpose of your testimony?

A9. The purpose of my testimony is to:

- Calculate the revenue requirements for DTE Electric's Demand Response (DR) program based on the actual expenditures incurred by the Company and the authorized expenditures in the applicable general rate case(s) for the 12-month period corresponding to the calendar year 2023 (the Reconciliation Year);
- Provide a reconciliation of the actual expenditures incurred by the Company versus the expenditures authorized in the applicable general rate case(s) for the Reconciliation Year; and
- Request approval of the regulatory asset/liability resulting from the difference between the actual and approved revenue requirements.

Q10. Are you sponsoring any exhibits in this proceeding?

A10. Yes. I am sponsoring the following exhibits:

Exhibit	Description
A-3	Revenue Requirement Calculation
A-4	Reconciliation of Actuals to Authorized

Q11. Were these exhibits prepared by you or at your direction?

A11. Yes, they were.

Line No.

Section II. Overview of Reconciliation

Q12. Has the Commission determined how to address any variance between actual spend and the authorized amounts resulting from the reconciliation proceedings?

A12. Yes. In its Order in Case No. U-18369 issued September 15, 2017, the Commission adopted the three-phase approach as the approved regulatory framework regarding the investment and associated expenditures for DR programs and pilots. The Commission held on page 9 of the Order that "…capital spending in the examination period will be reconciled against the amount approved in the IRP and recovered in rate case, while O&M spending will be reconciled against the amount both approved and recovered in the general rate case." The Commission further concluded on page 9 of the Order that costs associated with DR should follow deferred regulatory accounting with return.

Q13. What was the recovery mechanism approved by the Commission in the Company's 2019 DR Reconciliation Case No. U-20793?

A13. In its Order Approving Settlement Agreement dated February 18, 2021 in Case No. U-20793, the Commission approved a recovery mechanism for the overspend in capital and O&M expenditures resulting from the Company's 2019 DR reconciliation. The recovery mechanism consists of determining the revenue requirement difference between the revenue requirement associated with the Company's actual capital and O&M expenditures and the revenue requirement associated with the capital and O&M expenditures authorized and included in rates by the respective applicable general rate cases. The approved settlement agreement

Line No.

in Case No. U-20793 established that the revenue requirement calculation methodology described above will be applicable for the year 2019 and thereafter.

The settlement agreements approved and ordered by the Commission in subsequent DR reconciliation cases (U-21044, U-21242, and U-21403) did not deviate from the previously established recovery mechanism for the overspend in capital and O&M expenditures. Therefore, the resulting revenue requirement difference for the Reconciliation Year is calculated in this proceeding following the methodology approved in Case No. U-20793 and subsequent reconciliation cases.

Q14. Which general rate cases authorized the amounts used in this reconciliation?

A14. Rates paid by customers during the Reconciliation Year were based on two DTE Electric general rate cases. As explained below, the authorized amount of Demand Response O&M and capital expenditures is calculated using a proration of those two cases based on the effective date of their respective rates.

Case No. U-20836 utilized a projected test period of November 1, 2022 through October 31, 2023 and was approved by the Commission on November 18, 2022 with rates becoming effective on November 25, 2022. Rates paid by customers for the first 348 days of the Reconciliation Year were based on the authorized projected test period O&M and capital expenditures from Case No. U-20836.

Case No. U-21297 utilized a projected test period of December 1, 2023 through November 30, 2024 and was approved by the Commission on December 1, 2023 with rates becoming effective on December 15, 2023. Rates paid by customers for

Line No.

the final 17 days of the Reconciliation Year were based on the authorized projected test period O&M and capital expenditures from Case No. U-21297.

Q15. What is the purpose of Exhibit A-3, pages 1 and 2?

A15. Page 1 of Exhibit A-3 calculates the revenue requirement on plant which is necessary to determine the total revenue requirement for the DR program calculated on Exhibit A-4. Specifically, it calculates the revenue requirement, authorized by Case No. U-20836, on plant in service applicable to the DR program through the derivation of average plant in service, the applicable depreciation expense, and average depreciation reserve. Several amounts on page 1 of Exhibit A-3 are consistent with the amounts utilized in the settlement calculations and Staff Witness Wagner's Exhibit S-3.1 from DTE Electric's 2022 DR Reconciliation, Case No. U-21403, in computing the revenue requirement approved in Case No. U-20836. However, in preparing the exhibit for this case, it was determined that more than one tranche of DR asset retirements had occurred during the bridge and projected test periods of Case No. U-20836. The bridge and test year retirements are reflected on page 1, lines 3 and 6, respectively, and reduce the amount of Ending Plant in Service presented on line 7. Additionally, the asset retirements reduce the Ending Balance for Depreciation Reserve (page 1, line 18) and are presented again on lines 13 and 17. In this instance, the depreciation expense attributable to the retirements made prior to the projected test year also needed to be removed from the Adjusted Beginning Balance Depreciation Reserve. As the changes noted above impact Ending Plant in Service and Ending Depreciation Reserve, Depreciation Expense (line 11), Return on Authorized Rate Base (line 22), Property Tax Expense (line

Line No.

23), and the Annual Revenue Requirement on Plant (line 24) are impacted and different than those amounts included in Case No. U-21403.

Line 1 of page 1 on Exhibit A-3 reflects authorized capital spend and is utilized in calculating average plant in service (lines 2 through 7). Average plant in service (line 8) less the average depreciation reserve (line 19) yields average net plant (line 20) or rate base. The "return on" rate base is then calculated on line 22 by multiplying rate base by the pretax rate of return authorized by the Commission in Case No. U-20836. The annual authorized revenue requirement (line 24) is calculated by adding return on authorized rate base (line 22), depreciation expense (line 11), and property tax expense (line 23). Line 25 represents the proration of line 24 based on the number of days that rates associated with Case No. U-20836 are applicable as described earlier in testimony. Lastly, line 26 combines line 25 with the associated amount on line 20 of page 2 to determine the total revenue requirement on plant for the year which is carried over to Exhibit A-4.

Page 2 of Exhibit A-3 calculates the revenue requirement on plant using the same method as page 1, but as it pertains to DR costs approved in DTE Electric general rate case U-21297.

Q16. What is reflected on Exhibit A-3, page 3?

A16. Page 3 of Exhibit A-3 shows the calculation of the revenue requirement for the period January 1, 2023 to December 31, 2023, based on the actual capital expenditures as shown on Exhibit A-1, sponsored by Company Witness Kuspa. Beginning and ending balances for amounts that are used to derive net plant (plant

Line No.

in service, construction work in progress, retirement work in progress, and accumulated depreciation), as well as depreciation and property tax expense, were provided by the Company's Asset Management and Tax departments. The method for calculating the actual revenue requirement on plant for the reconciliation period is the same as that used for the calculation of authorized revenue requirement on plant, with the exception that the calculation of the ending construction work in progress balance includes a reduction of $2.0 million (line 8) associated with C&I Battery capital spend to be excluded from the reconciliation until the second customer for the project is identified.

Section III. Reconciliation of the Company's DR Expenditures

Q17. How did you prepare the reconciliation of the DR costs?

A17. As directed by Company Witness DeKimpe, I compared the actual DR costs to the authorized costs for the Reconciliation Year. The actual costs were provided to me by Company Witness Kuspa. This comparison is provided on Exhibit A-4.

Q18. What is the purpose of Exhibit A-4, "Reconciliation of Actuals to Authorized"?

A18. Exhibit A-4 is designed to compare the total authorized revenue requirement to the actual revenue requirement for the Reconciliation Year, where the resulting difference would be booked as a regulatory asset or liability and included in the Company's next general rate case after an order is received in this proceeding. The exhibit compares the actual O&M expenses and capital expenditures incurred during the Reconciliation Year to those authorized by the Commission in the aforementioned general rate cases. Additionally, the exhibit compares the actual

Line No.

and authorized revenue requirement on plant (return on rate base, depreciation, and property taxes) (line 9) which is calculated on Exhibit A-3.

Q19. What are the actual O&M expenses and capital expenditures for the DR portfolio during this reconciliation period as shown on Exhibit A-4?

A19. The actual O&M expenses were $2.4 million as reflected in column (b), lines 1 to 4 and capital expenditures were $6.6 million as reflected in column (b) on lines 5 to 8. The actual amounts reflected on Exhibit A-4 were obtained from Exhibits A-1 and A-2 sponsored by Company Witness Kuspa. Company Witness DeKimpe provides detail on the actual DR O&M and capital expenditures.

Q20. What are the authorized O&M expenses for the DR portfolio during this reconciliation period as shown on Exhibit A-4?

A20. Column (c) lines 1 to 4, reflect an annual amount of $2.9 million of O&M expenses as authorized by the Commission in the aforementioned general rate cases, and prorated based on the effective date of the associated base rates. When determining the associated authorized revenue requirement for the DR program, this is the appropriate amount to utilize as it is the amount included in DTE Electric's base rates that were effective for the Reconciliation Year.

Q21. How are the authorized O&M expenses for the DR portfolio classified on Exhibit A-4?

A21. For purposes of the general rate case, DTE Electric does not classify projected O&M costs for DR as labor or otherwise. For this reconciliation, authorized O&M costs associated with the aforementioned general rate cases are classified entirely

Line No.

as outside services to better align with actual costs and projections (column (c) line 2).

Q22. What are the authorized capital expenditures for the DR portfolio during this reconciliation period as shown on Exhibit A-4?

A22. Column (c), lines 5 to 8, reflect $7.3 million of authorized DR capital expenditures as authorized by the Commission in the aforementioned general rate cases, and prorated based on the effectiveness of the associated base rates. When comparing to actual capital expenditures during the reconciliation period, this is the appropriate amount to utilize as it is the amount included in DTE Electric's base rates that were effective for the Reconciliation Year.

Q23. What are the authorized and actual revenue requirement on plant amounts shown on Exhibit A-4?

A23. The actual revenue requirement on plant presented on Exhibit A-4 (line 9, column (b)) is carried over from the amount calculated on Exhibit A-3, page 3, line 24, and is calculated as described earlier in my testimony.

The authorized revenue requirement on plant presented on Exhibit A-4 (line 9, column (c)) is carried over from the amount calculated on Exhibit A-3, page 1, line 26, and is calculated based on amounts authorized by the Commission in the aforementioned general rate cases as described in my testimony above.

Q24. What is the calculated revenue requirement difference for the Company's DR reconciliation?

Line No.

A24. The total revenue requirement amount calculated for the Reconciliation Year based on actual capital and O&M expenditures is $13.8 million as shown on Exhibit A-4, line 10, column (b). The revenue requirement amount calculated based on the authorized capital and O&M expenditures for the Reconciliation Year is $15.5 million and is shown on Exhibit A-4, line 10, column (c). The calculated revenue requirement difference results from subtracting the revenue requirement calculated based on the authorized expenditures for the reconciliation period from the revenue requirement calculated based on the actual expenditures. Therefore, as shown on line 10, column (d), the revenue requirement based on actual expenditures is $1.7 million lower than the revenue requirement based on authorized expenditures included in rates.

Q25. How will the difference in revenue requirement be treated by the Company?

A25. Consistent with the method approved in Case No. U-20793 and followed in subsequent DR reconciliation cases (U-21044, U-21242, and U-21403), the resulting revenue requirement difference shall be booked as a regulatory liability that will be included in the Company's next general rate case and amortized for a period of no more than five (5) years.

Section IV. Summary

Q26. How would you summarize the Company's request in this current DR reconciliation proceeding?

A26. In this reconciliation proceeding, the Company is specifically requesting:

- That the Commission approve the Company's 2023 DR reconciliation capital and O&M expenditures incurred in relation to the amounts authorized in the Commission's Orders in Case Nos. U-20836 and U-21297;
- That the Commission approve that the resulting revenue requirement difference of $1,729,906 for the year 2023 be booked as a regulatory liability that shall be included in the Company's next general rate case and amortized for a period of no more than five (5) years.

Q27. Does this conclude your testimony?

A27. Yes, it does.

