

Michigan Public Service Commission
DTE Energy Gas Company
Forecasted Deliveries by Rate Schedule
Volumes in MMcf (2010-2024 15-Year Weather Normalization)

Case No.: U-21973
Exhibit: A-15
Schedule: E1
Witness: G. H. Chapel
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	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
Line No.	Schedule	GCR 12 ME Dec. 2024 B & UB Per Books	GCC 12 ME Dec. 2024 B & UB Per Books	GCR & GCC 12 ME Dec. 2024 B & UB Per Books	Aggregates 12 ME Dec. 2024 B & UB Per Books	Subtotal	15 Year HDD Weather Normalization	Adjusted 12 ME Dec. 2024 Base Year			
1	RATE A	91,586	6,229	97,815	1	97,816	12,400	110,216			
2	RATE 2A I	242	24	266	0	266	26	293			
3	RATE 2A II	2,529	745	3,274	7	3,281	365	3,646			
4	RATE GS-1	26,935	6,661	33,596	1,067	34,662	4,154	38,817			
5	RATE GS-2	806	170	975	26	1,002	84	1,086			
6	RATE S	450	613	1,063	348	1,411	195	1,606			
7	Total	122,549	14,440	136,989	1,449	138,438	17,225	155,662			
		Normalized Adjusted Calendar 2024	Jan-Dec 2025 Volume Changes	Jan-Dec 2025 Attachments	Normalized Adjusted Jan-Dec 2025	Jan-Sep 2026 Volume Changes	Jan-Sep 2026 Attachments	Adjusted Jan-Sep 2026	Oct-Sep 2026-27 Volume Changes	Oct-Sep 2026-27 Attachments	Adjusted Oct-Sep 2026-27
8	RATE A	110,216	(758)	333	109,791	(35,578)	633	74,845	33,283	1,715	109,843
9	RATE 2A I	293	2	0	295	(77)	0	217	74	0	291
10	RATE 2A II	3,646	(117)	0	3,529	(1,108)	0	2,421	986	0	3,407
11	RATE GS-1	38,817	256	205	39,278	(12,676)	408	27,009	10,319	1,078	38,406
12	RATE GS-2	1,086	(187)	0	899	(304)	0	595	157	0	752
13	RATE S	1,606	(12)	0	1,593	(515)	0	1,079	454	0	1,533
14	Total	155,662	(816)	537	155,384	(50,258)	1,041	106,167	45,273	2,793	154,232

Michigan Public Service Commission
DTE Energy Gas Company
Forecasted Customers by Rate Schedule

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	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)
Line No.	Schedule	12 ME Dec. 2024 Average GCR Customers Per Books	12 ME Dec. 2024 Average GCC Customers Per Books	12 ME Dec. 2024 Average GCR & GCC Customers Per Books	12 ME Dec. 2024 Average Aggregate Customers Per Books	Adjusted Calendar 2024	2025 Customer Changes	2025 Attachments	Adjusted Calendar 2025	Jan-Sep 2026 Customer Changes	Jan-Sep 2026 Attachments	Adjusted Jan-Sep 2026	Oct-Sep 2026-27 Customer Changes	Oct-Sep 2026-27 Attachments	Adjusted Calendar Oct-Sep 2026-27
1	RATE A	1,158,554	80,036	1,238,590	3	1,238,593	794	9,036	1,248,423	1,719	6,757	1,256,899	(833)	10,675	1,266,741
2	RATE 2A I	1,242	142	1,384	0	1,384	6	0	1,391	5	0	1,395	(2)	0	1,393
3	RATE 2A II	3,650	1,074	4,724	5	4,729	(12)	0	4,717	(83)	0	4,634	(77)	0	4,557
4	RATE GS-1	79,757	10,664	90,421	533	90,954	(971)	1,005	90,988	(686)	718	91,019	(1,040)	1,186	91,165
5	RATE GS-2	56	12	68	2	70	(9)	0	62	0	0	62	(0)	0	62
6	RATE S	63	80	143	74	217	2	0	218	(2)	0	217	(2)	0	214
7	Total	1,243,321	92,008	1,335,329	617	1,335,946	(189)	10,041	1,345,798	954	7,474	1,354,226	(1,955)	11,862	1,364,133

**Michigan Public Service Commission
DTE Gas Company
Annual Service Area Sales by Major Customer Classes and System Output
5-Year Projected
Volumes in Bcf**

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Line No.	(a) <u>Year</u>	(b) <u>Residential</u>	(c) <u>Commercial</u>	(d) <u>Industrial</u>	(e) <u>Other</u>	(f) <u>Total</u>	(g) <u>Losses and Company Use</u>		(h) <u>% of Output</u>	(i) <u>System Output</u>
							<u>Bcf</u>			<u>Bcf</u>
1	2026	113.7	40.2	141.9	0.0	295.9	7.6		2.5%	303.4
2	2027	113.4	39.8	141.5	0.0	294.7	7.6		2.5%	302.3
3	2028	113.7	39.6	141.1	0.0	294.5	7.6		2.5%	302.0
4	2029	112.8	39.0	140.6	0.0	292.4	7.6		2.5%	300.0
5	2030	112.5	38.6	140.4	0.0	291.4	7.6		2.5%	299.0

Note: EUT volumes added to Industrial class.

**Michigan Public Service Commission
DTE Energy Gas Company
Market Outlook: 2026 - 2030
Volumes in MMcf (2010-2024 15-Year Weather Normalization)**

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	(a)	(b)	(c)	(d)	(e)	(f)
Line No.	Rate Schedule	2026	2027	2028	2029	2030
1	Residential - Rate A	1,012	994	983	961	944
2	Residential - Rate 2A	293	290	288	284	281
3	Total Residential	1,305	1,285	1,271	1,244	1,225
4	Residential Heat - Rate A	108,934	108,790	109,179	108,386	108,173
5	Residential Heat - Rate 2A	3,481	3,375	3,287	3,168	3,067
6	Total Residential Heat	112,415	112,165	112,466	111,554	111,240
7	Commercial - Rate GS-1	1,802	1,770	1,747	1,707	1,676
8	Commercial - Rate GS-2	-	-	-	-	-
9	Commercial - Rate S	-	-	-	-	-
10	Total Commercial	1,802	1,770	1,747	1,707	1,676
11	Commercial Heat - Rate GS-1	36,077	35,778	35,660	35,159	34,850
12	Commercial Heat - Rate GS-2	770	737	708	673	641
13	Commercial Heat - Rate S	1,562	1,518	1,485	1,439	1,399
14	Total Commercial Heat	38,409	38,034	37,853	37,270	36,891
15	Industrial - Rate GS-1	759	751	748	736	729
16	Industrial - Rate GS-2	7	7	7	7	7
17	Total Industrial	766	758	755	743	736
18	Rate Schedule Sales	154,697	154,011	154,092	152,519	151,767

**Michigan Public Service Commission
DTE Energy Gas Company
Market Outlook: 2026 - 2030
Projected Average Number of Customers**

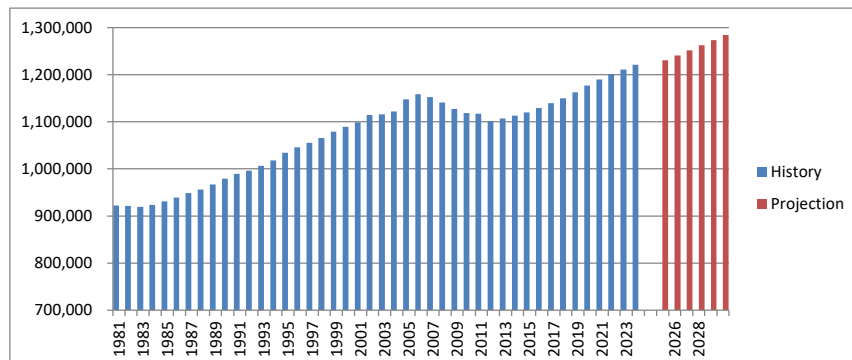
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	(a)	(b)	(c)	(d)	(e)	(f)
Line No.	Rate Schedule	2026	2027	2028	2029	2030
1	Residential - Rate A	17,610	17,485	17,360	17,235	17,110
2	Residential - Rate 2A	1,395	1,392	1,389	1,386	1,383
3	Total Residential	19,005	18,877	18,749	18,621	18,493
4	Residential Heat - Rate A	1,240,705	1,251,981	1,262,584	1,273,279	1,284,013
5	Residential Heat - Rate 2A	4,628	4,534	4,440	4,346	4,252
6	Total Residential Heat	1,245,333	1,256,515	1,267,024	1,277,625	1,288,265
7	Commercial - Rate GS-1	4,395	4,360	4,325	4,290	4,255
8	Commercial - Rate GS-2	-	-	-	-	-
9	Commercial - Rate S	-	-	-	-	-
10	Total Commercial	4,395	4,360	4,325	4,290	4,255
11	Commercial Heat - Rate GS-1	86,256	86,440	86,548	86,666	86,789
12	Commercial Heat - Rate GS-2	60	60	60	60	60
13	Commercial Heat - Rate S	216	213	210	207	204
14	Total Commercial Heat	86,532	86,713	86,818	86,933	87,053
15	Industrial - Rate GS-1	396	396	396	396	396
16	Industrial - Rate GS-2	2	2	2	2	2
17	Total Industrial	398	398	398	398	398
18	Rate Schedule Customers	1,355,662	1,366,863	1,377,313	1,387,867	1,398,464

**Michigan Public Service Commission
DTE Energy Gas Company
Comparison of Historical and Projected
Number of Residential Heating Customers
(Excludes Rate 2A)**

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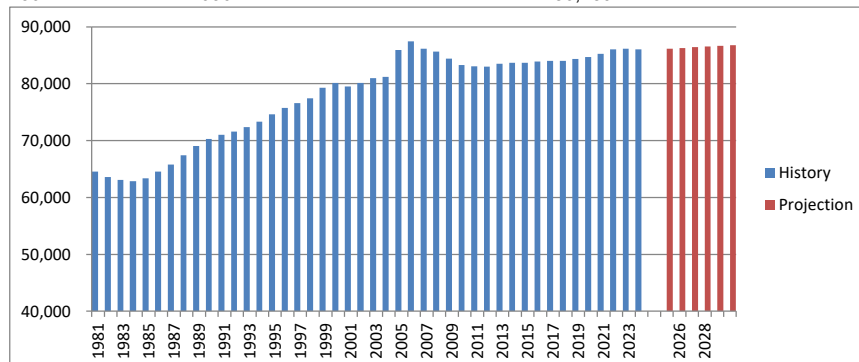
Line No.	(a) Year	(b) Average Number of Customers	(c) Change from Prior Year
1	Actual: 1981	922,160	
2	1982	921,456	(704)
3	1983	919,567	(1,889)
4	1984	923,258	3,691
5	1985	930,817	7,559
6	1986	938,943	8,126
7	1987	948,184	9,241
8	1988	956,321	8,137
9	1989	966,633	10,312
10	1990	979,548	12,915
11	1991	988,982	9,434
12	1992	996,540	7,558
13	1993	1,006,424	9,884
14	1994	1,017,835	11,411
15	1995	1,033,866	16,031
16	1996	1,046,142	12,276
17	1997	1,055,518	9,376
18	1998	1,065,316	9,798
19	1999	1,078,787	13,471
20	2000	1,089,348	10,561
21	2001	1,099,074	9,726
22	2002	1,114,783	15,709
23	2003	1,115,395	612
24	2004	1,121,927	6,532
25	2005	1,147,593	25,666
26	2006	1,158,586	10,993
27	2007	1,152,226	(6,360)
28	2008	1,141,129	(11,097)
29	2009	1,127,136	(13,993)
30	2010	1,118,507	(8,629)
31	2011	1,116,895	(1,612)
32	2012	1,101,255	(15,640)
33	2013	1,106,842	5,587
34	2014	1,112,857	6,015
35	2015	1,119,421	6,564
36	2016	1,129,690	10,269
37	2017	1,139,506	9,816
38	2018	1,149,527	10,021
39	2019	1,162,660	13,133
40	2020	1,177,058	14,398
41	2021	1,190,115	13,057
42	2022	1,201,131	11,016
43	2023	1,210,498	9,367
44	2024	1,220,736	10,238
	Forecast:		
45	2025	1,230,224	9,488
46	2026	1,240,705	10,481
47	2027	1,251,981	11,276
48	2028	1,262,584	10,603
49	2029	1,273,279	10,696
50	2030	1,284,013	10,734



**Michigan Public Service Commission
DTE Energy Gas Company
Comparison of Historical and Projected
Number of Commercial Heating Rate GS-1 Customers
(Forecast includes Aggregate customers)**

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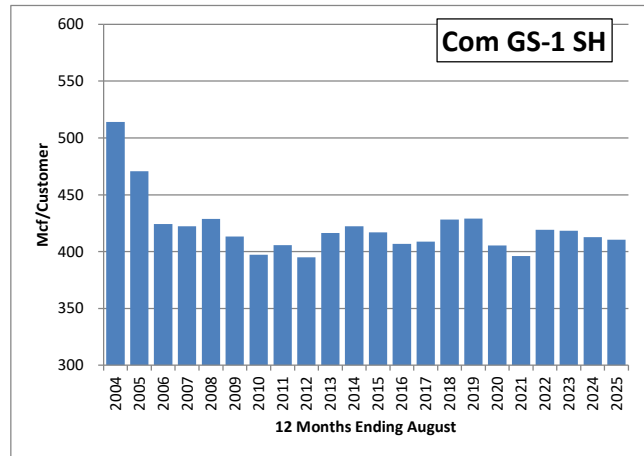
Line No.	(a)		(b) Average Number of Customers	(c) Change from Prior Year
		Year		
1	Actual:	1981	64,548	
2		1982	63,595	(953)
3		1983	63,066	(529)
4		1984	62,847	(219)
5		1985	63,359	512
6		1986	64,565	1,206
7		1987	65,801	1,236
8		1988	67,396	1,595
9		1989	69,082	1,686
10		1990	70,311	1,229
11		1991	71,023	712
12		1992	71,598	575
13		1993	72,387	789
14		1994	73,317	930
15		1995	74,663	1,346
16		1996	75,754	1,091
17		1997	76,570	816
18		1998	77,427	857
19		1999	79,306	1,879
20		2000	80,100	794
21		2001	79,558	(542)
22		2002	80,145	587
23		2003	80,984	839
24		2004	81,210	226
25		2005	85,966	4,756
26		2006	87,479	1,513
27		2007	86,195	(1,284)
28		2008	85,645	(550)
29		2009	84,431	(1,214)
30		2010	83,314	(1,117)
31		2011	83,096	(218)
32		2012	83,019	(77)
33		2013	83,531	512
34		2014	83,682	151
35		2015	83,685	3
36		2016	83,932	247
37		2017	84,014	82
38		2018	84,035	21
39		2019	84,343	308
40		2020	84,677	334
41		2021	85,277	600
42		2022	86,034	757
43		2023	86,159	125
44		2024	86,073	(86)
	Forecast:			
45		2025	86,151	78
46		2026	86,256	105
47		2027	86,440	184
48		2028	86,548	108
49		2029	86,666	118
50		2030	86,789	123



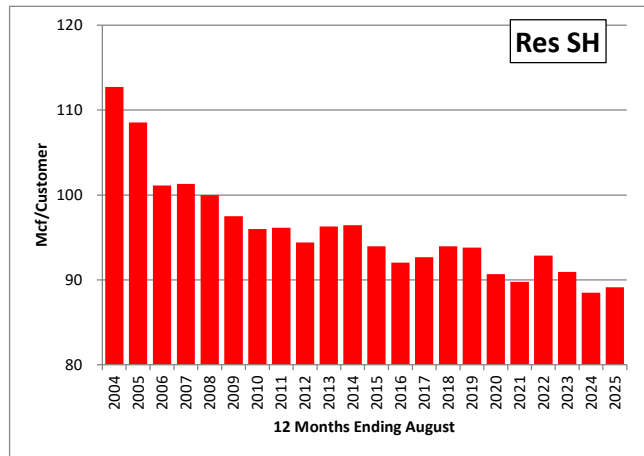
Michigan Public Service Commission
DTE Energy Gas Company
Consumption per Customer Trend - Com GS-1 SH and Res A SH
15 Year (2010-2024) Normalization

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Line	Period	(a) Consumption per Customer	(b) Change from Prior Period	(c) % Change from Prior Period
1	12 Mos. Ending August:	Rate Com. GS-1 Spaceheat		
2	2004	514.1		
3	2005	470.7	(43.4)	-8.45%
4	2006	424.2	(46.5)	-9.87%
5	2007	422.2	(2.0)	-0.48%
6	2008	428.7	6.5	1.55%
7	2009	413.3	(15.4)	-3.60%
8	2010	397.2	(16.1)	-3.89%
9	2011	405.6	8.4	2.12%
10	2012	395.0	(10.7)	-2.64%
11	2013	416.5	21.5	5.46%
12	2014	422.2	5.7	1.38%
13	2015	416.8	(5.5)	-1.30%
14	2016	406.9	(9.9)	-2.38%
15	2017	408.9	2.1	0.51%
16	2018	428.2	19.2	4.70%
17	2019	429.1	0.9	0.21%
18	2020	405.3	(23.8)	-5.54%
19	2021	396.2	(9.2)	-2.26%
20	2022	419.3	23.1	5.83%
21	2023	418.6	(0.7)	-0.17%
22	2024	412.9	(5.7)	-1.36%
23	2025	410.4	(2.5)	-0.60%



24	12 Mos. Ending August:	Rate A Res Spaceheat		
25	2004	112.7		
26	2005	108.6	(4.2)	-3.70%
27	2006	101.1	(7.4)	-6.86%
28	2007	101.3	0.2	0.20%
29	2008	100.0	(1.3)	-1.32%
30	2009	97.5	(2.5)	-2.50%
31	2010	96.0	(1.5)	-1.53%
32	2011	96.1	0.1	0.14%
33	2012	94.4	(1.7)	-1.78%
34	2013	96.3	1.9	1.97%
35	2014	96.4	0.2	0.17%
36	2015	93.9	(2.5)	-2.59%
37	2016	92.0	(1.9)	-2.02%
38	2017	92.7	0.6	0.69%
39	2018	93.9	1.3	1.36%
40	2019	93.8	(0.1)	-0.14%
41	2020	90.7	(3.1)	-3.33%
42	2021	89.8	(0.9)	-1.01%
43	2022	92.9	3.1	3.48%
44	2023	91.0	(1.9)	-2.08%
45	2024	88.5	(2.5)	-2.72%
46	2025	89.1	0.6	0.71%



Michigan Public Service Commission
DTE Energy Gas Company
Monthly Normal Degree Days
15-Year Normal (2010-2024)

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Line No.	(a) Month	(b) Detroit	(c) Grand Rapids	(d) Muskegon	(e) Traverse City	(f) Alpena	(g) Sault Ste. Marie	(h) Iron Mountain	(h) Weighted
1	January	1,190	1,214	1,164	1,253	1,364	1,449	1,516	1,222
2	February	1,027	1,077	1,054	1,139	1,232	1,307	1,358	1,075
3	March	812	870	876	980	1,070	1,131	1,117	872
4	April	475	526	545	639	718	765	760	532
5	May	163	197	221	296	345	364	359	205
6	June	16	26	36	72	108	133	115	34
7	July	1	3	6	11	19	29	32	5
8	August	2	8	7	14	32	37	56	9
9	September	66	92	86	122	184	186	226	91
10	October	337	392	379	429	503	526	589	379
11	November	694	738	697	758	832	878	969	727
12	December	974	1,019	973	1,059	1,136	1,229	1,332	1,013
13	Total	5,757	6,162	6,044	6,772	7,543	8,034	8,429	6,164

Weighting:	Detroit	53.8%
	Gr. Rapids	19.5%
	Muskegon	8.9%
	Trav. City	6.1%
	Alpena	7.3%
	SS Marie	1.6%
	Iron Mtn.	2.7%
	TOTAL	100.0%

**Michigan Public Service Commission
DTE Gas Company
Projected EUT Customers**

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Line No.	Rate Class	(a)	(b)	(c)	(d)
			2024 Year End Actual Customer Count	12 Months Ended September 2027 Projected Customer Count	Change (1) (b)-(c)
1	ST		434	433	
2	LT		79	80	
3	XLT		18	19	
4	XLT Optional Rate (2)		2	-	
5	XXLT (3)		3	5	
6	XXLT Optional Rate (4)		1	-	
7	SC (3)		1	-	
8	Total Accounts		<u>538</u>	<u>537</u>	<u>(1)</u>

(1) Change in customer count from 2024 to 2027:

Account losses from 2024 to 2027	(23)
December 2024 Billed vs. Company Books	14
New accounts during Year Ended September 202	<u>8</u>
	<u>(1)</u>

(2) Historical period Includes 2 customers in the XLT Optional rate class.

(3) One Special Contract was in effect for the Year Ended 2024.

- One Special Contract has been classified in the applicable rate based on break-even point for the 12 Months Ended Septmber 2027.

(4) Historical period Includes 1 customer in the XXLT Optional rate class.

**Michigan Public Service Commission
DTE Gas Company
Projected EUT Volumes
Volumes in MMcf**

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Witness: J. L. Huffman
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	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
								12 Months Ended September 2027	
		Per Company Books					Billed 2024	Projected Volumes	Change
Line No.	Rate Class	2020	2021	2022	2023	2024	(1)(2)(3)		
1	ST (1)	16,734	16,701	17,053	16,432	15,812	15,747	16,756	
2	LT (1)	21,307	19,188	19,911	17,810	18,809	18,871	18,961	
3	XLT (1)	22,253	27,639	32,827	30,937	28,289	28,283	29,367	
4	XLT Optional Rate (1)(4)	8,977	7,409	2,837	16,844	13,794	13,794	-	
5	XXLT (1)	17,821	21,592	26,758	26,745	23,615	23,615	75,728	
6	XXLT Optional Rate (1)(2)(3)(5)	8,200	22,598	33,106	36,536	41,537	41,535	-	
7	SC (1)(3)	59,788	27,273	14,117	11,174	9,708	9,707	-	
8	Total Volume	<u>155,079</u>	<u>142,399</u>	<u>146,610</u>	<u>156,479</u>	<u>151,563</u>	<u>151,552</u>	<u>140,812</u>	<u>(10,740)</u>
9	Year to Year % Variation of Total EUT Market		-8.2%	3.0%	6.7%	-3.1%		-7.1%	

- (1) Difference in volume per Company Books (Col. (f)) and Billed (Col. (g)) relates to prior period adjustments.
- (2) - Three Special Contract customers are included Per Company Books in 2020 - April 2021
- Two Special Contract customers are included Per Company Books in May 2021 - February 2022
- One Special Contract customer is included Per Company Books in March 2023 - December 2024
- (3) One Special Contract has been classified in the applicable rate based on break-even point for the 12 Months Ended September 2027.
- (4) Historical period Includes 2 customer in the XLT Optional rate class.
- (5) Historical period Includes 1 customer in the XXLT Optional rate class.

Michigan Public Service Commission
DTE Gas Company
Projected EUT Volumes
Projected Volume Adjustments
Volumes in MMcf

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	(a)	(b)	(c)	(d)	(e)	(f)
						2024 Billed Consumption vs. 12 Months Ended September 2027 Projected Consumption
Line No.	Type	Volume Adjustment Description	Number of Workpaper Entries	12 Months Ended September 2027 Projected Consumption	2024 Billed Consumption	Projected Consumption (d) - (e)
1	1	Facility closed or switched to non-EUT rate	23	-	2,310	(2,310)
2	2	New EUT customer	8	244	0	244
3	3	Energy Optimization (adjustment applied to ST and LT rates only)	2	(769)	0	(769)
4	4	Power generation adjusted for five-year average usage	10	65,334	69,797	(4,463)
5	5	Operational changes resulting from new ownership	12	394	361	33
6	6	Net impact of customer operational volume increases and decreases	523	75,609	79,084	(3,475)
		Total		140,812	151,552	(10,740)

Michigan Public Service Commission
DTE Gas Company
Summary of Lost and Unaccounted for Gas, Gas Used by Company and Cost Recovery -
Projected Test Year
(MMcf) and (\$000)

Case No.: U-21973
Exhibit: A-15
Schedule: E8
Witness: C. A. Bence
Page: 1 of 1

Line No.	Description	Source	Cost to be Allocated			Cost Recovery - Allocation to Customer Classes		
			Lost Gas	Co. Use	Total Lost Gas and Co. Use	Credit Method GIK	Sales, Choice & Aggregates Share	Total Lost Gas and Co. Use
1	Projected MMcf	(1),(2),(3)	3,636	3,958	7,594	5,938	1,656	7,594
2	Projected Cost of Gas Rate	(4)	\$ 3.67	\$ 3.67	\$ 3.67	\$ 3.67	\$ 3.67	\$ 3.67
3	Projected Cost of Gas		\$ 13,330	\$ 14,508	\$ 27,838	\$ 21,767	\$ 6,071	\$ 27,838
4	Cost of Gas - Section A	(5)	300	15,903	16,204	27,674	9,500	37,174
5	Cost of Gas Adjustment		\$ 13,030	\$ (1,395)	\$ 11,634	\$ (5,906)	\$ (3,430)	\$ (9,336)
6	Volumes - Section A		(6) 145	(6) 3,952	4,096	(5) 6,861	(7) 138,438	145,298

Footnotes:

- (1) Witness Bence Exhibit A-15, Schedule E9
- (2) Witness Bence Exhibit A-15, Schedule E11
- (3) Witness Bence Exhibit A-15, Schedule E10
- (4) Based on the jurisdictional cost of gas rates per Witness Chapel
- (5) Witness Bence Workpaper CB-6
- (6) Witness Bence Workpaper CB-1
- (7) GCR, GCC and Aggregates Volumes from Workpaper CB-1 & CB-2 x 1.00% (per U-21291)

**Michigan Public Service Commission
DTE Gas Company
Actual Lost and Unaccounted for Gas
12 Months Ended December - Five Year Average
(MMcf)**

Case No.: U-21973
Exhibit: A-15
Schedule: E9
Witness: C. A. Bence
Page: 1 of 1

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
Line No.	Description	December 2020	December 2021	December 2022	December 2023	December 2024	5-Year Average
1	Sales	123,607	125,235	142,325	127,133	122,556	
2	Gas Choice	23,337	21,152	20,421	15,711	14,433	
3	End-User Transportation	156,514	143,875	148,568	158,168	152,783	
4	Off-System (1)	417,624	439,161	499,250	514,108	481,765	
5	Exelon	9,872	9,881	11,419	10,127	10,393	
6	Total Volumes to Recover GIK	730,953	739,305	821,983	825,247	781,930	
7	Company Use	3,773	3,783	4,466	4,468	3,952	
8	Lost and Unaccounted for Gas	5,294	4,859	5,335	2,550	145	3,636
9	Total Lost Gas and Co. Use	9,067	8,642	9,801	7,018	4,096	

Footnotes:

(1) Off-system transportation and storage excluding non-physical transactional activity.

