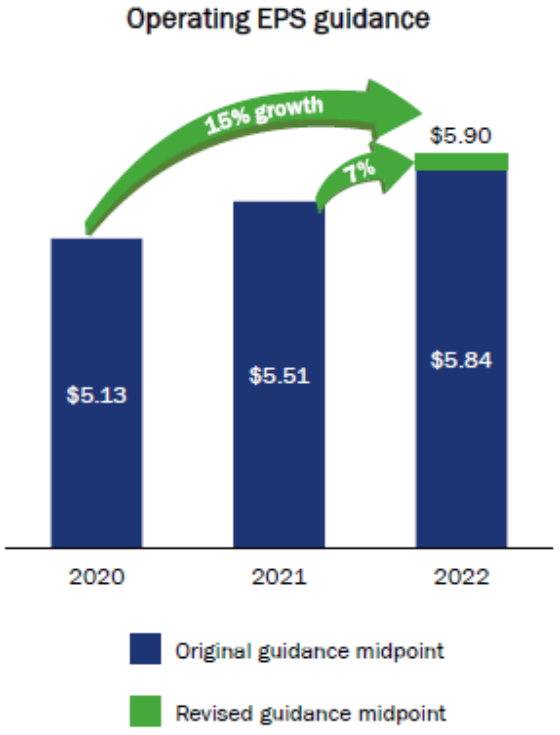
U-21534 Attorney General's Exhibits

Exhibit AG-1	DTE Energy Investor Presentation March 2022 U-21534
Exhibit AG-2	Blue Chip Report Feb 2024 U-21534
Exhibit AG-3	Emergent Replacements 2018-2023 and Inflation Rates U-21534
Exhibit AG-4	**CONF Utility Make Ready U-21534**
Exhibit AG-5	Housing Starts U-21534
Exhibit AG-6	I-375 Relocation U-21534
Exhibit AG-7	Tree Trim Surge Cost Savings U-21534
Exhibit AG-8	Power Gen 2018-2023 costs U-21534
Exhibit AG-9	**CONF Nuclear Plant Security System U-21534**
Exhibit AG-10	**CONF Nuclear Plant Radio System U-21534**
Exhibit AG-11	Nuclear Fuel Costs 2018-2023 costs U-21534
Exhibit AG-12	Nuclear Capial Projects 2024-2025 U-21534
Exhibit AG-13	Cust Service IT Projects U-21534
Exhibit AG-14	IT Projects U-21534
Exhibit AG-15	IT Capex 2018-2023 U-21534
Exhibit AG-16	Corporate Facilities Projects U-21534
Exhibit AG-17	Corporate Capex and Transpot Vehicles 2018-2023 U-21534
Exhibit AG-18	Capital Expenditures, Rate Base Reductions and Depr. U-21534
Exhibit AG-19	Ludington Deferral Costs U-21534
Exhibit AG-20	Working Capital I-Com Deferral Calculation U-21534
Exhibit AG-21	Incentive Comp Performance Metrics Results 2019-2023 U-21534
Exhibit AG-22	TOD Cost Deferral Details U-21534
Exhibit AG-23	Tree Trim Surge Costs and Power Outages U-21534
Exhibit AG-24	Detroit Tree Academy U-21534
Exhibit AG-25	Tree Trimmig Surge Program Return
Exhibit AG-26	Overall Cost of Capital U-21534
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Exhibit AG-28	Cost of Equity-DCF U-21534
Exhibit AG-29	Cost of Equity-CAPM U-21534
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Exhibit AG-33	Peer Group Selection U-21534
Exhibit AG-34	Market to Book Ratio U-21534
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Exhibit AG-36	Value Line - Volatility vs. Risk U-21534
Exhibit AG-37	O&M Summary Adjustments
Exhibit AG-38	O&M Inflation Adjustment U-21534
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Exhibit AG-40	O&M Tree Trim Surge Savings U-21534
Exhibit AG-41	O&M Uncollectible Accounts U-21534
Exhibit AG-42	O&M Injuries and Damages U-21534
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Exhibit AG-44	O&M Incentive Expense U-21534
Exhibit AG-45	Voluntary Separation Program U-21534
Exhibit AG-46	Credit Cards Merchant Fees U-21534
Exhibit AG-47	Corproate Jet Travel U-21534
Exhibit AG-48	AG Revenue Deficiency Calculation U-21534
Exhibit AG-49	DR AGDE-5.170a, 5.171, 5.173, 5.174
Exhibit AG-50	DR AGDE-5.175, 5.176a w AGDE-3.103c and attachment, 5.176b, 5.177a and b, 5.178 - 5.184, 5.184 supplemental response, 5.185a-b, 5.186
Exhibit AG-51	DR AGDE-5.187, 5.188
Exhibit AG-52	**DR AGDE-5.191a w attachment, 5.191b Supplemental w NDA attachment, 5.191c, 5.191d Supplemental w 5.191d attachment**
Exhibit AG-53	DR AGDE-5.193, 5.194a-b, 5.195a-b
Exhibit AG-54	DR AGDE-5.196
Exhibit AG-55	DR AGDE-5.198a-b, 5.199 to 5.201
Exhibit AG-56	DR AGDE-5.202a-b, 5.203a-c, 5.204, 5.205, 5.206a w WP-AJK Reliability Model-Event Projections, 5.206b, 5.207 w AGDE-1.26c, 5.208
Exhibit AG-57	DR AGDE-5.209a, 5.209b w two attachments
Exhibit AG-58	DR AGDE-5.210, 5.211a-c
Exhibit AG-59	DR AGDE-5.212, 5.213
Exhibit AG-60	DR AGDE-5.215a-b, 5.216 w U-20836 AGDE-8.261 and U-21297 AGDE-4.120, 5.218a w AGDE-4.166b-c, 4.167, 5.218b w MNSCDE-13.32 and attachment, 5.219a-b, 5.220, 5.221, 5.223b
Exhibit AG-61	DR AGDE-5.225 - 5.230
Exhibit AG-62	DR AGDE-5.232, 5.233, 5.234a-b
Exhibit AG-63	DR AGDE-5.235
Exhibit AG-64	DR AG-EVCO-1.1 to 1.3


DTE ENERGY
BUSINESS UPDATE
MARCH 8, 2022
DTE

Delivered strong financial results in 2021 and well-positioned for growth in 2022 and beyond

- ✓ Strong 2021 operating EPS[1] exceeded high end of guidance
- ✓ Successful spin of DTM
- ✓ Raised 2022 operating EPS guidance range to $5.80 - $6.00; revised guidance midpoint of $5.90 per share provides 7% growth from 2021 original guidance midpoint
- ✓ Reaffirming 5% - 7% operating EPS growth through 2026
- ✓ 7% dividend growth extended to 2022, consistent with high end of operating EPS growth target
- ✓ Utility 5-year capital investment is $1 billion higher than previous plan; over $40 billion investment plan over the 10-year period
- ✓ Strategic focus on decarbonization at DTE Vantage supporting a cleaner economy



DTE

1. Reconciliation of operating earnings (non-GAAP) to reported earnings included in the appendix

DTE Electric: transformational investments in generation and distribution provide customers cleaner, more reliable energy

Achieved operational successes in 2021

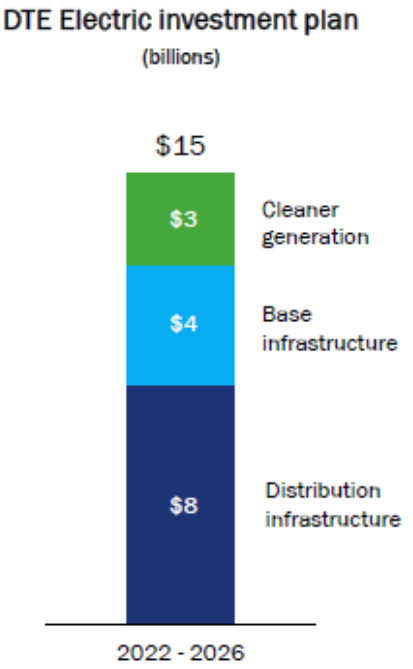
- Announced accelerated carbon reduction plan
  - Ceasing coal use at Belle River Power Plant and reducing carbon emissions by 50% by 2028, two years earlier than originally planned
- Expanded voluntary renewables program, one of the largest in the nation
- Began testing phase at Blue Water Energy Center

Focusing on the grid of the future and continued decarbonization efforts

- Filing updated IRP in October, one year earlier than planned
- Evaluating the opportunity to exit coal use at Monroe Power Plant earlier than 2040
- Investing in the grid of the future to ensure best-in-class performance

Maintaining affordability while modernizing the grid and improving reliability

- Filed first general rate case at DTE Electric in almost 3 years
- Implemented innovative regulatory strategies to keep base rates flat



DTE

Building the grid of the future and clean energy transformation creates $35 billion of investment opportunity over the next 10 years

Robust investment opportunities for the grid of the future to improve reliability and provide additional capacity

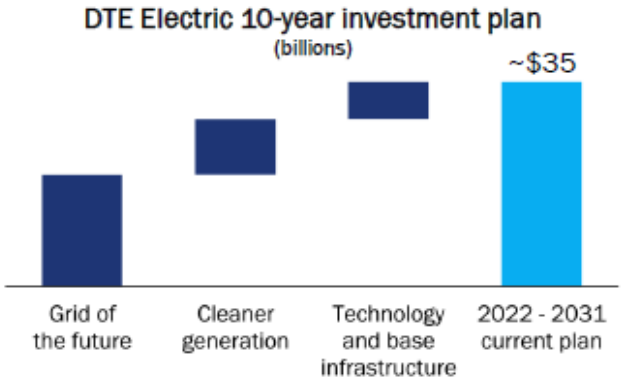
- Hardening the system with circuit rebuilds, new poles, cables and transformers
- Rebuilding sub-transmission and substations for increased capacity and reliability
- Technology and automation driving down outages and their duration

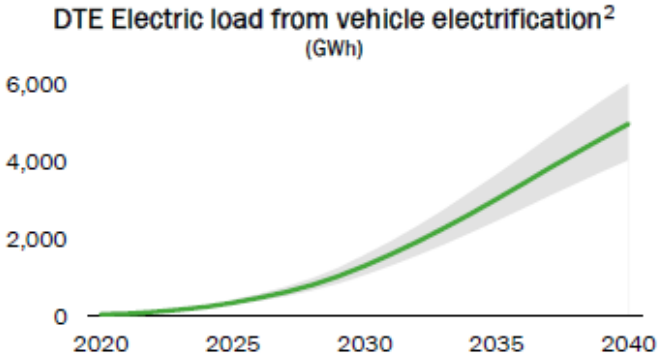
Accelerating the cessation of coal use drives replacement investment

- Renewable resources, short and long duration storage, demand response and dispatchable resources[1]

Preparing for increased pace of electric vehicle adoption that drives load growth and the need for additional grid reliability investment

- General Motors recently announced a $7 billion investment that secures its commitment to accelerate an all-electric future
  - Includes a $4 billion investment in our service territory to convert GM's Orion Township assembly plant to produce full-size electric pick-up trucks



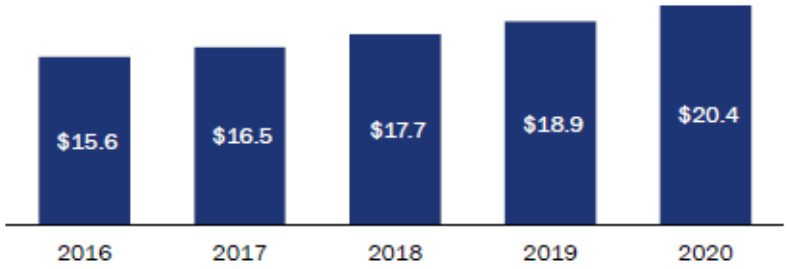


DTE

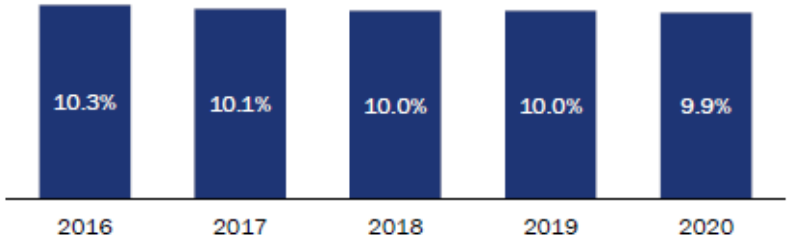
1. Examples include combined cycle plant with carbon capture and storage and hydrogen
2. Excludes underlying macroeconomic conditions including energy efficiency programs

Utilities have provided solid rate base growth

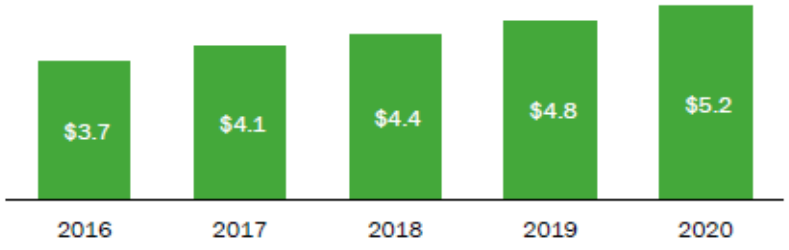
DTE Electric rate base[1]
(billions)



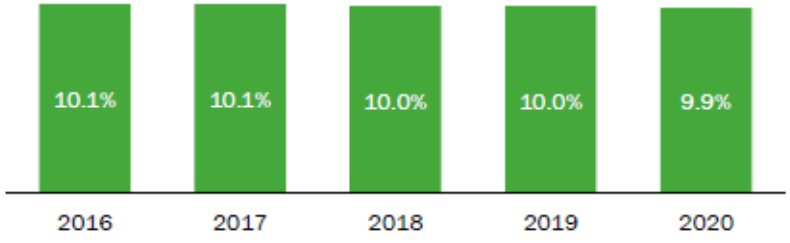
DTE Electric authorized ROE



DTE Gas rate base[1]
(billions)



DTE Gas authorized ROE



DTE

1. Year-end balances; Electric rate base includes renewables investment

Blue Chip Financial Forecasts®

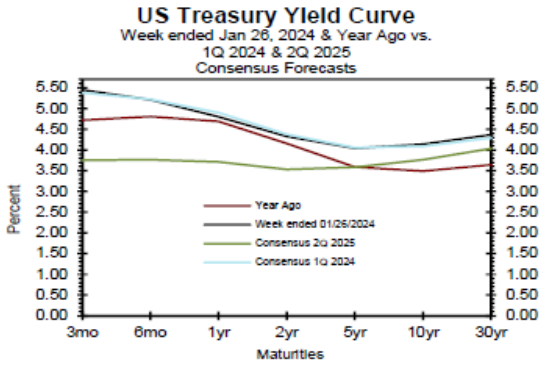
Top Analysts' Forecasts Of U.S. And Foreign Interest Rates, Currency Values And The Factors That Influence Them

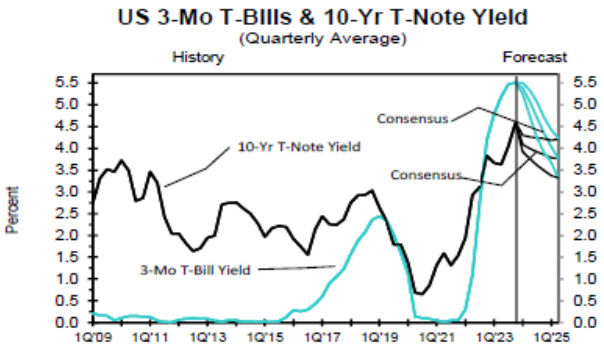
Vol. 43, No. 2, February 1, 2024

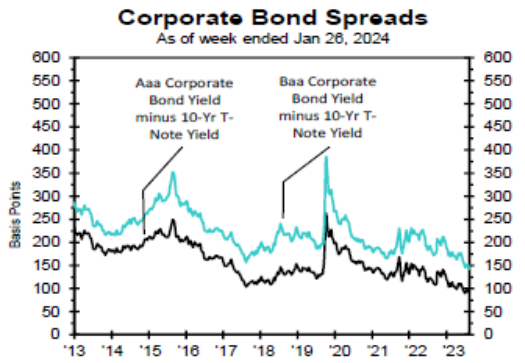
Consensus Forecasts of U.S. Interest Rates and Key Assumptions

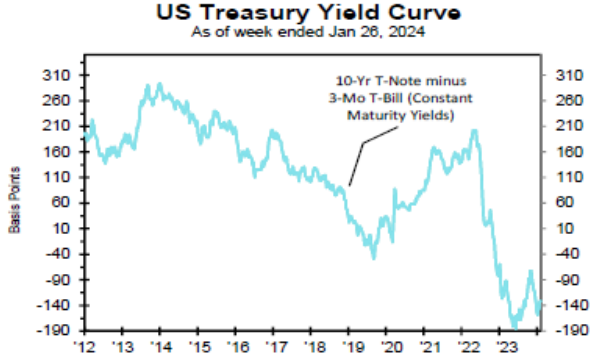
	History								Consensus Forecasts-Quarterly Avg.					
	Average For Week Ending				Average For Month			*Latest Qtr*	1Q	2Q	3Q	4Q	1Q	2Q
Interest Rates	Jan 26	Jan 19	Jan 12	Jan 6	Dec	Nov	Oct	4Q 2023	2024	2024	2024	2024	2025	2025
Federal Funds Rate	5.33	5.33	5.33	5.33	5.33	5.33	5.33	5.33	5.3	5.1	4.7	4.4	4.1	3.8
Prime Rate	8.50	8.50	8.50	8.50	8.50	8.50	8.50	8.50	8.5	8.2	7.9	7.6	7.3	7.0
SOFR	5.31	5.31	5.31	5.36	5.33	5.32	5.31	5.32	5.3	5.2	4.8	4.5	4.2	3.9
Commercial Paper, 1-mo.	5.32	5.33	5.32	5.32	5.32	5.33	5.33	5.33	5.3	5.1	4.7	4.4	4.1	3.9
Treasury bill, 3-mo.	5.45	5.46	5.47	5.47	5.44	5.52	5.60	5.52	5.4	5.1	4.7	4.3	4.0	3.8
Treasury bill, 6-mo.	5.21	5.20	5.22	5.25	5.34	5.44	5.57	5.45	5.2	5.0	4.6	4.3	4.0	3.8
Treasury bill, 1 yr.	4.80	4.79	4.77	4.83	4.96	5.28	5.42	5.22	4.9	4.7	4.4	4.1	3.9	3.7
Treasury note, 2 yr.	4.33	4.32	4.30	4.36	4.46	4.88	5.07	4.80	4.4	4.2	4.0	3.8	3.7	3.5
Treasury note, 5 yr.	4.04	4.02	3.93	3.96	4.00	4.49	4.77	4.42	4.1	3.9	3.8	3.7	3.6	3.6
Treasury note, 10 yr.	4.14	4.12	4.00	3.98	4.02	4.50	4.80	4.44	4.1	4.0	3.9	3.9	3.8	3.8
Treasury note, 30 yr.	4.37	4.34	4.19	4.12	4.14	4.66	4.95	4.58	4.3	4.2	4.2	4.1	4.0	4.0
Corporate Aaa bond	5.07	5.04	4.98	4.97	4.95	5.52	5.87	5.45	5.0	5.0	4.9	4.9	4.8	4.8
Corporate Baa bond	5.57	5.55	5.50	5.51	5.51	6.15	6.53	6.07	6.0	6.0	5.9	5.9	5.8	5.8
State & Local bonds	4.17	4.10	4.05	4.03	4.13	4.56	4.88	4.52	4.3	4.3	4.2	4.2	4.1	4.1
Home mortgage rate	6.69	6.60	6.66	6.62	6.82	7.44	7.62	7.29	6.7	6.6	6.5	6.3	6.2	6.1
	History								Consensus Forecasts-Quarterly					
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q
Key Assumptions	2022	2022	2022	2022	2023	2023	2023	2023	2024	2024	2024	2024	2025	2025
Fed's AFE $ Index	108.3	113.5	118.8	119.8	115.5	114.6	115.0	116.6	115.2	114.9	114.7	114.5	114.7	114.6
Real GDP	-2.0	-0.6	2.7	2.6	2.2	2.1	4.9	3.3	1.4	0.9	0.9	1.4	1.8	2.0
GDP Price Index	8.5	9.1	4.4	3.9	3.9	1.7	3.3	1.5	2.2	2.2	2.3	2.2	2.2	2.1
Consumer Price Index	9.2	9.7	5.5	4.2	3.8	2.7	3.6	2.8	2.5	2.4	2.4	2.3	2.2	2.2
PCE Price Index	7.7	7.2	4.7	4.1	4.2	2.5	2.6	1.7	2.2	2.3	2.2	2.2	2.1	2.1

Forecasts for interest rates and the Federal Reserve's Advanced Foreign Economies Index represent averages for the quarter. Forecasts for Real GDP, GDP Price Index, CPI and PCE Price Index are seasonally-adjusted annual rates of change (saar). Individual panel members' forecasts are on pages 4 through 9. Historical data: Treasury rates from the Federal Reserve Board's H.15; AAA-AA and A-BBB corporate bond yields from Bank of America-Merrill Lynch and are 15+ years, yield to maturity; State and local bond yields from Bank of America-Merrill Lynch, A-rated, yield to maturity; Mortgage rates from Freddie Mac, 30-year, fixed; SOFR from the New York Fed. All interest rate data are sourced from Haver Analytics. Historical data for Fed's Major Currency Index are from FRSR H.10. Historical data for Real GDP, GDP Price Index and PCE Price Index are from the Bureau of Economic Analysis (BEA). Consumer Price Index history is from the Department of Labor's Bureau of Labor Statistics (BLS).









MPSC Case No: U-21534
Requester: AG
Question No.: AGDE-3.96a
Respondent: B. Hill
Page: 1 of 1

Question: 96. Refer to Exhibit A-12, Schedule B5.4, page 3. Please:
a. Provide the source document and specific reference within the document for the inflation rates used for 2019 through 2022.

Answer: Please see file named "U-21534 Capital Exhibits A-12 B5.4 DO.xlsx" at https://dteenergy.sharepoint.com/sites/DiscoveryPortal/Elec/U21534/Documents/Forms/AllItems.aspx?id=%2Fsites%2FDiscoveryPortal%2FElec%2FU21534%2FDocuments%2FInitial%20Filing%20Documents%2F03%20Working%20Models&viewid=c5988175%2D3405%2D40fc%2Db0b8%2Da8fd6e0b646a for all calculations used.

Inflation rates used for historical years were the CPI-U rates which are created and maintained by the U.S. Bureau of Labor and Statistics at https://www.bls.gov.

Inflation rates used:
2019: 1.8%
2020: 1.2%
2021: 4.7%
2022: 8.0%

Attachment: N/A

MPSC Case No: U-21534
Requester: AG
Question No.: AGDE-3.96b
Respondent: B. Hill
Page: 1 of 1

Question: 96. Refer to Exhibit A-12, Schedule B5.4, page 3. Please:
b. Expand the schedule to show the actual capital expenditures for 2023 for each line item.

Answer: Please see attached file.

Attachment: U-21534 AGDE-3.96b-01 A-12 B5.4 Base Capital 2018-2023

U-21534 AGDE-3.96b-01 A-12 B5.4 Base Capital 2018-2023

Michigan Public Service Commission — Case No.: U-21534
DTE Electric Company — Exhibit: A-12
Projected Capital Expenditures — Schedule: B5.4
Distribution Plant - Emergent Replacements — Witness: B. L. Hill
($000) — Page: 3 of 26

	(a)		(b)	(c)	(d)	(e)	(f)	(g)		(h)	(i)	(j)
			Capital Expenditures									
			Historical	Historical	Historical	Historical	Historical	Historical	Historical	1/1/2025 -	1/1/2022 -	Emergent
Line			12 mos. ended	12 mos. ended	12 mos. ended	12 mos. ended	12 mos. ended	5-year	12 mos. ended	12/31/2025	12/31/2022	Replacements
No.	Description		12/31/2018	12/31/2019	12/31/2020	12/31/2021	12/31/2022	average	12/31/2023	Test Year	Historical	Adjustment
								1/				(h) - (i)
1	**Base Capital Programs**											
2	**Emergent Replacements**											
3	**Storm**		142,108	178,931	150,897	395,286	181,326	209,710	273,541			
4	Inflation Adjustment		23,437	25,825	19,731	31,623	-	20,123	-			
5	Inflation Adjusted Historical Capital		165,545	204,756	170,628	426,909	181,326	229,833	181,326	229,833	181,326	48,507
6	Inflation 1/1/23 -12/31/23	3.20%								7,355	5,802	1,552
7	Inflation 1/1/24 -12/31/24	2.90%								6,878	5,427	1,452
8	Inflation 1/1/25 -12/31/25	2.90%								7,078	5,584	1,494
9	Projected Storm Replacements									251,144	198,139	53,005
10	**Non-Storm**		159,555	163,112	155,324	209,236	263,014	190,048	209,356			
11	Inflation Adjustment		26,315	23,542	20,310	16,739	-	17,381	-			
12	Inflation Adjusted Historical Capital		185,870	186,654	175,634	225,975	263,014	207,429	263,014	207,429	263,014	(55,585)
13	Inflation 1/1/23 -12/31/23	3.20%								6,638	8,416	(1,779)
14	Inflation 1/1/24 -12/31/24	2.90%								6,208	7,871	(1,664)
15	Inflation 1/1/25 -12/31/25	2.90%								6,388	8,100	(1,712)
16	Projected Non-Storm Replacements									226,663	287,402	(60,739)
17	**Substation Reactive**		44,275	40,386	38,131	46,008	40,382	41,837	41,178			
18	Inflation Adjustment		7,302	5,829	4,986	3,681	-	4,360	-			
19	Inflation Adjusted Historical Capital		51,577	46,215	43,118	49,689	40,382	46,196	40,382	46,196	40,382	5,814
20	Inflation 1/1/23 -12/31/23	3.20%								1,478	1,292	186
21	Inflation 1/1/24 -12/31/24	2.90%								1,383	1,209	174
22	Inflation 1/1/25 -12/31/25	2.90%								1,423	1,244	179
23	Projected Substation Reactive Replacements									50,480	44,126	6,353
24	**Total Emergent Replacements Normalization Adjustment (Line 5 + Line 12 + Line 19) Pre-inflation**									483,459	484,722	(1,263)
25	Inflation 1/1/23 -12/31/23	3.20%								15,471	15,511	(40)
26	Inflation 1/1/24 -12/31/24	2.90%								14,469	14,507	(38)
27	Inflation 1/1/25 -12/31/25	2.90%								14,889	14,927	(39)
28	Total Projected Emergent Replacements Expense (Line 9 + Line 16 + Line 23)									528,287	529,667	(1,381)
29	Test Year Emergent Replacement Reduction Based on Strategic Spend									(21,436)		
30	Total Projected Emergent Replacements Expense less Test Year Emergent Reduction based upon Strategic Spend									506,851		

Exhibit AG-4

CONFIDENTIAL

MPSC Case No: U-21534
Requester: AG
Question No.: AGDE-3.117
Respondent: M. Leuker
Page: 1 of 1

Question: 117. Refer to pages 5 and 6 of Mr. Leuker's direct testimony on Economic Outlook. Please provide the number of housing starts in Michigan for 2022 and 2023, and the most recent number forecasted for 2024 and 2025. Identify the source of the information and provide a copy of the source documents showing the as of date of the forecasted information.

Answer: Michigan housing starts are not mentioned in pages 5 and 6 of my direct testimony and are not used in the sales forecast. Please see attachment "U-21534 AGDE-3.117 Michigan Housing Starts".

Attachment: *U-21534 AGDE-3.117 Michigan Housing Starts*

DTE Electric Company
Housing Starts

Case No.: U-21534
Attachment: U-21534 AGDE-3.117 Michigan Housing Starts
Respondent: M.B. Leuker
Page: 1 of 1

June 2024 Long Term

Next Update: July 2024

MI

		2022	2023	2024	2025
Housing Starts, Total Private (Thousands, SAAR)	2024Q1	20.52	19.28	18.54	20.55

Data compiled June 18, 2024.
SAAR = seasonally adjusted annual rate.
Dates in Column B represent the historical end dates of each series
Source: S&P Global Market Intelligence.
© 2024 S&P Global.

MPSC Case No: U-21534
Requester: AG
Question No.: AGDE-3.91b
Respondent: B. Hill
Page: 1 of 1

Question: 91. Refer to lines 4-14 on page 23 of Mr. Hill's direct testimony on the I-375 electric facilities' relocation project. Please:

b. Provide the timeline for each development phase of the project and identify the phase that the project is currently in (i.e., Initial scoping, conceptual analysis, engineering design, out for bid, construction, completed). If the project is being completed in multiples stages, provide the requested information for each stage.

Answer: **Phase 1 – Relocations:**
Initial scoping is complete
Conceptual analysis is complete
Engineering and design: Q2 2023 – Q2 2025 (Current Phase)
Conduit work out for bid: Q2 2024 (Current Phase)
Conduit and cable construction: Q3 2024 – Q4 2025

Phase 2 – New Infrastructure:
Initial scoping: Q4 2024
Conceptual analysis: Q3 2025
Engineering and design: Q3 2025 – Q1 2026
Conduit out for bid: TBD pending MDOT schedule
Conduit and cable construction: TBD pending MDOT schedule

Please note that the Company is awaiting an MDOT schedule for the phase 2 work required and cannot perform the second phase work until MDOT has completed their work.

Attachment: N/A

MPSC Case No: U-21534
Requester: AG
Question No.: AGDE-3.91e
Respondent: B. Hill
Page: 1 of 1

Question: 91. Refer to lines 4-14 on page 23 of Mr. Hill's direct testimony on the I-375 electric facilities' relocation project. Please:

e. Provide the latest project schedule issued by MDOT with project start and completion date, and showing the date when utilities relocation needs to be completed. Provide the as of date of the MDOT schedule.

Answer: The Company has not received a schedule from MDOT at this time and has only received a notice to vacate.

Attachment: N/A

MPSC Case No: U-21534
Requester: AG
Question No.: AGDE-4.167
Respondent: R. Steudle
Page: 1 of 1

Question: 167. Refer to the request and response to AGDE-4.120 in Case No. U-21297. Please provide the same information for 2024 and 2025.

Answer:

Estimated Tree-related Annual Cost savings ($ millions)			
Cost Category		2024	2025
Tree-Related O&M	Tree Trim Reactive	8.9	7.4
	Tree Trim Storm	11.2	10
	Other DO – Service Operations Storm and Trouble	8.5	7.5
Tree-Related Capital	Tree Trim Reactive	2.1	1.9
	Tree Trim Storm	12.8	11.4
	Other DO – Service Operations Storm and Trouble	52.0	46.3

Attachment: *NA*

MPSC Case No: U-21534
Requester: AG
Question No.: AGDE-3.107
Respondent: M. Guillaumin
Page: 1 of 1

Question: 107. Refer to Exhibit A-12, Schedule B5.1, page 1, on power generation projects. Please expand this schedule to include the same actual information for each year 2018 to 2023 and provide it in Excel.

Answer: Please see attachment labelled "U-21534 AGDE-3.107 Ex A-12 Sch B5.1 p1 2018-2023".

Attachment: U-21534 AGDE-3.107 Ex A-12 Sch B5.1 p1 2018-2023

Michigan Public Service Commission						Case No.:	U-21534
DTE Electric Company						Question No.:	AGDE-3.107
Actual Capital Expenditures						Witness:	M. Guillaumin
Steam, Hydraulic, and							
Other Power Generation							
($000)							
Line							
No.	Description	2018	2019	2020	2021	2022	2023
1	**Steam Power Generation**						
2	Routine	165,386	198,573	182,121	190,750	218,988	213,273
3	Non-Routine	18,984	59,353	47,451	128,195	104,057	157,175
4	Total Steam Power Generation	184,370	257,926	229,572	318,945	323,045	370,448
5	**Hydraulic Power Generation**						
6	Routine	2,758	4,564	7,736	20,832	12,978	10,144
7	Non-Routine	33,770	34,036	7,882	5,564	9,979	1,508
8	Total Hydraulic Power Generation	36,528	38,600	15,618	26,396	22,957	11,652
9	**Other Power Generation**						
10	Routine	34,293	34,727	11,610	57,616	66,684	47,016
11	Non-Routine	115,376	356,267	379,729	121,616	46,703	21,132
12	Total Other Power Generation	149,669	390,994	391,339	179,232	113,387	68,147
13	Grand Total Capital Expenditures	370,567	687,520	636,529	524,573	459,389	450,247

MPSC Case No: U-21534
Requester: AG
Question No.: AGDE-3.111
Respondent: M. Guillaumin
Page: 1 of 1

Question: 111. Refer to Exhibit A-12, Schedule B5.1, page 3, on power generation. Please expand this schedule to include the same actual information for each year 2018 to 2023 and provide it in Excel.

Answer: Please see attachment labelled "U-21534 AGDE-3.111 Ex A-12 Sch B5.1 p3 2018-2023".

Attachment: U-21534 AGDE-3.111 Ex A-12 Sch B5.1 p3 2018-2023

Michigan Public Service Commission						Case No.:	U-21534
DTE Electric Company						Question No.:	AGDE-3.111
Actual Capital Expenditures						Witness:	M. Guillaumin
Steam, Hydraulic, and							
Other Power Generation -- Routine							
($000)							
Line							
No.	**Total Capital - Routine**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**
	DATA BY SITE						
1	Fleet Support Services	2,335	1,786	2,320	2,157	3,085	2,201
2	Greenwood	2,617	4,043	13,144	9,269	10,581	10,126
3	Belle River/Range Road	12,991	46,511	47,370	41,366	59,478	32,984
4	St. Clair	18,666	8,963	7,737	2,021	(2)	-
5	Trenton Channel/Sibley Quarry	11,085	3,891	2,458	2,676	614	9,062
6	Monroe	117,692	133,379	109,092	133,262	145,233	158,899
7	Ludington	2,758	4,564	7,736	20,832	12,978	10,144
8	Peakers	34,293	34,727	11,610	56,852	65,649	44,372
9	Blue Water	-	-	-	764	1,035	2,644

Exhibit AG-9

CONFIDENTIAL

Exhibit AG-10

CONFIDENTIAL

MPSC Case No: U-21534
Requester: AG
Question No.: AGDE-3.102a
Respondent: J. Davis
Page: 1 of 1

Question: 102. Refer to Exhibit A-12, Schedule B5.3, page 1. Please:
a. Expand this schedule to include the same actual information for each year 2018 to 2023.

Answer: Please find the attached for the Nuclear Generation capital expenditures summary (Exhibit A-12, Schedule B5.3, page 1) for the actual historical 12-month periods ending December 31, 2018, 2019, 2020, 2021, 2022 and 2023, the projected 12-month bridge period ending December 31, 2024, and the projected 12-month test period ending December 31, 2025.

Attachment: U-21534 AGDE-3.102a-01 NG A12B53P1_2018-2023.pdf

Michigan Public Service Commission
DTE Electric Company
Projected Capital Expenditures
Nuclear Production Plant & Nuclear Fuel
($000)

MPSC Case No.: U-21534
Respondent: J. C. Davis
Requester: Attorney General
Question No.: AGDE-3.102a
Page: 1 of 1

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
		Capital Expenditures								
		Historical	Historical	Historical	Historical	Historical	Historical			Projected Test Year
Line No.	Description	12 mos. ended 12/31/2018	12 mos. ended 12/31/2019	12 mos. ended 12/31/2020	12 mos. ended 12/31/2021	12 mos. ended 12/31/2022	12 mos. ending 12/31/2023	12 mos. ending 12/31/2024	24 mos. ending 12/31/2024 col. (g)+(h)	12 mos. ending 12/31/2025
1	**Nuclear Production Plant**									
2	Routine and Small Projects 1/	106,794	45,284	94,044	53,076	91,269	64,822	68,892	133,714	42,450
3	Non-Routine and Large Projects 2/	61,112	84,784	176,456	96,824	173,244	89,201	113,872	203,073	39,420
4	Total Projects	167,906	130,068	271,300	149,700	264,513	154,022	182,765	336,787	80,870
5	**Nuclear Fuel**									
6	Uranium	28,819	30,578	-	51,761	-	48,048	-	48,048	61,379
7	Conversion	-	-	-	-	-	-	-	-	-
8	Enrichment	25,089	27,317	-	36,292	-	32,989	-	32,989	36,219
9	Fabrication	18,520	20,427	278	32,059	3,246	28,970	2,000	30,970	35,478
10	Total Nuclear Fuel	72,428	78,322	278	120,112	3,246	110,008	2,000	112,008	135,077
11	**Total Capital Expenditures**	240,334	208,390	271,578	269,812	267,759	264,030	184,765	448,795	215,947

1/ See Exhibit A-12, Schedule B5.3, Pages 2 and 3
2/ See Exhibit A-12, Schedule B5.3, Page 4

MPSC Case No: U-21534
Requester: AG
Question No.: AGDE-3.102b
Respondent: J. Davis
Page: 1 of 1

Question: 102. Refer to Exhibit A-12, Schedule B5.3, page 1. Please:

b. Show how the amounts for Nuclear Fuel on lines 6 to 9 for the projected test year were determined and explain why they increase significantly from 2023.

Answer: The Fermi 2 24-month-cycle equilibrium core reload plan is approximately 240 new nuclear fuel assemblies per refueling outage. However, the Fermi 2 Cycle 23 (2024 – 2026) core design only required 220 new fuel assemblies due to Fermi 2's Cycle 22 (2022 – 2024) operational history. DTE Electric projects the Fermi 2 reactor core will require 244 new nuclear fuel assemblies for core reload in Fermi 2 Refueling Outage 23 (spring 2026) to support Fermi 2 Cycle 24 (2026 – 2028) consistent with the Company's 2024 PSCR Plan U-21425.

DTE Electric determines projected nuclear fuel expenditures using industry-accepted software that is in accordance with applicable sections of Title 18 of the Code of Federal Regulations. The Fermi 2 nuclear fuel expenditures for the 12-month projected test period ending December 31, 2025, are an outcome of a reasonable and prudent analysis of the nuclear fuel cycle components and contract terms applied to the projected Fermi 2 nuclear core design requirements, consistent with the Company's 2024 PSCR Plan U-21425.

Attachment: None

MPSC Case No: U-21534
Requester: AG
Question No.: AGDE-3.103a
Respondent: J. Davis
Page: 1 of 1

Question: 103. Refer to Exhibit A-12, Schedule B5.3, pages 2-4. For each project of $3.0 million or greater in 2024 and 2025, please:

a. Describe the project, what is being done, and why it is necessary to undertake this project.

Answer: Part III Supplemental filing requirements Attachment 9, file labelled "U-21534 NG Att 9" provides the scope and rationale for each capital project greater than $1 million in total expenditures. Exhibit A-20, Schedule J2 provides further details regarding scope and rationale for Nuclear Generation Capital Routine and Small Projects. My direct testimony further provides additional narrative details regarding scope and rationale for Nuclear Generation Capital Routine and Small Projects and Nuclear Generation Capital Non-Routine and Large Projects. Individual project design changes were provided in response to ABDE-1.13.

Attachment: None

MPSC Case No: U-21534
Requester: AG
Question No.: AGDE-3.103b
Respondent: J. Davis
Page: 1 of 1

Question: 103. Refer to Exhibit A-12, Schedule B5.3, pages 2-4. For each project of $3.0 million or greater in 2024 and 2025, please:

b. Provide the project phases of development with related timeline and the identify the current phase of development (i.e., needs identification, initial concept scoping, engineering design, out for bids, construction, completed) and the target in-service date.

Answer: Nuclear Generation does not status projects as described above and therefore cannot provide project status in the requested manner. Target in-service dates for each project are provided in Exhibit A-12, Schedule B5.3, pages 2-4 in Column (g) of each page. As I stated in my direct testimony, most Nuclear Generation capital expenditures in 2024 were to support project implementation during Fermi 2 Refueling Outage 22, which completed in May 2024. Updated capital expenditure forecasts which incorporated actual RF22 performance were provided in response to STDE-2.15.

Attachment: None

MPSC Case No: U-21534
Requester: AG
Question No.: AGDE-3.103c
Respondent: J. Davis
Page: 1 of 1

Question: 103. Refer to Exhibit A-12, Schedule B5.3, pages 2-4. For each project of $3.0 million or greater in 2024 and 2025, please:

c. Provide the project cost by year from inception to completion.

Answer: Please find attached the Nuclear Generation actual Routine and Small Project capital expenditures for the historical 12-month periods ending December 31, 2017, 2018, 2019, 2020, 2021, 2022 and 2023 and the projected capital expenditures for the 12-month bridge period ending December 31, 2024, and the 12-month projected test period ending December 31, 2025 in the format of Exhibit A-12, Schedule B5.2 pages 2 - 3.

In the same attachment is the Nuclear Generation actual Non-Routine and Small Project capital expenditures for the historical 12-month periods ending December 31, 2017, 2018, 2019, 2020, 2021, 2022 and 2023 and the projected capital expenditures for the 12-month bridge period ending December 31, 2024, the 12-month projected test period ending December 31, 2025, and the 12-month, beyond-the-test-period period ending December 31, 2026 in the format of Exhibit A-12, Schedule B5.2 page 4.