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application of **DTE ELECTRIC COMPANY** for reconciliation of its 2023 Demand Response program costs.	Case No. U-21658

EXHIBITS

OF

KIRK M. VANGILDER

Michigan Public Service Commission Case No.: U-21658
DTE Electric Company Exhibit: A-3
Demand Response - 2023 Program Reconciliation Witness: K. Vangilder
Revenue Requirement Calculation Page: 1 of 3
In $ if not otherwise noted

Line	(a)		(b)	(c)
	Authorized (U-20836)			**Source / Notes**
1	Authorized Test Year Capital Spend		7,435,839	U-20836 Ex. A-12 Sch. B5.6 less Disallowances
2	Beginning Balance Plant in Service (10/31/22)		59,004,744	U-21403 Ex A-3 Pg 2 Line 2
3	Retirements Prior to Projected Test Year	(1)	(8,540,572)	U-20836 Hist. & Bridge Period Retirements
4	Adj. Beginning Balance Plant in Service (10/31/22)		50,464,172	Line 2 + Line 3
5	Additions to Plant in Service		7,435,839	Line 1
6	Retirements During Projected Test Year	(1)	(12,972,384)	U-20836 Test Year Retirements
7	Ending Plant in Service (10/31/23)		44,927,627	Line 4 + Line 5 + Line 6
8	Average Plant in Service		47,695,900	(Line 4 + Line 7) /2
	Construction Work In Progress			
9	Average Construction Work In Progress	(2)	558,577	U-21403 Ex A-3 Pg 2 Line 6
	Retirement Work in Progress (Debit in Acc. Depreciation)			
10	Average Retirement Work in Process	(2)	3,407,859	U-21403 Ex A-3 Pg 2 Line 7
11	**Depreciation Expense**		**9,539,180**	Line 8 * 20%
12	Beginning Balance Depreciation Reserve (10/31/22)		38,143,327	U-21403 Ex A-3 Pg 2 Line 7 + Line 9
13	Retirements Prior to Projected Test Year	(1)	(8,540,572)	Line 3
14	Depreciation Exp for Retirements Not Previously Captured	(3)	(2,320,634)	see footnote 3
15	Adj. Beginning Balance Depreciation Reserve (10/31/22)		27,282,121	Line 12 + Line 13 + Line 14
16	Change in Depreciation Reserve		9,539,180	Line 11
17	Retirements During Projected Test Year	(1)	(12,972,384)	Line 6
18	Ending Balance Depreciation Reserve (10/31/23)		23,848,917	Line 15 + Line 16 + Line 17
19	Average Depreciation Reserve		25,565,519	(Line 15 + Line 18) / 2
20	Average Net Plant		26,096,816	Line 8 + Line 9 + Line 10 - Line 19
21	Times Pretax Rate of Return		6.79%	U-20836 Rate of Return
22	**Return on Authorized Rate Base**		**1,771,974**	Line 20 * Line 21
23	**Property Tax Expense**		**1,344,482**	Calculation per Tax Department
24	Annual Revenue Requirement on Plant (U-20836)		12,655,636	Line 11 + Line 22 + Line 23
25	Revenue Requirement on Plant in Rates (Jan 1 - Dec 15)	(4)	12,066,195	Line 24 * (348/365)
26	Revenue Requirement on Plant in Rates (Jan 1 - Dec 31)		12,593,951	Line 25 + Ex A-3 Page 2 Line 20

(1) Amounts represent actual retirements that occurred during the historical, bridge, and test periods of the rate case. As retirements are based on end of useful life, these amounts are known during preparation of the case and included as reductions to plant in service and accumulated depreciation. 2021 was the first year that DR asset retirements took place, so this is an adjustment to the methodology used to determine authorized revenue requirement

(2) The DTE Electric general rate case does not take CWIP and RWIP into consideration as it pertains to DR bridge and test year capital additions. As such, amounts presented are unchange from the 2020 year end actuals included on the historical balance sheet used as the starting point for the case.

(3) Includes the depreciation expense for 2021 (half-year + full-year) and a prorated amount of 2022 (half-year) retirements that would have been removed had an amount of rate base exclusive to Demand Response calculatd for the base rate case prior to the projected test year.

(4) Rates paid by customers during 2023 were based on two DTE Electric general rate cases. The authorized 2023 Revenue Requirement on Plant is calculated using a proration of those two cases based on the effectiveness of their respective rates. Case No. U-20836 was approved by the Commission with rates to become effective November 25, 2022. Rates paid by customers for the first 348 days of 2023 were based on this case.

Michigan Public Service Commission Case No.: U-21658
DTE Electric Company Exhibit: A-3
Demand Response - 2023 Program Reconciliation Witness: K. Vangilder
Revenue Requirement Calculation Page: 2 of 3
In $ if not otherwise noted

Line	(a)		(b)	(c)
	Authorized (U-21297)			**Source / Notes**
1	Authorized Test Year Capital Spend		5,562,384	U-21297 Ex. A-12 Sch. B5.6 less Disallowances
2	Beginning Balance Plant in Service (11/30/23)		45,928,807	U-21403 GMW-5.2a + U-21297 Hist./Bridge activity
3	Additions to Plant in Service		5,562,384	Line 1
4	Retirements During Projected Test Year		(13,100,406)	U-21297 Test Year Retirements
5	Ending Plant in Service (11/30/24)		38,390,785	Line 2 + Line 3 = Line 4
6	Average Plant in Service		42,159,796	(Line 2 + Line 5) /2
	Construction Work In Progress			
7	Average Construction Work In Progress	(1)	751	U-21403 GMW-5.2a (Ex A-3 page 3 line 6)
	Retirement Work in Progress (Debit in Acc. Depreciation)			
8	Average Retirement Work in Process	(1)	3,685,930	U-21403 GMW-5.2a (Ex A-3 page 3 line 10)
9	**Depreciation Expense**		**8,431,959**	Line 6 * 20%
10	Beginning Balance Depreciation Reserve (11/30/23)		23,787,043	U-21403 GMW-5.2a + U-21297 Hist./Bridge activity
11	Change in Depreciation Reserve		8,431,959	Line 9
12	Retirements During Projected Test Year		(13,100,406)	U-21297 Test Year Retirements
13	Ending Balance Depreciation Reserve (11/30/24)		19,118,596	Line 10 + Line 11 + Line 12
14	Average Depreciation Reserve		21,452,819	(Line 10 + Line 13) / 2
15	Average Net Plant		24,393,658	Line 6 + Line 7 + Line 8 - Line 14
16	Times Pretax Rate of Return		6.92%	U-21297 Rate of Return
17	**Return on Authorized Rate Base**		**1,688,578**	Line 15 * Line 16
18	**Property Tax Expense**		**1,210,677**	Calculation per Tax Department
19	Annual Revenue Requirement on Plant (U-21297)		11,331,215	Line 9 + Line 17 + Line 18
20	Revenue Requirement on Plant in Rates (Dec 15 - Dec 31)	(2)	527,755	Line 19 * (17/365)

(1) The DTE Electric general rate case does not take CWIP and RWIP into consideration as it pertains to DR bridge and test year capital additions. As such, amounts presented are unchange from the 2021 year end actuals included on the historical balance sheet used as the starting point for the case.

(2) Rates paid by customers during 2022 were based on two DTE Electric general rate cases. The authorized 2023 Revenue Requirement on Plant is calculated using a proration of those two cases based on the effectiveness of their respective rates. Case No. U-21297 was approved by the Commission with rates to become effective December 15, 2023. Rates paid by customers for the final 17 days of 2023 were based on this case.

Michigan Public Service Commission Case No.: U-21658
DTE Electric Company Exhibit: A-3
Demand Response - 2023 Program Reconciliation Witness: K. Vangilder
Revenue Requirement Calculation Page: 3 of 3
In $ if not otherwise noted

Line	(a) Actuals		(b)	(c) Source / Notes
1	**2023 Actual Capital Spend**		6,646,383	Exhibit A-1
2	Beginning Balance Plant in Service	(1)	47,064,765	2022 Power Plan Ledger
3	Net Additions to Plant in Service		(11,614,776)	Line 4 - Line 2
4	Ending Plant in Service		35,449,989	2023 Power Plan Ledger
5	Average Plant in Service		41,257,377	(Line 4 + Line 2) /2
	Construction Work In Progress			
6	Beginning Balance to Construction Work In Progress		2,497,312	2022 Power Plan Ledger
7	Net Additions to Construction Work In Progress		4,657,038	Line 9 - Line 8 - Line 6
8	Exclusion of 2022 C&I Battery Spend	(2)	(1,990,360)	see footnote 2
9	Ending Balance to Construction Work In Progress		5,163,990	2023 Power Plan Ledger
10	Average Construction Work In Progress		3,830,651	(Line 9 + Line 6)/2
	Retirement Work in Progress (Debit in Accumulated Depreciation)			
11	Beginning Balance to Retirement Work in Progress		3,696,403	2022 Power Plan Ledger
12	Net Additions to Retirement Work in Progress		(0.65)	Line 13 - Line 11
13	Ending Balance to Retirement Work in Progress		3,696,402	2023 Power Plan Ledger
14	**Average Retirement Work in Process**		3,696,402	(Line 11 + Line 13)/2
15	**Depreciation Expense**		**8,763,600**	SAP Ledger
16	Beginning Balance Depreciation Reserve		27,973,574	2022 Accum. Depreciation - Power Plan Ledger
17	Change in Depreciation Reserve		(5,431,680)	Line 18 - Line 16
18	Ending Balance Depreciation Reserve		22,541,894	2023 Accum. Depreciation - Power Plan Ledger
19	Average Depreciation Reserve		25,257,734	(Line 18 + Line 16)/2
20	Average Net Plant		23,526,697	Line 5 + Line 10 + Line 14 - Line 19
21	Times Pretax Rate of Return		6.80%	Pg 1 Ln 21 * (348/365) + Pg 2 Ln 16 * (17/365)
22	**Return on Actual 2023 Rate Base**		**1,599,815**	Line 20 * Line 21
23	**Property Tax Expense**		**1,002,117**	Calculation per Tax Department
24	Annual Revenue Requirement on Plant		11,365,532	Line 15 + Line 22 + Line 23

(1) Reduced by $1,672,895 for the 2023 writeoff of the 2021 SmartCurrents capital spend exclusion
(2) Reduced by $1,990,360 for 2022 C&I Battery capital spend to be excluded from CWIP until a 2nd customer is in place per U-21403 settlement agreement

Michigan Public Service Commission
DTE Electric Company
Demand Response - 2023 Program Reconciliation
Reconciliation of Actuals to Authorized

Case No.: U-21658
Exhibit: A-4
Witness: K. Vangilder
Page: 1 of 1

Line No.	(a) Description	Source	(b) Actuals	(c) Authorized	(d) Variance Higher / (Lower)
	O&M Expenses				
1	Labor	(1) (2)	$ 35,647	$ -	$ 35,647
2	Contractors/Outside Service	(1) (2)	2,307,349	2,896,528	(589,179)
3	Other Non-Labor	(1) (2)	52,044	-	52,044
4	Total O&M Expense		$ 2,395,040	$ 2,896,528	$ (501,488)
	Capital Expenditures				
5	CoolCurrents	(3) (4)	1,007,109	3,218,282	(2,211,173)
6	SmartCurrents	(3) (4)	4,389,705	3,481,097	908,608
7	Other DR Programs and Pilots	(3) (4)	1,249,570	649,203	600,367
8	Total Capital Expenditures		$ 6,646,384	$ 7,348,583	$ (702,199)
9	Revenue Requirement on Plant	(5) (6)	$ 11,365,532	$ 12,593,951	$ (1,228,419)
10	**Total Revenue Requirement**	**Line 4 + Line 9**	**$ 13,760,572**	**$ 15,490,478**	**$ (1,729,906)**

(1) Actual O&M expense from Exhibit A-2 Lines 1-3
(2) Authorized O&M expenses are prorated between Case Nos. U-20836 and U-21297 (Exhibit A-13, Schedule C5.9).
(3) Actual capital expenditure from Exhibit A-1 Lines 1-3
(4) Authorized captital expenditures are prorated between Case Nos. U-20836 and U-21297 (Exhibit A-12, Schedule B5.6)
(5) Exhibit A-3 Page 3 Line 24
(6) Exhibit A-3 Page 1 Line 26

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application of **DTE ELECTRIC COMPANY** for reconciliation of its 2023 Demand Response program costs.	)))	Case No. U-21658

QUALIFICATIONS

AND

DIRECT TESTIMONY

OF

RYAN M. DEKIMPE

DTE ELECTRIC COMPANY
QUALIFICATIONS AND DIRECT TESTIMONY OF RYAN M. DEKIMPE

Line No.

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

A1. My name is Ryan M. DeKimpe (he/him/his). My business address is One Energy Plaza, Detroit, Michigan 48226. I am employed by DTE Electric Company (DTE Electric or Company) as a Principal Marketing Specialist in Demand Response (DR).

Q2. On whose behalf are you testifying?

A2. I am testifying on behalf of DTE Electric.

Q3. What is your educational background?

A3. I graduated from Oakland University, with a Bachelor of Science Degree in Marketing. In addition, I received a Master of Business Administration Degree from Wayne State University.

Q4. What is your professional experience?

A4. From 2013 until 2014, I was employed by DTE Electric where I supported the Pricing Strategy group as an Associate Marketing Analyst. In this role, I was responsible for assisting with creating a rate calculator that was primarily used by the Major Account Services (MAS) team to give their customers an accurate bill comparison tool to determine the best Commercial & Industrial (C&I) rate for their site. In 2014, I joined DTE Energy's Customer 360 project in which the Company implemented a new SAP billing system. In 2014, I was promoted to Marketing Analyst – Customer Marketing. In this position, I was responsible for developing and implementing strategies to bring DTE Energy's current billing and rate codes

over from the archaic system to the new SAP system. In 2016, I transitioned to the Change Management Team in which I developed training material and eventually became a trainer to the MAS group to assist in their learning of the new system. In 2017, I accepted the position as Principal Marketing Analyst in DR leading the Bring Your Own Thermostat (BYOT) pilot.

Q5. What is your current position?