Source: Witness Bence Workpaper CB-1

Michigan Public Service Commission
DTE Gas Company
Lost and Unaccounted for Gas and Gas Used by Company -
Cost Recovery Calculation
(MMcf)

Case No.: U-21973
Exhibit: A-15
Schedule: E10
Witness: C. A. Bence
Page: 1 of 1

Line No.	(a) Description	(b) Source	(b) Total
	Projected Lost and Unaccounted for Gas and Company Use		
1	Net Lost and Unaccounted for Gas	(1)	3,636
2	Company Use	(2)	3,958
3	Less: At Risk 3rd party and end-user GIK	(3)	<u>(5,938)</u>
4	Total Net Lost and Unaccounted for and Company Use Gas		<u><u>1,656</u></u>
	Projected Volumes to Recover LAUF and Company Use Over	(4)	
5	Sales and Gas Choice Customers		152,639
6	Aggregates		<u>1,593</u>
7	Total		<u><u>154,232</u></u>
	Net Lost and Unaccounted for and Company Use Gas %		
8	Total Net Lost and Unaccounted for and Company Use Gas		1,656
9	Total Volumes to Recover LAUF and Company Use Over		<u>154,232</u>
10	Gas-in-Kind (Lost and Unaccounted for and Company Use Gas) %		<u><u>1.07%</u></u>
11	Projected Test Period Cost of Gas Rate		<u>\$ 3,6657</u>
12	Cost of Service applicable to Sales, Gas Choice and Aggregates		<u><u>\$ 6,071</u></u>
13	Unit Rate for LAUF and Company Use included in Base Rates (L10 x L11)		<u><u>\$ 0.039</u></u>

Footnotes:

- (1) Witness Bence Exhibit A-15, Schedule E9
- (2) Witness Bence Exhibit A-15, Schedule E11
- (3) Witness Huffman Exhibit A-15, Schedule E14
- (4) Witness Chapel Exhibit A-15, Schedule E1

Michigan Public Service Commission
DTE Gas Company
Gas Used by Company
Projected Test Year
(MMcf)

Case No.: U-21973
 Exhibit: A-15
 Schedule: E11
 Witness: C. A. Bence
 Page: 1 of 1

Line No.	(a) Description	(b) Amount
1	Projected Test Year Gas Used by Company	
2	Compressor Fuel	3,032
3	Other Transmission and Storage Uses	567
4	Pipeline Fee Usage	287
5	Building Heat and Administrative Uses	65
6	Total Gas Used by Company	<u>3,952</u>
7	Adjustment for Increasing BTU Factor in Projected Test Year	6
8	Projected Test Year Gas Used by Company	<u><u>3,958</u></u>

Source: Witness Bence Workpaper CB-3

**Michigan Public Service Commission
DTE Gas Company
Transmission System Lost and Unaccounted For Summary
5 Years ended December 31, 2024 - Average
(MMcf)**

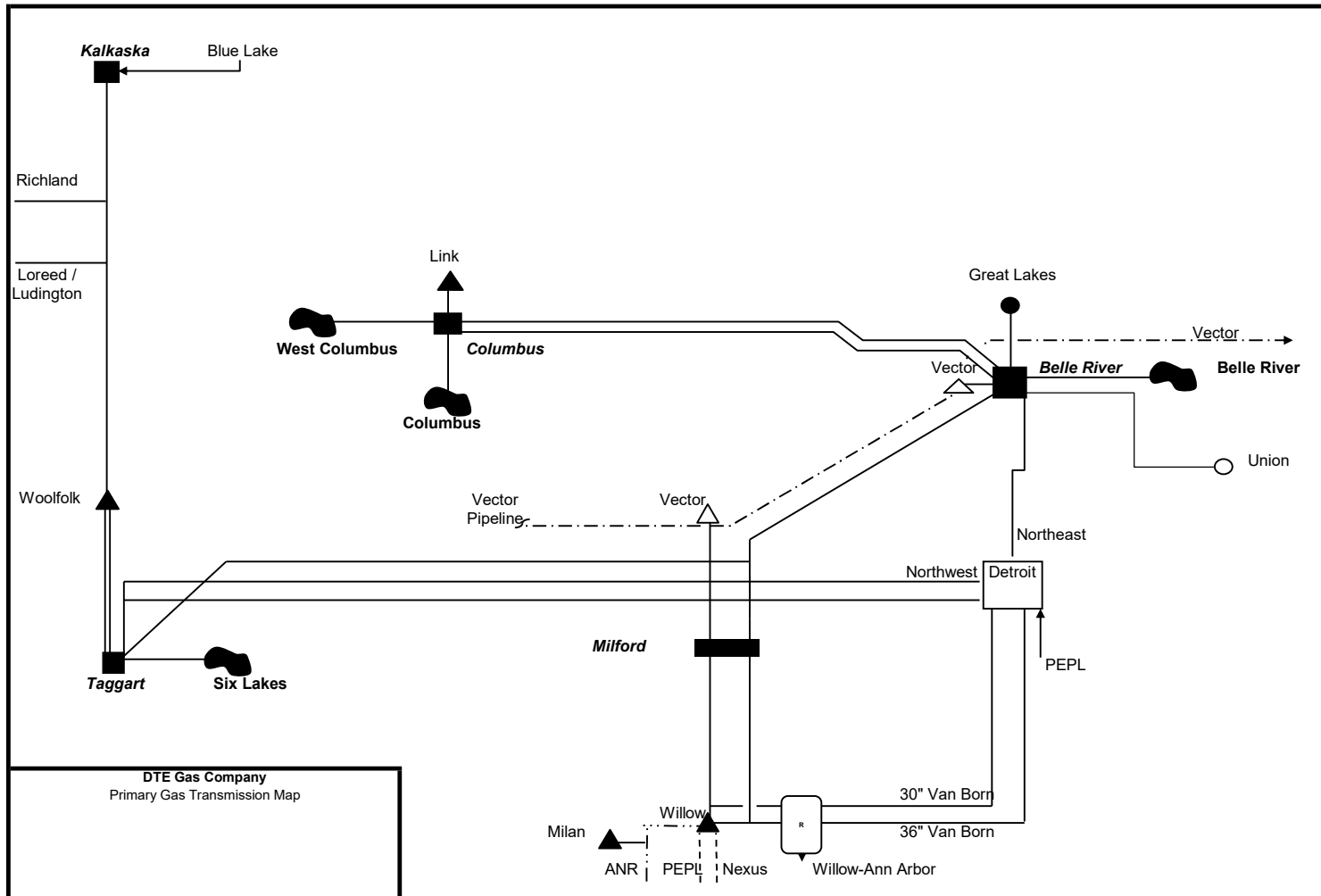
Case No.: U-21973
Exhibit: A-15
Schedule: E12
Witness: C. A. Bence
Page: 1 of 1

Line No.	(a) December Ended	Source	(b)	(c)	(d)
			Transmission System Lost and Unacct'd For (MMcf)	Transmission Throughput (MMcf)	Lost and Unacct'd %
1	2020	(1)	(383)	695,428	(0.06%)
2	2021	(1)	25	697,460	0.00%
3	2022	(1)	459	766,807	0.06%
4	2023	(1)	(1,000)	749,635	(0.13%)
5	2024	(1)	(551)	723,722	(0.08%)
6	Total		<u>(1,451)</u>	<u>3,633,052</u>	<u>(0.04%)</u>
7	Annual Average		<u>(290)</u>	<u>726,610</u>	<u>(0.04%)</u>
8	Annual Average Transmission LAUF		(290)		
9	Total LAUF	(2)	3,636		
10	% Transmission LAUF to Total LAUF		<u>(7.98%)</u>		

Footnotes:
(1) Witness Bence Workpaper CB-4
(2) Witness Bence Exhibit A-15, Schedule E9

**Michigan Public Service Commission
DTE Gas Company
Primary Gas Transmission System Map**

Case No.: U-21973
Exhibit: A-15
Schedule: E13
Witness: C. A. Bence
Page: 1 of 1



Michigan Public Service Commission
DTE Gas Company
Transmission and Distribution System Lost and Unaccounted For Gas
and Gas Used by Company Allocation
(MMcf)

Case No.: U-21973
Exhibit: A-15
Schedule: E14
Witness: J. L. Huffman
Page: 1 of 1

Line No.	(a) Description	(b) Source	(b) Lost Gas Amount	(c) GCR, GCC, Aggregates	(d) End-User Transport.	(e) XXLT Transport.	(f) Off System	(g) Exelon 3rd Party
Lost and Unaccounted for Gas								
1	Transmission Losses - see below		(288)	(62)	(26)	(30)	(166)	(4)
2	Distribution Losses - based on Current GIK		3,053		587	372	2,043	51
3	Distribution Losses - remainder of total		871	871				
4	Total Lost and Unaccounted For Gas	(1)	<u>3,636</u>	<u>810</u>	<u>561</u>	<u>342</u>	<u>1,877</u>	<u>47</u>
5	Transmission Lost Gas %		-0.04%	-0.04%	-0.04%	-0.04%	-0.04%	-0.04%
6	Distribution Lost Gas %			0.57%	0.90%	0.49%	0.49%	0.49%
7	Total Lost Gas %			<u>0.53%</u>	<u>0.86%</u>	<u>0.45%</u>	<u>0.45%</u>	<u>0.45%</u>
8	Total Throughput - Projected Test Year	(2),(3),(4)	721,354	154,232	65,084	75,728	415,917	10,393
9	Total Throughput - %		100.0%	21.4%	9.0%	10.5%	57.7%	1.4%
10	Transmission Losses - %		100.0%	21.4%	9.0%	10.5%	57.7%	1.4%
11	GCR, GCC, Aggregate - Projected TY		154,232	154,232				
12	Distribution Losses - remainder of total - %		100.0%	100.0%				
Gas Used by Company								
13	Total Gas Used by Company	(5)	<u>3,958</u>	<u>846</u>	<u>357</u>	<u>415</u>	<u>2,282</u>	<u>57</u>
14	Total Throughput for Test Period		721,354	154,232	65,084	75,728	415,917	10,393
15	Gas Used by Company %	L13 / L8	0.55%	0.55%	0.55%	0.55%	0.55%	0.55%
16	Total Volumes - Lost and Unaccounted for Gas and Gas Used by Company - Allocated	L4 plus L14	<u>7,594</u>	<u>1,656</u>	<u>918</u>	<u>757</u>	<u>4,159</u>	<u>104</u>
17	GIK % and GIK Equivalent	L16 / L8	<u>1.05%</u>	<u>1.07%</u>	<u>1.41%</u>	<u>1.00%</u>	<u>1.00%</u>	<u>1.00%</u>
			<u>5,938</u>		<-----	1,675	4,263	----->
18	Proposed Tariff / Contract GIK for EUTs and 3rd Party				1.41%	1.00%	1.00%	1.00%
19	GIK component due to Transmission Losses				0.04%	0.04%	0.04%	0.04%
20	GIK component due to Company Use				-0.55%	-0.55%	-0.55%	-0.55%
21	GIK component subsidizing Distribution Losses				<u>0.90%</u>	<u>0.49%</u>	<u>0.49%</u>	<u>0.49%</u>
Transmission Losses - Calculation:								
22	Average Annual Transmission Losses for January 2020 - December, 2024(MMcf)				(290)			
23	Avg. Annual Transmission Throughput for January 2020 - December, 2024 (excluding such activity as GR, PEPL, etc. that feed directly into the distribution system) (MMcf)				726,610			
24	% of Physical Transmission Throughput				<u>(0.04%)</u>			

Footnotes:

- (1) Witness Bence Exhibit A-15, Schedule E9
- (2) As provided by Witness Chapel, Exhibit A-15, Schedule E1
- (3) From the Testimony of Witness Huffman
- (4) Workpaper CB-2
- (5) Witness Bence Exhibit A15, Schedule E11

Michigan Public Service Commission
DTE Gas Company
Cost of Service Summary for the Projected Test Year Ending 09/30/2027

Case No: U-21973
Exhibit: A-16
Schedule: F1
Witness: H. J. Maroun
Page: 1 of 1

Line No.	(a) Rate Class	(b) (\$000) Cost of Service	(c) Customers/ MMcf (1)	(d) Per Unit Cost
Residential				
1	Rate A	(WP HJM-5, P10)		
2	Customer	297,080	1,266,741	\$ 19.54
3	Capacity	503,687	1,266,741	\$ 33.14
4	Commodity	19,475	109,843	\$ 0.1773
5	Total	<u>820,242</u>		
6	Customer & Capacity	800,768	1,266,741	\$ 52.68
7	Rate 2A	(WP HJM-5, P10)		
8	Customer	6,911	5,951	\$ 96.78
9	Capacity	14,093	5,951	\$ 197.35
10	Commodity	836	3,698	\$ 0.2260
11	Total	<u>21,839</u>		
12	Customer & Capacity	21,004	5,951	\$ 294.14
13	Rate S	(WP HJM-5, P15)		
14	Customer	1,961	214	\$ 763.47
15	Capacity	4,682	214	\$ 1,822.41
16	Commodity	112	1,533	\$ 0.0733
17	Total	<u>6,755</u>		
18	Customer & Capacity	6,643	214	\$ 2,585.89
19	General Services			
20	GS-1/GS-2	(WP HJM-5, P5)		
21	Customer	81,795	91,227	\$ 74.72
22	Capacity	164,135	91,227	\$ 149.93
23	Commodity	8,133	39,158	\$ 0.2077
24	Total	<u>254,063</u>		
25	Customer & Capacity	245,930	91,227	\$ 224.65
26	Transportation			
27	Rate ST	(WP HJM-5, P15)		
28	Customer	13,174	433	\$ 2,535.45
29	Capacity	33,574	433	\$ 6,461.52
30	Commodity	-	16,756	\$ -
31	Total	<u>46,748</u>		
32	Customer & Capacity	46,748	433	\$ 8,996.97
33	Rate LT	(WP HJM-5, P20)		
34	Customer	10,056	80	\$ 10,474.95
35	Capacity	26,890	80	\$ 28,010.67
36	Commodity	-	18,961	\$ -
37	Total	<u>36,946</u>		
38	Customer & Capacity	36,946	80	\$ 38,485.63
39	Rate XLT	(WP HJM-5, P20)		
40	Customer	13,755	19	\$ 60,327.76
41	Capacity	38,870	19	\$ 170,480.58
42	Commodity	-	29,367	\$ -
43	Total	<u>52,624</u>		
44	Customer & Capacity	52,624	19	\$ 230,808.34
45	Rate XXLT	(WP HJM-5, P25)		
46	Customer	7,928	5	\$ 132,128.59
47	Capacity	27,797	5	\$ 463,280.59
48	Commodity	-	75,728	\$ -
49	Total	<u>35,725</u>		
50	Customer & Capacity	35,725	5	\$ 595,409.18
51	Exelon	(WP HJM-5, P25)		
52	Customer	5,804	1	\$ 483,627.07
53	Capacity	16,177	1	\$ 1,348,077.12
54	Commodity	-	10,393	\$ -
55	Total	<u>21,980</u>		
56	Customer & Capacity	21,980	1	\$ 1,831,704.20

(1) Col. c: WP HJM-8

Michigan Public Service Commission
DTE Gas Company
Cost of Service Study for the Projected Test Year Ending 09/30/2027
Plant In Service
(\$000)

Case No: U-21973
Exhibit: A-16
Schedule: F1.1
Witness: H. J. Maroun
Page: 1 of 7

Line No.	(a) Description	(b) Total Company	(c) Rate GS-1/GS-2	(d) Rate A	(e) Rate 2A	(f) Rate S	(g) Rate ST	(h) Rate LT	(i) Rate XLT	(j) Rate XXLT	(k) Exelon	(l) Allocation Schedule
	Plant In Service											
1	Production Plant	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	1
2	Storage Plant	673,470	134,611	385,288	12,520	5,317	21,709	21,431	32,311	46,570	13,714	4
3	Transmission Plant	1,254,774	208,015	602,543	19,167	8,260	58,124	58,011	87,664	177,375	35,616	3
4	Distribution Plant											
5	Distribution Plant - Other	340,559	56,457	163,537	5,202	2,242	15,776	15,745	23,793	48,141	9,667	3
6	Mains	3,354,348	647,628	1,875,942	59,673	25,715	180,963	180,609	272,931	-	110,887	3A
7	Customer Related Plant											
8	Services	2,377,219	525,083	1,768,779	40,523	6,897	26,327	6,027	2,163	569	852	5
9	Meters	411,114	92,201	310,587	7,116	1,211	-	-	-	-	-	6
10	Meter/Reg Installation	520,225	116,672	393,017	9,004	1,532	-	-	-	-	-	6
11	Large Volume Installation	71,881	-	-	-	-	52,660	12,054	4,326	1,138	1,703	7
12												
13	Subtotal - CRP	\$ 3,380,439	\$ 733,956	\$ 2,472,382	\$ 56,642	\$ 9,640	\$ 78,987	\$ 18,081	\$ 6,489	\$ 1,708	\$ 2,555	
14												
15	Subtotal - Dist. Plant	\$ 7,075,346	\$ 1,438,042	\$ 4,511,860	\$ 121,518	\$ 37,597	\$ 275,726	\$ 214,434	\$ 303,213	\$ 49,849	\$ 123,108	
16												
17	Total - Plant in Service	\$ 9,003,589	\$ 1,780,668	\$ 5,499,691	\$ 153,204	\$ 51,173	\$ 355,559	\$ 293,875	\$ 423,187	\$ 273,794	\$ 172,439	

Source: Col. (b): WP HJM-7 and Company Books and Records; Cols. (c) to (l) = Col. (b) * Alloc. Factor Percentage on Page 7.

Michigan Public Service Commission
DTE Gas Company
Cost of Service Study for the Projected Test Year Ending 09/30/2027
Base O&M
(\$000)

Case No: U-21973
Exhibit: A-16
Schedule: F1.1
Witness: H. J. Maroun
Page: 2 of 7

Line No.	(a) Description	(b) Total Company	(c) Rate GS-1/GS-2	(d) Rate A	(e) Rate 2A	(f) Rate S	(g) Rate ST	(h) Rate LT	(i) Rate XLT	(j) Rate XXLT	(k) Exelon	(l) Allocation Schedule
Base O&M												
1	O&M Production	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	1
2	Storage	11,638	2,326	6,658	216	92	375	370	558	805	237	4
3	Transmission	115,733	19,186	55,575	1,768	762	5,361	5,351	8,086	16,360	3,285	3
4	Distribution	151,835	31,079	97,510	2,626	813	5,959	4,634	6,553	-	2,661	12A
5	Lost & Company Use Gas	27,838	7,068	19,826	667	277	-	-	-	-	-	1
6	Customer Accounts - Supv.	1,466	324	1,091	25	4	16	4	1	0	1	5
7	Meter Reading Expenses	5,144	1,136	3,828	88	15	57	13	5	1	2	5
8	Customer Records	37,475	8,278	27,883	639	109	415	95	34	9	13	5
9	Merchant Fees	-	-	-	-	-	-	-	-	-	-	Direct
10	Customer Accts. - Other	60,143	4,021	55,827	262	9	19	4	1	0	0	8
11	Customer Assistance - Supv.	0	0	0	0	0	0	0	0	0	0	8
12	Customer Services	2,880	193	2,674	13	0	1	0	0	0	0	8
13	Customer Communications	0	-	0	0	-	-	-	-	-	-	10
14	Misc Customer Exp	2,416	162	2,243	11	0	1	0	0	0	0	8
15												
16	Total; Base O&M	\$ 416,568	\$ 73,771	\$ 273,114	\$ 6,315	\$ 2,081	\$ 12,204	\$ 10,471	\$ 15,238	\$ 17,176	\$ 6,198	

Source: Col. (b): WP HJM-3, Col. f; Cols. (c) to (l) = Col. (b) * Alloc. Factor Percentage on Page 7.

Michigan Public Service Commission
DTE Gas Company
Cost of Service Study for the Projected Test Year Ending 09/30/2027
Rate Base
(\$000)

Case No: U-21973
Exhibit: A-16
Schedule: F1.1
Witness: H. J. Maroun
Page: 3 of 7

Line No.	(a) Description	(b) Total Company	(c) Rate GS-1/GS-2	(d) Rate A	(e) Rate 2A	(f) Rate S	(g) Rate ST	(h) Rate LT	(i) Rate XLT	(j) Rate XXLT	(k) Exelon	(l) Allocation Schedule
Rate Base												
1	Production Plant	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	1
2	Storage Plant	673,470	134,611	385,288	12,520	5,317	21,709	21,431	32,311	46,570	13,714	4
3	Transmission Plant	1,254,774	208,015	602,543	19,167	8,260	58,124	58,011	87,664	177,375	35,616	3
4	Distribution Plant - Other	340,559	56,457	163,537	5,202	2,242	15,776	15,745	23,793	48,141	9,667	3
5	Mains	3,354,348	647,628	1,875,942	59,673	25,715	180,963	180,609	272,931	-	110,887	3A
6	Services	2,377,219	525,083	1,768,779	40,523	6,897	26,327	6,027	2,163	569	852	5
7	Meters	411,114	92,201	310,587	7,116	1,211	-	-	-	-	-	6
8	Meter/Reg Installation	520,225	116,672	393,017	9,004	1,532	-	-	-	-	-	6
9	Large Volume Installation	71,881	-	-	-	-	52,660	12,054	4,326	1,138	1,703	7
10	General Plant	512,939	101,446	313,320	8,728	2,915	20,256	16,742	24,109	15,598	9,824	13
11	Intangible Plant	51,597	10,204	31,517	878	293	2,038	1,684	2,425	1,569	988	13
12	Intang. Plt - MARS	64	11	31	1	0	3	3	4	9	2	3
13	Intang. Plt. - Transmission	2,507	416	1,204	38	17	116	116	175	354	71	3
14	Intang. Plt. - HPP	3,537	719	2,256	61	19	138	107	152	25	62	12
15	Plant Held FFU- Prod	-	-	-	-	-	-	-	-	-	-	13
16	Plant Held FFU- Transm	-	-	-	-	-	-	-	-	-	-	13
17	Plant Held FFU- Dist	-	-	-	-	-	-	-	-	-	-	13
18	CWIP Storage	136,901	27,363	78,321	2,545	1,081	4,413	4,356	6,568	9,467	2,788	4
19	CWIP Transmission	41,292	6,845	19,828	631	272	1,913	1,909	2,885	5,837	1,172	3
20	CWIP Distribution	163,751	33,282	104,422	2,812	870	6,381	4,963	7,018	1,154	2,849	12
21	CWIP Distribution - Main	147,616	30,215	94,801	2,553	790	5,793	4,506	6,371	-	2,587	12A
22	CWIP General	35,900	7,100	21,929	611	204	1,418	1,172	1,687	1,092	688	13
23	CWIP Intangible	10,669	2,110	6,517	182	61	421	348	501	324	204	13
24	Accum. Depr. - Production	-	-	-	-	-	-	-	-	-	-	1
25	Accum. Depr. - Storage	(218,052)	(43,584)	(124,746)	(4,054)	(1,721)	(7,029)	(6,939)	(10,461)	(15,078)	(4,440)	4
26	Accum. Depr. - Transmission	(401,985)	(66,641)	(193,033)	(6,140)	(2,646)	(18,621)	(18,585)	(28,084)	(56,825)	(11,410)	3
27	Accum. Depr. - Distribution	(1,070,830)	(217,643)	(682,855)	(18,391)	(5,690)	(41,730)	(32,454)	(45,890)	(7,544)	(18,632)	12
28	Accum. Depr. - Dist. Mains	(965,315)	(197,589)	(619,937)	(16,697)	(5,166)	(37,885)	(29,464)	(41,662)	-	(16,915)	12A
29	Accum. Depr. - Intangible	(46,276)	(9,152)	(28,267)	(787)	(263)	(1,827)	(1,510)	(2,175)	(1,407)	(886)	13
30	Accum. Depr. - General	(211,448)	(41,819)	(129,160)	(3,598)	(1,202)	(8,350)	(6,902)	(9,938)	(6,430)	(4,050)	13
31	Accum. Depr. - Future Use	-	-	-	-	-	-	-	-	-	-	13
32	WC-Taxes	824,697	163,103	503,752	14,033	4,687	32,568	26,918	38,762	25,079	15,795	13
33	WC-Rev Rec&Pay	(12,470)	(2,735)	(8,325)	(253)	(79)	(294)	(197)	(216)	(257)	(113)	15
34	WC- Sales Storage	24,941	6,332	17,763	598	248	-	-	-	-	-	1
35												
36	Total Rate Base	\$ 8,033,624	\$ 1,590,652	\$ 4,909,027	\$ 136,954	\$ 45,863	\$ 315,281	\$ 260,649	\$ 375,418	\$ 246,760	\$ 153,021	

Source: Col. (b): WP HJM-7 and Company Books and Records (Plant) HJM-4 (Working Capital); Cols. (c) to (l) = Col. (b) * Alloc. Factor Percentage on Page 7.

