TROPOSPHERE LEGAL

August 23, 2024

Ms. Lisa Felice
Michigan Public Service Commission
7109 W. Saginaw Hwy.
Lansing, MI 48909

Via E-File

RE: MPSC Case No. U-21534

Dear Ms. Felice:

Attached please find the enclosed documents for filing:

- Motion to Strike Improper Rebuttal and Brief in Support by Attorney General Dana Nessel, Michigan Environmental Council, and Natural Resources Defense Council; and
- Proof of Service.

Sincerely,

Digitally signed by Christopher Bzdok
DN: cn=Christopher Bzdok, o=Troposphere Legal, email=chris@tropospherelegal.com, c=US
Date: 2024.08.23 14:41:22 -04'00'

Christopher M. Bzdok
chris@tropospherelegal.com

CC: Parties to Case No. U-21534

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the Application of **DTE ELECTRIC COMPANY** for authority to increase its rates, amend its rate schedules and rules governing the distribution and supply of electric energy, and for miscellaneous accounting authority.	Case No. U-21534

MOTION TO STRIKE IMPROPER REBUTTAL AND BRIEF IN SUPPORT

BY ATTORNEY GENERAL DANA NESSEL, MICHIGAN ENVIRONMENTAL COUNCIL AND NATURAL RESOURCES DEFENSE COUNCIL

August 23, 2024

TABLE OF CONTENTS

I. MOTION

1. Attorney General Dana Nessel, Michigan Environmental Council, and Natural Resources Defense Council (AG-MN) move to strike the following portions of the rebuttal testimony of DTE Electric Company witnesses as improper rebuttal:

- Rebuttal testimony of Satvir S. Deol, page 36, Q&A44 through page 42, Q&A47 (redline attached as Exhibit 1).
- Rebuttal testimony of Allen J. Kryscynski, page 5 line 18 to page 6 line 4 (redline attached as Exhibit 2).
- Rebuttal testimony of Allen J. Kryscynski, page 16, Q&A 27 (redline attached as Exhibit 3).
- Rebuttal testimony of Morgan Elliot Andahazy, page 12 line 23 to page 14 line 10 (redline attached as Exhibit 4).[1]

2. The identified portions of DTE's testimony are improper rebuttal because they attempt to supplement the company's direct case.

3. The brief provides further support for this motion.

II. BRIEF IN SUPPORT

A. <u>Legal standards on improper rebuttal.</u>

The purpose of rebuttal is not to improve or supplement a party's direct case, but to specifically refute or disprove testimony of another party. In Case No. U-8871, the Commission held that rebuttal is "evidence given by one party to contradict, explain or disprove evidence

[1] Witness Elliot Andahazy also sponsors Exhibit A-51 Schedule PP9 in the section of testimony that AG-MN move to strike and AG-MN will object to its admission when offered.

produced by the other party and tending to directly weaken or impeach that evidence."[2] The Commission has also held that "[e]vidence which could have been offered in a party's main case may be rejected if offered as rebuttal evidence…"[3]

In upholding the ALJ's decision to strike improper rebuttal in Case No. U-8871, the Commission quoted with approval statements by the ALJ that rebuttal "should not be used for the purpose of rehabilitating someone's direct case;" that "[i]t should be very clear in that rebuttal testimony what is being rebutted in someone else's case so that we can easily determine that it is in the nature of rebuttal;" and that rebuttal is "for the purpose of rebutting specific facts, judgments of the other parties that could not have been reasonably done with your direct case."[4]

In a 2012 Consumers Energy rate case, U-16794, the ALJ struck rebuttal testimony by a Consumers witness on the basis that it "is more of an attempt to supplement the Company's case in chief, that is to provide support for its own expenditures than it does rebut the basis of Staff's adjustment…"[5] In its Order, the Commission affirmed the ALJ's decision and made a point of noting that the Commission found the ALJ's ruling to be "well-reasoned."[6]

Consistent with the legal standard for proper rebuttal testimony, in the Scheduling Order in this proceeding, the Attachment A Instructions state as follows related to rebuttal testimony:[7]

> 1. Proper rebuttal evidence is the evidence given by one party to contradict, explain, or disprove evidence produced by the other party and tending to directly weaken or impeach that evidence. It should not be used for the purpose

[2] *In Re Midland Cogeneration Venture Limited Partnership*, Case No. U-8871 *et al*. (Order dated October 13, 1988), p 2, citing *Kirk v Ford Motor Company*, 147 Mich App 337; app lv den 426 Mich (1986).

[3] Case No. U-16034-R, Order dated March 8, 2012, pp 9-10.

[4] Case No. U-8871, *supra*, pp 2-3. *See also People v Holland,* 179 Mich. App. 184, 193; 445 N.W.2d 206 (1989) (rebuttal improper where it injects new issue that should have been introduced on case in chief).

[5] Ruling during evidentiary hearing in Case No. U-16794, 6 Tr 1432-33 (emphasis added).

[6] Case No. U-16794, Order dated June 7, 2012, pp 4-5.

[7] Case No. U-21534, April 26, 2024, Scheduling Memo (emphasis in original).

of rehabilitating or supplementing a party's direct case. Rebuttal should also be concise and to the point, presented for the purpose of rebutting specific facts or judgments of the other parties that could not have been reasonably done in a party's direct case.

2. Rebuttal testimony should explicitly identify the page and line numbers of the prefiled testimony being rebutted. A revised exhibit list should also be provided with the rebuttal filing.

B. Deol Rebuttal, page 36, Q&A44 through page 42, Q&A47.

In his direct testimony at pages 56-59, Table 8, DTE witness Satvir Deol presents a "high-level summary of the Subtransmission Redesign and Rebuild projects included in this case." Included in Table 8 is a project called Tie 4105, which is described in its entirety on page 58 as follows:

Subtransmission Redesign & Rebuild: Tie 4105	Lexington, Croswell, Port Sanilac, Applegate, Carsonville	Reliability: TIE 4105 has experienced frequent outages, escalated complaints, and is one of the worst performing Subtransmission lines.

Mr. Deol also states that detailed information for each of the projects in Table 8 is provided in Exhibit A-23, Schedule M6. Pages 244, 248, 252, 256, and 260 of that exhibit contain the identical text for each phase of that project under the label "Purpose and Necessity:"

> Reliability:
>
> • Tie 4105 has experienced frequent outages, escalated complaints, and is one of the worst performing subtransmission lines. Lightning causes phase to phase faults, due to lack of lighting protection, leading to breaker operations.
>
> • Tie 4105 pole inspection data has shown that a high number of wood poles are deteriorated and require replacement. Sections of conductor from this tie line have been evaluated. It has been determined that the steel core is deteriorated, and the remaining tensile strength is greatly reduced. The conductor has been determined to be at the end of its life based on this evaluation.

> • The existing Tie 4105 is built in deep right-of-way, which contributes to frequent outages from tree interference as well as longer outage duration due to the line not being truck accessible. There are 3,453 customers directly impacted by the reliability of Tie 4105.

Similarly, Table 8 of Mr. Deol's direct includes a project called "Trunk 3509," which is described in its entirety on page 58 as follows:

Subtransmission Redesign & Rebuild: Trunk 3509	Troy City Shelby SC Territory	Capacity: Trunk 3509 is loaded to 100% of the equipment's summer normal rating and 109% of the equipment's summer emergency rating, violating the Subtransmission Planning Criteria. Operability: Load will automatically be shed at Patton Substation to prevent this equipment overload.

Exhibit A-23, Schedule M6 states on page 288 under "Purpose and Necessity":

> Capacity: Trunk 3509 is loaded to 100% of the equipment's summer normal rating and 109% of the equipment's summer emergency rating, violating the Subtransmission Planning Criteria.
>
> Operability: There is an Emergency Load Control scheme at PATON substation that will automatically shed load (4.1 MVA) to prevent from overloading equipment on Trunk 3509 and protect the equipment from any permanent damage.

AG-MN witness Dennis Stephens testified that DTE does not complete any benefit-cost analysis on proposed Subtransmission Redesign and Rebuild projects – and that the failure to do so is unacceptable given the high cost of these projects.[8] Due to the lack of benefit-cost analyses, Mr. Stephens recommends that the Commission disallow cost recovery on the Subtransmission Redesign and Rebuild projects that are scheduled to come online in 2024 and 2025: Tie 4105 Phases 3 and 4, and Trunk 3509 – totaling $28.15 million.[9]

[8] Stephens Direct, p. 36.

[9] *Id*. at 37.

In his rebuttal testimony, DTE witness Deol presents seven pages of additional information regarding the claimed purpose and necessity of the Tie 4105 and Trunk 3509 projects.[10] The new information includes six new figures and one new table.

All of the new information could have been presented in Mr. Deol's direct testimony and exhibits, and *none* of it is responsive to Mr. Stephens' testimony that benefit-cost analyses should have been done to support the projects. It is just new information that expands greatly on the cursory descriptions of purpose and necessity for the projects in Table 8 of Mr. Deol's direct and Exhibit A-23, Schedule M6.

Mr. Deol even characterizes the new information as supplemental to his direct:

> Q48. In addition to the scope and benefits information you provided for the Tie 4105 and Trunk 3509 projects, does your rebuttal testimony include <u>more information</u> on scope, project drivers, costs and benefits for subtransmission projects?
>
> A48. Yes. In my testimony above, Q&A 44 to Q&A 47, I have <u>further explained</u> in detail the Tie 4105 and Trunk 3509 projects and why it is necessary to complete them.[11]

Because Mr. Deol offers the new testimony, including the figures and table, as additional information that supplements his direct testimony regarding the projects' purpose and necessity, the testimony is improper rebuttal and should be stricken.

C. <u>Kryscynski Rebuttal, page 5 line 18 to page 6 line 4.</u>

In rebuttal, Witness Kryscynski addresses concerns raised by AG-MN Witness Alvarez and Ann Arbor Witness Stults regarding allegations of stagnant all-weather system-wide reliability

[10] Deol Rebuttal, page 36, Q&A44 through page 42, Q&A47.