A5. In 2021, I was promoted to Principal Marketing Specialist in DR. In this position, I am responsible for developing portfolio strategies and developing, implementing, and managing electric demand response programs and pilots.

Q6. Have you received industry related training?

A6. Yes. I have completed the Demand Response Fundamentals and Evolution Course presented by the Peak Load Management Alliance (PLMA).

Q7. Have you testified previously before the Michigan Public Service Commission?

A7. Yes. I have sponsored testimony and exhibits before the Michigan Public Service Commission (MPSC or Commission) in the DTE Electric 2019 Demand Response Reconciliation case, U-20793 and the DTE Electric 2022 Demand Response Reconciliation case, U-21403.

Purpose of Testimony

Q8. What is the purpose of your testimony?

A8. The purpose of my testimony is:

- Provide an overview of the DR regulatory framework;
- Discuss DTE Electric's existing DR portfolio including residential, commercial, and industrial customer programs, pilots, and tariffs;
- Discuss the status of the DR programs and pilots during the corresponding calendar year of 2023 subject to this reconciliation proceeding;
- Describe the 2023 expenditures and explain why they were prudent;
- Request approval of the financial incentive mechanism (FIM) amount resulting from this 2023 annual reconciliation case;
- Discuss the cost-effectiveness of specific programs within DTE Electric's DR portfolio

Q9. Are you sponsoring any exhibits in the proceeding?

A9. Yes, I am sponsoring the following exhibits:

Exhibit	Description
A-5	2023 Financial Incentive Mechanism (FIM) Calculation
A-6	2023 Annual Demand Response Report

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

A10. Yes.

Q11. Would you describe the exhibits?

A11. Yes. Exhibit A-5 is the FIM calculation that shows the level of financial incentive the Company is entitled to receive as a result of its 2023 DR performance. Exhibit A-6 is the annual DR report for the year 2023 as required by the Commission's orders in Case Nos. U-18369 and U-20628. This report presents information regarding the Company's DR portfolio that is complementary to my testimony.

Part I. OVERVIEW OF DR REGULATORY FRAMEWORK

Q12. What is the regulatory framework adopted by the Commission to approve, recover, and reconcile expenditures in the Company's DR portfolio?

A12. In the September 15, 2017 Order in Case No. U-18369, the Commission approved a 'three-phase' approach for approval, recovery, and reconciliation of DR expenditures. In the first phase, DR proposals are evaluated in the context of an integrated resource plan (IRP). In the second phase, DR plans that were approved as part of the IRP are considered pre-approved and the associated costs are included in rates in the utility's future general rate cases. The utility can also propose changes or modifications to DR programs or pilots at this time. The IRP DR proposed programs and pilots, as well as any changes, are then evaluated and approved in rate cases and can be considered for inclusion in the next IRP. The third phase involves a reconciliation of DR costs, participation rates, and demand savings achieved on an annual basis. The Commission also stated that during the reconciliation proceedings, actual capital spending in the examination period will be reconciled against the amount approved in the IRP and recovered in a rate case while Operation and Maintenance ("O&M") spending will be reconciled against the amount approved and recovered in a general rate case.

Q13. Has the Company filed an IRP prior to this 2023 DR Reconciliation case?

A13. Yes. A settlement in the Company's last IRP, Case No. U-21193 was approved by the Commission on July 26, 2023 and is used as the basis for this reconciliation.

Q14. How is the DR regulatory framework applied to the reconciliation case in this proceeding?

A14. 2023 capital costs were approved by the Commission on November 18, 2022 in the Order in the Company's 2022 general rate case, Case No. U-20836, therefore the Company did not request pre-approval for capital spend for calendar year 2023 in Case No. U-21193. 2023 O&M spend is compared to the prorated approvals of Case No. U-20836 and Case No. U-21297. This is further discussed in the testimony of Company Witness Vangilder.

Part II. EXISTING DR PROGRAMS, PILOTS, AND TARIFFS

Q15. Could you describe the Company's current DR portfolio?

A15. Yes. DTE Electric develops and manages its DR programs offering customers a range of options consisting of products, customer incentives, tariff structures, and education based on their profiles and willingness to curtail or shift energy usage during peak hours. As part of the development process, the DR organization evaluates customer behavior, program acceptance and validates technologies that can deliver benefits to its customers.

The Company's current DR portfolio is made up of eleven tariffs and programs and three pilots that are available to residential, commercial, and industrial customers. The goal of the Company's DR portfolio is to deliver measurable peak demand

reduction by effectively engaging customers to manage and reduce or shift their energy consumption.

Q16. What programs and tariffs are included in the Company's current DR portfolio?

A16. The Company's DR portfolio is made up of CoolCurrents™, SmartCurrents™, Smart Savers, Interruptible Water Heating, Dynamic Peak Pricing (DPP) and multiple interruptible tariff rates for Commercial and Industrial (C&I) customers. The participants in the DR programs or on the tariffs receive a discounted rate or incentive in exchange for reducing their load during DR events.

Q17. What is a DR event?

A17. A DR event is a period of high energy demand when programs are activated to relieve stress on the grid.

Q18. What is the CoolCurrents Program?

A18. CoolCurrents is the program name for the Interruptible Space Conditioning tariff (Rate D1.1) that is available to residential and commercial customers. Customers who enroll in CoolCurrents are equipped with a direct Load Control Device (LCD) on their air conditioning unit(s) or central heat pump that allows the Company to cycle the associated appliance in exchange for a discounted rate. The cycling of the appliance is limited to no more than eight hours in any 24-hour period and events can be called year-round in any of the four MISO seasons.

Q19. What is the SmartCurrents Program?

A19. The SmartCurrents Program, commonly referred to as the Programmable Communicating Thermostat (PCT) Program, is a DR offering where residential and commercial customers receive a free ecobee premium thermostat. By enrolling in SmartCurrents and installing their free thermostat, customers agree to allow the Company to adjust the thermostat setpoint by up to four degrees during SmartCurrents Peak Events. SmartCurrents Peak Events can occur on non- holiday weekdays between the hours of 12:00 pm and 8:00 pm, can last no more than four hours and are limited to 64 total hours each calendar year, and available year-round.

Q20. What is the Smart Savers program?

A20. The Smart Savers program, which is a Bring Your Own Thermostat (BYOT) program, is available to residential and commercial customers who have an existing and eligible PCT installed at their residence or business. In this program, customers enroll their eligible thermostat in the program and agree to let the Company adjust the setpoint on the thermostat up to four degrees during Smart Savers events. Smart Savers events last no more than four hours and can be called between 12:00 pm and 8:00 pm on non-holiday weekdays. The Smart Savers season runs from June 1st through September 30th and events are limited to 56 total hours annually.

Q21. What is the Interruptible Water Heating rate?

A21. The Interruptible Water Heating rate (D5) is available to both residential and commercial customers that use hot water for sanitary purposes or other uses subject to the approval of the Company. An LCD is installed at the customer's location that turns off the heating element of the water heater for up to four hours in any 24-hour

period during any MISO season. Participating customers receive a discounted rate on the associated water heating usage.

Q22. What is the DPP rate?

A22. The DPP rate (D1.8) is a rate that is offered to residential and commercial customers. It is a three-tiered Time of Use rate (On-Peak, Mid-Peak, and Off-Peak), with a critical peak pricing (CPP) rate component. During a CPP event, which are available year-round in any of the four MISO seasons, the price per kilowatt of electricity increases to $1.02 per kilowatt hour. CPP events occur between 3:00 pm and 7:00 pm on non-holiday weekdays and are limited to no more than 56 hours per year.

Q23. What additional interruptible tariffs does the Company offer to C&I customers to promote participation in demand response?

A23. The Company offers C&I customers six tariffs at a discounted rate in exchange for agreeing to interrupt a portion of their electric load during DR events. Unless otherwise noted, these tariffs are available for interruption year-round in any of the four MISO seasons. The tariffs that are available to C&I customers are as listed:

1. Interruptible General Service Rate (D3.3): Commercial secondary customers can elect to have separately metered service that is subject to interruption or establish a portion of their load as firm through the product protection feature. This rate is not available to customers whose loads are primarily off-peak. Company interruptions may include interruptions for, but not limited to, maintaining system integrity,

economic reasons, or when available system generation is insufficient to meet anticipated system load.

2. Interruptible Supply Base Service Rate (D8): Primary voltage customers who desire separately metered service for a specified quantity of demonstrated interruptible load of not less than 50 kW at a single location can take service under this rate. Customers may be ordered to interrupt only when the Company finds it necessary to do so either to maintain system integrity or when the existence of such loads will lead to a capacity deficiency.
3. Alternative Electric Metal Melting (Rider 1.1): Customers who operate electric furnaces for the reduction of metallic ores and/or electric use consumed in holding operations who provide special circuits can have that load separately metered, making it subject to interruption. The Company may order an interruption to maintain system integrity.
4. Electric Process Heat (Rider 1.2): Customers who use electric heat as an integral manufacturing process, or electricity as an integral part of anodizing, plating, or a coating process and who provide special circuits can have that load separately metered, making it subject to interruption. The Company may order an interruption to maintain system integrity.
5. Interruptible Supply Rider (Rider 10): Rider 10 allows customers to elect the amount of interruption they are willing to take under a separate meter. Program participation is capped at a total of 650 MW of enrolled load. Rider 10 is designed for customers of greater than 50 MW at a single location, although at the Company's discretion, and with available capacity, the minimum site requirements can be waived. The Company may order an interruption to maintain system integrity.

6. Capacity Release (Rider 12): Customers are provided a capacity release payment by subscribing at least 100 kW of load per site location for interruption. The Company may order an interruption to maintain system integrity. The program is only available during the MISO summer season from June 1 – August 31 although the Company is evaluating customer reception for Rider 12 to be made available for the other seasons as well.

Q24. How much capacity does the Company's existing DR portfolio account for in meeting MISO's resource adequacy requirements in the 2023/2024 Planning Year (PY)?

A24. The 2023/2024 MISO PY was the first year that MISO implemented a seasonal construct, as opposed to yearly, in establishing resource adequacy requirements. MISO's resource adequacy construct has four seasons; Summer (June, July and August), Fall (September, October, November), Winter (December, January, February) and Spring (March, April, May). DTE Electric registered 831 MWs (installed capacity or ICAP) of demand response for the summer season, equating to 912 Zonal Resource Credits (ZRCs). The seasonal breakdown of ICAP MWs and ZRCs used to meet resource adequacy requirements in the 2023/24 PY is in Table 1.

Table 1 2023/24 PY ICAP MWs (ZRCs) by Season

Summer	Fall	Winter	Spring
831 (912)	368 (431)	363 (465)	318 (403)

Q25. How does the Company's DR portfolio compare to other utility DR portfolios?

A25. In 2022, the U.S. Energy Information Administration (EIA) ranked DTE Electric's DR portfolio the fifth largest in the country in terms of Potential Peak Demand Savings. EIA also ranked the Company's portfolio as the largest in MISO in terms of Potential Peak Demand Savings.

Q26. What is the intent of the DR pilot offerings?

A26. Pilots are potential programs focused on understanding technology or design and determining whether they can become full-scale programs that will deliver accountable peak demand reductions or shifts in energy consumption. The Company will determine which pilots may become programs in the DR portfolio on a case-by-case basis.

Q27. Why is it important to continue to invest in DR pilots?

A27. Continued investment in DR pilots allows the Company to stay at the forefront of new or emerging DR technologies and evaluate whether the technologies or program design will provide benefits to the Company and its customers. Investment in DR pilots also can shape future designs of programs and provide valuable learnings as the DR landscape changes.

Q28. What DR pilots did the Company invest in in 2023 to continue to diversify the portfolio as well as offer more options for potential DR customers?

A28. In 2023, the Company invested in pilots that included an electric vehicle (EV) DR pilot (Smart Charge), a residential home generator pilot, and a C&I Battery storage pilot. These pilots will be discussed in detail later in my testimony.

Q29. What is the overall purpose of continued investment in DR?

A29. DR programs are, and will continue to be, an important part of DTE Electric's integrated resource portfolio and are part of a utility system framework within the comprehensive context of an IRP process. The Company has been managing and investing in a diverse range of programs and pilots that serve as resources in the Company's IRP.

Changes have been occurring in the energy landscape including energy legislation, regulatory framework, and environmental regulations. These changes, coupled with a shift from fossil fuel-based generation to cleaner energy resources, are driving investment in a DR portfolio to help meet the MISO resource adequacy requirements. A portfolio of programs and pilots enables the Company to continue providing secure, reliable, and sustainable energy supply to its customers under a changing generation capacity and energy landscape.

Part III. DEMAND RESPONSE PROGRAM STATUS DURING 2023

Q30. What is the status of the Company's CoolCurrents Load Control Device (LCD) replacement program?

A30. As of December 31, 2023, approximately 260,000 residential customers and over 800 commercial customers take service on the D1.1 rate. The Company began replacing outdated legacy Radio Control Units (RCUs) in 2015 after identifying that the legacy RCUs were in need of repair, prone to malfunctioning, and difficult to service as some units were installed as early as the 1980's. Since then, the Company has successfully replaced an estimated 170,000 legacy RCUs with a two-way communicating 24v LCD. The replacement LCD provides the Company with

increased flexibility to interrupt based on geographic area or other subgroups as well as determine whether devices are online and available for interruption or offline.