Michigan Public Service Commission
DTE Gas Company
Cost of Service Study for the Projected Test Year Ending 09/30/2027
Operating Expense Allocation
(\$000)

Case No: U-21973
Exhibit: A-16
Schedule: F1.1
Witness: H. J. Maroun
Page: 4 of 7

Line No.	(a) Description	(b) Total Company	(c) Rate GS-1/GS-2	(d) Rate A	(e) Rate 2A	(f) Rate S	(g) Rate ST	(h) Rate LT	(i) Rate XLT	(j) Rate XXLT	(k) Exelon	(l) Allocation Schedule
Operating Expenses												
1	O&M Production	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	1
2	Storage	11,638	2,326	6,658	216	92	375	370	558	805	237	4
3	Transmission	115,733	19,186	55,575	1,768	762	5,361	5,351	8,086	16,360	3,285	3
4	Distribution	151,835	31,079	97,510	2,626	813	5,959	4,634	6,553	-	2,661	12A
5	Lost & Company Use Gas	27,838	7,068	19,826	667	277	-	-	-	-	-	1
6	Customer Accounts - Supv.	1,466	324	1,091	25	4	16	4	1	0	1	5
7	Meter Reading Expenses	5,144	1,136	3,828	88	15	57	13	5	1	2	5
8	Customer Records	37,475	8,278	27,883	639	109	415	95	34	9	13	5
9	Merchant Fees	-	-	-	-	-	-	-	-	-	-	Direct
10	Customer Accts. - Other	60,143	4,021	55,827	262	9	19	4	1	0	0	8
11	Customer Assistance - Supv.	0	0	0	0	0	0	0	0	0	0	8
12	Customer Services	2,880	193	2,674	13	0	1	0	0	0	0	8
13	Customer Communications	0	-	0	0	-	-	-	-	-	-	10
14	Misc Customer Exp	2,416	162	2,243	11	0	1	0	0	0	0	8
15	A&G Expense	155,063	26,608	101,036	2,253	720	4,868	4,177	6,078	6,851	2,473	17
16	Depr Production	-	-	-	-	-	-	-	-	-	-	1
17	Storage	16,503	3,299	9,441	307	130	532	525	792	1,141	336	4
18	Transmission	21,990	3,646	10,560	336	145	1,019	1,017	1,536	3,109	624	3
19	Distribution	96,200	19,552	61,345	1,652	511	3,749	2,916	4,123	678	1,674	12
20	Distribution - Mains	86,721	17,751	55,693	1,500	464	3,403	2,647	3,743	-	1,520	12A
21	General	23,945	4,736	14,626	407	136	946	782	1,125	728	459	13
22	Amort. of Intangible Plt.	9,962	1,970	6,085	170	57	393	325	468	303	191	13
23	Amort. of Reg. Debits	(4,883)	(838)	(3,182)	(71)	(23)	(153)	(132)	(191)	(216)	(78)	17
24	Property Taxes	132,466	26,198	80,914	2,254	753	5,231	4,324	6,226	4,028	2,537	13
25	Other Taxes	5,092	1,007	3,110	87	29	201	166	239	155	98	13
26	Payroll Taxes	12,270	2,105	7,995	178	57	385	331	481	542	196	17
27	State/City Income Taxes	14,168	2,805	8,658	242	81	556	460	662	435	270	18
28												
29	Operating Expenses	\$ 986,065	\$ 182,610	\$ 629,397	\$ 15,629	\$ 5,141	\$ 33,335	\$ 28,007	\$ 40,521	\$ 34,930	\$ 16,496	

Source: Col. (b): WP HJM-3 and Company Books and Records; Cols. (c) to (l) = Col. (b) * Alloc. Factor Percentage on Page 7.

Michigan Public Service Commission
DTE Gas Company
Cost of Service Study for the Projected Test Year Ending 09/30/2027
Revenue Requirement By Rate Class
(\$000)

Case No: U-21973
Exhibit: A-16
Schedule: F1.1
Witness: H. J. Maroun
Page: 5 of 7

Line No.	(a) Description	(b) Total Company	(c) Rate GS-1/GS-2	(d) Rate A	(e) Rate 2A	(f) Rate S	(g) Rate ST	(h) Rate LT	(i) Rate XLT	(j) Rate XXLT	(k) Exelon	(l) Allocation Schedule
Revenue Requirement												
1	Operating Expenses	\$ 986,065	\$ 182,610	\$ 629,397	\$ 15,629	\$ 5,141	\$ 33,335	\$ 28,007	\$ 40,521	\$ 34,930	\$ 16,496	
2	Amort. Of Debt Disc.	1,885	373	1,152	32	11	74	61	88	58	36	18
3	AFUDC	(12,988)	(2,590)	(7,893)	(226)	(79)	(493)	(418)	(606)	(433)	(249)	14
4	Income Required	558,306	110,544	341,159	9,518	3,187	21,911	18,114	26,090	17,149	10,634	18
5	Federal Income Tax	38,101	9,985	24,628	1,057	73	1,807	480	(750)	601	220	22
6	TCJA Amortization	(12,424)	(2,460)	(7,592)	(212)	(71)	(488)	(403)	(581)	(382)	(237)	18
7	Subtotal - COS	\$ 1,558,946	\$ 298,462	\$ 980,851	\$ 25,797	\$ 8,262	\$ 56,146	\$ 45,842	\$ 64,762	\$ 51,923	\$ 26,901	
8	Uncollectibles	23,540	4,898	15,331	436	154	622	508	718	575	298	20
9	Total Cost of Service	\$ 1,582,485	\$ 303,360	\$ 996,182	\$ 26,233	\$ 8,416	\$ 56,768	\$ 46,350	\$ 65,479	\$ 52,498	\$ 27,199	
10												
11	Storage Revenue	\$ (56,601)	\$ (11,313)	\$ (32,381)	\$ (1,052)	\$ (447)	\$ (1,825)	\$ (1,801)	\$ (2,715)	\$ (3,914)	\$ (1,153)	4
12	Off System Transp. Revenue	(78,489)	(13,012)	(37,691)	(1,199)	(517)	(3,636)	(3,629)	(5,484)	(11,095)	(2,228)	3
13	Subtotal - Midstream	\$ (135,090)	\$ (24,325)	\$ (70,071)	\$ (2,251)	\$ (963)	\$ (5,460)	\$ (5,430)	\$ (8,199)	\$ (15,009)	\$ (3,380)	
14	Appliance Service Programs	\$ (108,546)	\$ (22,062)	\$ (69,218)	\$ (1,864)	\$ (577)	\$ (4,230)	\$ (3,290)	\$ (4,652)	\$ (765)	\$ (1,889)	12
15	Gas-in-Kind Revenue	(21,767)	(5,526)	(15,502)	(522)	(216)	-	-	-	-	-	1
16	Other Revenue	(15,785)	(3,022)	(9,932)	(261)	(84)	(569)	(464)	(656)	(526)	(272)	19
17	Blue Lake Pipeline	(1,005)	(192)	(632)	(17)	(5)	(36)	(30)	(42)	(33)	(17)	19
18	Vector Pipeline	(2,727)	(522)	(1,716)	(45)	(14)	(98)	(80)	(113)	(91)	(47)	19
19	Subtotal - Other Revenue	\$ (149,830)	\$ (31,325)	\$ (97,000)	\$ (2,709)	\$ (897)	\$ (4,933)	\$ (3,864)	\$ (5,462)	\$ (1,415)	\$ (2,225)	
20	Low Income Assist. Pilot	\$ 28,776	\$ 5,987	\$ 18,741	\$ 533	\$ 188	\$ 761	\$ 621	\$ 877	\$ 703	\$ 364	20
21	Low Income Assist. Credit	(28,776)		(28,776)								
22	Less: Provision for Rt Refund	1,793	373	1,167	33	12	47	39	55	44	23	20
23	Customer Discount											
24	Re Alloc Cust. Discount											
25	Standby Chgs. / Min Vol. Rev.	(2,434)	(7)	-	-	-	(434)	(770)	(125)	(1,097)	-	Direct
26	Subtotal - Other Dist. Rev.	\$ (641)	\$ 6,353	\$ (8,868)	\$ 566	\$ 200	\$ 373	\$ (110)	\$ 807	\$ (350)	\$ 387	
27	Revenue Requirement	\$ 1,296,924	\$ 254,063	\$ 820,242	\$ 21,839	\$ 6,755	\$ 46,748	\$ 36,946	\$ 52,624	\$ 35,725	\$ 21,980	

Source: Col. (b): WP HJM-3 and Company Books and Records; Cols. (c) to (l) = Col. (b) * Alloc. Factor Percentage on Page 7.

Rev Req Lockdown \$ 1,296,924 \$ 254,063 \$ 820,242 \$ 21,839 \$ 6,755 \$ 46,748 \$ 36,946 \$ 52,624 \$ 35,725 \$ 21,980

Michigan Public Service Commission
DTE Gas Company
Service Charge - Staff Method using Historical Adjusted Costs
(\$000)

Case No: U-21973
Exhibit: A-16
Schedule: F1.1
Witness: H. J. Maroun
Page: 6 of 7

Line No.	(a) Description	(b) Total Company	(c) Rate GS-1/GS-2	(d) Rate A	(e) Rate 2A	(f) Rate S	(g) Allocation Schedule
1	Plant						
2	Services	\$ 1,940,302	\$ 428,577	\$ 1,443,689	\$ 33,075	\$ 5,629	5
3	Meters	335,554	75,255	253,503	5,808	988	6
4	Meter/Reg	424,611	95,228	320,783	7,349	1,251	6
5	Industrial Meters	71,881	-	-	-	-	7
6	Total Plant	\$ 2,772,349	\$ 599,060	\$ 2,017,975	\$ 46,232	\$ 7,868	
7	Cost Rate	<u>7.68%</u>	<u>7.68%</u>	<u>7.68%</u>	<u>7.68%</u>	<u>7.68%</u>	
8	Annual Plant Cost	\$ 212,975	\$ 46,020	\$ 155,023	\$ 3,552	\$ 604	
9	Expense						
10	Customer Accounts - Supv.	\$ 1,353	\$ 299	\$ 1,007	\$ 23	\$ 4	5
11	Meter Reading Expenses	\$ 4,750	1,049	3,535	81	14	5
12	Customer Records	\$ 36,050	7,963	26,824	615	105	5
13	Merchant Fees	5,692	-	-	-	-	Direct
14	Customer Accts. - Other	<u>52,066</u>	<u>3,481</u>	<u>48,330</u>	<u>227</u>	<u>8</u>	8
15	Total Expenses	\$ 99,912	\$ 12,792	\$ 79,695	\$ 946	\$ 130	
16	Cost Per Customer						
17	Total Cost	\$ 312,887	\$ 58,812	\$ 234,718	\$ 4,497	\$ 735	
18	Customer Count	<u>1,364,671</u>	<u>91,227</u>	<u>1,266,741</u>	<u>5,951</u>	<u>214</u>	
19	Annual Cost	<u>229.28</u>	<u>644.68</u>	<u>185.29</u>	<u>755.75</u>	<u>3,432.92</u>	
20	Monthly Cost	\$ 19.1	\$ 53.7	\$ 15.4	\$ 63.0	\$ 286.1	

Source: Col. (b): WP HJM-3 and Company Books and Records; Colc. (c) = Col. (b) * Alloc. Factor Percentage on Page 7.

Michigan Public Service Commission
DTE Gas Company
Cost of Service Study for the Projected Test Year Ending 09/30/2027
Allocation Factors

Case No: U-21973
Exhibit: A-16
Schedule: F1.1
Witness: H. J. Maroun
Page: 7 of 7

Line No.	(a) Description	(b) Total Company	(c) Rate GS-1/GS-2	(d) Rate A	(e) Rate 2A	(f) Rate S	(g) Rate ST	(h) Rate LT	(i) Rate XLT	(j) Rate XXLT	(k) Exelon	(l) Allocation Schedule
1	Commodity	100.0000%	25.389%	71.219%	2.398%	0.994%	0.000%	0.000%	0.000%	0.000%	0.000%	1
2	Throughput	100.0000%	12.820%	35.963%	1.211%	0.502%	5.486%	6.208%	9.615%	24.793%	3.403%	2
3	Average & Peak	100.0000%	16.578%	48.020%	1.528%	0.658%	4.632%	4.623%	6.986%	14.136%	2.838%	3
3A	A&P no XXLT	100.0000%	19.307%	55.926%	1.779%	0.767%	5.395%	5.384%	8.137%	0.000%	3.306%	3A
4	Storage	100.0000%	19.988%	57.209%	1.859%	0.789%	3.223%	3.182%	4.798%	6.915%	2.036%	4
5	Weighted Customers - All	100.0000%	22.088%	74.405%	1.705%	0.290%	1.107%	0.254%	0.091%	0.024%	0.036%	5
6	Weighted Customers - R & C	100.0000%	22.427%	75.547%	1.731%	0.295%	0.000%	0.000%	0.000%	0.000%	0.000%	6
7	Weighted Customers - LV	100.0000%	0.000%	0.000%	0.000%	0.000%	73.259%	16.770%	6.018%	1.584%	2.369%	7
8	Customer - All	100.0000%	6.685%	92.824%	0.436%	0.016%	0.032%	0.006%	0.001%	0.000%	0.000%	8
9	Customer - R & C	100.0000%	6.688%	92.861%	0.436%	0.016%	0.000%	0.000%	0.000%	0.000%	0.000%	9
10	Customer - Res.	100.0000%	0.000%	99.532%	0.468%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	10
11	Customer Related Plant	100.0000%	21.712%	73.138%	1.676%	0.285%	2.337%	0.535%	0.192%	0.051%	0.076%	11
12	Distribution Plant	100.0000%	20.325%	63.769%	1.717%	0.531%	3.897%	3.031%	4.285%	0.705%	1.740%	12
12A	Dist Plant no XXLT	100.0000%	20.469%	64.221%	1.730%	0.535%	3.925%	3.052%	4.316%	0.000%	1.752%	12A
13	Plant in Service	100.0000%	19.777%	61.083%	1.702%	0.568%	3.949%	3.264%	4.700%	3.041%	1.915%	13
14	CWIP	100.0000%	19.942%	60.772%	1.741%	0.611%	3.794%	3.218%	4.669%	3.334%	1.919%	14
15	Revenue	100.0000%	21.932%	66.762%	2.033%	0.633%	2.356%	1.582%	1.732%	2.062%	0.909%	15
16	Revenue Less Cost of Gas	100.0000%	20.091%	64.389%	1.838%	0.441%	3.610%	2.425%	2.655%	3.159%	1.392%	16
17	O&M Expense Less Gas	100.0000%	17.159%	65.158%	1.453%	0.464%	3.139%	2.694%	3.920%	4.418%	1.595%	17
18	Rate Base	100.0000%	19.800%	61.106%	1.705%	0.571%	3.925%	3.244%	4.673%	3.072%	1.905%	18
19	COSS Allocation	100.0000%	19.145%	62.918%	1.655%	0.530%	3.602%	2.941%	4.154%	3.331%	1.726%	19
20	COSS + COG Allocation	100.0000%	20.807%	65.127%	1.853%	0.653%	2.643%	2.158%	3.049%	2.444%	1.266%	20
21	Open	0.0000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	21
22	Pre-Tax NOI	100.0000%	26.206%	64.640%	2.773%	0.193%	4.742%	1.261%	-1.969%	1.576%	0.579%	22

Source: Exh. A-16, Sch. F1.2

Michigan Public Service Commission
DTE Gas Company
Allocation Schedules for the Projected Test Year Ending 09/30/2027
Allocation Schedule # 1
Commodity (MMcf)

Case No: U-21973
 Exhibit: A-16
 Schedule: F1.2
 Witness: H. J. Maroun
 Page: 1 of 22

	(a)	(b)	(c)
Line No.	Rate Class	Volume	% of Total
1	Rate GS-1/GS-2 - General	39,158	25.389%
2	Rate A - Residential	109,843	71.219%
3	Rate 2A - Multi-Family	3,698	2.398%
4	Rate S - Schools	1,533	0.994%
5	Rate ST Transportation		0.000%
6	Rate LT Transportation		0.000%
7	Rate XLT Transportation		0.000%
8	Rate XXLT Transportation		0.000%
9	Exelon		0.000%
10	Total	<u>154,232</u>	<u>100.000%</u>

Source: Workpaper HJM-1

Michigan Public Service Commission
DTE Gas Company
Allocation Schedules for the Projected Test Year Ending 09/30/2027
Allocation Schedule # 2
Throughput (MMcf)

Case No: U-21973
 Exhibit: A-16
 Schedule: F1.2
 Witness: H. J. Maroun
 Page: 2 of 22

	(a)	(b)	(c)
Line No.	Rate Class	Volume	% of Total
1	Rate GS-1/GS-2 - General	39,158	12.820%
2	Rate A - Residential	109,843	35.963%
3	Rate 2A - Multi-Family	3,698	1.211%
4	Rate S - Schools	1,533	0.502%
5	Rate ST Transportation	16,756	5.486%
6	Rate LT Transportation	18,961	6.208%
7	Rate XLT Transportation	29,367	9.615%
8	Rate XXLT Transportation	75,728	24.793%
9	Exelon	10,393	3.403%
10	Total	<u>305,437</u>	<u>100.000%</u>

Source: Workpaper HJM-1

Michigan Public Service Commission
DTE Gas Company
Allocation Schedules for the Projected Test Year Ending 09/30/2027
Allocation Schedule # 3
Average and Peak

Case No: U-21973
Exhibit: A-16
Schedule: F1.2
Witness: H. J. Maroun
Page: 3 of 22

Line No.	(a) Average Demand	(b) Annual Demand	(c) Daily Demand	(d) % of Total	(e) % of Average Portion
1	Rate GS-1/GS-2 - General	39,158,210	107,283	12.820%	4.301%
2	Rate A - Residential	109,843,293	300,941	35.963%	12.066%
3	Rate 2A - Multi-Family	3,698,115	10,132	1.211%	0.406%
4	Rate S - Schools	1,532,824	4,200	0.502%	0.168%
5	Rate ST Transportation	16,756,012	45,907	5.486%	1.841%
6	Rate LT Transportation	18,961,456	51,949	6.208%	2.083%
7	Rate XLT Transportation	29,366,915	80,457	9.615%	3.226%
8	Rate XXLT Transportation	75,728,098	207,474	24.793%	8.318%
9	Exelon	10,392,522	28,473	3.403%	1.142%
10	Total	305,437,445	836,815	100.000%	33.550%
	Peak Demand		Peak Day Demand	% of Total	% of Peak Portion
11	Rate GS-1/GS-2 - General		460,804	18.475%	12.277%
12	Rate A - Residential		1,349,557	54.108%	35.954%
13	Rate 2A - Multi-Family		42,088	1.687%	1.121%
14	Rate S - Schools		18,388	0.737%	0.490%
15	Rate ST Transportation		104,788	4.201%	2.792%
16	Rate LT Transportation		95,354	3.823%	2.540%
17	Rate XLT Transportation		141,157	5.659%	3.761%
18	Rate XXLT Transportation		218,370	8.755%	5.818%
19	Exelon		63,694	2.554%	1.697%
20	Total		2,494,200	100.000%	66.450%
	Average and Peak				% of Average and Peak
21	Rate GS-1/GS-2 - General				16.578%
22	Rate A - Residential				48.020%
23	Rate 2A - Multi-Family				1.528%
24	Rate S - Schools				0.658%
25	Rate ST Transportation				4.632%
26	Rate LT Transportation				4.623%
27	Rate XLT Transportation				6.986%
28	Rate XXLT Transportation				14.136%
29	Exelon				2.838%
30	Total				100.000%

Source: Page 2 and Workpaper HJM-1

Michigan Public Service Commission
DTE Gas Company
Allocation Schedules for the Projected Test Year Ending 09/30/2027
Allocation Schedule # 4
Storage Demand

Case No: U-21973
Exhibit: A-16
Schedule: F1.2
Witness: H. J. Maroun
Page: 4 of 22

Line No.	(a) Rate Class	(b) Peak Day Volume	(c) 50% Peak Allocation	(d) Annual Storage Cap.	(e) 50% Annual Allocation	(f) % of Total
1	Rate GS-1/GS-2 - General	460,804	9.238%	16,985	10.750%	19.988%
2	Rate A - Residential	1,349,557	27.054%	47,646	30.156%	57.209%
3	Rate 2A - Multi-Family	42,088	0.844%	1,604	1.015%	1.859%
4	Rate S - Schools	18,388	0.369%	665	0.421%	0.789%
5	Rate ST Transportation	104,788	2.101%	1,774	1.123%	3.223%
6	Rate LT Transportation	95,354	1.912%	2,008	1.271%	3.182%
7	Rate XLT Transportation	141,157	2.830%	3,109	1.968%	4.798%
8	Rate XXLT Transportation	218,370	4.378%	4,009	2.537%	6.915%
9	Exelon	63,694	1.277%	1,200	0.759%	2.036%
10	Total	<u>2,494,200</u>	<u>50.000%</u>	<u>79,000</u>	<u>50.000%</u>	<u>100.000%</u>

Source: Page 3, Company Books and Records and Workpaper HJM-1

Michigan Public Service Commission
DTE Gas Company
Allocation Schedules for the Projected Test Year Ending 09/30/2027
Allocation Schedule # 5
Weighted Customers - All

Case No: U-21973
Exhibit: A-16
Schedule: F1.2
Witness: H. J. Maroun
Page: 5 of 22

Line No.	(a) Rate Class	(b) # of Customers	(c) Weighting Factors	(d) Weighted Customers	(e) % of Total
1	Rate GS-1/GS-2 - General	91,227	4.12	376,047	22.088%
2	Rate A - Residential	1,266,741	1.00	1,266,741	74.405%
3	Rate 2A - Multi-Family	5,951	4.88	29,021	1.705%
4	Rate S - Schools	214	23.07	4,939	0.290%
5	Rate ST Transportation	433	43.54	18,855	1.107%
6	Rate LT Transportation	80	53.95	4,316	0.254%
7	Rate XLT Transportation	19	81.52	1,549	0.091%
8	Rate XXLT Transportation	5	81.52	408	0.024%
9	Exelon	1	609.82	610	0.036%
10	Total	<u>1,364,671</u>		<u>1,702,486</u>	<u>100.000%</u>

Source: Workpaper HJM-2

Michigan Public Service Commission
DTE Gas Company
Allocation Schedules for the Projected Test Year Ending 09/30/2027
Allocation Schedule # 6
Weighted Customers - R & C

Case No: U-21973
Exhibit: A-16
Schedule: F1.2
Witness: H. J. Maroun
Page: 6 of 22

Line No.	(a) Rate Class	(b) # of Customers	(c) Weighting Factors	(d) Weighted Customers	(e) % of Total
1	Rate GS-1/GS-2 - General	91,227	4.12	376,047	22.427%
2	Rate A - Residential	1,266,741	1.00	1,266,741	75.547%
3	Rate 2A - Multi-Family	5,951	4.88	29,021	1.731%
4	Rate S - Schools	214	23.07	4,939	0.295%
5	Rate ST Transportation	-	43.54	-	0.000%
6	Rate LT Transportation	-	53.95	-	0.000%
7	Rate XLT Transportation	-	81.52	-	0.000%
8	Rate XXLT Transportation	-	81.52	-	0.000%
9	Exelon	-	609.82	-	0.000%
10	Total	<u>1,364,133</u>		<u>1,676,749</u>	<u>100.000%</u>

Source: Workpaper HJM-2

Michigan Public Service Commission
DTE Gas Company
Allocation Schedules for the Projected Test Year Ending 09/30/2027
Allocation Schedule # 7
Weighted Customers - LV

Case No: U-21973
Exhibit: A-16
Schedule: F1.2
Witness: H. J. Maroun
Page: 7 of 22

Line No.	(a) Rate Class	(b) # of Customers	(c) Weighting Factors	(d) Weighted Customers	(e) % of Total
1	Rate GS-1/GS-2 - General	-	4.12	-	0.000%
2	Rate A - Residential	-	1.00	-	0.000%
3	Rate 2A - Multi-Family	-	4.88	-	0.000%
4	Rate S - Schools	-	23.07	-	0.000%
5	Rate ST Transportation	433	43.54	18,855	73.259%
6	Rate LT Transportation	80	53.95	4,316	16.770%
7	Rate XLT Transportation	19	81.52	1,549	6.018%
8	Rate XXLT Transportation	5	81.52	408	1.584%
9	Exelon	1	609.82	610	2.369%
10	Total	<u>538</u>		<u>25,737</u>	<u>100.000%</u>

Source: Workpaper HJM-2

Michigan Public Service Commission
DTE Gas Company
Allocation Schedules for the Projected Test Year Ending 09/30/2027
Allocation Schedule # 8
Customers - All

Case No: U-21973
Exhibit: A-16
Schedule: F1.2
Witness: H. J. Maroun
Page: 8 of 22

Line No.	(a) Rate Class	(b) # of Customers	(c) % of Total
1	Rate GS-1/GS-2 - General	91,227	6.685%
2	Rate A - Residential	1,266,741	92.824%
3	Rate 2A - Multi-Family	5,951	0.436%
4	Rate S - Schools	214	0.016%
5	Rate ST Transportation	433	0.032%
6	Rate LT Transportation	80	0.006%
7	Rate XLT Transportation	19	0.001%
8	Rate XXLT Transportation	5	0.000%
9	Exelon	1	0.000%
10	Total	<u>1,364,671</u>	<u>100.000%</u>

Source: Workpaper HJM-2

Michigan Public Service Commission
DTE Gas Company
Allocation Schedules for the Projected Test Year Ending 09/30/2027
Allocation Schedule # 9
Customers - R & C

Case No: U-21973
 Exhibit: A-16
 Schedule: F1.2
 Witness: H. J. Maroun
 Page: 9 of 22