[11] Deol Rebuttal, p. 43 (emphasis added).

in the face of increasing distribution investments.[12] More particularly, Witness Kryscynski is responding to this testimony from Mr. Alvarez and Dr. Stultz:[13]

- "DTE's system-wide reliability performance has been completely unresponsive to massive increases in the Company's capital spending in recent years, as shown in the chart presented in Mr. Alvarez' testimony."[14]

- "Finally, the chart below indicates that despite a 214% increase in annual distribution grid capital spending from 2015 to 2022, DTE's service interruption frequency increased 58.1%, and is still worse than the average for U.S. investor-owned utilities."[15]

- "Customers continue to pay more and more for service that is not improving."[16]

In his rebuttal discussion to this testimony about all-weather reliability performance in the face of increasing distribution spending, Witness Kryscynski reiterates themes from his direct testimony, with references thereto. Then he responds to this question:[17]

> **Q8. In addition to system-wide all-weather reliability, are there other metrics or analysis that should be used to understand the reliability improvements of investments, including tree trimming?**

The response to this question references Mr. Kryscynski's direct testimony and cites to Q23, discussing the primary challenges to reliability improvements, which include "an increase in the

[12] Kryscynski Rebuttal, pp. 4-6.

[13] Mr. Kryscynski also cites Alvarez Direct, page 17, line 12 ("particularly when exposed to extreme weather."). This citation is to a line of Mr. Alvarez' testimony containing fragments of two sentences – one quoting from the 2023 DGP and the other introducing criticism to it – neither seemingly on point with the rebuttal.

[14] Stephens Direct, p. 9, lines 8-10 (citing Alvarez direct), cited by Kryscynski Rebuttal, p. 4, line 4.

[15] Alvarez Direct, p. 17, lines 1-4. It appears this is what Mr. Kryscynski intended to rebut, as this is what Mr. Stephens' testimony references. Mr. Kryscynski's rebuttal testimony actually cited Alvarez Direct, page 17, line *12* ("particularly when exposed to extreme weather."). *See* Kryscynski Rebuttal, p. 4, line 4. Since line 12 contains fragments of two sentences – one quoting from the 2023 DGP and the other introducing criticism to it – neither seemingly on point with the rebuttal – MNSC assumes there is a typo.

[16] Stults Direct, p. 5, line 12 (cited by Kryscynski Rebuttal, p. 4 line 5).

[17] Kryscynski Rebuttal, p. 5.

number of high wind speed days."[18] It notes DTE witnesses have – in this and prior rate cases – "provided rigorous, compelling data analysis to show that these investments are delivering benefits."[19] This is all proper rebuttal – it is provided here for context.

Then Mr. Kryscynski testifies as follows in response to Q8, quoted above:

> As an example of these benefits, communities that have had grid investments are seeing greater resilience to storms. During the first week of June 2024, the community of Livonia experienced an EF1 (Enhanced Fujita Scale) tornado with wind speeds up to 95mph. The area which took the main impact from the tornado recently had over 200 poles replaced as part of the Pole and Pole Top Maintenance and Modernization Program (PTMM) program. These upgrades resulted in minimal damage, including only 3 broken poles, and resulted in a faster restoration effort - 99% of customers were restored within 27 hours. On the other hand, an adjacent area of the system where PTMM investments have not yet been implemented was also in the path of the storm. In this area the Company experienced 20 broken poles, resulting in over 5,000 customers who had to endure service outages lasting more than 48 hours due to the volume of events and severity damage.

This is not proper rebuttal to direct testimony from AG-MN Witnesses Stephens and Alvarez nor AA Witness Stults. Neither Mr. Stephens nor Mr. Alvarez challenged Mr. Kryscysnki's testimony about wind speeds. Mr. Kryscynski's rebuttal testimony here is about an event that happened on June 5, 2024 – and the implication that it supports the efficacy of the PTMM program, in particular. The testimony to which this rebuttal is purportedly responsive is about overall distribution spending relative to overall all-weather reliability performance, not about wind speed nor how PTMM-treated poles hold up in tornados. The rebuttal is not responding to direct specific facts or assertions made by a party in their direct testimony. It is not disproving or weakening testimony by Mr. Stephens, Mr. Alvarez, nor Dr. Stults. It is instead testimony aimed at rehabilitating or supporting the Company's main case. It introduces new evidence through

[18] *Id.*; Kryscynski Direct, pp. 22-23 and Figure 6 (Michigan Wind Guests 2000-2021).

[19] Kryscynski Rebuttal, p. 5.

rebuttal, which is improper. To the extent the Company believed the June event supports the reasonableness of proposed test year investments, it should have sought leave to amend its direct testimony, with an opportunity for interveners to explore the testimony in discovery and address it in direct testimony. By raising this incident for the first time in rebuttal testimony, DTE prevents the development of a comprehensive record. The testimony should be struck from Mr. Kryscynski's rebuttal testimony.

D. <u>Kryscynski Rebuttal, page 16 Q&A27.</u>

DTE proposes substantial and increasing capital spending on two programs that (among other things) replace distribution system equipment – 4.8kV Hardening and Pole and Pole Top Maintenance and Modernization (PTMM). Specific spending for each program is supported by Company witness Elliot Andahazy.[20] For context only and not to minimize the Company's case, DTE supports these programs based in substantial part on reliability and safety benefits – reductions in SAIFI (outage frequency), SAIDI (customer minutes interrupted), and wires down,[21] *i.e.*, outage and outage minute reductions.

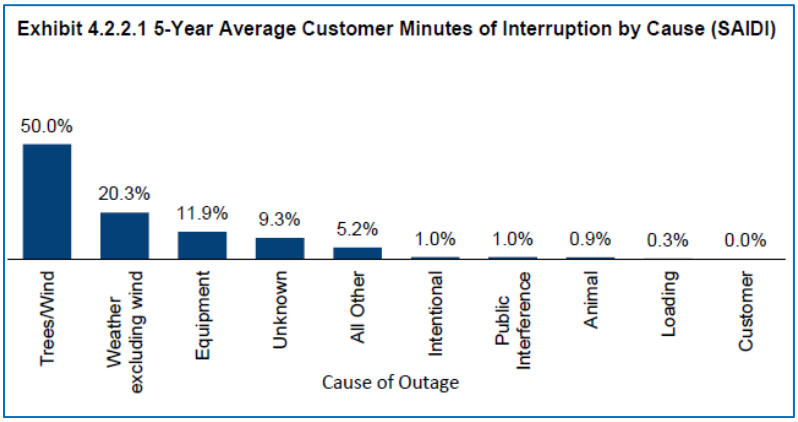
In direct testimony, AG-MN witnesses Alvarez and Stephens both raised deficiencies in the Company's general approach to improving distribution reliability and specifically to the reliability benefits from Hardening and PTMM.[22] Among other points, they both noted DTE's

[20] See generally Elliot Andahazy Direct, pp. 8-28 (4.8kV Hardening), 28-56 (PTMM).

[21] See Elliot Andahazy Direct, pp. 24-26 (Hardening benefits); Ex A-23 Sch M13 pp. 16-20 (PTMM benefits); Ex A-23 Sch M8, pp. 68 (PTMM benefits), 72-74 (Hardening benefits).

[22] See generally Alvarez Direct, pp. 14-19; Stephens Direct, pp. 7-15, 25-32.

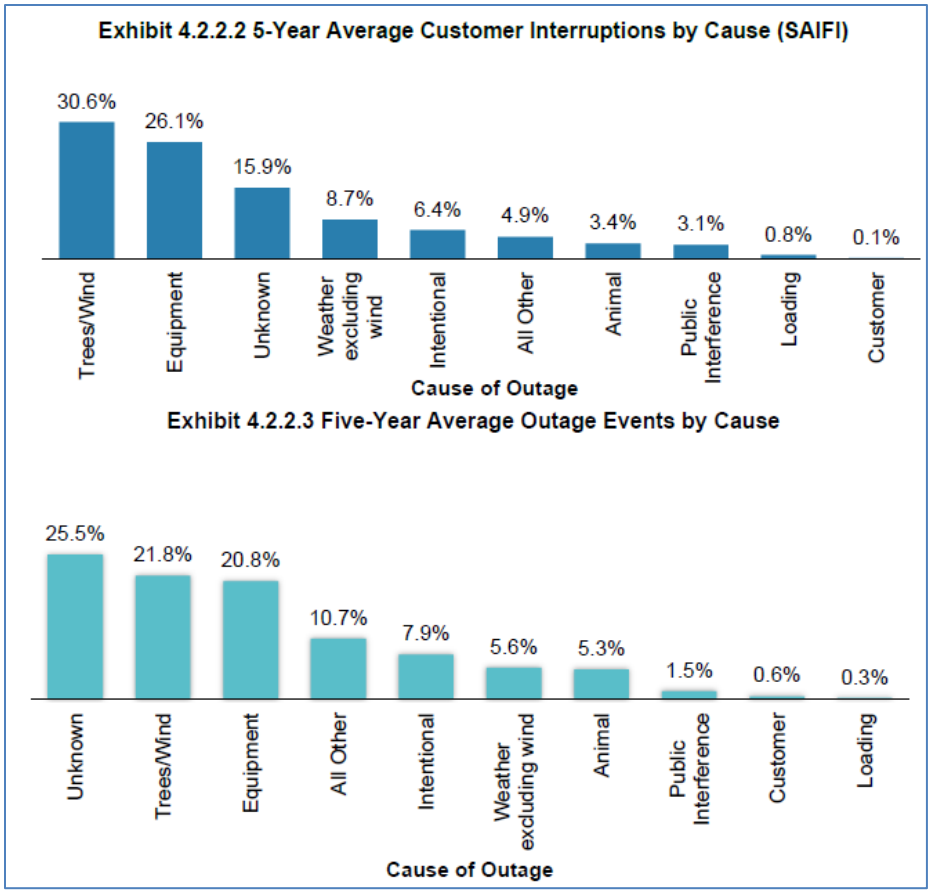
2023 Distribution Grid Plan (DGP) identifies trees, wind, and weather as the major causes of customer minutes interrupted, and both replicate this graph from the DGP:[23]



While not replicated by either Mr. Alvarez or Mr. Stephens, the DGP includes additional graphs showing outage causes, which are generally consistent – trees/wind cause more outages than equipment:[24]

[23] Alvarez Direct, p. 19; Stephens Direct, p. 8.