Throughout 2023, the Company focused on continuing to replace RCU devices as well as investigating previously installed LCDs that are offline. Nearly 25,000 previously installed replacement LCDs are no longer joined to the electric meter and thus not available for interruption. Based on the field investigations conducted in 2022 and 2023, around 70% of the replacement LCDs investigated are due to the customer wiring no longer supplying the required 24v. In 2023, DTE Electric replaced 642 RCUs with new LCDs. DTE Electric also conducted 7,959 investigations of offline LCDs. 1,671 LCDs were successfully reset and brought back online while 4,907 (78%) of devices that could not be reset were found to be offline due to the LCD not having power as the 24v line was not connected. The remaining devices were not reset due to access and safety issues. Making better use of data analysis and procedures for upgrading meters, DTE Electric is working to reduce the need for field investigations of offline devices.

Q31. Could you explain the status of the remaining CoolCurrents customers?

A31. Yes. Approximately 90,000 CoolCurrents customers still have legacy RCUs primarily due to not having the proper wiring in place to power a replacement LCD. Without the proper wiring available to provide power to the 24v LCD, the LCD will not be installed. To address this issue the Company is evaluating the installation of an alternative new LCD.

Q32. How does installing an alternative new LCD provide a solution to customers that do not have the proper wiring needed to support a replacement LCD?

A32. The replacement LCD, like the older RCUs, relies on a 24v line that is run from the customer's furnace for power. The Company has found that when a customer services or replaces their heating, ventilation, and air conditioning (HVAC) unit, this line is often not reattached or is simply removed. To replace or repair the 24v line, it is estimated that a customer would have to pay a contractor, on average, between $80 to $200 to make the replacement LCD functional. This is also comparable to what a customer with a legacy RCU would spend to ensure the proper wiring is in place for a replacement LCD.

The alternative 240v LCD connects directly to the customer's HVAC unit and pulls its power from the unit making the 24v line no longer necessary. By offering this alternative LCD, CoolCurrents customers can remain enrolled in the program without any additional cost, as the device is not dependent on a dedicated, customer supplied separate 24v line.

Q33. Has the Company worked with any other utilities to gather learnings about the alternative 240v LCD?

A33. Yes. DTE Electric had discussions with Consumers Energy Company (CMS), who uses a similar 240v LCD, to better understand how the alternative LCD is installed and operates. This included an installation go and see by the Company's field personnel with CMS field installers. The go and see allowed the Company's field personnel to see the alternative LCD installation process as well as learn what type of equipment and components are needed and to ask questions directly to

experienced installers. In addition, the CoolCurrents Program Manager discussed the alternative LCD with the CMS Program Manager to gather further learnings from their experiences. After the collaborative field events conducted with CMS installers, DTE Electric field service personnel determined that similar devices could be installed by the Company's personnel.

Q34. Has the Company ordered any alternative LCDs that do not require a 24v line?

A34. Yes. In 2023, the Company ordered and accepted delivery of nearly 5,000 alternative LCDs that are targeted to be installed in 2024. In addition, the Company has ordered the various components that are necessary for the installations. The installation of the alternative LCD devices will be used to gauge whether this is a viable solution for customers who do not have the proper 24v wiring. Assuming that there is a willingness on the part of customers to have the alternative 240v LCD installed on their appliance, and DTE Electric field service executes requested installations as anticipated; this device will likely provide a satisfactory alternative to the 24v device.

Q35. How will the Company determine if the alternative LCD provides a solution to customers that are offline and/or without the proper voltage?

A35. To determine if the alternative LCD is a viable solution the Company will consider customer acceptance, ease of installation, and functionality of the alternative LCD.

Q36. Why is the Company continuing to make these improvements?

A36. The Company identified that replacing the outdated infrastructure results in a higher capacity value through increased capabilities and effectiveness. The LCDs are two way communicating devices providing the Company the capability to determine whether devices are available for interruption. They also provide flexibility to interrupt at a substation or circuit level. With continued investment in the CoolCurrents program, DTE Electric can extend the equipment life and continue to provide an additional DR program option for residential and commercial customers. In addition, the CoolCurrents program is a direct load control DR program that doesn't allow for customer opt outs adding additional value to the Company's DR portfolio and further supports resource adequacy.

Q37. Can you provide an update on Smart Savers, otherwise known as Bring-Your-Own-Thermostat or BYOT?

A37. Yes. Enrollment in the Smart Savers program continues to meet the annual goals of the program. In 2023, 12,800 thermostats were enrolled into the program. This brought the total enrolled thermostats to 63,960 by year-end, compared to an enrollment goal of 60,000 devices.

Q38. Could you please describe the SmartCurrents Programmable Communicating Thermostat (PCT) Program?

A38. The PCT program, marketed under the name SmartCurrents, is a program where the Company provides a free Wi-Fi enabled thermostat to a customer. In exchange for the thermostat, the Company is able to adjust the setpoint on the thermostat during DR events by a maximum of four (4) degrees.

Q39. What changes did the Company make to the SmartCurrents program in 2023?

A39. In August of 2023, SmartCurrents was relaunched with changes to the program. One of the changes included the separation of the program from the DPP rate. Other changes included upgrading the thermostat to an ecobee Premium Thermostat, providing an annual participation incentive to increase retention, and revising the DR event parameters to increase the flexibility and availability of SmartCurrents as a MISO LMR resource. While the program was being redesigned to incorporate these changes, program recruitment was paused.

Q40. Why did the Company think separating the SmartCurrents program from the DPP rate was necessary?

A40. Separating the SmartCurrents program from the DPP rate responds to feedback heard directly from customers in an ad hoc quantitative survey to understand how they would rate select attributes of the SmartCurrents program. In addition, this change allows customers to select the rate that best fits their household and lifestyle. Removing the tariff requirement also opened eligibility to customers who previously may have been denied enrollment due to tariff incompatibilities. In addition, this change allowed the Company to make the necessary changes to the event parameters to better align with the Company's other DR programs.

Q41. Have the program changes had an impact on customer enrollment since the relaunch in August of 2023?

A41. Yes. Since relaunch, the program enrolled a gross 7,820 customers as of December 31, 2023, which is 29% of all program enrollees currently active as of the same date.

Q42. How many customers are enrolled in SmartCurrents Program?

A42. The total number of enrolled devices as of December 31, 2023, was 27,120. This represents a net growth of 5,986 customers throughout 2023.

Part IV. DEMAND RESPONSE PILOTS STATUS DURING 2023

Q43. Could you describe the Peak Time Savings (PTS) pilot?

A43. The PTS pilot was structured to reward customers for reducing energy consumption during the Company's called peak events. The participating customers received bill credits for each DR event based on measured reductions in customers' energy demand relative to a pre-established baseline, that was developed based on features of comparable utility programs. Unlike the Company's current DPP rate, the PTS pilot does not increase a customer's electric rate during peak events, but instead provided customers with a no-risk introduction to demand response. Initial recruitment for the pilot was launched in June 2021 with events beginning in August of 2021. The pilot was planned to run through the end of the 2023.

Q44. Can you provide an update for the PTS pilot?

A44. Yes. The Company executed two events in 2023: August 3 from 3 p.m. - 7 p.m. and September 5 from 3 p.m. - 7 p.m. After conclusion of the pilot period on September 30, 2023, the Company identified that the pilot resulted in minimal customer savings, with an average reduction of 0.33 kWh from the August 3 event and no reductions from the September 5 event, compared to the implementer estimated average reduction of 2.5 kWh. for the pilot. Based on these results, the PTS pilot was terminated on December 31, 2023.

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Q45. Were there any other reasons for discontinuing the pilot beyond the minimal kWh savings?

A45. Yes. The Company's desire for the pilot was to provide real-time feedback after a DR event so customers would remain engaged in the program, recall the actions they took to reduce their energy usage during the event, and improve on future event performance. The Company partnered with an external resource to provide this function and to calculate and issue bill credits. To manage costs, the data was transferred once per month to align with all 20 bill cycles. This process was not able to provide customers with real-time performance feedback for each event. When a cost-effective solution with the desired outcomes was not deemed possible, the Company discontinued the pilot.

Q46. Is there a possibility that the Company will revisit the PTS pilot in the future?

A46. Yes. The overall feedback from customers was generally positive regarding the pilot participation. Because of the positive customer feedback and the no risk education into demand response, this pilot may be revisited in the future if the Company's implementer, or a new implementer, can provide participating customers with quicker feedback on their event performance. Providing more immediate results could possibly improve customer engagement and savings if more frequent events are called in the future.

Q47. Could you describe the Company's battery energy storage system (BESS) pilot for C&I customers?

A47. Yes. The battery energy storage pilot, which was previously discussed in Case No. U-21403, is a behind-the-meter (BTM) lithium-ion phosphate BESS at two C&I customers' sites. It is designed to test the ability to achieve peak demand shaving or shifting during DR events. The Company is targeting a two-year pilot period following installation and commissioning of the batteries.

Q48. Can you discuss the main objectives of the C&I Battery Storage pilot?

A48. The main objectives of the designed pilot are as follows:

- Evaluate the effectiveness of the BESS to achieve system peak demand reduction when a demand response event is called by the Company
- Assess customer's actions to achieve demand charge and overall bill reduction
- Gain operational experience on battery installation, management, and control interfaces when the system is located in a customer's site as opposed to a Company's site
- Engage with customers to better understand their interest in hosting and potentially escalating BESS
- Assess feasibility for sharing asset control between customer and the Company
- Facilitate the understanding of multiple energy storage values, compensation models, and the integration of battery storage in wholesale markets to support tariff development as contemplated by the Commission's order in MPSC Case No. U-21032

Q49. Can you describe the status and progress of the C&I battery pilot?

A49. Yes. Both batteries have been ordered, shipped from China, and have arrived in the US. The switchgear component, which has an approximate 38-week lead-time, was approved in December 2023, and both switchgears were ordered on December 27, 2023.

As part of the implementation plan, the Company has identified one customer. The License Agreement with the first customer has been verbally agreed upon and will be signed following the Pilot Operating Agreement which will be completed once skid design with the integrator, Hitachi, has been finalized. This is expected to occur in Q4 2024. The Company intends to leverage the License Agreement developed and verbally agreed upon by the first participant and the Pilot Operating Agreement as a template for the agreement with the second participant. Due to lead time of major equipment, installation at the first customer's site has taken longer than anticipated but is targeted for Q2 2025. The Company plans for both batteries to be operational by the end of 2025. The initial proposed event schedule includes no more than 30 planned DR events per year and five non-planned DR events, with a least one-hour customer notice, per year. However, per the order in Case No. U-21297, the Company will meet with the MPSC Staff to discuss an appropriate number of required test events each year.

Q50. What are the customer benefits of participating in the BTM battery energy storage pilot?

A50. The pilot will target customers who are already enrolled on the Company's Rate D4, Rate D6.2, or Rate D11 electric tariffs (excluding sites or load under Rider 10) since those customers are more suited for pilot participation due to their peak load

profiles, outdoor space availability and operational capabilities. The Company will retain the ability to control the BESS when calling a dispatch event while the customer will retain the option to use the BESS when the Company does not call an event. The dispatch strategy will consider the ability for the Company to call a certain number of scheduled DR events with a prior-day notification, and a limited number of non-scheduled DR events with immediate notification. When no Company DR event is planned, the customer will be able to dispatch the BESS to address its facility energy needs on a day-by-day basis. It is expected that more detailed commercial arrangements will balance the different control and use possibilities split between the Company and the customer. This arrangement will allow for the customer to get experience operating a battery while potentially reducing peak operating costs.

Q51. What are the estimated impacts of the BTM battery energy storage pilot?

A51. While the design parameters are subject to change as the Company moves forward with the pilot engaging the customer host, the battery will be up to 250 kW/ 1 MWh at each of the two sites to reduce peak customer and system demand over an event of up to 4 hours.

Q52. How will the BTM battery energy storage pilot be evaluated?

A52. The BTM battery energy storage pilot will be evaluated by measuring the load reduction during events called by the Company against the battery expected parameters, as well as the evaluation of other system impacts. The customer peak load reduction will also be evaluated to observe the reduction on the customer's bill

for both Company called events and customer's use. The Company will also evaluate communication and sharing of the battery controls with a customer.

Q53. Why did the design of the C&I Battery pilot include two customers?

A53. The design of the pilot included two customers so the Company could evaluate the battery's performance and the pilot design on different customer load profiles. Two customers with different load profiles will facilitate learnings on charging patterns and charge status during DR events as well as how the customer uses the battery on a day-to-day basis.

Q54. What progress has the Company made in identifying a second customer to participate in the C&I Battery Storage Pilot?

A54. The Company has engaged in several discussions with several potential participants and provided each with an overview of the pilot, potential bill savings, up-front costs, and potential post-pilot options to aid in their decision-making process. One customer has shown a strong interest in participating and follow-up meetings are being scheduled.