Line No.	(a) Rate Class	(b) # of Customers	(c) % of Total
1	Rate GS-1/GS-2 - General	91,227	6.688%
2	Rate A - Residential	1,266,741	92.861%
3	Rate 2A - Multi-Family	5,951	0.436%
4	Rate S - Schools	214	0.016%
5	Rate ST Transportation	-	0.000%
6	Rate LT Transportation	-	0.000%
7	Rate XLT Transportation	-	0.000%
8	Rate XXLT Transportation	-	0.000%
9	Exelon	-	0.000%
10	Total	1,364,133	100.000%

Source: Workpaper HJM-2

Michigan Public Service Commission
DTE Gas Company
Allocation Schedules for the Projected Test Year Ending 09/30/2027
Allocation Schedule # 10
Customers - Residential

Case No: U-21973
 Exhibit: A-16
 Schedule: F1.2
 Witness: H. J. Maroun
 Page: 10 of 22

Line No.	(a) Rate Class	(b) # of Customers	(c) % of Total
1	Rate GS-1/GS-2 - General	-	0.000%
2	Rate A - Residential	1,266,741	99.532%
3	Rate 2A - Multi-Family	5,951	0.468%
4	Rate S - Schools	-	0.000%
5	Rate ST Transportation	-	0.000%
6	Rate LT Transportation	-	0.000%
7	Rate XLT Transportation	-	0.000%
8	Rate XXLT Transportation	-	0.000%
9	Exelon	-	0.000%
10	Total	1,272,692	100.000%

Source: Workpaper HJM-2

Michigan Public Service Commission
DTE Gas Company
Allocation Schedules for the Projected Test Year Ending 09/30/2027
Allocation Schedule # 11
Customer Related Plant
(\$000)

Case No: U-21973
 Exhibit: A-16
 Schedule: F1.2
 Witness: H. J. Maroun
 Page: 11 of 22

	(a)	(b)	(c)
Line No.	Rate Class	Amount	% of Total
1	Rate GS-1/GS-2 - General	733,956	21.712%
2	Rate A - Residential	2,472,382	73.138%
3	Rate 2A - Multi-Family	56,642	1.676%
4	Rate S - Schools	9,640	0.285%
5	Rate ST Transportation	78,987	2.337%
6	Rate LT Transportation	18,081	0.535%
7	Rate XLT Transportation	6,489	0.192%
8	Rate XXLT Transportation	1,708	0.051%
9	Exelon	2,555	0.076%
10	Total	<u>3,380,439</u>	<u>100.000%</u>

Source: Exh. A-16, Sch. F1.1, Page 1, Line 13

Michigan Public Service Commission
DTE Gas Company
Allocation Schedules for the Projected Test Year Ending 09/30/2027
Allocation Schedule # 12
Distribution Plant
(\$000)

Case No: U-21973
 Exhibit: A-16
 Schedule: F1.2
 Witness: H. J. Maroun
 Page: 12 of 22

	(a)	(b)	(c)
Line No.	Rate Class	Amount	% of Total
1	Rate GS-1/GS-2 - General	1,438,042	20.325%
2	Rate A - Residential	4,511,860	63.769%
3	Rate 2A - Multi-Family	121,518	1.717%
4	Rate S - Schools	37,597	0.531%
5	Rate ST Transportation	275,726	3.897%
6	Rate LT Transportation	214,434	3.031%
7	Rate XLT Transportation	303,213	4.285%
8	Rate XXLT Transportation	49,849	0.705%
9	Exelon	123,108	1.740%
10	Total	<u>7,075,346</u>	<u>100.000%</u>

Source: Exh. A-16, Sch. F1.1, Page 1, Line 15

Michigan Public Service Commission
DTE Gas Company
Allocation Schedules for the Projected Test Year Ending 09/30/2027
Allocation Schedule # 13
Plant in Service
(\$000)

Case No: U-21973
Exhibit: A-16
Schedule: F1.2
Witness: H. J. Maroun
Page: 13 of 22

	(a)	(b)	(c)
Line No.	Rate Class	Amount	% of Total
1	Rate GS-1/GS-2 - General	1,780,668	19.777%
2	Rate A - Residential	5,499,691	61.083%
3	Rate 2A - Multi-Family	153,204	1.702%
4	Rate S - Schools	51,173	0.568%
5	Rate ST Transportation	355,559	3.949%
6	Rate LT Transportation	293,875	3.264%
7	Rate XLT Transportation	423,187	4.700%
8	Rate XXLT Transportation	273,794	3.041%
9	Exelon	172,439	1.915%
10	Total	<u>9,003,589</u>	<u>100.000%</u>

Source: Exh. A-16, Sch. F1.1, Page 1, Line 17

Michigan Public Service Commission
DTE Gas Company
Allocation Schedules for the Projected Test Year Ending 09/30/2027
Allocation Schedule # 14
Construction Work in Progress
(\$000)

Case No: U-21973
 Exhibit: A-16
 Schedule: F1.2
 Witness: H. J. Maroun
 Page: 14 of 22

	(a)	(b)	(c)
Line No.	Rate Class	Amount	% of Total
1	Rate GS-1/GS-2 - General	106,916	19.942%
2	Rate A - Residential	325,818	60.772%
3	Rate 2A - Multi-Family	9,334	1.741%
4	Rate S - Schools	3,277	0.611%
5	Rate ST Transportation	20,340	3.794%
6	Rate LT Transportation	17,254	3.218%
7	Rate XLT Transportation	25,030	4.669%
8	Rate XXLT Transportation	17,873	3.334%
9	Exelon	10,288	1.919%
10	Total	<u>536,129</u>	<u>100.000%</u>

Source: Exh. A-16, Sch. F1.1, Page 3, Lines 18-23

Michigan Public Service Commission
DTE Gas Company
Allocation Schedules for the Projected Test Year Ending 09/30/2027
Allocation Schedule # 15
Revenue
(\$000)

Case No: U-21973
Exhibit: A-16
Schedule: F1.2
Witness: H. J. Maroun
Page: 15 of 22

	(a)	(b)	(c)	(d)	(e)
Line No.	Rate Class	Amount	Cost of Gas (1)	Incl. COG	% of Total
1	Rate GS-1/GS-2 - General	213,343	143,543	356,887	21.932%
2	Rate A - Residential	683,744	402,656	1,086,400	66.762%
3	Rate 2A - Multi-Family	19,519	13,556	33,076	2.033%
4	Rate S - Schools	4,683	5,619	10,302	0.633%
5	Rate ST Transportation	38,334	-	38,334	2.356%
6	Rate LT Transportation	25,751	-	25,751	1.582%
7	Rate XLT Transportation	28,189	-	28,189	1.732%
8	Rate XXLT Transportation	33,550	-	33,550	2.062%
9	Exelon	14,784	-	14,784	0.909%
10	Total	<u>1,061,898</u>	<u>565,375</u>	<u>1,627,273</u>	<u>100.000%</u>

(1) Cost of Gas included for GCC customers

Source: Col. (b): HJM-8; Col. (c): Page 1 Priced at COG of \$3.6657

Michigan Public Service Commission
DTE Gas Company
Allocation Schedules for the Projected Test Year Ending 09/30/2027
Allocation Schedule # 16
Revenue Less Cost of Gas
(\$000)

Case No: U-21973
 Exhibit: A-16
 Schedule: F1.2
 Witness: H. J. Maroun
 Page: 16 of 22

	(a)	(b)	(c)
Line No.	Rate Class	Amount	% of Total
1	Rate GS-1/GS-2 - General	213,343	20.091%
2	Rate A - Residential	683,744	64.389%
3	Rate 2A - Multi-Family	19,519	1.838%
4	Rate S - Schools	4,683	0.441%
5	Rate ST Transportation	38,334	3.610%
6	Rate LT Transportation	25,751	2.425%
7	Rate XLT Transportation	28,189	2.655%
8	Rate XXLT Transportation	33,550	3.159%
9	Exelon	14,784	1.392%
10	Total	<u>1,061,898</u>	<u>100.000%</u>

Source: Exh. A-16, Sch. F1.2, Page 15, Col. (b)

Michigan Public Service Commission
DTE Gas Company
Allocation Schedules for the Projected Test Year Ending 09/30/2027
Allocation Schedule # 17
O&M Less Gas
(\$000)

Case No: U-21973
 Exhibit: A-16
 Schedule: F1.2
 Witness: H. J. Maroun
 Page: 17 of 22

	(a)	(b)	(c)
Line No.	Rate Class	Amount	% of Total
1	Rate GS-1/GS-2 - General	66,703	17.159%
2	Rate A - Residential	253,288	65.158%
3	Rate 2A - Multi-Family	5,647	1.453%
4	Rate S - Schools	1,804	0.464%
5	Rate ST Transportation	12,204	3.139%
6	Rate LT Transportation	10,471	2.694%
7	Rate XLT Transportation	15,238	3.920%
8	Rate XXLT Transportation	17,176	4.418%
9	Exelon	6,198	1.595%
10	Total	<u>388,730</u>	<u>100.000%</u>

Source: Exh. A-16, Sch. F1.1, Page 2, Line 16 less Line 5

Michigan Public Service Commission
DTE Gas Company
Allocation Schedules for the Projected Test Year Ending 09/30/2027
Allocation Schedule # 18
Rate Base
(\$000)

Case No: U-21973
Exhibit: A-16
Schedule: F1.2
Witness: H. J. Maroun
Page: 18 of 22

	(a)	(b)	(c)
Line No.	Rate Class	Amount	% of Total
1	Rate GS-1/GS-2 - General	1,590,652	19.800%
2	Rate A - Residential	4,909,027	61.106%
3	Rate 2A - Multi-Family	136,954	1.705%
4	Rate S - Schools	45,863	0.571%
5	Rate ST Transportation	315,281	3.925%
6	Rate LT Transportation	260,649	3.244%
7	Rate XLT Transportation	375,418	4.673%
8	Rate XXLT Transportation	246,760	3.072%
9	Exelon	153,021	1.905%
10	Total	<u>8,033,624</u>	<u>100.000%</u>

Source: Exh. A-16, Sch. F1.1, Page 3, Line 36

Michigan Public Service Commission
DTE Gas Company
Allocation Schedules for the Projected Test Year Ending 09/30/2027
Allocation Schedule # 19
Total COS Less Uncollectibles
(\$000)

Case No: U-21973
 Exhibit: A-16
 Schedule: F1.2
 Witness: H. J. Maroun
 Page: 19 of 22

	(a)	(b)	(c)
Line No.	Rate Class	Amount	% of Total
1	Rate GS-1/GS-2 - General	298,462	19.145%
2	Rate A - Residential	980,851	62.918%
3	Rate 2A - Multi-Family	25,797	1.655%
4	Rate S - Schools	8,262	0.530%
5	Rate ST Transportation	56,146	3.602%
6	Rate LT Transportation	45,842	2.941%
7	Rate XLT Transportation	64,762	4.154%
8	Rate XXLT Transportation	51,923	3.331%
9	Exelon	26,901	1.726%
10	Total	<u>1,558,946</u>	<u>100.000%</u>

Source: Exh. A-16, Sch. F1.1, Page 5, Line 7

Michigan Public Service Commission
DTE Gas Company
Allocation Schedules for the Projected Test Year Ending 09/30/2027
Allocation Schedule # 20
COS + COG Allocation
(\$000)

Case No: U-21973
Exhibit: A-16
Schedule: F1.2
Witness: H. J. Maroun
Page: 20 of 22

	(a)	(b)	(c)	(d)	(e)
Line No.	Rate Class	Amount	Cost of Gas (1)	Incl. COG	% of Total
1	Rate GS-1/GS-2 - General	298,462	143,543	442,006	20.807%
2	Rate A - Residential	980,851	402,656	1,383,507	65.127%
3	Rate 2A - Multi-Family	25,797	13,556	39,354	1.853%
4	Rate S - Schools	8,262	5,619	13,881	0.653%
5	Rate ST Transportation	56,146	-	56,146	2.643%
6	Rate LT Transportation	45,842	-	45,842	2.158%
7	Rate XLT Transportation	64,762	-	64,762	3.049%
8	Rate XXLT Transportation	51,923	-	51,923	2.444%
9	Exelon	26,901	-	26,901	1.266%
10	Total	<u>1,558,946</u>	<u>565,375</u>	<u>2,124,321</u>	<u>100.000%</u>

(1) Cost of Gas included for GCC customers
Source: Col. (b): Page 19; Col. (c): Page 15

Michigan Public Service Commission
DTE Gas Company
Allocation Schedules for the Projected Test Year Ending 09/30/2027
Allocation Schedule # 21
Open for Future Use
(\$000)

Case No: U-21973
 Exhibit: A-16
 Schedule: F1.2
 Witness: H. J. Maroun
 Page: 21 of 22

	(a)	(b)	(c)
Line No.	Rate Class	Amount	% of Total
1	Open for Future Use		
2			
3			
4			
5			
6			
7			
8			
9			
9			
10	Total	<u> </u>	<u> </u>
		<u> </u>	<u> </u>

Source:

Michigan Public Service Commission
DTE Gas Company
Allocation Schedules for the Projected Test Year Ending 09/30/2027
Allocation Schedule # 22
Pre-Tax NOI
(\$000)

Case No: U-21973
Exhibit: A-16
Schedule: F1.2
Witness: H. J. Maroun
Page: 22 of 22

	(a)	(b)	(c)	(d)	(e)
Line No.	Rate Class	Revenue	Expenses Less Taxes	Pre-Tax NOI	% of Total
1	Rate GS-1/GS-2 - General	213,343	150,494	62,850	26.206%
2	Rate A - Residential	683,744	528,720	155,024	64.640%
3	Rate 2A - Multi-Family	19,519	12,868	6,651	2.773%
4	Rate S - Schools	4,683	4,221	462	0.193%
5	Rate ST Transportation	38,334	26,961	11,373	4.742%
6	Rate LT Transportation	25,751	22,727	3,024	1.261%
7	Rate XLT Transportation	28,189	32,912	(4,723)	-1.969%
8	Rate XXLT Transportation	33,550	29,770	3,780	1.576%
9	Exelon	14,784	13,396	1,388	0.579%
10	Total	1,061,898	822,069	239,829	100.000%

Source: Col (b): Workpaper HJM-8; Col (c): A-16, F1.1, p4

Michigan Public Service Commission
DTE Gas Company
Summary of Projected Test Year Ending 09/30/2027
Proposed Gas Revenue Increase

Case No: U-21973
Exhibit: A-16
Schedule: F2
Witness: H. J. Maroun
Page No. 1 of 5

Line No.	(a) Rate Class	(b) Test Year MMcf	(c) Annual Operating Revenues (\$000) Test Year		(d) Proposed (2)	(e) Increase / (Decrease) Revenues (\$000)		(f) Percent
			Current (1)	Proposed (2)				
	Residential							
1	Rate A	109,843	1,170,694	1,263,541		92,847		7.93%
2	Rate 2A	3,698	36,563	39,786		3,223		8.81%
3	Total Residential Services	113,541	1,207,258	1,303,327		96,070		7.96%
	General Services							
4	GS-1/GS-2	39,158	394,758	422,873		28,115		7.12%
5								
	School							
6	Rate S	1,533	11,727	12,509		782		6.67%
7	Subtotal Gas Sales Revenues	154,232	1,613,742	1,738,709		124,967		7.74%
	Transportation							
8	Rate ST	16,756	42,631	58,524		15,893		37.28%
9	Rate LT	18,961	29,389	39,813		10,424		35.47%
10	Rate XLT	29,367	32,501	44,446		11,945		36.75%
11	Rate XXLT	75,728	36,087	38,919		2,832		7.85%
12	Exelon	10,393	14,784	22,663		7,879		53.30%
13	Total Transportation Services	151,205	155,392	204,365		48,973		31.52%
14	Total Revenues	305,437	1,769,134	1,943,074		173,940		9.83%
15	Less: Cost of Gas (included above)		565,375	565,375		-		
16	Less: Current IRM Surcharge Revenues (included above)		84,779	-		(84,779)		
17	Less: Proposed IRM Surcharge Revenues (included above)		-	21,259		21,259		
18	Less: Current EWR Surcharge Revenues (included above)		59,607	59,607		-		
19	Base Revenues		1,059,373	1,296,833		237,460		22.42%

Sources: Exhibit A-16 Schedule F3

(1) Projected test year billing determinants at current base rates include revenues from both IRM and EWR surcharges. IRM revenues are based on blended rates that combine 2026 surcharges (weighted for the final three months of 2026) and 2027 surcharges (weighted for the first nine months of 2027), as authorized in Case No. U-21291. EWR surcharges reflect rates effective as of September 2025, as approved in Case No. U-21558. Cost of gas revenues are calculated using projected billing determinants and a cost of gas rate of \$3.6657 per Mcf, as shown in Exhibit A-13, Schedule C4.

(2) Projected test year billing determinants at proposed base rates include revenues from both IRM and EWR surcharges. IRM revenues are based on the proposed 2027 surcharges presented in Exhibit A-18, Schedule H4. EWR surcharges reflect rates effective as of September 2025, as approved in Case No. U-21558. Cost of gas revenues are calculated using projected billing determinants and a cost of gas rate of \$3.6657 per Mcf, as shown in Exhibit A-13, Schedule C4.

**Michigan Public Service Commission
DTE Gas Company
Comparison of Rates**

Case No: U-21973
Exhibit: A-16
Schedule: F2
Witness: H. J. Maroun
Page: 2 of 5

Line No.	(a) Rate Class	(b)	(c)
		Current Rates (\$/Mcf)	Proposed Rates (\$/Mcf)
<u>Residential</u>			
1	Rate A		
2	Customer Charge	14.50	15.40
3	Low Income Assistance Credit	(40.00)	(40.00)
4	RIA Credit	(14.50)	(15.40)
5	Distribution Charge	4.4732	5.5795
6	Rate 2A		
7	Customer Charge Meter Class 1	14.50	15.40
8	Customer Charge Meter Class 2	50.00	55.00
9	Distribution Charge	4.4732	5.5795
10	Rate S		
11	Customer Charge	270.00	285.00
12	Distribution Charge	2.6026	3.3840
<u>General Services</u>			
13	GS-1		
14	Customer Charge	50.00	55.00
15	Distribution Charge	4.0481	4.9694
16	GS-2		
17	Customer Charge	925.00	1,050.00
18	Distribution Charge	3.2981	4.1166

**Michigan Public Service Commission
DTE Gas Company
Comparison of Rates**

Case No: U-21973
Exhibit: A-16
Schedule: F2
Witness: H. J. Maroun
Page: 3 of 5

Line No.	(a) Rate Class	(b) Current Rates (\$/Mcf)	(c) Proposed Rates (\$/Mcf)
<u>Transportation Service</u>			
1	Rate ST Small Transportation Service		
2	Customer Charge	2,780	3,300
3	Transportation Charge - Cost Based	1.3986	2.3622
4	Transportation Charge - Market Floor	0.2300	0.2300
5	Transportation Charge - Market Ceiling	2.5672	4.4944
6	Rate LT Large Transportation Service		
7	Customer Charge	4,980	9,490
8	Transportation Charge - Cost Based	1.0647	1.5201
9	Transportation Charge - Market Floor	0.2300	0.2300
10	Transportation Charge - Market Ceiling	1.8994	2.8102
11	Rate XLT Extra Large Transportation Service		
12	Customer Charge	14,460	16,450
13	Transportation Charge - Cost Based	0.8418	1.2881
14	Transportation Charge - Market Floor	0.1800	0.1800
15	Transportation Charge - Market Ceiling	1.5036	2.3962
16	Rate XXL Extra Large Transportation Service		
17	Customer Charge	178,055	194,000
18	Transportation Charge - Cost Based	0.2873	0.3179
19	Transportation Charge - Market Floor	0.0500	0.0500
20	Transportation Charge - Market Ceiling	1.5036	2.3962

Michigan Public Service Commission
DTE Gas Company
Comparison of Present and Proposed Customer Charges
For Sales and Transportation Rate Schedules

Case No: U-21973
Exhibit: A-16
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Line No.	(a) Description	(b) Current	(c) Per Cost of Service Study (1)	(d) Proposed
<u>SALES RATE SCHEDULES</u>				
1	Rate A (Residential Rate)	\$ 14.50	\$ 52.68	\$ 15.40
2	* Current: \$13.50 credit applicable to RIA			
3	* Current: \$30 credit applicable for Low Income Assistance			
4	Rate 2A (Residential Multiple Family Dwelling)			
5	Meter Class I	\$ 14.50	\$ 294.14	\$ 15.40
6	Meter Class II	\$ 50.00		\$ 55.00
7	Rate GS-1 (Non-Residential General Service)	\$ 50.00	\$ 224.65	\$ 55.00
8	Rate GS-2 (General Service Large Volume Rate)	\$ 925.00		\$ 1,050.00
9				
10	Rate S (School Rate)	\$ 270.00	\$ 2,585.89	\$ 285.00
<u>TRANSPORTATION RATE SCHEDULES</u>				
11	Rate ST	\$ 2,780.00	\$ 8,997.0	\$ 3,300.00
12	Rate LT	\$ 4,980.00	\$ 38,485.6	\$ 9,490.00
13	Rate XLT	\$ 14,460.00	\$ 230,808.3	\$ 16,450.00
14	Rate XXLT	\$ 178,055.00	\$ 595,409.2	\$ 194,000.00

(1) Source: Exhibit A-16 Schedule F1

Line No.	Rate Class	Source	Current Annual Operating Revenues for Test Year Period (\$000)				Total Current Revenues
			Base Revenues (1)	Cost of Gas (2)	IRM (3)	EWR (4)	
Residential							
1	Rate A	Exh. A-16 Sch. F3 p1	\$ 683,744	\$ 402,656	\$ 53,482	\$ 30,813	\$ 1,170,694
2	Rate 2A	Exh. A-16 Sch. F3 p1	19,519	13,556	1,532	1,956	36,563
3	Total Residential Services		703,263	416,212	55,014	32,768	1,207,258
General Services							
4	GS-1/GS-2	Exh. A-16 Sch. F3 p2	213,336	143,543	17,536	20,342	394,758
5							
School							
6	Rate S	Exh. A-16 Sch. F3 p3	4,683	5,619	614	811	11,727
7	Subtotal Gas Sales Revenues		921,282	565,375	73,164	53,921	1,613,742
Transportation							
8	Rate ST	Exh. A-16 Sch. F3 p4	37,880	-	4,075	677	42,631
9	Rate LT	Exh. A-16 Sch. F3 p4	24,969	-	3,654	766	29,389
10	Rate XLT	Exh. A-16 Sch. F3 p4	28,018	-	3,297	1,186	32,501
11	Rate XXLT	Exh. A-16 Sch. F3 p4	32,440	-	588	3,058	36,087
12	Exelon	Exh. A-16 Sch. F2 p1	14,784	-	-	-	14,784
13	Total Transportation Services		138,091	-	11,615	5,686	155,392
14	Subtotal Current Revenues		1,059,373	565,375	84,779	59,607	1,769,134
15	Appliance Service Program	Exh. A-3, Sch. C3					108,546
16	Total Current Revenues - For UCX Calculation						1,877,679

(1) Current base revenues based on projected test year billing determinants multiplied by base rates approved in Case No. U-21291.
(2) Cost of gas revenues based on projected test year billing determinants multiplied by the cost of gas rate shown on Exhibit A-13 Schedule C4.
(3) IRM revenues based on projected test year billing determinants multiplied by blended IRM surcharges, combining 2026 surcharges (weighted for the last three months of 2026) and 2027 surcharges (weighted for the first nine months of 2027); surcharges approved in Case No. U-21291.
(4) Current EWR revenues reflect projected test year billing determinants multiplied by the EWR rates effective as of September 2025, as approved in Case No. U-21558.

Michigan Public Service Commission
DTE Gas Company
Calculation of the Projected Test Year Ending 09/30/2027
Current and Proposed Revenues by Rate Schedule
Residential Service - Rates A and 2A
(\$000)

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Exhibit: A-16
Schedule: F3
Witness: H. J. Maroun
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Line No.	(a) Description	(b) Customers/ MMcf	(c) Current Rate	(d) Pro Forma Revenue	(e) Proposed Rate	(f) Proposed Revenue	(g) Proposed Revenue Increase/(Decrease)		(h)
							Amount	Percent	
BASE REVENUE:									
Rate A									
1	Customer Charges (\$/Mo)	1,266,741	\$ 14.50	\$ 220,413	\$ 15.40	\$ 234,094	\$ 13,681		6.21%
2	LIA Credit (\$/Mo)	33,000	\$ (40.00)	(15,840)	\$ (40.00)	(15,840)			
3	RIA Credit (\$/Mo)	70,000	\$ (14.50)	(12,180)	\$ (15.40)	(12,936)			
4	Total			\$ 192,393		\$ 205,318			
5	Distribution Charge (\$/Mcf)	109,843	\$ 4.4732	\$ 491,351	\$ 5.5795	\$ 612,865	\$ 121,514		24.73%
6	Subtotal Rate A	109,843		\$ 683,744		\$ 818,183	\$ 134,439		19.66%
Rate 2A (Multiple Family)									
7	Customer Charges (\$/Mo)								
8	Meter Class 1	1,393	\$ 14.50	\$ 242	\$ 15.40	\$ 257	\$ 15		6.21%
9	Meter Class 2	4,557	\$ 50.00	2,734	\$ 55.00	3,008	\$ 273		10.00%
10	Total Service Charge	5,951		\$ 2,977		\$ 3,265			
11	Distribution Charge (\$/Mcf)	3,698	\$ 4.4732	\$ 16,542	\$ 5.5795	\$ 20,633	\$ 4,091		24.73%
12	Subtotal Multi-Family	3,698		\$ 19,519		\$ 23,899	\$ 4,380		22.44%
13	Base Revenue Residential	113,541		\$ 703,263		\$ 842,082	\$ 138,819		19.74%
ADDITIONAL REVENUE:									
Cost of Gas (\$/Mcf)									
14	Rate A	109,843	\$ 3.6657	\$ 402,656	\$ 3.6657	\$ 402,656			
15	Rate 2A	3,698	\$ 3.6657	13,556	\$ 3.6657	13,556			
16	Subtotal Cost of Gas			\$ 416,212		\$ 416,212	\$ -		0.0%
IRM (1) (2) (\$/Mo)									
17	Rate A	1,266,741	\$ 3.52	\$ 53,482	\$ 0.78	\$ 11,890			
18	Rate 2A	5,951	21.45	1,532	5.25	375			
19	Subtotal IRM			\$ 55,014		\$ 12,265	\$ (42,749)		-77.7%
EWR (3) (\$/Mcf)									
20	Rate A	109,843	\$ 0.28051	\$ 30,813	\$ 0.28051	\$ 30,813			
21	Rate 2A	3,698	\$ 0.52886	1,956	\$ 0.52886	1,956			
22	Subtotal EWR			\$ 32,768		\$ 32,768	\$ -		0.0%
23	Total Revenue Residential			\$ 1,207,258		\$ 1,303,327	\$ 96,070		8.0%
Calculation of Distribution Charge:									
24	Revenue Requirement		\$ 842,082				\$ 842,082		
25	Less Annual Revenue From:						\$ -		
26	Customer Charges	\$ 208,583					\$ -		
27							\$ 842,082		
28	Distribution Revenue	\$ 633,499					\$ 842,082		
29	Divided by Throughput (MMcf)	113,541					\$ -		
30	Proposed Distribution Charge	\$ 5.5795	per Mcf						

Source:

Exh. A-16, Sch F1.1 (Rev Req); HJM-1 (Volumes); HJM-2 (Customers); Exh. A-13, Sch C4 (COG);
HJM-11 (Current IRM and EWR); Exh. A-18, Sch. H4 (Proposed IRM)

Notes:

- (1) Current IRM surcharges are based on a blended rate that combines 2026 surcharges (weighted for the final three months of 2026) and 2027 surcharges (weighted for the first nine months of 2027), as approved in Case No. U-21291.
- (2) Proposed IRM revenues are based on 2027 surcharges presented in Exhibit A-18, Schedule H4.
- (3) EWR surcharges reflect rates effective as of September 2025, as approved in the U-21558 Order.