Attachment: U-21534 AGDE-3.103c-01 ExhibitA-12ScheduleB53 Page 2-4 extended.pdf
U-21534 AGDE-3.103c-02ExhibitA-12ScheduleB53 Page 2-4 extended.xslx

Michigan Public Service Commission
DTE Electric Company
Projected Capital Expenditures
Nuclear Production Plant
Routine and Small Projects
($000)

MPSC Case No.: U-21534
Respondant: J. C. Davis
Requester: Attorney General
Question No.: AGDE-3.103c
Page: 1 of 3

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(l)	(m)
							Capital Expenditures					
		Historical	Historical	Historical	Historical	Historical	Historical	Historical	Projected Bridge Period		Projected Test Year	
Line No.	Project Name	12 mos. ended 12/31/2017	12 mos. ended 12/31/2018	12 mos. ended 12/31/2019	12 mos. ended 12/31/2020	12 mos. ended 12/31/2021	12 mos. ended 12/31/2022	12 mos. ended 12/31/2023	12 mos. ending 12/31/2024	24 mos. ending 12/31/2024	12 mos. ending 12/31/2025	In Service Year
										col. (h)+(i)		
1	**Routine and Small Projects**											
2	Undervessel replacements	7,365	5,021	171	11,573	2,502	8,011	212	6,415	6,627	-	Annual
3	Visual Annunciator System (VAS) replacement	10	47	3,315	3,350	3,183	7,570	25	-	25	-	Annual
4	Security system computer	-	-	188	(14)	1,230	7,080	17,011	9,197	26,207	-	Annual
5	Plant radio system	4,390	2,118	2,706	391	2,295	4,176	6,049	1,498	7,546	-	Annual
6	Residual heat removal service water outlet valve (F068A/B) replacement	-	-	-	2,008	1,982	3,817	913	3,900	4,812	-	Annual
7	Environmentally Qualified (EQ) seal replacements	-	-	-	321	3,144	3,758	6	-	6	-	Annual
8	Safety relief valves (SRVs)	-	2,509	530	4,678	1,689	3,148	2,219	2,264	4,483	759	Annual
9	Snubbers	2,682	2,711	28	2,742	531	3,002	284	1,401	1,685	32	Annual
10	Low Pressure Turbine (LPT) expansion joints	-	-	-	996	238	2,423	-	-	-	-	Annual
11	Unitized actuators (UAs) replacement	3,720	3,316	1,541	5,786	1,964	2,389	1,210	4,660	5,870	230	Annual
12	Residual Heat Removal (RHR) motors replacement	-	-	-	-	-	2,374	3,609	2,744	6,352	949	Annual
13	High pressure stop and control valves (HPSV/HPCV) replacement	-	2,468	17	(14)	967	2,274	528	4,141	4,670	-	Annual
14	Reactor recirculation system (RRS) replacements	-	-	-	518	8	2,198	(206)	-	(206)	-	Annual
15	Main Steam Isolation Valves (MSIV) replacement	1,499	839	-	2,621	2	2,141	227	906	1,133	-	Annual
16	Low pressure stop and intercept valves (LPSV/LPIV) replacements	-	-	-	(53)	2,294	2,083	352	4,416	4,768	-	Annual
17	Valve replacements	3,782	1,628	1,796	2,525	2,417	2,066	1,060	1,220	2,280	-	Annual
18	Main steam bypass valve (MSBV) replacement	-	-	-	-	506	1,857	-	-	-	-	Annual
19	Core spray line vents	-	-	-	448	742	1,838	753	1,625	2,377	-	Annual
20	Diesel fire pump	-	-	-	-	1,051	1,720	167	-	167	-	Annual
21	Emergency equipment service water (EESW) pump	-	-	-	-	-	1,669	-	-	-	-	Annual
22	Motor operated valves (MOV)	779	4,995	-	11	200	1,619	-	-	-	-	Annual
23	Reactor Protection System (RPS) motor-generator (MG) set replacements	-	-	-	-	713	1,596	315	-	315	176	Annual
24	Emergency Diesel Generator (EDG) cylinder liner replacements	-	-	-	-	-	1,475	-	-	-	-	Annual
25	Flow accelerated corrosion (FAC) program piping insulation	412	318	35	706	-	1,229	76	758	833	-	Annual
26	Owner Controlled Area (OCA) security access control system	-	-	-	-	-	1,158	(609)	-	(609)	-	Annual
27	Residual heat removal service water (RHRSW) pump	-	-	-	837	440	974	-	-	-	-	Annual
28	Control rod drive mechanism (CRDM) replacement	1,222	4,280	3,857	5,132	4,770	916	4,604	603	5,206	4,867	Annual
29	Moisture separator reheater relief valve (MSRRV)	-	-	41	266	352	819	-	-	-	-	Annual

Michigan Public Service Commission
DTE Electric Company
Projected Capital Expenditures
Nuclear Production Plant
Routine and Small Projects
($000)

MPSC Case No.: U-21534
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Question No.: AGDE-3.103c
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Line No.	(a) Project Name	(b) Historical 12 mos. ended 12/31/2017	(c) Historical 12 mos. ended 12/31/2018	(d) Historical 12 mos. ended 12/31/2019	(e) Historical 12 mos. ended 12/31/2020	(f) Historical 12 mos. ended 12/31/2021	(g) Historical 12 mos. ended 12/31/2022	(h) Historical 12 mos. ended 12/31/2023	(i) Capital Expenditures Projected Bridge Period 12 mos. ending 12/31/2024	(j) Capital Expenditures Projected Bridge Period 24 mos. ending 12/31/2024 col. (h)+(i)	(l) Projected Test Year 12 mos. ending 12/31/2025	(m)
30	General plant tools	2,155	2,398	3,223	6,175	4,307	688	3,544	2,504	6,048	3,375	Annual
31	Heater Drains Pump (HDP) replacement	-	-	-	-	-	593	13	-	13	-	Annual
32	Condensate pump	76	753	24	692	0	426	402	1,069	1,471	189	Annual
33	Residual Heat Removal (RHR) HVAC hydramotors	530	432	-	205	80	328	283	86	369	45	Annual
34	Breaker replacement	-	-	-	-	-	308	55	269	324	265	Annual
35	Plant wireless	-	-	-	-	-	297	1,908	5,871	7,778	-	Annual
36	Condensate filter demineralizer (CFD) septas	507	325	648	342	133	233	156	363	519	345	Annual
37	Refuel bridge mast	-	-	-	-	1,007	205	-	-	-	-	Annual
38	Refuel Floor monorail replacement	-	-	-	-	-	205	285	370	655	-	Annual
39	Switchyard footer replacement	-	-	-	-	-	194	237	132	369	-	Annual
40	Unitized Actuator shop	-	-	-	-	-	182	1,359	101	1,460	-	Annual
41	Hot machine shop	-	-	-	-	-	178	3,514	267	3,780	-	Annual
42	Contractor time & work tracking system	-	-	-	-	-	158	24	-	24	-	Annual
43	Piping replacements	366	2,208	20	8,753	7	106	3,851	752	4,603	-	Annual
44	Security defensive strategy simulator	-	-	-	-	1,567	106	-	-	-	-	Annual
45	Control rod blade (CRB) replacements	84	2,831	3,212	-	1,905	78	2,526	49	2,576	887	Annual
46	Pump and motor replacements	-	-	-	542	742	34	318	-	318	-	Annual
47	Reverse osmosis system replacement	-	-	-	-	-	21	-	-	-	2,597	Annual
48	Independent Spent Fuel Storage Installation (ISFSI) casks	76	755	1,079	(762)	1,856	2	49	689	738	282	Annual
49	Integrated Plant Computer System (IPCS) replacement	5,883	4,914	3,961	7,566	537	(10)	-	-	-	-	Annual
50	Paperless recorders replacement	-	422	781	1,212	903	(10)	-	131	131	124	Annual
51	Roof replacements	-	-	-	-	-	-	3,385	-	3,385	-	Annual
52	Neutron Monitoring System replacements	-	-	-	-	-	-	2,171	2,683	4,854	-	Annual
53	SCRAM discharge header	-	-	-	-	-	-	671	1,379	2,051	-	Annual
54	Temporary power modifications	-	-	-	-	-	-	493	1,945	2,438	-	Annual
55	Balance of plant (BOP) battery replacement	-	-	-	-	-	-	85	1,228	1,313	-	Annual
56	Reactor feed pump turbine (RFPT) rotor	847	1,392	-	(1)	-	-	167	1,721	1,888	-	Annual
57	Hydrogen seal replacement	-	-	-	-	-	-	124	1,181	1,304	-	Annual
58	Heater Feed Pump (HFP) replacement	-	-	-	-	-	-	-	340	340	-	Annual
59	Natural draft cooling towers	8,031	7,240	3,673	4,306	-	-	(775)	-	(775)	9,515	Annual
60	Document management system enhancements	-	-	-	-	-	-	-	-	-	9,992	Annual
61	Remote monitoring	-	-	-	-	-	-	-	-	-	4,473	Annual
62	Electronic work package system	-	-	-	-	-	-	-	-	-	2,584	Annual
63	GSW Pump House Critical Digital Asset (CDA)	-	-	-	-	-	-	-	-	-	745	Annual
64	Balance of Projects (<$500K)	8,030	2,641	2,495	(285)	5,848	1,568	1,176	14	1,190	16	Annual
65	**Total Routine and Small Projects**	**95,548**	**56,560**	**33,341**	**73,573**	**52,109**	**81,269**	**64,822**	**68,892**	**133,714**	**42,450**	

Michigan Public Service Commission
DTE Electric Company
Projected Capital Expenditures
Nuclear Production Plant
Non-Routine and Large Projects
($000)

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No.	Project Name	Historical 12 mos. ended 12/31/2014	Historical 12 mos. ended 12/31/2015	Historical 12 mos. ended 12/31/2016	Historical 12 mos. ended 12/31/2017	Historical 12 mos. ended 12/31/2018	Historical 12 mos. ended 12/31/2019	Historical 12 mos. ended 12/31/2020	Historical 12 mos. ended 12/31/2021	Capital Expenditures Historical 12 mos. ended 12/31/2022	Historical 12 mos. ended 12/31/2023	Projected Bridge Period 12 mos. ending 12/31/2024	Projected Bridge Period 24 mos. ending 12/31/2024	Projected Test Year 12 mos. ending 12/31/2025	Beyond Projected Test Year 12 mos. ending 12/31/2026	Beyond Projected Test Year 12 mos. ending 12/31/2027	Beyond Projected Test Year 12 mos. ending 12/31/2028	Beyond Projected Test Year 12 mos. ending 12/31/2029	Beyond Projected Test Year 12 mos. ending 12/31/2030	In Service Year
													col. (k)+(l)							
1	**Non-Routine and Large Projects**																			
2	Main Unit Generator replacement	297	9,402	10,964	10,742	14,100	29,751	26,611	21,349	47,087	33,774	54,025	87,799	14,292	48,431					2026
3	Torus Vent Header	-	-	-	-	-	-	-	9,411	34,135	-	-	-	-						Annual
4	Underground safety-related service water piping	-	409	1,863	1,482	3,512	13,323	7,958	10,191	23,287	10,459	32,543	43,002	-						2024
5	Main Unit Generator rotor replacement	-	-	-	-	-	-	-	8,047	15,948	-	-	-	-						Annual
6	Generator excitation automatic voltage regulator (AVR)	-	-	-	54	633	3,913	1,943	2,378	11,028	14	-	14	-						Annual
7	Transformer #65 and #69 replacements	-	-	-	-	-	-	11,929	10,495	10,439	115	-	115	-		3,988	8,994			Annual
8	License renewal implementation (LRI)	-	-	1,655	2,809	2,685	4,412	4,043	2,863	5,755	7,748	7,554	15,302	729						2025
9	Circulating Water (CW) Discharge Pipe	-	-	-	-	-	-	-	667	5,251	-	-	-	734	9,669					Annual
10	Feed water heaters replacements	-	-	-	-	-	-	1,821	7,661	4,873	7,006	4,014	11,019	4,730	25,682					2026
11	Drywell Coolers #12 and #13	-	-	-	-	-	609	1,775	1,707	3,451	8	-	8	-						Annual
12	Boraflex fuel storage racks	-	-	-	4,534	1,602	2,928	3,954	2,309	3,397	2,924	1,126	4,051	-						2024
13	Radiation monitors	-	-	-	-	-	-	-	135	2,701	4,749	8,439	13,189	2,611						2024
14	Reactor Building Freight Elevator	-	-	-	-	-	-	878	8,596	1,900	2	-	2	-						Annual
15	Transformer replacements	-	-	-	-	-	144	1,307	2,892	1,625	312	-	312	-						Annual
16	Drywell Cooler #8	-	-	-	-	562	611	129	845	1,501	36	-	36	626						2026
17	Fire header restoration	1,538	-	668	-	1,490	1,012	47	84	840	4,093	-	4,093	-						Annual
18	Drywell Coolers #10 and #14	-	-	-	-	-	1,824	2,356	412	33	-	-	-	-						Annual
19	Off-gas chiller replacement	-	-	-	-	327	3,516	9,072	147	15	-	-	-	-						Annual
20	General Service Water (GSW) intake groin replacement	-	-	-	-	81	5,682	(7)	4,526	(18)	17,981	-	17,981	-						2024
21	Turbine Building moisture barrier	-	-	-	-	-	-	-	-	-	507	-	507	-						2024
22	Digital control modifications	-	-	-	-	-	-	-	-	-	209	-	209	-				4,000	8,000	Annual
23	Drywell moisture barrier replacement	-	-	-	-	-	-	-	-	-	66	2,766	2,832	-						2024
24	Fire detection system replacement	-	-	-	-	-	-	-	-	-	13	2,317	2,330	1,252		5,000	5,000			2024
25	Interuptable Air Supply (IAS) dryer replacements	-	-	-	-	-	-	-	-	-	4	825	829	-						Annual
26	Reactor recirculation motor-generator (RRMG) replacements	-	-	-	-	-	-	-	-	-	0	-	0	6,226	10,893	4,107	5,053			2026
27	Turbine controls replacements	-	-	-	-	-	-	-	-	-	37	263	300	762		4,000	4,000	8,000	8,000	Annual
28	Sanitary system replacement	-	-	-	-	-	-	-	-	-	-	-	-	6,457						Annual
29	Emergency Diesel Generator Service Water (EDGSW) piping	-	-	-	629	2,712	814	1,298	150	(4)	-	-	-	-						Annual
30	Other Capital Spend <$100K	-	-	-	570	-	130	-	-	-	(859)	-	(859)	-						Annual
31	**Total Non-Routine and Large Projects**	**1,835**	**9,811**	**15,151**	**20,820**	**27,703**	**68,671**	**75,113**	**94,864**	**173,244**	**89,201**	**113,872**	**203,073**	**38,420**	**94,675**	**17,095**	**23,047**	**12,000**	**16,000**	

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Requester: AG
Question No.: AGDE-3.114a
Respondent: M. Hatsios
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Question: 114. Refer to Exhibit A-12, Schedule B5.7.3 on Customer Service IT projects. For each project of $3.0 million or greater in 2024 and 2025, please:
a. Describe the project, what is being done and why it is necessary to undertake each project.

Answer: The requested information for Customer Service IT projects that are $3.0 million or greater in 2024 and 2025 can be found using the references listed below:

2024-2025 Projects ($3 million or greater)	Witness Hatsios Direct Testimony Pages and Exhibit Reference	Exhibit A-24 N1.1 Reference
MIGP Customer - Requested Renewable Energy Projects	MJH-86 Line 10 - MJH-87 Line 7	Page 1 Line 6 Pages 17 - 19
MIGP Scope 3 Billing and Enrollment	MJH-89 Line 21 - MJH-90 Line 6	Page 1 Line 10 Pages 33-34
Regulatory Compliance	MJH-93 Line 12 - MJH-95 Line 24	Page 2 Line 17 Pages 43-44
Rider 17 – MIGreenPower, Residential and Small Commercial & Industrial	MJH-90 Lines 8 - 22	Page 2 Lines 19-20 Pages 47-50
Advanced Analytics AA Use Cases Implementation	MJH-40 Lines 12-24 and MJH-49 Line 24 - MJH-52 Line 20	Page 2 Line 24 Pages 57-60
Collection Web Self-Service	MJH-22 Lines 14-24and MJH-23 Line 1- MJH 24 Line 17	Page 3 Lines 37-38 Pages 86-89
Error Free Communication - Outage Status (Customer-Facing System)	MJH-69 Line 16 – MJH 70 Line 3, MJH-80 Line 18 -MJH-84 Line 7, and	Page 3 Line 47 Pages 107-110

	Exhibit A-24 Schedule N7 Page 3.	
MIMO Web Self-Service	MJH-27 Lines 15 - MJH-29 Line 2	Page 4 Lines 53-54 Pages 121-124
Payment Web Self-Service	MJH-36 Line 20 - MJH-38 Line 24	Page 4 Lines 55-56 Pages 125-129

Attachment: None.

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Requester: AG
Question No.: AGDE-3.114b
Respondent: M. Hatsios
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Question: 114. Refer to Exhibit A-12, Schedule B5.7.3 on Customer Service IT projects. For each project of $3.0 million or greater in 2024 and 2025, please:

b. Provide the project phases of development with related timeline and the identify the current phase of development (i.e., needs identification, initial concept development/scoping, system requirements, implementation, completed) and the target in-service date.

Answer: The Customer Service IT projects of $3.0 million or greater in 2024 and 2025 utilize three different methodologies when managing a project's delivery. These methodologies are Agile, Waterfall, and project-specific delivery phases.

1. The following projects utilize the Agile methodology to manage project delivery lifecycle. Delivery cycle in Agile projects is broken down into short time-boxed periods called sprints. Each sprint cycle includes the following phases: Tech refinement/ Analysis, Design, Development, Testing, Go-live/ Deployment, and Post-production. There are instances where multiple sprints may be completed for each phase. The new features and enhancements are deployed per application release calendar.

2024-2025 Projects ($3 million or greater) that utilize the Agile Methodology	Sprint Completion Timeline
Collection Web Self-Service	Bi-weekly
Error Free Communication - Outage Status	Bi-weekly
MIMO Web Self-Service	Bi-weekly
Payment Web Self-Service	Bi-weekly

2. The Regulatory Compliance project utilizes the Waterfall methodology to complete the project delivery lifecycle. This project funds the Customer Relationship & Billing and reporting system changes necessary to comply with the outcome of any MPSC rate orders, to provide funding for emerging regulatory compliance items, and to fund the implementation of new rates and programs as approved by the MPSC (see Hatsios Direct Testimony Page MJH-93 Lines 20-23). Waterfall projects are broken down into phases with durations that align with the development effort

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required for the system functional change. Each project lifecycle includes the following phases: Analysis/Requirements/Design, Build/Development, Testing, Go-live/ Deployment, and Post-production. Specific dates for each phase depend on the extent of the changes and vary by the specific regulatory requirement. Since these projects follow the Waterfall methodology, the enhancements are deployed to align with DTE's defined monthly release calendar.

3. The following 2024-2025 projects utilize project-specific delivery phases.

2024 Advance Analytics Use Cases Implementation: Use Case #1 - Contact Center Journey Mapping	**Start Date**	**Finish Date**
Initiation	4/1/2024	4/1/2024
Design	4/1/2024	4/5/2024
Data Integration	4/8/2024	9/6/2024
Analytics and Insights Development	8/9/2024	10/11/2024
Phase 1 and Phase 2 Testing and Deployment	10/11/2024	12/13/2024
In-Service / Go-Live	12/13/2024	12/13/2024
Warranty	12/13/2024	12/31/2024

2024 Advance Analytics Use Cases Implementation: Use Case #2 - Energy Assistance and EWR	**Start Date**	**Finish Date**
Initiation	2/26/2024	2/26/2024
Requirements / Design	2/26/2024	5/20/2024
Develop deployment pipeline for machine learning model	5/20/2024	6/14/2024
Production deployment and validation of Machine Learning pipeline	6/17/2024	7/15/2024
SAP integration / Agent Assist Development and Testing	5/28/2024	8/9/2024
Go-Live for SAP Changes and Agent Assist	7/26/2024	8/9/2024
Machine Learning pipeline, SAP, Agent Assist-integrated Post-production Testing	8/9/2024	9/16/2024
Warranty	9/17/2024	10/14/2024

2025 Advance Analytics Use Cases Implementation: Use Case #1 - Reducing MPSC Complaints	**Start Date**	**Finish Date**
Initiation	3/11/2025	3/11/2025
Requirements / Design	3/11/2025	5/30/2025

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Develop deployment pipeline for machine learning model	6/2/2025	10/24/2025
Production testing and deployment of Machine Learning pipeline	7/14/2025	12/12/2025
In-Service / Go-Live	12/12/2025	12/12/2025
Warranty	12/15/2025	12/31/2025

2025 Advance Analytics Use Cases Implementation: Use Case #2 - Automating CR Notes	**Start Date**	**Finish Date**
Initiation	2/17/2025	2/17/2025
Requirements / Design	2/17/2025	5/16/2025
Develop deployment pipeline for machine learning model	5/19/2025	6/20/2025
Production deployment and testing of Machine Learning pipeline	6/23/2025	7/11/2025
SAP integration	5/19/2025	8/22/2025
Go-Live for SAP Changes	8/22/2025	8/22/2025
Post-production Testing	8/25/2025	9/26/2025
Warranty	9/29/2025	10/26/2025

	MIGP Customer - Requested Renewable Energy Projects		**Rider 17 – MIGreenPower, Residential and Small Commercial & Industrial (2024)**		**Rider 17 – MIGreenPower, Residential and Small Commercial & Industrial (2025)**	
	Start Date	**End Date**	**Start Date**	**End Date**	**Start Date**	**End Date**
Project Kick-off	8/1/2024	8/31/2024	2/1/2024	3/30/2024	1/2/2025	2/28/2025
Design	9/1/2024	12/31/2024	4/1/2024	7/31/2024	4/1/2025	4/30/2025
Development	1/2/2025	6/30/2025	4/1/2024	9/30/2024	4/1/2025	9/30/2025
Testing	7/1/2025	10/30/2025	7/31/2024	10/30/2024	7/1/2025	10/30/2025
Go-Live	11/30/2025	11/30/2025	11/30/2024	11/30/2024	11/30/2025	11/30/2025
Warranty	12/1/2025	12/31/2025	12/1/2024	12/31/2024	12/1/2025	12/31/2025

Not listed in the table above is the MIGP Scope 3 Billing and Enrollment project as it now has a project delivery year of 2026. While there has been delay in the MIGP Scope 3 Billing and Enrollment project due to the unavailability of generation capacity, the Company fully intends and has plans to complete the MIGP project(s) identified in the rate case.

Attachment: None.

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Requester: AG
Question No.: AGDE-3.114c
Respondent: M. Hatsios
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Question: 114. Refer to Exhibit A-12, Schedule B5.7.3 on Customer Service IT projects. For each project of $3.0 million or greater in 2024 and 2025, please:

c. Provide the project cost by year from inception to completion.

Answer: The project costs by year can be found in the table below.

2024-2025 Projects ($3 million or greater)	Investment Category	Exhibit A-12 B5.7.3 Line No(s).
MIGP Customer - Requested Renewable Energy Projects	Regulatory/Compliance	4
MIGP Scope 3 Billing and Enrollment	Regulatory/Compliance	11
Regulatory Compliance	Regulatory/Compliance	14
Rider 17 – MIGreenPower, Residential and Small Commercial & Industrial	Regulatory/Compliance	15
Advanced Analytics AA Use Cases Implementation	IT Enhancement	18
Collection Web Self-Service[3,4]	Strategic	21 (2022)[1], 29, 31 (2022), 39 (2022)[2], 48 (2022)
Error Free Communication - Outage Status	Strategic	35
MIMO Web Self-Service[3,4]	Strategic	21 (2022)[1], 38 (2022), 39 (2022)[2], 41
Payment Web Self-Service[4]	Strategic	42

[1] 2022 amount of the CR&B Enhancement project allocated to Collection digital self-service is $100K and $200K for MIMO digital self-service. See Hatsios Direct Testimony for the projects that fund Collection digital self-service on Page MJH-21 (Table 3) and MIMO digital self-service on Page MJH-25 (Table 5).

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[2] 2022 amount of the Journey Work Product Transformation Teams project allocated to Collection digital self-service is $2,300K and $3,000K for MIMO digital self-service. See Hatsios Direct Testimony for the projects that fund Collection digital self-service on Page MJH-21 (Table 3) and MIMO digital self-service on Page MJH-25 (Table 5).

[3] The Collection and MIMO Web Self-Service projects are a part of the digital self-service projects that include additional projects whose cost supported the development of the Collection and MIMO digital self-service transactions. These costs are referenced in the table for the year in which it is applicable. The 2022 amounts are shown in the footnotes above.

[4] 2021 IT digital self-service projects outside of the period included in U-21534 supported the development of the Collection, MIMO, and Payment digital self-service transactions. These projects include: IVR Virtual Assistants in the amount of ~$1,100K in 2021 for Collection, Digital Experience Group in the amount of $1,579K in 2021 for MIMO, Digital Transactional Experience in the amount of ~$500K in 2021 for MIMO and in the amount of ~$500K in 2021 for Collection, and Kiosk Experience in the amount of $1,522K in 2021 for Payment. Also, there were 2020 IT capital costs in the amount of $5,183K from the Digital Experience Group that supported MIMO and Outage digital self-service; however, we are unable to break-out the MIMO portion.

Attachment: None.

MPSC Case No: U-21534
Requester: AG
Question No.: AGDE-3.114d
Respondent: M. Hatsios
Page: 1 of 1

Question: 114. Refer to Exhibit A-12, Schedule B5.7.3 on Customer Service IT projects. For each project of $3.0 million or greater in 2024 and 2025, please:

d. Provide a copy of the cost/benefit analysis showing the project was economically justified.

Answer: As outlined in witness Sharma Direct Testimony (see Page PS-7 Line 17 – PS-8 Line 20), DTE IT assigns and utilizes a project prioritization score (PPS) in place of traditional cost benefit analysis for prioritizing all IT investments. The PPS score, business benefit and outcomes supporting each project are provided in the executive summaries, Exhibit A-24, Schedule N1.1.

2024-2025 Projects ($3 million or greater)	Investment Category	Exhibit A-24 N1.1 Reference
MIGP Customer - Requested Renewable Energy Projects	Regulatory/Compliance	Pages 17-19
MIGP Scope 3 Billing and Enrollment	Regulatory/Compliance	Pages 33-34
Regulatory Compliance	Regulatory/Compliance	Pages 43-44
Rider 17 – MIGreenPower, Residential and Small Commercial & Industrial	Regulatory/Compliance	Pages 47-50
Advanced Analytics AA Use Cases Implementation	IT Enhancement	Pages 57-60
Collection Web Self-Service	Strategic	Pages 86-89
Error Free Communication - Outage Status	Strategic	Pages 107-110
MIMO Web Self-Service	Strategic	Pages 121-124
Payment Web Self-Service	Strategic	Pages 125-129

Additionally, for projects that support call volume reduction, these projects are supported by the NPV model, see Exhibit A-24, Schedule N6, Page 3. Of the above 2024-2025 projects, these projects would include a portion of the 2024 Advanced Analytics Use Cases Implementation, and Collection Web Self-Service, MIMO Web Self-Service, and Payment Web Self-Service.

Attachment: None.

MPSC Case No: U-21534
Requester: AG
Question No.: AGDE-3.123a
Respondent: P. Sharma
Page: 1 of 1

Question: 123. Refer to Exhibit A-12, Schedule B5.7.1 on Customer Service IT projects. For each project of $3.0 million or greater in 2024 and 2025, please:

a. Describe the project, what is being done, and why it is necessary to undertake each project.

Answer: The requested information for Customer Service IT projects of $3.0 million or greater in 2024 and 2025 can be found using the references listed below:

Projects $3 million or greater	Witness Sharma's Direct Testimony Page Reference	Exhibit A-24 N1 Reference
Customer Digital Channels and Self-Service Program	PS-41 and PS-42	Pages 95 through 102
Customer Relationship and Billing Program	PS-44 and PS-45	Page 116 through 119
MIGreenPower Program Stabilization	PS-46 and PS-47	Pages 128 and 129
Powerley Customer Platform Application Health	PS-47 and PS-48	Pages 132 and 133
Digital Channels Transformation Program	PS-54 and PS-56	Pages 155 through 158

Attachment: None

MPSC Case No: U-21534
Requester: AG
Question No.: AGDE-3.123b
Respondent: P. Sharma
Page: 1 of 1

Question: 123. Refer to Exhibit A-12, Schedule B5.7.1 on Customer Service IT projects. For each project of $3.0 million or greater in 2024 and 2025, please:

b. Provide the project phases of development with related timeline and the identify the current phase of development (i.e., needs identification, initial concept, system requirements, implementation, completed) and the target in-service date.

Answer: The Customer Service IT projects of $3.0 million or greater in 2024 and 2025 utilize Agile methodology to manage project delivery lifecycle. Delivery cycles in Agile projects are broken down into short timeboxed periods called sprints. Each sprint cycle includes the following phases: Tech refinement / Analysis, Design, Development, Testing, Go-live / Deployment, and Post-production.

Since these projects follow the Agile methodology, the new features and enhancements are deployed monthly or bi-weekly per application release calendar. The Delivery timeline for Customer Service IT projects $3.0 million or greater in 2024 and 2025 is shown below:

2024-2025 Projects ($3 million or greater)	Delivery Timeline
Customer Digital Channels and Self-Service Program	Monthly
Customer Relationship and Billing Program	Bi-weekly
MIGreenPower Program Stabilization	Monthly
Powerley Customer Platform Application Health	Monthly
Digital Channels Transformation Program	Bi-weekly

Attachment: None

MPSC Case No: U-21534
Requester: AG
Question No.: AGDE-3.123c
Respondent: P. Sharma
Page: 1 of 2

Question: 123. Refer to Exhibit A-12, Schedule B5.7.1 on Customer Service IT projects. For each project of $3.0 million or greater in 2024 and 2025, please:
c. Provide the project cost by year from inception to completion.

Answer: The Customer Service IT projects $3.0 million or greater in 2024 and 2025 are non-discretionary capital investments in the Sustainment and Return-to-Health investment category.
As described in the DTE Five-Year IT Plan 2021-2025 filed in Docket No. U-20642, section 3.B. "Sustainment" investments cover on-going required activities for applying patches, data adjustments, performance tuning, administrative activities (data archiving, certificate expiration) etc.
As described in the DTE Five-Year IT Plan 2021-2025 filed in Docket No. U-20642, section 3.C "Return-to-Health" investment category represents non-discretionary spend, to update systems which are in critical health or end-of-life. These projects require recurring annual investments to continue to sustain or address critical health, or end-of-life.

2024-2025 Projects ($3 million or greater)	Investment Category	Witness Sharma's Direct Testimony Reference	Cost by year from inception to completion
Customer Digital Channels and Self-Service Program	Sustainment	PS-41 and PS-42	Annual
Customer Relationship and Billing Program	Sustainment	PS-44 and PS-45	Annual
MIGreenPower Program Stabilization	Sustainment	PS-46 and PS-47	Annual
Powerley Customer Platform Application Health	Sustainment	PS-47 and PS-48	Annual
Digital Channels Transformation Program	Return to Health	PS-54 and PS-56	Annual

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Requester: AG

Question No.: AGDE-3.123c

Respondent: P. Sharma

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Additional information on Sustainment and Return to Health categories can be found in the Witness Sharma direct testimony PS-13 and PS-14 and DTE Five-Year IT Plan 2021-2025 filed in Docket No. U-20642 (pg. 11,12 Section 3.B,3.C).

Attachment: None

MPSC Case No: U-21534
Requester: AG
Question No.: AGDE-3.123d
Respondent: P. Sharma
Page: 1 of 1

Question: 123. Refer to Exhibit A-12, Schedule B5.7.1 on Customer Service IT projects. For each project of $3.0 million or greater in 2024 and 2025, please:

d. Provide a copy of the cost/benefit analysis showing each project was economically justified.

Answer: The Customer Service IT projects $3.0 million or greater in 2024 and 2025 are non-discretionary capital investments in the Sustainment and Return to Health investment category.

As outlined in witness Sharma direct testimony Q14(PS-7 through PS-9), non-discretionary Regulatory/Compliance, Sustainment, and Return-to-Health projects are considered "must do" and, therefore, do not require a cost benefit analysis.

2024-2025 Projects ($3 million or greater)	Investment Category	Witness Sharma's Direct Testimony Page Reference
Customer Digital Channels and Self-Service Program	Sustainment	PS-41 and PS-42
Customer Relationship and Billing Program	Sustainment	PS-44 and PS-45
MIGreenPower Program Stabilization	Sustainment	PS-46 and PS-47
Powerley Customer Platform Application Health	Sustainment	PS-47 and PS-48
Digital Channels Transformation Program	Return to Health	PS-54 and PS-56

Attachment: None

MPSC Case No: U-21534
Requester: AG
Question No.: AGDE-3.122
Respondent: P. Sharma
Page: 1 of 1

Question: 122. Refer to Exhibit A-12, Schedule B5.7, pages 1, 2 and 3, on IT projects. Please expand these schedules to include the same actual information for each year 2018 to 2023 and provide it in Excel.

Answer: Please see attached excel 'U-21534 AGDE-3.122 A-12 B5.7 2018-2023 actuals.xlsx'

Attachment: U-21534 AGDE-3.122 A-12 B5.7 2018-2023 actuals.xlsx

Line No.	Description	2018 Actuals ($000)	2019 Actuals ($000)	2020 Actuals ($000)	2021 Actuals ($000)	2022 Actuals ($000)	2023 Actuals ($000)
1	**Shared Asset Expenditures**						
2	Corporate Applications	4,549	3,637	6,240	16,880	17,087	10,728
3	Plant & Field	1,457	4,430	4,590	9,260	7,237	9,475
4	Information Technology for IT	2,777	5,417	2,736	16,673	5,153	3,205
5	Information Protection Security	480	1,321	1,975	1,870	6,063	3,924
6	Infrastructure Operations	7,403	10,101	20,983	21,919	36,190	49,018
7	Enterprise Data Analytics	-	468	6,616	4,771	5,521	4,570
8	Innovations	331	7	3,684	2,227	2,789	3,043
9	Subtotal Corporate Support IT	16,997	25,381	46,824	73,600	80,039	83,964
10	Customer Service - (Sustainment and Return to Health)	18,683	18,508	23,738	20,545	15,252	22,017
11	Customer Service - (Strategic, Enhancements & Compliance)	4,890	3,005	6,108	10,396	28,398	21,476
12	Subtotal Customer Service IT	23,573	21,513	29,846	30,941	43,650	43,493
13	**Grand Totals**	**40,571**	**46,894**	**76,671**	**104,541**	**123,689**	**127,456**

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Requester: AG
Question No.: AGDE-3.127a
Respondent: N. Foley
Page: 1 of 1

Question: 127. Refer to lines 21-25 on page 61 and lines 1-8 on page 62 of Ms. Uzenski's direct testimony on the downtown campus facilities renovation. Please:

a. Explain why employees are required to return to their office only for three days instead of full time. What work efficiencies are gained by having employees at their office location only three days instead of 5-days a week?

Answer: The Company objects for the reason that the request is unclear, vague and incapable of answer in its present form since the Company is unclear regarding the meaning of "work efficiencies."

Subject to this objection, and without waiving this objection, the Company responds as follows:

The decision to require employees to return to their office for three days per week was a corporate policy decision. The Company has not attempted to forecast and/or quantify the efficiency of its workforce under a 3-day vs. 5-day in-office policy.

Attachment: *None*

MPSC Case No: U-21534
Requester: AG
Question No.: AGDE-3.127b
Respondent: T. Uzenski
Page: 1 of 1

Question: 127. Refer to lines 21-25 on page 61 and lines 1-8 on page 62 of Ms. Uzenski's direct testimony on the downtown campus facilities renovation. Please:

b. Why are space updates needed to accommodate only a 3-day work week when pre-Covid the space was sufficient for a 5-day work week?

Answer: Much of the space had been reconfigured to support agile work (unassigned seating where you reserve a workstation when you come in). This allowed us to sell two buildings and eliminate the lease of two buildings. (Ashley Mews, Navitas Building, Northwest Planning, and Farmington TSSC). In order to accommodate everyone being on site at the same time we are moving back to assigned seating but accommodating a larger population as we have overall reduced square footage. Reconfiguration of furniture was required, and workstations were added in collaborative areas to maximize space.

Attachment: *none*

MPSC Case No: U-21534
Requester: AG
Question No.: AGDE-3.127c
Respondent: T. Uzenski
Page: 1 of 1

Question: 127. Refer to lines 21-25 on page 61 and lines 1-8 on page 62 of Ms. Uzenski's direct testimony on the downtown campus facilities renovation. Please:

c. What happened to the furniture, monitors, docking stations, work stations and other equipment that was previously at the office? Why can't employees use or return the equipment that was previously at their office location pre-Covid?

Answer: Furniture that came out of the headquarters (HQ) was reused on projects in service centers and plants and the much older furniture in those areas was salvaged. Also, as employees are working from home two days a week a home office setup is still required. Thus, the monitors, keyboards, mice, and desk chairs that went to employees' homes are still needed in their home office. Therefore, it was required that this equipment be purchased to fully outfit the offices in the HQ. We moved from 2,000 reservable workstations to 4,100 workstations that are assigned to each employee.

Attachment: *none*

MPSC Case No: U-21534
Requester: AG
Question No.: AGDE-3.127d
Respondent: T. Uzenski
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Question: 127. Refer to lines 21-25 on page 61 and lines 1-8 on page 62 of Ms. Uzenski's direct testimony on the downtown campus facilities renovation. Please:

d. Why do all huddle and conference rooms in the GO and SB buildings require audio-visual equipment to be Microsoft Teams enabled now? How has the company managed so far in the past 3 years post Covid-19 without this equipment?

Answer: Not all huddle rooms were Teams enabled. All conference rooms are now Teams enabled to accommodate the return to office and to have the ability to conduct hybrid meetings in any of these rooms. This project added Teams enabled equipment to 88 conference rooms.

Attachment: *none*

MPSC Case No: U-21534
Requester: AG
Question No.: AGDE-3.127e
Respondent: T. Uzenski
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Question: 127. Refer to lines 21-25 on page 61 and lines 1-8 on page 62 of Ms. Uzenski's direct testimony on the downtown campus facilities renovation. Please:

e. Why are conference and huddle rooms needed on the first floor of the Cisler Building lobby at a cost of $4.8 million given that they have managed without those rooms before?

Answer: The space renovated on the 1st floor WCB was unused, nonfunctional space. It was space that was once leased by Lake Trust Credit Union, but they moved to another smaller suite on the 2nd floor; and space that was back office/support space as well as our old energy house demonstration space. These areas were repurposed and made functional through this renovation. The complex lacked larger meeting spaces that could accommodate groups in the 40 – 50 range, and there were times that groups were seeking off-site space that was rented or using the GO Auditorium which then caused larger groups to move off site. This renovation made un-used space useful and filled a need the complex had, and ultimately reduced the use of off-site meeting space.

Attachment: *none*

MPSC Case No: U-21534
Requester: AG
Question No.: AGDE-3.131a
Respondent: T. Uzenski
Page: 1 of 1

Question: 131. Refer to Exhibit A-12, Schedule B5.8, pages 2 and 3. For each project of $2 million or greater in 2023, 2024, and/or 2025, please:

a. Describe the project, what is being done, and why it is necessary to undertake this project.

Answer: See file attached.

Attachment: *U-21534 AGDE-3.131a Facilities and Service Center Projects.pdf*

AGDE – 3.131a

Exhibit A-12, Schedule B5.8

Page 2 - Facilities

Line 7 WSC Building G Roof Replacement:

What: Facilities (asset preservation) has determined that the roof (approximately 335,000 Sqf.) on the Warren Service Center Building G is at the end of its useful life and requires replacement. NTH Consultants, Ltd. (NTH) will develop a technical roofing survey and design, assist with competitive construction bidding, and provide construction services that will provide a long-term solution to current roofing problems.

Why: Degraded, unreliable, roof. Condition is such that the capability for water infiltration and active leaks exists. This would lead to wet insulation and the potential for corrosions and structural degradation of the roof deck, as well as the potential for water entering the building.

Line 8 WSC Primary Roof Replacement:

What: The roof at the Walker Cisler Building is at the end of its useful life and requires replacement. NTH Consultants, Ltd. (NTH) will develop a technical roofing survey and design, assist with competitive construction bidding, and provide construction services that will provide a long-term solution to current roofing problems.

Why: Degraded and unreliable roof. Condition is such that the capability for water infiltration and active leaks exists. This would lead to wet insulation and the potential for corrosions and structural degradation of the roof deck, as well as the potential for water entering the building.

Line 12 Greenwood Energy Center Roof:

What: The roofs at the Greenwood Energy Center are at the end of its useful life and requires replacement. NTH Consultants, Ltd. (NTH) will develop a technical roofing survey and design, assist with competitive construction bidding, and provide construction services that will provide a long long-term solution to current roofing. problems.

Why: Degraded, unreliable, roof. Condition is such that the capability for water infiltration and active leaks exists. This would lead to wet insulation and the potential for corrosions and structural degradation of the roof deck, as well as the potential for water entering the building.

Line 13 Walker Cisler Building Substation and Distribution Replacement: Previously approved in Case No. U-21297.

What: According to the VFA (facilities capital planning tool) data, some of the equipment in the WCB substation and electrical distribution system has reached its end of life and needs to be replaced.

Why: The WCB substation and electrical distribution is being utilized to power the WCB building. The equipment that has reached its end of life needs to be removed and replaced.

Line 14 Plaza Center Distribution Panelboard Replacement:

What: According to the VFA data, some of panelboards in the Plaza Building has reached its end of life and needs to be replaced. In order to identify which ones, need to be replaced, an investigation of the equipment. needs to occur.

Why: The panelboards are currently being utilized in the Plaza building. The equipment that has reached its end of life is unknown.

Line 17 ESOC Chiller Replacement:

What: On February 3, 2022, ESOC chiller #2 and #3 were found to be inoperable. The initial analysis has determined the chillers internal piping and drum had frozen and longer usable and repair will exceed the replacement costs. Provide new design to replace the two chillers to handle the ESOC building load and operate within the design specification, weather conditions and operational requirements.

Why: Facilities management decision to replace the chillers since the ESOC building is considered as a critical DTE operational asset. Cooling is necessary for existing equipment, temporary chillers required to maintain critical controls equipment for extended duration due to long lead procurement duration ($1.5M - 42 mos x $35k). New design for new chillers required to mitigate the risk of future freeze. Additional upgrades might be needed for chiller #1 and chilled water system.

Line 19 WSC Fire Suppression:

What: Provide a new Fire Suppression Pump House System that will provide the proper pressurized main line (and sub mains), for site buildings F,G,L,W and DLAB. The new system will comply with NFPA 24 and all applicable Building and Fire Codes. Due to availability of funding and probable length of project timeline, this project will be a 2 phased project(TBD).

Why: The WSC has an existing Fire Pump System "supply house" and "water reservoir" that has aged well beyond its useful life. Buildings, F, G, L, W and DLAB, are currently being fed by this existing system and as such do not have the proper capacity/flow to provide adequate coverage for these buildings, posing a high insurance risk.

Line 20 WSC Transformer Yard Reorganization: Previously approved in Case No. U-21297.