Q55. Could you describe the electric vehicle (EV) DR or Smart Charge pilot?

A55. The initial design of Smart Charge, which launched in 2019, was to assess the effectiveness of Open Vehicle Grid Integrated Platform (OVGIP) concept to integrate EV charging with grid objectives through demand response. This initial design ran until May of 2023.

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After completion of the initial design, the Company, modified the focus of the pilot to incorporate managed charging, starting in July 2023. One of the main reasons the Company transitioned to managed charging was due to the mandatory roll out of residential electric time of use (TOU) rates in March 2023. In this phase of the pilot, the Company's managed charging approach ties each participant's enrollment to their specific TOU rate schedule and automatically initiates charging to occur during their off-peak rate period when it's the lowest cost for them and most beneficial to the system. In addition, the Company is interested to learn if there's an impact of the Company scheduling participant's daily charging automatically through vehicle telematics and managed charging participation for them, or if EV users are already scheduling their charging during off-peak time periods without the Company's assistance.

Throughout 2023, the Company continued its partnership with Ford, General Motors (GM), and BMW through the OVGIP while adding a new partnership with WeaveGrid. WeaveGrid is a platform that connects utilities, original equipment manufacturers (OEMs), and EV drivers and is the platform that is used to enroll eligible Tesla drivers into the Smart Charge pilot. The pilot will continue through the end of 2024.

While the OVGIP is funded through the DR O&M budget, the partnership with WeaveGrid was made available through the Emerging Technology Fund (ETF) that was approved in Case No. U-20836[1]. The OVGIP forecasted spend will be subject

[1] As described in Q/A 111 of Burns' Testimony (Case No. U-20836)

to future DR reconciliation while the spend associated with the ETF will not be subject to future DR reconciliations.

Q56. Could you describe the status and progress of the Smart Charge pilot?

A56. Yes. In 2019, the Company worked with Electric Power Research Institute (EPRI), Sumitomo, Ford, and GM. The first phase of the pilot concluded after six months in August 2019 after calling 12 events with approximately 165 Ford and GM employee EV drivers. The second phase of the pilot expanded beyond automotive employees to any Ford and GM drivers in the Company's service territory, increasing to 370 participants. DTE Electric dispatched DR events for the eight months ending December 2021, resulting in 1.7 MWh of avoided energy consumption during called events.

In May 2022, BMW joined the next phase with Ford and GM, which grew to 663 participants and called 44 DR events over the 12-month period ending May 2023. The Company and OEMs identified an aggregate avoided energy total of 14 MWh across all 44 events. The DR events were all two hours in length and were called during different days of the week (weekdays only) and different times of the day to test customer participation levels and to understand how much avoided energy the Company could expect to achieve based on the number of participants enrolled. The Company observed the best avoided energy results during the 12am-2am time periods, since most EV owners typically charge their EV overnight, presumably due to more prevalent daytime work hours and cheaper off-peak rates. The average aggregated avoided energy per enrolled EV during the 12am-2am event window

was 1.33 kWh. The average aggregated avoided energy per participating EV during the 12am-2am event window was 9.04 kWh.

Beginning in July 2023, after the conclusion for the 2022/23 pilot year, the Company and OEMs had to re-recruit customers. The expansion of the pilot to support managed charging required a change in terms and conditions by the OEMs. As of December 31, 2023, there were 1,224 EVs enrolled in the Smart Charge pilot. GM, Ford, and Tesla began enrolling customers in 2023, while BMW began enrolling customers in Q1 of 2024. The Company will continue to recruit customers for this pilot through December 2024. Once a participant enrolls, Smart Charge automatically schedules daily charging to meet their charging needs during their off-peak rate times. This scheduled charging occurs on the weekdays only. The Company also plans to call up to five DR events, June through September, to evaluate how much demand and energy savings can be achieved. The Smart Charge pilot is designed to provide data and learnings around customer acquisition, customer engagement, customer retention, and load shed to evaluate the viability of utilizing eligible EV models for managed charging and DR curtailment events as a DR resource. Evaluating how participants and EVs respond to the different event times, lengths and incentives offered will help guide us to a better program design in the future.

Q57. Could you please describe the residential generator pilot?

A57. Yes. The Company is conducting a residential customer-owned natural gas generator pilot. The pilot leverages Generac Grid Services' platform and utilizes telemetry to shift customers' electric load to the customers' generator in real-time

during Company called DR events. Customers were prescreened for eligibility to participate in the pilot and were targeted accordingly. One qualifier to participate was, "owner has a premium or dealer managed subscription to Mobile Link." The premium or dealer managed Mobile Link subscription allows the Company to operate a switch-free program capable of remote operations such as responding to demand response events. Through benchmarking with CMS, the Company learned switch programs are more expensive due to the cost of physical LCDs and the associated truck roll for the installation of the LCD. Customers have the options to opt-out of up to two events per calendar year, throughout the duration of the program. Events can occur on any non-holiday weekday between the hours of 8:00 am and 8:00 pm within any MISO season, can last no more than four hours and are limited to 40 hours in total each calendar year. The pilot will conclude in December 2025.

Q58. What are the general objectives in pursuing a residential generator pilot?

A58. The main objectives of the residential generator pilot are as follows:

- Determine whether customers would be willing to actively participate and allow for real-time telemetry to control their generators during an event
- Assess the viability of a program that can act as a year-round DR asset responding on short-term notices for peak events
- Assess customer receptiveness and the value customers receive from a residential generator pilot
- Identify and process new learnings that could be applied to current and future demand response offerings

Q59. What are the customer benefits of participating in the residential generator pilot?

A59. Pilot participants will benefit by receiving incentives from the Company which include an up-front gift card of $100 and a $250 gift card for remaining enrolled at the end of the pilot term as well as reduced electric bills during peak events.

Q60. Could you please provide an update on the current status of the residential generator pilot?

A60. Yes. In 2023 the Company launched a 200-participant cap residential customer-owned natural gas generator pilot, Demand Response Home Generator Program, in partnership with Generac Grid Services. Recruitment efforts began in July 2023 and continued through September 2023, resulting in successful enrollment of 197 customers. The Company called its first pilot event on November 28th, 2023, resulting in an average customer load reduction of 0.66 kW during the two-hour morning event. The Company will continue to call events throughout 2024.[2] The generator pilot will provide visibility around customer acquisition, customer engagement, customer retention, and load shed data that will help the Company evaluate the viability of utilizing customer-owned natural gas generators as a year-round LMR to provide load reduction.

Part V. DTE ELECTRIC's 2023 EXPENDITURES

Q61. How much in Capital and O&M did the Company spend on its DR portfolio in 2023?

[2] The Company called its second event on March 6th from 8:30am to 11:30am and observed an average reduction of .58 kWh/Customer with a peak reduction of .81 kWh/customer.

A61. As referenced by Company Witness Kuspa, the Company spent $6,646,384 in capital and $2,395,040 in O&M in 2023. The capital expenditures by program can be seen in Witness Kuspa Exhibit A-1 and the O&M expenditures are available in Witness Kuspa Exhibit A-2.

Q62. What were the capital expenditures that were associated with the CoolCurrents Program?

A62. In 2023, the Company spent $1,007,109[3] in capital. These expenditures associated with the CoolCurrents program were used to purchase 1,051 replacement LCD switches and performed 7,785 investigations of offline devices. A portion of the capital investment, nearly $271,000, was used to convert 4,996 24v replacement LCDs to 240v alternative LCDs. In 2024, the Company is beginning to install the alternative 240v devices with a goal to install 4,000 devices by year-end. The Company spent $2,211,173 less than authorized[4] as IT work and an external EM&V analysis for program enhancements were delayed. The Company reallocated capital funds associated with CoolCurrents to other DR programs.

Q63. Can you provide a breakdown of the SmartCurrents capital costs?

A63. In 2023, $4,389,705[5] of capital was spent to support the SmartCurrents program. In December 2023, the Company re-allocated a majority of the program spend associated with device fee costs from O&M to capital. This change was driven by Company ownership of the enrolled thermostats. Capital costs associated with the SmartCurrents program consist primarily of contract labor and materials. Contract

[3] Company Witness Kuspa Exhibit A-1, Line 1
[4] Company Witness Vangilder Exhibit A-4, Line 5
[5] Company Witness Kuspa Exhibit A-1, Line 2

Line No.

labor is provided by ICF and EnergyHub, and materials consists of the ecobee device costs and associated API license. In addition, there is internal DTE Electric labor to support the program, that includes program management, internal IT labor and digital assistance. ICF assists in the management of the SmartCurrents program in many facets including, but not limited to, thermostat scheduling, installation and reporting, program management, recordkeeping, IT support, customer communication and marketing development, as well as coordinating thermostat purchases. ICF supported the program redesign. EnergyHub is the third-party integrator and their platform that is used communicate with the enrolled thermostats which includes determining if the thermostat is online and dispatching event notifications to host thermostats and making the temperature offset when a DR event is called. The Company spent $908,608 more on SmartCurrents than authorized[6] on the reclassification of SmartCurrents O&M to capital and to redesign the program which has led to 7,820 customers enrolling since relaunch which is 29% of total enrollments.

Q64. How much O&M was spent on the Smart Savers program in 2023?

A64. In 2023, $2,173,924[7] was spent to support the Smart Savers program. In addition to the platform fee, this level of spend was necessary for the efforts associated with marketing, enrollment, integration and evaluation of the Smart Savers customers and corresponding devices.

[6] Company Witness Vangilder Exhibit A-4, Line 6

[7] Company Witness Kuspa Exhibit A-2, page 2, line 1

Q65. How much in capital and O&M expenditures did the Company invest in other DR programs and pilots in 2023?

A65. The Company spent $1,249,570[8] in capital and $221,116[9] in O&M to support other DR programs and pilots.

Q66. How much Capital and O&M did the Company spend on the PTS pilot in 2023?

A66. The Company spent $93,773[10] in capital and $48,087[11] in O&M to support the PTS pilot. Costs included customer bill credits earned for event participation, customer service and customer communications.

Q67. How much capital did the Company spend on the C&I Battery Storage pilot in 2023?

A67. In 2023, the Company spent $123,437[12] in capital to procure the switchgear and storage of the batteries as well as labor for the pilot.

Q68. How much O&M did the Company spend on Smart Charge pilot in 2023?

A68. In 2023, the Company spent $122,306[13] on the Smart Charge pilot to support the OVGIP platform fee and monthly EV enrollment fees.

Q69. Did the Company have any other capital costs associated with pilots in 2023?

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[8] Witness Kuspa Exhibit A-1, page 1, line 3
[9] Includes Lines 4, 7 and 10 on Witness Kuspa's Exhibit A-2, page 2.
[10] Included in Line 3 of Witness Kuspa's Exhibit A-1
[11] Witness Kuspa's Exhibit A-2, page 2, line 7.
[12] Included in Line 3 of Witness Kuspa's Exhibit A-1
[13] Witness Kuspa's Exhibit A-2, page 2, line 4

A69. Yes. The Company spent $106,324[14] to purchase 864 water heater LCDs for the interruptible water heating replacement project as well as $445,000[15] on the C&I Dashboard technology which includes the one-time set up fee ($150,000) and the annual platform fee ($295,000). In addition, the Company spent $481,036[16] to support other DR programs and pilots.

Q70. Were there any other DR O&M costs associated with running the DR Portfolio?

A70. Yes. The Company spent $50,723[17] to support DR programs and pilots.

Q71. Why did the Company spend $501,488 less O&M than authorized?

A71. The Company delayed the launch of a marketplace rebate program for the Smart Savers program, which is now scheduled to launch in 2024. The Company also reclassified the EnergyHub costs associated with the SmartCurrents Program from O&M to capital.

Q72. Why are the capital and O&M expenditures related to the DR portfolio prudent?

A72. Despite spending less capital and O&M than authorized, the Company was able to successfully enroll more customers into Smart Savers, redesign the SmartCurrents Program, offer customers three pilots as well as add 45 MWs (6%) to the DR Portfolio over the 2022/23 MISO Plan Year.

[14] Included on Witness Kuspa's Exhibit A-1, Line 3
[15] Included on Witness Kuspa's Exhibit A-1, Line 3
[16] Included on Witness Kuspa's Exhibit A-1, Line 3
[17] Witness Kuspa's Exhibit A-2, page 2, Line 10

Part VI. FINANCIAL INCENTIVE MECHANISM

Q73. Could you please provide background on the Financial Incentive Mechanism (FIM) calculation and allowance?

A73. In Case U-18369, the Commission agreed with Advanced Energy Management Alliance (AEMA) that a financial incentive for DR is reasonable. At that time, the Commission indicated that providers and other interested parties may propose appropriate incentives as part of the reconciliation proceeding. In the Company's 2019 DR Reconciliation (Case No. U-20793), the Commission approved the settlement allowing the Company to begin collecting an incentive through a calculated FIM, beginning with 2020 DR program costs, pending the Company maintains the peak demand reduction levels achieved in the prior calendar year. The settlement also states, "…once achieving the peak demand reduction levels from the prior calendar year, DTE Electric will collect a FIM using the Staff's proposed calculation methodology for partial achievement of the target peak demand reduction approved in the DTE Electric's most recent approved Integrated Resource Planning (IRP) case." Additionally, the FIM amount is capped at 15% of the Company's non-capitalized costs. The Company first achieved an incentive through a calculated FIM as part of the 2020 reconciliation Case No. U-21044.