Michigan Public Service Commission
DTE Gas Company
Calculation of the Projected Test Year Ending 09/30/2027
Current and Proposed Revenues by Rate Schedule
General Service - Rates GS-1 & GS-2
(\$000)

Case No: U-21973
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Schedule: F3
Witness: H. J. Maroun
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Line No.	(a) Description	(b) Customers/ MMcf	(c) Current Rate	(d) Pro Forma Revenue	(e) Proposed Rate	(f) Proposed Revenue	(g) Proposed Revenue Increase/(Decrease)		(h)	
							Amount	Percent		
BASE REVENUE:										
General Service - Rate GS-1										
1	Customer Charges (\$/Mo)	91,165	\$ 50.00	\$ 54,699	\$ 55.00	\$ 60,169	\$ 5,470		10.0%	
2	Distribution Charge (\$/Mcf)	<u>38,406</u>	\$ 4.0481	<u>155,472</u>	\$ 4.9694	<u>190,858</u>	\$ 35,385		22.8%	
3	Subtotal Rate GS-1	38,406		\$ 210,171		\$ 251,027	\$ 40,855		19.4%	
General Service - Rate GS-2:										
5	Customer Charges (\$/Mo)	62	\$ 925.00	\$ 685	\$ 1,050.00	\$ 777	\$ 93		13.5%	
6	Distribution Charge (\$/Mcf)	<u>752</u>	\$ 3.2981	<u>2,480.2</u>	\$ 4.1166	<u>3,096</u>	\$ 616		24.8%	
7	Subtotal Rate GS-2	<u>752</u>		<u>\$ 3,165</u>		<u>\$ 3,873</u>	\$ 708		22.4%	
8	Base Revenue General Service	<u>39,158</u>		<u>\$ 213,336</u>		<u>\$ 254,900</u>	\$ 42,271		<u>19.8%</u>	
ADDITIONAL REVENUE:										
Cost of Gas (\$/Mcf)										
9	GS-1	38,406	\$ 3.6657	\$ 140,787	\$ 3.6657	\$ 140,787				
10	GS-2	752	\$ 3.6657	\$ 2,757	\$ 3.6657	\$ 2,757				
11	Subtotal Cost of Gas			\$ 143,543		\$ 143,543	\$ -		0.0%	
IRM (1) (2) (\$/Mo)										
12	GS-1	91,165	\$ 16.02	\$ 17,525	\$ 3.73	\$ 4,086				
13	GS-2	62	16.02	12	3.73	3				
14	Subtotal IRM			\$ 17,536		\$ 4,088	\$ (13,448)		-76.7%	
EWR (3) (\$/Mcf)										
15	GS-1	38,406	\$ 0.5289	\$ 20,311	\$ 0.5289	\$ 20,311				
16	GS-2 (3)	752	\$ 0.0404	30	\$ 0.0404	30				
17				\$ 20,342		\$ 20,342	\$ -		0.0%	
18	Total Revenue General Service			<u>394,758</u>		<u>422,873</u>	\$ 28,115		7.1%	
Calculation of Distribution Charge:										
19		Rate GS-1	Rate GS-2			Rev Req: GS-1 and GS-2	\$ 254,063			
20	Revenue Requirement	\$ 254,900				Rounding	\$ -			
21	Less: Customer Charges	<u>60,946</u>				Rate Design Adjustment (4)	<u>\$ 836</u>			
22						Adj Rev Req	\$ 254,900			
23	Distribution Revenue	\$ 193,953				Revenues	<u>\$ 254,900</u>			
24	Plus GS-2 Difference	641				Check	\$ -			
25	Adj. Rev	\$ 194,595								
26	Divide by: Throughput (MMcf)	<u>39,158</u>				Variable Rate				
27						Differential				
28	Proposed Distribution Charge	\$ 4.9694	\$ 4.1166	per Mcf		\$ 0.8529				
Breakeven Analysis										
		GS-1 vs. GS-2								
		Current	Proposed							
29	Annual Fixed Charges: Small	\$ 792	\$ 705							
30	Annual Fixed Charges: Large	\$ 11,292	\$ 12,645							
31	Annual Fixed Cost Differential	\$ 10,500	\$ 11,940							
32	Variable Rate Differential	\$ 0.7500	\$ 0.8529							
33	Annual Break Even (Mcf)	<u>14,000</u>	<u>14,000</u>							

Source:

Exh. A-16, Sch F1.1 (Rev Req); HJM-1 (Volumes); HJM-2 (Customers); Exh. A-13, Sch C4 (COG);
HJM-11 (Current IRM & EWR); Exh. A-18, Sch. H4 (Proposed IRM)

Notes:

- (1) Current IRM surcharges are based on a blended rate that combines 2026 surcharges (weighted for the final three months of 2026) and 2027 surcharges (weighted for the first nine months of 2027), as approved in Case No. U-21291.
- (2) Proposed IRM revenues are based on 2027 surcharges presented in Exhibit A-18, Schedule H4.
- (3) EWR surcharges reflect rates effective as of September 2025, as approved in the U-21558 Order.
- (4) Adjustment necessary to achieve economic breakeven point of 2,183 Mcf between Rate S and GS-1

Michigan Public Service Commission
DTE Gas Company
Calculation of the Projected Test Year Ending 09/30/2027
Current and Proposed Revenues by Rate Schedule
School Service Rate S
(\$000)

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Witness: H. J. Maroun
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Line No.	(a) Description	(b) Customers / MMcf	(c) Current Rate	(d) Pro Forma Revenue	(e) Proposed Rate	(f) Proposed Revenue	(g) Proposed Revenue Increase/(Decrease) Amount	(h) Percent
BASE REVENUE:								
1	Customer Charges (\$/Mo)	214	\$ 270.00	\$ 694	\$ 285.00	\$ 732	\$ 39	5.6%
2	Distribution Charge (\$/Mcf)	1,533	\$2.6026	\$ 3,989	\$3.3840	\$ 5,187	\$ 1,198	30.0%
3	Base Revenue Rate S	1,533		\$ 4,683		\$ 5,919	\$ 1,236	26.4%
ADDITIONAL REVENUE:								
Cost of Gas (\$/Mcf)								
4	Subtotal Cost of Gas	1,533	\$ 3.6657	\$ 5,619	\$ 3.6657	\$ 5,619	\$ -	0.0%
IRM (1) (2) (\$/Mo)								
5	Subtotal IRM	214	\$ 239.04	\$ 614	\$ 62.15	\$ 160	\$ (454)	-74.0%
EWR (3) (\$/Mcf)								
6	Subtotal EWR	1,533	\$ 0.5289	\$ 811	\$ 0.5289	\$ 811	\$ -	0.0%
7	Total Revenue Rate S			\$ 11,727		\$ 12,509	\$ 782	6.7%

Calculation of Distribution Charge:

8	Revenue Requirement	\$ 5,919				Rev Req: \$ 6,755	
9	Less Annual Revenue From:					Rounding -	
10	Customer Charges	\$ 732				Rate Design Adjustment (4) (836)	
11						Adj Rev Req \$ 5,919	
12	Distribution Revenue	\$ 5,187				Revenues 5,919	
13	Divided by Throughput	1,533	MMcf			Difference \$ 0	
14	Proposed Distribution Charge	\$ 3.3840	per Mcf				
15	Proposed Customer Charge	\$ 285.00					

GS-1 vs. S

Breakeven Analysis		Current	Proposed
16	Annual Fixed Charges: GS-1	\$ 792	\$ 705
17	Annual Fixed Charges: S	\$ 6,108	\$ 4,166
18	Annual Fixed Cost Differential	\$ 5,316	\$ 3,461
19	Variable Rate Differential	\$ 1.4455	\$ 1.5854
20	Annual Break Even (Mcf)	3,678	2,183

Source:

Exh. A-16, Sch F1.1 (Rev Req); HJM-1 (Volumes); HJM-2 (Customers); Exh. A-13, Sch C4 (COG); HJM-11 (Current IRM & EWR); Exh. A-18, Sch. H4 (Proposed IRM)

Notes:

- (1) Current IRM surcharges are based on a blended rate that combines 2026 surcharges (weighted for the final three months of 2026) and 2027 surcharges (weighted for the first nine months of 2027), as approved in Case No. U-21291.
- (2) Proposed IRM revenues are based on 2027 surcharges presented in Exhibit A-18, Schedule H4.
- (3) EWR surcharges reflect rates effective as of September 2025, as approved in the U-21558 Order.
- (4) Adjustment necessary to achieve economic breakeven point of 2,183 Mcf between Rate S and GS-1

Michigan Public Service Commission
DTE Gas Company
Calculation of the Projected Test Year Ending 09/30/2027
Current and Proposed Revenues by Rate Schedule
Transportation Service Rate ST, LT, XLT and XXLT
(\$000)

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Schedule: F3
Witness: H. J. Maroun
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Line No.	(a) Description	(b) Customers/ MMcf	(c) Current Rate	(d) Pro Forma Revenue	(e) Proposed Rate	(f) Proposed Revenue	(g) Proposed Revenue Increase/(Decrease) Amount	(h) Percent
BASE REVENUE:								
Customer Charges (\$/Mo)								
1	Rate ST	433	\$ 2,780	\$ 14,445	3,300	\$ 17,147	\$ 2,702	18.71%
2	Rate LT	80	4,980	4,781	9,490	9,110	4,330	90.56%
3	Rate XLT	19	14,460	3,297	16,450	3,751	454	13.76%
4	Rate XXLT	5	178,055	10,683	194,000	11,640	957	8.96%
5	Total Customer Charges	537		\$ 33,206		\$ 41,648	\$ 8,442	25.42%
Transportation Charges (\$/Mcf)								
6	Rate ST	16,756	\$ 1,3986	\$ 23,435	\$ 2,3622	\$ 39,581	\$ 16,146	68.90%
7	Rate LT	18,961	1,0647	20,188	1,5201	28,824	8,635	42.77%
8	Rate XLT	29,367	0,8418	24,721	1,2881	37,828	13,107	53.02%
9	Rate XXLT	75,728	0,2873	21,757	0,3179	24,071	2,315	10.64%
10	Total Transportation Charges	140,812		\$ 90,101		\$ 130,304	\$ 40,203	44.62%
11	Base Revenue EUT			\$ 123,307		\$ 171,952	\$ 48,645	39.45%
ADDITIONAL REVENUE:								
IRM (1) (2) (\$/Mo)								
12	Rate ST	433	\$ 784	\$ 4,075	\$ 215	\$ 1,119		
13	Rate LT	80	3,807	3,654	1,160	1,113		
14	Rate XLT	19	14,460	3,297	7,373	1,681		
15	Rate XXLT	5	9,808	588	2,490	149		
	Subtotal IRM			\$ 11,615		\$ 4,063	\$ (7,552)	-65.0%
EWR (3) (\$/Mcf)								
16	Rate ST	16,756	\$ 0,0404	\$ 677	\$ 0,0404	\$ 677		
17	Rate LT	18,961	0,0404	766	0,0404	766		
18	Rate XLT	29,367	0,0404	1,186	0,0404	1,186		
19	Rate XXLT	75,728	0,0404	3,058	0,0404	3,058		
	Subtotal EWR			\$ 5,686		\$ 5,686	\$ -	0.0%
	Total Revenue EUT			\$ 140,608		\$ 181,701	\$ 41,094	29.2%
Calculation of Transportation Charges:								
	Rate Schedule:	ST	LT	XLT	XXLT			
20	Revenue Req Per COSS	\$ 46,748	\$ 36,946	\$ 52,624	\$ 35,725	Rev Req: EUT	\$ 172,043	
21	Discount					Rounding		
22	Rate Design Adjustment (4)	10,000	1,000	(11,000)		Remote Meter	\$ (91)	
23	Target Revenue	\$ 56,748	\$ 37,946	\$ 41,624	\$ 35,725	Rate Design Adjustment		
24	Less Remote Meter Fees	20.1	12.3	45.6		Adj Rev Req	\$ 171,952	
25	Less Customers Charges	17,147	9,110	3,751	11,640	Revenues	\$ 171,952	
26	Distribution Revenue	\$ 39,581	\$ 28,824	\$ 37,828	\$ 24,071	Difference	\$ (0)	
27	Divided by Throughput	16,756	18,961	29,367	75,728			
28	Transportation Rate (\$/Mcf)	\$ 2,3622	\$ 1,5201	\$ 1,2881	\$ 0,3179			
29	Average Cost Per Mcf	\$ 3.3867	\$ 2.0012	\$ 1.4174	\$ 0.4717			
30	Proposed Customer Charge:	\$ 3,300	\$ 9,490	\$ 16,450	\$ 194,000			
31	Year 1 IRM Charge 2027	215	1,160	7,373	2,490			
Breakeven Analysis								
		ST vs. LT		LT vs. XLT		XLT vs. XXLT		ST vs. GS-1
32	Annual Fixed Charges - ST	\$ 42,185		\$ 127,795			ST	\$ 705
33	Annual Fixed Charges - LT	\$ 127,795	LT	\$ 285,871			GS-1	\$ 42,185
34	Annual Fixed Cost Differential	\$ 85,610		\$ 158,075				\$ 41,480
35	Variable Rate Differential	\$ 0.8421		\$ 0.2320				\$2,6072
36	Annual Break Even (Mcf)	101,662		681,388				15,910
	Target Breakeven (4)	100,000		700,000				14,500
		1,662		(18,612)				1,410

Source:
Exh. A-16, Sch F1.1 (Rev Req); HJM-1 (Volumes); HJM-2 (Customers); HJM-11 (Current IRM & EWR); Exh. A-18, Sch. H4 (Proposed IRM)

- Notes:
- (1) Current IRM surcharges are based on a blended rate that combines 2026 surcharges (weighted for the final three months of 2026) and 2027 surcharges (weighted for the first nine months of 2027), as approved in Case No. U-21291.
 - (2) Proposed IRM revenues are based on 2027 surcharges presented in Exhibit A-18, Schedule H4.
 - (3) EWR surcharges reflect rates effective as of September 2025, as approved in the U-21558 Order.
 - (4) Adjustments necessary to achieve economic breakeven points between classes

Michigan Public Service Commission
DTE Gas Company
Comparison of Typical Bills Under Current and Proposed Rates Including IRM
Rate Class: Residential
Rate Schedule: A

Case No: U-21973
Exhibit: A-16
Schedule: F4
Witness: H. J. Maroun
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Line No.	(a) Distribution Volumes (Mcf)	(b) Current Monthly Bill	(c) Proposed Monthly Bill	(d) Increase/ (Decrease) (Col. c - Col. b)	(e) Percent Change (Col. d / Col. b)	(f) Current Unit Costs Per MCF (Col. b / Col. a)	(g) Proposed Unit Costs Per MCF (Col. c / Col. a)
1	0	\$ 18.02	\$ 16.18	\$ (1.84)	-10.19%		
2	5	\$ 60.12	\$ 63.81	\$ 3.70	6.15%	\$ 12.02	\$ 12.76
3	10	\$ 102.21	\$ 111.44	\$ 9.23	9.03%	\$ 10.22	\$ 11.14
4	20	\$ 186.41	\$ 206.70	\$ 20.29	10.88%	\$ 9.32	\$ 10.33
5	25	\$ 228.50	\$ 254.32	\$ 25.82	11.30%	\$ 9.14	\$ 10.17
6	30	\$ 270.60	\$ 301.95	\$ 31.35	11.59%	\$ 9.02	\$ 10.07
7	40	\$ 354.80	\$ 397.21	\$ 42.41	11.95%	\$ 8.87	\$ 9.93
8	50	\$ 438.99	\$ 492.47	\$ 53.48	12.18%	\$ 8.78	\$ 9.85
9	Customer Charge (per Month) (1)		\$ 14.50	\$ 15.40			
10	Distribution Charge (per Mcf) (2)		\$ 4.4732	\$ 5.5795			
11	Cost of Gas (per Mcf) (3)		\$ 3.6657	\$ 3.6657			
12	IRM (per Month) (4)		\$ 3.52	\$ 0.78			
13	EWR (per Mcf) (5)		\$ 0.2805	\$ 0.2805			

Source: Exhibit A-16, Schedule F3, page 1

Michigan Public Service Commission
DTE Gas Company
Comparison of Typical Bills Under Current and Proposed Rates Including IRM
Rate Class: Residential
Rate Schedule: 2A Meter Class 1
Multiple Family Dwelling Service

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Line No.	(a) Distribution Volumes (Mcf)	(b) Current Monthly Bill	(c) Proposed Monthly Bill	(d) Increase/ (Decrease) (Col. c - Col. b)	(e) Percent Change (Col. d / Col. b)	(f) Current Unit Costs Per MCF (Col. b / Col. a)	(g) Proposed Unit Costs Per MCF (Col. c / Col. a)
1	0	\$ 35.95	\$ 20.65	\$ (15.30)	-42.55%		
2	5	\$ 79.29	\$ 69.52	\$ (9.77)	-12.32%	\$ 15.86	\$ 13.90
3	10	\$ 122.63	\$ 118.39	\$ (4.24)	-3.46%	\$ 12.26	\$ 11.84
4	20	\$ 209.31	\$ 216.14	\$ 6.83	3.26%	\$ 10.47	\$ 10.81
5	25	\$ 252.65	\$ 265.01	\$ 12.36	4.89%	\$ 10.11	\$ 10.60
6	30	\$ 295.99	\$ 313.88	\$ 17.89	6.04%	\$ 9.87	\$ 10.46
7	40	\$ 382.67	\$ 411.62	\$ 28.95	7.57%	\$ 9.57	\$ 10.29
8	50	\$ 469.34	\$ 509.36	\$ 40.01	8.53%	\$ 9.39	\$ 10.19
9	60	\$ 556.02	\$ 607.10	\$ 51.08	9.19%	\$ 9.27	\$ 10.12
10	70	\$ 642.70	\$ 704.84	\$ 62.14	9.67%	\$ 9.18	\$ 10.07
11	80	\$ 729.38	\$ 802.58	\$ 73.20	10.04%	\$ 9.12	\$ 10.03
12	90	\$ 816.05	\$ 900.32	\$ 84.26	10.33%	\$ 9.07	\$ 10.00
13	100	\$ 902.73	\$ 998.06	\$ 95.33	10.56%	\$ 9.03	\$ 9.98
14	Customer Charge (per Month)	\$ 14.50	\$ 15.40				
15	Distribution Charge (per Mcf)	\$ 4.4732	\$ 5.5795				
16	Cost of Gas (per Mcf)	\$ 3.6657	\$ 3.6657				
17	IRM (per Month)	\$ 21.45	\$ 5.25				
18	EWR (per Mcf)	\$ 0.5289	\$ 0.5289				

Michigan Public Service Commission
DTE Gas Company
Comparison of Typical Bills Under Current and Proposed Rates Including IRM
Rate Class: Residential
Rate Schedule: 2A Meter Class 2
Multiple Family Dwelling Service

Case No: U-21973
Exhibit: A-16
Schedule: F4
Witness: H. J. Maroun
Page: 3 of 6

Line No.	(a) Distribution Volumes (Mcf)	(b) Current Monthly Bill	(c) Proposed Monthly Bill	(d) Increase/ (Decrease) (Col. c - Col. b)	(e) Percent Change (Col. d / Col. b)	(f) Current Unit Costs Per MCF (Col. b / Col. a)	(g) Proposed Unit Costs Per MCF (Col. c / Col. a)
1	0	\$ 71.45	\$ 60.25	\$ (11.20)	-15.67%		
2	100	\$ 938.23	\$ 1,037.66	\$ 99.43	10.60%	\$ 9.38	\$ 10.38
3	200	\$ 1,805.01	\$ 2,015.06	\$ 210.05	11.64%	\$ 9.03	\$ 10.08
4	300	\$ 2,671.79	\$ 2,992.47	\$ 320.68	12.00%	\$ 8.91	\$ 9.97
5	400	\$ 3,538.57	\$ 3,969.87	\$ 431.30	12.19%	\$ 8.85	\$ 9.92
6	500	\$ 4,405.35	\$ 4,947.27	\$ 541.93	12.30%	\$ 8.81	\$ 9.89
7	600	\$ 5,272.13	\$ 5,924.68	\$ 652.55	12.38%	\$ 8.79	\$ 9.87
8	700	\$ 6,138.91	\$ 6,902.08	\$ 763.18	12.43%	\$ 8.77	\$ 9.86
9	800	\$ 7,005.69	\$ 7,879.49	\$ 873.80	12.47%	\$ 8.76	\$ 9.85
10	900	\$ 7,872.46	\$ 8,856.89	\$ 984.43	12.50%	\$ 8.75	\$ 9.84
11	1000	\$ 8,739.24	\$ 9,834.29	\$ 1,095.05	12.53%	\$ 8.74	\$ 9.83
12	1500	\$ 13,073.14	\$ 14,721.31	\$ 1,648.18	12.61%	\$ 8.72	\$ 9.81
13	2000	\$ 17,407.03	\$ 19,608.33	\$ 2,201.30	12.65%	\$ 8.70	\$ 9.80
14	Customer Charge (per Month)		\$ 50.00	\$ 55.00			
15	Distribution Charge (per Mcf)		\$ 4.4732	\$ 5.5795			
16	Cost of Gas (per Mcf)		\$ 3.6657	\$ 3.6657			
17	IRM (per Month)		\$ 21.45	\$ 5.25			
18	EWR (per Mcf)		\$ 0.5289	\$ 0.5289			

Michigan Public Service Commission
DTE Gas Company
Comparison of Typical Bills Under Current and Proposed Rates Including IRM
Rate Class: Non-Residential General Service
Rate Schedule: GS-1

Case No: U-21973
Exhibit: A-16
Schedule: F4
Witness: H. J. Maroun
Page: 4 of 6

Line No.	(a) Distribution Volumes (Mcf)	(b) Current Monthly Bill	(c) Proposed Monthly Bill	(d) Increase/ (Decrease) (Col. c - Col. b)	(e) Percent Change (Col. d / Col. b)	(f) Current Unit Costs Per MCF (Col. b / Col. a)	(g) Proposed Unit Costs Per MCF (Col. c / Col. a)
1	0	\$ 66.02	\$ 58.73	\$ (7.28)	-11.03%		
2	5	\$ 107.23	\$ 104.55	\$ (2.68)	-2.50%	\$ 21.45	\$ 20.91
3	10	\$ 148.45	\$ 150.37	\$ 1.93	1.30%	\$ 14.84	\$ 15.04
4	20	\$ 230.87	\$ 242.02	\$ 11.14	4.83%	\$ 11.54	\$ 12.10
5	25	\$ 272.09	\$ 287.84	\$ 15.75	5.79%	\$ 10.88	\$ 11.51
6	30	\$ 313.30	\$ 333.66	\$ 20.36	6.50%	\$ 10.44	\$ 11.12
7	40	\$ 395.73	\$ 425.30	\$ 29.57	7.47%	\$ 9.89	\$ 10.63
8	50	\$ 478.15	\$ 516.94	\$ 38.78	8.11%	\$ 9.56	\$ 10.34
9	60	\$ 560.58	\$ 608.58	\$ 48.00	8.56%	\$ 9.34	\$ 10.14
10	70	\$ 643.01	\$ 700.22	\$ 57.21	8.90%	\$ 9.19	\$ 10.00
11	80	\$ 725.43	\$ 791.86	\$ 66.42	9.16%	\$ 9.07	\$ 9.90
12	90	\$ 807.86	\$ 883.50	\$ 75.64	9.36%	\$ 8.98	\$ 9.82
13	100	\$ 890.29	\$ 975.14	\$ 84.85	9.53%	\$ 8.90	\$ 9.75
14	Customer Charge (per Month)	\$ 50.00	\$ 55.00				
15	Distribution Charge (per Mcf)	\$ 4.0481	\$ 4.9694				
16	Cost of Gas (per Mcf)	\$ 3.6657	\$ 3.6657				
17	IRM (per Month)	16.02	3.73				
18	EWR (per Mcf)	\$ 0.5289	\$ 0.5289				

Source: Exhibit A-16, Schedule F3, page 2

Michigan Public Service Commission
DTE Gas Company
Comparison of Typical Bills Under Current and Proposed Rates Including IRM
Rate Class: General Service (Large Volume)
Rate Schedule: GS-2