What: Warren Service Center (WSC) Transformer Yard presents challenges for inventory management, emergency access, and equipment warranty requirements. When a transformer is needed it is difficult to locate and retrieve the appropriate transformer in a timely manner. A reorganization of
the transformer yard is needed to improve equipment access, support inventory management, and address and maintain storage warranty.

Why: The WSC Transformer Yard is not organized such that all equipment is accessible and inventory data is not accurate nor easily maintained. In addition, access to electricity is needed to meet some unit's warranties.

Line 22 WCB Façade Restoration:

What: Repair of any façade deficiencies found during assessment.

Why: City of Detroit requires by code to do an assessment of the facade every 5 years, any repairs needed will result in a capital improvement to the building.

Line 24 Ann Arbor Service Center electric system replacement:

What: According to the VFA data, some of the equipment in the Ann Arbor substation and electrical distribution system has reached its end of life and needs to be replaced.

Why: The Ann Arbor substation and electrical distribution is being utilized to power the Ann Arbor building. The equipment that has reached its end of life needs to be removed and replaced.

Line 25 Redford electric system replacement:

What: According to the VFA data, some of the equipment in the Redford substation and electrical distribution system has reached its end of life and needs to be replaced.

Why: The Redford substation and electrical distribution is being utilized to power the Redford building. The equipment that has reached its end of life needs to be removed and replaced.

Line 26 Shelby Service Center Renovation:

What: Includes asset preservation and infrastructure upgrades including a new roof, removal of a septic tank and connection to the city sewer system, mechanical equipment, bathroom/locker room replacement and interior renovation.

Why: In order to accommodate everyone being on site at the same time we are moving back to assigned seating but accommodating a larger population as we have overall reduced square footage. Reconfiguration of furniture was required and workstations were added in collaborative areas to maximize space.

Line 27 WCB First Floor Conference Rooms: See response to AGDE 3.127e.

Line 28 Office Space Audio/Video: See response to AGDE-3.127d.

Line 29 WCB Office Space Updates: See response to AGDE 3.127b and AGDE-3.127c.

Lines 46, 48, 56 End of Life Replacements: (Construction, Door, Replacement):

What: Routine replacement of assets that reach end of life and disrepair.

Why: According to VFA data building assets are at end of life and need replacement.

Page 3 – Service Center Optimization

Lines 2 and 3 - WSC Site Improvements and Building L Renovation: See Uzenski testimony starting at line 20 on page TMU-63.

Line 7 Western Wayne Renovation: Previously approved in Case No. U-21297.

What: The building was constructed in 1978 and many building systems such as lighting, plumbing, electrical, flooring, and ceilings.

Why: The lighting, plumbing, electrical, flooring, and ceilings are beyond their useful life and need replacing.

Line 8 Western Wayne Garage & Warehouse:

What: The Western Wayne Service Center garage is too small compared to the number of vehicles that are sent to the garage for service. The garage is overused. The garage gets congested and it is difficult to move vehicles in and out of the garage.

Why: Re-design and modify the Western Wayne Service Garage to service more vehicles. Use unused space in the building to give the fleet mechanics more room to work. Re-arrange the garage to improve the use of space.

Line 9 Western Wayne Site Improvements:

What: Includes a parking lot expansion, stormwater management, site lighting, and a perimeter security fence.

Why: Parking lot is in disrepair and current storm water detention ponds are at end of life and need to be upgraded.

Line 11 Waterford Service Center (EXCLUDING ASOC): See Uzenski testimony starting at line 7 on page TMU-65.

Line 12 Ann Arbor Storm Water Improvements: See Uzenski testimony starting at line 3 on page TMU-65.

Line 23 Training Center Renovation (aka Service Center Automated Building Control Systems): See Uzenski testimony starting at line 9 on page TMU-66.

Line 27 Headquarters HVAC/BMS System:

What: Building has an HVAC control system. This project will survey and document the existing system conditions and will follow with a design/specs for a properly designed system and eventually purchase, install a new building HVAC Control System.

Why: The older HVAC system was rendered end of useful life due to the inability to maintain temperature control and energy efficiency throughout the headquarters.

MPSC Case No: U-21534
Requester: AG
Question No.: AGDE-3.131b
Respondent: T. Uzenski
Page: 1 of 1

Question: 131. Refer to Exhibit A-12, Schedule B5.8, pages 2 and 3. For each project of $2 million or greater in 2023, 2024, and/or 2025, please:

b. Provide the project phases of development with related timeline and the identify the current phase of development (i.e., needs identification, initial concept scoping, engineering design, out for bids, construction, completed) and the target in-service date.

Answer: See file attached.

Attachment: *U-21534 AGDE-3.131b&c Cost by Year.xls*

Case No.: U-21534
AGDE-3.131b&c
($000)

From Exhibit: A-12
Schedule: B5.8
Page: 2 of 5

Corporate Staff - Facilities Construction and Upgrades

Exhibit Line No.	Description		12 mos. ending 12/31/2021	Historical 12 mos. ending 12/31/2022	Projected 12 mos. ending 12/31/2023	12 mos. ending 12/31/2024	12 mos. ending 12/31/2025		Total Cost		In Service Year	Timeline / Phase
7	WSC Bldg G Roof replacement		270	2,228	3,962	5,000	-		11,460		Annual	Construction
8	WSC Primary Roof Replacement (Inc. Demo of Cooling Towers)			9	2,913	-	-		2,922		Annual	Completed
12	Greenwood Energy Center Roofs			-	82	-	2,000		2,082		Annual	Engineering
13	WCB Substation & Distribution Replacement		624	485	4,411	5,100	-		10,620		Annual	Construction
14	Plaza Distribution Panelboard Replacement		364	297	1,868	2,219	5,000		9,749		Annual	Engineering
17	ESOC Chiller Replacement		0	866	1,821	5,000	-		7,687		Annual	Construction
19	WSC Site Fire Suppression / Eliminate Fire Reservoir		0	818	3,162	1,300	-		5,280		Annual	Construction
20	WSC Transfomer Yard Reorganization		0	675	2,170	2,913	-		5,759		Annual	Construction
22	WCB Facade restoration			-	-	-	3,000		3,000		Annual	Initial Concept
24	Ann Arbor SC - Main building electrical system lifecycle replace			-	9	-	2,000		2,009		Annual	Initial Concept
25	Redford - Main building electrical system lifecycle replacement			-	-	-	2,000		2,000		Annual	Initial Concept
26	Renovation - Shelby SC		0	2,407	5,973	1,000	-		9,380		Annual	Construction
27	Renovation - WCB 1 Conference Rooms			-	4,810	-	-		4,810		Annual	Completed
28	Office space updates - Audio/Video			-	-	4,000	-		4,000		Annual	Construction
29	Office space updates - WCB			-	1,455	1,000	-		2,455		Annual	Construction
	End of Life Repairs and Replacements											
46	Construction			4,997	4,429	4,403	4,233		n/a		Annual	Construction
48	Door			905	1,370	1,362	2,054		n/a		Annual	Construction
56	HVAC			6,852	6,621	6,582	9,427		n/a		Annual	Construction

Corporate Staff - Service Center Optimization and Modernization

From Exhibit: A-12
Schedule: B5.8
Page: 3 of 5

Exhibit Line No.	Description		2017-2020	12 mos. ending 12/31/2021	Historical 12 mos. ending 12/31/2022	Projected 12 mos. ending 12/31/2023	12 mos. ending 12/31/2024	12 mos. ending 12/31/2025		Total Cost		In Service Year	
	Warren Service Center												
2	Warren Service Center Site Improvements			144	1,155	4,086	1,500	-		6,885		2024	Construction
3	Warren Service Center Building L Renovation			112	1,362	1,788	-	4,800		8,062		2025	Construction
										-			
7	Western Wayne Service Center Renovation			1,857	10,080	4,337	-	-		16,274		2025	Completed
8	Western Wayne Garage & Warehouse				-	-	-	4,700		4,700		2025	Initial Concept
9	Western Wayne Site Improvements				-	-	-	2,900		2,900		2025	Initial Concept
										-			
11	Waterford Service Center (excluding ASOC)		3,967	1,993	5,932	25,348	4,293	-		41,534		2024	Construcion
12	Ann Arbor SC Storm Water Improvements				-	-	-	3,000		3,000		2025	Initial Concept
23	Training & Development Center Renovation				2	703	-	7,000		7,705		2026*	Engineering
27	Headquarters HVAC/BMS System				4	2,708				2,712		2024	Construcion

**Note to Training & Development Center Renovation - 2026 is the assumed in service date for the rate case; December 2025 is the updated in-service date*

MPSC Case No: U-21534
Requester: AG
Question No.: AGDE-3.130a
Respondent: T. Uzenski
Page: 1 of 1

Question: 130. Refer to Exhibit A-12. Schedule B5.8, page 1. Please:
a. Expand this schedule to include actual capex for 2018 through 2023 and provide in Excel.

Answer: See file attached.

Attachment: *U-21534 AGDE-3.130a Corporate Staff Capital Expenditures.xls*

U-21534								
AGDE 3.130a								
Capital Expenditures - Corporate Staff								
	Actual	**Actual**	**Actual**	**Actual**	**Actual**	**Actual**	**Projected**	**Projected**
	12 mos. ended	**12 mos. ended**	**12 mos. ended**	**12 mos. ended**	**12 mos. ended**	**12 mos. ended**	**12 mos. ending**	**12 mos. ending**
	12/31/2018	**12/31/2019**	**12/31/2020**	**12/31/2021**	**12/31/2022**	**12/31/2023**	**12/31/2024**	**12/31/2025**
Electric Vehicle Fleet and Maintenance	16,323	30,640	20,698	21,672	43,821	33,155	38,236	42,600
Facilities-Construction & Upgrade	62,126	67,023	47,508	55,128	50,028	62,192	51,952	40,492
Service Center Optimization & Modernization	20,725	20,800	11,694	16,687	30,122	39,877	5,793	28,800
Headquarters Energy Center	1,436	11,260	24,971	-	-			
Security Measures	598	7,552	4,838	4,537	5,812	4,340	838	8,038
NERC-Critical Infrastructure Program	4,203	2,278	1,221	-	-			
Enterprise Automation 1/	6,760	8,307	11,797	-	-			
Other Miscellaneous	1,941	(2,957)	238	(4,091)	(3,185)	(2,087)	150	150
Total Corporate Staff	114,113	144,903	122,965	93,932	126,598	137,477	96,968	120,080
1/ Enterprise Automation is included on Exhibit A-12 B5.7.1 sponsored by Witness Sharma after 2020.								

MPSC Case No: U-21534
Requester: AG
Question No.: AGDE-3.130bii
Respondent: T. Uzenski
Page: 1 of 1

Question: 130. Refer to Exhibit A-12. Schedule B5.8, page 1. Please:

b. For the Electric Vehicle Fleet on line1:

ii. Provide the number of vehicles of each type or class purchased each year for 2021 to 2023 and forecasted for 2024 and 2025 with the related dollars.

Answer: See STDE-4.3a through STDE-4.3d.

Attachment: *none*

Adjustments to Capital Expenditures, Rate Base and Depreciation Expense

($000)

Line	Description	Capital Expenditure Reductions [1] 2023 & Prior	2024	2025	Total	Rate Base Reduction	Depreciation Rate [2]	Reduction in Depreciation Expense	Property Tax Millage Rate	Property Tax Adjustment [4]
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
1	**Distribution Operations:**									
2	Emergent Replacements		24,526	28,557	53,083	38,805	4.11%	1,595	0.05600	$ 659
3	Customer Connections & Load Growth		14,453	(3,405)	11,048	12,751	4.11%	524	0.05600	$ 388
4	Utility Make Ready Attachments		3,734	10,173	13,907	8,821	4.11%	363	0.05600	$ 100
5	Relocation of I-375 Electrical Facilities		25,000	8,000	33,000	29,000	4.11%	1,192	0.05600	$ 672
6	Electric System Equipment		3,153	3,456	6,609	4,881	4.11%	201	0.05600	$ 85
7	General Plant, Tools, Equipment & Miscellaneous		1,758	1,862	3,620	2,689	4.11%	111	0.05600	$ 47
8	Portable Generators		4,500		4,500	4,500	4.11%	185	0.05600	$ 121
9	Tree Trim Surge Program Savings and Risk Model	6,902	66,900	59,600	133,402	103,602	4.11%	4,258	0.05600	$ 1,984
10	2023 Underspent amount	25,202			25,202	25,202	4.11%	1,036	0.05600	$ 677
11	Strategic Capital Programs - Paul Alvarez: [3]									
12	4.8kV Hardening		73,333	81,800	155,133	114,233	4.11%	4,695	0.05600	$ 1,971
13	Pole and Poletop Maintenance & Modernization			57,550	57,550	28,775	4.11%	1,183	0.05600	$ -
14	Strategic & Service Line OH to UG Pilots		13,744	16,019	29,763	21,754	4.11%	894	0.05600	$ 369
15	Subtransmission Redesign and Rebuild		25,336	2,808	28,144	26,740	4.11%	1,099	0.05600	$ 681
16	Distribution Automation			101,176	101,176	50,588	4.11%	2,079	0.05600	$ -
17	Grid Automation Telecommunications		16,900	15,000	31,900	24,400	4.11%	1,003	0.05600	$ 454
18	**Power Generation:**									
19	Greenwood and Belle River		21,855	8,223	30,078	25,967	3.24%	841	0.05600	$ 587
20	2023 Projects Underspent	3,951			3,951	3,951	3.24%	128	0.05600	$ 106
21	**Nuclear**									
22	Security System Computer	19,033	9,197		28,230	28,230	4.26%	1,203	0.05600	$ 759
23	Plant Radio System	11,332	1,498		12,830	12,830	4.26%	547	0.05600	$ 345
24	Plant Fuel Costs			20,017	20,017	10,009	4.26%	426	0.05600	$ -
25	Other Projects		58,039	56,311	114,350	86,195	4.26%	3,672	0.05600	$ 1,560
26	**Customer Service/IT**									
27	Customer Service projects		5,750	15,393	21,143	13,447	20.00%	2,689		
28	Other IT projects		1,218	2,958	4,176	2,697	20.00%	539		
29	2023 Projects Underspent	34,854			34,854	34,854	20.00%	6,971		
30	**Corporate**									
31	Corporate Office renovations	6,265	8,000		14,265	14,265	7.56%	1,078	0.05600	$ 383
32	Other corporate-wide facilities			24,600	24,600	12,300	7.56%	930	0.05600	$ -
33	Transportation Fleet		4,564	8,187	12,751	8,658	7.56%	655	0.05600	$ 123
34	**EV Programs**		6,979	2,295	9,274	8,127	8.53%	693	0.05600	$ 188
35	**Total**	**$ 107,539**	**$ 390,437**	**$ 520,580**	**$ 1,018,556**	**$ 758,266**		**$ 40,788**		**$ 12,261**
36										
37	Working Capital					25,684				
38										
39	Total Rate Base Deduction					**$ 783,950**				

Source: (1) See AG witness Coppola Direct Testimony.
(2) Depreciation rates from Exhibit A-13, Schedule C6, page 2.
(3) See AG-MNS witness Paul Alvarez Direct Testimony.
(4) Property tax adjustment for 2024 and prior years disallowances x 96% factor x 50% x millage rate. No property taxes on IT software.

MPSC Case No: U-21534
Requester: AG
Question No.: AGDE-1.20a
Respondent: T. Uzenski
Page: 1 of 1

Question: 20. Refer to Exhibit A-12, Schedule B4. Please:

a. Explain what is included on line 27, Reg. Asset Ludington, which has a $9.9 million balance in the projected test year.

Answer: The Commission's May 18, 2023 Order in Case No. U-21310 provided for the deferral of costs to restore allegedly defective work performed by Toshiba America Energy Systems Corporation at the Ludington Pumped Storage Plant. The balance reflects capital replacement and repair costs incurred during 2023, offset by anticipated liquidated damages.

Attachment: *none*

MPSC Case No: U-21534
Requester: AG
Question No.: AGDE-1.20b
Respondent: M. Guillaumin
Page: 1 of 1

Question: 20. Refer to Exhibit A-12, Schedule B4. Please:

b. Provide a schedule in Excel showing how the cumulative projected costs by major item at January 1 and December 31, 2025 were determined, beginning with the balance in the historical test year.

Answer: The balance in 2025 reflects the same balance as of December 31, 2023. See attached.

Attachment: *U-21534 AGDE-1.20b Ludington Regulatory Asset.xls*

		U-21534	
		AGDE-1.20b	
Ludington Regulatory Asset			
Historical and Projected Balance		$ thousands	
Capital Replacements		13,677	
Accrued unbilled liabilities		803	
O&M Repairs		60	
Liquidated Damages		(4,607)	
Total Regulatory Asset		9,933	

MICHIGAN PUBLIC SERVICE COMMISSION
DTE Electric - Electric Rate Case

Case No. U-21534
Exhibit AG-20
July 26, 2024

Working Capital - Regulatory Asset - Incentive Compensation Balance

Line	Caption or Description	Thousands of Dollars: Projected 2023 Test Requested Amounts*	2023 Actual Performance Results**	2023 Amount Earned	Notes
	(a)	(b)	(c)	(d)	(e)
1	U-20836 Incentive Comp. Requested (Oper Metrics)				
2	AIP	$ 6,029	28.00%	$ 1,688	Col (b) x (c)
3	REP	15,196	28.00%	4,255	Col (b) x (c)
4	Total Requested and Paid by Company	$ 21,225		$ 5,943	L 2 + L 3
5	Amounts Approved for Recovery in Rates (p. 301 of 11/18/2022 Order in U-20836)			$ 12,735	
6	Operational-related Metrics Compensation eared by Company			5,943	L 4 Above
7	Over Recovery By Company & Liability to Customers (Jan 1, 2025)			$ 6,792	L 5 less L 6
8	2025 Negative Amortization Expense (5 Yr. Amortization)			(1,358)	
9	Balance at End of 2025			5,434	L 7 x 80%
10	Average Liability to Customers			$ 6,113	Avg. of L7 & L 8
11	Asset Balance per Company***			3,884	Co. Exh. A-12, Sch B4
12	**Working Capital Reduction**			**$ 9,997**	L 9 Plus L 10

* From page 53 of Witness Cooper's Case U-20836 testimony which was recognized on page 301 of the U-20836 rate order.

** Exhibit AG-21 includes DR AGDE 1.48 with Attachment for the performance percentages achieved.

*** In the deferral account, he Company also included $8.8 million in accrual assuming it would achieve Target Level Performance in 2024. With no actual performance yet achieved such accrual is premature and has been removed from my calculations.

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-1.48

Respondent: M. Fix

Page: 1 of 1

Question: 48. Refer to Exhibit A-21, Schedules K2, K3, and K4, regarding Incentive Compensation. Please provide a schedule in Excel with each of the 2023 operational metrics and for each of the three groupings (DTE Electric, DTE Nuclear Generation, and DTE LLC) showing the performance results by identifying for each such metric for performance at (a) below Threshold; (b) at or above Threshold, but below Target; (c) at Target; (d) between Target and Maximum; and (e) at the Maximum.

Answer: Please see response to TMS-1.4

Attachment: None

DTE Electric Company
Case No. U-21534
AGDE-1.48
AIP, AIP Executives and REP Operating Measure Results: 2019 - 2023

Line No	Description	AIP 2019	AIP 2020	AIP 2021	AIP 2022	AIP 2023	AIP Average	AIP Executives 2019	AIP Executives 2020	AIP Executives 2021	AIP Executives 2022	AIP Executives 2023	AIP Executives Average	REP 2019	REP 2020	REP 2021	REP 2022	REP 2023	REP Average	Combined Average
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)	(s)	(t)
1	**DTE Electric**																			
2	Less than Threshold	4	3	4	2	6		4	3	4	2	6		4	3	4	2	6		
3	Between Threshold and Target	3	0	2	2	1		3	0	2	2	1		3	0	2	2	1		
4	Target	0	1	0	1	0		0	1	0	1	0		0	1	0	1	0		
5	Between Target and Maximum	4	6	3	3	1		4	6	3	3	1		2	5	2	2	0		
6	Maximum	2	4	0	1	1		2	4	0	1	1		2	4	0	1	1		
7		13	14	9	9	9		13	14	9	9	9		11	13	8	8	8		
8																				
9	Sum of Performance for all measures	1,124%	1,544%	483%	790%	389%		1,124%	1,544%	483%	847%	425%		774%	1,273%	366%	637%	238%		
10																				
11	Average Performance	86.5%	110.3%	53.6%	87.8%	43.2%	76.3%	86.5%	110.3%	53.6%	94.1%	47.2%	78.3%	70.3%	97.9%	45.7%	79.6%	29.8%	64.7%	
12																				
13	**Nuclear Generation**																			
14	Less than Threshold	3	1	2	4	4		3	1	2	4	4		3	1	2	3	4		
15	Between Threshold and Target	0	1	3	2	0		0	1	3	2	0		0	0	2	1	0		
16	Target	0	1	0	0	0		0	1	0	0	0		0	1	0	0	0		
17	Between Target and Maximum	3	1	1	0	2		3	1	1	0	2		1	1	1	0	1		
18	Maximum	2	3	1	2	2		2	3	1	2	2		2	3	1	3	2		
19		8	7	7	8	8		8	7	7	8	8		6	6	6	7	7		
20																				
21	Sum of Performance for all measures	803%	786%	550%	411%	593%		8.025	7.864	5.499	461%	657%		433%	660%	432%	521%	413%		
22																				
23	Average Performance	100.3%	112.3%	78.6%	51.3%	74.1%	83.3%	100.3%	112.3%	78.6%	57.6%	82.1%	86.2%	72.2%	110.0%	72.0%	74.5%	58.9%	77.5%	
24																				
25	**DTE LLC**																			
26	Less than Threshold	5	5	3	1	6		5	5	3	1	6		5	5	3	1	6		
27	Between Threshold and Target	3	0	1	1	1		3	0	1	1	1		3	0	1	1	1		
28	Target	0	1	0	2	0		0	1	0	2	0		0	1	0	2	0		
29	Between Target and Maximum	4	6	4	3	1		4	6	4	3	1		3	5	3	2	0		
30	Maximum	5	5	0	1	0		5	5	0	1	0		4	5	0	1	0		
31		17	17	8	8	8		17	17	8	8	8		15	16	7	7	7		
32																				
33	Sum of Performance for all measures	1,631%	1,732%	533%	864%	222%		16.313	17.323	5.331	924%	235%		1,207%	1,439%	404%	678%	88%		
34																				
35	Average Performance	96.0%	101.9%	66.6%	107.9%	27.8%	80.0%	96.0%	101.9%	66.6%	115.5%	29.4%	81.9%	80.5%	90.0%	57.7%	96.9%	12.6%	67.5%	
36																				
37	**Total**																			
38	Less than Threshold	12	9	9	7	16		12	9	9	7	16		12	9	9	6	16		
39	Between Threshold and Target	6	1	6	5	2		6	1	6	5	2		6	0	5	4	2		
40	Target	0	3	0	3	0		0	3	0	3	0		0	3	0	3	0		
41	Between Target and Maximum	11	13	8	6	4		11	13	8	6	4		6	11	6	4	1		
42	Maximum	9	12	1	4	3		9	12	1	4	3		8	12	1	5	3		
43		38	38	24	25	25		38	38	24	25	25		32	35	21	22	22		
44																				
45	Sum of Performance for all measures	3,558%	4,063%	1,566%	2,064%	1,204%		3,558%	4,063%	1,566%	2,231%	1,316%		2,414%	3,373%	1,202%	1,837%	739%		
46																				
47	Average Performance	93.6%	106.9%	65.2%	82.6%	48.1%	79.3%	93.6%	106.9%	65.2%	89.3%	52.7%	81.5%	75.4%	96.4%	57.2%	83.5%	33.6%	69.2%	76.7%
48																				
49																				
50	**Total**																			
51	Less than Threshold	12	9	9	7	16		12	9	9	7	16		12	9	9	6	16		
52	Between Threshold and Target	6	1	6	5	2		6	1	6	5	2		6	0	5	4	2		
53	Target	0	3	0	3	0		0	3	0	3	0		0	3	0	3	0		
54	Between Target and Maximum	11	13	8	6	4		11	13	8	6	4		6	11	6	4	1		
55	Maximum	9	12	1	4	3		9	12	1	4	3		8	12	1	5	3		
56	Total Measures	38	38	24	25	25		38	38	24	25	25		32	35	21	22	22		
57																				
58	Total Measures at Target and Above	20	28	9	13	7		20	28	9	13	7		14	26	7	12	4		
59																				
60	Percentage of Measures at Target and Above	52.6%	73.7%	37.5%	52.0%	28.0%	48.8%	52.6%	73.7%	37.5%	52.0%	28.0%	48.8%	43.8%	74.3%	33.3%	54.5%	18.2%	44.8%	47.4%

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-4.156a.

Respondent: P. Bennett

Page: 1 of 1

Question: 156. Refer to Exhibit A-13, Schedule C5.9.2 on the ACPP and TOD. Please:
a. Provide a list of each amount of $100,000 and greater spent on ACPP and TOD for each year and explain why that expense was necessary and justified. Provide this information in Excel with the remaining total amount for items below $100,000 that totals to the amount spent each year.

Answer: Please refer to the excel file AGDE-4.156a tab for cost explanations.

Attachment: *U-21534 AGDE-4.156a. ACPP and TOD Cost Deferrals*

Michigan Public Service Commission								Case No.:	U-21534	
DTE Electric Company								Exhibit:	A-13	
Advanced Customer Pricing Pilot (ACPP) & Time of Day (TOD)								Schedule:	C5.9.2	
Regulatory Asset Deferral								Witnesses:	M. Hatsios	
($000)									J. Sparks	
									P. Bennett	
								Page:	1 of 1	
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
Line No.	**Description**	**Actual CY 2019**	**Actual CY 2020**	**Actual CY 2021**	**Actual CY 2022**	**Projected CY 2023**	**Projected CY 2024**	**Projected CY 2025**	**Total**	**Sponsoring Witness**
1	**Advanced Customer Pricing Pilot Deferral (Note 1)**									
2	Information Technology	58	862	1,302	321	-	-	-	2,542	M. Hatsios
3	Customer Outreach	107	1,512	1,347	-	-	-	-	2,966	P. Bennett
4	Customer Service	-	-	-	-	-	-	-	-	M. Hatsios
5	Evaluation, Monitoring, & Verification and Operational Support	-	283	171	172	-	-	-	626	P. Bennett
6	Insight	-	358	100	6	-	-	-	464	M. Hatsios
7	Total ACPP Deferral	165	3,015	2,920	499	-	-	-	6,599	
	1/ Authorization to defer ACPP project costs to regulatory asset per order in Case No. U-20602									
		Actual CY 2019	**Actual CY 2020**	**Actual CY 2021**	**Actual CY 2022**	**Projected CY 2023**	**Projected CY 2024**	**Projected CY 2025**	**Total**	**Sponsoring Witness**
8	**Time of Day Implementation Project Costs Deferral (Note 2)**									
9	Information Technology	-	-	-	1,601	881	-	-	2,482	M. Hatsios
10	Customer Outreach	-	-	-	2,044	453	-	-	2,497	P. Bennett
11	Customer Service	-	-	-	-	5,152	-	-	5,152	M. Hatsios
12	Subtotal TOD Expense	-	-	-	3,644	6,486	-	-	10,130	
13	Less TOD Expense thru November 18, 2022	-	-	-	(1,665)	-	-	-	(1,665)	
14	Total TOD Deferral	-	-	-	1,979	6,486	-	-	8,465	
	2/ Authorization to defer TOD project costs to regulatory asset per order in Case No. U-20836 (effective November 2022)									

Michigan Public Service Commission									Case No.	U-21534							
DTE Electric Company										AGDE-4.156a.							
Advanced Customer Pricing Pilot (ACPP) & Time of Day (TOD)									Witnesse	M. Hatsios							
Regulatory Asset Deferral										P. Bennett							
($000)																	
									Page:	1 of 1							
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)		(j)						
Line		Actual	Actual	Actual	Actual	Projected	Projected	Projected									
No.	**Description**	**CY 2019**	**CY 2020**	**CY 2021**	**CY 2022**	**CY 2023**	**CY 2024**	**CY 2025**	**Total**		**Sponsoring Witness**	**Description**	**CY 2019**	**CY 2020**	**CY 2021**	**CY 2022**	**CY 2023**
1	Advanced Customer Pricing Pilot Deferral (Note 1)																
2	Information Technology	58	862	1,302	321	-	-	-	2,542		M. Hatsios	**Information Technology**	IT delivery lead and other IT contract resources performed design and development activities for AMI work.	Preparation work for pilot launch end of March/April. Launch post-poned to 2021 due to the COVID pandemic. Continued work on validation of designs and testing.	Completed development and performed testing. Converted pilot customers to the new rate. Remainder of the year IT was in warranty and extended warranty phase. April - May validation of bill accuracy. July - Sept validation of AMI interval calculations are accurate. Oct - Dec extended warranty phase.	Continued post production support and monitoring. Removed programming for self-service rate sign-up for the end of the pilot..	
3	Customer Outreach	107	1,512	1,347	-	-	-	-	2,966		P. Bennett	**Customer Outreach**	Research was conducted with focus groups for messge testing to ensure communications were easy for customers to understand.	Developed 7 mailings and emails including a brochure about upcoming program and potential savings,as well as a welcome kit with an external agency. A tool was implemented to execute the email communications. In addition, two videos were created for the pilot website to introduce the "shift and save program" as well as how to save money on the new rate. A website was stood up for all customer facing information to learn about the program for both opt-in group and seperate for opt-out group for two rates being tested.	Final communicationwas sent to customer indicating pilot was over, and full TOU roll out would happen in future. Customer that participated in the survey were paid their incentive for participation in the survey ($25 per each survey: 3 surveys available to recieve incentive).		
4	Customer Service	-	-	-	-	-	-	-	-		M. Hatsios	**Customer Service**					
5	Evaluation, Monitoring, & Verification and Operatio	-	283	171	172	-	-	-	626		P. Bennett	**Evaluation, Monitoring, & Verification and Operational Support**		EM&V provided analysis of entire 1.9M residential customers currently on D1 to develop representative sample of 200 customers to offer the pilot. Developed how much each customers would save if "shifted their usage" to off-peak times based off historical data to use in communications.	Developed and administered participant surveys, and customer incentives for taking the survey.	Analyzed data regarding how customers changed behavior to shift usage. In addition, determined optimal communications, communication channels and tools for web for the full TOU roll out.	
6	Insight	-	358	100	6	-	-	-	464		M. Hatsios	**Insight**		Developed the TOU rate elements in the Insight App. Development included building hourly data to visualize, budget setting and forecasting, high bill alert metadata, notifications, hourly rate info for budget breakdowns, enhance visualization, and budget calculator integration.	Performed testing and regression testing.	Wrap up costs.	
7	Total ACPP Deferral	165	3,015	2,920	499	-	-	-	6,599								
	1/ Authorization to defer ACPP project costs to regulatory asset per order in Case No. U-20602																
		Actual	Actual	Actual	Actual	Projected	Projected	Projected					**CY 2019**	**CY 2020**	**CY 2021**	**CY 2022**	**CY 2023**
8	Time of Day Implementation Project Costs Deferral (Note 2)	CY 2019	CY 2020	CY 2021	CY 2022	CY 2023	CY 2024	CY 2025	Total		Sponsoring Witness						
9	Information Technology	-	-	-	1,601	881	-	-	2,482		M. Hatsios	**Information Technology**				Program was set up to transition all residential customers to TOD, except for those in TOD-exempt programs. Re-configured the website, the insight app, and updated all remaining AMI meters to be interval based instead of register based to provide for TOD billing.	Peformed testing on changes for accuracy. After customer conversion in the end of March/early April, the project was in hypercare through the end of June to allow the customers time to receive their first bill.
10	Customer Outreach	-	-	-	2,044	453	-	-	2,497		P. Bennett	**Customer Outreach**				Research (focus groups) for messaging since the rate would no longer be opt-out. Pre-paid majority of the cost for two customer communications - direct mail and email.	Remainder of cost of printing and developing welcome kits sent to 2M customers. Welcome kit explained the rate and new tools to ensure customer could understand their usage and new rate.
11	Customer Service	-	-	-	-	5,152	-	-	5,152		M. Hatsios	**Customer Service**					Labor charges and additional training and surge staff for the expected call spike due to new rate implementation.

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-4.157a.

Respondent: R. Steudle

Page: 1 of 1

Question: 157. Refer to lines 3-10 on page 13 of Ms. Steudle's direct testimony on the tree trimming program. Please provide the following information in Excel: a. The number of customer power outages incurred each year from 2012 to 2023 due to tree or vegetation caused damage or events.

Answer: See attached – this data reflects customer interruptions identified as vegetation related based on the methodology used for the ETTP effectiveness analysis.

Attachment: *U-21534 AGDE-4 157a Customer Interruptions*

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Customers Interrupted	959,883	991,109	1,303,242	870,802	957,896	1,748,339	1,326,949	1,477,637	1,287,891	1,003,029	879,774	1,445,908
U-21534 AGDE-4 157a Customer Interruptions												

MPSC Case No: U-21534
Requester: AG
Question No.: AGDE-4.157b.
Respondent: R. Steudle
Page: 1 of 1

Question: 157. Refer to lines 3-10 on page 13 of Ms. Steudle's direct testimony on the tree trimming program. Please provide the following information in Excel: b. Provide the number of catastrophic storms and grey sky days, separately, for each year 2012 to 2023.

Answer: DTE objects for the reason that the information requested is not relevant, nor is it reasonably calculated to lead to the discovery of admissible evidence. Without waiving this objection, but subject to it, the Company responds as follows:

The cited testimony discusses changes in the measurement of the tree trim program's effectiveness at the conclusion of the surge. The changes are necessitated by the fact that all circuit miles will have been trimmed to the ETTP, there is no discussion of weather and no mention of the weather - related conditions used in the question.

Attachment: *None*

MPSC Case No: U-21534
Requester: AG
Question No.: AGDE-4.159d.
Respondent: R. Steudle
Page: 1 of 1

Question: 159. Refer to lines 10-23 on page 16 of Ms. Steudle's direct testimony on the tree trimming surge program cost escalation. Please: d. Provide the actual cost per mile for distribution surge tree trimming and for on-cycle, separately, for each year 2012 to 2023 and forecasted for 2024 and 2025 in Excel.

Answer: The Company objects for providing figures for years 2012-2018 for the reason that the information requested is not relevant nor is it reasonably calculated to lead to the discovery of admissible evidence. The Surge program started in 2019; therefore, the cost escalation associated with the surge program is relevant from that year forward. Without waiving this objection, the Company responds as follows:

The provided data is also for miles and costs related to O&M and the regulatory asset to align with the funding sources for the Surge program. Assuming surge miles refers to reclaim miles that had not been trimmed to the ETTP specification, see the attached document for the information requested for years 2019-2025.

Attachment: *U-21534 AGDE 4.159c-f -01 Miles and Cost*

U-21534 AGDE 4.159d -01 Miles and Cost

		2019	2020	2021	2022	2023	2024 & 2025
	Distribution Reclaim $/Mile	$ 29,403	$ 29,375	$ 28,507	$ 43,695	$ 35,086	$ 33,832
	Distribution On-Cycle $/Mile			$ 17,319	$ 18,037	$ 25,496	$ 30,031

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-4.163a.

Respondent: R. Steudle

Page: 1 of 1

Question: 163. Refer to lines 1-2 on page 21 of Ms. Steudle's direct testimony on paying contractors wage premiums to perform tree trimming surge program work. Please provide the following information in Excel: a. The premium cost paid for each year 2018 to 2023 and forecasted for 2024 and 2025.

Answer: See attachment from the response to AGDE-4.160a (tab Outsource Premium).

Attachment: *None.*

	2019-2022 Act	2023-2025 Forecast*	**Total**
U-20162	$38.89	$6.56	**$45.46**
Actuals/Forecast	$64.63	$50.53	**$115.16**
Net Impact			**$69.70**
*2023 forecast based on 8+4 forecast, 2024-2025 based on the estimated workforce needed to complete the Surge			

MPSC Case No: U-21534
Requester: AG
Question No.: AGDE-4.163b.
Respondent: R. Steudle
Page: 1 of 1

Question: 163. Refer to lines 1-2 on page 21 of Ms. Steudle's direct testimony on paying contractors wage premiums to perform tree trimming surge program work. Please provide the following information in Excel: b. The number of companies that were paid and will be paid the premium each year 2018-2025, the amount paid to each company, and the number of trimmers within each company.

Answer: The Company objects for the reason that the information requested consists of confidential, proprietary, and/or commercial information, the disclosure of which would cause the Company, its ratepayers, and its customers competitive harm. Without waiving this objection, but subject to it, the Company responds as follows:

See the attached file showing aggregate payments to local and outsourced vendors.

Attachment: *U-21534-AGDE-4.163b - Premium Cost*

DTEE Response to AGDE-4.163b

	2019	2020	2021	2022	2023	2024 & 2025
Number of companies	7	6	7	7	5	4
Total Premiums	$8.4	$12.7	$14.4	$29.2	$16.0	$34.5

	2019	2020	2021	2022	2023	2024 & 2025
Local	894	918	844	989	870	900
Outsource	239	246	412	650	412	500
Total	**1133**	**1164**	**1256**	**1639**	**1282**	**1400**

U-21534 AGDE-4.163b - Premium Cost

MPSC Case No: U-21534
Requester: AG
Question No.: AGDE-4.164b.
Respondent: R. Steudle
Page: 1 of 1

Question: 164. Refer to lines 1-14 on page 21 of Ms. Steudle's direct testimony on the incremental cost of programmatic additions. Please: b. Provide the number of students enrolled each year, the number that graduated and became part of the Company's tree trimming program each year, and the number of graduates who are still part of the Company's tree trimming program of the total number who participated in the academy.

Answer:

	2021	2022	2023
Trained	71	96	54
Graduated	58	90	53
Placed	49	55	27

Of the students placed with a tree contractor – 74 are still working as part of the tree trimming program. Over half the graduates from the program are Detroit residents.

Attachment: *None*

Michigan Public Service Commission
DTE Electric Company
Tree Trim Regulatory Asset - Return On
Projected 12 Month Period Ending December 31, 2025, as adjusted by AG
($000)

Exhibit: AG-25
Case No.: U-21534
July 26, 2024
Page: 1 of 1

Line No.	(a) Description	(b) Test Period Amount	(c) Reference
1	**Return on Tree Trim Regulatory Asset**		
2	Average Balance Regulatory Asset	$ 231,950	Line 16
3	Deferred Tax Liability	(60,075)	- Line 2 x 25.9% Composite Tax Rate
4	Average Net Rate Base	171,875	
5	Authorized Rate of Return on Permanent Capital (pretax)	5.76%	Exhibit A-14, Schedule D1
6	Return on Tree Trim	$ 9,900	

		2019-A	2020-A	2021-A	2022-A	2023	2024	2025	
7	**Tree Trim Regulatory Asset**								
8	#REF!	43,300	74,100	70,500	58,200	67,000	52,700	43,700	Exhibit A-13 C5.6.1, Line 2
9	Carrying Charges through April 30, 2020 1/		1,200						
10	Additional Funding Request	-	-	-	-	-	-	-	Exhibit A-13 C5.6.1, Line 3
11	Total Tree Trim Reg Asset Deferral	43,300	75,300	70,500	58,200	67,000	52,700	43,700	
12	Total Tree Trim Reg Asset Cumulative	43,300	118,600	189,100	247,300	157,400	210,100	253,800	Cumulative Line 11
13	Approved for Securitization 2/				(156,900)				Case U-21015
14	Cumulative Balance at December 31				90,400	157,400	210,100	253,800	
15	Cumulative Balance at December 31						210,100	253,800	Assumes 100% of annual spend
16	Average Balance							231,950	

Source: Exhibit A-11, Schedule A1.1.

MICHIGAN PUBLIC SERVICE COMMISSION **Case No. U-21534**
DTE Electric - Electric Rate Case **Exhibit AG-26**
July 26, 2024
Recommended Capital Structure & Cost Rates for Test **Page 1 of 1**
Year Ending December 31, 2025

(Millions of Dollars)

Line	Description	Capital Structure: Capital Balances*	Capital Structure: % Permanent Capital	Capital Structure: % Total Capital	Cost Rate**	Total Cost (d) x (e)	Conversion Factors***	Pre-Tax Wtd. Cost (f) x (g)
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
1	Long Term Debt	$ 8,668.8	50.0%	39.21%	4.24%	1.66%	1.0000	1.66%
2	Preferred Stock	-	0.0%	0.00%	0.00%	0.00%	1.3496	0.00%
3	Common Equity	8,668.7	50.0%	39.21%	9.85%	3.86%	1.3496	5.21%
4	Total Permanent Capital	17,337.5	100.0%	78.42%		5.52%		6.88%
5	Short Term Debt	509.5		2.30%	5.76%	0.13%	1.0000	0.13%
6	Deferred Income Taxes	4,229.6		19.13%	0.00%	0.00%	1.0000	0.00%
7	JDITC							
8	Long Term Debt	15.7		0.07%	4.24%	0.00%	1.0000	0.00%
9	Preferred Stock	-		0.00%	0.00%	0.00%	1.3496	0.00%
10	Common Equity	15.7		0.07%	9.85%	0.01%	1.3496	0.01%
11	Total Capitalization & Cost Rates	$ 22,108.0		100.00%		**5.67%**		**7.02%**

Notes

* All capital balances per Company Exhibit A-14, Schedule D1.