Q74. What is the FIM calculation methodology established in the settlement agreement and approved by the Commission in Case No. U-20793?

A74. The FIM calculation methodology directs that the Company earn 0.3% of non-capitalized costs for each 1% of the DR growth target achieved starting at 50% of the growth target and increasing up to the 15% cap for achieving 100% of the

growth target. The Company's 2019 IRP, Case No. U-20471 is used for identifying the baseline while the most recently approved IRP, Case No. U-21193, is used for identifying the target. The baseline and target can then be compared to determine the 50% point at which the Company starts to earn the FIM incentive. The Company's IRP in Case No. U-21193 includes the respective DR peak demand reduction levels in MW of installed capacity or ICAP, a summary of which is detailed in Page 2 of 2 in Exhibit A-5. The baseline for any given year is the IRP target for the previous year. This is the case throughout the duration of the IRP study period, until it is supplanted with targets from a newer, approved IRP. The Company's performance is evaluated at the portfolio level, therefore, the baseline and target levels used for calculation of the FIM amount are those total levels corresponding to the whole DR portfolio, and not those levels considered on an individual program basis.

Q75. Could you please describe the calculation of the actual amount of the FIM that the Company is requesting for the year 2023 in the current reconciliation proceeding?

A75. The calculation of the FIM amount for the year 2023 has three (3) steps that are evaluated in successive order.

a) The Company maintained or exceeded the peak demand reduction levels achieved in the prior calendar year. The Company's peak demand reduction levels of 831 MW (ICAP) in the year 2023 exceeded the levels of 786 MW achieved in the year 2022, then,

b) The FIM amount resulting from the established methodology for the year 2023 is $544,823, based on the following calculation:

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a. The achieved peak demand reduction level for the year 2023 is 831 MW (ICAP), which exceeded the baseline but not the target set by the 2022 IRP (Case No. U-21193). The mid-point was exceeded at which the Company starts to earn the FIM incentive. The baseline is based on the Company's 2019 IRP (Case No. U-20471) while the target is based on the Company's 2022 IRP. For the year 2023, the baseline level is 757 MW, the target is 855 MW, and the mid-point or 50%-point level is 806 MW.

b. The corresponding percentage to be applied to the non-capitalized costs for the calculation of the FIM amount is 8%. According to the calculation mechanism, the Company earns 0.3% of non-capitalized costs for each 1% of the DR growth target achieved starting at 50% of the growth target and increasing up to the 15% cap for achieving 100% of the growth target.

c. The Company's total 2023 non-capitalized costs are $7,119,015. The non-capitalized costs include costs incurred in the regular management of the programs and pilots, as well as customer acquisition costs and customer incentive payments that are not capital expenditures. Depending on the nature of the spend, these non-capitalized costs are included some into the O&M expense line for the Company's DR portfolio, and others in the demand response incentive

payments made to (DR) customers as a capacity expense in the Company's power supply cost recovery (PSCR) plan.

d. The FIM amount of $544,823 results from the multiplication of 8% (b. above) times $ 7,119,015 (c. above).

c) Finally, the calculated FIM amount of $544,823 for the respective year 2023 is 8% of DTE Electric's non-capitalized costs, therefore not exceeding the 15% limit agreed-upon by the parties in the settlement approved by the Commission in Case No. U-20793.

For further details regarding the calculation of the actual FIM amount of $544,823, please refer to Exhibit A-5, page 1 of 2.

Part VII. COST-EFFECTIVENESS

Q76. Could you please describe the settlement agreement from Case No. U-21044 (2020 DR Reconciliation) regarding cost-effectiveness of the Company's DR programs?

A76. It was agreed upon by all parties in the settlement agreement for Case No. U-21044 that DTE Electric will conduct specific cost-effectiveness tests beyond what is required in the IRP for DR resources that qualify as LMRs to meet MISO's resource adequacy requirements. Resources excluded from cost-effectiveness testing are tariffs D3.3, D8, R1.1, R1.2 and R10. The specific cost effectiveness test is Net Present Value (NPV) compared to MISO's Cost of New Entry (CONE).

Q77. Was the agreed upon methodology for cost-effectiveness testing subsequently updated?

A77. Yes. It was agreed upon in Case No. U-21403 (2022 DR Reconciliation) that the Company will evaluate changing the cost-effectiveness test from an annual test to a seasonal cost-effectiveness test and provide an update on this evaluation prior to filing the 2023 DR reconciliation.

Q78. Did the Company provide an update on the seasonal cost effectiveness test to Staff prior to the filing of this instant case?

A78. Yes. Representatives from the Company met with MPSC Staff on May 2, 2024 to discuss cost-effectiveness. During this meeting, it was decided that the Company would continue to use the cost-effectiveness methodology from the settlement agreement in Case No. U-21044 in this instant case while continuing to explore seasonal cost effectiveness and engaging with Staff on this topic.

Q79. What programs were analyzed for cost-effectiveness?

A79. The Company analyzed the cost effectiveness for CoolCurrents, Smart Savers, SmartCurrents and Rider 12 in the instant case.

Q80. What cost effectiveness measures were analyzed?

A80. The Company analyzed the cost effectiveness of the programs using a NPV analysis.

Q81. How did the Company calculate the NPV of the DR programs and the portfolio?

A81. DTE Electric calculated the NPV of the projected revenue requirement to generate a Levelized Cost of Capacity (LCOC) on a $/kW basis. This was then compared to

CONE and was considered to be cost-effective if the LCOC was less than the Zone 7 CONE for the 2024/25 PRA which was $127,135/MW-year or $127.16/kw-year.

Q82. What are the inputs used for the NPV analysis?

A82. For the NPV analysis, inputs include the Marginal Cost of Capital, Discount Rate, Tax Rate as well as depreciation rates. Capital and O&M expenditures on a program basis are also used to generate the total revenue requirement for past, current and future years. The actual and forecasted capacity of the program also is used to accurately calculate the LCOC.

Q83. What were the LCOC outputs of the individual programs and the portfolio in the NPV analysis?

A83. Table 2 displays the LCOC output from the NPV analysis for each program and the portfolio.

Table 2: NPV Results

Program	Forward Looking LCOC ($/kW-year)
Smart Savers	73.6
SmartCurrents	64.9
Rider 12	25.1
CoolCurrents	14.9

Q84. Were the four programs calculated to be cost-effective when comparing the calculated LCOC to CONE?

A84. All programs were proven to be cost-effective when comparing the calculated LCOC to the CONE value of $127.16/kw-year.

Q85. Please summarize your direct testimony.

A85. To summarize my testimony:

a) The Company spent $6,646,384 in capital compared to an authorized amount of $7,348,583 and $2,395,040 in O&M compared to an authorized amount of $2,896,528 in 2023 on its DR portfolio. These expenditures should be considered prudent as the Company was able to enroll additional customers into Smart Savers, redesign the SmartCurrents Program, offer customers three pilots as well as add 45 MWs (6%) to the DR Portfolio over the 2022/23 MISO Plan Year.

b) The FIM amount resulting from the agreed-upon methodology for the year 2023 is $544,823.

c) All programs were proven to be cost-effective when comparing the calculated LCOC to the CONE value of $127.16/kw-year.

Q86. Does this complete your testimony?

A86. Yes.

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application of **DTE ELECTRIC COMPANY** for reconciliation of its 2023 Demand Response program costs.	Case No. U-21658

EXHIBITS

OF

RYAN M. DEKIMPE

1) 2023 Peak Demand Reduction Level Exceed 2022 Peak Demand Reduction Level

	(a)	(b)	(c)
Line No.	**Description**	**2022**	**2023**
1	Peak Demand Reduction Level ICAP (MW)	786	831

2) Actual FIM Calculation

	(a)	(b)	(c)
Line No.	**Description**	**Amount**	**Source**
2	Baseline	757	Exhibit A-5. Page 2 of 2. Column (c). Line 10
3	Target	855	Exhibit A-5. Page 2 of 2. Column (d). Line 10
4	50% to Target	806	(Line 2 + Line 3)/2
5	Actual	831	Line 1, Column c
6	DR Growth Target (Achieved %)	76%	(Line 5 - Line 2)/(Line 3-Line 2)
7	DR Growth Target (Achieved % - 50%)	26%	Line 6 - 50%
8	Incentive Earned (%)	8%	Line 7 * 30% (.3% for every 1% for growth)
9	O&M Amount ($)	2,395,040	Exhibit A-4 Column (b). Line 4
10	Customer Incentives ($)	4,723,975	Detail in Note 1 below
11	Total DR Non-Capitalized Costs ($)	7,119,015	Line 9 + Line 10
12	Calculated FIM Amount ($)	544,823	Line 11 * Line 8

3) 2023 Calculated FIM Amount NOT to Exceed 15% of Non-Capitalized Costs

	(a)	(b)	(c)
Line No.	**Description**	**Amount**	**Source**
13	Calculated FIM Amount ($)	544,823	Line 12
14	15% of Non-capitalized Costs ($)	1,067,852	Line 11 * 15%
15	Exceed (Yes/No)	No	Line 13 =< Line 14

16	Note 1: Customer Incentives	
17	Smart Savers (Bring Your Own Device, BYOD)	2,574,650
18	Rider 12	2,149,325
19	Total Incentives	4,723,975

Michigan Public Service Commission
DTE Electric Company
Demand Response 2023 Reconciliation
2023 Financial Incentive Mechanism (FIM) - Calculation

Case No.: U-21658
Exhibit: A-5
Witness: R. M. Dekimpe
Page: 2 of 2

	(a)	(b)	(c)	(d)	(e)
		DR FIM Targets - MW (ICAP)			
Line No.	**Program Description**	**2021**	**2022**	**2023**	**2024**
1	R10 Interrupt. Supply Rider	305	305	315	313
2	D1.1 Interruptable A/C	196	215	215	221
3	D8 Interrupt. Supply Rate	97	126	106	105
4	R1.2 Process Heat	74	74	65	64
5	D3.3 Interrupt. General Service	21	21	20	25
6	R1.1 Metal Melting	7	7	3	3
7	D5 Interrupt. Hot Water Htg.	5	5	-	-
8	R12 Capacity Release	5	5	40	45
8	Smart Savers	-	-	55	55
9	SmartCurrents	-	-	36	42
10	Total	709	757	855	873

DTE Electric Company
2023 Annual Demand Response Report

Introduction

The following report provides data on demand response (DR) enrolled capacity and related events for each program or pilot, as applicable, as well as a supporting narrative. The following items are included in this report: (1) information describing existing programs and pilots by customer class, including an explanation of any program changes resulting from lessons learned in the previous year; (2), if applicable, in the event that energy was purchased in the market, a description of the company's method for determining whether to purchase energy rather than relying on DR; and (3) a description of any other programs or pilots that the company is considering implementing that might have potential for expanding DR resources in the future.

The following is considered the DTE Electric's 2023 Annual Report, which provides detailed information on DTE Electric's residential and commercial and industrial (C&I) demand response programs and pilots.

Program Summary

DTE Electric continues to develop its DR resources as part of its overall goal to expand options available to customers, satisfy evolving customer preferences and expectations, and grow the contribution of cost-effective demand side alternatives to DTE Electric's resource portfolio.

DTE Electric's DR portfolio includes the following tariffs:

- Tariff D1.1 Interruptible Space-Conditioning Service Rate (CoolCurrents)
- Tariff D1.8 Dynamic Peak Pricing Rate
- Tariff D3.3 Interruptible General Service Rate
- Tariff D5 Interruptible Water Heating Service Rate
- Tariff D8 Interruptible Supply Rate
- Tariff R1.1 Alternative Electric Metal Melting
- Tariff R1.2 Electric Process Heat
- Tariff R10 Interruptible Supply Rider
- Tariff R12 Capacity Release
- Smart Savers (Bring Your Own Thermostat, BYOT)
- SmartCurrents (Programmable Communication Thermostat Program, PCT)

The Company relies on these programs to decrease peak load demand and augment grid reliability during emergency events. Interrupting customers via DR programs also reduces the need for real-time energy market purchases during emergency events.

Many of the existing DR programs have been in place for years and form a solid foundation for future DR efforts. The Company seeks to develop a portfolio of programs that balances affordability, flexibility, and reliability in anticipation of a future need.

The following sections provide an overview of DTE's current DR programs, report on 2023 called event(s), and provide program updates. The tables included, as Attachment A, summarize the enrolled capacity, availability, and dispatch of existing DR resources, in the format provided by the Commission.

Programs Available Primarily to Residential Customers

DTE Electric operates a combination of tariff-based rates, programs, and pilots as part of its residential DR portfolio.