[24] Ex A-23 Sch M8, p. 42.



Mr. Stephens further included an analysis of equipment failures based on the Company's field notes from service interruptions, which he suggested indicates the "equipment" outage classification may be inflated: he found 33% of outages classifies as "equipment" related were caused by vegetation contact or third-party damage.[25]

In rebuttal, Mr. Kryscynski identified concerns with Mr. Stephen's "equipment failures" analysis, which is proper rebuttal.[26] Then Mr. Kryscynski testifies as follows:[27]

[25] Stephens Direct, p. 8; Ex A-12.

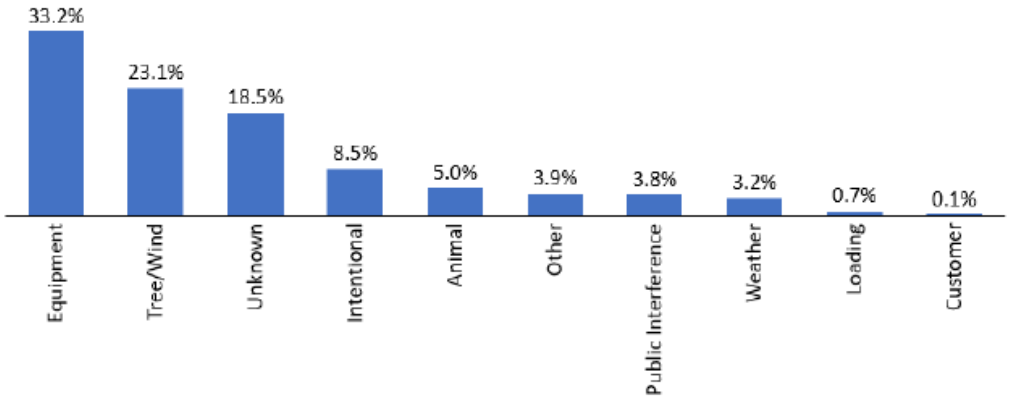
[26] Kryscynski Rebuttal, pp. 15-16.

[27] Kryscynski Rebuttal, p. 16.

Q27. What analysis has the Company performed to estimate the cause of outages?

A27. The Company has calculated the percentages of customer interruptions, by cause code, under non-MED conditions over the past five years. The results, by cause code, are shown in Figure 1 below. The cause code 'Equipment Failure' is the largest contribution to customer interruptions, followed by tree/wind related events. The conclusion from this analysis is that equipment is indeed a leading cause of outages, and the tree trimming program, while important to address tree related outages, is not sufficient to address a significant portion of outages.

Figure 1 Customer Interruptions by cause code (2019-2023, Non-MEDs)



This is improper rebuttal, for several reasons. First, it is at best rebuttal – not to Mr. Stephen's equipment failure using DTE field notes – but to contradict the Company's own analyses of outage causes in the 2023 DGP. Mr. Stephens' equipment failure analysis looked at whether classifying outage causation code as "Equipment Failure" was accurate and appropriate, given DTE's field notes about the outage event:[28]

[28] Ex MEC-12 (excerpt).

Job Number	Outage Time	Restore Time	Duration	egi	Circuit	stomers Affec	vice Ext	Extent	Cause Code	DS Device	DS Cause
NW23032100506	3/20/2023 18:00	3/21/2023 13:56	181	NW	Circuit508	2270	RECLO	Device (i	Equipment Failure	NA	NA
NE23031001474	3/10/2023 18:09	3/10/2023 22:55	266	NE	Circuit1208	174	RECLO	Device (i	Equipment Failure	PTTM	PTMM FAILURE
NE23020701129	2/7/2023 14:37	2/8/2023 5:10	871	NE	Circuit1210	2271	RECLO	Device (i	Equipment Failure	WIRE DOWN	3RD PARTY DAMAGE
SW23042300837	4/23/2023 22:08	4/24/2023 9:30	681	SW	Circuit2423	510	FUSE	Device (i	Equipment Failure	NA	NA
SW23042400888	4/24/2023 15:11	4/24/2023 10:36	23	SW	Circuit2423	608	OHCKT	rcuit Lev	Equipment Failure	NA	NA
NE23042900055	4/29/2023 2:35	4/29/2023 17:20	878	NE	Circuit1217	124	FUSE	Device (i	Equipment Failure	NA	NA
SE23022100530	2/21/2023 11:35	2/21/2023 21:41	606	SE	Circuit2442	112	FUSE	Device (i	Equipment Failure	PTTM	PTMM FAILURE
SE23022709812	2/23/2023 7:53	2/28/2023 21:35	1508	SE	Circuit2442	981	OHCKT	rcuit Lev	Equipment Failure	NA	NA
NW23032500911	3/24/2023 12:34	3/25/2023 21:35	462	NW	Circuit1587	2290	OHCKT	rcuit Lev	Equipment Failure	NA	NA
NW23050100692	5/1/2023 12:19	5/1/2023 19:39	439	NW	Circuit1587	126	CP	Device (i	Equipment Failure	NA	NA
NW23041201488	4/12/2023 19:07	4/13/2023 5:24	432	NW	Circuit2450	153	RECLO	Device (i	Equipment Failure	NA	NA
NW23041201299	4/12/2023 19:05	4/12/2023 22:08	182	NW	Circuit1470	1089	OHCKT	rcuit Lev	Equipment Failure	RECLOSER	EQUIP FAILURE
NW23030319097	3/3/2023 20:46	3/4/2023 16:47	1196	NW	Circuit1469	211	RECLO	Device (i	Equipment Failure	NA	NA
SE23031700047	3/17/2023 1:35	3/17/2023 16:08	873	SE	Circuit1590	211	CP	Device (i	Equipment Failure	WIRE DOWN	NA
SE23050401499	5/4/2023 17:40	5/4/2023 22:20	240	SE	Circuit1593	1141	RECLO	Device (i	Equipment Failure	JUMPER OPEN	VEGETATION DAMAGE
SE23020901596	2/9/2023 17:34	2/9/2023 20:21	165	SE	Circuit1598	332	RECLO	Device (i	Equipment Failure	WIRE DOWN	NA
SE23042400216	4/24/2023 1:55	4/24/2023 5:49	203	SE	Circuit1600	136	G TRAN	e Transf	Equipment Failure	OK ON ARRIVAL	NA
SE23042400213	4/24/2023 1:55	4/24/2023 5:49	203	SE	Circuit1600	141	H TRAN	e Transf	Equipment Failure	OK ON ARRIVAL	NA
NW23022000803	2/20/2023 11:10	2/20/2023 16:47	137	NW	Circuit2485	2030	OHCKT	rcuit Lev	Equipment Failure	WIRE DOWN	NA

Mr. Stephens never compared the relative number of outages classified as "equipment" to those classified as "tree/wind" or "animal" or others. Mr. Kryscynski's analysis, however, does not address the *accuracy* of the equipment classification at all, it instead compares the number of outages by cause code – "equipment" versus "tree/wind" versus "animal" and so on. Nothing in Mr. Kryscynski's analysis of relative causations responds to Mr. Stephens' analysis of the *accuracy* of DTE's causation code classification. There is no indication Mr. Kryscynski even considered the field notes in developing Figure 1, which is the thing Mr. Stephens testified about.

This analysis instead undermines DTE's own evidence in the DGP and replicated in AG-MN witness testimony about what causes more outages – trees/wind, animals, equipment, or others. It is improper for DTE to file rebuttal testimony to its own evidence, which Mr. Stephens and Mr. Alvarez simply copied in their testimony and relied upon. It is also improper for DTE to present in rebuttal a new analysis based on data it had in its possession all along in an attempt to bolster its direct case and support its equipment replacement reliability strategy. Presenting this new analysis – which is materially different that the similar analysis presented in its direct case – for the first time in rebuttal prevents a proper and fair opportunity to understand then adequately refute it.

The testimony and analysis in Q&A 27 should be struck from Mr. Kryscynski's rebuttal testimony.

E. Elliot Andahazy Rebuttal, page 12 line 23 to page 14 line 10 and Exhibit A-51 Schedule PP9.

As discussed above, DTE proposes substantial and increasing spending on its 4.8kV Hardening program.[29] AG-MN witness Stephens recommended the Hardening program be eliminated and replaced with DPLD arc wire removal instead.[30] Among other testimony he made these two statements:

- "DTE is required to complete the tree trimming in any event, meaning that the reliability benefits from tree trimming should not be credited to the 4.8kV Hardening program."[31]
- "… replacing crossarms when defects are identified is part of the pole top maintenance program in any event."[32] (page 12, lines 4-5).

In rebuttal, DTE witness Elliot Andahazy characterized these two statements as claims by Mr. Stephens that Hardening is "redundant" with PTMM and tree trimming.[33] In her rebuttal, Ms. Elliot Andahazy disagrees with the implied redundancy and identifies two reasons Hardening is not redundant with PTMM or trimming – PTMM and Hardening circuits do not overlap and trimming is necessary before Hardening.[34] This is proper rebuttal; it is here for context, not to recharacterize or alter the rebuttal.

Thereafter, the rebuttal testimony poses this question:

> **Q17. Is there anything else you would like to add for context concerning the 4.8kV Hardening Program as compared to the Tree Trimming Program?**

[29] Elliot Andahazy Direct, pp. 9-28.

[30] Stephens Direct, pp. 10-15.

[31] *Id.* at p. 13, lines 2-4.

[32] *Id.* at p. 12, lines 4-5.

[33] Elliot Andahazy Rebuttal, p. 11.

[34] Elliot Andahazy Rebuttal, pp. 11-12, Q&A 16.

In response, Witness Elliot Andahazy states these are complementary programs, and the Tree Trimming Surge is approaching completion. Again, MNSC is not asserting this is improper rebuttal, this is context.

It is the analysis that follows this response that is improper rebuttal that MNSC moves to strike. The rebuttal says this:

> The Company presented analysis in discovery response U-21534 MNSCDE-3.6-01 23 4.8kV Hardening Data.xlsx (Exhibit A-51, Schedule PP9) which demonstrates the 4.8kV Hardening Program provides significant safety and reliability benefits 1 three years after work is performed (Tables 1, 2, and 3).