** All cost rates per Company Exhibit A-14, Schedule D1 except for Common Equity which is set forth on Exhibit AG-27

*** Conversion factors per Company Exhibit A-14, Schedule D1.

MICHIGAN PUBLIC SERVICE COMMISSION | **Case No. U-21534**
DTE Electric - Electric Rate Case | **Exhibit AG-27**
July 26, 2024
Summary of Cost of Common Equity Capital Analysis | **Page 1 of 1**

Line	Description	Relative Weighting	Peer Group	Note
	(a)	(b)	(c)	(d)
1	Discounted Cash Flow (DCF) Approach	50.00%	9.26%	1
2	Capital Asset Pricing Model (CAPM) Approach	25.00%	10.57%	2
3	Equity Risk Premium Approach	25.00%	10.10%	3
4	**Calculated Cost of Common Equity (Sum of Col. (b) x (c) for each line)**		**9.80%**	
5	**Rounding**		**0.05%**	4
6	**Cost of Common Equity for Rate Case Purposes**		**9.85%**	

Note 1 See Exhibit AG-28
Note 2 See Exhibit AG-29
Note 3 See Exhibit AG-30
Note 4 Reflects the potential effects of increasing interest rates on the DCF Approach and establishing a more gradual approach to adjusting the Company's ROE to the true cost of Common Equity

MICHIGAN PUBLIC SERVICE COMMISSION **Case No. U-21534**
DTE Electric - Electric Rate Case **Exhibit AG-28**
July 26, 2024
Discounted Cash Flow (DCF) Application
(See Equation Below)

Line	Company	Ticker	Stock Price*	Projected 2024-25 Avg. Dividend**	Dividend Yield Col. (d)/(c)	EPS Growth Rate*** Value Ln Long Trm Growth	EPS Growth Rate*** Analysts 5 Yr Growth p/Yahoo	EPS Growth Rate*** Average of Col. (f) & (g)	DCF ROE for Proxy Co. Col. (e) + (h)
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
1	Alliant Energy	LNT	50.91	$ 1.98	3.89%	N/M	N.M	N.M	N/M
2	Ameren	AEE	73.29	2.77	3.78%	6.37%	5.50%	5.94%	9.71%
3	Avista	AVA	37.06	1.96	5.29%	5.30%	6.20%	5.75%	11.04%
4	Black Hills	BKH	55.72	2.65	4.76%	3.97%	0.70%	3.97%	8.73%
5	CMS Energy	CMS	61.91	2.12	3.42%	4.49%	N.M	4.49%	7.92%
6	Consolidated Edison	ED	94.96	3.36	3.54%	5.54%	6.09%	5.82%	9.35%
7	IDACORP	IDA	95.68	3.40	3.55%	5.29%	4.40%	4.84%	8.40%
8	Northwestern	NWE	51.45	2.62	5.09%	5.71%	4.50%	5.10%	10.20%
9	PNM Resources	PBM	37.77	1.61	4.26%	3.81%	4.42%	4.12%	8.38%
10	Public Service Enterprise Group	PEG	73.41	2.47	3.36%	6.98%	5.60%	6.29%	9.65%
13	**Average**				**4.09%**	**5.27%**	**4.68%**	**4.63%**	***9.26%***

Notes
* High-Low Average Prices for the 30 days May 1 to June 12, 2024 per Yahoo
** From the Value Line Investment Survey Publications of April 10, May 10 and June 7, 2024
*** Columns (f) and (g) are from AG workpapers
N/M Low and High Growth Rates eliminated

Equation $R = D/P + g$ *Where* **R** = the required return on the equity security; **P** = the current price of the equity security; **D** = the next dividend on the security; **g** = the expected growth rate of earnings

Comparison of DCF Results by Company (AG versus DTEE results)

			DCF Results**			
	AG Peer Company	**Ticker**	**AG Results**	**AG Results Excl ED&PNM**	**DTEE Results**	**Variance Col c - e**
	(a)	(b)	(c)	(d)	(e)	(f)
1	Alliant Energy	LNT	N/M	N/M	10.70%	
2	Ameren	AEE	9.71%	9.71%	9.20%	
3	Avista	AVA	11.04%	11.04%	11.50%	
4	Black Hills	BKH	8.73%	8.73%	9.60%	
5	CMS Energy	CMS	7.92%	7.92%	10.50%	
6	Consolidated Edison*	ED	9.35%			
7	IDACORP	IDA	8.40%	8.40%	7.90%	
8	Northwestern	NWE	10.20%	10.20%	9.50%	
9	PNM Resources*	PBM	8.38%			
10	Public Service Enterprise Group	PEG	9.65%	9.65%	9.40%	
	Average (Excl. PNM Resources & Cosol. Edison)		**9.26%**	**9.38%**	**9.79%**	**0.52%**

Conclusion:	Exclude PNM and Consolidated Edison	0.11%
	Use DTEE DCF rates	0.41%
	Total Variance AG Case vs. Company Case	**0.52%**

* These two companies are not in the DTEE sponsored peer group

** AG results from page 1 of this exhibit
DTEE results from Exhibit A-14, Schedule D5.7, page 1, Panel A, column 3

MICHIGAN PUBLIC SERVICE COMMISSION | **Case No. U-21534**
DTE Electric - Electric Rate Case | **Exhibit AG-29**
July 26, 2024
Capital Asset Pricing Model Application |
(See Equation Below)

Line	Company	Ticker	Common Equity to Capital %	Current Beta (*B*)	Risk Premium (R*p*)	Beta x Risk Premium Col. (d) x (e)	Projected 2025 Risk Free Rate (R*f*)	K*e* or 2025 CAPM ROE for Proxy Co. Col. (e) + (f)
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
1	Alliant Energy	LNT	42.8%	0.90	7.17%	6.45%	4.05%	10.50%
2	Ameren	AEE	41.7%	0.90	7.17%	6.45%	4.05%	10.50%
3	Avista	AVA	49.2%	0.95	7.17%	6.81%	4.05%	10.86%
4	Black Hills	BKH	41.5%	1.05	7.17%	7.53%	4.05%	11.58%
5	CMS Energy	CMS	31.5%	0.85	7.17%	6.09%	4.05%	10.14%
6	Consolidated Edison	ED	49.3%	0.80	7.17%	5.74%	4.05%	9.79%
7	IDACORP	IDA	51.3%	0.85	7.17%	6.09%	4.05%	10.14%
8	Northwestern	NEW	49.6%	0.95	7.17%	6.81%	4.05%	10.86%
9	PNM Resources	PBM	33.6%	0.90	7.17%	6.45%	4.05%	10.50%
10	Public Service Enterprise Group	PEG	44.0%	0.95	7.17%	6.81%	4.05%	10.86%
13	**Average**		**43.5%**	**0.91**	**7.17%**	**6.52%**	**4.05%**	***10.57%***
14	High							11.58%
15	Low							9.79%

Sources
Column (c) From Data included in SEC filings
Column (d) From the Value Line Investment Survey Publications of April 19, May 10 and June 7, 2024
Column (e) Historic average - 1926 to 2022 Ibbotson returns of Stock Market vs. Yield on Government Bonds
Column (g) Average 2025 30 Year U.S. Treasury Rate

	Blue Chip Economic Indicators		
	Jan. 2024	**May 2024**	**Average**
10 Yr. Treasury Rate	3.70%	4.00%	
July 2024 Spread	0.20%	0.20%	
Est. 30 Yr. Treasury Rate	**3.90%**	**4.20%**	**4.05%**

Equation for CAPM K*e* = R*f* + (*B* x R*p*)

Where K*e* = the Cost of Common Equity; R*f* = the Risk Free Rate of Return;
B = the Beta or covariance of the stocks price to overall market ; and
R*p* = the Expected Risk Premium of the overall market

MICHIGAN PUBLIC SERVICE COMMISSION | **Case No. U-21534**
DTE Electric - Electric Rate Case | **Exhibit AG-30**
July 26, 2024
Electric Utility Equity Risk Premium Approach | **Page 1 of 1**

Line	Description	Projected Test Period	Note
	(a)	(c)	(d)
1	**Proxy Group Debt Ratings (S & P)**	**A to BBB**	
2	**Number of Proxy Companies**	**10**	
	Build-up of Common Equity Rate of Return		
3	Long Term US Treasury Rate Projection	4.05%	1
4	Corporate Spread Over Treasury Bond Rate	1.67%	2
5	Sub Total (Line 2 + Line 3)	5.72%	
6	Historical Spread - Utility Common Stocks over Bonds	4.38%	3
7	**Cost of Common Equity (Line 5 + Line 6)**	***10.10%***	

Notes
1 See risk free rate from AG CAPM analysis
2 Reflects the average spread in 2022 of "A" rated issues (155 BP) and "BBB" issues (179 BP) based on analysis of Exhibit A-18, Schedule H
3 Historical average per AG workpapers

ROEs Under 9.9%**

Line	Electric Company	Jurisdiction & Order Date			ROE Awarded in 2022	ROE Awarded in 2023	Parent Company	Pub. Finan'ls Avail.	Long Term Debt Issued Since Date of Rate Order
1	Niagara Mohawk Power	NY	Jan. 20	2022	9.00%		National Grid, PLC	Foreign	
2	Southwestern Public Service	NM	Feb. 16	2022	9.35%		Xcel Energy	Yes	May 3, 2022 $700M, 30 Yr. at 4.6%
3	Indiana Michigan Power	IN	Mar. 2	2022	9.70%		American Electric Power	Yes	Feb 27, 2023 $850M, 10 Yr. at 5.625%
4	Public Service of Colorado	CO	Mar. 16	2022	9.30%		Xcel Energy	Yes	May 3, 2022 $700M, 30 Yr. at 4.6%
5	Orange & Rockland Utilities	NY	Apr. 14	2022	9.20%		Consolidated Edison	Yes	Nov. 9, 2022 $700M, 30 Yr. at 6.15%
6	Portland General Electric	OR	Apr. 25	2022	9.50%		Portland General Electric	Yes	Jan 3, 2023 $200M, 7 Yr. and 10 Yr at 5.47% & 5.56%
7	Unitil Energy Systems	NH	May 12	2022	9.20%		Unitil	Yes	
8	Southwestern Electric Power	AR	May 23	2022	9.50%		American Electric Power	Yes	Feb 27, 2023 $850M, 10 Yr. at 5.625%
9	Green Mountain Power	VT	Aug. 31	2022	8.57%		Enegir	Private	
10	Oklahoma Gas & Electric	OK	Sep. 8	2022	9.50%		OGE	Yes	Jan 3, 2023 $450M, 10 Yr. at 5.4%
11	El Paso Electric	TX	Sep. 15	2022	9.35%		JP Mrgn Chase TII Fund	Private	
12	Kingsport Power	TN	Oct. 25	2022	9.50%		American Electric Power	Yes	Feb 27, 2023 $850M, 10 Yr. at 5.625%
13	Commonwealth Edison	IL	Nov. 17	2022	7.85%		Exelon	Yes	Jan 3, 2023 $975M, 10 Yr. and 30 Yr at 4.9% & 5.3%
14	NSTAR Electric	MA	Nov. 30	2022	9.80%		Eversource	Yes	May 8, 2023 $1.8Bil. 3Yr, 5Yr., 10Yr at 4.75% to 5.45%
15	Ameren Illinois	IL	Dec. 1	2022	7.85%		Ameren	Yes	May 2023 $500M 10 Yr. at 4.95%
16	Delmarva Power & Light	MD	Dec. 14	2022	9.60%		Exelon	Yes	Jan 3, 2023 $975M, 10 Yr. and 30 Yr at 4.9% & 5.3%
17	Duke Energy Ohio	OH	Dec. 14	2022	9.50%		Duke	Yes	March 2023 $750M 10 Yr & 30 Yr at 5.25% & 5.65%
18	Pacificorp	OR	Dec. 16	2022	9.50%		Berkshire Hathaway Energy	Yes	May 15, 2023 $1.2Bil. 31 Yr at 5.5%
19	Pudget Sound Energy	WA	Dec. 22	2022	9.40%		Alberta Investment Mgt. Co.	Private	
20	Wisconsin Public Service	WI	Dec. 22	2022	9.80%		WEC Energy	Yes	Jan. 9, 2023 - $1.1 B; 3 and 5 Yr. at 4.75
21	Sierra Pacific Power	NV	Dec. 27	2022	9.56%		Berkshire Hathaway Energy	Yes	
22	Empire District Electric	OK	Dec. 29	2022	9.30%		Algonquin Power & Utilities	Foreign	
23	Wisconsin Electric Power	WI	Dec. 29	2022	9.80%		WEC Energy	Yes	Jan. 9, 2023 - $1.1 B; 3 and 5 Yr. at 4.75
24	**Average 2022 ROE Awarded under 9.9%**				**9.29%**				

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Notes for pages 1 and 2

* All ROE data from Regulatory Research Associates & excludes Limited Issue Rider cases

** A summary of all ROEs including those at 9.9% and above is included on page 3 of this exhibit

Electric Rate Case Return on Equity (ROE) Rates (2022 and 2023)*

ROEs Under 9.9%**

Line	Electric Company	Jurisdiction	Order Date		ROE Awarded in 2022	ROE Awarded in 2023	Parent Company	Pub. Finan'ls Avail.	Long Term Debt Issued Since Date of Rate Order
1	Minnesota Power Enterpr.	MN	Jan. 23	2023		9.65%	Allete	Yes	Apr. 27, 2023 $125M 10 Yr. at 4.9%
2	Cheyenne Light Fuel & Pwr.	WY	Jan. 26	2023		9.75%	Black Hills	Yes	Sep. 15, 2023 $$450M 10.5 Yr. at6.15%
3	Duke Energy Progress	SC	Feb. 9	2023		9.60%	Duke Energy	Yes	Mar. 2023 $500M (10 Yr), $500M (30 Yr.) at 5.25% & 5.35%
4	Southwestern Electric Power	LA	Feb. 17	2023		9.50%	Xcel Energy	Yes	Jul. 31, 2023, $800M 10 Yr at 5.45%
5	Oncor Elec. Delivery	TX	Mar. 9	2023		9.70%	Sempra Energy	Yes	Jun. 2023 $550M (3 Yr), $700M (10 Yr.) at 5.4% & 5.5%
6	Versant Power	ME	May. 31	2023		9.35%	Enmax (City of Alberta, Can.)	Private	
7	Northern States Power	MN	Jun 1	2023		9.25%	Xcel Energy	Yes	Jul. 31, 2023, $800M 10 Yr at 5.45%
8	Central Maine Power	ME	Jun 6	2023		9.35%	Avangrid	Yes	
9	MDU Resources	ND	Jun 6	2023		9.75%	MDU Resources	Yes	
10	Consolidated Edison of NY	NY	Jul. 20	2023		9.25%	Consolidated Edison	Yes	Nov 2023 $600M (10 Yr.) at 5.5%
11	Northern Indiana P. S.	IN	Aug. 2	2023		9.80%	NIPSCO	Yes	Jun 2024 $600M (5 Yr) at 5.2%
12	Entergy Texas	TX	Aug. 3	2023		9.57%	Entergy	Yes	May 2024 $1.2B (30 Yr.) at 7.125%
13	Duke Energy Progress	NC	Aug. 18	2023		9.80%	Duke Energy	Yes	Sep. 2023 $600M (10 Yr), $750M (30 Yr.) at 5.75% & 6.10%
14	Green Mountain Power	VT	Aug. 23	2023		9.58%	Eniger	Private	
15	United Illuminating Group	CT	Aug. 25	2023		8.63%	Avangrid	Yes	Oct. 2023 $65M 10 Yr. 4.5% (Remarketed)
16	Tuscon Electric Power	AZ	Aug. 25	2023		9.55%	Fortis	Canada	
17	Avista	ID	Aug. 31	2023		9.40%	Avista	Yes	
18	Public Service of Colorado	CO	Sep. 6	2023		9.30%	Xcel Energy	Yes	Feb 2024 $800M (10 Yr.) at 5.5%
19	MDU Resources	MT	Sep. 21	2023		9.65%	MDU Resources	Yes	
20	Duke Energy KY	KY	Oct. 12	2023		9.75%	Duke Energy	Yes	Jun 2024 $1.5B (10 Yr & 30 Yr) at 5.45 & 5.80
21	New York State Elec. & Gas	NY	Oct. 12	2023		9.20%	Avangrid	Yes	
22	Rochester Gas & Electric	NY	Oct. 12	2023		9.20%	Avangrid	Yes	
23	Potomac Edison	MD	Oct. 18	2023		9.50%	Exelon	Yes	Feb 2024 $1.7B (5 Yr, 10 Yr, 30 Yr) 5.15%, 5.45%, 5.6%
24	Southwestern Public Service	NM	Oct. 19	2023		9.50%	Xcel Energy	Yes	Feb 2024 $800M (10 Yr.) at 5.5%
25	NorthWestern Energy Group	MT	Oct. 25	2023		9.65%	NorthWestern Energy Group	Yes	
26	Madison Gas & Electric	WI	Nov. 3	2023		9.70%	MGE Energy	Yes	
27	Public Service of Oklahoma	OK	Nov. 3	2023		9.30%	American Electric Power	Yes	Jun 2024 $1.0B (30 Yr.) 7%
28	Northern States Power	WI	Nov. 9	2023		9.80%	Xcel Energy	Yes	Feb 2024 $800M (10 Yr.) at 5.5%
29	Wisconsin Power & Light	WI	Nov. 9	2023		9.80%	Alliant Energy	Yes	
30	Atlantic City Electric	NJ	Nov. 17	2023		9.60%	Exelon	Yes	Feb 2024 $1.7B (5 Yr, 10 Yr, 30 Yr) 5.15%, 5.45%, 5.6%
31	Pacificorp	WY	Nov. 28	2023		9.35%	Berkshire Hathaway	Yes	
32	Empire District Electric	AR	Dec. 7	2023		9.70%	Algonquin Power & Utilities	Canada	
33	Ameren Illinois	IL	Dec. 14	2023		8.72%	Ameren	Yes	
34	Baltimore Gas & Electric	MD	Dec. 14	2023		9.50%	Exelon	Yes	Feb 2024 $1.7B (5 Yr, 10 Yr, 30 Yr) 5.15%, 5.45%, 5.6%
35	Commonwealth Edison	IL	Dec. 14	2023		8.91%	Exelon	Yes	Feb 2024 $1.7B (5 Yr, 10 Yr, 30 Yr) 5.15%, 5.45%, 5.6%
36	Portland General Electric	OR	Dec. 18	2023		9.50%	Portland General Electric	Yes	
37	Nevada Power	NV	Dec. 26	2023		9.52%	Berkshire Hathaway	Yes	
38	Idaho Power	ID	Dec. 28	2023		9.60%	IDACORP	Yes	
39	**Average 2023 ROE Awarded under 9.9%**					**9.48%**			

Summary of All Cases (incl. ROEs at 9.9% and Above)*

Line	Caption/No. of Cases	State	Company	ROE % * 2022	ROE % * 2023	2022	2023	Explanations & Commentary
1	**Number of ROE Decisions Under 9.9%**					23	38	From Pages 1 and 2
2	**ROEs Awarded at 9.90% or Higher**							
3		Michigan	DTE Electric	**9.90%**	**9.90%**	1	1	
4			Consumer Energy Co.		**9.90%**		1	
5			Upper Peninsula Power		**9.90%**		1	
6		Ohio	Dayton Power & Light	**10.00%**		1		Distribution ROE Only; Smaller Utility (536K customers)
7		N. Carolina	Duke Energy Carolinas		**10.10%**		1	
8		Georgia	Georgia Power	**10.50%**		1		Troubled Nuclear Plant Construction
9		Alaska	Alaska Elec. Light & Power		**11.45%**		1	Small Juneau Alaska utility (17,600 customers)**
10		California	Pacific Gas & Electric	**10.70%**	**10.70%**	1	1	Wild Fire Risk
11		California	Pacific Gas & Electric	**10.00%**		1		Wild Fire Risk
12		California	San Diego Gas & Electric	**10.20%**	**10.65%**	1	1	
13		California	San Diego Gas & Electric	**9.95%**		1		
14		California	So. California Edison	**10.30%**	**10.75%**	1	1	Wild Fire Risk
15		California	So. California Edison	**10.05%**		1		Wild Fire Risk
16		California	Pacificorp		**10.00%**		1	
17		California	Liberty Utilities (CalPeco Elec.)		**10.00%**	-	1	Small Utility - Lake Tahoe (Rate Base of Approx. $350M)***
18	Total Cases with ROEs Stated (Excl. Lmtd. Issue Riders)					**32**	**48**	
19	**Avg. ROE Rate Awarded**		**Excluding 9.9% Plus Cases**			**9.29%**	**9.48%**	
20			**All Cases***			**9.54%**	**9.66%**	**Simple 2 Yr. Average** **9.6%**

* All ROE data from Regulatory Research Associates & excludes Limited Issue Rider cases
** Per page 24 of Avista Form 10-K filed in early 2023.
*** Per Algonquin Investor Presentation of Nov. 10, 2023, page 16

MICHIGAN PUBLIC SERVICE COMMISSION
DTE Electric - Electric Rate Case

Case No. U-21534
Exhibit AG-32
July 26, 2024

2022-2023 Midwest ROE Decisions Outside Michigan*

Line	Company	State Jurisdiction	Month	Year	2023 Authorized ROE Decision
	(a)	(b)	(c)	(d)	(e)
1	Minnesota Power	Minnesota	January	2023	9.65%
2	Northern States Power	Minnesota	June	2023	9.25%
3	Northern Indiana P.S.	Indiana	August	2023	9.80%
4	Duke Energy Kentucky	Kentucky	October	2023	9.75%
5	Madison Gas & Electric	Wisconsin	November	2023	9.70%
6	Northern States Power	Wisconsin	November	2023	9.80%
7	Wisconsin Power & Light	Wisconsin	November	2023	9.80%
8	Ameren Illinois	Illinois	December	2023	8.72%
9	Commenwealth Edison	Illinois	December	2023	8.91%
10	**Average of 2022 and 2023 Decisions**				**9.49%**

* As published by Regulatory Research Associates

MICHIGAN PUBLIC SERVICE COMMISSION
DTE Electric - Electric Rate Case

Case No. U-21534
Exhibit AG-33
July 26, 2024

Comparison of AG and DTEE Peer Groups

			Elimination Factors										
		2023	Revs. Over Under				Reorg.	EPS	OS Wind	Large NU Ops	Total	Peer Group per	
Line	Value Line Electric Utilities	Revs. ($M)	20 B +	1 B	No Div. Grth	Foreign	M & A	Fall-Off	& Wldfr.	& DTE	Factors	AG	DTEE
1	AVANGRID	$ 8,309			Yes		Yes				2		
2	Consolidated Edison	14,663										x	
3	Dominion Energy	14,393			Yes		Yes				2		
4	Duke Energy	29,060	Yes								1		x
5	Eversource Energy	11,911					Yes		Yes		2		
6	Exelon	21,727	Yes								1		x
7	FirstEnergy	12,870					Yes				1		
8	NextEra Energy	28,114	Yes							Yes	2		x
9	PPL Corp.	8,312						Yes			1		
10	Public Service Enterp. Group	11,237										x	x
11	Southern Co.	25,253	Yes								1		x
12	ALLETE	1,880					Yes				1		x
13	Alliant Energy	4,027										x	x
14	Ameren	7,500										x	x
15	American Electric Power	18,882					Yes				1		x
16	CMS Energy	7,462										x	x
17	CenterPoint Energy	8,646					Yes				1		x
18	DTE Energy	12,745								Yes	1		
19	Entergy	12,147					Yes	Yes			2		x
20	Fortis	11,517				Yes					1		
21	Evergy	5,508						Yes			1		x
22	MGE Energy	670		Yes							1		x
23	OGE Energy	2,674						Yes			1		x
24	Otter Tail	1,349								Yes	1		x
25	WEC Energy	8,893					Yes				1		x
26	Avista	1,752										x	x
27	Black Hills	2,331										x	x
28	Edison International	16,338							Yes		1		x
29	Hawaiian Electric	3,682			Yes			Yes	Yes		3		
30	IDACORP	1,766										X	x
31	Northwestern	1,422										x	x
32	PNM Resources	1,939										x	
33	Pacific Gas & Electric	24,438	Yes						Yes		2		
34	Pinnacle West Capital	4,696						Yes			1		x
35	Portland General Electric	2,923						Yes			1		
36	Sempra Energy	16,720				Yes					1		x
37	Xcel Energy	14,206							Yes		1		x
38	Unitil	557		Yes							1		
	Totals		5	2	3	2	9	7	5	3	**36**	**10**	**25**

Companies Eliminated from Peer Group Consideration
(due to M & A, Reorg. and EPS Growth Disruptions)

Line	Company involved in M & A, Reorg.	Anticipated Actions to be Taken per Value Line
1	Avangrid	Iberdola of Spain looking to acquire remainder of Company
2	Dominion Energy	Selling various assets to reduce debt
3	Eversource	Looking to sell Off-Shore Wind and Water Distribution assets
4	First Energy	Selling $3.5 Billion in Transmission Assets
5	Allete*	Being acquired by Global Infrastructure Partners
6	American Electric Power*	Selling AEP OnSite Partners for $0.3 billion
7	CenterPoint Energy*	Sale of two gas units pending for $1.2 B to Bernhard Capital Ptns.
8	Entergy*	Looking to sell shut-down nuclear assets
9	WEC Energy*	Purchasing $0.5 billion stake in Texas solar project

		EPS per Value Line				
	mpany with Earnings Disruption	2020	2021	2022	2023	ments based on Value Line and Company Docu
10	PPL Corp	$ 2.04	$ 0.53	$ 1.41	$ 1.60	Effects of Restructuring
11	Entergy*	6.90	6.87	5.35	11.10	Hurricanes Ida and Zeta (2020-22); Favorable IRS Audit Outcome (2023)
12	Evergy*		3.83	3.26	3.17	Impairment Loss in 2022
13	OGE Energy*		2.36	2.25	2.07	
14	Hawaiian Electric		2.25	2.20	1.81	Wildfires - Value Line estimates 2028 EPS at $1.00 per share
15	Pinnacle West*		5.47	4.26	4.41	Disruptive Rate Case Outcome in late 2021 - EPS to recover
16	Portland General Electric			2.74	2.38	Mild Weather in 2023 and higher costs

* These companies have been included in the Company's peer group

MICHIGAN PUBLIC SERVICE COMMISSION
DTE Electric - Electric Rate Case
Peer Group Market to Book Equity Ratios-Mar. 31, 2024

Case No. U-21534
Exhibit AG-34
July 26, 2024

Line	Company (a)	Ticker (b)	Mkt. Val. p/Sh. Of Com. Equity Mar.. 31, 2024* (c)	Millions: Book Value of Com. Equity** (d)	Millions: Common Shares** (e)	Book Value per Share (d) / (e) (f)	Market to Book Ratio (c) / (f) (g)
1	Alliant Energy	LNT	$ 50.40	$ 6,817	256.4	26.59	1.90
2	Ameren	AEE	73.96	11,443	266.6	42.92	1.72
3	Avista	AVA	35.02	2,521	78.2	32.24	1.09
4	Black Hills	BKH	54.60	3,334	68.9	48.39	1.13
5	CMS Energy	CMS	60.34	7,722	298.6	25.86	2.33
6	Consolidated Edison	ED	90.81	21,615	346.0	62.47	1.45
7	IDACORP	IDA	92.89	2,415	50.1	47.63	1.95
8	Northwestern	NEW	50.93	2,813	64.8	43.41	1.17
9	PNM Resources	PBM	37.64	2,356	90.2	26.12	1.44
10	Public Service Enterprise Group	PEG	66.78	15,718	497.0	31.63	2.11
11	**Average**						**1.63**

* Per Yahoo

** Per SEC Filings on Form 10-Q for quarter ended March 2024

MICHIGAN PUBLIC SERVICE COMMISSION | **Case No. U-21534**
DTE Electric - Electric Rate Case | **Exhibit AG-35**
July 26, 2024
Page 1

Rating Agency Cash Flow Ratios
(With ROE at 9.85% and a 50% Common Equity Ratio)

		12 M.E. March 2023 Adjusted Moody's Cash Flow Ratio ($ Mil.)			
Line	Caption	Cash From Operations Pre-Wkg. Cap.	Debt	Ratio (e) / (f)	Note
	(a)	(b)	(c)	(d)	
1	**12 M.E. March 2023 Actual Ratio Results**	$ 2,290	$ 11,322	**20.2%**	1
2	Increase Common Equity (to 50% vs 47.1%)	-	(559)		2
3	Increase ROE (to 9.85% vs 9.26%)	109			3
4	**Pro Forma w/50% Common Equity, 9.85% ROE**	$ 2,399	$ 10,763	**22.3%**	L 1 + L 2 + L 3
5	**Ratings Downgrade Risk**			***Below 21%***	4

Notes

1 From page 1 of Moody's July 6, 2023 report on DTE Electric (see AGDE _____ Attachment)

2 Amount from "Rebalancing Adjustments" determined under the footnotes on this page

3 Net Income if a 9.85% ROE was earned: Common Equity of $9.779 below x 9.85% equals $ 963 M
DTE Electric 12 M.E. March net income (from Company SEC filings) 854 M
Net Income Under 9.85% **$ 109** M **To Line 3 Above**

4 From page 2 of Moody's July 6, 2023 report on DTE Electric under "Factors that could lead to a downgrade"

Avg. Capital ($Mil.) 12 M.E. March 2023 (Per SEC Filings of Company)	March 2022	March 2023	Two Point Average	Rebalancing Adjustmts.	2021 Rebalanced Amount	2021 Rebalanced % Capital
Long-Term Debt	$ 9,787	$ 10,889	$ 10,338	**$ (559)**	$ 9,779	50.0%
Preferred Stock	-	-	-		-	0.0%
Common Equity	8,827	9,613	9,220	559	9,779	50.0%
Total	$ 18,614	$ 20,502	$ 19,558		$ 19,558	100.0%
Common Equity %			**47.1%**			

VLFAlert

ValueLinefunds

4th Quarter 2018

Volume VII, Issue IV

00207257



Mitchell Appel
President
Value Line Funds

Dear Fellow Shareholder,

Thank you for choosing Value Line Funds as a part of your diversified investment portfolio. For over half a century, Value Line Funds has championed sound investment principles and helped thousands of investors accomplish their financial goals with our actively managed family of mutual funds.

We hope you enjoy this edition of the VLFAlert and thank you for your continued support.

Volatility is Not Risk:
Why the Difference is Critical to Long-Term Results

2017 lulled many equity investors into a comfort zone based on historically low volatility. 2018 has been more volatile—with tighter monetary policy and geopolitical and trade policy uncertainty among the drivers of the increase. But volatility levels in 2018 are actually historically normal—even with the bouts of volatility anticipated ahead of the November mid-term elections. But volatility is not risk. And recognizing the difference can be critical to your long-term investment returns.

Defining Our Terms

Volatility is simply the measure of the up and down movements of the market. For example, since 1950, when the Value Line Funds were first established, the average maximum drawdown in the broad U.S. equity market during midterm election years has been -17%, with weakness tending to be concentrated in the pre-election days. However, the good news is that there has been a consistent tendency historically for post-drawdown rallies, averaging +32% in the subsequent year.[1] Volatility? Yes! Uncertainty? Yes! But volatility is only risk if you act during down times—that is, only if you sell. To which the often-invoked quip may well be the most prudent answer: "Don't just do something, sit there."

Risk, on the other hand, is the probability of a permanent loss. You might think of risk as the possibility of having to lower your quality of life in the future.

> **"Volatility is not synonymous of risk but—for those who truly understand it—of wealth."**
> *- Francois Rochon**

Recognizing the Difference

Volatility is independent of risk. Too many investors let an investment's short-term price movements, or perceptions of short-term price movements, drive their buying and selling decisions. Too often volatility is regarded as something to be avoided. But since short-term price moves are unknowable and independent of underlying fundamentals and value, such volatility should not be a determinant.

And ALL investments have risk of some kind, including cash and CDs. One just needs to pick the risks that are best to take based on your individual tolerance level, time horizon and financial needs and goals.

As famed investor and Berkshire Hathaway CEO Warren Buffet wrote:

> "Stock prices will always be far more *volatile* than cash-equivalent holdings. *Over the long term*, however, currency-denominated instruments are *riskier* investments — far riskier investments — than widely-diversified stock portfolios that are bought over time and that are owned in a manner invoking only token fees and commissions. **That lesson has not customarily been taught in business schools, where volatility is almost universally used as a proxy for risk. Though this pedagogic assumption makes for easy teaching, it is dead wrong: Volatility is *far* from synonymous with risk.** Popular formulas that equate the two terms lead students, investors and CEOs astray."[2]

> **"Volatility is our friend. Volatility has nothing to do with risk."**
> *- Mohnish Pabrai**

(continued on back)

It's a Matter of Time, Not Timing

Most experienced investors do not fear volatility, only unrecoverable loss. But most losses, as measured by a day, a week, a quarter or a year, are recoverable over time. Declines in principal value have historically been temporary. Of course, there are true risks. A company could go totally out of business. An innovation could transform an industry so profoundly to make a once "blue chip" company a relic. A geopolitical event could happen to negate all assumptions. But these occurrences are rare. For the vast majority of investors, maintaining a long-term perspective is the real key to attaining gains over their investing lifetime. Historically, since World War II, the longer you hold stocks, the narrower the range of returns.[3] In other words, even if volatility is a concern, it decreases the longer you hold stocks. It's the old adage: what matters is time in the market, not market timing.

"You can't overlook the volatility, but you don't let it push you around in the market."

*- Boone Pickens**

solutions designed to meet a broad array of investment goals. Whether you are looking for income or long-term capital appreciation, whether you choose to invest in equities, taxabl or tax-exempt fixed income or a hybrid fund of multiple asset classes, you can rely on the solid fundamentals of Value Line Funds.

Value Line Funds Include:
Equity Funds
Premier Growth Fund
Larger Companies Focused Fund
Mid Cap Focused Fund
Small Cap Opportunities Fund
Hybrid Funds
Asset Allocation Fund
Capital Appreciation Fund
Fixed Income Funds
Tax Exempt Fund
Core Bond Fund

MICHIGAN PUBLIC SERVICE COMMISSION
DTE Electric - Electric Rate Case

Case No. U-21534
Exhibit AG-37
Date: July 26, 2024
Page 1 of 1

O & M Summary-Millions of Dollars

Line	Caption or Description of Item	Amount	Reference
	(a)	(b)	(c)
1	**Total O & M Per Company Case**	$ 1,267.0	Ex. A-13, Sch. C5
	AG Case Adjustments		
2	2024-25 Inflation at CPI	(14.6)	Ex. AG-38
3	Steam Generation	(21.9)	Ex. AG-39
3	Voluntary Separation Program	(10.1)	Testimony*
4	Tree Tim Program Savings	(8.8)	Ex. AG-40**
5	Discontinue Non-Residential Merchant Fee Program	(3.5)	Testimony***
6	Uncollectible Accounts Expense	(3.8)	Ex. AG-41
7	Injuries & Damages	(2.9)	Ex. AG-42
8	Active Health Care	(3.1)	Ex. AG-43
9	Supplemental Savings Plan Expense	(3.2)	Testimony
10	Corporate Aircraft	(0.3)	Testimony****
11	Incentive Compensation Plan	(51.3)	Ex. AG-44
12	Total Adjustments	**(123.5)**	Sum L2 to L11
13	**Total O&M per AG Case**	**$ 1,143.5**	L1 + L12
14	**Total O&M Reduction**	**$ (123.5)**	line 13 less Line 1

* DR AGDE 1.23c indicates 2025 savings of $20.3 million. The AG has included 50% of this amount reflecting the Company's uncertainty

** DTEE determined its O&M savings in Exhibit A-13, Sch. C5.7 from only two categories on Exhibit A-22. DR AGDE-4.167 confirms that a third category (Tree Trim Reactive) should also be included in determining the "Tree Trim Savings"

*** Amount calculated by Company and indicated on Exhibit A-13, Sch. C5.7.1.

**** Based on DR AGDE-1.24 response

MICHIGAN PUBLIC SERVICE COMMISSION
DTE Electric Company - Electric Rate Case

Case No. U-21534
Exhibit AG-38
Date: July 26, 2024

2024 and 2025 Inflation in O&M

AG Estimate vs. Company Estimate

		Thousands of Dollars				
Line	Major O&M Area	Normalized 2023*	Inflation Rate**	AG Inflation Amount	Inflation Per Company	Inflation Difference
	(a)	(b)	(c)	(d)	(e)	(f)
1	Steam Power Generation	$ 182,951	4.65%	$ 8,507	$ 13,554	$ (5,047)
2	Fuel Supply & Merc Fuel Handling	7,507	4.65%	349	505	(156)
3	Nuclear Power Generation			-	-	-
4	PERC	27,475		-	-	-
5	All Other Expenses	133,760	4.65%	6,220	9,747	(3,527)
6	Hydraulic Power Generation	10,641	4.65%	495	623	(128)
7	Other Power Generation	26,894	4.65%	1,251	1,392	(141)
8	Distribution			-	-	-
9	Tree Trim Expenses	105,398		-	-	-
10	ADMS	150		-	-	-
11	All Other Expenses	262,099	4.65%	12,188	13,944	(1,756)
12	Customer Service			-	-	-
13	Merchant Fees	10,655		-	-	-
14	Cust. 360 Amortization	2,797		-	-	-
15	TOD Reg. Amortization	1,460		-	-	-
16	All Other Expenses	85,069	4.65%	3,956	5,935	(1,979)
17	Uncollectible Accounts Expense	37,477		-	-	-
18	Regulated Marketing			-	-	-
19	Charging Forward Amortization	1,181		-	-	-
20	All Other Expenses	19,791	4.65%	920	1,240	(320)
21	Corporate Support			-	-	-
22	Injuries & Damages	15,577		-	-	-
23	Environmental	3,762		-	-	-
24	All Other Expenses	176,604	4.65%	8,212	9,740	(1,528)
25	Pension & Benefits	86,640		-	-	-
26	Total	**$ 1,197,888**		**$ 42,097**	**$ 56,680**	**$ (14,583)**

* Per ABDE-1.6

** Reflects CPI Inflation at 2.4% and 2.2% for 2024 and 2025 per the February 1, 2024 Blue Chip Financial Forecast

MICHIGAN PUBLIC SERVICE COMMISSION
DTE Electric - Electric Rate Case

O & M Summary-Millions of Dollars

Case No. U-21534
Exhibit AG-39
Date: July 26, 2024

Line	Caption or Description of Item	$ Millions Amount	Reference
	(a)	(b)	(c)
1	**Steam Generation per Company**	**$ 213.4**	Exh. A-13, Sch C5.1
	AG Estimate & Adjustments		
2	Actual 2023 Expense	183.0	See DR AGDE 1.6
3	2024 and 2025 Inflation at 4.65%	8.5	Note 1
4	Total 2025 Estimate per Attorney General	**191.5**	L2 + L3
5	**Total O&M Reduction**	**$ (21.9)**	L4 less L1

Note 1 Reflects CPI Inflation at 2.4% and 2.2% for 2024 and 2025 per the February 1, 2024 Blue Chip Financial Forecast

MICHIGAN PUBLIC SERVICE COMMISSION
DTE Electric - Electric Rate Case

Case No. U-21534
Exhibit AG-40
Date: July 26, 2024

Tree Trim Savings ($Millions of Dollars)

Line	Cost Category or Caption	2025 Test Yr. Costs	2022 Hist. Yr. Costs	Savings from Lower 2025 Costs vs. 2022	Ex. A-22, Sch. L1
	(a)	(b)	(c)	(d)	(e)
1	Tree Trim Reactive*	$ 7.4	$ 16.2	$ 8.8	Line 4
2	Tree Trim Storm*	10.0	15.0	5.0	Line 9
3	Other DO-Service Operations Storm and Trouble*	7.5	11.3	3.8	Line 10
4	Total Costs	24.9	42.5	17.6	
5	Less Campany Savings Reflected in filed O&M Exhibit**			8.8	
6	**Additional O&M Reduction**			**$ 8.8**	

* These are the three O&M items identified by the Company in DR-4.167 (Exhibit AG-7).

** This is reflected on Exhibit A-13, Schedule C5.6 in footnote 6 and the third item.

MICHIGAN PUBLIC SERVICE COMMISSION
DTE Electric Company - Electric Rate Case

Case No. U-21534
Exhibit AG-41
Date: July 26, 2024

Uncollectible Accounts Expense

(Thousands of Dollars)

Line	Caption or Description	Net Write-Off Amounts	Net Sales	% Charged Off & AG Projection (b) / (c)	Reference
	(a)	(b)	(c)	(d)	
1	Total Year 2021	$ 40,044	$ 5,551,588	**0.721%**	See AGDE 1.27a Attchmt.
2	Total Year 2022	37,658	5,614,043	**0.671%**	See AGDE 1.27a Attchmt.
3	Total Year 2023	44,144	5,847,903	**0.755%**	See AGDE 1.27a Attchmt.
4	Avg. Percentage			**0.716%**	Avg. of Lines 1,2 & 3
5	Projected Test Year Revenues			**$ 6,399,006**	See AGDE 1.27b Attchmt.
6	**Total Uncollectible Expense per AG (Excl. Direct Charges)**			**$ 45,795**	Line 4 x Line 5
7	Average of Amounts charged to other Expenses Directly 2021-2023			1,231	See AGDE 1.27a Attchmt.
8	**AG Uncollectible Expense Forecast**			**47,026**	Line 6 + 7
9	**Uncollectible Expense per DTE Electric in 2023**			**50,870**	Ex. A-13, Sch. C5.8, line 15
10	***Decrease in Uncollectible Accounts Expense***			***$ (3,844)***	Line 8 less Line 9

MICHIGAN PUBLIC SERVICE COMMISSION
DTE Electric Company - Electric Rate Case

Case No. U-21534
Exhibit AG-42
Date: July 26, 2024

Injuries & Damages
(Thousands of Dollars)

Line	Year or Caption (a)	Amount (b)	Notes/Sources (c)
1	2019	$ 11,042	Ex. A-13, Sch. C5.10, p. 3
2	2020	11,702	Ex. A-13, Sch. C5.10, p. 3
3	2021	32,953	Ex. A-13, Sch. C5.10, p. 3
4	2022	17,158	Ex. A-13, Sch. C5.10, p. 3
5	2023	5,029	AGDE-1.38 Attachment
6	Five Year Average	$ 15,577	Avg of 2019 to 2023
7	Company 2025 Estimate	$ 18,440	Ex. A-13, Sch. C5.10, p. 1
8	**Reduction in Injuries & Damages**	**$ (2,863)**	Line 6 less Line 7

Medical Expenses -Reduced Inflation Rate
(Thousands of Dollars)

Line	Caption	Actual Gross Expenses 2017	2018	2019	2020	2021	2022	
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	
	Historic Cost Information							
1	Gross Actual Medical, Dental & Vision	$ 69,193	$ 68,182	$ 70,419	$ 67,201	$ 84,283	$ 82,998	Note 1
2	Average Employees	6,582	6,795	6,896	6,848	6,751	6,697	Note 1
3	Cost per Employee (L1 / L2)	$ 10.512	$ 10.034	$ 10.212	$ 9.813	$ 12.485	$ 12.393	Note 1
4	Avg. Annualized Cost per Employee Increase			***3.33%***	***for 5 Yrs.***			

Line		Projected Expense 2023	2024	2025	Test Year*	
	Projected Cost Information					
5	O&M Costs for 2023 (per ABDE-1.6)	50,013		-	-	
	Less Constant Dollar Adjustment (per ABDE-1.6)	(424)				
6	Net Amount Escalated at 3.33%	49,589	51,240	52,947	52,947	Note 2
7	Company Expense Estimate				56,083	Ex. A-13, Sch. C5.11, pg. 1 (L11)
8	***Reduction in Medical Expense and O&M***				***$ (3,136)***	Line 6 less Line 7

Notes
1 Line 1, Col. (b) to (f) are from Exhibit A-13, Sched. C5.11.3 Line 4, 5 and 6
2 The 3.33% escalation per year is based upon the historical 2017 to 2022 historical experience from line 4 abov

MICHIGAN PUBLIC SERVICE COMMISSION
DTE Electric - Electric Rate Case

Case No. U-21534
Exhibit AG-44
Date: July 26, 2024
Page 1 of 1

Incentive Compensation Exclusion From O&M

Line	Caption or Description of Item (a)	$Thousands Amount (b)	Reference (c)
1	Financial Metric Related Incentive Compensation	$ 39,232	Note 1
2	Operational Metrics Deferred and Subject to Later Recovery	10,663	Note 2
3	2023 Incentive Compensation in Rates Not Paid by Company	1,358	Note 3
4	Total O&M Reduction	**$ 51,253**	

1 See page 62 of witness Cooper's testimony

2 Determined as follows

Operational Metric Incentive Compensation (p. 62 of Cooper testimony	$	20,271
Portion to Defer for later recovery (100% less 47.4% per AGDE 1.48 Attach.)		52.60%
Amount to Defer ($20,771 x 52.6%)	$	10,663

3 Over-recovery of 2023 Incentive Compensation of $6.792K x 20% per Exhibit AG-WC1

MPSC Case No: U-21534
Requester: AG
Question No.: AGDE-1.23a
Respondent: M. Fix
Page: 1 of 1

Question: 23. Attachment 1 to the Company's application for rate relief show that $72 million of the rate increase pertains to Operating Costs & Other. A January 10, 2024 Detroit Free Press article reported that DTE Energy offered buyouts to about 3,000 employees or 30% of its workforce. Please provide the following information as it pertains to DTEE and any affiliates that bill the Company for costs:

a. Provide the date that this buyout offer was made to employees and how many employees were targeted.