Tariff D1.1 - Interruptible Space-Conditioning Service Rate
Tariff D1.1, also referred to as the CoolCurrents program, is an interruptible rate for residential and commercial central A/C and heat pump customers. Participating customers receive a reduced rate on separately metered central A/C or heat pump electric usage in exchange for allowing the Company to control the customers' equipment. The Company may issue a control signal for system integrity or economic reasons.

Program participation requires a separate meter and installation of a radio control unit (RCU), which cycles the equipment on and off in 15-minute intervals on control days. To minimize the impact to customers, the interruption does not exceed thirty minutes in any one hour or eight hours in any one day. Beginning with the approval requested in General Rate Case U-17767, DTE Electric has been upgrading the existing one-way RCUs with the new two-way ZigBee enabled Load Control Device (LCD) that leverage the Company's Advanced Metering Infrastructure (AMI) network. The new switches allow DTE Electric to better leverage the program as both a capacity and economic resource in the MISO market.

RCU replacement began in the third quarter of 2015 and continued throughout 2023. As of December 31, 2023, the Company has installed approximately 170,000 LCDs. As of December 31, 2023, nearly 25,000 previously installed units are no longer joined to the electric meter and thus not available for interruption. Based on field investigations conducted in 2022 and 2023, around 70% of the replacement LCDs investigated are due to the customer wiring no longer supplying the required 24v. Other reasons for offline devices are unrecorded meter changes or a device reset required due to a meter firmware upgrade. The Company has investigated and is proceeding to install an alternative 240v LCDs that can be directly connected to a customer's HVAC unit power, thus eliminating the need for a 24v wire installation. The Company ordered and accepted delivery of approximately 5,000 alternative LCD's in 2023 with installation to begin in 2024.

CoolCurrents represents 176 MW of installed capacity (ICAP) for the summer season of the 2023/2024 MISO Planning Year, which translates to approximately 193 Zonal Resource Credits (ZRCs).

Tariff D1.8 – Dynamic Peak Pricing (DPP)

The DPP tariff encourages residential customers, secondary commercial, and secondary industrial customers to reduce or shift their electricity usage from On-peak periods to Off-peak and Mid-peak periods when the cost of generation is lower. The program relies on price signals to motivate customers to change their behavior and usage patterns. The current tariff varies the rate based on three prescribed time periods and includes a significantly higher rate for consumption during DTE-called peak events (i.e., Critical Peak Event(s)"). Critical Peak Events may be tied to spikes in wholesale market prices or when the power grid is stressed, such as during a heat wave. Critical Peak Events are limited to non-holiday weekdays, between 3:00 PM and 7:00 PM. The higher Critical Peak price is intended to induce customer-driven load reduction during these events, which the Company can call for no more than 14 events (56 hours) per year. In return, the participants receive a discount on the standard tariff price during the Off-Peak hours of the day. In accordance with the tariff, customers are notified of an upcoming Critical Peak Event via email, text message or automated voice message up to 24 hours, but no less than 6 hours prior to an expected Critical Peak Event. Customers on DPP that are also on SmartCurrents will have their thermostats automatically adjusted when a Critical Peak Event is called. Customers are required to maintain at least one notification preference for event alerts (i.e., automated telephone message, text message, e-mail, or presentment on an in-premise display unit furnished by the Company). Once enrolled on the DPP Tariff, customers are ineligible for other tariffs, riders, or separately metered service and must stay on the tariff for at least a year. MWs reductions associated with the Critical Peak Pricing period are not registered with MISO as an LMR.

The DPP Tariff had 24,738 residential customers and 29 commercial customers enrolled in the program on December 31, 2023.

SmartCurrents: Programmable Controllable Thermostat (PCT) Program

The Company is running the Programmable Controllable Thermostat (PCT) program, targeting primarily residential customers. Upon enrollment, the Company provides the customer with a free Wi-Fi enabled PCT. The customer's enrollment allows the Company to send a signal to the Company-provided PCT, that has been installed in the customer's home, during a SmartCurrents Peak Event. SmartCurrents Peak Events can occur Monday through Friday (not on a Federal holiday) between 12 p.m. and 8p.m. ET for up to four (4) hours throughout the entire year. SmartCurrents Peak Events will not exceed a total event hours of 64 hours per year. Customers are notified by the in-premise display unit (PCT) and email (if they choose). During the event, the PCT is sent a signal to adjust the thermostat temperature setting by up to four (4) degrees. The customer has the option to override the temperature set point.

In 2023, the Company redesigned and relaunched the program in Summer 2023 under a new design, which no longer requires the DPP rate for participation. Additionally, the program upgraded the thermostat provided to the ecobee Premium Thermostat and now will provide an annual bill credit incentive ($25) to customers whose

thermostats are installed and active for a year or more beginning in Summer 2024. The Company forecasted to reach 27,000 enrolled thermostats by the end of 2023. Table 1 displays the enrollment levels of the SmartCurrents Program.

Table 1: SmartCurrents Enrollment Levels

PCT	**Actual 12/31/2023**
Number of Enrollments	27,120
Net Growth	5,986

Program recruitment was paused during redesign and halted until the program relaunched in August of 2023, even in that shortened time frame, the PCT program was able to reach the 27,000-thermostat goal.

The SmartCurrents program accounted for 30 MWs (ICAP) for the summer season of the 2023/2024 MISO Planning Year, which translates to approximately 33 Zonal Resource Credits (ZRCs).

Smart Savers: Bring Your Own Thermostat (BYOT)
In 2023, Smart Savers continued to be utilized as a LMR within MISO. 78 MWs were entered into the MISO's Annual Planning Resource Auction (PRA), equivalent to approximately 86 ZRCs. In the Smart Savers program, the Company enrolls residential customers that already have Wi-Fi enabled smart thermostats installed. In 2023, the Company offered a $50 bill credit to all enrolled customers who are enrolled by September 1 and remain enrolled through September 30. The bill credit incentives are paid out annually to enrolled customers in October.

In the Smart Savers program, participating customers' thermostats are configured to allow the Company to send a control signal during Smart Savers events. Smart Savers events only occur on non-holiday weekdays between the hours of 12 P.M. and 8 P.M. and are limited to 56 event hours per year. This signal raises the set-point of the participating thermostats by up to four (4) degrees and returns to its original set point once the event ends.

EnergyHub, as a third-party implementation contractor, is facilitating marketing efforts with participating thermostat vendors to send mobile in-app push notifications to customers with qualifying smart thermostats in the DTE Electric service territory. Along with in-app recruitment from thermostat vendors, the Company ran multiple email campaigns in 2023, targeting specific customer groups for the Smart Savers program. EnergyHub has specifically partnered with eight (8) thermostat vendors for coordination and equipment interconnection. The Company has reached a significant enrollment rate and effectively enrolled 63,960 cumulative devices as of December 31, 2023, surpassing the Company's enrollment goal of 60,000 devices by 2023-year end. Table 2 displays the enrollment levels of the Smart Savers Program.

Table 2: Smart Savers Enrollment Levels

	Actual 12/31/2023

Number of Enrollments	63,960
Annual Growth (Period Ending)	12,800

Based on these insights, the Company is actively monitoring ongoing results, and aims at increasing customer engagement that would result in effective peak demand reduction under various circumstances throughout the 2023 year and beyond.

Tariff D5 – Interruptible Water Heating Service Rate

Rate Schedule D5, also referred to as the Interruptible Water Heating Service Rate (or Interruptible Hot Water Heating), is available to customers with electric water heaters, including solar thermal hot water heaters, on the Residential or General Service rate. The water heaters must be separately metered and dedicated to sanitary purposes (i.e., pool heaters are not eligible). Pursuant to the tariff, the customer's water heater will be controlled by a timer or other monitoring device in intervals not to exceed four hours per day.

As of December 31, 2023, there were approximately 44,858 residential customers and 775 commercial customers enrolled in the Interruptible Water Heating Service Rate. The number of enrolled customers is anticipated to remain relatively flat. This program was not registered as a MISO LMR in 2023. The Company has received regulatory approval in electric rate case U-20836 to begin a switch replacement program, similar to the CoolCurrents switch replacement program. In 2023, 281 new Water Heater Load Control Devices have been deployed to replace malfunctioning radio control units. Additional units were purchased and are intended to be installed in 2024 as replacements for radio control units.

Other Residential DR Pilot Programs

DTE Smart Charge: Electric Vehicle (EV) Managed Charging and Demand Response

Smart Charge is a pilot that targets customers who own an eligible EV model from Tesla, Ford, General Motors (GM) and BMW in its service territory, utilizing telematics technology, to automate EV managed charging and call DR events in the summer months. In 2023, the Company also added the eligibility of Tesla EVs to join Smart Charge, through a new partnership with WeaveGrid, a platform used to connect utilities, original equipment manufacturers (OEMs), and EV drivers.

Starting in July 2023, the Company modified Smart Charge by incorporating managed charging into the pilot. This modification was due to the mandatory roll out of residential electric time of use (TOU) rates in March 2023. In this phase of the pilot, the Company ties each participant's enrollment to their specific TOU rate schedule and automatically initiates charging to occur during their off-peak rate period (lowest participant cost and most beneficial to system). As of December 31, 2023, there were 1,224 EVs enrolled in the pilot.

2023 Pilot Status:

- GM, Ford, and Tesla began enrolling customers in 2023.

- As of December 31st, 2023 the Company enrolled 1,224 EV's in pilot.
- Eligible EV makes and models include:
  - Ford customers: Any Ford plug-in electric vehicle model
  - GM customers: 2016-2022 Chevrolet electric vehicle or plug-in hybrid
  - BMW customers: Any BMW plug-in electric vehicle model
  - Tesla customers: Any Tesla plug-in electric vehicle model

The Company plans to make the Smart Charge pilot a program within the DR portfolio beginning in 2025. With continued allocated O&M resources, along with the forecasted increased adoption of EVs, Smart Charge is expected to continue expanding. Transitioning Smart Charge to a program also allows for more customers to participate in the program above the current pilot customer cap of 2,000.

Peak Time Savings (PTS)

The Company completed the design and implementation plan of the Peak Time Savings (PTS), formerly known as Peak Time Rebate, pilot in 2019. Development of the Pilot began in late summer of 2020, which concluded with the launch of the pilot in June 2021. The PTS pilot was structured to reward customers for reducing energy consumption during DTE-called peak events (i.e., "Peak Time Event(s)"). The participating customers received bill credits for each event based on measured reductions in customers' energy demand relative to a pre-established baseline, which was developed based on features of comparable utility programs. The PTS pilot did not penalize customers for consuming during peak events beyond the normal price of electricity set in their respective customers' tariffs, providing customers with a no-risk introduction to DR.

The objectives of the PTS pilot included: a) implementing a pilot, that if successful, could be scaled up to be transitioned to a program, b) testing key variables to inform an established design and structure of an actual program in the future, c) analyzing the pilot outcomes to determine the potential peak-shaving impact of a future program, including impact on rates and revenues, d) understanding customers' receptiveness, and perceived and received value, e) providing the Company with a hands-on experience with a new variety of DR, and, complementarily, gaining new learnings that informs other Company's pilots and programs.

The Company launched the PTS pilot with marketing and recruiting in June 2021. In 2021, the PTS pilot was offered to roughly 500,000 residential electric customers with the goal of obtaining 10,800 eligible participants. PTS events were called on weekdays from 3 PM to 7 PM, excluding holidays, during all four seasons. The maximum number of events allowed in a calendar year is 20 (80 hours). The notification window for a PTS event was no less than two hours before an event is called.

In 2023, the Company ran two events. The first event was run in August 2023 and the second event was ran in September 2023. Shortly after the second event, the Company began planning to terminate the pilot. The decision to terminate the pilot was due to low customer savings and difficulties providing customers with timely feedback. The Company calculated an average energy reduction of 0.33 kWh from the August event and no energy reduction from the September event, whereas the implementer estimated an average reduction of 2.5 kWh. The Company's

desire for the pilot was to provide real-time feedback after a DR event so customers would remain engaged in the program, recall the actions they took to reduce their energy usage during the event, and improve on future event performance. The Company partnered with an external resource to provide this function and to calculate and issue bill credits. To manage costs, the data was transferred once per month to align with all 20 bill cycles. This process was not able to provide customers with real-time performance feedback for each event. When a cost-effective solution with the desired outcomes was not deemed possible, the Company made the decision to discontinue the pilot. The Company communicated the pilot termination to enrolled customers in December 2023. The pilot was terminated on December 31st, 2023.

Pilot Status:

- Peak Time Savings pilot concluded on 12/31/2023.

Demand Response Home Generator

The pilot leverages Generac Grid Services' platform and utilizes telemetry to shift customers' electric load to the customers' generator in real-time during Company called DR events. Customers were prescreened for eligibility to participate in the pilot and were targeted accordingly. One qualifier to participate was, "owner has a premium or dealer managed subscription to Mobile Link." The premium or dealer managed Mobile Link subscription allows the Company to operate a switch-free program capable of remote operations such as responding to demand response events. Customers have the options to opt-out of up to two events per calendar year, throughout the duration of the program. Events can occur on any non-holiday weekday between the hours of 8:00 am and 8:00 pm within any MISO season, can last no more than four hours and are limited to 40 hours in total each calendar year.