Then it presents these three tables:

Table 1 – All-Weather Customer Interruptions Excluding MEDs 3-years avg. before vs. 3-years avg. after

4.8kV Hardening	3-years Avg. Before All-Weather Customer Interruptions	3-years Avg. After All-Weather Customer Interruptions	Difference (Better) / Worse	% (Improvement) / Worsening
Circuits Hardened 2018-2020	124,353	70,123	(54,230)	(44%)
Control Group 2018-2020	692,879	882,197	189,318	27%

Table 2 – Customer Minutes Interrupted Excluding MEDs 3-years avg. before vs. 3-years avg. after

4.8kV Hardening	3-years Avg. Before Customer Minutes Interrupted Excl. MEDs	3-years Avg. After Customer Minutes Interrupted Excl. MEDs	Difference (Better) / Worse	% (Improvement) / Worsening
Circuits Hardened 2018-2020	16,900,510	5,654,200	(11,246,309)	(67%)
Control Group 2018-2020	114,271,545	94,710,157	19,561,388	17%

Table 3 – Wire Down Events 3-years avg. before vs. 3-years avg. after

4.8kV Hardening	3-years Avg. Before Wire Down Events	3-years Avg. After Wire Down Events	Difference (Better) / Worse	% (Improvement) / Worsening
Circuits Hardened 2018-2020	1,624	1,099	(525)	(32%)
Control Group 2018-2020	9,892	11,307	1,415	14%

The rebuttal response to Q17 concludes as follows:

> Please note that these 3-year average before and 3-year average after calculated benefits are even higher than the 3-year average before and 1-year after benefits shown in my revised direct testimony. Please also note that this analysis includes the years 2021 and 2023 which were historic storm years when overall system reliability experienced the greatest impacts. Taking all these factors into account, it is clear that some of the Company's most vulnerable customers in and around the city of Detroit

> have received significant and persistent safety and reliability benefits as a result of the 4.8kV Hardening Program.

This is improper rebuttal testimony. It does not explain, disprove, weaken, or impeach Mr. Stephens' "claims implying the 4.8kV Hardening scope is redundant" with Tree Trimming or PTMM, as characterized by witness Elliot Andahazy.[35] The three Tables present analyses about the effectiveness of Hardening, they have nothing to do with whether there is overlap or redundancy between Hardening and PTMM or Hardening and Trimming.

The rebuttal testimony asserts this "analysis" was presented in a discovery response, but that is misleading – only the *raw data* was presented in a discovery response.[36] The discovery response, which is reproduced at Exhibit A-51 Schedule PP9, contains 153 pages with several thousand lines of data. But the discovery response provides no "analysis" – no summations, no interpretation of the data, no characterization whether circuits improved or worsened, as shown in Tables 1-3.

And even if the Company had produced the *analyses* in Tables 1-3 in discovery responses, that would not make them proper analyses for rebuttal testimony. These are analyses the Company is citing as supporting the benefits of its Hardening program based on data in its possession and available when it filed its direct case. The rebuttal testimony itself describes what these Tables are: they are updates and re-do's of the Company's Hardening reliability and wire downs benefits analyses in Figures 3, 4, and 5 on pages 24 to 26 of witness Elliot Andahazy's direct testimony. They are identical analyses comparing all-weather SAIFI, SAIDI, and wires down between Hardened and Control Group circuits, except they consider three years before and after Hardening instead of just one year before and after. These Tables and supporting testimony are not rebuttal

[35] Elliot Andahazy Rebuttal, p. 11 (citing Stephens Direct).

[36] *Id.* at p. 12, line 23.

to testimony from AG-MN witness Stephens, they are a late attempt to bolster the Company's direct case with new evidence. Presenting these new analyses in rebuttal denies opposing parties the fair opportunity to unpack them and file testimony refuting them.

The testimony and tables on page 12 line 22 to page 14 line 10 should be struck from Ms. Elliot Andahazy's rebuttal testimony. In addition, when it is offered for admission into the record, the ALJ should not admit proposed Exhibit A-51 Schedule PP9 because it is not relevant to the Company's rebuttal testimony and should not be in the record of decision in this proceeding.

III. CONCLUSION.

In sum, rebuttal cannot be used to supplement direct testimony, and therefore the DTE rebuttal discussed above should be stricken.

Respectfully submitted,

Troposphere Legal, PLC
Counsel for MNSC

Date: August 23, 2024

By: 
Digitally signed by Christopher Bzdok
DN: cn=Christopher Bzdok, o=Troposphere Legal, email=chris@tropospherelegal.com, c=US
Date: 2024.08.23 14:41:40 -04'00'

Christopher M. Bzdok (P53094)
Tracy Jane Andrews (P67467)
420 E. Front St.
Traverse City, MI 49686
Phone: 231-709-4000

EXHIBIT 1

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the Application of	)	
DTE ELECTRIC COMPANY	)	
for authority to increase its rates, amend	)	Case No. U-21534
its rate schedules and rules governing the	)	
distribution and supply of electric energy, and	)	
for miscellaneous accounting authority.	)	

REBUTTAL TESTIMONY

OF

SATVIR S. DEOL

DTE ELECTRIC COMPANY
REBUTTAL TESTIMONY OF SATVIR S. DEOL

Line No.

Q1. Please state your full name, title, business address and by whom you are employed?

A1. My name is Satvir S. Deol (he/him/his), and my business address is One Energy Plaza, Detroit, Michigan, 48226 and I am employed by DTE Electric Company (DTE Electric or Company).

Q2. Did you file direct testimony in this proceeding on behalf of DTE Electric Company (DTE Electric or Company)?

A2. Yes.

Purpose of Testimony

Q3. What is the purpose of your rebuttal testimony?

A3. The purpose of this testimony is to rebut certain positions and recommendations for disallowances of capital projects as proposed by certain witnesses that provided direct testimony in the instant case. These witnesses include:

- Michigan Attorney General (AG), Michigan Environmental Council (MEC), Natural Resources Defense Council (NRDC), collectively referred to as "AG-MN" Witness Stephens
- Ann Arbor Witness Stults
- Detroit Area Advocacy Organizations (DAAO) Witness Koeppel
- Michigan Attorney General (AG), Michigan Environmental Council (MEC), Natural Resources Defense Council (NRDC), Sierra Club (SC), and Citizens Utility Board of Michigan (CUB), collectively referred to as "MNSC" Witness Woolley

- Association of Businesses Advocating Tariff Equity (ABATE) Witness York

The absence of a discussion of other matters in my rebuttal testimony should not be taken as an indication of agreement with other aspects of any intervenor's testimony.

Q4. Are you sponsoring any exhibits in this proceeding?

A4. Yes. I am sponsoring the following exhibits:

Exhibit	Schedule	Description
A-50	OO1	Discovery Response MNSCDE-5.5a(S1)
A-50	OO2	NDA CEII MNSCDE-5.5a(S1) – Subransmission Load Data
A-50	OO3	Discovery Response MNSCDE-8.5a

Q5. Were these exhibits prepared by you or under your direction?

A5. Yes, they were.

Q6. How is your testimony organized?

A6. There are eight specific topics I will rebut in my testimony, as listed below. A detailed discussion of why the intervenor's recommendations should not be accepted by the Commission follows.

Line No.

Rebuttal Contents

"During initial planning stages of large projects, multiple design options are often explored as different engineering groups collaborate to brainstorm high-level solutions. An initial set of solutions will be narrowed down if some solutions are determined to be unsuitable for reasons such as, but not limited to, the following:

- Does not adhere to DTE engineering standards and practices
- Availability or lead time of equipment is too long
- An extended outage duration is required to complete project
- Alternative is overly complex and not markedly better than other options"

Q43. In addition to the general concerns you've noted, does Witness Stephens recommend the disallowance of any specific projects that are part of the Subtransmission Redesign and Rebuild Program?

A43. Yes. He recommends the disallowance of three specific subtransmission projects: Tie 4105 Phase 3, Tie 4105 Phase 4, and Trunk 3905.

~~**Q44. What is the scope of the Tie 4105 project?**~~

~~A44. Tie 4105 is a 62-mile circuit serving 7 substations (~3,546 customers) in the rural part of the Company's service territory. To mitigate degrading reliability, the project is to rebuild and relocate approximately 35 miles (~50%) of this circuit. The construction will include equipment designed to the new, more resilient standards, and relocation from deep, heavily treed ROW to more truck accessible road ROW, as shown in Figures 6 and 7 below.~~

Line
No.

Figure 6 : Tie 4105 Existing Wood Poles vs. New Steel Poles

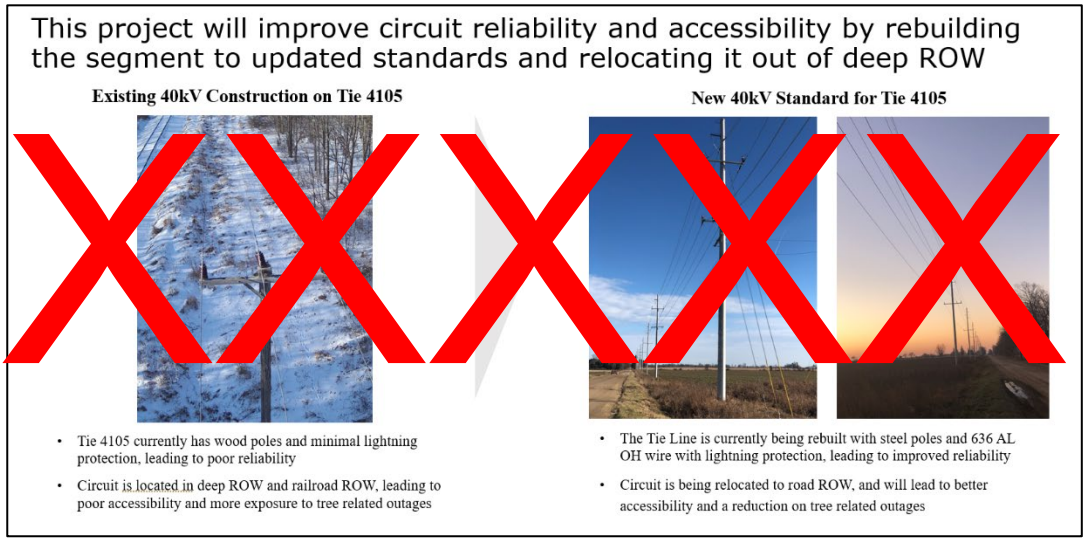


Figure 7 : Tie 4105 Existing Route vs. New Route Along Road ROW

Q45. Why is it necessary to complete the Tie 4105 project?