Case No: U-21973
Exhibit: A-16
Schedule: F4
Witness: H. J. Maroun
Page: 5 of 6

Line No.	(a) Distribution Volumes (Mcf)	(b) Current Monthly Bill	(c) Proposed Monthly Bill	(d) Increase/ (Decrease) (Col. c - Col. b)	(e) Percent Change (Col. d / Col. b)	(f) Current Unit Costs Per MCF (Col. b / Col. a)	(g) Proposed Unit Costs Per MCF (Col. c / Col. a)
1	0	\$ 941.02	\$ 1,053.73	\$ 112.72	11.98%		
2	100	\$ 1,641.44	\$ 1,836.01	\$ 194.56	11.85%	\$ 16.41	\$ 18.36
3	200	\$ 2,341.86	\$ 2,618.28	\$ 276.41	11.80%	\$ 11.71	\$ 13.09
4	300	\$ 3,042.28	\$ 3,400.55	\$ 358.26	11.78%	\$ 10.14	\$ 11.34
5	400	\$ 3,742.70	\$ 4,182.82	\$ 440.11	11.76%	\$ 9.36	\$ 10.46
6	500	\$ 4,443.13	\$ 4,965.09	\$ 521.96	11.75%	\$ 8.89	\$ 9.93
7	600	\$ 5,143.55	\$ 5,747.36	\$ 603.81	11.74%	\$ 8.57	\$ 9.58
8	700	\$ 5,843.97	\$ 6,529.63	\$ 685.66	11.73%	\$ 8.35	\$ 9.33
9	800	\$ 6,544.39	\$ 7,311.90	\$ 767.51	11.73%	\$ 8.18	\$ 9.14
10	900	\$ 7,244.81	\$ 8,094.17	\$ 849.36	11.72%	\$ 8.05	\$ 8.99
11	1000	\$ 7,945.23	\$ 8,876.44	\$ 931.21	11.72%	\$ 7.95	\$ 8.88
12	Customer Charge (per Month)	\$ 925.00	\$ 1,050.00				
13	Distribution Charge (per Mcf)	\$ 3.2981	\$ 4.1166				
14	Cost of Gas (per Mcf)	\$ 3.6657	\$ 3.6657				
15	IRM (per Month)	\$ 16.02	\$ 3.73				
16	EWR (per Mcf)	\$ 0.0404	\$ 0.0404				

Source: Exhibit A-16, Schedule F3, page 2

Michigan Public Service Commission
DTE Gas Company
Comparison of Typical Bills Under Current and Proposed Rates Including IRM
Rate Class: Schools
Rate Schedule: S

Case No: U-21973
Exhibit: A-16
Schedule: F4
Witness: H. J. Maroun
Page: 6 of 6

Line No.	(a) Distribution Volumes (Mcf)	(b) Current Monthly Bill	(c) Proposed Monthly Bill	(d) Increase/ (Decrease) (Col. c - Col. b)	(e) Percent Change (Col. d / Col. b)	(f) Current Unit Costs Per MCF (Col. b / Col. a)	(g) Proposed Unit Costs Per MCF (Col. c / Col. a)
1	0	\$ 509.04	\$ 347.15	\$ (161.89)	-31.80%		
2	100	\$ 1,188.76	\$ 1,105.01	\$ (83.75)	-7.04%	\$ 11.89	\$ 11.05
3	200	\$ 1,868.48	\$ 1,862.87	\$ (5.60)	-0.30%	\$ 9.34	\$ 9.31
4	300	\$ 2,548.19	\$ 2,620.73	\$ 72.54	2.85%	\$ 8.49	\$ 8.74
5	400	\$ 3,227.91	\$ 3,378.60	\$ 150.68	4.67%	\$ 8.07	\$ 8.45
6	500	\$ 3,907.63	\$ 4,136.46	\$ 228.83	5.86%	\$ 7.82	\$ 8.27
7	600	\$ 4,587.35	\$ 4,894.32	\$ 306.97	6.69%	\$ 7.65	\$ 8.16
8	700	\$ 5,267.07	\$ 5,652.18	\$ 385.11	7.31%	\$ 7.52	\$ 8.07
9	800	\$ 5,946.79	\$ 6,410.05	\$ 463.26	7.79%	\$ 7.43	\$ 8.01
10	900	\$ 6,626.51	\$ 7,167.91	\$ 541.40	8.17%	\$ 7.36	\$ 7.96
11	1000	\$ 7,306.23	\$ 7,925.77	\$ 619.54	8.48%	\$ 7.31	\$ 7.93
12	Customer Charge (per Month)	\$ 270.00	\$ 285.00				
13	Distribution Charge (per Mcf)	\$ 2.6026	\$ 3.3840				
14	Cost of Gas (per Mcf)	\$ 3.6657	\$ 3.6657				
15	IRM (per Month)	\$ 239.04	\$ 62.15				
16	EWR (per Mcf)	\$ 0.5289	\$ 0.5289				

Source: Exhibit A-16, Schedule F3, page 3

**Michigan Public Service Commission
DTE Gas Company
Summary of Proposed Tariff Changes**

Case No.: U-21973
Exhibit: A-16
Schedule: F5
Witness: H. J Maroun
Page: 1 of 2

<u>Page</u>	<u>Sheet</u>	<u>Section</u>	<u>Description</u>
1.	C-42	C8.9 B.(1)	Update Carrying Cost Rate
2.	C-43	C8.9 B.(1)	Update Discount Rate
3.	D-2.00	D2.1	Revise IRM rates and footnote to reflect proposed IRM plan.
4.	D-2.01	D2.2	Revise IRM definition and rates for updated proposal.
5.	D-9.00	D5	Revise Customer Charge and Distribution Charge for Residential Service Rate A.
6.	D-10.00	D5	Revise Residential Income Assistance Credit
7.	D-11.00	D5	Eliminate Duplicative language
8.	D-14.00	D6	Revise Customer Charges and Distribution Charge for Multifamily Dwelling Service Rate 2A, Meter Classes I and II.
9.	D-17.00	D7	Revise Customer Charges and Distribution Charges for General Service Rates GS-1 and GS-2.
10.	D-19.00	D8	Revise Customer Charges and Distribution Charge for School Service Rate S.
11.	E-2.00	E1. E.	Eliminate OFODQ Max language
12.	E-8.00	E4.5	Eliminate OFODQ Max language
		E4.5 B	Eliminate OFODQ Max language
13.	E-13.00	E14	Eliminate restriction for contract cancellation in the initial term of the Contract.
14.	E-14.00	E14	Revise Customer Charge and Transportation Rates for Transportation Service Rates ST and LT.
15.	E-15.00	E14	Revise Customer Charge and Transportation Rates for Transportation Service Rates XLT and XXLT.

**Michigan Public Service Commission
DTE Gas Company
Summary of Proposed Tariff Changes**

Case No.: U-21291
Exhibit: A-16
Schedule: F5
Witness: H. J Maroun
Page: 2 of 2

<u>Page</u>	<u>Sheet</u>	<u>Section</u>	<u>Description</u>
16.	E-16.00	E14	Eliminate XLT XXLTL break even. Insert XXLTL qualifications.
17.	E-35.00	E25	Rates - Section B. Update Rate for contracts equal to or exceeding 365 days.
18.	E-37.00	E26	Rates - Section B. Update Rate for contracts equal to or exceeding 65 days.

M.P.S.C. No. 1 – Gas
DTE Gas Company
(Updated Carrying Cost Rate)

Revised Sheet No. C-42.00
Cancels Revised Sheet No. C-42.00

(Continued from Sheet No. C-41.00)

C8. CUSTOMER ATTACHMENT PROGRAM (Contd.)

C8.9 Model Assumptions

A. Incremental Revenues

The incremental revenues will be calculated based on current rates and a forecast of the timing and number of Customer attachments as well as Customers' annual consumption levels.

B. Incremental Costs

(1) Carrying Cost Rate

The Carrying Cost Rate will be a pre-tax weighted rate of long-term debt and common equity. The cost will be equal to and weighted in proportion to those authorized in the Company's most recent rate order. Based on DTE Gas's rate order in Case No. ~~U-21291~~U-21973, dated, ~~November 7, 2024~~_____, the Carrying Cost Rate is equal to ~~8.869.33~~_____%.

(2) Plant in Service

Plant in Service shall reflect Company's estimated cost to construct distribution mains, Customer service lines, meters and pressure regulators or regulating facilities for the Project. The timing of the facility investment, primarily service lines, will correspond with the projected timing of Customer attachments.

(3) Carrying Costs

The Carrying Costs will be the product of the average of beginning and end-of-year net plant, Plant in Service minus accumulated depreciation minus deferred taxes, multiplied by the Carrying Cost Rate, noted in paragraph (1) above.

(Continued on Sheet No. C-43.00)

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Senior Vice President
Regulatory Affairs

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Page HJM-23, Lines 10-21;
Page HJM-24, Lines 1-11

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M.P.S.C. No. 1 – Gas
DTE Gas Company
(To Update Discount Rate)

Revised Sheet No. C-43.00
Cancels Revised Sheet No. C-43.00

(Continued from Sheet No. C-42.00)

C8. CUSTOMER ATTACHMENT PROGRAM (Contd.)
C8.9 Model Assumptions (Contd.)

(4) Depreciation

Depreciation expense will be the product of Plant in Service multiplied by the appropriate prescribed depreciation rates approved for Company.

(5) Property Taxes and Other Operating Expenses

Property Taxes will be the product of Plant in Service multiplied by Company’s average property tax rate. All Other Incremental Operating Expenses will be included as identified. Incremental O&M will, at a minimum, include a proportional cost for monthly meter reading, billing and mailing.

(6) Discount Rate

The Discount Rate will be a weighted rate of long-term debt and common equity. The cost will be equal to and weighted in proportion to those authorized in the Company’s most recent rate order. Based on DTE Gas’s rate order in Case No. ~~U-21291U-21973~~, dated ~~November 7, 2024~~, the Discount Rate is equal to ~~7.127.49~~%.

C8.10 Customer Attachment Project Areas

All gas sold in any area specifically listed below is subject to the following Customer Attachment Project (CAP) charges. CAP areas and charges shall be added to or removed from the list from time to time by Company.

<u>CAP No</u>	<u>Charge</u>	<u>Cap Area</u>	<u>County</u>	<u>End</u>
5371	\$19.39	BAY VALLEY	ACME	11/2/2031
4872	\$40.99	SUB BUTTRICK PRESERVE	ADA	01/19/2032
1337	\$16.50	Crescent Rd, Harrisville	ALCONA	09/11/2025
1700	\$23.03	155 S Barlow Harrisville	ALCONA	12/13/2026
3648	\$64.25	N LAKE RITCHIE RD, FAWN	ALCONA	08/17/2030
6377	\$47.81	S POWER DR	ALCONA	08/02/2033
7003	\$60.32	935 N F 41	ALCONA	09/20/2034
7106	\$79.88	6900 BUCK RUN	ALCONA	10/11/2034
1295	\$38.34	NORTH SHORE ROAD	ALGER	08/17/2025
5451	\$16.40	NORLIN WAY,AU TRAIN REVISED	ALGER	09/07/2031
5484	\$76.40	N RIDGE RD	ALGER	11/18/2031
5995	\$14.76	E9725 OLD INDIAN TOWN RD	ALGER	10/27/2032
6196	\$18.49	CANDY CANE LN	ALGER	07/06/2033
1413	\$34.47	7642 Weiss Alpena	ALPENA	10/27/2025

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(Continued on Sheet No. C-44.00)

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M.P.S.C. No. 1 – Gas
DTE Gas Company
(Update IRM Surcharge)

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

D2. SURCHARGES AND INFRASTRUCTURE RECOVERY MECHANISM

D2.1 Surcharges

Rate Schedule No.	<u>U-21294U-21973</u> IRM Surcharge \$/Customer
A Residential	\$ <u>0.7866</u>
2A Multifamily Dwelling Class I	\$ <u>4.115.25</u>
2A Multifamily Dwelling Class II	\$ <u>4.115.25</u>
GS-1 Non-Residential General Service	\$ <u>3.063.73</u>
GS-2 Large Volume	\$ <u>3.063.73</u>
<100,000 Mcf	
>100,000 Mcf	
S School	\$ <u>46.0362.15</u>
ST Small Volume Transportation	\$ <u>151.07215.42</u>
LT Large Volume Transportation	\$ <u>733.481,159.71</u>
XLT Extra Large Volume Transportation	\$ <u>4,258.387,372.55</u>
XXLT Double Extra Large Volume Transportation	\$ <u>2,379.092,489.59</u>

C&I/EUT Exploratory Program

In addition to the above surcharges/ (credits), Rate Schedules A, 2A, GS-1, GS-2, and S are subject to Rule C7, Gas Cost Recovery, and may be subject to Rule C8, Customer Attachment Program.

The IRM is effective beginning with the first cycle of the January 2027 billing month and will change on a bill cycle basis thereafter each January based on the tables on Sheet No. D-2.01.

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Regulatory Affairs

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Page HJM-24, Lines 12-16;
Page HJM-25, Lines 1-16

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Michigan Public Service Commission
dated _____, 2026
in Case No. U-21973

M.P.S.C. No. 1 – Gas
DTE Gas Company
(Update IRM Surcharges)

Revised Sheet No. D-2.01
Cancels _____ Revised Sheet No. D-2.01

D2. SURCHARGES AND INFRASTRUCTURE RECOVERY MECHANISM (Contd.)

D2.2 Infrastructure Recovery Mechanism (IRM)

The IRM, approved in Case No. ~~U-21291~~U-21973, is implemented on a bill cycle basis. The IRM is effective beginning with the first cycle of the January ~~2025~~2027 billing month and will change on a bill cycle basis thereafter each January based on the tables on Sheet No. D-2.01. The IRM is subject to an annual reconciliation of spend process and rates below any applicable cap may change based on the outcome of this process. Once implemented, the rate will be applied on the same basis as the monthly Customer Charge. The IRM will not expire until a final rate order superseding the IRM is issued in a general rate proceeding, however the rate may be lowered as a result of the annual reconciliation.

IRM for Sales Rate Schedule Customers:

\$ per Month				
	<u>A</u>	<u>2A I/2A II</u>	<u>GS-1/ GS-2</u>	<u>S</u>
<u>2027</u>	<u>\$ 0.78</u>	<u>\$ 5.25</u>	<u>\$ 3.73</u>	<u>\$ 62.15</u>
<u>2028</u>	<u>\$ 2.63</u>	<u>\$ 17.07</u>	<u>\$ 12.17</u>	<u>\$ 200.53</u>
<u>2029</u>	<u>\$ 4.94</u>	<u>\$ 31.06</u>	<u>\$ 22.20</u>	<u>\$ 362.43</u>
<u>2030</u>	<u>\$ 7.32</u>	<u>\$ 45.31</u>	<u>\$ 32.42</u>	<u>\$ 527.22</u>
<u>2031 and beyond</u>	<u>\$ 9.84</u>	<u>\$ 59.68</u>	<u>\$ 42.78</u>	<u>\$ 691.74</u>
	<u>A</u>	<u>2A I/2A II</u>	<u>GS-1/ GS-2</u>	<u>S</u>
<u>2025</u>	<u>\$0.66</u>	<u>\$4.11</u>	<u>\$3.06</u>	<u>\$46.03</u>
<u>2026</u>	<u>\$2.26</u>	<u>\$14.18</u>	<u>\$10.57</u>	<u>\$158.80</u>
<u>2027</u>	<u>\$3.94</u>	<u>\$23.88</u>	<u>\$17.84</u>	<u>\$265.78</u>
<u>2028</u>	<u>\$5.51</u>	<u>\$32.83</u>	<u>\$24.52</u>	<u>\$366.68</u>
<u>2029-beyond</u>	<u>\$6.94</u>	<u>\$40.86</u>	<u>\$30.46</u>	<u>\$460.77</u>

IRM for Transportation Rate Schedule Customers:

\$ per Month				
	<u>ST</u>	<u>LT</u>	<u>XLT</u>	<u>XXLT</u>
<u>2027</u>	<u>\$ 215.42</u>	<u>\$ 1,159.61</u>	<u>\$ 7,372.55</u>	<u>\$ 2,489.59</u>
<u>2028</u>	<u>\$ 694.47</u>	<u>\$ 3,736.25</u>	<u>\$ 16,450.00</u>	<u>\$ 9,608.19</u>
<u>2029</u>	<u>\$ 1,254.31</u>	<u>\$ 6,745.47</u>	<u>\$ 16,450.00</u>	<u>\$ 22,057.72</u>
<u>2030</u>	<u>\$ 1,824.12</u>	<u>\$ 9,490.00</u>	<u>\$ 16,450.00</u>	<u>\$ 38,534.49</u>
<u>2031 and beyond</u>	<u>\$ 2,392.74</u>	<u>\$ 9,490.00</u>	<u>\$ 16,450.00</u>	<u>\$ 56,057.38</u>
	<u>ST</u>	<u>LT</u>	<u>XLT</u>	<u>XXLT</u>
<u>2025</u>	<u>\$151.07</u>	<u>\$733.48</u>	<u>\$4,258.38</u>	<u>\$2,379.09</u>
<u>2026</u>	<u>\$521.25</u>	<u>\$2,530.79</u>	<u>\$14,460.00</u>	<u>\$7,351.62</u>
<u>2027</u>	<u>\$871.90</u>	<u>\$4,231.86</u>	<u>\$14,460.00</u>	<u>\$10,626.69</u>
<u>2028</u>	<u>\$1,205.26</u>	<u>\$4,980.00</u>	<u>\$14,460.00</u>	<u>\$13,546.21</u>
<u>2029-beyond</u>	<u>\$1,520.25</u>	<u>\$4,980.00</u>	<u>\$14,460.00</u>	<u>\$16,003.69</u>

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Regulatory Affairs

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M.P.S.C. No. 1 – Gas
DTE Gas Company
(Update Rates)

Fifth Revised Sheet No. D-9.00
Cancels Fourth Revised Sheet No. D-9.00

D5. RESIDENTIAL SERVICE RATE A

Character of Service

Who May Take Service

Subject to limitations and restrictions contained in orders of the Commission in effect from time to time and in the Rules and Regulations of the Company, service is available under this Rate Schedule to any residential customer for residential service as hereinafter defined. As used in this Rate Schedule “residential service” means service to any residential customer for any purpose, including space heating, by individual meter in a single family dwelling or building; or in an individual flat or apartment, or to not over four households served by a single meter (one customer) in a multifamily dwelling, or portion thereof. Residential premises also used regularly for professional or business purposes (such as doctor’s office in a home, or where a small store is integral with the living space) are considered as residential where the residential use is half or more of the total gas volume; otherwise, these will be provided service under General Service Rate GS-1.

For purposes of rate application “residential usage” shall be usage consumed within an individual household, or reasonably appurtenant and related to, and normally with such a household, for such applications as space conditioning, cooking, water heating, refrigeration, clothes drying, incineration, lighting and other similar household applications.

Hours of Service

Twenty-four hours per day.

Rate

Customer Charge:	\$ 15.4014.50 per Meter per month, plus
Distribution Charge:	\$ 0.557950.44732 per 100 cubic feet
Gas Cost Recovery Charge:	As set forth on Sheet No. D-3.00

(Continued on Sheet No. D-10.00)

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Senior Vice President
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M.P.S.C. No. 1 – Gas
DTE Gas Company
(Update Rates)

Sixth Revised Sheet No. D-10.00
Cancels Fifth Revised Sheet No. D-10.00

(Continued from Sheet No. D-9.00)

D5. RESIDENTIAL SERVICE RATE A (Contd.)

Low Income Energy Assistance Programs

When service is supplied to a customer taking service under Rate A at their primary residence, where the total household income does not exceed 150% of the Federal poverty level, either the Residential Income Assistance Service Provision credit or the Low Income Assistance Credit shall be applied during all billing months. These credits will be distributed at the Company’s discretion.

To qualify for the Residential income Assistance Service Provision credit or Income Assistance Service Provision credit, a customer must verify they meet at least one of the following requirements in the past 12 months:

1. Receipt of:
 - a. Home Heating Credit
 - b. State Emergency Relief;
 - c. Michigan Energy Assistance Program
 - d. Medicaid or
 - e. Supplementary Nutrition Assistance Program
2. If a low income customer cannot verify they meet any of the above requirements, a self-attestation form must be completed and provided to the utility.

If any Low Income Energy Assistance program results in a credit balance, that credit balance may only be applied to future billed amounts related to utility service provided to that customer under Rate A. In no case will a refund of such a balance be issued.

Residential Income Assistance Service Provision

The monthly credit for the residential Income Assistance Service Provision shall be applied as follows: Income Assistance Credit: \$(~~15.40~~14.50) per meter per month consistent with and equal to the Customer Charge.

Low Income Assistance Credit Pilot

This credit is available to up to 33,000 qualifying customers taking service under Rate A.

In addition to the income verification methods listed above, a customer may qualify for the Low Income Assistance Credit Pilot with proof of Enrollment in the Company’s affordable payment plan as sanctioned under the Michigan Energy Assistance Program (MEAP) or having received one-time MEAP assistance in the past 12 months.

The monthly credit for the residential Low Income Assistance Credit shall be applied as follows: Income Assistance Credit: \$(40.00) per meter per month, consistent with the Customer Charge.

General Terms and Surcharges

This Rate is subject to all General Terms and Conditions shown on Sheet No. D-1.00 and Surcharges shown on Sheet No. D-2.00.

Maroun:
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(Continued on Sheet No. D-11.00)

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Cancels Second Revised Sheet No. D-11.00

(Continued from Sheet No. D-10.00)

D5. RESIDENTIAL SERVICE RATE A (Contd.)

~~Low Income Assistance Credit Pilot (contd.)~~

~~The monthly credit for the residential Low Income Assistance Credit shall be applied as follows: Income Assistance Credit: \$(40.00) per meter per month~~

~~General Terms and Surcharges~~

~~This Rate is subject to all General Terms and Conditions shown on Sheet No. D-1.00 and Surcharges shown on Sheet No. D-2.00.~~

Late Payment Charge and Due Date

A late payment charge of 2% of the bill, net of taxes, not compounded, may be added to any bill which is delinquent. The due date shall be 21 days following the date the bill was sent. A late payment charge will not be assessed against Customers participating in the Winter Protection Plan.

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Fifth Revised Sheet No. D-14.00
Cancels Fourth Revised Sheet No. D-14.00

(Continued from Sheet No. D-13.00)

D6. MULTIFAMILY DWELLING SERVICE RATE 2A (Contd.)

Rate

Customer Charge (One of the following charges per Customer per month will be applied).

Meter Class I:	\$15.40 14.50 per Meter per month
Meter Class II:	\$55.00 50.00 per Meter per month
Distribution Charge:	\$0.55 7950.44 732 per 100 cubic feet
Gas Cost Recovery Charge:	As set forth on Sheet No. D-3.00

General Terms and Surcharges

This Rate is subject to all General Terms and Conditions shown on Sheet No. D-1.00 and Surcharges shown on Sheet No. D-2.00.

Late Payment Charge and Due Date

A late payment charge of 2% of the bill, net of taxes, not compounded, may be added to any bill which is delinquent. The due date shall be 21 days following the date the bill was sent.

Gas Cost Recovery

This rate is subject to adjustments for fluctuations in the cost of gas as stated in Rule C7 of the applicable Rules and Regulations of Company.

Customer Contract

Applications for Gas Service shall be in writing upon application forms to be supplied by Company. Existing Customers who wish to connect space heating equipment must make written application for such service on forms to be provided by Company.

Meter Classification

For application of the Monthly Customer Charge in this Rate, Company's gas meters are designated in one of the following classifications:

- Meter Class I: Meters with a rating of 400 Cubic Feet per Hour (Cfh) or less:
- Meter Class II: Meters with a rating in excess of 400 Cubic Feet per Hour (Cfu)

(Continued on Sheet No. D-15.00)

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Fifth Revised Sheet No. D-17.00
Cancels Fourth Revised Sheet No. D-17.00

D7. GENERAL SERVICE RATE GS-1 AND GS-2

Availability

Subject to limitations and restrictions contained in orders of the Commission in effect from time to time and in the Rules and Regulations of Company, service is available under this Rate Schedule to any non-residential Customer, for any purpose.

Rates and Charges

<u>Service Category</u>	<u>Customer Charge per Month</u>	<u>Distribution Charge</u>
GS-1	\$ 55.00 50.00 per meter	\$ 0.496940 40481 per 100 cubic feet
GS-2	\$ 1,050.00 925.00 per Customer	\$ 0.411660 32981 per 100 cubic feet

Customer Charge for GS-2 is “per meter or Contiguous Facility.”

Optional Remote Meter Charge \$25.00 per Meter per Month

Customers may choose the Service Category under which they take service, consistent with the provisions of Rules C4.1, Classes of Service, C4.2, Choice of Rates and C4.3, Gas Not to be Submetered for Resale. When a Customer is selecting its initial Service Category, Company must advise them that the economic break even point between GS-1 and GS-2 is approximately 14,000 Mcf per year. After the initial selection is made, then it is Customer’s responsibility to determine when it is appropriate to switch Service Categories, as permitted by Rule C4.2, Choice of Rates.

Gas Cost Recovery Charge

The gas cost recovery factors are shown on Sheet No. D-3.00. The rate is subject to adjustments for fluctuations in the cost of gas as stated in Rule C7 of the applicable Rules and Regulations of Company.

General Terms and Surcharges

This Rate is subject to all General Terms and Conditions shown on Sheet No. D-1.00 and Surcharges shown on Sheet No. D-2.00.

Late Payment Charge and Due Date

A late payment charge of 2% of the bill, net of taxes, not compounded, may be added to any bill which is not paid on or before 21 calendar days from the date of mailing.