Main Objectives

- Determine whether customers would be willing to actively participate and allow for real-time telemetry to control their generators during an event.
- Assess viability of a pilot that can act as a year-round DR asset responding on short-term notice for peak events.
- Assess customer receptiveness and the value customers receive from a residential generator pilot.
- Identify and process new learnings that could be applied to current and future demand response offerings.

Pilot Status:

- In 2023, a 200-participant residential customer owned generator pilot was launched (Demand Response Home Generator Program) in partnership with Generac Grid Services.
- Recruitment of participants ran between July and September of 2023, with 197 participants enrolled in the program.
- The Company called its first pilot event on November 28th, 2023 and observed an average of .66 kWh per customer.

<u>Programs Restricted to Commercial & Industrial (C&I) Customers</u>

DTE Electric offers a suite of interruptible tariffs for C&I customers, including:

- Tariff D3.3 Interruptible General Service Rate
- Tariff D8 Interruptible Supply Rate
- Tariff R1.1 Alternative Electric Metal Melting
- Tariff R1.2 Electric Process Heat
- Tariff R10 Interruptible Supply Rider
- Tariff R12 Capacity Release

Tariff D3.3 – Interruptible Generation Service Rate

Rate Schedule D3.3 is available to no more than 300 customers desiring interruptible service. Service to participating customers must be permanently wired and taken through separately metered circuits. This rate is not available for primarily off-peak loads such as outdoor lighting. In December 2023, there were 64 customers participating on this rate.

Tariff D8 – Interruptible Supply Rate

Customers must contract for a minimum of 50 kW of separately metered service at a single location and at primary voltage to qualify for this rate. The interruptible capacity on this rate is limited to 300 MW. Customers may be ordered to interrupt only when the Company issues an order to maintain system integrity or prevent a capacity deficiency. In December 2023, there were 123 customers enrolled on this tariff.

Tariff R1.1 – Alternative Electric Metal Melting

Rate Schedule R1.1 applies to customers who operate electric furnaces for metal melting or for the reduction of metallic ores, and who receive service under Rate Schedules D3, D4, D8 or D11 and consume electricity for holding operations. These customers are subject to immediate interruption on short-term notice to maintain system integrity but will be provided advanced notice of probable interruption and the estimated duration whenever possible. In December 2023, there were 17 customers enrolled on Tariff R1.1.

Tariff R1.2 – Electric Process Heat

Rate Schedule R1.2 applies to customers who use electric heat in a manufacturing process, or who use electricity in an anodizing, plating, or coating process. These customers are subject to immediate interruption on short-term notice to maintain system integrity but will be provided advanced notice of probable interruption and the estimated duration whenever possible. There were 155 customers enrolled in this program in December 2023.

Tariff R10 – Interruptible Supply Rider

Under this rate, customers may contract for no less than 50,000 kW of interruptible service at a single location. The Company will notify the customer as to the total amount of load to be curtailed, which will be stated as a percentage of the total supplied load for the immediately preceding hour. This notification will generally come one hour in advance but may arrive as soon as 10 minutes in advance. In December 2023, there were 53 customers enrolled on this tariff.

Tariff R12 – Capacity Release
Under this tariff, the Company's customers receive a voluntary capacity release payment for reducing loads of not less than 100 kW at a single location during system integrity (emergency) events during the summer months. In 2023, 103 site locations signed up for the Rider 12 Capacity Release program.

Collectively, D3.3, D8, R1.1, R1.2, R10 and R12 accounted for 547 MWs which translated into 601 ZRCs for the summer season of the 2023/24 planning year.

Commercial & Industrial DR Pilot Programs

C&I Behind-The-Meter (BTM) Battery Pilot
The battery energy storage pilot, which was previously discussed in U-21403, is a behind-the-meter (BTM) lithium-ion phosphate battery energy storage system (BESS) at two customers' sites. It is designed to test the ability to achieve peak demand shaving or shifting during DR events. The Company is targeting a two-year pilot period following installation and commissioning of the batteries.

The main objectives of the designed pilot are as follows:

- Evaluate the effectiveness of the BESS to achieve system peak demand reduction when a demand response event is called by the Company
- Assess customer's actions to achieve demand charge and overall bill reduction
- Gain operational experience on battery installation, management, and control interfaces when the system is located in a customer's site as opposed to a Company's site
- Engage with customers to better understand their interest in hosting and potentially escalating BESS
- Assess feasibility for sharing asset control between customer and the Company
- Facilitate the understanding of multiple energy storage values, compensation models, and the integration of battery storage in wholesale markets to support tariff development as contemplated by the Commission's order in MPSC Case No. U-21032

Both batteries have been ordered, shipped from China, and have arrived in the US. The switchgear component, which has an approximate 38-week lead-time, was approved in December 2023, and both switchgears were ordered on December 27, 2023.

As part of the implementation plan, the Company has identified one customer. The License Agreement with the first customer has been verbally agreed upon and will be signed following the Pilot Operating Agreement which will be completed once skid design with the integrator, Hitachi, has been finalized. The Company intends to leverage the License Agreement developed and verbally agreed upon by the first participant and the Pilot Operating Agreement as a template for the agreement with the second participant. Due to lead time of major equipment, installation at the first customer's site has taken longer than anticipated but is targeted for Q2 2025. The Company has been engaging with interested prospects for the second participant and that the second battery

will be installed shortly after the first. Once the second customer has been finalized and the first installation is underway, the installation of the second battery will begin. The Company plans for both batteries to be operational by the end of 2025. The initial proposed event schedule includes no more than 30 planned DR events per year and five non-planned DR events, with a least one-hour customer notice, per year. However, per the order in Case No. U-21297, the Company will meet with the MPSC Staff to discuss an appropriate number of required test events each year.

The Company continues to engage in discussions with several potential participants to identify a second customer for the pilot. In each discussion, potential participants are given an overview of the pilot, potential bill savings, up-front costs and potential post-pilot options to aid in their decision-making process. One customer has shown strong interest in participating in the pilot. The design of the pilot includes two customers to allow the Company to further evaluate the battery's performance and pilot design of unique customer load profiles.

Compliance with Order in Case U-20628

The Company continues to partner with third-party DR providers when applicable. Currently, the Company partners with ICF International, Inc. (ICF), Powerley and EnergyHub on the SmartCurrents program. ICF remains as the program implementer of SmartCurrents, providing project management support to coordinate resources for customer enrollment and unenrollment; thermostat procurement, distribution, installation, and ongoing management; customer service and field support and training; IT support; and marketing and communications development and execution. Previously, Powerley exclusively provided support for thermostat procurement, distribution, and device management to allow for the enrollment and unenrollment of devices, dispatching of DR events and reporting.

The Company also partners with EnergyHub, Inc. on the Smart Savers (BYOT) Program. In this program, EnergyHub's role is a third-party provider, who runs turnkey Bring Your Own Thermostat (BYOT) program services. Approved thermostat manufacturers market and promote the program to potential customers. The Company initiates a load reduction curtailment day when appropriate, during the program capability period. EnergyHub provides a software platform, that enables the Company to initiate curtailment events, enroll customers, and receive Evaluation, Measurement and Verification (EM&V).

The BYOT program currently uses two-way communications to/from the connected thermostats using a Mercury Distributed Energy Resource Management System (DERMS) software platform provided by EnergyHub, the program administrator. EnergyHub's secure and scalable platform manages devices across a variety of communications networks, allowing the Company to provide customers with access to the latest device technology for various thermostat manufacturers approved for use in the BYOT Program.

The Company has worked, and continues to work, with EnergyHub to create a co-branded marketing program that includes email, web, and in-app marketing. The marketing leverages device manufacturer and service provider partnerships to target potential BYOT enrollees through digital programs. EnergyHub provides a

microsite, enrollment page, FAQ page and in-app technology to drive enrollment and convert customers. The microsite and enrollment pages include a program description, FAQ information, and application to enroll in the program.

For the CoolCurrents program, the Company partners with Itron. The Company uses licensed software through Itron to track sites where Load Control Devices are installed and to conduct interruption events at these locations when needed. Company IT personnel partner with Itron to refine processes and system alterations related to conducting these DR events. The Company also employs Itron to replace many of the older Radio Control Units with the new Load Control Devices. Additionally, the Load Control Devices themselves are purchased through Itron from Corporate Systems Engineering. Working with Itron on these aspects of our CoolCurrents program allows the Company to have Load Control Devices formatted, installed, and entered into the appropriate software in an efficient fashion. Regular contact between the Company Program Manager and Itron support personnel has made scheduling installation appointments work for the customer when needed.

The Company continues to partner with Electric Power Research institute (EPRI) on the DTE Smart Charge Electric Vehicle (EV) DR pilot. EPRI provides an advanced Open Vehicle Grid Integrated Platform (OVGIP) that allows the Company to seamlessly integrate Plug-in Electric Vehicle (PEV) charging with grid objectives through DR and Demand Side Management (DSM) mechanisms within the Company's electric service territory. EPRI's portal enables the Company to schedule and dispatch DR signals and events to the automakers, who then communicate the DR event parameters to their participants via text messaging. If the participant does not opt out of the event, their PEV charging power will curtail once the DR event begins. In 2023, the Company began a partnership with Weave Grid on a managed charging pilot.

The Company has also partnered with Generac Grid Services on its residential home generator pilot. The Company uses Generac to help identify customers, house generator information and dispatch events.

Conclusion

The Company's Electric demand response portfolio is being designed to support the overall goals of expanding options available to customers, satisfying evolving customer preferences and expectations, and growing the contribution of cost-effective demand side alternatives. The demand response programs are expected to continue to provide significant load reduction capabilities and benefits to customers.

ATTACHMENT A

2023 ANNUAL DEMAND RESPONSE REPORT

Tariff & Sheet No.	Total demand reduction available [1]	Maximum demand reduction achieved (MW)[2]	Total resource capacity reported to MISO (MW)[3]	Total energy reduction achieved (MWh)[4]	Total spending on marketing and administration ($)	Total capital expense ($) (excluding AMI)	Average customer response (%)[5]	Notes
RESIDENTIAL INTERRUPTIBLE AND PRICE RESPONSE								
D1.1 (Eighth Revised Sheet No. D-4.00)	176	N/A	176	0	$44,892[1]	$1,007,109	N/A	
SmartCurrents	108 (Summer)	N/A	(108 Summer)	N/A	$-87,279[2]	$4,389,705	N/A	Negative O&M due to change from O&M to Capital
Smart Savers (BYOT)					$2,173,924	$0	N/A	
COMMERCIAL AND INDUSTRIAL INTERRUPTIBLE AND PRICE RESPONSE								
D3.3 (Eighth Revised Sheet No. D-21.00)	547 (Summer)	N/A	547 (Summer)	N/A	N/A	N/A	N/A	
D8 (Seventh Revised Sheet No. D-40.00)								
R1.1 (Seventh Revised Sheet No. D-59.00								
R1.2 (Eighth Revised Sheet No. D-61.00)								
R10 (Third Revised Sheet No. D-90.00)								
R12 (First Revised Sheet No. D-95.00)								

	On-Peak Energy Purchased (MWh) for Demand Response*	Average on-peak energy purchase price ($/MWh) for Demand Response*
Annual Total	--	--

* DTE Electric has processes in place to interrupt its two economic DR classes, D1.1 and D3.3, when the MISO energy market price (the LMP at the DECO.NEC load node) is higher than the respective DR price threshold for a sustained period of time. There were no occasions in 2023 in which DTE paid more in sustained purchased power expense rather than interrupt those DR classes economically.

[1] Report total demand response (i.e., potential demand reduction), in MW, available at the end of the year for each tariff.

[2] Report the maximum amount of demand reduction achieved during a single event in the reported year. If this is an estimate, indicate how the estimate was calculated.

[3] Report the capacity amount associated with the DR program that was reported to MISO as a capacity resource (if it was reported as a resource). Also, indicate the MISO category (LMR, DRR, other (specify))

[4] Report the total energy reduction achieved, on a cumulative basis, for each DR program during the reported year.

[5] Report the annual customer responsiveness (i.e., number of customers who responded) as a percentage of customers called for each program for the reporting year. If this is an estimate, indicate how the estimate was calculated.

[1] Included in Witness Kuspa Exhibit A2, Page 2, Line 10

[2] See Q64 on page 29 of Witness Dekimpe Testimony for explanation

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application of **DTE ELECTRIC COMPANY** for reconciliation of its 2023 Demand Response program costs.	))))	Case No. U-21658

PROOF OF SERVICE

ESTELLA R. BRANSON states that on June 28, 2024, she served a copy of the DTE Electric Company's Application, Direct Testimony and Exhibits of Witnesses, Ryan M. DeKimpe, William J. Kuspa and Kirk M. Vangilder in the above captioned matter, via electronic mail upon the persons listed on the attached service list.

Estella R. Branson

Digitally signed by Estella R. Branson
Date: 2024.06.28 15:16:23 -04'00'

ESTELLA R. BRANSON

MPSC Case No. U-21658
Service List

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