A45. As shown in Table 2 below, Tie 4105 reliability performance began to degrade further in 2019. The substations served from Tie 4105 experienced frequent

Line No.

outages. This resulted in escalated complaints by customers and communities to the Company and the Michigan Public Service Commission (MPSC).

Table 2 Tie 4105 Initiative Reliability Performance Improvement

Year	Total Momentary Outages on Tie 4105	Total Sustained Outages on Tie 4105	Total Customer Minutes from TIE4105 Outages	
2015	3	3	4,5 656	
2	10		0,346	
201		4	,671,876	
2018		3	1,804,047	
20	9		90,554	
20	1		3, 693	
2021	4	6	7,64 2	
2022	5	7	1,155,311	
2023	2	4	365,832	Tie 4105 Phase 1 Completed

Seventy percent of the poles on Tie 4105 are beyond their life expectancy. Testing of the conductor samples from Tie 4105 demonstrated reduced tensile strength and the steel core zinc layer was no longer present to prevent further oxidation & corrosion, as shown in Figure 8. If not addressed urgently, this will lead to conductor failure and a much-reduced resiliency during severe weather events, as shown in Figure 9.

Figure 8: Existing Tie 4105 Steel Core of 3/0 ACSR conductor showing corrosion

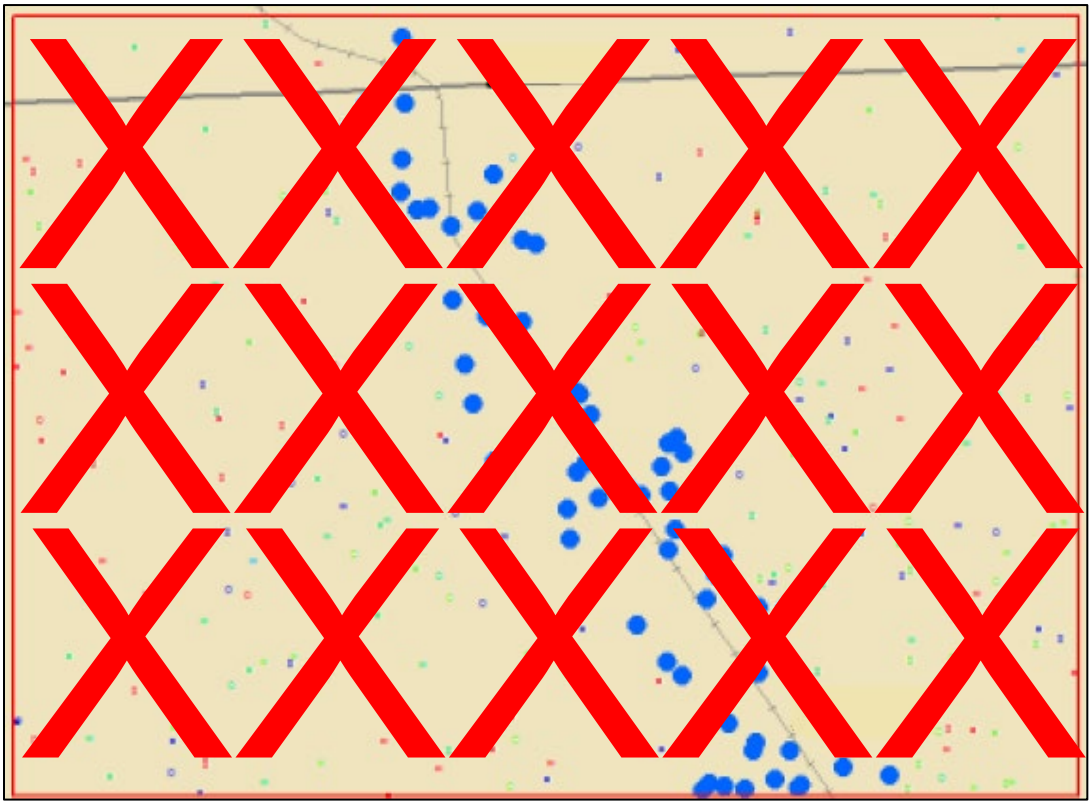
Line
No.

Figure 9: Existing Tie 4105 3/0 ACSR reduced tensile strength

Demonstrating the need for greater resiliency, data from the FALLS® lightning database indicates that there were 65 lightning strikes within a half mile of Tie 4105 from January 2016 through December 2018 shown as blue dots on the map in Figure 10 below. Lightning within a half mile is capable of generating induced impulses on power lines. Of these 65 lightning strikes, the data indicates there were 13 lightning strikes during this time interval that were direct strikes to the lines or immediately adjacent to them. See Figure 11 for the date, time, polarity, and intensity of the lightning events.

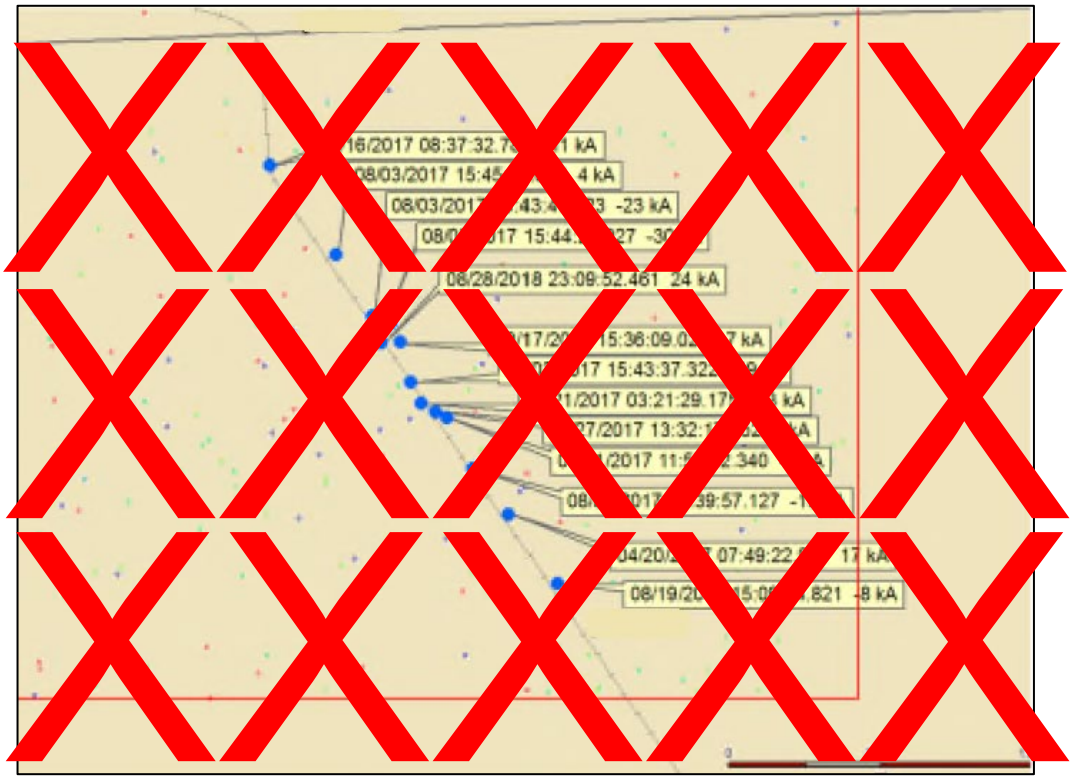
Line
No.

~~**Figure 10: Lightning strikes within 5-miles of Tie 4105 between 2016 and 2018**~~



Line
No.

Figure 11: Lightning activity within a half mile of Tie 4105 between January 2016 and December 2018



This project is currently underway, and it will be implemented in phases. As shown in Table 1 above, Tie 4105 reliability performance began to show improvements after the first phase of the project was completed in early 2023.

Q46. What is the scope of the Trunk 3509 project?

A46. The Trunk 3509 project's scope is to upgrade about 1.2 miles of exiting underground cable to the current standard higher capacity, more reliable 650 EPR cable. In addition, the circuit connection will be moved to a new station position which involves installing new station equipment (breaker, disconnects, and relay).

~~Trunk 3509 is a 5-mile circuit serving 4 substations (2,539 customers including a major hospital and trauma center). The circuit has a unique configuration where it shares the station position/equipment with another circuit (Trunk 3508). This configuration increases the outage exposure on Trunk 3509 and limits its capacity, as the station equipment must carry the load of two circuits. Additionally, both circuits must be shutdown to perform routine maintenance on station equipment like the breaker.~~

Q47. Why is it necessary to complete the Trunk 3509 project?

A47. Trunk 3509 is experiencing thermal overload planning criteria violations in both normal day-to-day and single contingency scenario. To protect Trunk 3509 from equipment damage during a single contingency scenario, the Company has to implement an emergency load control scheme at one of the substations. If this emergency load control scheme is triggered, all of the customers served from the substation would experience an outage until the failure is fixed or until further operation solutions can be implemented (if available). Also, due to the existing thermal overload planning criteria violation, additional customer load cannot be added to TRK 3509 limiting growth in the area.

The objective of the Trunk 3509 project is to upgrade the limiting equipment that is causing this thermal overload planning criteria violation. By doing this work, we are alleviating thermal loading violations, and the possibility of shedding customer load during a single contingency event. Additional benefits include increased capacity on Trunk 3509, improving operational flexibility, and reducing outage exposure on Trunk 3509 by giving the circuit its own station position.

EXHIBIT 2

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the Application of	)	
DTE ELECTRIC COMPANY	)	
for authority to increase its rates, amend	)	Case No. U-21534
its rate schedules and rules governing the	)	
distribution and supply of electric energy, and	)	
for miscellaneous accounting authority.	)	

REBUTTAL TESTIMONY

OF

ALLEN J. KRYSCYNSKI

DTE ELECTRIC COMPANY
REBUTTAL TESTIMONY OF ALLEN J. KRYSCYNSKI

Line No.