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Cancels Fourth Revised Sheet No. D-19.00

(Continued from Sheet No. D-18.00)

D8. SCHOOL SERVICE RATE S

Character of Service

Who May Take Service

Subject to limitations and restrictions contained in orders of the Commission in effect from time to time and in the Rules and Regulations of Company, service is available under this Rate Schedule to each individual school which shall make application for service and which shall by contract in writing agree that the gas supplied hereunder shall, during the term of such contract, be used only in the following buildings:

- A. Buildings on property exempt from taxation under the laws of the State of Michigan which are located on the same site and used for school purposes to impart instruction to children, grades kindergarten through twelve, when provided by any public, private, denominational or parochial school, including all adjacent and appurtenant buildings owned by the same Customer which are located on the same site and which constitute an integral part of such school facilities.
- B. Buildings on property exempt from taxation under the laws of the State of Michigan which are located on the same campus and used to impart instruction provided by colleges and universities when being operated under the laws of said State, including all adjacent and appurtenant buildings owned by the same Customer which are located on the same campus and which constitute an integral part of such college or university facilities.

Rate

Customer Charge:	\$285.00 270.00 per Customer per month, plus
Distribution Charge:	\$.033840 26026 per 100 cubic feet
Gas Cost Recovery Charge:	As set forth on Sheet No. D-3.00

Customer Charge is “per meter or Contiguous Facility.”

Optional Remote Meter Charge	\$25.00 per Meter per Month
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General Terms and Surcharges

This Rate is subject to all General Terms and Conditions shown on Sheet No. D-1.00 and Surcharges shown on Sheet No. D-2.00.

Late Payment Charge and Due Date

A late payment charge of 2% of the bill, net of taxes, not compounded, may be added to any bill which is not paid on or before 21 calendar days from the date of mailing.

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Cancels Revised Sheet No. E-2.00

(Continued from Sheet No. E-1.00)

Applicable for End-Use Transportation Service

E1. GENERAL PROVISIONS AND DEFINITIONS (Contd.)

E1.1 Definitions (Contd.)

Month, except as provided with respect to billing, is the period beginning at 10:00 a.m. Eastern Clock Time on the first Day of the calendar Month and ending at 10:00 a.m. Eastern Clock Time on the first Day of the next succeeding calendar Month.

Nomination or Nominating is a transmittal by Customer, or its designated agent, of request for receipt and/or delivery of gas for Customer’s account for each Gas Day that service is desired.

Operational Flow Order or OFO is a directive the Company issues, as set forth in Section E4.5, requiring customers to nominate and deliver flowing gas supply onto the Company’s system during a specified Gas Day(s). ~~This requirement will be either, 1) a maximum daily quantity (OFODQ Max), or 2) a minimum daily quantity (OFODQ Min); or 3) set based on due to a customer’s special operating conditions as determined by the Company and quantity specified in the Contract between customer and Company.~~ An OFO will be issued to alleviate conditions that, in the sole judgment of Company, jeopardize the operations or integrity of the Company’s system. An OFO may include, but is not limited to, any of the following flowing requirements:

- An OFO that is applicable to all customers,
- An OFO to customers within an affected region,
- An OFO applicable to specific large customers
- Restrictions to a customer with special operating conditions,
- Direction to deliver gas to points specified by the utility.

See Section E4.5.

~~Operational Flow Order Daily Quantity Maximum or OFODQ Max means a maximum daily quantity of gas supply that a customer will be allowed to nominate and deliver to Company during a Gas Day(s), typically during extreme warm weather or other operational constraints, and only after Company has invoked an Operational Flow Order per Section E4.5.~~

Operational Flow Order Daily Quantity Minimum or OFODQ Min means a minimum daily quantity of gas supply that a customer will be required to nominate and deliver to Company during a Gas Day(s), typically during extreme cold weather or other operational constraints, and only after Company has invoked an Operational Flow Order per Section E4.5.

Rate Schedule means the schedule of rates governing natural gas service as approved by the Commission.

Receipt Point(s) are those interconnection(s) between the facilities of Company and third parties that deliver gas to Company, for the account of Customer.

(Continued on Sheet No. E-2.01)

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M.P.S.C. No. 1 – Gas
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(To remove OFODQ Max)

_____ Revised Sheet No. E-8.00
Cancels _____ Revised Sheet No. E-8.00

(Continued from Sheet No. E-7.00)

Applicable for End-Use Transportation Service

E4. SERVICE REQUIREMENTS (Contd.)

E4.4 Measurement (Contd.)

B. All quantities of gas delivered at the Delivery Point(s) by Company to Customer, or for the account of Customer, shall be measured at the Delivery Point(s) by Company, or its designee, in accordance and in compliance with the measurement specifications contained in the Gas Measurement Report #3, Gas Measurement Report #7, Gas Measurement Report #8 and Gas Measurement Report #9.

E4.5 Notice of Operational Flow Order (OFO)

When there is adequate time during constrained operational conditions or an emergency situation, and if applicable, Company will implement an Operational Flow Order, or OFO. Unless specified otherwise in the Contract between the customer and Company, an OFO invokes the requirement that customers shall deliver at least the OFODQ Min ~~or no more than the OFODQ Max~~ as specified by the Company's OFO notice to customer.

A. DTE shall deliver any OFO notices to the person the Company is in regular communication with about Customer's day-to-day operations as it pertains to Company. If said contact is no longer in that position or is not available, it is the Customer's responsibility to update DTE with current and accurate contacts. Company shall be deemed to have provided valid notice of the OFO if notice is provided to any person at Customer with whom Company has regular communications about Customer's day-to-day operations as it pertains to DTE.

~~B. When Company has provided customer notification of an OFODQ Max, any nomination made by customer that is greater than customer's OFODQ Max shall be rejected by the Company.~~

~~C.~~ When Company has provided customer notification of an OFODQ Min requirement, customer shall be deemed non-compliant and shall be charged for Unauthorized Gas Usage set forth in Sections E7 and E14, on any Gas Day customer has not nominated and delivered to the Receipt Point(s) quantities of natural gas equal to or greater than customer's required OFODQ Min. Should a customer determine the quantity nominated and delivered was equal to or greater than the customers' usage on the gas day(s), although nominated and delivered gas did not meet OFODQ min requirements, such a customer can seek an Unauthorized Gas Usage penalty waiver by providing Company with proof within 30 days of receiving the bill containing the Unauthorized Gas Use charges. The onus is entirely on the customer to identify and contact Company should they be a candidate for such a waiver.

~~D.~~ Should a customer assert that OFODQ Min compliance caused the customer to have Excess Storage at month-end, customer may request DTE to waive any related Excess Storage Charges for the month the OFO occurred and must provide documentation supporting their claim. The onus lies with the customer to notify DTE and provide evidence within 30 days of receiving the bill containing the Excess Storage charges. The Company reserves the right to waive such an Excess Storage Charge for the following month at its sole discretion.

The payment of Unauthorized Gas Usage Charge does not create the right to exceed the levels established by an OFO.

(Continued on Sheet No. E-9.00)

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M.P.S.C. No. 1 – Gas
DTE Gas Company
(To remove restriction to initial contracts)

_____ Revised Sheet No. E-13.00
Cancels _____ Revised Sheet No. E-13.00

(Continued from Sheet No. E-12.00)

Applicable for End-Use Transportation Service

E13. TRANSPORTATION CONTRACT CANCELLATION

Customer taking service under a Transportation Service Rate Schedule may cancel its Contract ~~during the initial term of the Contract~~ if Customer provides at least 30 days prior written notice to Company that (1) Customer’s facility or business has or will permanently close or cease operations, (2) Customer is transferring ownership of the facility or business in whole, or (3) Customer is transferring service to another Rate Schedule provided Customer complies with all rules for transferring service to another Rate Schedule. Upon Contract termination, Customer will be required to pay all outstanding charges owed to Company by: (a) the payment due date posted on the final invoice for transportation service, and/or (b) as provided by the terms and conditions of the contract(s) between the Company and Customer.

If Customer taking gas service under a Transportation Service Rate Schedule, and is paying a negotiated transportation rate under the optional provision, terminates its Contract prior to the end of the term as provided above, Customer will be required to pay Company, as liquidated damages and not as a penalty, a settlement payment equal to the sum of the Transportation Charges and Monthly Customer Charges that Company would have received from the time of cancellation to the expiration date of Customer’s Contract. In calculating the settlement payment, the Transportation Charge will be applied to Customer’s then current ACQ. Any settlement payment will be discounted to present value using the London Interbanking Offer Rate (LIBOR) on the date of Contract cancellation to take into account the period between the date of cancellation and the date on which such amounts would have otherwise been due under the Contract.

(Continued on Sheet No. E-14.00)

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DTE Gas Company
(Update Rates, Provide for exception to 12 month requirement)

Third Revised Sheet No. E-14.00
Cancels Fourth Revised Sheet No. E-14.00

_(Continued from Sheet No. E-13.00)

Applicable for End-Use Transportation Service

E14. TRANSPORTATION SERVICE RATES ST, LT, XLT, XXLT

Availability

Subject to any restrictions, service under this Rate Schedule is available to any Customer who could otherwise purchase gas under any other Company Rate Schedule.

Customer that selects transportation service under this Rate Schedule must remain on this Rate Schedule for at least 12 Months before Customer is eligible for a non-Transportation Service Rate and shall continue on this rate Year to Year after the initial term of the Transportation Contract has expired unless otherwise agreed upon between Company and Customer. Customer eligible to request a return to sales rates must provide a minimum of 12 Months written notice to Company of its election to return to sales rates, unless otherwise agreed upon between company and customer.

Company reserves the right to deny a return to sales rates subject to Company’s Controlled Service Rule C2.

Under this Rate Schedule, Company will transport gas for Customer from the Receipt Point(s) to the Delivery Point(s).

Rates and Charges

	<u>Service Category</u>	
	<u>ST</u>	<u>LT</u>
Monthly Charges		
Customer Charge	\$3,300,780 Per Customer	\$9,490,980 Per Customer
	Customer Charge is “per meter or Contiguous Facility.”	
Optional Remote Meter Charge	\$25.00 Per Meter	\$25.00 Per Meter
Transportation Rates		
Cost Based Rate	\$0.236220-13986 Per Ccf	\$0.152010-10647 Per Ccf
Optional Rates:		
Maximum Rate	\$0.449440-25672 Per Ccf	\$0.281020-18994 Per Ccf
Minimum Rate	\$0.02300 Per Ccf	\$0.02300 Per Ccf

(Continued on Sheet No. E-15.00)

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M.P.S.C. No. 1 – Gas
DTE Gas Company
(Update Rates)

Fifth Revised Sheet No. E-15.00
Cancels Fourth Revised Sheet No. E-15.00

(Continued from Sheet No. E-14.00)

Applicable for End-Use Transportation Service

E14. TRANSPORTATION SERVICE RATES ST, LT, XLT, XXLT (Contd.)

Rates and Charges

		<u>Service Category</u>	
		<u>XLT</u>	<u>XXLT</u>
Customer	Monthly Charges		
	Customer Charge	\$16,450 14,460 Per Customer	\$194,000 178,055 Per
Customer Charge is “per meter or Contiguous Facility.”			
	Remote Meter Charge	\$100.00 Per Meter	\$100.00 Per Meter
Transportation Rates			
	Cost Based Rate	\$0.1288 10.08418 Per Ccf	\$0.03179 0.02873 Per Ccf
Optional Rates:			
	Maximum Rate	\$0.2396 20.15036 Per Ccf	\$0.2396 20.15036 Per Ccf
	Minimum Rate	\$0.01800 Per Ccf	\$0.00500 Per Ccf

Annual Contract Quantity or ACQ

ACQ means an annual quantity of natural gas specified in the Contract between Customer and Company, that can be delivered to Company and is based on Customer’s average 12 Month usage (determined from the last 36 Months of data), plus adjustments, approved at Company’s sole discretion, for known or expected changes or special operating conditions (including Standby Service per Section C4.5). Company will utilize their best efforts to ensure that Customer’s ACQ is reflective of Customer’s annual consumption and allow Customer all reasonable opportunities to minimize the risk of Unauthorized Gas Usage Charges.

Maximum Daily Quantity or MDQ

MDQ means a daily quantity of natural gas specified in the Contract between Customer and Company, that can be delivered to Company and is based on Customer’s highest historical Month usage (determined from the last 36 Months of data) divided by the number of days during that Month and multiplied by 110%, plus adjustments, approved at Company’s sole discretion, for known or expected changes or special operating conditions (including Standby Service per Section C4.5). Provided, however, during September, October, and November, Customer’s MDQ will be based on the daily average of Customer’s September, October, and November, usage from the previous three years, plus 1.43% of Customer’s ACQ divided by 30 days. The MDQ may be calculated and changed independently from the ACQ. Company and Customer may agree to use a different MDQ as part of the negotiations for an optional discount from the cost based rates set forth in the tariff. Company will utilize their best efforts to ensure that Customer’s MDQ is reflective of Customer’s maximum daily consumption and allow Customer all reasonable opportunities to minimize the risk of Unauthorized Gas Usage Charges.

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M.P.S.C. No. 1 – Gas
DTE Gas Company
(Update rate and remove ANR-ML7 price reporting location)

Seventh Revised Sheet No. E-35.00
Cancels Sixth Revised Sheet No. E-35.00

(Continued from Sheet No. E-15.00)

Applicable for End-Use Transportation Service

E14. TRANSPORTATION SERVICE RATES ST, LT, XLT, XXLT (Contd.)

Selection Of Service Category and Rates

When Customer is selecting its initial service category, Company must advise it that the economic break-even point between ST and LT is approximately 100,000 Mcf per year, the economic break-even point between LT and XLT is approximately 700,000 Mcf per year.

To take service under the economic break-even point between XLT and XXLT, a customer must

1) Consume a minimum of 4 Bcf annually and

a. For contiguous accounts, only the consumption from the master account will be considered when determining minimum consumption threshold;

2) Take deliveries directly from DTE Gas's transmission or high-pressure distribution system is approximately 3,500,000 Mcf per year (based on the cost based rate).

After the initial selection is made, then it is Customer's responsibility to determine when it is appropriate to switch service categories.

Customer will be charged the Cost Based Rate under its chosen Service Category, unless Customer chooses to negotiate a different rate under the Optional Rate provision. Company must advise Customer of its right to negotiate rates under the Optional Rate provision, however Company is under no obligation to offer a rate different than the Cost Based Rate. Company, at its discretion, may negotiate different transportation rates for individual Customers between the maximum and minimum rates under the appropriate Optional Rate provision. The negotiated rate may be applied to Customer's entire load or a portion of its load; however, under no circumstances can Company charge an average rate per Mcf greater than the maximum rate or less than the minimum rate. The transportation rate is charged for each Ccf of gas delivered to Customer in a given month.

Transportation Service

In accordance with Section E2.2 and Company's Nominating procedures, Customer shall advise Company of the volume of gas that Customer will cause to be delivered to Company for transportation during that Month and the Receipt Point(s) where the gas will be delivered to Company.

If in any Month, the volume of gas received by Company at the Receipt Point(s), less the allowance for company-use and lost-and-unaccounted-for gas, is more than the volume of gas taken by Customer at the Delivery Point(s), then the difference shall be retained by Company and delivered to Customer in those succeeding Months when the volume of gas received by Company is less than Customer's requirements. Should the aggregate volume of gas, less the allowance for company-use and lost-and-unaccounted-for gas, retained by Company at any Month-end exceed 10% of the Annual Contract Quantity for ST, LT, and XLT, or exceeds 5% of the Annual Contract Quantity for XXLT, then Company shall have the rights: (1) to refuse to receive any additional volume of gas for that Customer until Company has satisfied itself that the volume of gas retained for Customer is less than 10% of the Annual Contract Quantity for ST, LT, and XLT, or is less than 5% of the Annual Contract Quantity for XXLT, and (2) to charge Customer for the storage of any Month-end balance that exceeds 10% of the Annual Contract Quantity for ST, LT, and XLT, or exceeds 5% of the Annual Contract Quantity for XXLT.

If Customer does not withdraw its gas retained by Company within 60 days of the termination of the Contract, then Company shall have the right to purchase the gas from Customer at a rate of \$1.00 per MMBtu.

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Cancels Sixth Revised Sheet No. E-35.00

(Continued from Sheet No. E-34.00)

Applicable for Off-System Storage and Transportation Service

E25. TRANSPORTATION OFF-SYSTEM (FIRM) SERVICE RATE TOS-F (Contd.)

Imbalance

Company and Customer shall work to keep the gas flow in balance at all times. If at any time, the volumes of gas received by Company at the Receipt Point(s) are greater or lesser than the gas delivered at the Delivery Point(s), Company may refuse, increase or decrease deliveries to correct the imbalances. If, upon termination of a Contract, Customer has not delivered to Company quantities of gas that are equal to those Customer has taken at the Delivery Point(s), Customer must deliver the deficient volumes to Company, within 60 days of the termination of Contract, at a mutually agreeable rate of delivery. If Customer fails to correct the imbalance within the 60 day period, then Customer shall pay an Unauthorized Gas Usage Charge to Company. The charge for such Unauthorized Gas Usage shall be \$10.00 per MMBtu plus the highest price reported in Gas Daily in the midpoint column of the Daily Price Survey for the following locations for the month in which the Unauthorized Gas Use occurred: Dawn, Ontario; Chicago city-gates; Consumers city-gate; or MichCon city-gate. In the event Gas Daily discontinues its reporting such prices, the Company will select a comparable reporting service.

Gas in Kind

Company shall retain 1.00% of all gas received at the Receipt Point(s) to compensate it for the allowance for company-use and lost-and-unaccounted-for gas on Company’s system. This volume shall not be included in the quantity available for delivery to Customer. In no event will Customer pay Gas-in-Kind more than once on the same volumes.

Rates

- A. For contracts less than 365 days, a rate as mutually agreed to by Customer and Company and set forth in Contract, consisting of a demand portion and/or a commodity portion.
- B. For contracts equal to or exceeding 365 days, a rate not to exceed ~~\$0.68200.4711~~ per MMBtu, consisting of a demand portion and/or a commodity portion shall be mutually agreed to by Customer and Company and set forth in Contract.

Late Payment Charge and Due Date

A late payment charge of 2% shall be applied to the unpaid balance outstanding if the bill is not paid in full on or before the date on which the bill is due. The due date of Customer’s bill shall be 21 days from the date bill was sent.

(Continued on Sheet No. E-35.01)

Issued _____, 2026
M. A. Bruzzano
Senior Vice President
Regulatory Affairs

Detroit, Michigan

Huffman:
Page JLH-73, Lines 18-24
Maroun:
Page HJM-27, Lines 8-14

Effective for service rendered on
and after _____, 2026

Issued under authority of the
Michigan Public Service Commission
dated _____, 2026

M.P.S.C. No. 1 – Gas
DTE Gas Company
(Update rate and remove ANR-ML7 price reporting location)

Seventh Revised Sheet No. E-37.00
Cancels Sixth Revised Sheet No. E-37.00

(Continued from Sheet No. E-36.00)

Applicable for Off-System Storage and Transportation Service

E26. TRANSPORTATION OFF-SYSTEM (INTERRUPTIBLE) SERVICE RATE TOS-I (Contd.)

Imbalance

Company and Customer shall work to keep the gas flow in balance at all times. If at any time, the volumes of gas received by Company at the Receipt Point(s) are greater or lesser than the gas delivered at the Delivery Point(s), Company may refuse, increase or decrease deliveries to correct the imbalances. If, upon termination of a Contract, Customer has not delivered to Company quantities of gas that are equal to those Customer has taken at the Delivery Point(s), Customer must deliver the deficient volumes to Company, within 60 days of the termination of Contract, at a mutually agreeable rate of delivery. If Customer fails to correct the imbalance within the 60 day period, then Customer shall pay an Unauthorized Gas Usage charge to Company. The charge for such Unauthorized Gas Usage shall be \$10.00 per MMBtu plus the highest price reported in Gas Daily in the midpoint column of the Daily Price Survey for the following locations for the month in which the Unauthorized Gas Use occurred: Dawn, Ontario; Chicago city-gates; Consumers city-gate; or MichCon city-gate for all gas taken by Customer in excess of the cumulative volume delivered to Company (less Gas-in-Kind) on behalf of Customer. In the event Gas Daily discontinues its reporting such prices, the Company will select a comparable reporting service.

Gas in Kind

Company shall retain 1.00% of all gas received at the Receipt Point(s) to compensate it for the allowance for company-use and lost-and-unaccounted-for gas on Company’s system. This volume shall not be included in the quantity available for delivery to Customer. In no event will Customer pay Gas-in-Kind more than once on the same volumes.

Rates

- A. For contracts less than 365 days, a rate as mutually agreed to by Customer and Company and set forth in Contract, consisting of a demand portion and/or a commodity portion.
- B. For contracts equal to or exceeding 365 days, a rate not to exceed ~~\$0.68200-4711~~ per MMBtu, consisting of a demand portion and/or a commodity portion shall be mutually agreed to by Customer and Company and set forth in Contract.

Late Payment Charge and Due Date

A late payment charge of 2% shall be applied to the unpaid balance outstanding if the bill is not paid in full on or before the date on which the bill is due. The due date of Customer’s bill shall be 21 days from the date the bill was sent.

(Continued on Sheet No. E-37.01)

Issued _____, 2026
M. A. Bruzzano
Senior Vice President
Regulatory Affairs

Huffman:
Page JLH-73, Lines 18-24
Maroun:
Page HJM-27, Lines 8-14

Effective for service rendered on
and after _____, 2026

Issued under authority of the
Michigan Public Service Commission
dated _____, 2026

Detroit, Michigan

M.P.S.C. No. 1 – Gas
DTE Gas Company
(Update per Order U-20642)

Fourth Revised Sheet No. G-1.00
Cancels Third Revised Sheet No. G-1.00

Issued: September 18, 2020
C. Serna
Vice President
Regulatory Affairs
Detroit, Michigan

Effective for service rendered on
and after October 1, 2020

Issued under authority of the
Michigan Public Service Commission
dated August 20, 2020 in Case No. U-20642

Michigan Public Service Commission
DTE Gas Company
Derivation of Transportation Cost of Service Rate
For the 12 Months Ending September 30, 2027
(\$000)

Case No: U-21973
Exhibit: A-16
Schedule: F6
Witness: H. J. Maroun
Page: 1 of 1

(a)	(b)
Line No.	(Per WP HJM-6) Transmission Revenue Requirement
1	Plant In Service (Pg 1 of 5)
2	Transmission Plant
3	Total - Plant in Service
4	Base O&M (Pg 2 of 5)
5	Transmission
6	Lost & Company Use Gas
7	Base O&M
8	Rate Base (Pg 3 of 5)
9	Transmission Plant
10	Intangible Plant
11	General Plant
12	Intang. Plt. - Transmission
13	Plant Held FFU- Transm
14	CWIP Transmission
15	CWIP General
16	CWIP Intangible
17	Accum. Depr. - Transmission
18	Accum. Depr. - Intangible
19	Accum. Depr. - General
20	W/C - Plant in Service
21	W/C - Revenue
22	W/C - Sales Storage
23	Total Rate Base
24	Operating Expenses (Pg 4 of 5)
25	Transmission
26	Lost & Company Use Gas
27	A&G Expense
28	Depr Transmission
29	Depr General
30	Amort. Of Intangible Plt.
31	Amort. Of Reg. Debits
32	Property Taxes
33	Other Taxes
34	Payroll Taxes
35	State/City Income Taxes
36	Operating Expenses
37	Revenue Requirement (Pg 5 of 5)
38	Operating Expenses
39	Amort. Of Debt Disc.
40	AFUDC
41	Income Required
42	Federal Income Tax
43	TCJA Amortization
44	Uncollectibles
45	Total Cost of Service
46	Off System Transp. Revenue
47	Gas-in-Kind Revenue
48	Other Revenue
49	Blue Lake Pipeline
50	Vector Pipeline
51	Less: Provision for Rt Refund
52	Standby Chrgs
53	Revenue Requirement
54	Lost Gas Recovery From GCC/GCR
55	Adjusted Revenue Requirement
56	Capacity (Exh. A-16, Sch. F.1.2, Pg 2, Col. b, Line 10)
57	Commodity Rate

Michigan Public Service Commission
DTE Gas Company
Recent Utility Corporate Bond Issuances

Case No.: U-21973
Exhibit: A-17
Schedule: G2
Witness: T. J. Lepczyk
Page: 1 of 11