Answer: A voluntary separation incentive package (VSIP) was offered to 1,025 DTE Electric employees and 1,622 DTE Energy Corporate Services, LLC employees (shared service employees) on January 8, 2024.

Attachment: None

MPSC Case No: U-21534
Requester: AG
Question No.: AGDE-1.23b
Respondent: M. Fix
Page: 1 of 1

Question: 23. Attachment 1 to the Company's application for rate relief show that $72 million of the rate increase pertains to Operating Costs & Other. A January 10, 2024 Detroit Free Press article reported that DTE Energy offered buyouts to about 3,000 employees or 30% of its workforce. Please provide the following information as it pertains to DTEE and any affiliates that bill the Company for costs:

b. Provide details of the buyout offer, such as who qualified, effective date, payouts, etc.

Answer: Employees were considered eligible if they did not fall under certain criteria, including, but not limited to: represented (union) employees, engineers, operations critical employees (e.g. control room operators, cybersecurity roles). The VSIP included 25 weeks of an employee's base salary plus one additional week for every year of service up to a maximum of 44 weeks total. The effective separation date varied from February 2024 through June 2024.

Attachment: None

MPSC Case No: U-21534
Requester: AG
Question No.: AGDE-1.23c
Respondent: M. Fix
Page: 1 of 1

Question: 23. Attachment 1 to the Company's application for rate relief show that $72 million of the rate increase pertains to Operating Costs & Other. A January 10, 2024 Detroit Free Press article reported that DTE Energy offered buyouts to about 3,000 employees or 30% of its workforce. Please provide the following information as it pertains to DTEE and any affiliates that bill the Company for costs:

c. Provide the number of total employee reductions, and by department, with related cost reductions for 2023, 2024, and 2025.

Answer: 140 DTE Electric employees and 249 DTE Energy Corporate Services, LLC employees accepted the VSIP. The package was not offered in 2023. There are no projected savings for 2024 due to DTE Electric's actual costs of the program (the accrued separation payments) of $30.6 million. A primary purpose of the VSIP was to realign the workforce to support the changing nature of the Company's work and how we do it, such as an increased focus on infrastructure investments, cybersecurity, and the clean energy transition. Because of this, DTE Electric is still evaluating potential 2025 cost reductions due to the need to fill key roles so that we can continue our progress towards building more modern infrastructure and a future with lower carbon emissions. Currently, DTE Electric estimates that up to $20.2 million in expense reductions could materialize in 2025, inclusive of both labor and employee benefits. This estimate will continue to evolve due to the need to fill many key roles. This savings estimate also does not include any offset of the program costs. If actual savings are realized in 2025, they will be embedded in the Company's rates as actual costs in a future rate case.

Attachment: None

MPSC Case No: U-21534
Requester: AG
Question No.: AGDE-1.23d
Respondent: M. Fix
Page: 1 of 1

Question: 23. Attachment 1 to the Company's application for rate relief show that $72 million of the rate increase pertains to Operating Costs & Other. A January 10, 2024 Detroit Free Press article reported that DTE Energy offered buyouts to about 3,000 employees or 30% of its workforce. Please provide the following information as it pertains to DTEE and any affiliates that bill the Company for costs:

d. Provide the cost reductions in subpart (c) separately for labor cost savings, savings in employee benefits, space, and other overhead costs for each year and the projected test year.

Answer: Estimated labor expense savings in 2025 are $14.4 million and estimated savings in benefits expense for 2025 are $5.8 million. The estimated benefits savings presumes a continuation of the deferral mechanisms for pension and OPEB. There are no expected savings for space or other overheads.

Attachment: None

MPSC Case No: U-21534
Requester: AG
Question No.: AGDE-1.23e
Respondent: N. Foley
Page: 1 of 1

Question: 23. Attachment 1 to the Company's application for rate relief show that $72 million of the rate increase pertains to Operating Costs & Other. A January 10, 2024 Detroit Free Press article reported that DTE Energy offered buyouts to about 3,000 employees or 30% of its workforce. Please provide the following information as it pertains to DTEE and any affiliates that bill the Company for costs:

e. Identify in which exhibit and line number in this rate case the cost savings are shown for each department, or overall, for each year 2023- 2025, and for the projected test year, and the specific amount.

Answer: There are no costs or projected savings related to the VSIP in any of the Company's exhibits.

Attachment: None

MPSC Case No: U-21534
Requester: AG
Question No.: AGDE-1.28d
Respondent: P. Bennett
Page: 1 of 1

Question: 28. Refer to page 2 of Exhibit A-13, Schedule C5.7.1, on Credit/Debit Card Merchant Fees. Please:

d. Provide a comparison in Excel of the transaction fees incurred under each payment method used by customers, such as payment by check, automatic bank withdrawal, Kiosks, etc., for each year 2021, 2022, and 2023.

Answer: The table below indicates the associated fees by payment channel for 2021-2023

Average Fee by Payment Channel

	2021	2022	2023
Electronic Funds Transfer (EFT)	$0.08	$0.08	$0.10
Automatic Clearing House (ACH)	$0.09	$0.09	$0.11
Check	$0.20	$0.20	$0.20
KIOSK	$4.95	$3.65	$3.92

Attachment: U-21534 AGDE-1.28d Other Payment Transaction fees. xls

MPSC Case No: U-21534
Requester: AG
Question No.: AGDE-1.28g
Respondent: P. Bennett
Page: 1 of 1

Question: 28. Refer to page 2 of Exhibit A-13, Schedule C5.7.1, on Credit/Debit Card Merchant Fees. Please:

g. Explain any limitations on the use of credit/debit cards by non- residential customers and when that practice began and why.

Answer: At the same time the popularity of credit cards was on the rise with business owners, Large Industrial and Commercial customers who previously were prevented from utilizing a card payment had the ability to use this payment type in the new SAP system. In August of 2019, the Company began mitigating merchant fees with a rate blocking policy for large commercial and industrial customers since these customers were not intended to use this payment method.

The Company further limited usage of credit cards for business customers with over $75,000 in annual usage beginning in 2021.

Attachment: None

MPSC Case No: U-21534
Requester: AG
Question No.: AGDE-1.24
Respondent: T. Uzenski
Page: 1 of 1

Question: 24. Please provide the cost of privately-hired corporate jet airplane travel by DTEE employees, DTE Energy employees, and other affiliated companies, charged to DTEE and included in the historical costs for 2022, 2023, and the projected test year. Provide also a list of the employees who used such private jet travel for each year 2022 and 2023, their position title, the date of travel, the individual trip cost, the reason for the travel, the cities visited, the miles traveled round trip, and the tons of CO2 carbon footprint for each trip identified in the Company's Net-Zero Sustainability Report or similar report. Provide this information in Excel.

Answer: The Company leases a fractional share of an aircraft for limited business travel by executives (typically Vice President & above) and other employees when there is an appropriate business need.

The costs of private (non-commercial) corporate jet expense charged to DTE Electric for 2022 and 2023 was $236,299 and $139,026, respectively. There is approximately $258,000 of corporate jet expenses included in the projected test period.

Refer to the attachment for a list of employees who utilized private jet travel in 2022 including their positions, dates of travel, trip costs, business reason for travel, and the departure and destination cities. The Company does not track the miles traveled or CO2 emissions. There was no corporate jet travel in 2023.

Attachment: U-21534 AGDE-1.24 2022 Corporate Jet Travel.xlsx

DTE Electric Company
Case No. U-21534
AGDE-1.24
2022 Corporate Jet Travel Details

Business Purpose	DESTINATION	DEPARTURE	RETURN	PASSENGERS	Total Cost
National LAMPAC meeting, EEI Spring Board Meeting and Congressional visits	Washington DC (one way flight)	3/7/2022 (Willow Run Airport)	Commercial flight for return	Gerard Anderson - Chairman of Board of Directors	$ 6,811
2022 DTE Annual Shareholders Meeting/Board and Committee Meetings	Pick up at Concord NC, Hartsfied-Jackson Atlanta, GA, Final destination Fort Lauderdale, FL	5/3/2022 (Oakland County International Airport)	One Way Trip	Matt Paul - DTE Electric President & COO David Ruud - Executive VP & CFO Ruth Shaw - DTE Board of Directors David Thomas - DTE Board of Directors Valerie Williams - DTE Board of Directors	$ 21,356
2022 DTE Annual Shareholders Meeting/Board and Committee Meetings	Fort Lauderdale, FL	5/3/2022 (Oakland County International Airport)	5/5/2022 Fort Lauderdale to Oakland Cnty Intl	Gerard Anderson - Chairman of Board of Directors Trevor Lauer - DTE Vice Chairman Chip McClure - DTE Board of Directors Jerry Norcia - Chief Executive Officer JoAnn Chavez - Senior VP and Chief Legal Officer Joi Harris - President & COO - DTE Energy Mark Murray - DTE Board of Directors Lisa Muschong - VP Corporate Secretary Renee Tomina - Senior VP, Project Management Office Gary Torgow** - DTE Board of Directors Robert Skaggs** - DTE Board of Directors ** Return Flight Only	$ 62,516
RETURN FROM 2022 DTE Annual Shareholders Meeting/Board and Committee Meetings	Fort Lauderdale, FL to Hartsfied-Jackson, Atlanta, GA to Concord Regional, Concord, NC to Oakland County Intl.	5/5/2022 Fort Lauderdale, FL	5/5/2022 Plane returned to Oakland Cnty Intl	Diane Antishin - VP Human Resources Lisa Muschong - VP Corporate Secretary Matt Paul - DTE Electric President & COO David Ruud - Executive VP & CFO Ruth Shaw - DTE Board of Directors David Thomas - DTE Board of Directors Renee Tomina - Senior VP, Project Management Office	$ 10,796
Meeting with sell side analysts and various investors at the AGA conference	Miami, FL	5/16/2022 Oakland Cnty Intl	One Way Trip	Jerry Norcia - Chief Executive Officer David Ruud - Executive VP & CFO Barbara Tuckfield - Director, Investor Relations	$ 16,991
RETURN FROM: Meeting with sell side analysts and various investors at the AGA conference	Return to Oakland Cnty. Intl.	5/18/2022 - Miami, FL	return to Oakland County Airport	Jerry Norcia - Chief Executive Officer David Ruud - Executive VP & CFO Barbara Tuckfield - Director, Investor Relations	$ 6,846
Attend 2022 Mackinac Policy Conference	Mackinac Island, MI	6/1/2022 - Oakland County Intl.	One Way Trip	Joi Harris - President & COO - DTE Energy Renze Hoeksema - VP, Corporate & Government Affairs Trevor Lauer - DTE Vice Chairman Jerry Norcia - Chief Executive Officer Shawn Patterson - VP Environmental Mgmt & Safety	$ 2,854
	Oakland Cnty Intl. (return from Mackinac)	6/2/2022 - Mackinac Island, MI	One Way Trip - returned to Oakland Cnty Intl.	Joi Harris - President & COO - DTE Energy Renze Hoeksema - VP, Corporate & Government Affairs Trevor Lauer - DTE Vice Chairman Jerry Norcia - Chief Executive Officer Shawn Patterson - VP Environmental Mgmt & Safety	$ 7,427
Jerry Norcia Attend the INPO Board meeting in the morning, then Jerry, Pete and Trevor will meet with INPO team in the afternoon for a DTE/INPO CEO meeting	Atlanta GA	7/13/2022 Oakland Cnty Intl to Fulton County, Atlanta GA	7/14/2022 Fulton county, Atlanta, GA to Oakland Cnty Intl	Pete Dietrich - Senior VP & Chief Nuclear Officer Trevor Lauer - Dte Vice Chairman Jerry Norcia - Chief Executive Officer	$ 14,583

DTE Electric Company
Case No. U-21534
AGDE-1.24
2022 Corporate Jet Travel Details

	Meeting with sell side analysts and various investors during Guggenheim NDR	Teterboro, NJ	8/8/2022 Oakland Cnty Intl to Teterboro, NJ	8/8/2022 Teterboro, NJ to Oakland Cnty Intl	Jerry Norcia - Chief Executive Officer Barbara Tuckfield - Director, Investor Relations	$ 11,445
	Meeting in NY under a tight time schedule, with several employees. Recent travel using commercial airlines has been erratic; need to have the flexibility to get everyone there on time and return on time. Meet with the CeO & team at GE in NY to discuss stator, relationship, schedule, extended power upgrade wind repowering, and CCUS capabilities.	New York, NY	8/22/2023 Oakland Cnty Intl to Schenectady County, NY	8/23/2022 Schenectady County, NY to Oakland Cnty Intl.	Dennis Decator - Manager, Nuclear Project Portfolio Steven Fatora - Director, Nuclear Project Management Trevor Lauer - DTE Vice Chairman Jaspreet Singh - Vice President, Corporate Services Renee Tomina - Senior VP, Project Management Office	$ 11,585
	The DTE Team and a team from the Nature Conservancy (TNC) will go to the UP to tour federally protected wilderness areas, visit sustainable forestry practices, and learn about the preservation and conservation efforts and carbon program	Marquette, MI	8/29/2022 Oakland Cnty to Sawyer Intl, Marquette MI	8/29/2022 Sawyer Intl, Marquette MI to Oakland Cnty Intl.	Joi Harris - President & COO - DTE Energy Jerry Norcia - Chief Executive Officer Shawn Patterson - VP Environmental Mgmt & Safety Patrick Doran (The Nature Conservancy) Helen Taylor (The Nature Conservancy) Rich Tuzinsky (The Nature Conservancy)	$ 8,560
	September DTE Energy Board Strategic Meeting and Committee Meetings bring outside directors here	Bring Directors to Detroit Metro Airport	9/20/2022 Depart Hartsfield-Jackson, Atlanta GA, to Carrollton, GA to Detroit Metro to Oakland Cnty Int.	One Way Trip	David Thomas - DTE Board of Directors Ruth Shaw - DTE Board of Directors	$ 11,832
	September DTE Energy Board Strategic Meeting and Committee Meetings bring outside directors here	Bring Directors to Detroit Metro Airport	9/20/2022 Depart Houston, TX to Detroit Metro then Oakland Cnty Intl.	One Way Trip	Valerie Williams - DTE Board of Directors	$ 15,841
	September DTE Energy Board Strategic Meeting and Committee Meetings outside directors return home	Raleigh-Durham Intl, Morrisville, NC	9/22/2022 Depart Oakland Cnty Intl, to Detroit Metro to Raleigh Durham Intl	One Way Trip	Ruth Shaw - DTE Board of Directors	$ 6,058
	September DTE Energy Board Strategic Meeting and Committee Meetings outside directors return home	Knoxville, TN Houston, TX	9/22/2022 Depart Oakland Cnty Intl, to Detroit Metro to Knoxville, TN then to Houston TX	One Way Trip	Gail McGovern - DTE Board of Directors Valerie Williams - DTE Board of Directors	$ 17,966
	Attend INPO Board meetings and CEO Conference	Atlanta, GA	11/1/2022 Depart Oakland Cnty Intl to Atlanta GA	11/2/2022 Atlanta, GA to Oakland Cnty Intl	Jerry Norcia - Chief Executive Officer Pete Dietrich (return flight only) - Senior VP and Chief Nuclear Officer	$ 12,923

MICHIGAN PUBLIC SERVICE COMMISSION
DTE Electric Company

Exhibit: AG-48
Case No: U-21534
July 26, 2024

Computation of Revenue Deficiency for Projected Test Year 2025

($000)

Line	Description	Company Filed Amount	AG Recommended Adjustments	Revised Amount
	(a)	(b)	(c)	(d)
1	Rate Base [1]	$ 22,107,989	$ (783,950)	$21,324,039
2	Rate of Return	5.92%	-0.25%	5.67%
3	Income Required	$ 1,309,478	$ (100,405)	$ 1,209,073
4	Adjusted Net Operating Income [2]	1,087,100	127,821	1,214,921
5	Income Deficiency (Sufficiency)	$ 222,378	$ (228,226)	$ (5,848)
6	Revenue Multiplier	1.3496	1.3496	1.3496
7	**Revenue Deficiency (Sufficiency)**	300,129	$ (308,021)	(7,892)
8	Return On - Tree Trim Surge Program	18,786	(8,886)	9,900
9	Return On - Monroe Regulatory Asset	137,518	-	137,518
10	**Revenue Deficiency (Sufficiency) - Total**	**$ 456,433**	**$ (316,907)**	**$ 139,526**

[1] Rate Base Adjustments Exhibit AG-18

[2] AG adjustments to Operating Income - Increase (Decrease):

			Source
Sales Revenue			
O&M Expenses		123,500	Exhibit AG-37
Property Tax		12,261	Exhibit AG-18
Depreciation Expense		40,788	Exhibit AG-18
Total		$ 176,549	
Effective Tax Rate (1-1/1.3496)	25.91%		
Taxes		(45,737)	
Interest Synchronization on Capital Adjustments		(2,992)	RevDef-WP1
Adjusted Net Operating Income		$ 127,821	

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-5.170a

Respondent: P. Bennett

Page: 1 of 1

Question: 170. Refer to page 10 of Ms. Bennett's rebuttal testimony on EV sales. Please: a. Confirm that the year-to-date sales through May 2024 are historical sales and not forward-looking expectations of sales growth.

Answer: Confirmed that the year-to-date sales through May 2024 are indeed historical sales.

Attachment: None

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-5.171

Respondent: P. Bennett

Page: 1 of 1

Question: 171. Refer to page 11 of Ms. Bennett's rebuttal testimony on EV forecasted sales. Does Ms. Bennett believe that the 50% sale percentage in the Michigan Healthy Climate Plan and the 56% high end of the percentage range by MEIU witness Sherman are realistic EV sales forecasts? If yes, based on what research performed by Ms. Bennett?

Answer: The Company recognizes that EV forecasted sales is uncertain six years in the future (2030) due to changing incentives and continued changes to other automotive market drivers. The 50% in the MIHCP and the 56% stated by witness Sherman represent the high end of the range that the Company believes is possible. This remains consistent with the use of the MIHCP EV forecast as the "High Electric Vehicle scenario" in Case No. U-21193, the Company's most recent IRP.

Three of the six independent forecasts used to source the EV sales forecast have EV sales reaching 50% of new vehicle sales by 2030.

Attachment: *None*

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-5.173

Respondent: P. Bennett

Page: 1 of 1

Question: 173. Refer to lines 8-13 on page 28 of Ms. Bennett's rebuttal testimony on credit card fees for non-residential customers. Please confirm that despite the mitigation action taken, the Company still incurred $4.2 million in credit card fees for non-residential customers and forecasted $3.5 million for the projected test year.

Answer: DTE Electric 2023 merchant fee actuals are $6.902M for residential and $4.053M for non-residential which totals to $10.956M. After subsequent review, there is a slight difference in the breakdown provided in audit response TMS-8.1. Given the 2023 actuals, the forecast for non-residential in the projected test year would be $4.094M.

Attachment: *None.*

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-5.174

Respondent: P. Bennett

Page: 1 of 1

Question: 174. Refer to lines 8-13 on page 28 of Ms. Bennett's rebuttal testimony on credit card fees for non-residential customers. Although businesses prefer to use credit cards with no fees, why should all other customers pay for those costs?

Answer: Business customers, not restricted by the two mitigation policies, appreciate the flexibility offered to utilize a credit card payment. Of the 54,000 non-residential customers that utilized a card payment last year, we believe that most are small business customers who often utilize credit cards to run their businesses. According to the National Small Business Association, approximately 37% of small businesses have used credit cards over the past 12 months to meet their capital needs which suggests that facilitating credit card use for small business is a meaningful part of maintaining business customer satisfaction and financial flexibility.

Attachment: *None.*

MPSC Case No: U-21534
Requester: AG
Question No.: AGDE-5.175
Respondent: T. Uzenski
Page: 1 of 2

Question: 175. Refer to lines 12-22 on page 16 of Mr. Davis's rebuttal testimony on nuclear generation projects that are not going into service before the end of the projected test year. Please confirm the Company has included the $83.9 million in costs in Construction Work In Process and in rate base in this rate case. If confirming, provide the return on investment and other costs included in the revenue requirement in this rate case. Provide also the AFUDC related to the same projects and the exhibit and workpaper where the AFUDC is calculated. If not confirming, provide evidence otherwise.

Answer: Confirmed that the Company included the $83.9 million of costs in Construction Work in Progress (CWIP) and in rate base. The return on the four specific investments in 2024 and 2025 making up this total is not explicitly calculated in the Company's filing as the capital is included in the aggregate CWIP amount reflected in rate base. The estimated return can be calculated by applying the Company's requested pre-tax return to the capital expenditures (including the capex from 2022 and 2023) as follows:

						2025
Exhibit A-12, B5.3, page 4	Line	2022	2023	2024	2025	Average
Main Unit Generator Replacement	2	47,087	33,880	54,025	14,292	
Feedwater heaters Replacement	10	4,873	7,050	4,014	4,730	
Drywell Cooler #8	16	1,501	36	-	626	
Reactor recirculation motor-generator	26	-	-	-	6,226	
		53,461	40,966	58,039	25,874	12,937
2022-2024 plus avg 2025						165,403
Requested Pre-tax Return (Exhibit A-12, Sch D1)						7.37%
Requested return						12,184

Co-Respondent(s): J. Davis

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-5.175

Respondent: T. Uzenski

Page: 2 of 2

The related AFUDC offset on the four projects is shown on Exhibit A-12, Schedule B5.3, page 5, lines 2, 6, 11 and 20 as follows:

Exhibit A-12, Sch B5.3, Page 5	Line	
Main Unit Generator Replacement	2	10,643
Feedwater heaters Replacement	6	1,353
Drywell Cooler #8	11	185
Reactor recirculation motor-generator	20	211
AFUDC Credit		12,392

Attachment: *None*

Co-Respondent(s): J. Davis

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-5.176a

Respondent: J. Davis

Page: 1 of 1

Question: 176. Refer to pages 17 and 18 of Mr. Davis's rebuttal testimony on the Fermi 2 security computer system. Please: a. Confirm that in discovery requests AGDE-3.98a-c (Exhibit AG-9), the Attorney General asked the Company to provide the initial estimated cost of the security computer system, the current forecasted cost by year from inception to completion with the current implementation date, and explanation of variance of 10% or greater – but instead, the Company provided the documents included on pages 2-4 of Exhibit AG-9, which purported to answer the requested information. If not confirming, provide evidence otherwise.

Answer: The Company's responses to AGDE-3.98 consisted of four subparts. The appropriation request provided in response to AGDE-3.98a as depicted in Exhibit AG-9, pages 2-4 represent a portion of the Company's response. The Company provided the total projected expenditures for the Security Computer System in AGDE-3.103c as referenced in AGDE-3.98b and confirmed that the implementation of the project completes in 2024. The Company attributed the primary driver for exceeding the 10% threshold as "the inclusion of projected expenditures for the Secured Owner-Controlled Access Building" in its response to AGDE-3.98c. In response to AGDE-3.98d, the Company provided relevant contracts.

Attachment: None

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-3.103c

Respondent: J. Davis

Page: 1 of 1

Question: 103. Refer to Exhibit A-12, Schedule B5.3, pages 2-4. For each project of $3.0 million or greater in 2024 and 2025, please:

c. Provide the project cost by year from inception to completion.

Answer: Please find attached the Nuclear Generation actual Routine and Small Project capital expenditures for the historical 12-month periods ending December 31, 2017, 2018, 2019, 2020, 2021, 2022 and 2023 and the projected capital expenditures for the 12-month bridge period ending December 31, 2024, and the 12-month projected test period ending December 31, 2025 in the format of Exhibit A-12, Schedule B5.2 pages 2 - 3.

In the same attachment is the Nuclear Generation actual Non-Routine and Small Project capital expenditures for the historical 12-month periods ending December 31, 2017, 2018, 2019, 2020, 2021, 2022 and 2023 and the projected capital expenditures for the 12-month bridge period ending December 31, 2024, the 12-month projected test period ending December 31, 2025, and the 12-month, beyond-the-test-period period ending December 31, 2026 in the format of Exhibit A-12, Schedule B5.2 page 4.

Attachment: U-21534 AGDE-3.103c-01 ExhibitA-12ScheduleB53 Page 2-4 extended.pdf
U-21534 AGDE-3.103c-02ExhibitA-12ScheduleB53 Page 2-4 extended.xslx

Michigan Public Service Commission
DTE Electric Company
Projected Capital Expenditures
Nuclear Production Plant
Routine and Small Projects
($000)

MPSC Case No.: U-21534
Respondant: J. C. Davis
Requester: Attorney General
Question No.: AGDE-3.103c
Page: 1 of 3

Line No.	(a) Project Name	(b) Historical 12 mos. ended 12/31/2017	(c) Historical 12 mos. ended 12/31/2018	(d) Historical 12 mos. ended 12/31/2019	(e) Historical 12 mos. ended 12/31/2020	(f) Historical 12 mos. ended 12/31/2021	Capital Expenditures (g) Historical 12 mos. ended 12/31/2022	(h) Historical 12 mos. ended 12/31/2023	Projected Bridge Period (i) 12 mos. ending 12/31/2024	(j) 24 mos. ending 12/31/2024 col. (h)+(i)	Projected Test Year (l) 12 mos. ending 12/31/2025	(m) In Service Year
1	**Routine and Small Projects**											
2	Undervessel replacements	7,365	5,021	171	11,573	2,502	8,011	212	6,415	6,627	-	Annual
3	Visual Annunciator System (VAS) replacement	10	47	3,315	3,350	3,183	7,570	25	-	25	-	Annual
4	Security system computer	-	-	188	(14)	1,230	7,080	17,011	9,197	26,207	-	Annual
5	Plant radio system	4,390	2,118	2,706	391	2,295	4,176	6,049	1,498	7,546	-	Annual
6	Residual heat removal service water outlet valve (F068A/B) replacement	-	-	-	2,008	1,982	3,817	913	3,900	4,812	-	Annual
7	Environmentally Qualified (EQ) seal replacements	-	-	-	321	3,144	3,758	6	-	6	-	Annual
8	Safety relief valves (SRVs)	-	2,509	530	4,678	1,689	3,148	2,219	2,264	4,483	759	Annual
9	Snubbers	2,682	2,711	28	2,742	531	3,002	284	1,401	1,685	32	Annual
10	Low Pressure Turbine (LPT) expansion joints	-	-	-	996	238	2,423	-	-	-	-	Annual
11	Unitized actuators (UAs) replacement	3,720	3,316	1,541	5,786	1,964	2,389	1,210	4,660	5,870	230	Annual
12	Residual Heat Removal (RHR) motors replacement	-	-	-	-	-	2,374	3,609	2,744	6,352	949	Annual
13	High pressure stop and control valves (HPSV/HPCV) replacement	-	2,468	17	(14)	967	2,274	528	4,141	4,670	-	Annual
14	Reactor recirculation system (RRS) replacements	-	-	-	518	8	2,198	(206)	-	(206)	-	Annual
15	Main Steam Isolation Valves (MSIV) replacement	1,499	839	-	2,621	2	2,141	227	906	1,133	-	Annual
16	Low pressure stop and intercept valves (LPSV/LPIV) replacements	-	-	-	(53)	2,294	2,083	352	4,416	4,768	-	Annual
17	Valve replacements	3,782	1,628	1,796	2,525	2,417	2,066	1,060	1,220	2,280	-	Annual
18	Main steam bypass valve (MSBV) replacement	-	-	-	-	506	1,857	-	-	-	-	Annual
19	Core spray line vents	-	-	-	448	742	1,838	753	1,625	2,377	-	Annual
20	Diesel fire pump	-	-	-	-	1,051	1,720	167	-	167	-	Annual
21	Emergency equipment service water (EESW) pump	-	-	-	-	-	1,669	-	-	-	-	Annual
22	Motor operated valves (MOV)	779	4,995	-	11	200	1,619	-	-	-	-	Annual
23	Reactor Protection System (RPS) motor-generator (MG) set replacements	-	-	-	-	713	1,596	315	-	315	176	Annual
24	Emergency Diesel Generator (EDG) cylinder liner replacements	-	-	-	-	-	1,475	-	-	-	-	Annual
25	Flow accelerated corrosion (FAC) program piping insulation	412	318	35	706	-	1,229	76	758	833	-	Annual
26	Owner Controlled Area (OCA) security access control system	-	-	-	-	-	1,158	(609)	-	(609)	-	Annual
27	Residual heat removal service water (RHRSW) pump	-	-	-	837	440	974	-	-	-	-	Annual
28	Control rod drive mechanism (CRDM) replacement	1,222	4,280	3,857	5,132	4,770	916	4,604	603	5,206	4,867	Annual
29	Moisture separator reheater relief valve (MSRRV)	-	-	41	266	352	819	-	-	-	-	Annual

Michigan Public Service Commission
DTE Electric Company
Projected Capital Expenditures
Nuclear Production Plant
Routine and Small Projects
($000)

MPSC Case No.: U-21534
Respondant: J. C. Davis
Requester: Attorney General
Question No.: AGDE-3.103c
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(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(l)	(m)
						Capital Expenditures					
	Historical	Historical	Historical	Historical	Historical	Historical	Historical	Projected Bridge Period		Projected Test Year	
Line No. Project Name	12 mos. ended 12/31/2017	12 mos. ended 12/31/2018	12 mos. ended 12/31/2019	12 mos. ended 12/31/2020	12 mos. ended 12/31/2021	12 mos. ended 12/31/2022	12 mos. ended 12/31/2023	12 mos. ending 12/31/2024	24 mos. ending 12/31/2024	12 mos. ending 12/31/2025	
									col. (h)+(i)		
30 General plant tools	2,155	2,398	3,223	6,175	4,307	688	3,544	2,504	6,048	3,375	Annual
31 Heater Drains Pump (HDP) replacement	-	-	-	-	-	593	13	-	13	-	Annual
32 Condensate pump	76	753	24	692	0	426	402	1,069	1,471	189	Annual
33 Residual Heat Removal (RHR) HVAC hydramotors	530	432	-	205	80	328	283	86	369	45	Annual
34 Breaker replacement	-	-	-	-	-	308	55	269	324	265	Annual
35 Plant wireless	-	-	-	-	-	297	1,908	5,871	7,778	-	Annual
36 Condensate filter demineralizer (CFD) septas	507	325	648	342	133	233	156	363	519	345	Annual
37 Refuel bridge mast	-	-	-	-	1,007	205	-	-	-	-	Annual
38 Refuel Floor monorail replacement	-	-	-	-	-	205	285	370	655	-	Annual
39 Switchyard footer replacement	-	-	-	-	-	194	237	132	369	-	Annual
40 Unitized Actuator shop	-	-	-	-	-	182	1,359	101	1,460	-	Annual
41 Hot machine shop	-	-	-	-	-	178	3,514	267	3,780	-	Annual
42 Contractor time & work tracking system	-	-	-	-	-	158	24	-	24	-	Annual
43 Piping replacements	366	2,208	20	8,753	7	106	3,851	752	4,603	-	Annual
44 Security defensive strategy simulator	-	-	-	-	1,567	106	-	-	-	-	Annual
45 Control rod blade (CRB) replacements	84	2,831	3,212	-	1,905	78	2,526	49	2,576	887	Annual
46 Pump and motor replacements	-	-	-	542	742	34	318	-	318	-	Annual
47 Reverse osmosis system replacement	-	-	-	-	-	21	-	-	-	2,597	Annual
48 Independent Spent Fuel Storage Installation (ISFSI) casks	76	755	1,079	(762)	1,856	2	49	689	738	282	Annual
49 Integrated Plant Computer System (IPCS) replacement	5,883	4,914	3,961	7,566	537	(10)	-	-	-	-	Annual
50 Paperless recorders replacement	-	422	781	1,212	903	(10)	-	131	131	124	Annual
51 Roof replacements	-	-	-	-	-	-	3,385	-	3,385	-	Annual
52 Neutron Monitoring System replacements	-	-	-	-	-	-	2,171	2,683	4,854	-	Annual
53 SCRAM discharge header	-	-	-	-	-	-	671	1,379	2,051	-	Annual
54 Temporary power modifications	-	-	-	-	-	-	493	1,945	2,438	-	Annual
55 Balance of plant (BOP) battery replacement	-	-	-	-	-	-	85	1,228	1,313	-	Annual
56 Reactor feed pump turbine (RFPT) rotor	847	1,392	-	(1)	-	-	167	1,721	1,888	-	Annual
57 Hydrogen seal replacement	-	-	-	-	-	-	124	1,181	1,304	-	Annual
58 Heater Feed Pump (HFP) replacement	-	-	-	-	-	-	-	340	340	-	Annual
59 Natural draft cooling towers	8,031	7,240	3,673	4,306	-	-	(775)	-	(775)	9,515	Annual
60 Document management system enhancements	-	-	-	-	-	-	-	-	-	9,992	Annual
61 Remote monitoring	-	-	-	-	-	-	-	-	-	4,473	Annual
62 Electronic work package system	-	-	-	-	-	-	-	-	-	2,584	Annual
63 GSW Pump House Critical Digital Asset (CDA)	-	-	-	-	-	-	-	-	-	745	Annual
64 Balance of Projects (<$500K)	8,030	2,641	2,495	(285)	5,848	1,568	1,176	14	1,190	16	Annual
65 **Total Routine and Small Projects**	**95,548**	**56,560**	**33,341**	**73,573**	**52,109**	**81,269**	**64,822**	**68,892**	**133,714**	**42,450**	

Michigan Public Service Commission
DTE Electric Company
Projected Capital Expenditures
Nuclear Production Plant
Non-Routine and Large Projects
($000)

MPSC Case No.: U-21534
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	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)	(s)	(t)
										Capital Expenditures									
		Historical	Historical	Historical	Historical	Historical	Historical	Historical	Historical	Historical	Historical	Projected Bridge Period		Projected Test Yea	Beyond Projected Test Year					
	Project Name	12 mos. ended 12/31/2014	12 mos. ended 12/31/2015	12 mos. ended 12/31/2016	12 mos. ended 12/31/2017	12 mos. ended 12/31/2018	12 mos. ended 12/31/2019	12 mos. ended 12/31/2020	12 mos. ended 12/31/2021	12 mos. ended 12/31/2022	12 mos. ended 12/31/2023	12 mos. ending 12/31/2024	24 mos. ending 12/31/2024	12 mos. ending 12/31/2025	12 mos. ending 12/31/2026	12 mos. ending 12/31/2027	12 mos. ending 12/31/2028	12 mos. ending 12/31/2029	12 mos. ending 12/31/2030	In Service Year
													col. (k)+(l)							
1	**Non-Routine and Large Projects**																			
2	Main Unit Generator replacement	297	9,402	10,964	10,742	14,100	29,751	26,611	21,349	47,087	33,774	54,025	87,799	14,292	48,431					2026
3	Torus Vent Header	-	-	-	-	-	-	-	9,411	34,135	-	-	-	-						Annual
4	Underground safety-related service water piping	-	409	1,863	1,482	3,512	13,323	7,958	10,191	23,287	10,459	32,543	43,002	-						2024
5	Main Unit Generator rotor replacement	-	-	-	-	-	-	-	8,047	15,948	-	-	-	-						Annual
6	Generator excitation automatic voltage regulator (AVR)	-	-	-	54	633	3,913	1,943	2,378	11,028	14	-	14	-						Annual
7	Transformer #65 and #69 replacements	-	-	-	-	-	-	11,929	10,495	10,439	115	-	115	-		3,988	8,994			Annual
8	License renewal implementation (LRI)	-	-	1,655	2,809	2,685	4,412	4,043	2,863	5,755	7,748	7,554	15,302	729						2025
9	Circulating Water (CW) Discharge Pipe	-	-	-	-	-	-	-	667	5,251	-	-	-	734	9,669					Annual
10	Feed water heaters replacements	-	-	-	-	-	-	1,821	7,661	4,873	7,006	4,014	11,019	4,730	25,682					2026
11	Drywell Coolers #12 and #13	-	-	-	-	-	609	1,775	1,707	3,451	8	-	8	-						Annual
12	Boraflex fuel storage racks	-	-	-	4,534	1,602	2,928	3,954	2,309	3,397	2,924	1,126	4,051	-						2024
13	Radiation monitors	-	-	-	-	-	-	-	135	2,701	4,749	8,439	13,189	2,611						2024
14	Reactor Building Freight Elevator	-	-	-	-	-	-	878	8,596	1,900	2	-	2	-						Annual
15	Transformer replacements	-	-	-	-	-	144	1,307	2,892	1,625	312	-	312	-						Annual
16	Drywell Cooler #8	-	-	-	-	562	611	129	845	1,501	36	-	36	626						2026
17	Fire header restoration	1,538	-	668	-	1,490	1,012	47	84	840	4,093	-	4,093	-						Annual
18	Drywell Coolers #10 and #14	-	-	-	-	-	1,824	2,356	412	33	-	-	-	-						Annual
19	Off-gas chiller replacement	-	-	-	-	327	3,516	9,072	147	15	-	-	-	-						Annual
20	General Service Water (GSW) intake groin replacement	-	-	-	-	81	5,682	(7)	4,526	(18)	17,981	-	17,981	-						2024
21	Turbine Building moisture barrier	-	-	-	-	-	-	-	-	-	507	-	507	-						2024
22	Digital control modifications	-	-	-	-	-	-	-	-	-	209	-	209	-				4,000	8,000	Annual
23	Drywell moisture barrier replacement	-	-	-	-	-	-	-	-	-	66	2,766	2,832	-						2024
24	Fire detection system replacement	-	-	-	-	-	-	-	-	-	13	2,317	2,330	1,252		5,000	5,000			2024
25	Interuptable Air Supply (IAS) dryer replacements	-	-	-	-	-	-	-	-	-	4	825	829	-						Annual
26	Reactor recirculation motor-generator (RRMG) replacements	-	-	-	-	-	-	-	-	-	0	-	0	6,226	10,893	4,107	5,053			2026
27	Turbine controls replacements	-	-	-	-	-	-	-	-	-	37	263	300	762		4,000	4,000	8,000	8,000	Annual
28	Sanitary system replacement	-	-	-	-	-	-	-	-	-	-	-	-	6,457						Annual
29	Emergency Diesel Generator Service Water (EDGSW) piping	-	-	-	629	2,712	814	1,298	150	(4)	-	-	-	-						Annual
30	Other Capital Spend <$100K	-	-	-	570	-	130	-	-	-	(859)	-	(859)	-						Annual
31	**Total Non-Routine and Large Projects**	**1,835**	**9,811**	**15,151**	**20,820**	**27,703**	**68,671**	**75,113**	**94,864**	**173,244**	**89,201**	**113,872**	**203,073**	**38,420**	**94,675**	**17,095**	**23,047**	**12,000**	**16,000**	

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-5.176b

Respondent: J. Davis

Page: 1 of 1

Question: 176. Refer to pages 17 and 18 of Mr. Davis's rebuttal testimony on the Fermi 2 security computer system. Please: b. Confirm that the Company proceeded to undertake the project based only on the $9.9 million initial partial appropriation approval shown on page 2 of Exhibit A-9 instead of the total estimated cost of the project, which the Company did not provide in response to discovery. If not confirming, provide evidence otherwise.

Answer: Given this project's importance to maintaining Fermi's regulatory requirements for plant security, the Company initiated the project using the $9.9 million initial partial appropriation. See also Response AGDE-5.176a. The appropriations form on page 2 of AG-9 shows the amount authorized on January 23, 2023, as $25.2 million which was the total initial internal budget for the project. The appropriations form on page 4 of Exhibit AG-9 shows the new total amount of $39.2 million as the total updated internal budget for the project. Projected project capital expenditures were provided in response to AGDE-3.103c where the actual and projected Security System Computer project expenditures totaled approximately $34.9 million. My direct testimony and rebuttal testimony explained that projected capital expenditures provided in a rate case will be different than internal appropriations because the Company removes contingencies and other uncertain expenditures from projected amounts in rate cases.

Attachment: None.