Q1. Please state your full name, title, business address and by whom you are employed?

A1. My name is Allen J. Kryscynski (he/him/his), and my business address is One Energy Plaza, Detroit, Michigan, 48226 and I am employed by DTE Electric Company

Q2. Did you file direct testimony in this proceeding on behalf of DTE Electric Company (DTE Electric or Company)?

A2. Yes.

Purpose of Testimony

Q3. What is the purpose of your rebuttal testimony?

A3. The purpose of this testimony is to rebut certain positions of:

- Michigan Public Service Commission (MPSC or Commission) Staff (Staff) Witness Tayler Becker
- Attorney General (AG), Michigan Environmental Council (MEC), Natural Resource Defense Council (NRDC), collectively AG-MN Witness Paul Alvarez
- AG-MN Witness Dennis Stephens
- City of Ann Arbor (AA) Witness Melissa Stults
- AA Witness Skye Stewart
- Michigan Municipal Association for Utility Issues (MAUI) Witness Richard Bunch
- Soulardarity and We Want Green, Too (collectively DAAO) Witness Elizabeth Jacob

Line No.

- DAAO Witness Yunus Kinkhabwala, PhD
- DAAO Witness Jackson Koeppel
- The Ecology Center, The Environmental Law & Policy Center, Union of Concerned Scientists, and Vote Solar (CEO) Witness Curt Volkmann
- CEO Witness Boratha Tan
- CEO Witness William Kenworthy

Q4. Are you sponsoring any exhibits in this proceeding?

A4. Yes. I am sponsoring the following exhibits:

Exhibit	Schedule	Description
A-43	HH1	MNSCDE-15.23a – Depreciation
A-43	HH2	Assessing Changes in the Reliability of the U.S. Electric Power System - LBNL
A-43	HH3	Recent trends in power system reliability and implications for evaluating future investments in resiliency
A-43	HH4	WP AJK U-21534 GPM
A-43	HH5	WP AJK U-21534 Reliability Model
A-43	HH6	MNSCDE-12.8b - Reliability Program Analysis

Q5. How is your testimony organized?

A5. There are several specific points I will rebut in my testimony; subjects are listed below. A detailed discussion follows to correct inaccuracies and explain why certain recommendations should not be accepted by the Commission.

Line No.

Rebuttal Content

3) The Company is early on its journey to stabilize and rebuild the grid. Our strategic capital investment in 2022 was $715 million, in 2019 it was $313 million. DTE Electric's distribution system, because of its size and complexity, requires sustained higher levels of investment to affect a change in reliability metrics at an overall system level.

Q8. In addition to system-wide all-weather reliability, are there other metrics or analysis that should be used to understand the reliability improvements of investments, including tree trimming?

A8. Yes. Many of our customers are in fact seeing reliability improvement, in the areas where we have invested. First, as discussed in Q23 of my revised direct testimony, we have seen reliability improvements in the areas that we have tree trimmed and are maintaining tree clearance, and in areas where we have invested in capital infrastructure upgrades. Over multiple rate cases, including this one, the Company's distribution Witnesses have provided rigorous, compelling data analysis to show that these investments are delivering benefits.

~~As an example of these benefits, communities that have had grid investments are seeing greater resilience to storms. During the first week of June 2024, the community of Livonia experienced an EF1 (Enhanced Fujita Scale) tornado with wind speeds up to 95mph. The area which took the main impact from the tornado recently had over 200 poles replaced as part of the Pole and Pole Top Maintenance and Modernization Program (PTMM) program. These upgrades resulted in minimal damage, including only 3 broken poles, and resulted in a faster restoration effort - 99% of customers were restored within 27 hours. On the other hand, an adjacent~~

~~area of the system where PTMM investments have not yet been implemented was also in the path of the storm. In this area the Company experienced 20 broken poles, resulting in over 5,000 customers who had to endure service outages lasting more than 48 hours due to the volume of events and severity damage.~~

Second, in the 2023 DGP the Company has provided a roadmap of investments and paired that roadmap with a sophisticated reliability model, also provided in this case to support the Company's proposed investments. The reliability model supports the Company's assertion that if the proposed capital investments are made, there will be significant improvements in the Company's non-MED and all-weather reliability metrics.

Rebuttal Issue 2: Required Capital Investment

Q9. Please summarize AG-MN Witness Stephens' context for his testimony related to distribution investments.

A9. Witness Stephens (pages 6 line 2 through page 7 line 5) begins his testimony by differentiating what he terms "discretionary" spending from non-discretionary spending. His definition of discretionary is "If the capital is not spent, can customers still have safe and reliable service?" He then proposes that all "discretionary" spending be subject to what he terms "risk-informed benefit -cost analysis".

Q10. Do you agree with AG-MN Witness Stephens' definition of discretionary investments?

EXHIBIT 3

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the Application of	)	
DTE ELECTRIC COMPANY	)	
for authority to increase its rates, amend	)	Case No. U-21534
its rate schedules and rules governing the	)	
distribution and supply of electric energy, and	)	
for miscellaneous accounting authority.	)	

REBUTTAL TESTIMONY

OF

ALLEN J. KRYSCYNSKI

DTE ELECTRIC COMPANY
REBUTTAL TESTIMONY OF ALLEN J. KRYSCYNSKI

Line No.

Q1. Please state your full name, title, business address and by whom you are employed?

A1. My name is Allen J. Kryscynski (he/him/his), and my business address is One Energy Plaza, Detroit, Michigan, 48226 and I am employed by DTE Electric Company

Q2. Did you file direct testimony in this proceeding on behalf of DTE Electric Company (DTE Electric or Company)?

A2. Yes.

Purpose of Testimony

Q3. What is the purpose of your rebuttal testimony?

A3. The purpose of this testimony is to rebut certain positions of:

- Michigan Public Service Commission (MPSC or Commission) Staff (Staff) Witness Tayler Becker
- Attorney General (AG), Michigan Environmental Council (MEC), Natural Resource Defense Council (NRDC), collectively AG-MN Witness Paul Alvarez
- AG-MN Witness Dennis Stephens
- City of Ann Arbor (AA) Witness Melissa Stults
- AA Witness Skye Stewart
- Michigan Municipal Association for Utility Issues (MAUI) Witness Richard Bunch
- Soulardarity and We Want Green, Too (collectively DAAO) Witness Elizabeth Jacob

Line No.

- DAAO Witness Yunus Kinkhabwala, PhD
- DAAO Witness Jackson Koeppel
- The Ecology Center, The Environmental Law & Policy Center, Union of Concerned Scientists, and Vote Solar (CEO) Witness Curt Volkmann
- CEO Witness Boratha Tan
- CEO Witness William Kenworthy

Q4. Are you sponsoring any exhibits in this proceeding?

A4. Yes. I am sponsoring the following exhibits:

Exhibit	Schedule	Description
A-43	HH1	MNSCDE-15.23a – Depreciation
A-43	HH2	Assessing Changes in the Reliability of the U.S. Electric Power System - LBNL
A-43	HH3	Recent trends in power system reliability and implications for evaluating future investments in resiliency
A-43	HH4	WP AJK U-21534 GPM
A-43	HH5	WP AJK U-21534 Reliability Model
A-43	HH6	MNSCDE-12.8b - Reliability Program Analysis

Q5. How is your testimony organized?

A5. There are several specific points I will rebut in my testimony; subjects are listed below. A detailed discussion follows to correct inaccuracies and explain why certain recommendations should not be accepted by the Commission.

Line No.

Rebuttal Content

equipment expected life expectancy, which is used in estimating investment needed for equipment replacements. I further describe that equipment age, but not depreciation status, is just one of the factors considered to assess asset health and the need for replacement.

Q17. Does equipment depreciation status factor into the Company's distribution equipment replacement decisions?

A17. No.

Rebuttal Issue 3: Equipment Outages

Q18. Witness AG-MN Stephens, in addressing what he believes to be the cause of outages, makes the statement that "storm response and vegetation management – not equipment condition – have driven the Company's historically poor (relative to peers) reliability performance".[5] Similarly Witness Alvarez says "Given that vegetation contact is the root cause of at least 50% of the interruption minutes customers experience, spending should be focused on root causes."[6] Do you agree with Witness Alvarez and AG-MN Witness Stephens' characterization of the key drivers of reliability?

A18. I agree that vegetation is a significant cause of outages, which is why the Company began the Tree Trim Surge program in 2019. However, I believe that focusing solely on vegetation would not by itself address the complex set of factors that influence distribution reliability.

[5] Stephens DT page 7, lines 19-20
[6] Alvarez DT, page 19, lines 12-14

Q19. Can you provide more detail on what you call the complex set of factors that influence distribution reliability?

A19. Yes. The full analysis of grid reliability needs to address both the initiating event that caused the outage (i.e., trees/wind) and the underlying equipment that was not resilient to trees/wind. As an example, on a circuit which is on-cycle for tree trimming could have an out of right of way tree that falls into the lines. When this happens, whether an outage occurs or not, the size of the outage, and the extent of damage is determined in part by the equipment that the tree encounters. If the equipment is aged or built to a previous less-robust engineering and construction standard, the tree will be more likely to break the equipment. However, if the circuit has been rebuilt to the current stronger standard, with larger poles, fiberglass cross arms, and steel reinforced wire, the equipment may not fail or the damage will be minimized. Additionally, automation investments will provide even more improvements to reliability. Using a similar example, if high winds cause a large branch to create an outage and an automated recloser loop scheme is installed on that circuit, not only will the outage be reduced in size (number of customers affected) but the Company will have information on specifically where the outage occurred, which will allow the Company to dispatch crews directly to the location without the need to patrol the circuit. A more detailed description of automation benefits can be found in Witness Hartwick's revised direct testimony on pages 11 through 12.

Q20. Do you agree with AG-MN Witness Stephens' characterization of the Company's "storm response" as a key driver impacting reliability performance?