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-5.177a

Respondent: J. Davis

Page: 1 of 1

Question: 177. Refer to page 18 of Mr. Davis's rebuttal testimony on the Fermi 2 plant radio system. Please: a. Confirm that in discovery requests AGDE-3.99a-c (Exhibit AG-10), the Attorney General asked the Company to provide the initial estimated cost of the security computer system, the current forecast cost by year from inception to completion with the current implementation date, and explanation of variance of 10% or greater – but instead, the Company provided the documents included on pages 2-4 of Exhibit AG- 10, which purported to answer the requested information. If not confirming, provide evidence otherwise.

Answer: Discovery request AGDE-3.99 was in reference to the Plant Radio System project not "security computer system." Assuming that the request is directed to the Plant Radio System project, the Company's responses to AGDE-3.99 consisted of four subparts. The appropriation request provided in response to AGDE-3.99a as depicted in Exhibit AG-10, pages 2-4 represents a portion of the Company's response. The Company provided the total projected expenditures for the Plant Radio System in AGDE-1.03c as referenced in AGDE-3.99b and confirmed that the implementation of the project completes in 2024. The Company attributed the primary driver for exceeding the 10% threshold as "replacing cabling to the uninterrupted power supplies to provide additional margin" in its response to AGDE-3.99c. In response to AGDE-3.99d, the Company provided relevant contracts.

Attachment: None.

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-5.177b

Respondent: J. Davis

Page: 1 of 1

Question: 177. Refer to page 18 of Mr. Davis's rebuttal testimony on the Fermi 2 plant radio system. Please: b. Confirm that the Company proceeded to undertake the project based only on the $6.0 million initial partial appropriation approval shown in the Appropriation Request on page 2 of Exhibit AG10 instead of the total estimated cost of the project, which the Company did not provide in response to discovery. If not confirming, provide evidence otherwise.

Answer: Given this project's importance to maintaining Fermi's regulatory requirements for emergency response and plant security, the Company initiated the project using the $6.0 million initial partial appropriation. The Plant Radio System has an "annual" in-service year, meaning the Company appropriates the projects as equipment is placed in service; recall from my direct testimony at line 3, page JCD-20 that "Replacement of the plant radio system began in 2017 with the replacement of plant radio equipment in the Fermi 2 Main Control Room (MCR)." The appropriations form shows the amount authorized on October 19, 2022, as $15.8 million which was the total initial internal budget for the project. Page 4 of Exhibit AG-9: The appropriations form shows the amount as $19.4 million which is the total updated internal budget for the project. Projected project capital expenditures were provided in response to AGDE-3.103c where the actual and projected Security System Computer project expenditures totaled approximately $23.6 million (approximately $6.5 million of which was for the MCR portion of the project and placed in service in 2019). For the reasons I explained in my direct testimony and rebuttal testimony, projected capital expenditures provided in rate cases will be different than internal appropriations because the Company removes contingencies and other uncertain expenditures from projected amounts in its rate cases.

Attachment: None.

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-5.178

Respondent: J. Davis

Page: 1 of 1

Question: 178. Refer to page 19 of Mr. Davis's rebuttal testimony about previous capital expenditures for the Fermi 2 plant security computer and radio systems, which were previously included in rate case filings in Case No. U-20836 and U-21297. Does Mr. Davis believe that the fact that the Company included capital expenditures in prior rate cases resolves the Company's responsibility from justifying the reasonableness and prudency of the cumulative costs for those two systems in this rate case?

Answer: The Company objects to the request to the extent the request seeks a legal conclusion. Subject to and without waiving this objection, the Company would answer as follows:

The Company is committed to completing the projects depicted in Exhibit A-12, Schedule B5.3 which are reasonable, prudent and justified for reasons discussed in my direct testimony and rebuttal testimony and for the reasons previously discussed in Case Nos. U-20836 and U-21297. The projects have been appropriately and consistently justified for recovery.

Attachment: None.

Co-Respondent(s): Legal

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-5.179

Respondent: J. Davis

Page: 1 of 1

Question: 179. Refer to pages 19 and 20 of Mr. Davis's rebuttal testimony about the Company including or excluding certain capital expenditures for future phases of the Fermi 2 plant security computer and radio systems, which were not yet known in rate case filings in Case No. U-20836 and U-21297. Does Mr. Davis believe that the fact that the Company did not include capital expenditures in prior rate cases absolves the Company from justifying the changes in scope of the projects or the reasonableness and prudency of the cumulative costs for those two systems in this rate case in adequate detail?

Answer: The Company objects to the request to the extent the request seeks a legal conclusion. Subject to and without waiving this objection, the Company would answer as follows:

The Company has properly supported the reasonableness and the prudence of the expenditures to support replacement of the Security Computer System and the Plant Radio System at each iteration of the project.

Attachment: None.

Co-Respondent(s): Legal

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-5.180

Respondent: J. Davis

Page: 1 of 1

Question: 180. Refer to lines 1-10 on page 21 of Mr. Davis's rebuttal testimony about forecasted capital expenditures for the Fermi 2 plant security computer and radio systems not including contingency costs. Does Mr. Davis believe that if the forecasted capital expenditures had included contingency costs that it would have justified the large cost overruns between the initial request and the final cost?

Answer: The changes in total cost are primarily due to changes in scope, which would not typically be covered under normal contingency allotments. Nuclear Generation justified the changes in total budget when requesting updated project appropriations. The bases for the requested updated appropriations are included in the appropriations forms themselves as discussed in my rebuttal testimony.

Attachment: None.

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-5.181

Respondent: J. Davis

Page: 1 of 1

Question: 181. Refer to lines 12-24 on pages 22 and 23 of Mr. Davis's rebuttal testimony that the Nuclear Generation department does not use a phase-gate approval process for capital projects. Confirm that, irrespective of whether the Nuclear Generation uses a phase-gate approval process, nuclear plant projects still go through all or some of the following phases: initial concept analysis, scope and cost determination, engineering review, project bid requests to approved contractors or vendors, construction or implementation, and final inspection and completion. If not confirming, identify why it is prudent management practice for the Nuclear Generation department to exclude most or all of those phases of project implementation.

Answer: My rebuttal testimony at line 20, page JCD-23-Rebuttal provides a salient example of a pump motor replacement project that demonstrates that activities such as scope, procurement and implementation occur within various times of a project's life cycle with Nuclear Generation. The term "phase," especially in traditional phase-gate project management, suggests a regimented sequence of events that must complete prior to advancing to the next "phase" and for reasons discussed in my rebuttal testimony is not reasonable for an already existing, operating nuclear power plant and would not otherwise be applicable to those unit-based capital replacements that are the majority of Nuclear Generation's capital projects.

Attachment: None.

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-5.182

Respondent: J. Davis

Page: 1 of 1

Question: 182. Refer to lines 6-13 on page 24 of Mr. Davis's rebuttal testimony, where he argues that rigid adherence to a phase-gate approval process would result in decision-making paralysis. Does Mr. Davis believe that non-nuclear generation departments of the Company that track and provide project phase development information deal with similar decision-making paralysis?

Answer: I am an expert for Nuclear Generation and can only provide insights on how Nuclear Generation must operate given the regulations and commitment to the nuclear safety priority applicable to Fermi 2.

Attachment: None.

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-5.183

Respondent: J. Davis

Page: 1 of 1

Question: 183. Refer to lines 15-24 on page 24 of Mr. Davis's rebuttal testimony about using pre-selected suppliers. Does this practice of using pre-selected suppliers mean that the Nuclear Generation department does not bid out work to different contractors, suppliers, and vendors when purchasing, replacing, or installing new equipment? If yes, how does the Company determine it has paid the least cost for the products and services that meet the required specifications? When the Company requests and reviews bids, is that not a phase of project development and implementation?

Answer: No, my direct testimony at line 4, page JCD-4 explains "pre-selected" or "pre-approved" as it applies to my rebuttal testimony;

> "In general, DTE Electric secures long-term supplier agreements for Fermi 2 nuclear fuel, reactor services, turbine services, major maintenance services, heavy construction services, radiation protection services and engineering design services through competitive supplier sourcing and negotiation. Individual projects can then source, as needed, suppliers using these long-term agreements which facilitates each major supplier's resources being integrated into the overall work plan. DTE Electric sources other components, equipment and services in a reasonable and prudent manner consistent with the factors I outlined above."

In the context that I described above, requesting and reviewing bids is not a "phase" in the traditional application of project management because the sourcing events occur outside the scope of any individual project – as is reasonable given the highly integrated schedules and rigorous regulations of nuclear operations. DTE Electric provided supplier sourcing documentation in response to discovery requests most notably, ADGE-3.98d, AGDE-3.99d and ADGE-3.104d.

Attachment: None.

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-5.184

Respondent: J. Davis

Page: 1 of 1

Question: 184. Refer to lines 17-24 on page 25 of Mr. Davis's rebuttal testimony on the Document Management System. Was the implementation of the additional modules for this system as simple as "plug and play" with no upfront work done to determine what needs the Company had and how the system modules would address those needs? Was there no IT department involvement to install those modules and test that they worked as intended?

Answer: The Document Management System modules described in my rebuttal testimony refer to work projected to occur as depicted in Exhibit A-12 Schedule B5.3. As the implementation of the additional modules has not yet occurred, the actual expenditures for this project are zero with projected expenditures not expected to occur until 2025. When implementation occurs, appropriate Company organizations such as Information Technology would support. The in-service foundation application that I referenced in my rebuttal testimony was completed in 2022 with details provided in Case No. U-21297, Exhibit A-24 Schedule N3, Line 222.

Attachment: None.

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-5.184 (Supplemental)

Respondent: J. Davis

Page: 1 of 1

Question: 184. Refer to lines 17-24 on page 25 of Mr. Davis's rebuttal testimony on the Document Management System. Was the implementation of the additional modules for this system as simple as "plug and play" with no upfront work done to determine what needs the Company had and how the system modules would address those needs? Was there no IT department involvement to install those modules and test that they worked as intended?

Answer: The Document Management System modules described in my rebuttal testimony refer to work projected to occur as depicted in Exhibit A-12 Schedule B5.3. As the implementation of the additional modules has not yet occurred, the actual expenditures for this project are zero with projected expenditures not expected to occur until 2025. When implementation occurs, appropriate Company organizations such as Information Technology would support. The in-service foundation application that I referenced in my rebuttal testimony was completed in 2022 with details provided in Case No. U-21297, Exhibit A-24 Schedule N3, Line ~~222~~ 219.

Attachment: None.

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-5.185a

Respondent: J. Davis

Page: 1 of 1

Question: 185. Refer to lines 4-19 on page 26 of Mr. Davis's rebuttal testimony on the Sanitary System project. Please: a. Confirm that on pages 45 and 46 his direct testimony Mr. Davis describes the Sanitary System consisting of multiple items as being antiquated, and that he identified replacement of two pumps, without stating that they would be replaced in 2025. If not confirming, provide evidence otherwise.

Answer: My direct testimony regarding Sanitary System references page 4 of Exhibit A-12, Schedule B5.3, line 28 – there column (g) depicts "annual" as the projected in-service date for Sanitary System, meaning DTE Electric intends to in-service assets as they are replaced, a specific date beyond the test period would have been provided if DTE Electric projected to replace the entire system prior to in-servicing the entire replacement system as a unit. My direct testimony at line 8 of page JCD-46 describes the scope associated with this annual in-service projection as "The sanitary system project replaces this antiquated sanitary wastewater disposal with a more modern two pump system."

Attachment: None.

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-5.185b

Respondent: J. Davis

Page: 1 of 1

Question: 185. Refer to lines 4-19 on page 26 of Mr. Davis's rebuttal testimony on the Sanitary System project. Please: b. If the replacement of the two pumps for the forecasted capital expenditures was to occur in 2025, explain why that date was not stated in response to discovery, as completing the first phase of the project

Answer: See response to AGDE-5.185a.

Attachment: None.

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-5.186

Respondent: J. Davis

Page: 1 of 1

Question: 186. Refer to Exhibit A-47, Schedule LL2. Please confirm that the fuel costs of $135 million for 2025 are the highest the Company has forecasted since 2018. If not confirming, provide evidence otherwise.

Answer: Yes, the $135 million represents an increase of approximately 5% per year over the 2023 expenditure relative to the volume adjustments discussed in my rebuttal testimony. In addition, Exhibit A-47, Schedule LL2, line 1 depicts projected nuclear fuel expenditures for the two years ending 2019 as totaling approximately $152.0 million and the projected nuclear fuel expenditures for the two years ending 2025 as totaling $137.1 million. The total two-year nuclear fuel expenditures of $152.0 million as projected in Case No. U-20162 are greater than the total two-nuclear fuel expenditures of $137.1 million as projected in Case No. U-21534.

Attachment: None.

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-5.187

Respondent: M. Fix

Page: 1 of 1

Question: 187. Refer to page 3 of Mr. Fix's rebuttal testimony on the calculated percent of incentive compensation for the Company achieving a historical level of performance for operating measures. Confirm that Mr. Coppola used the same methodology in this rate case as approved by the Commission in Case Nos. U-20836 and U-21297. If not confirming, provide evidence otherwise.

Answer: Confirmed.

Attachment: None

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-5.188

Respondent: M. Fix

Page: 1 of 1

Question: 188. Refer to page 5 of Mr. Fix's rebuttal testimony on the calculated percent of incentive compensation proposed by the Company. Confirm that the Commission has not previously approved the methodology proposed by the Company in Exhibit A-35, Schedule Z1. Confirm also that Schedule Z1 does not show that the Company achieved performance at 100% of target in 2023 or on average in the last five years. If not confirming, provide evidence otherwise.

Answer: While the Commission has not adopted the Company's use of the methodology reflected on Exhibit A-35, Schedule Z1 in its most recent orders addressing this issue, the Commission did adopt this methodology in its Order in Case No. U-18999, DTE Gas Company's 2017 rate case, wherein it concluded:

> "However, the Commission declines to adopt the Attorney General's proposed limited recovery of 60% of the remaining $5.5 million. DTE Gas presented persuasive evidence that its annual overall average performance in operating measures for AIP and REP was 90.1% (Case No. U-18999, Order, April 18, 2018, p.86).

Regarding Schedule Z1, the assertions are confirmed.

Attachment: None.

MPSC Case No: U-21534

Requester: AG

Question No.: NDA AGDE-5.191a

Respondent: M. Fix

Page: 1 of 1

Question: 191. Refer to pages 13 and 14 of Mr. Fix's rebuttal testimony on the Voluntary Incentive Separation Program (VSIP). Please: a. Provide the calculation of the $20.2 million estimated savings for 2025 in Excel with formulas intact and all supporting detail, data, and assumptions.

Answer: The Company objects to this request because it seeks information which is confidential, proprietary, research and development of trade secrets, or commercial information, the disclosure of which would cause the Company, its ratepayers and its customers competitive harm. Without waiving these objections, but subject to them, the Company responds as follows:

Please see attachment entitled "U-21534 NDA AGDE-5.191a VSIP Detail ".

Attachment: U-21534 NDA AGDE-5.191a VSIP Detail

Co-respondent: Legal

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-5.191b

Respondent: M. Fix

Page: 1 of 1

Question: 191. Refer to pages 13 and 14 of Mr. Fix's rebuttal testimony on the Voluntary Incentive Separation Program (VSIP). Please: b. Provide also the estimated savings for 2024 and the supporting calculations in Excel.

Answer: As I explained in my rebuttal testimony on page 14, lines 11-12, the Company incurred $30.6 million in costs to implement the VSIP. Therefore, the Company is not expecting to realize any savings from the VSIP for 2024.

Attachment: None

MPSC Case No: U-21534

Requester: AG

Question No.: NDA AGDE-5.191b (S1)

Respondent: M. Fix

Page: 1 of 1

Question: 191. Refer to pages 13 and 14 of Mr. Fix's rebuttal testimony on the Voluntary Incentive Separation Program (VSIP). Please: b. Provide also the estimated savings for 2024 and the supporting calculations in Excel.

Answer: Supplemental response: While the Company hasn't prepared a detailed projection of the net impact on its O&M expenses for 2024, please see attachment entitled "U-21534 NDA AGDE-5.191d Estimated Net VSIP O&M Savings: 2024" for an estimate of the potential net O&M savings in 2024. This estimate is based on the 2025 estimated VSIP O&M savings provided in response to AGDE-5.191a as adjusted for the assumption that 75% of the gross savings would be realized in 2024, since most of the employees separated at the end of March 2024, and the assumption that 25% of the cost of new hires would be incurred in 2024. The estimated net O&M savings in 2024 using these assumptions is $22.1 million, exclusive of the costs of the employee separation payments incurred by DTE Electric in 2024 of $30.6 million. The combination of the estimated savings and separation costs results in a net cost to the Company in 2024 of $8.5 million.

Attachment: U-21534 NDA AGDE-5.191d Estimated Net VSIP O&M Savings: 2024

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-5.191c

Respondent: M. Fix

Page: 1 of 1

Question: 191. Refer to pages 13 and 14 of Mr. Fix's rebuttal testimony on the Voluntary Incentive Separation Program (VSIP). Please: c. Provide the calculation of the $34.2 million included in CUB witness Denzler's direct testimony in Excel with formulas intact and explain why this amount differs from the $20.2 million amount provided to the Attorney General in response to DR AGDE-1.23c.

Answer: Please see response to AGDE-5-191a for the calculation of $34.2 million provided in Excel. The difference between the estimated net savings of $20.2 million and the estimated savings of $34.2 million used by CUB witness Denzler is that the $20.2 million is net of the cost of anticipated new hires whereas the $34.2 million improperly excludes the cost of new hires. Also please see response AGDE-1.23c.

Attachment: None

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-5.191d

Respondent: M. Fix

Page: 1 of 1

Question: 191. Refer to pages 13 and 14 of Mr. Fix's rebuttal testimony on the Voluntary Incentive Separation Program (VSIP). Please: d. Provide the calculation of the $30.6 million in separation payments in Excel and identify by month and year when those costs were incurred or will be incurred and specifically for what items.

Answer: Please see attachment entitled "U-21534 AGDE-5.191d VSIP Payments", which reflects the separation payments made under the VSIP. These represent the only costs incurred for the VSIP.

Attachment: U-21534 AGDE-5.191d VSIP Payments

DTE Electric Company
Case No. U-21534
AGDE-5.191d
VSIP Payments
($000's)

	(a)	(b)	(c)	(d)	(e)
			DTE LLC		
Line No.	Month	Electric	Total	Allocated to Electric 1/	Total Electric
1	February	166	561	442	608
2	March	11,220	16,225	12,773	23,993
3	April	0	1,412	1,112	1,112
4	May	112	1,483	1,168	1,279
5	June	1,280	3,013	2,371	3,651
6	Total 2024	12,778	22,694	17,865	30,643
7					
8	1/ Percent Allocated to Electric:		78.7%		

-

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-5.191d (S1)

Respondent: M. Fix

Page: 1 of 1

Question: 191. Refer to pages 13 and 14 of Mr. Fix's rebuttal testimony on the Voluntary Incentive Separation Program (VSIP). Please: d. Provide the calculation of the $30.6 million in separation payments in Excel and identify by month and year when those costs were incurred or will be incurred and specifically for what items.

Answer: Supplemental Response: The payments listed on the previously provided attachment entitled "U-21534 AGDE-5.191d VSIP Payments" exclusively reflect the separation payments paid in 2024 based on the eligibility criteria described in response to AGDE-1.23b.

Attachment: None

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-5.193

Respondent: N. Foley

Page: 1 of 1

Question: 193. Refer to lines 12-19 on page 37 of Mr. Foley's rebuttal testimony on the use of the Company's "blended" inflation rates combining the CPI rate and the Company's internal forecasted wage increase rate. Please confirm that in discussing inflation rates on pages 191-193 of the December 1, 2023 order in Case No. U-21297, the Commission did not discuss or approve "blended" inflation rates and instead noted the Attorney General's agreement with the total forecasted rates of 3.6%, 3.2%, and 2.66% as reasonable while rejecting any implication of approval of blended rates. If not confirming, provide evidence otherwise.

Answer: Partially confirmed. The Company agrees that the Commission did not directly address the use of a "blended" or "composite" inflation rate in its December 1, 2023 Order in Case No. U-21297 (December 2023 Order). The Company further agrees that in its December 2023 Order the Commission noted the Attorney General's objection to the use of a blended inflation rate while agreeing to the total forecasted rates.

However, the Company disagrees with any suggestion that the Commission did not approve the use of composite inflation rates. In Case No. U-21297 the Company proposed the use of a composite inflation rate through Exhibit A-13, Schedule C5.15. In its December 2023 Order, the Commission "decline[d] to approve an overall inflation adjustment". (page 193)

Since the Commission did not order an adjustment to the Company's proposed inflation rate, nor did it note any objection to how the Company's proposed rate was calculated, it implicitly approved of its use.

Attachment: *None*

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-5.194a

Respondent: N. Foley

Page: 1 of 1

Question: 194. Refer to lines 4-11 on page 38 of Mr. Foley's rebuttal testimony on the use of the Blue Chip Report or the S&P/IHS Markit CPI rate. Please: a. Confirm that the CPI inflation rates used by Mr. Coppola in his direct testimony for 2024 and 2025 and the Company's CPI inflation rates for the same years in Exhibit A-13, Schedule C5.15, were the same rates at 2.4% and 2.2%, respectively. If not confirming, provide evidence otherwise.

Answer: Confirmed.

Attachment: *None*

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-5.194b

Respondent: N. Foley

Page: 1 of 1

Question: 194. Refer to lines 4-11 on page 38 of Mr. Foley's rebuttal testimony on the use of the Blue Chip Report or the S&P/IHS Markit CPI rate. Please: b. Confirm that in rate case decisions in Case Nos. U-20836 and U-21297, the Commission did not approve any specific source or publication of the CPI and simply approved CPI-based inflation rates. If not confirming provide evidence otherwise.

Answer: Partially confirmed. The Company agrees that in its December 1, 2023 Order in Case No. U-21297 and its November 18, 2022 Order in Case No. U-20836 the Commission did not directly address the source of the CPI rate.

However, in Case No. U-21297 the Company noted the source of its proposed CPI rate as "S&P/IHS Markit – U.S. Economic Outlook…" in Exhibit A-13, Schedule C5.15. In Case No. U-20836 the Company noted the source of its proposed CPI rate as "IHS Markit – U.S. Economic Outlook…" in Exhibit A-13, Schedule C5.15.

In approving the Company's proposed composite inflation rates in those cases, the Commission implicitly approved the source of the rates.

Attachment: *None*

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-5.195a

Respondent: M. Guillaumin

Page: 1 of 1

Question: 195. Refer to lines 19-25 on page 5 and lines 1-4 on page 6 of Ms. Guillaumin's rebuttal testimony on the forecasted capital expenditures for 2024 and 2025 for the Belle River and Greenwood power plants. Please: a. Confirm that in her direct testimony, Ms. Guillaumin did not discuss that the Belle River power plant had only one major maintenance outage during 2021-2023 and two outages forecasted for 2024 and 2025. Similarly, Ms. Guillaumin did not discuss that the Greenwood power plant had a partial maintenance outage in 2021-2023 and one full major maintenance outage forecasted for 2024-2025. If not confirming, provide evidence otherwise.

Answer: Not confirmed.

On page 129 of my direct testimony, I describe Belle River Unit 1 had a periodic maintenance outage in 2022 and Belle River Unit 1 and Greenwood Unit 1 have periodic maintenance outages scheduled in 2025. Additionally, during the bridge period in the instant case, I indicate Belle River Unit 2 has a periodic maintenance outage in 2024 (see page 76 of my direct testimony).

Periodic maintenance outages that occurred in 2021, such as the partial maintenance outage on Greenwood Unit 1, were prior to the historical test year in the instant case and were not described in my direct testimony.

Attachment: None.

U-21534 AGDE.5.196b Supplemental

MPSC Case No: U-21534

Requester: AG

Question No.: ~~AGDE-5.196b~~ AGDE-5.195b

Respondent: M. Guillaumin

Page: 1 of 1

Question: 195. Refer to lines 19-25 on page 5 and lines 1-4 on page 6 of Ms. Guillaumin's rebuttal testimony on the forecasted capital expenditures for 2024 and 2025 for the Belle River and Greenwood power plants. Please: b. Confirm that major maintenance outages are not typically annual events. If confirming, explain why the Company had only half of a major maintenance outage for Greenwood and only one for Belle River in three years and now is planning for two major maintenance outages in two consecutive years. If not confirming, explain further.

Answer: It is confirmed that each generating unit does not have a major maintenance outage annually. The Company's steam generation units are typically taken offline at least once every 3-5 years in order to perform major maintenance. Depending on which units are due for major maintenance in the fleet, the number of major maintenance outages in a year can vary. The current schedule for major maintenance outages at Greenwood and Belle River Power Plants is based on the specific equipment and project needs as described in my direct testimony.

Attachment: None.

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-5.196

Respondent: M. Guillaumin

Page: 1 of 1

Question: 196. Refer to lines 17-25 on page 6 and lines 1-8 on page 7 of Ms. Guillaumin's rebuttal testimony on the Belle River and Greenwood power plant routine maintenance. If replacement of low-pressure turbines is infrequent at a cost of $20 million each, how can these replacements be considered routine maintenance?

Answer: Steam turbine replacements are common in the industry and in the Company, so steam turbine replacement projects are included in the routine maintenance capital projects listed on pages 4-7 of Exhibit A-12, Schedule B5.1, consistent with the Company's previous rate case filings.

Attachment: None.

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-5.198a

Respondent: M. Hatsios

Page: 1 of 1

Question: 198. Refer to lines 15-25 on page 7 and lines 1-16 on page 8 of Mr. Hatsios' rebuttal testimony on the MIGP Customer-Requested Renewable Energy Projects. Please: a. Confirm that as of July 2024 the Company still had not started this project.

Answer: Yes, the project did not begin in July 2024.

Attachment: *None.*

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-5.198b

Respondent: M. Hatsios

Page: 1 of 1

Question: 198. Refer to lines 15-25 on page 7 and lines 1-16 on page 8 of Mr. Hatsios' rebuttal testimony on the MIGP Customer-Requested Renewable Energy Projects. Please: b. Confirm that as of August 2024, the project is still in the early stage of initiation.

Answer: Yes, the project kicked off on August 1, 2024, and is in the project initiation phase. The later 2024 project start was addressed in my revised direct and rebuttal testimonies, due to the delay in the construction of the renewable energy projects. Additionally, the capital cost recovery for this project as a Level 2 project was approved in Case No. U-21297 (MPSC Staff Exhibit S-12.3, page 1, line 40) as discussed in my revised direct (see Page MJH-86, lines 14-17) and rebuttal (see Page MJH-7, lines 21-25) testimonies.

Attachment: *None.*

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-5.199

Respondent: M. Hatsios

Page: 1 of 1

Question: 199. Refer to lines 18-25 on page 8 and page 9 of Mr. Hatsios' rebuttal testimony on the Rider 17-MIGP, Residential, And Small Commercial & Industrial Project. Please confirm that the information provided in response to DR AGDE-3.114a-d was correct as of the date issued. If not confirming, explain why it is incorrect.

Answer: The information provided in response to AGDE-3.114b pages 2-3 regarding the project phases and timeline for the 2024 and 2025 Rider 17 – MIGreenPower Residential and Small Commercial & Industrial project was correct. Additionally, the capital cost recovery for this project as a Level 2 project was approved in Case No. U-21297 (MPSC Staff Exhibit S-12.3, page 1, line 39) as discussed in my revised direct (see Page MJH-90, lines 12-15) and rebuttal (see Page MJH-8, line 24-25 and Page MJH-9, line 1) testimonies.

Attachment: *None.*

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-5.200

Respondent: M. Hatsios

Page: 1 of 1

Question: 200. Refer to page 10 of Mr. Hatsios' rebuttal testimony on the 2025 Advances Analytics Use Case Project. Please confirm that the information provided in response to DR AGDE-3.114a-d was correct as of the date issued. If not confirming, explain why it was incorrect.

Answer: The information provided in response to AGDE-3.114b pages 2-3 regarding the project phases and timeline for the 2025 Advanced Analytics Use Cases Implementation: Use Case #1- Reducing MPSC Complaints and discussed on page MJH-10 of my rebuttal testimony are correct. Both the discovery response and the rebuttal testimony speak to a March 2025 project initiation / start date with no change to the project end date. In rebuttal testimony, I also indicated that initial scoping for this use case has been completed and data preparation has begun due to the extensive data and data engineering requirements of the project to ensure the timely kick-off of the modeling phase of the project in March 2025.

Attachment: *None.*

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-5.201

Respondent: M. Hatsios

Page: 1 of 1

Question: 201. Refer to pages 11 and 12 of Mr. Hatsios' rebuttal testimony on the TOD deferred expenses. Please confirm that neither in Case No. U-21297 nor in this rate case, did the Company provide the detailed cost items that make up the balance in the TOD deferred regulatory asset to permit an in-depth analysis of the reasonableness and prudency of the costs incurred. If not confirming, provide evidence otherwise.

Answer: Confirmed**.** The Company has not provided a list of detailed cost items of $100,000 or greater (as defined by the AG in their discovery request AGDE-4.156a) in either Case No. U-21297 or the instant case. TOD deferred expenses have been provided broken down by major component in Exhibit A-13, Schedule C5.9.2 lines 8-14 in both rate cases. Details regarding the reasons for the spend in each component were explained in the Company's response to AGDE-4.156a in the instant case.

Attachment: *None.*

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-5.202a

Respondent: B. Hill

Page: 1 of 1

Question: 202. Refer to lines 17-21 on page 5 of Mr. Hill's rebuttal testimony stating that the use of inflation is reasonable and appropriate to adjust past expenditures using the CPI when they are being used as the basis for future projections of capital expenditures included in rate base. Please: a. Explain whether the Company applied this approach in forecasting all future cost projections for both capital and O&M expenditures or only select areas. If only select areas, explain why only those cost areas were selected and not the other costs.

Answer: The Company uses an inflation adjusted historical average to forecast future investment in base capital in many but not all categories. Where we use historical averages and why is described in my direct testimony, including Emergent Replacements as described in my direct testimony page 7 line 16 to page 8 line 15 and page 23 lines 4-14 for Customer Connections, Relocations and Other.

Attachment: None

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-5.202b

Respondent: B. Hill

Page: 1 of 1

Question: 202. Refer to lines 17-21 on page 5 of Mr. Hill's rebuttal testimony stating that the use of inflation is reasonable and appropriate to adjust past expenditures using the CPI when they are being used as the basis for future projections of capital expenditures included in rate base. Please: b. Does the Company plan to expand the use of this inflation-adjusted historical constant dollar cost approach to all its cost forecasts in future years? Explain why and when, or why not.

Answer: DTE Electric objects for the reason that the request is not relevant, nor is it reasonably calculated to lead to the discovery of admissible evidence. Subject to this objection, and without waiving this objection, DTE Electric would answer as follows:

At this time, the Company has no future plans to expand the use of an inflation adjusted historical average methodology.

Attachment: None

Co-respondent: Legal

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-5.203a

Respondent: B. Hill

Page: 1 of 1

Question: 203. Refer to lines 17-21 on page 5 of Mr. Hill's rebuttal testimony stating that the use of inflation is reasonable and appropriate to adjust past expenditures using the CPI when they are being used as the basis for future projections of capital expenditures included in rate base. Please: a. Electric Plant Instruction No. 2 of the FERC-approved Uniform System of Accounts states that all electric plant shall be included in the accounts at the cost incurred by the utility. Confirm that including costs in rate base that have been inflated above costs would violate the instructions of the Uniform System of Accounts. If not confirming, explain why not.

Answer: The instructions in the Uniform System of Accounts apply to the accounting for actual costs. They do not prescribe the process for projecting estimated future costs (e.g., in rate cases). In certain instances, the Company estimated future capital expenditures by applying an inflation rate to historical costs. This is a reasonable and prudent forecast methodology as described in my direct and rebuttal testimony. Once the expenditures are actually incurred, they will be reflected in the accounting records at the actual cost, consistent with the requirements in the Uniform System of Accounts.

Attachment: *none*

Co-respondent: T. Uzenski

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-5.203b

Respondent: B. Hill

Page: 1 of 1

Question: 203. Refer to lines 17-21 on page 5 of Mr. Hill's rebuttal testimony stating that the use of inflation is reasonable and appropriate to adjust past expenditures using the CPI when they are being used as the basis for future projections of capital expenditures included in rate base. Please: b. Explain why adjusting historical costs to constant dollars for ratemaking and including those costs in rate base is any different than recording costs on the books of the Company above actual cost.

Answer: Future projections, by definition, are not actual costs. To project future expenditures, a reasonable and prudent forecast methodology must be applied. One such methodology is applying inflation to prior period expenditures. Regardless of the forecast method used for rate case purposes, once the expenditures are actually incurred, they will be reflected in the accounting records at the actual cost.

Attachment: *none*

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-5.203c

Respondent: B. Hill

Page: 1 of 1

Question: 203. Refer to lines 17-21 on page 5 of Mr. Hill's rebuttal testimony stating that the use of inflation is reasonable and appropriate to adjust past expenditures using the CPI when they are being used as the basis for future projections of capital expenditures included in rate base. Please: c. Provide evidence from other state jurisdictions where the use of constant dollar adjustments to historical costs is an accepted ratemaking methodology.

Answer: The Company has not performed the requested analysis.

Attachment: None

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-5.204

Respondent: B. Hill

Page: 1 of 1

Question: 204. Refer to pages 7 and 8 of Mr. Hill's rebuttal testimony on the Department of Defense Inflation and Escalation Best Practices for Cost Analysis. Confirm that the practices and cost analytical tools of the Department of Defense have no relevancy in ratemaking in Michigan. If not confirming, explain why it is relevant.

Answer: The Department of Defense Inflation and Escalation Best Practices for Cost Analysis describes an appropriate and reasonable methodology for calculating average costs from historical costs using an escalation index and an inflation index. This forecasting method is like inflation adjusted historical average used for most base capital categories.

Attachment: None

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-5.205

Respondent: B. Hill

Page: 1 of 1

Question: 205. Refer to lines 7-16 on page 9 of Mr. Hill's rebuttal testimony on the proposed adjustment of historical costs for subsequent year's CPI inflation factors. Confirm that the Company has not provided any evidence that historical costs incurred in 2018 through 2022 increased by the inflation factors in subsequent years. If not confirming, provide a reference where that detailed evidence has been presented in the Company's direct case or in rebuttal.

Answer: See rebuttal testimony page 6 lines 4-11.

Attachment: None

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-5.206a

Respondent: B. Hill

Page: 1 of 1

Question: 206. Refer to lines 6-20 on page 10 of Mr. Hill's rebuttal testimony on cost efficiencies. Please: a. Provide the calculations showing how you arrived at the $20,819,951 and $21,435,815 in Excel with formulas intact and all data and assumptions cited to a source and explained. If the Excel worksheet has multiple tabs and calculations, reference the applicable tabs and line numbers where these amounts are shown.

Answer: As stated in my rebuttal testimony on page 10 in lines 13-20, these savings calculations were provided in discovery response U-21534 AGDE-3.95b-01 Emergent Savings 2024-2025.xlsx (Exhibit A-52, Schedule QQ3). The values in cells C7, D7, and E7 in "U-21534 AGDE-3.95b-01 Emergent Savings 2024-2025.xlsx" can be found in the Reliability Model on tab "Event Projections" in cells E8, F8, and G8.

Attachment: None

Co-respondent: J. Kryscynski

Output

		Baseline	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Total Events	Avg	206,482	196,716	196,806	196,280	195,753	195,137	194,086	192,233	190,313	188,308	184,987	180,843	178,568	178,232
	High	226,921	215,177	215,237	214,607	213,999	213,352	212,281	210,351	208,383	206,413	202,888	198,380	195,946	195,867
	Med	205,336	195,844	195,939	195,427	194,908	194,291	193,237	191,387	189,466	187,447	184,141	180,041	177,795	177,436
	Low	189,169	180,803	180,922	180,483	180,016	179,429	178,426	176,686	174,860	172,935	169,887	166,124	164,053	163,662

		Baseline	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Projected Non-MED Tree Multiple Customer Outage Events	4%	7,365	5,922	5,887	5,833	5,732	5,681	5,713	5,773	5,824	6,037	6,043	5,850	5,689	6,045
Projected Non-MED Non-Tree Multiple Customer Outage Events	10%	18,104	18,189	18,692	18,934	18,945	18,613	18,063	17,242	16,240	15,355	14,973	14,485	14,460	14,577
Projected Non-MED Single Customer Tree Outage Events	4%	7,474	7,465	7,458	7,451	7,437	7,416	7,381	7,334	7,289	7,215	7,108	7,025	7,003	6,991
Projected Non-MED Single Customer Non-Tree Outage Events	29%	49,263	49,197	49,154	49,106	49,022	48,905	48,698	48,418	48,143	47,695	47,055	46,574	46,445	46,370
Projected Non-MED Multiple Customer Non-Outage Events	13%	23,232	17,901	17,710	17,334	17,275	17,467	17,643	17,657	17,895	18,198	17,920	17,387	17,322	17,772
Projected Non-MED Single Customer Non-Outage Events	20%	34,983	34,920	34,846	34,747	34,590	34,355	33,971	33,399	32,679	31,689	30,298	28,697	27,239	25,934
Projected Non-MED Other Non-Outage Events	19%	32,069	32,069	32,069	32,069	32,069	32,069	32,069	32,069	32,069	32,069	32,069	32,069	32,069	32,069
Total		172,490	165,662	165,817	165,474	165,070	164,507	163,538	161,892	160,140	158,259	155,467	152,086	150,227	149,759

			2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Projected MED Tree Multiple Customer Outage Events	Avg	4,082	3,282	3,263	3,233	3,177	3,149	3,167	3,200	3,228	3,346	3,349	3,243	3,153	3,351
	High	8,039	6,464	6,426	6,366	6,257	6,201	6,236	6,301	6,357	6,589	6,596	6,386	6,209	6,599
	Med	3,651	2,935	2,918	2,891	2,841	2,816	2,832	2,861	2,887	2,992	2,995	2,900	2,820	2,996
	Low	2,253	1,811	1,801	1,784	1,753	1,737	1,747	1,766	1,781	1,846	1,848	1,789	1,740	1,849
Projected MED Non-Tree Multiple Customer Outage Events	Avg	1,881	1,890	1,942	1,967	1,968	1,934	1,877	1,791	1,687	1,595	1,556	1,505	1,502	1,515
	High	3,250	3,265	3,355	3,399	3,400	3,341	3,242	3,095	2,915	2,756	2,688	2,600	2,595	2,617
	Med	1,731	1,739	1,788	1,811	1,812	1,780	1,727	1,649	1,553	1,468	1,432	1,385	1,383	1,394
	Low	842	846	869	881	881	866	840	802	755	714	696	674	673	678
Projected MED Single Customer Tree Outage Events	Avg	3,162	3,158	3,155	3,152	3,146	3,137	3,122	3,103	3,084	3,052	3,007	2,972	2,963	2,958
	High	6,607	6,599	6,593	6,587	6,574	6,556	6,525	6,483	6,443	6,378	6,284	6,211	6,191	6,181
	Med	2,638	2,635	2,633	2,630	2,625	2,618	2,605	2,589	2,573	2,547	2,509	2,480	2,472	2,468
	Low	1,804	1,802	1,801	1,799	1,795	1,790	1,782	1,770	1,760	1,742	1,716	1,696	1,691	1,688
Projected MED Single Customer Non-Tree Outage Events	Avg	6,013	6,005	6,000	5,994	5,984	5,969	5,944	5,910	5,876	5,822	5,744	5,685	5,669	5,660
	High	8,199	8,189	8,181	8,173	8,159	8,140	8,105	8,059	8,013	7,939	7,832	7,752	7,730	7,718
	Med	7,802	7,791	7,784	7,777	7,764	7,745	7,712	7,668	7,624	7,553	7,452	7,376	7,355	7,344
	Low	2,111	2,109	2,107	2,105	2,101	2,096	2,087	2,075	2,063	2,044	2,017	1,996	1,991	1,987
Projected MED Multiple Customer Non-Outage Events	Avg	9,250	7,127	7,051	6,902	6,878	6,955	7,025	7,030	7,125	7,245	7,135	6,923	6,897	7,076
	High	14,482	11,159	11,040	10,805	10,768	10,888	10,998	11,007	11,155	11,344	11,171	10,838	10,798	11,079
	Med	8,419	6,487	6,418	6,282	6,260	6,330	6,394	6,399	6,485	6,595	6,494	6,301	6,277	6,441
	Low	4,743	3,654	3,615	3,539	3,527	3,566	3,602	3,605	3,653	3,715	3,658	3,549	3,536	3,628
Projected MED Single Customer Non-Outage Events	Avg	6,531	6,520	6,506	6,487	6,458	6,414	6,342	6,236	6,101	5,916	5,657	5,358	5,086	4,842
	High	7,491	7,478	7,462	7,441	7,407	7,357	7,275	7,152	6,998	6,786	6,488	6,145	5,833	5,554
	Med	6,071	6,060	6,047	6,030	6,002	5,962	5,895	5,796	5,671	5,499	5,258	4,980	4,727	4,500
	Low	3,295	3,289	3,282	3,272	3,258	3,236	3,199	3,146	3,078	2,985	2,854	2,703	2,565	2,442
Projected MED Other Non-Outage Events	Avg	3,072	3,072	3,072	3,072	3,072	3,072	3,072	3,072	3,072	3,072	3,072	3,072	3,072	3,072
	High	6,362	6,362	6,362	6,362	6,362	6,362	6,362	6,362	6,362	6,362	6,362	6,362	6,362	6,362
	Med	2,534	2,534	2,534	2,534	2,534	2,534	2,534	2,534	2,534	2,534	2,534	2,534	2,534	2,534
	Low	1,631	1,631	1,631	1,631	1,631	1,631	1,631	1,631	1,631	1,631	1,631	1,631	1,631	1,631

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-5.206b

Respondent: B. Hill

Page: 1 of 1

Question: 206. Refer to lines 6-20 on page 10 of Mr. Hill's rebuttal testimony on cost efficiencies. Please: b. Confirm that the amounts included on line 6 of page 1 of Exhibit A-12, Schedule B5.4, are not operating cost efficiencies but avoided duplicate costs from strategic capital expenditures. If not confirming, provide evidence otherwise.

Answer: The Company objects because the question is based on a false premise. The rebuttal testimony lines 6-20 on page 10 explains the savings are from both Strategic Capital Investments and the Tree Trim Surge program.