A20. No. The Company has storm processes in place that allow the Company to mobilize and respond quickly to storms, and the Company continues to evaluate and improve its storm response processes. Witness Stephens fails to account for the real issue impacting "storm response" which has been, and is still today, the volume of events that occur during a narrow window of time during large weather events. During these storms, the Company typically has significantly more outage events than line crews to assign to mitigate the events due to the amount and complexity of damage that occurs. Even with the additional support of foreign crews, restoration can become a supply vs. demand problem. And while the Company has made improvements to increase the supply of lineman, the Company must also reduce the demand for linemen, meaning the need to reduce the number of outage events by hardening the grid in order to continue to mitigate and fully solve this problem. In summary, the storm response challenges are primarily driven by event volume, in part, by equipment that is no longer capable of standing up to increasingly harsh weather conditions.

Q21. Based on his interpretation of DTE Electric's reliability data, what are AG-MN Witness Alvarez's conclusions and recommendations?

A21. Witness Alvarez's conclusion is equipment related failures are not a significant root cause of outages, and that capital programs such as automation, which admittedly improve reliability by reducing the impact of outages, are not an effective approach to improve reliability (page 19, lines 8-15). He also recommends that the Commission:

> "Require DTE to slow the rate of capital spending and assess the benefits of its vegetation management program relative to strategic capital spending aimed at improving reliability." (Alvarez, page 8, lines 9-11)

Q22. Does AG-MN Witness Alvarez reference any studies to support his conclusion that capital investment should be slowed?

A22. Yes. On page 16, lines 4-6, Witness Alvarez says:

> "Research completed by Lawrence Berkeley National Laboratory on behalf of the U.S. Department of Energy found no correlation between investor-owned utility distribution capital spending increases and reliability improvement the following year."

The study cited in his testimony at the bottom of page 16 is "Assessing Changes in the Reliability of the U.S. Electric Power System. Lawrence Berkeley National Laboratory report LBNL-188741 (August 2015), pp. 37-38."

Q23. Is AG-MN Witness Alvarez's correctly interpreting LBNL's research that there is no correlation between capital and reliability improvements accurate?

A23. No. Witness Alvarez's conclusion there is no correlation between capital investment and reliability improvements is incorrect. In fact, it's impossible given the inputs into the study. The LNBL study, included as Exhibit A-43, Schedule HH2[7] - Assessing Changes in the Reliability of the U.S. Electric Power System - LBNL, talks about spending in terms of "maintenance" (O&M). The O&M spend that was analyzed was not only distribution O&M but bundled to include transmission O&M dollars. Capital investment was not analyzed in this study. A subsequent journal article published by the authors, Exhibit A-43, Schedule HH3 – "Recent trends in power system reliability and implications for evaluating future investments in resiliency", is even more precise in defining spending as "T&D O&M expenditures".

[7] Exhibit A-43, Schedule HH2 page 17

Q24. Did the LBNL study conclude there was no correlation between O&M spending and reliability the following year?

A24. No, in fact this journal article indicates that 10 of the 12 models evaluated had a negative sign for the expenditures variable as summarized in Tables A.4 and A.5 in Schedule HH3, although many were not statistically significant. The negative sign means that previous year O&M spending is correlated with an improvement in reliability (SAIDI+SAIFI) the following year.

Q25. What concerns does AG-MN Witness Stephens have about the impact of equipment failures on reliability?

A25. Witness Stephens performed an analysis on a small set of outage events and claimed that the percentage of interruptions caused by equipment is small – less than 12%. (Page 8, lines 5-10)

Q26. Does the Company have concerns with AG-MN Witness Stephen's analysis?

A26. Yes, the Company has two main concerns. The first is that the Company was unable to verify Witness Stephens' analysis. He claims he examined 100 service interruptions with the cause of 'equipment failure' (page 8, line 7), however the file provided only included 77 events with the cause of 'equipment failure' and only 68 indicated any analysis had been done. The second, and more important concern regarding Witness Stephens' analysis is that he relied on outage crew field notes provided by the Company to determine if equipment caused the outage. Field notes are not intended to document the cause of outages, rather they are used in the moment as a means of communication between various field resources and the systems operations center to co-ordinate and facilitate restoration. The primary

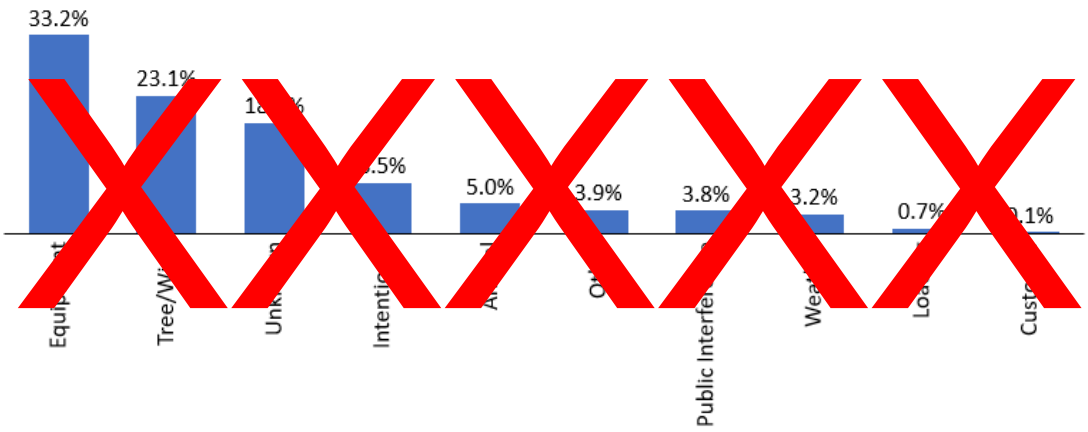
Line No.

indicator of the cause of the outages is the cause code field in the outage management system.

Q27. What analysis has the Company performed to estimate the cause of outages?

A27. The Company has calculated the percentages of customer interruptions, by cause code, under non-MED conditions over the past five years. The results, by cause code, are shown in Figure 1 below. The cause code 'Equipment Failure' is the largest contribution to customer interruptions, followed by tree/wind related events. The conclusion from this analysis is that equipment is indeed a leading cause of outages, and the tree trimming program, while important to address tree related outages, is not sufficient to address a significant portion of outages.

Figure 1 Customer Interruptions by cause code (2019-2023, Non-MEDs)



Q28. Do you agree with Witness Alvarez's recommendation to slow capital spending[8] to assess benefits of its tree trim program relative to its capital program?

A28. No. There are several reasons why I disagree:

[8] Alvarez DT, p. 8, lines 9-11

Line No.

1) Customers are clear that they want to see significant reliability improvements even in the face of storms.
2) With 90%[9] of the system on cycle for Tree Trimming by the end of 2024, the Company's reliability model indicates that the two largest opportunities to improve reliability are Circuit Automation[10] and replacing degraded equipment (PTMM, Hardening, Conversion), which will account for almost 80% of the projected all-weather SAIDI improvements by 2029. Delaying this work will hamper the Company's ability to improve customer reliability in the near-term.
3) The majority of our customer interruptions are not tree related.[11]
4) The benefits of the Tree Trim program are well known, and analysis has been presented in this rate case, past rate cases, and annual tree trim reports submitted to the Commission for years.
5) While the Company's Tree Trim program has proved highly effective, the Company's recent reliability performance shows that more capital infrastructure investment is needed.

[9] See Witness Steudle testimony, page 15, line 14
[10] As Witness Alvarez notes on page 19, lines 10-12, DTE Electric's Distribution Automation program is "designed to mitigate the impact of service interruptions."[11] Data in the 2023 DGP shows that 69% of all-weather SAIFI and 50% of all-weather SAIDI is from causes other than trees. See Exhibits 4.2.2.1 and 4.2.2.2 within the 2032 DGP, (Exhibit A-23, Schedule M8)[12] Order in U-21297 filed on 12/1/2023 available at https://mi-psc.my.site.com/sfc/servlet.shepherd/version/download/0688y00000At0VBAAZ.
[11] Data in the 2023 DGP shows that 69% of all-weather SAIFI and 50% of all-weather SAIDI is from causes other than trees. See Exhibits 4.2.2.1 and 4.2.2.2 within the 2032 DGP, (Exhibit A-23, Schedule M8)[12] Order in U-21297 filed on 12/1/2023 available at https://mi-psc.my.site.com/sfc/servlet.shepherd/version/download/0688y00000At0VBAAZ.

EXHIBIT 4

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the Application of	)	
DTE ELECTRIC COMPANY	)	
for authority to increase its rates, amend	)	Case No. U-21534
its rate schedules and rules governing the	)	
distribution and supply of electric energy, and	)	
for miscellaneous accounting authority.	)	

REBUTTAL TESTIMONY

OF

MORGAN ELLIOTT ANDAHAZY

DTE ELECTRIC COMPANY
REBUTTAL TESTIMONY OF MORGAN ELLIOTT ANDAHAZY

Line No.

Q1. Please state your full name, title, business address and by whom you are employed?

A1. My name is Morgan Elliott Andahazy (she/her/hers). 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.

Q2. Did you file revised direct testimony in this proceeding on behalf of DTE Electric Company (DTE Electric or Company)?

A2. Yes.

Purpose of Testimony

Q3. What is the purpose of your rebuttal testimony?

A3. The purpose of this testimony is to rebut certain positions of Witnesses Alvarez and Stephens on behalf of the Attorney General (AG), Michigan Environmental Council (MEC), and Natural Resources Defense Council (NRDC), collectively referred to as "AG-MN". The absence of a discussion of other matters in my rebuttal testimony should not be taken as an indication of agreement with other aspects of any intervenor's testimony.

Q4. Are you sponsoring any exhibits in this proceeding?

A4. Yes. I am sponsoring the following exhibits:

Exhibit	Schedule	Description
A-51	PP1	Discovery Response: U-21534 MNSCDE-15.34b
A-51	PP2	NDA Discovery Response: U-21534 MNSCDE-15.34b-01 4.8kV Hardening Program Cost per Mile

Line No.			
1			Analysis
2	A-51	PP3	Discovery Response: U-21534 MNSCDE-15.37
3	A-51	PP4	NDA Discovery Response: U-21534 MNSCDE-
4			15.37-01 PTMM Program Investment per Mile
5			Analysis
6	A-51	PP5	Discovery Response: U-21534 MNSCDE-15.38a
7	A-51	PP6	NDA Discovery Response: U-21534 MNSCDE-
8			15.38a-01 URD Program Investment per Thousand
9			Feet Analysis
10	A-51	PP7	Discovery Response: U-21534 MNSCDE-15.47a
11	A-51	PP8	NDA Discovery Response: U-21534 MNSCDE-
12			15.47a-01 Breaker Program Investment per Breaker
13			Analysis
14	A-51	PP9	Discovery Response: U-21534 MNSCDE-3.6-01
15			4.8kV Hardening Data.xlsx
16	A-51	PP10	NDA Discovery Response: U-21534 MNSCDE-
17			3.10b
18	A-51	PP12	Discovery Response: U-21534 MNSCDE-15.24
19	A-51	PP13	Discovery Response: U-21534 MNSCDE-12.5b
20			Pole Standards
21	A-51	PP14	Discovery Response: U-21534 MNSCDE-12.5c
22			

23 **Q5. Were these exhibits prepared by you or under your direction?**

24 A5. Yes, they were.

25

Q6. How is your testimony organized?

A6. There are twenty specific points I will rebut in my testimony, as listed below. A discussion of why the intervenor's recommendations should not be accepted by the Commission follows.

Rebuttal Contents

Rebuttal Issue 4: AG-MN Witness Stephens's inaccurate claim that the 4.8kV Hardening Program scope is redundant with Tree Trimming and PTMM.

Q15. What does AG-MN Witness Stephens say concerning the redundancy of the 4.8kV Hardening Program when compared to the PTMM and Tree Trimming Programs?

A15. AG-MN Witness Stephens makes two claims implying the 4.8kV Hardening scope is redundant in his testimony:

- "DTE is required to complete the tree trimming in any event, meaning that the reliability benefits from tree trimming should not be credited to the 4.8kV Hardening program." (page 13, lines 2-4).
- "… replacing crossarms when defects are identified is part of the pole top maintenance program in any event." (page 12, lines 4-5).

Q16. Do you agree that the Tree Trim and PTMM Programs make the 4.8kV Hardening Program work redundant?

A16. No. The Company disagrees with AG-MN Witness Stephens's implications that the 4.8kV Hardening Program is redundant because PTMM and Tree Trimming will be performed on the circuits regardless.

First, it is important to note that circuits which are within the 4.8kV Hardening Program scope are currently excluded from the scope of the PTMM Program. There is no redundancy between the programs, and hardened circuits will later have PTMM performed on them at an appropriate time in future PTMM cycles.

Line No.

Second, tree trimming is required to allow crews safe and efficient access to equipment. It is not redundant to trim circuits being hardened. The 4.8kV Hardening Program coordinates its work with the Tree Trimming Program and circuits are trimmed before 4.8kV Hardening work begins. Hardened circuits will be later tree trimmed again at an appropriate time in the maintenance tree trimming cycle.

Q17. Is there anything else you would like to add for context concerning the 4.8kV Hardening Program as compared to the Tree Trimming Program?

A17. Yes. I would also like to state that these programs are complementary in nature and not direct replacements for each other.

While tree trimming is clearly a beneficial program and is necessary to continue, trimming trees alone does not improve the condition of poles and pole-top equipment. Replacing defective poles and pole-top equipment with newer and stronger designs and materials improves the grid's ability to avoid wire downs and outages from inclement weather and tree impacts. The Company is six years into its Tree Trimming Surge and had 83% of its circuits on-cycle as of year-end 2023. If reliability was only driven by the need for tree trimming as AG-MN Witness Stephens seems to suggest, this is contradicted by the Company experiencing two of its worst storm years in 2021 and 2023.

~~The Company presented analysis in discovery response U-21534 MNSCDE-3.6-01 4.8kV Hardening Data.xlsx (Exhibit A-51, Schedule PP9) which demonstrates that~~

Line No.

the 4.8kV Hardening Program provides significant safety and reliability benefits three years after work is performed (Tables 1, 2, and 3).

Table 1 – All-Weather Customer Interruptions Excluding MEDs 3-years avg. before vs. 3-years avg. after

4.8kV Hardening	3-years Avg. Before All-Weather Customer Interruptions	3-years Avg. After All-Weather Customer Interruptions	Difference (Better) / Worse	% (Improvement) / Worsening
Circuits Hardened 2018-2020	[illegible]	[illegible]	[illegible]	[illegible]
Control Group 2018-2020	692,879	882,197	189,318	27%

Table 2 – Customer Minutes Interrupted Excluding MEDs 3-years avg. before vs. 3-years avg. after

4.8kV Hardening	3-years Avg. Before Customer Minutes Interrupted Excluding MEDs	3-years Avg. After Customer Minutes Interrupted Excluding MEDs	Difference (Better) / Worse	% (Improvement) / Worsening
Circuits Hardened 2018-2020	[illegible]	[illegible]	[illegible]	[illegible]
Control Group 2018-2020	114,271,545	94,710,157	19,561,388	17%

Line No.

~~**Table 3 – Wire Down Events 3-years avg. before vs. 3-years avg. after**~~

4.8kV Hardening	3-years Avg. Before Wire Down Events	3-years Avg. After Wire Down Events	Difference (Better) or Worse	% Improvement) or Worsening
Circuits Hardened 2018-2020				
Control Group 2018-2020	9,892	11,307	1,415	14%

~~Please note that these 3-year average before and 3-year average after calculated benefits are even higher than the 3-year average before and 1-year after benefits shown in my revised direct testimony. Please also note that this analysis includes the years 2021 and 2023 which were historic storm years when overall system reliability experienced the greatest impacts. Taking all these factors into account, it is clear that some of the Company's most vulnerable customers in and around the city of Detroit have received significant and persistent safety and reliability benefits as a result of the 4.8kV Hardening Program.~~

Rebuttal Issue 5: AG-MN Witness Stephens's inaccurate claim that DPLD Arc Wire Removal alone provides nearly all the safety benefits at half the cost of 4.8kV Hardening Program.

Q18. What does AG-MN Witness Stephens assert concerning DPLD Arc Wire Removal?

A18. On page 11, lines 12-17, AG-MN Witness Stephens states, "Removing the DPLD wire alone will provide almost all of the safety benefits of the 4.8kV Hardening program at greatly reduced cost, and with a greater deployment speed. The marginal

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the Application of **DTE ELECTRIC COMPANY** for authority to increase its rates, amend its rate schedules and rules governing the distribution and supply of electric energy, and for miscellaneous accounting authority.	Case No. U-21534

Proof of Service

On the date below, an electronic copy of **Motion to Strike Improper Rebuttal and Brief in Support by Attorney General Dana Nessel, Michigan Environmental Council, and Natural Resources Defense Council** was served on the following:

Name/Party	E-mail Address
Administrative Law Judge Hon. Sally Wallace	wallaces2@michigang.gov
DTE Electric Company Paula Johnson-Bacon Jon P. Christinidis John A. Janiszewski Breanne K. Reitzel Andrea E. Hayden	mpsc.filings@dteenergy.com paula.bacon@dteenergy.com jon.christinidis@dteenergy.com john.janiszewski@dteenergy.com Breanne.reitzel@dteenergy.com Andrea.hayden@dteenergy.com
Michigan Attorney General Joel B. King	ag-enra-spec-lit@michigan.gov kingj38@michigan.gov
Michigan Public Service Commission Staff Amit T. Singh Michael J. Orris Heather M.S. Durian Monica M. Stephens Lori Mayabb	singha9@michigan.gov orrism@michigan.gov durianh@michigan.gov stephensm11@michigan.gov mayabbl@michigan.gov
City of Ann Arbor and Michigan Municipal Association of Michigan Valerie J.M. Brader	ecf@rivenoak.com valerie@rivenoaklaw.com
Environmental Law & Policy Center, The Ecology Center, Union of Concerned Scientists, and Vote Solar Nicholas N. Wallace Daniel Abrams	nwallace@elpc.org dabrams@elpc.org
Utility Workers Union of America, Local 223 Benjamin L. King	bking@michworkerlaw.com

Michigan Energy Innovation Business Council, Institution for Energy Innovation, Foundry Association of Michigan, Advanced Energy United, and Energy Michigan Timothy J. Lundgren Laura A. Chappelle Justin K. Ooms	 tlundgren@potomaclaw.com lchappelle@potomaclaw.com jooms@potomaclaw.com
The Kroger Company Kurt J. Boehm Jody Kyler Cohn Justin Bieber	 kboehm@bkllawfirm.com jkylercohn@bkllawfirm.com jbieber@energystrat.com
Utility Workers Union of America, Local 223 Benjamin L. King	 bking@michworkerlaw.com
We Want Green, Too and Soulardarity Amanda Urban Mark Templeton Jacob Schuhardt Sam Heppel Madison S. Wilson	 t-9aurba@lawclinic.uchicago.edu templeton@uchicago.edu jschuhardt@uchicago.edu heppell@uchicago.edu madisonwilson@uchicago.edu
Great Lakes Renewable Energy Association Don L. Keskey Brian W. Coyer	 donkeskey@publiclawresourcecenter.com bwcoyer@publiclawresourcecenter.com
Walmart, Inc. Melissa M. Horne	 mhorne@hcc-law.com
Association of Businesses Advocating Tariff Equity Michael J. Pattwell Stephen A. Campbell	 mpattwell@clarkhill.com scampbell@clarkhill.com
EVgo Services, LLC Nikhil Vijaykar	 nvijaykar@keyesfox.com
International Transmission Company (ITC) Richard J. Aaron Courtney F. Kissel Olivia R.C.A. Flower Hannah E. Buzolits	 raaron@dykema.com ckissel@dykema.com oflower@dykema.com hbuzolits@dykema.com
Michigan Cable Telecommunications Association Sean P. Gallagher	 sgallagher@fraserlawfirm.com
PROTEC (The Michigan Coalition to Protect the Public Rights of Way) Michael J. Watza	 mike.watza@kitch.com

{signature on following page}

The statements above are true to the best of my knowledge, information and belief.

Troposphere Legal, PLC
Counsel for MEC, NRDC, SC & CUB

Date: August 23, 2024 By: 

Breanna Thomas, Legal Assistant
420 E. Front St.
Traverse City, MI 49686
Phone: 231-709-4000
Email: breanna@tropospherelegal.com