Attachment: None

Co-respondent: J. Kryscynski

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-5.207

Respondent: B. Hill

Page: 1 of 1

Question: 207. Refer to pages 15 through 18 of Mr. Hill's rebuttal testimony on the Company's proposed adjustments to actual historical costs for Customer Connections, Relocations, Electric system Equipment, General Plant, Tools and Miscellaneous items by applying historical inflation. Please confirm that in Case Nos. U-20836 and U-21297, the Commission accepted Mr. Coppola's proposed 3-year actual historical cost averaging without adjustment for historical inflation. If not confirming, provide evidence otherwise.

Answer: See response to AGDE-1.26c.

Attachment: None

Co-respondent: J. Kryscynki

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-1.26c

Respondent: J. Kryscynski

Page: 1 of 1

Question: 26. Refer to Exhibit A-13, Schedule C5.6, page 2. Please:

c. Explain why the Company is proposing these retroactive inflation adjustments when in Case No. U-21297 the Commission rejected this same adjustment proposal.

Answer: The Commission did not reject the inflation adjustments in Case No. U-21297, the adjustments were approved.

See the below text from the U-21297 order (page 201):

"As discussed in the "Emergent Replacements" section above, the Commission finds that DTE Electric's proposed inflationary adjustment should be approved. The Commission notes that as stated by the company, the Commission approved a similar inflation adjustment for this expense in the November 18 order. *See*, November 18 order, p. 258."

Attachment: *N/A*

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-5.208

Respondent: B. Hill

Page: 1 of 1

Question: 208. Refer to lines 1-14 on page 19 of Mr. Hill's rebuttal testimony disagreeing with the use of housing starts as an indicator of activity for future customer connections. Please confirm that in forecasting customer connections, Mr. Hill simply used a 3-year average of capital expenditures adjusted for historical and future inflation and does not take into consideration any economic activity that affects customer demand for new connections. If not confirming, provide evidence otherwise.

Answer: The Company's forecast is based on a three-year average of capital expenditures adjusted for historic and future inflation which takes into account the economic activity of the prior three-years, historic inflation rates, and projected future inflation rates.

Attachment: None

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-5.209a

Respondent: B. Hill

Page: 1 of 1

Question: 209. Refer to lines 5-9 and Table 2 on page 11 of Mr. Hill's rebuttal testimony on the I-375 Relocation project. Please: a. Explain why the Company is now lowering its overall spending plans for 2024 and shifting more spending to 2025. What new information did the Company receive, and when, to justify the change in spending?

Answer: The Company received its latest update from MDOT concerning the I-375 Relocation project on August 14, 2024 which confirmed that MDOT has selected a contractor for the project.

DTEE has not yet received a final design for the I-375 and Gratiot area therefore this work scope was moved into 2025.

Attachment: *None*

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-5.209b

Respondent: B. Hill

Page: 1 of 1

Question: 209. Refer to lines 5-9 and Table 2 on page 11 of Mr. Hill's rebuttal testimony on the I-375 Relocation project. Please: b. Provide a copy of any recent work plans or project schedules provided by MDOT to the Company.

Answer: The following documents are the most recent work plans and project schedules DTEE has received.

https://www.michigan.gov/mdot/-/media/Project/Websites/MDOT/Projects-Studies/Special-Projects/I-375/Progressive-Design-Build-Presentation.pdf?rev=79ca836417434d9b9f2da95c7770772c&hash=76A52093E002C4D008C58E5D1FCBD2D0

https://www.michigan.gov/mdot/projects-studies/special-construction/i-375-reconnecting-communities-project/project-information

Attachment: *N/A*



I-375 RECONNECTING COMMUNITIES PROJECT

PROGRESSIVE DESIGN BUILD INFORMATION SESSION

April 2024

AGENDA

1. Welcome
2. Project Overview
3. Project Updates
4. Progressive Design Build
5. Q&A

PROJECT OVERVIEW



Exhibit: AG-57
Case No.: U-21534
Page 5 of 29

MDOT
Michigan Department of Transportation

PURPOSE AND NEED

TRANSPORTATION

- Address an infrastructure need and replace the outdated interchange design, deteriorated bridges and roadways.
- Address existing and future transportation needs and roadway safety for all users.
- Improve connectivity to surrounding areas for both vehicular and nonmotorized users.
- Enhance access to enable future development and other placemaking opportunities

MDOT'S MISSION

- Serve and connect people, communities and the economy through transportation.



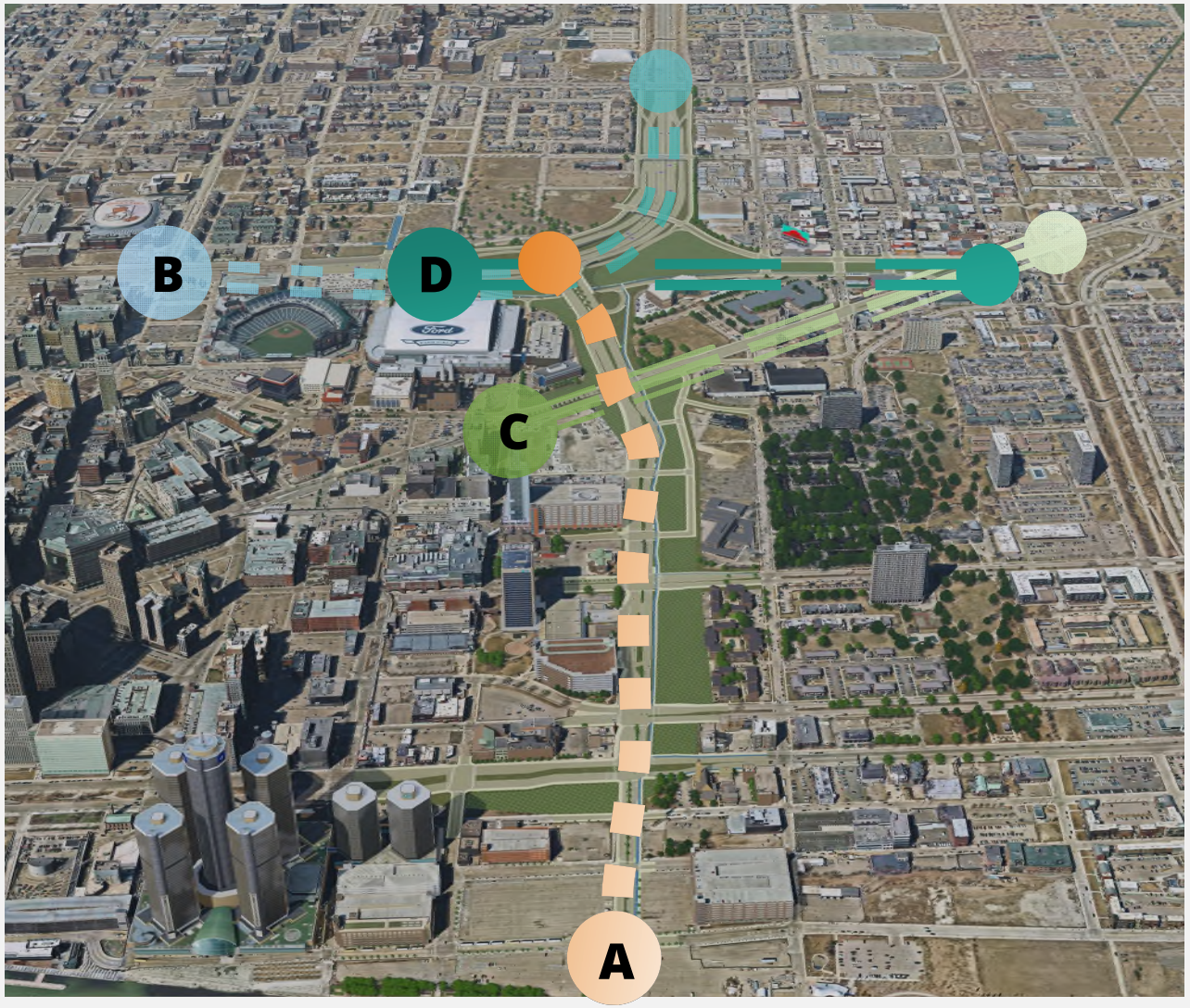
PROJECT FEATURES

Project limits include:

A. I-375 from the Detroit River to the I-75 interchange
B. I-75 from John R Street to Mack Avenue
C. Gratiot Avenue from St. Antoine to the Dequindre Cut
D. Existing Gratiot Connector

Benefits:

- Strengthens existing and future transportation, multimodal mobility choices and roadway safety.
- Improves connectivity.
- Enhanced access enables future development and other placemaking opportunities with official land use and long-term economic development plans.
- Address deteriorated infrastructure, including stormwater management capacity.



PROJECT UPDATES



MAJOR INPUT FROM LAST YEAR

What we heard:	How we responded:
The boulevard design has too many lanes.	MDOT conducted a new traffic study that has resulted in a modified design.
How will my business stay open during construction?	MDOT has selected the progressive design-build delivery method to allow for increased stakeholder engagement and invited new partners to provide peer review and additional resources.

Since the last time the LAC met, in October 2023:

The project team has been engaging in smaller stakeholder meetings to begin conversations about the project's Framework and address specific stakeholder concerns.

MDOT has also conducted meetings for organizations that represent small and local businesses that may be interested in the project's design, construction and additional services.

SMALL ENGAGEMENT MEETINGS

Stakeholders

McDougall-Hunt Neighborhood Association

General Motors

Detroit Riverfront Conservancy

Martin Luther King Jr. Senior High School

Greektown Neighborhood Partnership

Kresge Roundtable

Black Bottom Archives

McDougall-Hunt Neighborhood Association

Elmwood Park Cooperative

Blue Cross Blue Shield of Michigan

Detroit Riverfront Conservancy

Eastern Market

Lafayette Park Co-Op Boards

Organizations and Business Community

Industry Collaboration: NABWIC, GLWBC, MBDA, MMSDC

Industry Collaboration: MMC Day of Development

Industry Collaboration: MDBBA

Industry Forum: General business community

Industry Collaboration: DEGC

Industry Forum: General business community

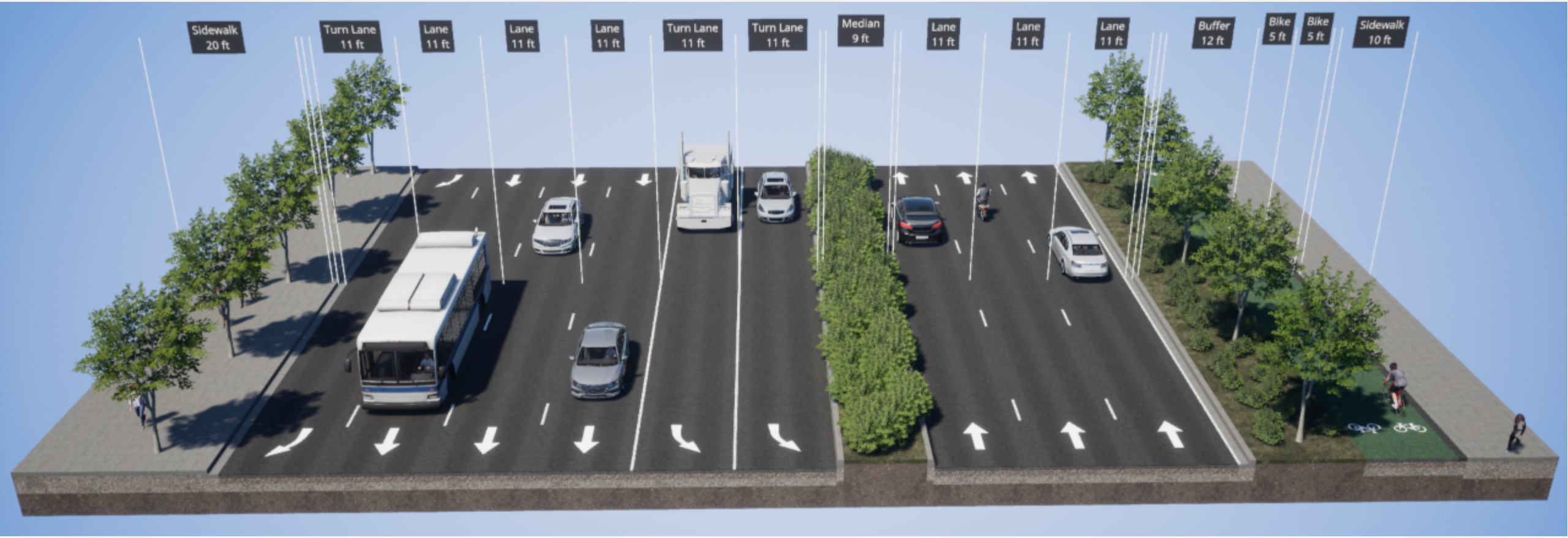
TRAFFIC ANALYSIS

MDOT conducted a new traffic analysis to determine if lanes could be reduced on the new boulevard. Over the past few months, MDOT has:

- Conducted traffic data collection (traffic volumes and vehicle flow patterns).
- Analyzed the data (intersection analysis to identify any bottlenecks or congestion points and analyzing safety).
- Reporting findings to the city, SEMCOG, and FHWA.
- **The data shows less traffic during the morning and evening rush hours, allowing MDOT to reduce the number of lanes on the boulevard and increase local connectivity in the interchange area.**

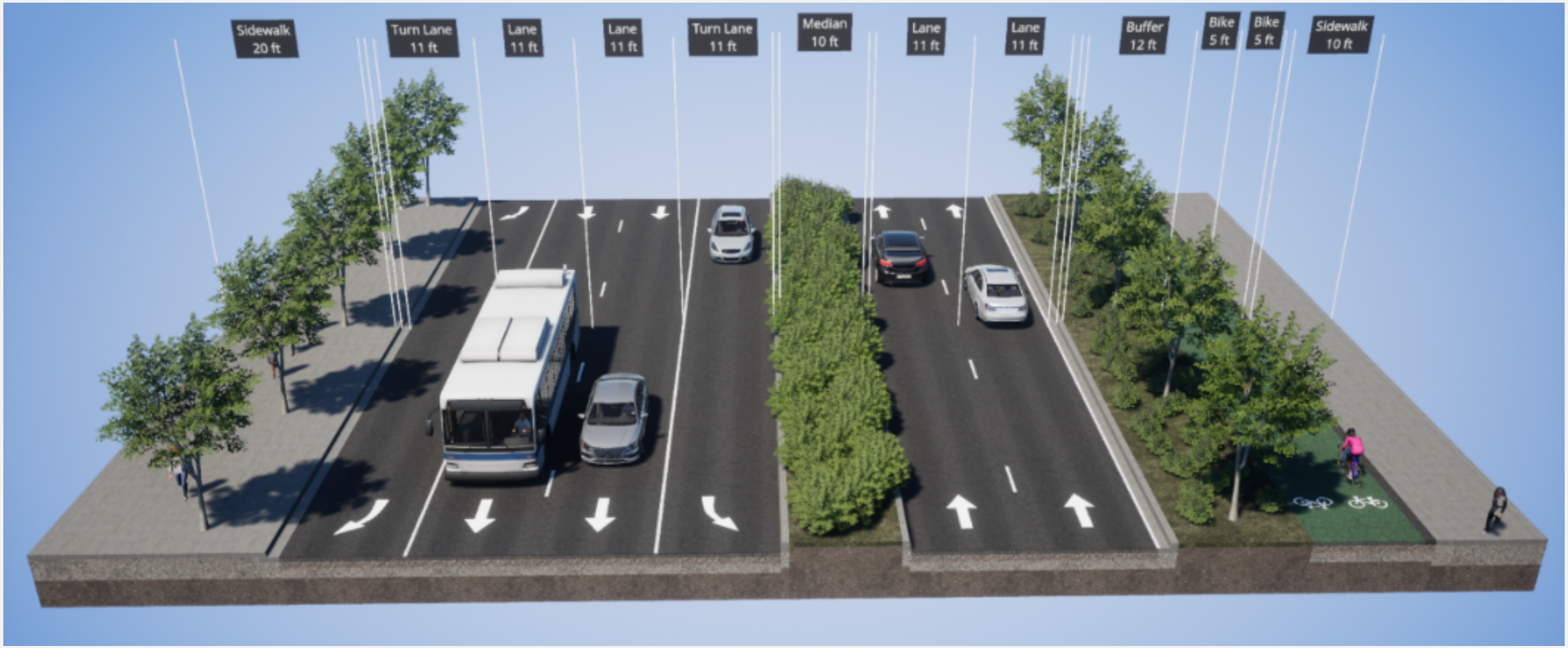
Boulevard Updates

Previous Boulevard Concept - North of Lafayette Street



Boulevard Updates

Revised Boulevard Concept (with Median) - North of Lafayette Street



PROJECT PARTNERS

City of Detroit

- Framework plan, including zoning and land use study

MDOT

- Boulevard design and construction
- Community enhancements plan
- Framework plan

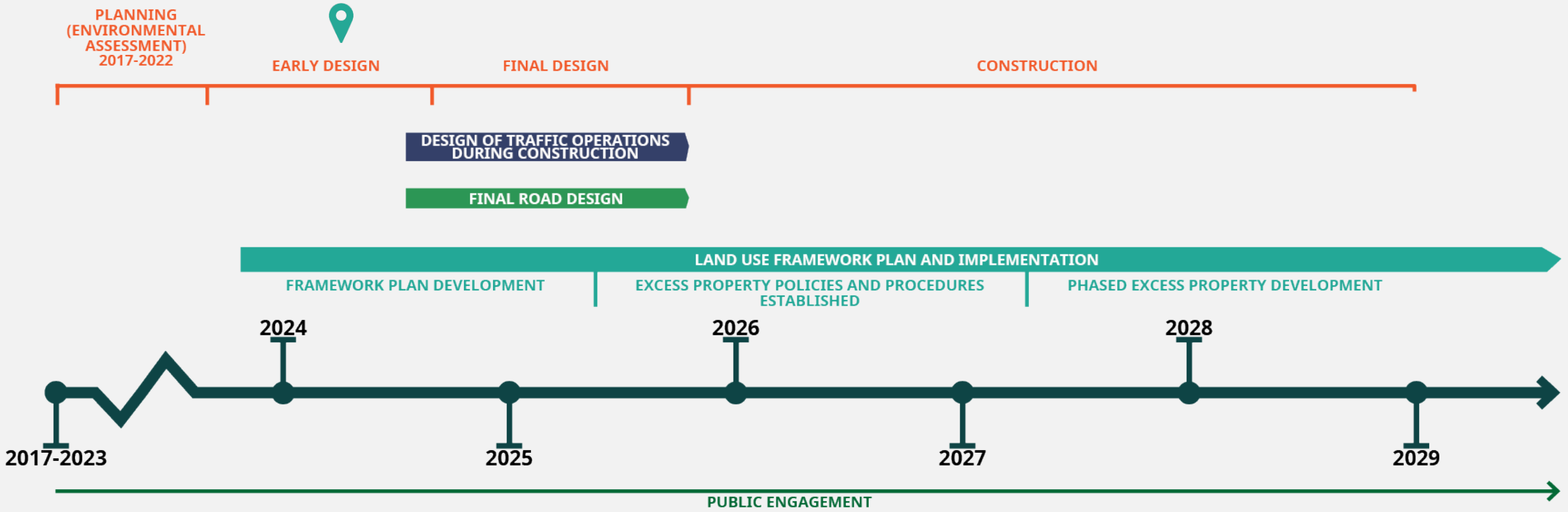
Downtown Detroit Partnership

- Construction mitigation
- Economic analysis
- Peer review

Kresge

- Roundtable

PROJECT ENGAGEMENT TIMELINE



PROGRESSIVE DESIGN-BUILD



MDOT Michigan Department of Transportation

WHY PDB FITS I-375



STAKEHOLDER INPUT

Incorporate stakeholder input and manage changes as the project and framework develop.



SCHEDULE

Support achievement of the target project schedule, including groundbreaking and completion.



DESIGN AND CONSTRUCTION INNOVATION

Support contractor input into design and construction approach, preserving the benefits of designer-contractor integration.



TRAFFIC MANAGEMENT AND WORK PACKAGING

Develop construction staging and packaging options to support efficient scheduling, mitigate interface risk, and manage traffic impacts during construction.



BUSINESS AND WORKFORCE DEVELOPMENT

Support maximum small and disadvantaged business participation and workforce development opportunities.

PROJECT DELIVERY METHOD

Procurement and Delivery Process

Establish "Guaranteed Maximum Price"

$

Phase I

Phase II

Design-Builder Procurement

Collaboration and Engagement

Design-Schedule-Plan-Budget

Design-Build Construction

Qualifications-Based Selection

Evaluation of experience, people, and approach, including:

- Design
- Construction
- Stakeholder, workforce and DBE engagement

Collaborative Engagement Process

- Scope refinement
- Validation of current design
- MDOT
- Ongoing design
- PDB team
- Community

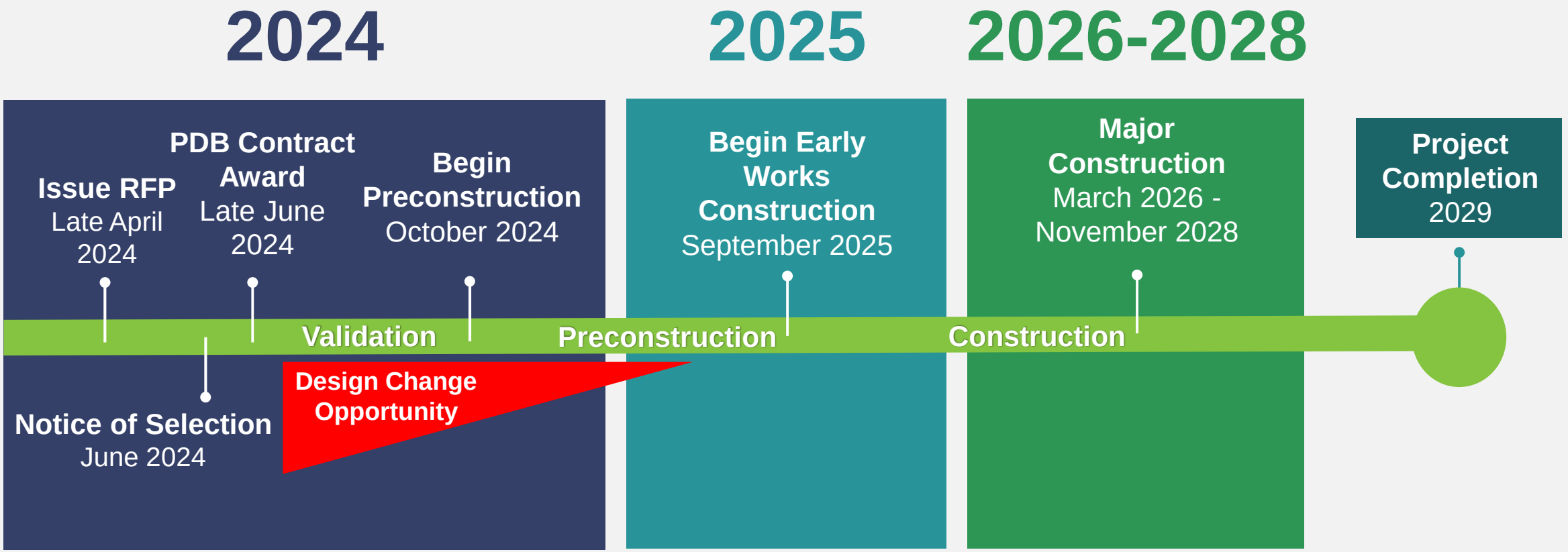
Iterative Design Process

- Work packaging and sequencing
- "Open book" pricing at defined design milestones
- Commercial terms/risk allocation
- Subcontracting strategy

Design-Build Delivery

- Build from about 70-90 percent plans
- Design-build roles and responsibilities

PDB SCHEDULE



DESIGN CHANGES DURING PDB

- Adding connections to improve grid connectivity throughout the corridor.
- Value-adding design changes within the existing project limits.

Design changes that can be made

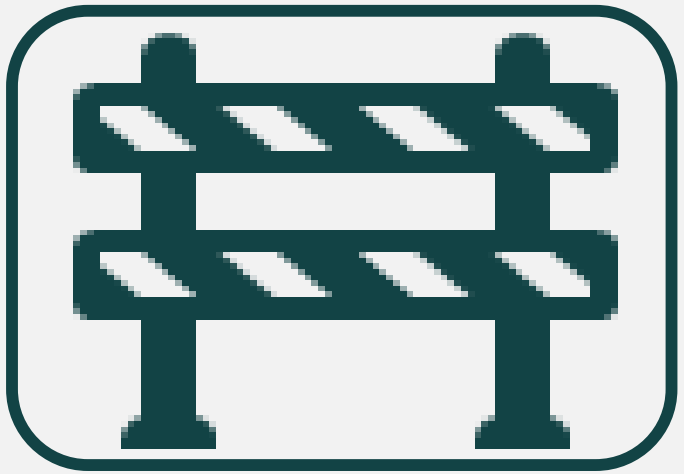


- Major changes that would impact federal environmental commitments (NEPA).
- Changes that would negatively impact safety, adjacent properties, and are not technically feasible.

Design changes that can not be made



TRAFFIC OPERATIONS DURING CONSTRUCTION



Access During Construction



Community Input



Construction Scheduling

TRAFFIC OPERATIONS DURING CONSTRUCTION

2.6 Meetings

During the Validation Subphase, the Design-Builder shall participate in various meetings and workshops. The Design-Builder shall perform administrative tasks including preparation of agendas and meeting notes. The following tasks identify the meetings and workshops in which the Design-Builder shall participate, with the minimum number of attendees included (virtual or in-person). These include:

A. **Kick-off Meeting (1):** Intent of the meeting is to establish project goals and schedule. Design-Builder Attendance will include all Key Personnel and will be in-person.
B. **Project Status Meetings (16)**: Weekly meeting to discuss high level project status. Design-Builder Attendance will be limited to Project Manager, Design Manager, and Construction Manager. It is assumed that there will be 16 Project Status Meetings.
C. **Concept Review Meetings (4):** Intent is to review project details with the MDOT. Design-Builder Attendance will include Project Manager, Design Manager, Construction Manager, and other Subject Matter Experts as needed. It is assumed that there will be 4 Concept Review Meetings.
D. **Utility Meetings with Utility owners (18):** Meetings with Utility owners as required to define activities necessary to perform the Work and develop the Utility and Third-Party Coordination Plan.
E. **Utilities Meetings with MDOT (4):** Monthly meeting with the MDOT utility coordinator to provide update on project progress and utility coordination efforts. It is assumed that there will be 4 Utility Task Force Meetings. Design-Builder Attendance will include Design Manager, Subject Matter Experts, and design team members as required.
F. **Traffic Operations Meetings (4)**: Monthly meeting with the MDOT to review the traffic study. Design-Builder Attendance will include Design Manager, Subject Matter Experts, and design team members as required.
G. **Stakeholder Engagement Meetings (7):** Bi-weekly meetings with stakeholders, including Public Meetings, Local Advisory Committee (LAC) meetings, and 1-on-1 meetings to provide update and seek feedback regarding project design, construction planning, and progress of Work. MDOT will be responsible for all correspondence with the public. The Design-Builder shall assist or lead the communications efforts as directed by MDOT. The Design-Builder shall participate in the following Stakeholder Engagement Meetings to share information regarding its conceptual designs for Maintenance of Traffic (MOT):
    a. **MOT Listening Session:** Meet with stakeholders for the purpose of understanding their questions and concerns regarding impacts during construction.
    b. **MOT Concept Presentation:** Present and gather stakeholder feedback regarding two unique MOT concepts developed by the Design-Builder.

18.2.1.3 Maintenance of Traffic (MOT)

The conceptual design schematic drawings shall include the Design-Builder's conceptual design for two unique MOT concepts. The schematic drawings shall include the following elements related to each MOT concept:

A. Plan view illustrations of all major construction stages through completion of the Project showing the work area, traffic being maintained, closures, temporary pavement and/or structures, location of typical sections, and references to applicable standards.
B. Typical sections including lane widths and shy distances, paved shoulders, pavement markings, drums, temporary barriers, buffer distances, work areas, drop-offs, and station locations.
C. Detour plans and alternative route plans identifying anticipated improvements.

18.3 Maintenance of Traffic Concept Report

The Design-Builder shall include a report in PDF format that describes its conceptual designs for two unique MOT scenarios. The MOT Concept Report shall include the following elements related to maintaining traffic and be included as an attachment to the Basis of Design Report:

A. Proposed schedule for each concept showing MOT phases and durations, including closure durations for freeways and ramps.
B. Discussion of the sequence of operations and MOT procedures, identifying all long-term lane closures and all roadway closures (short-term or long-term). Long-term is for any closures 3 days or longer.
C. Summary of traffic modeling with anticipated level of service due to lane closures and detour routes.
D. Opinion of Probable Costs for MOT

FRAMEWORK PLAN OVERVIEW

What's in the Framework Plan?

EQUITY

Ensure the project benefits the community, includes local businesses, and honors the history of Black Bottom and Paradise Valley.

MOBILITY

Make it easier to walk, roll and drive to neighborhood destinations.

URBAN DESIGN

Create public spaces that are enjoyable, functional (i.e., manage rainfall).

DEVELOPMENT

Guide development to meet community needs (i.e., housing, retail/services, and community facilities).

NEIGHBORHOOD CONTEXT

Work with the community to understand the unique conditions and opportunities in the neighborhood.



SBE AND DBE PROGRAMS

- **Goal:** Maximize the utilization of small and minority-owned businesses and workforce in the execution of all project phases and services.
  - Validation: No less than 9 percent, Preconstruction: No less than 9 percent, Construction: To be determined based on advanced design and construction plans.
  - Key Personnel includes an equity manager who will be responsible for identifying increased opportunities and managing and implementing the SBE and DBE program and Workforce Development initiatives.

improved accessibility and connectivity. MDOT is partnering with the City and local stakeholders to develop strategies for final facility design, urban design and development, and opportunities for small businesses and workforce development centered on diversity, equity, and inclusion through an ongoing community engagement process.

The Project's delivery will place an enhanced focus on disadvantaged and small business inclusion and workforce development as the scope and extent of work required for the delivery of this project have significant opportunities to ensure equitable economic participation. See ITP Sections 2.9 and 2.10 respectively for additional details.

C. the Proposer's approach to managing subcontracting and subcontractor performance and workforce development during construction, including:
   a. Supporting the performance of SBE/DBE subcontractors and the effectiveness of workforce development
   b. The approach to mitigating barriers facing SBE and DBE firms' involvement on transportation projects;
   c. The approach to tracking, documenting, and ensuring compliance with equal employment opportunities and workforce development requirements;





PDB provides the unique ability to collaborate on an infrastructure solution that addresses mobility and safety needs, improves efficiency of delivery, and creates positive socio-economic change.

QUESTIONS?

THANK YOU!

I-375 Project Team
MDOT-I-375Corridor@Michigan.gov

www.Michigan.gov/I375

Comment: bit.ly/i375comment

Subscribe: bit.ly/i375subscribe

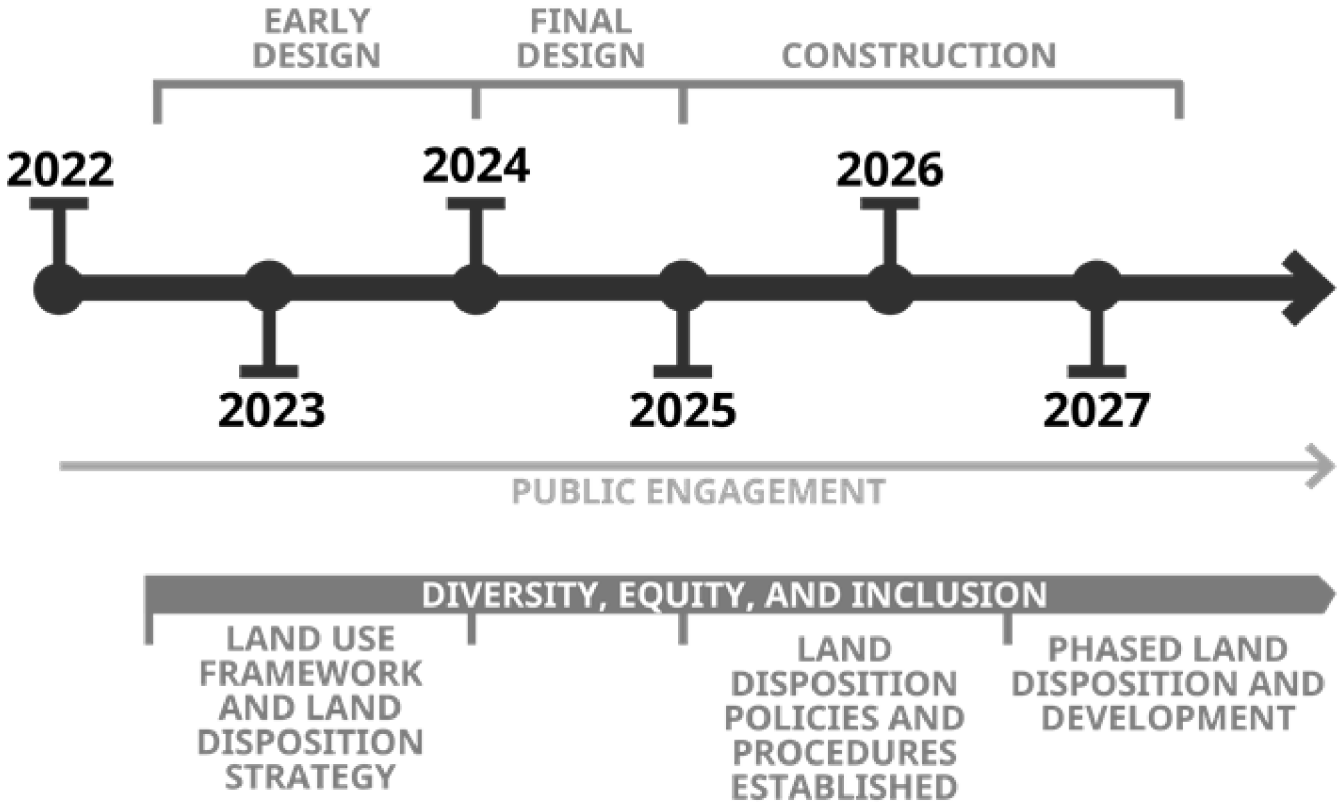
Contact: 855-375-MDOT(6368)

MDOT

Project Information

Some highlights of the Selected Alternative include:

- The I-75/I-375 interchange would be an urban-type interchange with right-hand on and off ramps that would provide access to the Eastern Market, Gratiot Avenue, the new boulevard, Brush Street, and Mack Avenue. This would eliminate the need to exit the freeway to stay on I-75.
- A city street-level boulevard would begin south of the I-75/I-375 interchange and continue to the Detroit River, opening up additional connections to the Detroit Riverfront, Eastern Market, Brush Park, and a new local connector street from Eastern Market to Gratiot Avenue.
- Braided ramps to and from Mack Avenue on I-75, meaning the ramps would pass over other ramps to and from the boulevard using bridges to separate the roadways and ramp traffic, eliminating weaving, or conflict points.
- Additional connectivity and access would be provided with a new bridge connecting Brush Park and Eastern Market, additional street connections in Eastern Market, and access to Brush Park from southbound I-75.
- Improved nonmotorized facilities, including a two-way cycle track connecting the Riverfront to the Montcalm Street extension to Gratiot Avenue. The two-way cycle track would then extend west to Brush Street and east to Gratiot Avenue where it connects with the Dequindre Cut Greenway bicycle path.
- Potential excess property that could be available for future redevelopment.
- Signalized intersections would be located along the boulevard at Jefferson Avenue, Larned Street, Lafayette Avenue, Monroe Street, Macomb Street, Clinton Street, Gratiot Avenue, and at the Blue Cross Blue Shield parking structure.



Project Information

Copyright State of Michigan

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-5.210

Respondent: B. Hill

Page: 1 of 1

Question: 210. Refer to lines 21-25 on page 23 and lines 1-4 on page 23 of Mr. Hill's rebuttal testimony on the Company's program to provide portable power generators to select customers. If the Company has empathy for customers who need to throw away spoiled food after days of power outages or have medical needs for power, why is the Company not funding this program outside of ratemaking with shareholder funds, particularly since customers are already paying the Company for electricity service that they are not getting during a power outage?

Answer: The Company believes portable generators are a reasonable and prudent expenditure as described in lines 3-13 on page 31 of my direct testimony and lines 1-5 on page 25 of my rebuttal testimony by providing benefits to customers and therefore it's appropriate for the associated costs to be included in the Company's revenue requirement in this case.

Attachment: None

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-5.211a

Respondent: B. Hill

Page: 1 of 1

Question: 211. Refer to lines 6-23 on page 24 of Mr. Hill's rebuttal testimony on portable generators and not waiting 48 hours to deploy them. Please: a. Confirm that the following statement from the response to DR AGDE-3.93a is still correct: "The Company generates a list of customers (identified to likely be out of power for greater than 48 hours) that it contacts during extended storms. Customers identified as senior citizens, low-income, and those with medical needs are prioritized for generator deployment."

Answer: Confirmed.

Attachment: None

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-5.211b

Respondent: B. Hill

Page: 1 of 1

Question: 211. Refer to lines 6-23 on page 24 of Mr. Hill's rebuttal testimony on portable generators and not waiting 48 hours to deploy them. Please: b. In his rebuttal, Mr. Hill states that the Company has not seen any indications that generator demand will exceed supply thus far. When did the Company begin this program?

Answer: The Company first deployed portable generators during storm in January 2024 and they were also used during two storms in June 2024.

Attachment: *N/A*

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-5.211c

Respondent: B. Hill

Page: 1 of 1

Question: 211. Refer to lines 6-23 on page 24 of Mr. Hill's rebuttal testimony on portable generators and not waiting 48 hours to deploy them. Please: c. Do Company employees or contractors deliver gasoline to fuel the portable generators also in the middle of the night and keep a time log of when generators will run out of fuel?

Answer: DTE Electric objects for the reason that the information requested is not relevant, nor is it reasonably calculated to lead to the discovery of admissible evidence.

Attachment: None

Co-respondent: Legal

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-5.212

Respondent: P. Sharma

Page: 1 of 1

Question: 212. Refer to lines 16-26 on page 14 and page 15 of Mr. Sharma's rebuttal testimony on the format of discovery requested AGDE-3.123 for IT projects. If Mr. Sharma was confused with the discovery question referencing Schedule B5.7.1 and Customer Service IT projects, why did he not ask for clarification instead of assuming it pertained only to customer service IT projects?

Answer: Due to the similarity in questions and reference of Customer IT projects between those directed towards Witness Hatsios (Questions 114a, 114b, 114c, and 114d) and those towards Witness Sharma (Questions 123a, 123b, 123c, and 123d) in AGDE-3, it was reasonably assumed that similar information was being requested from both witnesses. Information pertaining to Corporate Applications was provided via U-21534 Exhibit A-46 Schedule KK2 along with the rebuttal testimony filed on August 16, 2024.

Attachment: None

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-5.213

Respondent: P. Sharma

Page: 1 of 1

Question: 213. Refer to lines 22-27 on page 15 of Mr. Sharma's rebuttal testimony and Exhibit A-46, Schedule KK2. Please confirm that based on the timelines shown on page 2 of Exhibit A-43, Schedule KK2, no work had started on the Cloud Health and Safety project as of the filing date of this rate case and as of July 2024, the project is still in the early initiation phase of development. Confirm also that the Enhanced Document Management Capabilities project is still in the Requirements analysis phase per page 3 of Schedule KK2. If not confirming, explain.

Answer: Cloud Health and Safety Project: Confirmed. Cloud Health and Safety is currently in build phase as per the timeline provided in U-21534 Exhibit A-43, Schedule KK2.
Enhanced Document Capabilities: Confirmed. Enhanced document is currently in requirement analysis phase as per the timeline provided in U-21534 Exhibit A-43, Schedule KK2.

Attachment: None

MPSC Case No: U-21534
Requester: AG
Question No.: AGDE-5.215a
Respondent: R. Steudle
Page: 1 of 1

Question: 215. Refer to lines 1-7 on page 6 of Ms. Steudle's rebuttal testimony on the calculation of cost savings from tree trimming in the Tree Trim Model versus the Reliability Model. Please: a. Confirm that the Company has provided conflicting data between the costs savings identified in the Tree Trim Model in Exhibit A-22 and the Reliability Model.

Answer: The purpose for providing Exhibit A-22 in this rate case is different than the purpose of the Reliability Model. Given these differences, some of the baseline data is different – inherently these differences lead to outputs being slightly different between these two tools.

The purpose of the reliability model is to forecast how investments impact DTE Electric's system reliability through the prevention of trouble events and reduction of restoration time and customers affected. The model forecasts the expected cost savings based on the projected changes in events, restoration time and customers affected.

The Company continues to include the version of Exhibit A-22, Schedule L1 originally included in Case No. U-20836 to demonstrate the positive NPV and justification for the Surge program overall, however, the Company did not update this model for the final years of the Surge since the majority of savings have already been realized.

Attachment: *None*

Co-respondent: J. Kryscynski

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-5.215b

Respondent: R. Steudle

Page: 1 of 1

Question: 215. Refer to lines 1-7 on page 6 of Ms. Steudle's rebuttal testimony on the calculation of cost savings from tree trimming in the Tree Trim Model versus the Reliability Model. Please: b. Confirm that there is no evidence that the Reliability Model is more accurate in determining cost savings from the tree trimming surge program than the Tree Trim Model. If not confirming, provide evidence otherwise.

Answer: The Company has not done a direct comparison of the two models, however, the reliability model uses a more recent baseline and therefore reflects the most current assessment of cost savings the Company forecasts from strategic investments in and around our gird.

Attachment: *None*

MPSC Case No: U-21534
Requester: AG
Question No.: AGDE-5.216
Respondent: R. Steudle
Page: 1 of 1

Question: 216. Refer to lines 15-22 on page 6 of Ms. Steudle's rebuttal testimony on the Attorney General's request for cost savings from the surge program. Please confirm that the request from the Attorney General was not to compare the relative cost savings between the Surge Scenario and Status Quo Scenario in Exhibit A-22, but for the Company to provide the amount of cost savings that would be realized from the Tree Trimming Surge program as initially present in Table 11 of Ms. Hartwick's direct testimony in DR U-20836 AGDE-8.261, subsequently requested in DR U-21297 AGDE-4.120, and lastly requested in DR U-21534 AGDE-4.167. If not confirming, provide evidence otherwise.

Answer: The original question in DR U-20836 AGDE-8.261 was "Refer to Table 11 on page 36 of Ms. [H]artwick's direct testimony. Please provide the amount of cost savings that you plan to realize in 2022 and 2023 in each of the listed areas."

The purpose of Table 11 (copy included below) was to demonstrate the status quo cost (current costs) compared to achieving a 5-year cycle, ie. executing the Surge. The AG's question pointed to Table 11, therefore the Company's understanding was to provide the forecasted cost savings of executing the Surge relative to status quo.

Estimated Tree-related Annual Cost Savings
($ millions, excluding inflation)

Cost Category		Current Cost	5 Year Cycle Achieved
Tree-Related O&M	Tree Trim Reactive	$16.7	$9.4
	Tree Trim Storm	$15.9	$7.3
	Other DO – Service Operations Storm and Trouble	$12.0	$6.0
Tree-Related Capital	Tree Trim Reactive	$3.0	$2.7
	Tree Trim Storm	$18.2	$13.7
	Other DO - Service Operations Storm and Trouble	$73.8	$20.7

Attachment: *None*

MPSC Case No.:	U-20836
Requestor:	AG
Question No.:	AGDE-8.261
Respondent:	S. Hartwick
	1 of 1

Question: Refer to Table 11 on page 36 of Ms. Kartwick's direct testimony. Please provide the amount of cost savings that you plan to realize in 2022 and 2023 in each of the listed areas.

Answer: This information can be found in Exhibit A-22 – please note the costs below account for inflation. Table 11 was unadjusted for inflation to give a comparison of costs before and after the Surge.

Estimated Tree-related Annual Cost savings ($ millions)			
Cost Category		2022	2023
Tree-Related O&M	Tree Trim Reactive	16.2	15.0
	Tree Trim Storm	15.0	13.2
	Other DO – Service Operations Storm and Trouble	11.3	10.0
Tree-Related Capital	Tree Trim Reactive	2.9	2.5
	Tree Trim Storm	17.2	15.1
	Other DO – Service Operations Storm and Trouble	69.6	61.2

Attachment: None.

MPSC Case No: U-21297
Requester: AG
Question No.: AGDE-4.120
Respondent: S. Hartwick
Page: 1 of 1

Question: Refer to lines 1-12 on page 25 of Mr. Robinson's direct testimony on tree trimming cost savings. Please provide the same information as previously provided in response to U- 20836 AGDE-8.261 for 2023 and 2024. Provide a reference with line number and period where those cost savings are shown in the exhibits for O&M expense and capital expenditures in this rate case.

Answer: Please see the table below for the 2023 and 2024 information.

Estimated Tree-related Annual Cost savings ($ millions)			
Cost Category		2023	2024
Tree-Related O&M	Tree Trim Reactive	15.0	8.9
	Tree Trim Storm	13.2	11.2
	Other DO – Service Operations Storm and Trouble	10.0	8.5
Tree-Related Capital	Tree Trim Reactive	2.5	2.1
	Tree Trim Storm	15.1	12.8
	Other DO – Service Operations Storm and Trouble	61.2	52.0

The dollars referenced in Witness Robinson's direct testimony are showing in Exhibit A-13 C5.6 Line 19 column j.

Attachment: N/A

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-4.167

Respondent: R. Steudle

Page: 1 of 1

Question: 167. Refer to the request and response to AGDE-4.120 in Case No. U-21297. Please provide the same information for 2024 and 2025.

Answer:

Estimated Tree-related Annual Cost savings ($ millions)			
Cost Category		2024	2025
Tree-Related O&M	Tree Trim Reactive	8.9	7.4
	Tree Trim Storm	11.2	10
	Other DO – Service Operations Storm and Trouble	8.5	7.5
Tree-Related Capital	Tree Trim Reactive	2.1	1.9
	Tree Trim Storm	12.8	11.4
	Other DO – Service Operations Storm and Trouble	52.0	46.3

Attachment: *NA*

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-4.167 (S1)

Respondent: R. Steudle

Page: 1 of 1

Question: 167. Refer to the request and response to AGDE-4.120 in Case No. U-21297. Please provide the same information for 2024 and 2025.

Answer: This discovery question from the AG was also requested in Case No. U-21297 and in Case No. U-20836.

The previous response used the numbers referred to in Exhibit A-22, Schedule L1, line numbers 4, 9, and 10. Those costs were the projected costs under the Surge scenario – not the relative cost savings produced as a result of doing the Surge. The attached file shows the correct line numbers and values that should have been used.

It is important to note the purpose of Exhibit A-22 is to compare the value of executing the Surge compared to the status quo alternative.

The cost savings demonstrated in Exhibit A-22 are based on the Tree Trim Surge Model. The model was developed when the Surge was first proposed in July of 2018 in Case No. U-20162. The information reflected in Exhibit A-22 is based on when the model was last updated in late 2021 for Case No. U-20836. The savings are calculated by comparing a scenario in which the Company continues the Surge (Surge Program) to a scenario in which the Surge funding does not continue (Status Quo). In U-20836 the Company used the model to demonstrate the benefit from continuing the Surge for the years 2022 through 2025, as opposed to stopping it in 2021.

The Company has already realized the modeled savings from 2022-2024 since the Surge has continued. DTE Electric included the U-20836 version of Exhibit A-22 to demonstrate the positive NPV and justification for the Surge program overall, however, the Company did not update this model for the final years of the Surge since majority of savings have already been realized.

Attachment: U-21534_AGDE-4.167 (S) - Exhibit A-22 Schedule L1 Savings

U-21534 - Previously Submitted

Estimated Tree-related Annual Cost savings ($ millions)				
Cost Category		Exhbit A-22, Schedule L1 Line No.	2024	2025
Tree-Related O&M	Tree Trim Reactive	4	8.9	7.4
	Tree Trim Storm	9	11.2	10.0
	Other DO – Service Operations Storm and Trouble	10	8.5	7.5
Tree-Related Capital	Tree Trim Reactive	24	2.1	1.9
	Tree Trim Storm	25	12.8	11.4
	Other DO – Service Operations Storm and Trouble	26	52.0	46.3

U-21534 - Corrected

Estimated Tree-related Annual Cost savings ($ millions)				
Cost Category		Exhbit A-22, Schedule L1 Line No.	2024	2025
Tree-Related O&M	Tree Trim Reactive	Line 16 minus Line 4	7.2	9.3
	Tree Trim Storm	Line 19 minus Line 9	5.0	7.1
	Other DO – Service Operations Storm and Trouble	Line 20 minus Line 10	3.8	5.4
Tree-Related Capital	Tree Trim Reactive	Line 29 minus Line 24	1.0	1.4
	Tree Trim Storm	Line 30 minus Line 25	5.8	8.1
	Other DO – Service Operations Storm and Trouble	Line 31 minus Line 26	23.3	33.0

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-5.218a

Respondent: R. Steudle

Page: 1 of 1

Question: 218. Refer to page 9 of Ms. Steudle's rebuttal testimony on the cost/benefit analysis (CBA) for the Tree Trim Risk Prioritization Model. Please: a. Confirm that in response to DR AGDE-4.166b, the Company stated that no CBA had been done on the Tree Trim Risk Prioritization Model.

Answer: The specific question in AGDE-4.166b was "Provide a copy of the NPV cost/benefit analysis showing that the purchase of LiDAR is economically beneficial."

The Company correctly responded that it has *not* completed an NPV analysis related to the **LiDAR** investment that was made in 2021/2022.

In Witness Coppola's direct testimony, page 33, lines 5-12, he recommended the Commission disallow the investment in the Tree Trim Risk Prioritization Model because he stated the Company had not completed an NPV to justify that model. The Company *did* perform an NPV related to the **Tree Trim Risk Prioritization Model** and submitted it as part of Case U-21297.

Attachment: *None*

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-4.166b.

Respondent: R. Steudle

Page: 1 of 1

Question: 166. Refer to pages 30-32 of Ms. Steudle's direct testimony on risk-based tree trimming. Please: b. Provide a copy of the NPV cost/benefit analysis showing that the purchase of LiDAR is economically beneficial.

Answer: The Company has not completed this analysis.

Attachment: *None*

MPSC Case No: U-21534
Requester: AG
Question No.: AGDE-4.166c.
Respondent: R. Steudle
Page: 1 of 1

Question: 166. Refer to pages 30-32 of Ms. Steudle's direct testimony on risk-based tree trimming. Please: c. Explain how the Company knows it can save tree trimming costs by 5% with LiDAR.

Answer: The Company did not state it will save 5% from LiDAR data. The Company forecasts saving 5% through utilizing risk-based cycles instead of adhering to a 5-year cycle for all distribution circuits. The risk-based model uses the LiDAR data along with a number of other inputs to provide a recommended trimming cycle for each circuit.

Attachment: *None*

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-5.218b

Respondent: R. Steudle

Page: 1 of 1

Question: 218. Refer to page 9 of Ms. Steudle's rebuttal testimony on the cost/benefit analysis (CBA) for the Tree Trim Risk Prioritization Model. Please: b. Confirm that in response to DR AGDE-4.166c, the Company did not explain the basis for the assumed 5% annual cost savings in tree trimming costs with the use of the Risk model.

Answer: The specific question in AGDE-4.166c was "Explain how the Company knows it can save tree trimming costs by 5% with LiDAR."

The Company's response accurately stated the 5% savings was related to the Tree Trim Prioritization Risk model, not LiDAR.

If the intended question was, how did the Company assume the 5% savings for the risk prioritization model, the Company's response is as follows. The Company based the 5% savings on the white paper that was shared in discovery question MNSCDE-13.32.

Attachment: *N/A*

MPSC Case No: U-21534

Requester: MNSC

Question No.: MNSCDE-13.32

Respondent: R. Steudle

Page: 1 of 1

Question: 32.Please refer to Steudle p. RCS-32. Witness Steudle assumes a savings of 5% for utilizing risk-based cycles compared to traditional cadence-based cycles. Please provide the workpapers, calculations, and assumptions that resulted in this 5% estimated

Answer: White paper is attached.

Attachment: *U-21534 MNSCDE-13.32 Risked Based Model White Paper.pdf*

The case for risk-based dynamic cycle

For the past years, DTE has optimized its vegetation management program and increased investment to boost system reliability and move to a stable 5-year cycle. We are already seeing clear benefits from this approach in terms of cost per mile and system performance.

As a next step in our planning process DTE wants to start using more information and analytics to gradually transition to a risk-based dynamic cycle where different areas are trimmed more or less frequently depending on the probability of a vegetation-driven failure and the expected consequence of this failure. This should not be understood as a wholesale change of our program but instead as refinement and improvement – DTE will still trim roughly on an average 5-year cycle and we will trim every mile in our system, just enabling some variation in frequency based on risk.

We have seen strong evidence in our analyses that a risk-based dynamic cycle can lead to substantial cost and reliability benefits. For example, Exhibit 1 shows the distribution of vegetation-driven outages in DTE's system. In this analysis we can see that the top 20% of the miles with more vegetation-driven outages account for ~70% of all customer interruptions. This is driven by a variety of factors including increased vegetation density, more customer downstream, older infrastructure, or local weather patterns. A differentiated treatment where those miles are trimmed more frequently (e.g., every 4 years) and lower-risk miles are trimmed less frequently will be more efficient and will result into reliability or cost benefits.

This risk-based approach is innovative and will be based on advanced analytics and machine-learning leveraging existing DTE's high-resolution LiDAR imagery and our thorough data collection from the field. This is consistent with practices already proposed by other utilities (e.g., AES has developed and uses a risk-based model to inform tree trimming in Indiana, Consumer Energy trims higher voltage circuits more frequently[1]) and a frequent practice in mid-cycle reliability-based programs.

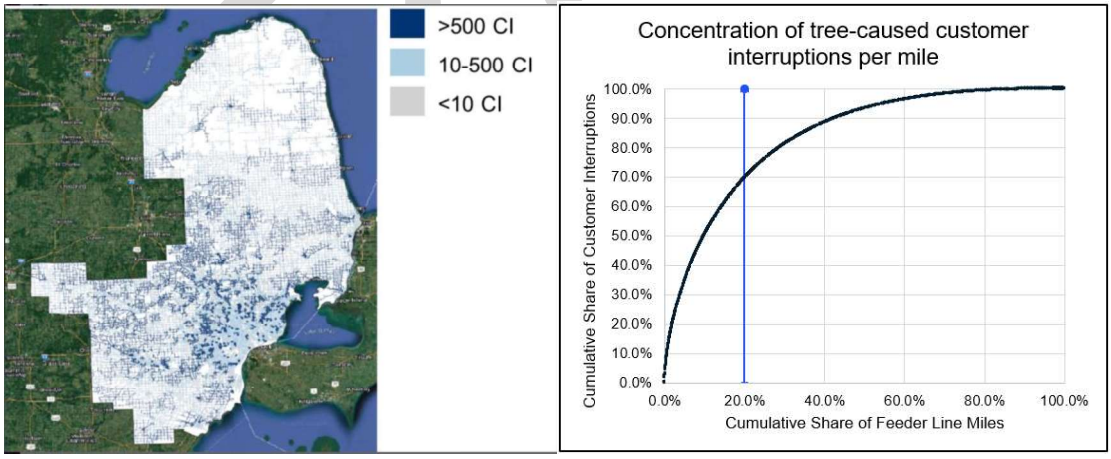


Exhibit 1: Distribution of vegetation outages; 20% of line miles comprise ~70% of customer interruptions looking at the aggregate feeder level

Our approach for dynamic based cycle

DTE dynamic cycle approach will be based on *vegetation risk*, calculated as the expected *probability of a vegetation outage* times the *consequence of this outage* (e.g., numbers of customers impacted). Trimming frequency for our system will still be ~5 years on average but we trim higher-risk areas with

[1] See p. 258 of Consumers Energy Final EDIIP - MPSC Case No. U-20147

higher frequency (e.g., trim every 3-4 years) and lower risk areas with lower frequency (not expected to exceed 6 years).

DTE is building advanced analytics models to estimate the *probability of a vegetation driven outage* in our lines. These models leverage a variety of datasets including remote sensing (e.g., existing high-resolution LiDAR), environmental and weather history, asset characteristics, trimming history, and outage history. A machine learning model is then trained using all this information and can predict expected failures in every area of our system – predictions are granular and have proven very accurate in other utilities.

Consequence of failure is informed by DTE connectivity mapping – how many customers are downstream from a certain insulating device. We can also consider the existence of critical customers and other factors that increase the severity of an outage.

Once *vegetation risk* is calculated, DTE planning specialists will use optimization models to determine a trim plan that is operationally efficient while meeting desired trimming frequencies. This considers geographic bundling of work and other contractor and sourcing constraints.

Expected benefits from the proposed approach

Our risk-based model will result into a more efficient use of trimming funds and deliver cost and reliability benefits. Reliability benefits will be driven by more frequent trim of high-risk areas which reduces the expected customer interruptions. Cost benefits will result from lower restoration costs from reduced outages and a slightly lower trim frequency for the overall DTE system.

We have estimated benefits numerically based on a simplified model which considers that DTE's top 20% higher-vegetation-risk miles account for ~70% of all customer interruptions and the bottom 30% lower-vegetation-risk miles account for only ~5% (as per Exhibit 1). If we move to a 4-year trim frequency for the top 20% higher-risk miles and a 6-year trim frequency for the bottom 30% lower-risk miles, then overall program costs would remain unchanged[2], but a simple calculation shows that we are covering ~16% more risk per year[3].

DTE's commitment (modelled in our NPV) is to reinvest most of the improved efficiency from dynamic cycle into reliability and return 5% cost savings to customers from a small overall reduction in trim frequency (from 5 yr average to 5.2 yr average). This commitment is reflected in the table below.

	By 2025-30, before risk-based dynamic cycle	**By 2025-30, after risk-based dynamic cycle**
Program cost	$108M/yr with average 5-yr trimming frequency[4]	Reduction of up to $5.4M/yr equivalent to 5% of total program costs
Vegetation reliability	Vegetation SAIFI ~0.15[5]	Up to 10% improvement in vegetation-driven outages equivalent to ~35k lower CMI

[2] Simplified model assumes cost/mile relatively similar across circuits in a stable cycle

[3] 5-yr cycle model impacts 20% of the total risk per year. Dynamic model impacts 0.7 x 1/4 + 0.2 x 1/5 + 0.1 x 1/6 = 23% of the total risk per year. 16% = 23% / 20% -1

[4] Based off average projected total tree trim spend from 2025-2029

[5] Projected 2025 non-MED vegetation related SAIFI per DTE Vegetation Management Team

DRAFT

The simplified model results are consistent with more detailed advanced analytics studies run by our consultants for other utilities which consistently indicate the potential to deliver cost reduction in excess of 5% with reliability improvement in excess of 10% when moving to dynamic cycle (see Exhibit 2 below). DTE analytics team will replicate these details models for our territory over the next few months and validate our high-level analysis.

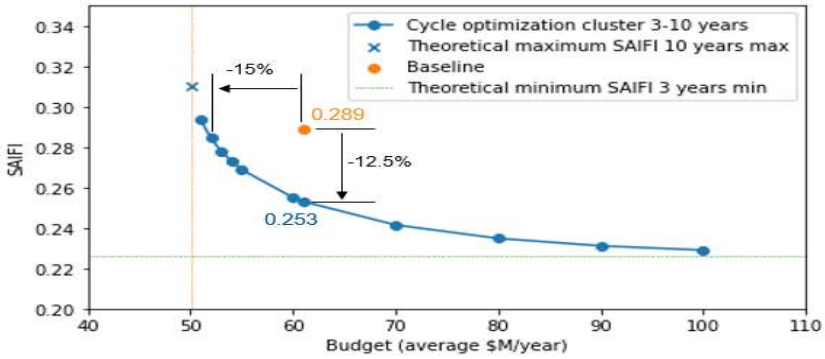


Exhibit 2: Benchmark dynamic risk-based cycle models for other US utilities.

Costs from technology development

DTE has ramped up a Digital Factory team to develop the technology required to move to a more complex dynamic cycle approach – this is a combination of remote sensing technology using aerial/satellite imagery and LiDAR. The Digital Factory team is currently developing and testing sophisticated machine learning algorithms to deliver granular prediction of vegetation risk and a recommended trimming plan that will be both optimal for reliability and cost efficient.

The estimated program cost from digital delivery as in the following table, mostly reflecting a technology capital expense. Our internal build approach is unique and delivers best value since DTE will own all the code from this effort and will not have to pay any fees to use the software.

One-time Costs	Capital
External Labor + Solution IP	$2,962,500
Internal Labor	$2,361,500
Hardware	$1,000,000
Total	**$6,324,000**

Recurring Costs	Capital
Internal maintenance	$300,000[6]

[6] Estimate based off DTE Vegetation Management team suggestion to assume 2 FTE at $200K annual compensation. 75% is capitalized due to the assumption that 75% of their time will be devoted to developing new features while 25% of their time will be devoted to maintenance.

Expected NPV and return on investment

This program has a very attractive return on investment for DTE's customer and stakeholders while also delivering very substantial non-financial benefits in terms of reliability, improved customer satisfaction, reduced greenhouse gas emissions and better overall efficiency.

From a financial perspective our initial investment of $6.32M will be offset over the first 3-4 years of the program, delivering net benefits after then. This is illustrated in the following table

Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Total investment (Capital one-time costs)	$(4.88)M	$(1.44)M								
Savings from reduced trimming costs[7]	-	-	$2.70M	$5.40M	$5.40M	$5.40M	$5.40M	$5.40M	$5.40M	$5.40M
Recurring Costs (Capital recurring costs)	$(0.30)M	$(0.30)M	$(0.30)M	$(0.30)M	$(0.30)M	$(0.30)M	$(0.30)M	$(0.30)M	$(0.30)M	$(0.30)M

Estimated breakeven year: 2025

Estimated 10-year NPV (Rate of return @ 6.8%): $19.56

Estimated 10-year IRR: 44%

In addition to these financial returns, we also see several other benefits from the program including:

- **Better reliability** driven by a more efficient program which focuses spend on the highest impact areas. We estimate a ~10%Veg SAIFI improvement and 35k CMI improvement
- **Improved customer satisfaction** due to fewer outage events and/or less disturbance from veg management activities
- **Reduction in greenhouse gas emissions** (scope 3), from pre-planning drives, reduction in restoration activities and potentially trim miles
- **Improved process and employee experience** across vegetation management as a result of an integrated digital workflow

[7] Savings equal to 5% of $108M estimated tree trim program costs

DRAFT

Initial modeling using historical data

In order to verify initial reliability and value estimates from benchmarks, we built out a dynamic cycling model using historical trim and cost data. The historical data we used was averaged over a span of select years to reduce the amount of variability that occurred from year to year. The model was built to accept input on the amount of line miles to move to a longer 6-year cycle, move to a shorter 4-year cycle, or remain in a 5-year cycle. The two main outputs were the % vegetation related SAIFI impact and the % net cost impact on the tree trim cost program.

SAIFI impact was modeled for each of the three separate cycle-time groups of line miles. Using historical customer outage data, we were able to estimate either the increase or decrease in customer interruptions per line mile from moving to either a longer or short cycle time. If a line mile moved to a shorter cycle time, our assumption was that the total amount of customer interruptions would decrease by 5.0%. If a line mile moved to a longer cycle time, our assumption was that the total amount of customer interruptions would increase by 4.5%. And if a line mile remained in a 5-year cycle we assumed no change in customer interruptions.

Net cost impact was also modeled individually for each of the three separate cycle-time groups of line miles. To calculate the net model impact, we began by averaging the base total tree trim costs using the same years of data. Then for each cycle-time group of line miles we calculated the average cost per mile using historical cost per mile trim data. We did this to model our hypothesis that riskier line miles cost more to trim per line mile due to their trimming complexity. After acquiring the average cost per line mile for each cycle-time group, we then estimated the increase or decrease in total costs from moving to different time base cycles (for example, trimming a span more frequently will result in incurring the cost to trim more frequently). When summing all these factors together, we modeled that moving to a dynamic cycling trimming model could result in 19% decrease in tree trimming costs holding SAIFI constant.

DRAFT

Appendix – simplified model math calculations

Reliability benefits from dynamic cycle:

$$1 - \frac{Risk\ Dynamic}{Risk\ Uniform} = 10\% - 15\%$$

$$Risk\ Uniform = Impact * \frac{Probability\ of\ outage}{5}$$

$$Risk\ Dynamic = Impact * \left(\frac{0.7 Probability\ of\ outage}{4} + \frac{0.2 Probability\ of\ outage}{5} + \frac{0.1 Probability\ of\ outage}{6}\right)$$

Cost equivalence in dynamic cycle

$$Cost\ static\ cycle = \frac{Total\ cost}{5\ years}$$

$$Cost\ dynamic\ cycle = Total\ cost\ x$$

Notes and assumptions:

- When simplified, the actual percentage is 16.6%. We expect this value to be around 10%-15% due to the assumption that the cost to trim the higher risk trees will be higher than the lower risk trees.

When tested with real outage data, we observed a reliability impact of 16.0%

DRAFT

MPSC Case No: U-21534
Requester: AG
Question No.: AGDE-5.219a
Respondent: R. Steudle
Page: 1 of 2

Question: 219. Refer to lines 5-17 on page 12 and lines 1-5 on page 13 of Ms. Steudle's rebuttal testimony on capitalized tree trimming cost. Please: a. Confirm that the Company actually incurred $496 million of capitalized costs related to tree trimming. If not confirming, explain why the Company would include costs in Exhibit A-22 that are not related to tree trimming.

Answer: The $496 million is the capital costs related to emergent work, broken up into three categories.

Cost Category	Description	Total Provided by AG in Discovery DEAG-21
Tree Trim Reactive Capital	Trimming related to emergent events (non-Storm)	$12.3
Tree Trim Storm Capital	Trimming related to restoring customers during storms	$112.6
Other DO Tree-related Capital	Overhead (linemen) labor and equipment costs of restoring tree related outages	$371.2

"Tree Trim Reactive" and "Tree Trim Storm" costs are related to tree trimming activities. Trimming that takes place under these costs categories is not to the maintenance specification, instead the focus is to obtain clearance needed to restore the outage or mitigate the hazard.

"Other DO Tree-related" reflects the costs of overhead (linemen) labor and equipment that is incurred when a tree-related event occurs. For example a tree falls into the powerlines and creates an outage. Overhead crews would be required to restore the outage. These costs were included in Exhibit A-22 to reflect the overall benefit of the Tree Trim Surge for customers. By executing the Surge the Company forecasted reducing tree-related events,

[1] See Exhibit A-42 Schedule GG5 - DEAG-2

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Requester: AG

Question No.: AGDE-5.219a

Respondent: R. Steudle

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which subsequently reduces the costs of addressing those events, beyond just trimming costs.

Attachment: *None.*

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-5.219b

Respondent: R. Steudle

Page: 1 of 1

Question: 219. Refer to lines 5-17 on page 12 and lines 1-5 on page 13 of Ms. Steudle's rebuttal testimony on capitalized tree trimming cost. Please: b. If some of the costs included in Exhibit A-22 are not related to tree trimming why is the Company providing misleading and incorrect information in this exhibit?

Answer: The costs reflected in Exhibit A-22 are intended to demonstrate the costs and benefits related to the Tree Trim Surge. A portion of those costs are not directly tree trimming, but driven by how many tree-related events are directly related to the Tree Trim Surge Program.

Attachment: *None*

MPSC Case No: U-21534
Requester: AG
Question No.: AGDE-5.220
Respondent: R. Steudle
Page: 1 of 1

Question: 220. Refer to lines 7-11 on page 13 of Ms. Steudle's rebuttal testimony on capitalized tree trimming costs. Confirm that, whether capitalized or expensed, tree trimming costs still achieve the trimming of trees to prevent future power outages. If not confirming, explain why not.

Answer: The Company does not confirm with respect to the $496 million– a portion of those costs are related to restoring an immediate outage. Trimming costs for restoring an outage can entail trimming for accessibility needs of the overhead crews, e.g. trimming a tree that is laying across overhead lines, trimming this tree is necessary to restore the outage, however this trimming activity does not mitigate future outages.

Specific to lines 7-11 on page 13 of Ms. Steudle's rebuttal testimony – trimming completed for consturction projects is typically to a larger clearance specification than the mainteannce specifciation, in those instances, the trimming is beneficial to preventing future outages. However, those costs are not related to the $496 million that was the topic of rebuttal.

Attachment: *None*

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-5.221

Respondent: R. Steudle

Page: 1 of 1

Question: 221. Refer to lines 1-12 on page 14 of Ms. Steudle's rebuttal testimony on tree trimming cost increases in 2022 due to more work done in tree dense areas. Why did the Company not address these areas from the beginning of the Surge program, given that it was the purpose of the surge program to address such areas?

Answer: Each year of the Surge the Company has prioritized circuits based a number of factors, including historical reliability related to tree events. The work completed in 2022 was selected in response to the 2021 severe storm season.

Attachment: *None*

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-5.223b

Respondent: R. Steudle

Page: 1 of 1

Question: 223. Refer to lines 22-24 on page 18 and lines 1-9 of Ms. Steudle's rebuttal testimony on the Detroit Tree Academy. b. Explain why 30% retention is an acceptable level or standard to measure against. Is this not a case of low expectations and problems with the bootcamp?

Answer: The 30% retention is the historical percent of trimmers who make it from the beginning of the apprenticeship to becoming a qualified journeyman tree trimmer. The Company in partnership with IBEW and our tree trim contractors recognized the retention rate posed challenges to create a sustainable, local tree trimming workforce. That was the key reason for developing the Tree Trim Academy. As discussed, those who have completed the Academy are twice as likely to remain in the apprenticeship compared to the historical retention rate.

Attachment: *None*

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-5.225

Respondent: T. Uzenski

Page: 1 of 1

Question: 225. Refer to lines 17-25 on page 5 of Ms. Uzenski's rebuttal testimony on transportation vehicles. Confirm that neither on the list of vehicles provided in Exhibit A-37, Schedule BB2, nor in her direct testimony, did Ms. Uzenski provide detailed and adequate justification for why additional vehicles needed to be purchased (for an increase in capital expenditures from $32.8 million in 2023 to $42.6 million in the projected test year). If not confirming, provide a reference to where that evidence was provided.

Answer: While my direct testimony did not explicitly explain the year over year change in cost, I did say on page TMU-60 that the forecast was based on the use of "a proprietary model which develops a comprehensive asset life cycle that optimizes the cost of ownership. Historic ownership costs and operational data are used to develop a replacement strategy specific to DTE Electric. Assets with the greatest reduction to maintenance and ownership costs are chosen for replacement."

Attachment: *none*

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-5.226

Respondent: T. Uzenski

Page: 1 of 1

Question: 226. Refer to lines 18-25 on page 7 and lines 1-12 on page 8 of Ms. Uzenski's rebuttal testimony on floor renovations at the Company's headquarters building. Please explain why the number of workstations more than doubled, from 2,000 to 4,100. Explain also how many work stations the Company had pre-Covid, what happened to those workstations, and why they cannot be used again.

Answer: During the last four years the Company moved to agile workspaces and eliminated workstations. The agile strategy was to have 50% capacity as everyone would not be in the office at the same time, i.e., approximately 4,000 employees only used 2,000 workstations. The workstations that were eliminated were mostly used in field sites to replace furniture that was 20-plus years old. Also, the buildings the Company sold were sold furnished; therefore, that furniture was not available. When the Company moved to a strategy to provide everyone an assigned desk, the Company needed to install workstations and ancillary equipment. The Company did have some furniture in storage, and that inventory was exhausted prior to purchasing new to complete the requirement.

Attachment: *none*

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-5.227

Respondent: T. Uzenski

Page: 1 of 1

Question: 227. Refer to page 10 and lines 1-10 on page 11 of Ms. Uzenski's rebuttal testimony on the deferred costs in Ludington Plant regulatory asset. Does the Company agree that if some or all the costs being deferred are disallowed that the return earned on the disallowed costs should be refunded to customers? If yes, explain how. If no, why not.

Answer: DTE Electric objects to the request for the reason that the request calls for speculation. Subject to and without waiving the above objection, the Company would respond as follows:

In the event of any hypothetical future disallowance, the Company will follow the relevant Commission orders regarding any potential refund of the return included in base rates on the disallowed amount.

Attachment: *none*

Co-respondent: Legal

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-5.228

Respondent: T. Uzenski

Page: 1 of 1

Question: 228. Refer to lines 18-25 on page 12 of Ms. Uzenski's rebuttal testimony on the base amount of incentive compensation to be used in the calculation of recoverable expense. Does the Company agree that if the Commission had approved recovery of 100% of the incentive compensation proposed by the Company in Case U-20836 related to operating performance measures, the amount that would have been included in rates is the same amount that Mr. Coppola is using in his calculation? If not agreeing, what was the amount proposed by the Company in Case U-20836 at 100% of target for operating measures?

Answer: The Company agrees that if the Commission had approved recovery of 100% of the incentive compensation related to operating performance measures in Case No. U-20836, the annual amount included in rates from December 2022 through mid-December 2023 would have been $21.225 million. However, the Commission did not approve such expense. It approved a lower baseline amount. Thus, the appropriate comparison is actual costs incurred to the level of costs included in the Company's revenue requirement adopted by the Commission.

Attachment: *none*

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-5.229

Respondent: T. Uzenski

Page: 1 of 1

Question: 229. Refer to lines 1-8 on page 13 of Ms. Uzenski's rebuttal testimony on the requirements included in the incentive compensation tracker mechanism. Please confirm that the language in the Commission order only references the percentage of target performance achieved up to 100% and makes no reference to actual incentive compensation earned. If not confirming, provide evidence otherwise.

Answer: Confirmed. However, the Company's use of actual costs is based on the Commission's well-established practice in tracker mechanisms of comparing actual costs incurred to the level of costs included in the Company's revenue requirement adopted by the Commission (e.g., PERC cost tracker, pension deferral).

Attachment: *none*

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-5.230

Respondent: T. Uzenski

Page: 1 of 1

Question: 230. Refer to lines 10-25 on page 13 of Ms. Uzenski's rebuttal testimony on the calculation of actual performance achieved for the incentive compensation tracker mechanism. Please confirm that Mr. Coppola used the same methodology approved by the Commission in Case No. U-20836 and Ms. Uzenski is arguing in her testimony to change that methodology. If not confirming, provide evidence otherwise.

Answer: The Company disagrees that performance results used in the incentive tracker are based on the percentage of total measures at target or above. If the results were based on the percentage of total measures at target, as suggested by the Attorney General, the Commission's Order in Case No. U-20836 would not have needed to specify "a maximum of 100% of the target level" because the number of measures cannot mathematically exceed 100%.

The Company believes the incentive tracker is based on the weighted average performance, capped at 100%.

Notwithstanding, the Company confirms that the 28% result for the operating measures in Exhibit AG-20 for 2023 appear to be calculated in the same manner as the 60% performance factor presented by Mr. Coppola in Case No. U-20836.

Attachment: *none*

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-5.232

Respondent: B. Villadsen

Page: 1 of 1

Question: 232. Refer to the table page 9 of witness Villadsen's rebuttal testimony on the ROE rates calculated by various parties. Please confirm that the modified ROE rates shown in the table and attributed to each intervenor and Staff have been calculated by witness Villadsen using her preferred methodologies and do not represent corrections of errors in the calculations of the ROE rate by the various parties. If not confirming, specifically identify each of the calculation errors.

Answer: Not confirmed. The calculations were performed by Dr. Villadsen and represent reasonable adjustments – not Dr. Villadsen's preferred methodology. For example, she made no adjustments to Mr. Coppola's risk premium model even if she finds a regression approach is preferable. Further, the table on page 9 does not include a consideration of financial leverage other than for Mr. Bandyk, who includes such consideration in his submitted testimony.
Her specific adjustments are described in her rebuttal testimony, pp. 19-20, pp. 22-25, and pp. 27-28 as well as in Exhibit A-39, Schedules DD2, DD3, DD5, and DD9.

Attachment: *None.*

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-5.233

Respondent: B. Villadsen

Page: 1 of 1

Question: 233. Refer to lines 9-23 on page 10 and lines 1-7 on page 11 of witness Villadsen's rebuttal testimony on the ROE rates calculated by various parties, where she states that those rates are too low, albeit higher than in the last rate case, and not reflective of the increase in the 20-year U.S. Treasury rate since the last rate case. Does Dr. Villadsen agree that if the Federal Reserve Bank reduces interest rates beginning later in 2024 and into 2025 that the cost of equity andthe ROE rate for the Company should also decline? If no, explain why not.

Answer: No. For the purpose of assessing the cost of equity, it is the market-determined interest rates, e.g., the Treasury bond yield and utility / corporate bond yield that are relevant along with other financial market indicators.

Attachment: *None.*

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-5.234a

Respondent: B. Villadsen

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Question: 234. Refer to lines 15-19 on page 12 of witness Villadsen's rebuttal testimony on the ROE rate calculated by Mr. Coppola and the 50% weight given to the DCF model result. Please: a. Confirm that Mr. Coppola has applied his ROE methodologies and weightings consistently in prior rate cases during periods of low and high interest rates.

Answer: Not confirmed for all cases Mr. Coppola has testified in as she is not familiar with his approach in all cases. Confirmed for the cases Dr. Villadsen has been involved with (e.g., Case Nos. U-20561, U-20642, U-20940, U-20836, U-21297, U-21291, U-21534).

Attachment: *None.*

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-5.234b

Respondent: B. Villadsen

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Question: 234. Refer to lines 15-19 on page 12 of witness Villadsen's rebuttal testimony on the ROE rate calculated by Mr. Coppola and the 50% weight given to the DCF model result. Please: b. Confirm that for utility companies, which pay dividends, the DCF model more accurately captures the future cashflow and return that investors would expect from investment in utility stocks over other methodologies, such as the CAPM. If not confirming, provide evidence otherwise.

Answer: Not confirmed. Analysts' forecasted Earnings Per Share capture expected earnings and hence are indicative of expected cash flow, albeit earnings and cash flow may differ for a period of time. However, the DCF model does not necessarily capture all expected market returns as it does not consider, for example (i) cash other than earnings (e.g., share buybacks, which changes the timing of the cash distribution) or (ii) options that the companies may have. For a discussion of why the DCF does not work in the case of options, see, for example, Brealey, Myers, and Allen (2017), Principles of Corporate Finance, 12the Edition, p. 548.

Attachment: *None.*

MPSC Case No: U-21534

Requester: AG

Question No.: AGDE-5.235

Respondent: S. Wisniewski

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Question: 235. Refer to lines 11-17 on page 3 of witness Wisniewski's rebuttal testimony on the property tax liability and expense. Please confirm that similar to the 2025 example, 2024 property taxes related to the proposed plant addition disallowances would be expensed over two years. If not confirming, explain why not.

Answer: As discussed in my direct testimony (page 12, lines 11 through 13) and my rebuttal testimony (page 3, lines 8 through 11), the Company expenses its property tax liability over a two-year period, with the total liability of each year being expensed 39% the current year and 61% the subsequent year.

How the Company calculated its projected 2024 and 2025 property tax liabilities is described in detail in my direct testimony (page 10, line 4, through page 12, line 2). If the Commission orders a disallowance of capital expenditures in 2023 and prior years, this will impact both the 2024 and 2025 property tax liabilities. If the Commission orders a disallowance of 2024 capital expenditures, this will impact the 2025 property tax liability but not the 2024 property tax liability.

Attachment: *None*

MPSC Case No.: U-21534
Requester: MI Department of Attorney General
Question No.: AG-EVGO-1-1
Respondent: Lindsey Stegall
Objection: Counsel
Date: August 28, 2024
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QUESTION: Refer to Mr. Stegall's rebuttal testimony to the direct testimony of Sebastian Coppola on behalf of the Michigan Attorney General. In his rebuttal, Mr. Stegall disagrees with Mr. Coppola's recommendation to the Commission to reduce the amount of spending by DTE Electric (DTEE) on customer rebates and infrastructure make-ready capital expenditures and instead Mr. Stegall encourages the Commission to approve the full spending proposed by DTEE, including redirecting unspent dollars to additional rebates for businesses in rural segments. In his direct testimony, Mr. Stegall states that "EVgo is a leader in electric vehicle ("EV") charging solutions, building and operating the infrastructure and tools needed to expedite the mass adoption of EVs for individual drivers, rideshare and commercial fleets, and businesses. EVgo is one of the nation's largest public fast charging providers, featuring over 1,000 fast charging locations across more than 35 states, including stations built through EVgo eXtend™." Please confirm that EVgo would directly and financially benefit from the customer rebates given out by DTEE to businesses and other customers and that EVgo has a final incentive to promote more and higher rebates by DTEE for the installation of EV chargers, which would include the installation of EVgo chargers by those customers. If not confirming, explain why not.

OBJECTION: EVgo objects to this request because it is a compound question. EVgo further objects to this request because the term "final incentive" is vague and undefined. Subject to and without waiving those objections, EVgo responds below.

RESPONSE: To the extent EVgo applies for and receives a rebate from DTE, EVgo—and in particular, the project at issue—would benefit financially from that rebate. To the extent other customers apply for and receive a rebate from DTE, EVgo would not directly benefit from that rebate, financially or otherwise. As explained in both EVgo's intervention and in Ms. Stegall's direct testimony, EVgo has an interest in DTE's rebate program as a third-party electric vehicle service provider operating and planning to expand its network in DTE's service territory.

MPSC Case No.: U-21534
Requester: MI Department of Attorney General
Question No.: AG-EVGO-1-2
Respondent: Lindsey Stegall
Objection: Counsel
Date: August 28, 2024
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QUESTION: Refer to lines 13-16 on page 7 of Mr. Stegall's rebuttal testimony about the newspaper and magazine articles referenced by Mr. Coppola in his testimony not being specific to the EV market in Michigan. Does Mr. Stegall believe that the EV market in Michigan is different than the EV market in the rest of the U.S.? If yes, please identify those differences as it pertains to recent EV sales trends discussed in the articles.

OBJECTION: EVgo objects to this request because the term "EV market" is vague and undefined. EVgo further objects to this request because requiring Ms. Stegall to identify the differences between the EV market in Michigan and the EV market in the rest of the U.S. is overly broad and unduly burdensome. Subject to and without waiving that objection, EVgo responds as follows.

RESPONSE: The U.S. EV market, including EV supply and consumer demand for EVs and EV charging infrastructure, is impacted by a wide variety of forces at the international, national, state and local levels. As a result, EV markets across various states and utility service territories can share similarities but also can diverge in meaningful respects. As a simple example of this complexity: EV sales in a particular geography might decelerate due to rising electricity prices, whereas EV sales in an adjacent geography might simultaneously accelerate due to a local incentive program, all while EV sales in both geographies continue to grow due to falling EV prices and the availability of federal tax credits. Given this complexity, an analysis of the charging infrastructure needs in a particular utility service territory would benefit from an analysis of EV sales in that particular service territory.

MPSC Case No.: U-21534
Requester: MI Department of Attorney General
Question No.: AG-EVGO-1-3
Respondent: Lindsey Stegall
Objection: Counsel
Date: August 28, 2024
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QUESTION: Refer to lines 16-21 on page 7 and lines 2-5 on page 8 of Mr. Stegall's rebuttal testimony about Mr. Coppola not connecting his testimony to the specific needs of DTEE's customers and indiscriminately reducing the proposed DTEE spending budget. Please:

a. Confirm that neither Mr. Stegall nor DTEE have surveyed DTEE's customers about their needs for EVs or have determined that the majority of DTEE's customers support paying (in electric rates) for rebates and other EV subsidies that benefit a small number of customers who can afford to buy an EV.

OBJECTION: EVgo objects to this question because it is argumentative. EVgo further objects to this question because it is a compound question. Subject to and without waiving those objections, EVgo responds as follows.

RESPONSE: Ms. Stegall disagrees with the premise of this question because, as explained in her direct testimony, rebates for EV infrastructure can benefit all ratepayers, including EV-owners and non-EV owners. Notwithstanding, Ms. Stegall has not surveyed DTE's customers, nor is Ms. Stegall aware whether DTE has surveyed its customers about their needs for EVs or about their support for rebates.