Line No.	Offer Date	(a) Issuer	(c) Secured (?)	(d) Credit Ratings		(f) Maturity	(g) Tenor	(h) Amount (\$MM)	(i) Coupon	(j) Spread
				Moody's	S&P					
1	01/03/23	The Connecticut Light and Power Co	FMB	A1/A+		01/15/53	30 FXD	\$500	5.250%	135
2	01/03/23	Public Service Co of Oklahoma	Senior	Baa1/A-		01/15/33	10 FXD	\$475	5.250%	150
3	01/03/23	Oklahoma Gas and Electric Co	Senior	A3/A-		01/15/33	10 FXD	\$450	5.400%	165
4	01/03/23	Entergy Arkansas LLC	FMB	A2/A		01/15/33	10 FXD	\$425	5.150%	140
5	01/03/23	Duke Energy Carolinas LLC	FMB	Aa3/A		01/15/53	30 FXD	\$900	5.350%	145
6	01/03/23	Duke Energy Carolinas LLC	FMB	Aa3/A		01/15/33	10 FXD	\$900	4.950%	120
7	01/03/23	Consumers Energy Co	FMB	A1/A		03/01/28	5 FXD	\$425	4.650%	75
8	01/03/23	Commonwealth Edison Co	FMB	A1/A		02/01/53	30 FXD	\$575	5.300%	140
9	01/03/23	Commonwealth Edison Co	FMB	A1/A		02/01/33	10 FXD	\$400	4.900%	115
10	01/04/23	Public Service Co of New Hampshire	FMB	A1/A+		01/15/53	30 FXD	\$300	5.150%	133
11	01/04/23	Pacific Gas and Electric Co	FMB	Baa3/BBB-		01/15/33	10 FXD	\$750	6.150%	250
12	01/04/23	Pacific Gas and Electric Co	FMB	Baa3/BBB-		01/15/53	30 FXD	\$750	6.750%	295
13	01/09/23	WEC Energy Group Inc	Senior	Baa1/BBB+		01/15/28	5 FXD	\$450	4.750%	112.5
14	01/09/23	WEC Energy Group Inc	Senior	Baa1/BBB+		01/09/26	3 FXD	\$650	4.750%	85
15	02/02/23	National Rural Utilities Cooperative Finance Corp	Senior	A2/A-		03/13/26	3 FXD	\$600	4.450%	70
16	02/02/23	National Rural Utilities Cooperative Finance Corp	Senior	A2/A-		03/15/28	5 FXD	\$200	4.800%	95
17	02/02/23	National Rural Utilities Cooperative Finance Corp	Senior	A1/A-		01/15/33	10 FXD	\$300	5.800%	123
18	02/06/23	Spire Missouri Inc	FMB	A1/A		02/15/33	10 FXD	\$400	4.800%	120
19	02/06/23	NextEra Energy Capital Holdings Inc	Senior	Baa1/BBB+		02/28/53	30 FXD	\$1,150	5.250%	155
20	02/06/23	NextEra Energy Capital Holdings Inc	Senior	Baa1/BBB+		02/28/33	10 FXD	\$1,000	5.050%	140
21	02/06/23	NextEra Energy Capital Holdings Inc	Senior	Baa1/BBB+		02/28/30	7 FXD	\$600	5.000%	125
22	02/06/23	NextEra Energy Capital Holdings Inc	Senior	Baa1/BBB+		02/28/28	5 FXD	\$1,250	4.900%	110
23	02/13/23	Tucson Electric Power Co	Senior	A3/A-		04/15/53	30 FXD	\$375	5.500%	175
24	02/13/23	Consumers Energy Co	FMB	A1/A		05/15/33	10 FXD	\$700	4.625%	97
25	02/16/23	Exelon	Senior	Baa2/BBB		03/15/53	30 FXD	\$650	5.600%	170
26	02/16/23	Exelon	Senior	Baa2/BBB		03/15/33	10 FXD	\$850	5.300%	145
27	02/16/23	Exelon	Senior	Baa2/BBB		03/15/28	5 FXD	\$1,000	5.150%	112.5
28	02/21/23	Constellation Energy Generation LLC	Senior	Baa2/BBB		03/01/33	10 FXD	\$600	5.800%	185
29	02/21/23	Constellation Energy Generation LLC	Senior	Baa2/BBB		03/01/28	5 FXD	\$750	5.600%	143
30	02/21/23	Consolidated Edison Co of New York Inc	Senior	Baa1/A-		03/01/33	10 FXD	\$500	5.200%	125
31	02/21/23	CenterPoint Energy Resources Corp	Senior	A3/BBB+		03/01/33	10 FXD	\$600	5.400%	145
32	02/21/23	CenterPoint Energy Resources Corp	Senior	A3/BBB+		03/01/28	5 FXD	\$600	5.250%	115
33	02/22/23	NextEra Energy Capital Holdings Inc	Senior	Baa1/BBB+		03/01/25	2 FXD	\$2,500	6.051%	120
34	02/27/23	Union Electric Co	FMB	A2/A		03/15/53	30 FXD	\$500	5.450%	155
35	02/27/23	Southern California Edison Co	FMB	A2/A-		03/01/53	30 FXD	\$450	5.700%	180
36	02/27/23	Southern California Edison Co	FMB	A2/A-		03/01/28	5 FXD	\$750	5.300%	115
37	02/27/23	PPL Electric Utilities Corp	FMB	A1/A+		05/15/53	30 FXD	\$750	5.250%	145
38	02/27/23	PPL Electric Utilities Corp	FMB	A1/A+		05/15/33	10 FXD	\$600	5.000%	120
39	02/27/23	DTE Electric Co	FMB	Aa3/A		04/01/53	30 FXD	\$600	5.400%	148
40	02/27/23	DTE Electric Co	FMB	Aa3/A		04/01/33	10 FXD	\$600	5.200%	130
41	02/27/23	American Electric Power	Senior	Baa2/BBB+		03/01/33	10 FXD	\$850	5.625%	175
42	02/28/23	Florida Power & Light Co	FMB	Aa2/A+		04/01/53	30 FXD	\$750	5.300%	140
43	02/28/23	Florida Power & Light Co	FMB	Aa2/A+		04/01/33	10 FXD	\$750	5.100%	120
44	02/28/23	Florida Power & Light Co	FMB	Aa2/A+		04/01/28	5 FXD	\$1,000	5.050%	90
45	03/01/23	KeySpan Gas East Corp	Senior	Baa1/BBB+		03/06/33	10 FXD	\$500	5.994%	200
46	03/01/23	Eversource Energy	Senior	Baa1/BBB+		03/01/28	5 FXD	\$750	5.450%	123
47	03/01/23	Edison	Jr Sub	Baa3/BB+		06/15/53	30NC5 FXD/FXD	\$500	8.125%	0.1
48	03/02/23	Northwest Natural Gas Co	FMB	A2/A-		03/15/33	10 FXD	\$100	5.750%	170
49	03/02/23	NRG Energy	Senior Secured	Baa3/BBB-		03/15/33	10 FXD	\$740	7.000%	310
50	03/02/23	Black Hills	Senior	Baa2/BBB+		03/15/28	5 FXD	\$350	5.950%	170
51	03/06/23	San Diego Gas & Electric Co	FMB	A1/A		04/01/53	30 FXD	\$800	5.350%	150
52	03/06/23	Duke Energy Progress LLC	FMB	Aa3/A		03/15/53	30 FXD	\$500	5.350%	148
53	03/06/23	Duke Energy Progress LLC	FMB	Aa3/A		03/15/33	10 FXD	\$500	5.250%	128
54	03/07/23	Evergy Kansas Central Inc	FMB	A2/A		03/15/53	30 FXD	\$400	5.700%	185
55	03/08/23	System Energy Inc	FMB	Baa1/A		04/15/28	5 FXD	\$325	6.000%	255
56	03/09/23	Louisville Gas and Electric Co	FMB	A1/A		04/15/33	10 FXD	\$400	5.450%	155
57	03/09/23	Kentucky Utilities Co	FMB	A1/A		04/15/33	10 FXD	\$400	5.450%	155

Michigan Public Service Commission
DTE Gas Company
Recent Utility Corporate Bond Issuances

Case No.: U-21973
Exhibit: A-17
Schedule: G2
Witness: T. J. Lepczyk
Page: 2 of 11

Line No.	Offer Date	(a) Issuer	(c) Secured (?)	(d) Credit Ratings		(f) Maturity	(g) Tenor	(h) Amount (\$MM)	(i) Coupon	(j) Spread
				Moody's	S&P					
58	03/09/23	Idaho Power Co	FMB	A2/A-		03/15/53	30 FXD	\$400	5.500%	170
59	03/09/23	AEP Transmission Co LLC	Senior	A2/A-		03/15/53	30 FXD	\$700	5.400%	157
60	03/20/23	Duke Energy Ohio Inc	FMB	A2/A		04/01/53	30 FXD	\$375	5.650%	200
61	03/20/23	Duke Energy Ohio Inc	FMB	A2/A		04/01/33	10 FXD	\$375	5.250%	175
62	03/20/23	CenterPoint Energy Houston Electric LLC	FMB	A2/A		04/01/53	30 FXD	\$300	5.300%	165
63	03/20/23	CenterPoint Energy Houston Electric LLC	FMB	A2/A		04/01/33	10 FXD	\$600	4.950%	150
64	03/21/23	Southwest Gas Corp	Senior	Baa1/BBB		03/23/28	5 FXD	\$300	5.450%	175
65	03/21/23	Oklahoma Gas and Electric Co	Senior	A3/A-		04/01/53	30 FXD	\$350	5.600%	190
66	03/21/23	Nisource	Senior	Baa2/BBB+		03/30/28	5 FXD	\$750	5.250%	155
67	03/21/23	Indiana Michigan Power Co	Senior	A3/A-		04/01/53	30 FXD	\$500	5.625%	190
68	03/21/23	Duke Energy Indiana LLC	FMB	Aa3/A		04/01/53	30 FXD	\$500	5.400%	170
69	03/23/23	Public Service Electric and Gas Co	Senior	A1/A		03/15/53	30 FXD	\$400	5.125%	142
70	03/23/23	Public Service Electric and Gas Co	Senior	A1/A		03/15/33	10 FXD	\$500	4.650%	122
71	03/27/23	Wisconsin Power and Light Co	Senior	A3/A		04/01/33	10 FXD	\$300	4.950%	145
72	03/27/23	Public Service Co of Colorado	FMB	A1/A		04/01/53	30 FXD	\$850	5.250%	155
73	03/28/23	Virginia Electric and Power Co	Senior	A2/BBB+		04/01/53	30 FXD	\$750	5.450%	175
74	03/28/23	Virginia Electric and Power Co	Senior	A2/BBB+		04/01/33	10 FXD	\$750	5.000%	150
75	03/28/23	Southwestern Electric Power Co	Senior	Baa2/A-		04/01/33	10 FXD	\$350	5.300%	178
76	03/28/23	Pennsylvania Electric Co	Senior	Baa1/BBB		03/30/26	3 FXD	\$300	5.150%	140
77	03/28/23	Pacific Gas and Electric Co	FMB	Baa3/BBB-		04/01/53	30 FXD	\$750	6.700%	295
78	03/28/23	Metropolitan Edison Co	Senior	A3/BBB		04/01/28	5 FXD	\$425	5.200%	160
79	04/03/23	Evergy Metro Inc	Senior	A2/A+		04/15/33	10 FXD	\$300	4.950%	153
80	04/04/23	WEC Energy Group Inc	Senior	Baa1/BBB+		01/09/26	3 FXD	\$350	4.750%	100
81	05/01/23	Northern States Power Co/MN	FMB	Aa3/A		05/15/53	30 FXD	\$800	5.100%	135
82	05/01/23	Georgia Power Co	Senior	Baa1/BBB+		05/17/33	10 FXD	\$1,000	4.950%	140
83	05/01/23	Georgia Power Co	Senior	Baa1/BBB+		05/16/28	5 FXD	\$750	4.650%	105
84	05/01/23	CenterPoint Energy Resources Corp	Senior	A3/BBB+		03/01/28	5 FXD	\$300	5.250%	100
85	05/08/23	Oncor Electric Delivery Co LLC	Senior Secured	A2/A+		NA	5 FXD	\$600	--	85
86	05/08/23	Oncor Electric Delivery Co LLC	Senior Secured	A2/A+		NA	30 FXD	\$400	--	145
87	05/08/23	Ohio Power Co	Senior	Baa1/A-		06/01/33	10 FXD	\$400	5.000%	155
88	05/08/23	Eversource Energy	Senior	Baa1/BBB+		05/15/26	3 FXD	\$450	4.750%	105
89	05/08/23	Eversource Energy	Senior	Baa1/BBB+		05/15/33	10 FXD	\$800	5.125%	162.5
90	05/08/23	Eversource Energy	Senior	Baa1/BBB+		03/01/28	5 FXD	\$550	5.450%	130
91	05/08/23	DTE Energy Co	Senior	Baa2/BBB		06/01/28	5 FXD	\$800	4.875%	140
92	05/08/23	Baltimore Gas and Electric Co	Senior	A3/A		06/01/53	30 FXD	\$700	5.400%	158
93	05/09/23	Entergy Mississippi LLC	FMB	A2/A		09/01/33	10 FXD	\$300	5.000%	148
94	05/10/23	Edison	Senior	Baa2/BBB-		11/15/28	6 FXD	\$600	5.250%	190
95	05/15/23	Southern Co/The	Senior	Baa2/BBB		06/15/33	10 FXD	\$750	5.200%	173
96	05/15/23	Southern Co/The	Senior	Baa2/BBB		06/15/28	5 FXD	\$750	4.850%	143
97	05/15/23	Puget Sound Energy Inc	FMB	A2/A-		06/01/53	30 FXD	\$400	5.448%	160
98	05/15/23	PacifiCorp	FMB	A1/A+		05/15/54	31 FXD	\$1,200	5.500%	165
99	05/15/23	National Fuel Gas	Senior	Baa3/BBB-		10/01/26	3 FXD	\$300	5.500%	190
100	05/15/23	Florida Power & Light Co	Senior	A1/A		05/15/26	3 FXD	\$500	4.450%	80
101	05/15/23	Florida Power & Light Co	FMB	Aa2/A+		05/15/33	10 FXD	\$750	4.800%	130
102	05/15/23	Florida Power & Light Co	FMB	Aa2/A+		05/15/30	7 FXD	\$500	4.625%	115
103	05/15/23	Florida Power & Light Co	FMB	Aa2/A+		05/15/28	5 FXD	\$750	4.400%	95
104	05/15/23	AES Corp/The	Senior	Baa3/BBB-		06/01/28	5 FXD	\$900	5.400%	200
105	05/17/23	Southern California Gas Co	FMB	Aa2/A+		06/01/33	10 FXD	\$500	5.200%	165
106	05/17/23	Southern California Gas Co	FMB	Aa2/A+		06/01/53	30 FXD	\$500	5.750%	190
107	05/17/23	Southern California Edison Co	FMB	A2/A-		12/01/53	30 FXD	\$700	5.875%	200
108	05/17/23	Southern California Edison Co	FMB	A2/A-		06/01/26	3 FXD	\$400	4.900%	112.5
109	05/17/23	National Rural Utilities Cooperative Finance Corp	Sub	A3/BBB		09/15/53	30NC5 FXD/FXD	\$300	7.125%	0.0715
110	05/17/23	ITC Holdings Corp	Senior	Baa2/BBB+		NA	4 FXD	\$300	--	135
111	05/17/23	ITC Holdings Corp	Senior	Baa2/BBB+		06/01/33	10 FXD	\$500	5.400%	185
112	05/17/23	Electricite de France SA	Senior	Baa1/BBB		05/23/53	30 FXD	\$1,000	6.900%	310
113	05/17/23	Electricite de France SA	Senior	Baa1/BBB		05/23/33	10 FXD	\$1,000	6.250%	270
114	05/17/23	Electricite de France SA	Senior	Baa1/BBB		05/23/28	5 FXD	\$1,000	5.700%	215
115	05/22/23	AEP Texas Inc	Senior	Baa2/A-		06/01/33	10 FXD	\$450	5.400%	172

Michigan Public Service Commission
DTE Gas Company
Recent Utility Corporate Bond Issuances

Case No.: U-21973
Exhibit: A-17
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Witness: T. J. Lepczyk
Page: 3 of 11

Line No.	Offer Date	(a) Issuer	(c) Secured (?)	(d) Credit Ratings		(f) Maturity	(g) Tenor	(h) Amount (\$MM)	(i) Coupon	(j) Spread
				Moody's	S&P					
116	05/23/23	Ameren Illinois Co	FMB	A1/A		06/01/33	10 FXD	\$500	4.950%	127
117	05/30/23	Nisource	Senior	Baa2/BBB+		06/30/33	10 FXD	\$450	5.400%	175
118	05/30/23	Nisource	Senior	Baa2/BBB+		03/30/28	5 FXD	\$300	5.250%	135
119	05/31/23	American Electric Power	Jr Sub	Baa3/BBB+		08/15/25	2 FXD	\$850	5.699%	155
120	06/01/23	Pacific Gas and Electric Co	FMB	Baa3/BBB-		06/15/33	10 FXD	\$1,150	6.400%	280
121	06/01/23	Pacific Gas and Electric Co	FMB	Baa3/BBB-		01/15/29	5 FXD	\$850	6.100%	240
122	06/01/23	Pacific Gas and Electric Co	FMB	Baa3/BBB-		01/15/53	30 FXD	\$500	6.750%	315
123	06/05/23	Piedmont Natural Gas Co Inc	Senior	A3/BBB+		06/15/33	10 FXD	\$350	5.400%	170
124	06/07/23	National Grid PLC	Senior	Baa2/BBB		06/12/33	10 FXD	\$800	5.809%	202
125	06/07/23	National Grid PLC	Senior	Baa2/BBB		06/12/28	5 FXD	\$700	5.602%	167
126	06/08/23	Palomino Funding Trust I	Senior	Baa3/BBB-		NA	5 FXD	\$450	--	337.5
127	06/08/23	Electricite de France SA	Jr Sub	Ba2/B+		12/31/99	PerpNC10 FXD/FXD	\$1,500	9.125%	0.09125
128	06/13/23	Duke Energy Carolinas LLC	FMB	Aa3/A		NA	30 FXD	\$500	4.875%	150
129	06/13/23	Duke Energy Carolinas LLC	Senior	Aa3/A		01/15/33	10 FXD	\$350	4.950%	130
130	06/15/23	PECO Energy Co	FMB	Aa3/A		06/15/33	10 FXD	\$575	4.900%	120
131	06/20/23	Sempra Energy	Senior	Baa2/BBB		08/01/33	10 FXD	\$700	5.500%	180
132	06/20/23	Sempra Energy	Senior	Baa2/BBB		08/01/26	3 FXD	\$550	5.400%	123
133	06/26/23	The Connecticut Light and Power Co	FMB	A1/A+		07/01/33	10 FXD	\$300	4.900%	120
134	06/26/23	National Rural Utilities Cooperative Finance Corp	Senior	A2/A-		09/15/28	5 FXD	\$400	5.050%	110
135	06/27/23	Arizona Public Service Co	Senior	A3/BBB+		08/01/33	10 FXD	\$500	5.550%	180
136	07/17/23	Boston Gas Co	Senior	Baa1/BBB+		07/20/53	30 FXD	\$400	6.119%	218
137	07/31/23	Xcel Energy	Senior	Baa1/BBB+		08/15/33	10 FXD	\$800	5.450%	153
138	07/31/23	Consumers Energy Co	FMB	A1/A		02/15/29	5 FXD	\$500	4.900%	75
139	08/03/23	Public Service Electric and Gas Co	FMB	A1/A		08/01/53	30 FXD	\$400	5.450%	115
140	08/03/23	Public Service Electric and Gas Co	FMB	A1/A		08/01/33	10 FXD	\$500	5.200%	103
141	08/03/23	New York State Electric & Gas Corp	Senior	Baa1/A-		08/15/33	10 FXD	\$400	5.850%	168
142	08/03/23	New York State Electric & Gas Corp	Senior	Baa1/A-		08/15/28	5 FXD	\$350	5.650%	140
143	08/07/23	San Diego Gas & Electric Co	FMB	A1/A		08/15/28	5 FXD	\$600	4.950%	90
144	08/08/23	Virginia Electric and Power Co	Senior	A2/BBB+		08/15/53	30 FXD	\$600	5.700%	150
145	08/08/23	Virginia Electric and Power Co	Senior	A2/BBB+		08/15/33	10 FXD	\$400	5.300%	128
146	08/08/23	Entergy Texas Inc	FMB	A3/A		09/01/53	30 FXD	\$350	5.800%	160
147	08/08/23	Centerpoint Energy	Senior	Baa2/BBB		08/10/26	3 FXD	\$400	5.250%	90
148	08/14/23	Entergy Arkansas LLC	FMB	A2/A		09/15/33	10 FXD	\$300	5.300%	120
149	08/15/23	Alexander Funding Trust II	Secured	Baa3/BBB-		NA	5 FXD	\$500	--	310
150	09/05/23	WEC Energy Group Inc	Senior	Baa1/BBB+		NA	3 FXD	\$600	--	93
151	09/05/23	The Southern Co	Senior	Baa2/BBB		03/15/34	10 FXD	\$700	5.700%	148
152	09/05/23	The Southern Co	Senior	Baa2/BBB		03/15/29	5 FXD	\$600	5.500%	113
153	09/05/23	MidAmerican Energy Co	FMB	Aa2/A+		09/15/54	31 FXD	\$1,000	5.850%	147
154	09/05/23	MidAmerican Energy Co	FMB	Aa2/A+		01/15/34	10 FXD	\$350	5.350%	110
155	09/05/23	Duke Energy	Senior	Baa2/BBB		09/15/53	30 FXD	\$750	6.100%	173
156	09/05/23	Duke Energy	Senior	Baa2/BBB		09/15/33	10 FXD	\$600	5.750%	150
157	09/06/23	Idaho Power Co	FMB	A2/A-		04/01/54	31 FXD	\$350	5.800%	150
158	09/06/23	Black Hills	Senior	Baa2/BBB+		05/15/34	10 FXD	\$450	6.150%	190
159	09/11/23	Southern Co Gas Capital Corp	Senior	Baa1/BBB+		09/15/33	10 FXD	\$500	5.750%	148
160	09/11/23	Nevada Power Co	Senior	A2/A+		03/15/54	30 FXD	\$500	6.000%	163
161	09/12/23	The Brooklyn Union Gas Co	Senior	Baa2/BBB+		NA	10 FXD	\$400	--	212
162	09/12/23	Monongahela Power Co	FMB	A3/A-		02/15/34	10 FXD	\$400	5.850%	160
163	09/13/23	Sierra Pacific Power Co	Senior	A2/A+		03/15/54	30 FXD	\$400	5.900%	160
164	09/13/23	CenterPoint Energy Houston Electric LLC	Secured	A2/A		10/01/28	5 FXD	\$500	5.200%	85
165	09/18/23	Public Service Co of New Hampshire	FMB	A1/A+		10/01/33	10 FXD	\$300	5.350%	105
166	09/18/23	NSTAR Electric Co	Senior	A1/A		10/01/28	5 FXD	\$150	5.600%	115
167	09/18/23	Interstate Power and Light Co	Senior	Baa1/A-		10/15/33	10 FXD	\$300	5.700%	145
168	09/26/23	Southern California Edison	FMB	A2/A-		10/01/28	5 FXD	\$550	5.650%	105
169	09/26/23	Constellation Energy Generation LLC	Senior	Baa2/BBB		10/01/53	30 FXD	\$900	6.500%	180
170	09/26/23	Constellation Energy Generation LLC	Senior	Baa2/BBB		01/15/34	10 FXD	\$500	6.125%	158
171	10/02/23	Public Service Enterprise	Senior	Baa2/BBB		10/15/33	10 FXD	\$400	6.125%	150
172	10/02/23	Public Service Enterprise	Senior	Baa2/BBB		10/15/28	5 FXD	\$600	5.875%	120
173	10/04/23	Dominion Energy South Carolina Inc	FMB	A2/A		10/15/53	30 FXD	\$500	6.250%	140

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				Moody's	S&P					
174	10/05/23	Atmos Energy	Senior	A1/A-		11/15/53	30 FXD	\$500	6.200%	133
175	10/05/23	Atmos Energy	Senior	A1/A-		11/15/33	10 FXD	\$400	5.900%	120
176	10/30/23	National Rural Utilities Cooperative Finance Corp	Senior	A2/A-		11/13/26	3 FXD	\$400	5.600%	73
177	11/06/23	PG&E	FMB	Baa3/BBB		03/15/34	10 FXD	\$800	6.950%	233
178	11/06/23	Duke Energy Florida LLC	FMB	A1/A		11/15/53	30 FXD	\$700	6.200%	142
179	11/06/23	Duke Energy Florida LLC	FMB	A1/A		11/15/33	10 FXD	\$600	5.875%	125
180	11/06/23	Alabama Power Co	Senior	A1/A-		11/15/33	10 FXD	\$300	5.850%	120
181	11/07/23	Alliant Energy Finance LLC	Senior	Baa2/BBB+		03/30/29	5 FXD	\$300	5.950%	147
182	11/08/23	Oncor Electric Delivery Co LLC	Senior Secured	A2/A+		11/15/33	10 FXD	\$800	5.650%	115
183	11/08/23	Kentucky Power Co	Senior	Baa3/BBB		11/15/33	10 FXD	\$375	7.000%	250
184	11/08/23	Eversource Energy	Senior	Baa2/BBB+		02/01/29	5 FXD	\$800	5.950%	147
185	11/08/23	Evergy Kansas Central Inc	FMB	A2/A+		11/15/33	10 FXD	\$300	5.900%	140
186	11/15/23	Ameren	Senior	Baa1/BBB		12/01/26	3 FXD	\$600	5.700%	105
187	11/16/23	SCE Trust VII	Pref	Baa3/BB+		12/31/99	1024 FXD	\$550	7.500%	7.5
188	11/20/23	Consolidated Edison Co of New York Inc	Senior	A3/A-		11/15/53	30 FXD	\$900	5.900%	137.5
189	11/20/23	Consolidated Edison Co of New York Inc	Senior	A3/A-		03/15/34	10 FXD	\$600	5.500%	115
190	11/28/23	Oglethorpe Power Corp	FMB	Baa1/BBB+		12/01/53	30 FXD	\$400	6.200%	175
191	12/04/23	Edison	Jr Sub	Baa3/BB+		06/15/54	31NC5 FXD/FXD	\$450	7.875%	0.07875
192	12/06/23	American Electric Power	Senior	Baa2/BBB+		01/15/29	5 FXD	\$1,000	5.200%	112.5
193	12/11/23	Vistra Operations Co LLC	Secured	Baa3/BBB-		10/15/33	10 FXD	\$400	6.950%	240
194	12/11/23	ONE Gas	Senior	A3/A-		04/01/29	5 FXD	\$300	5.100%	87
195	12/18/23	Ameren	Senior	Baa1/BBB		01/15/29	5 FXD	\$700	5.000%	110
196	01/02/24	Consumers Energy Co	FMB	A1/A		05/30/29	5 FXD	\$600	4.600%	73
197	01/02/24	Duke Energy	Senior	Baa2/BBB		01/05/27	3 FXD	\$550	4.850%	75
198	01/02/24	Duke Energy	Senior	Baa2/BBB		01/05/29	5 FXD	\$550	4.850%	95
199	01/02/24	PPL Electric Utilities Corp	FMB	A1/A+		02/15/34	10 FXD	\$650	4.850%	92
200	01/02/24	Virginia Electric and Power	Senior	A2/BBB+		01/15/34	10 FXD	\$500	5.000%	115
201	01/02/24	Virginia Electric and Power	Senior	A2/BBB+		01/15/54	30 FXD	\$500	5.350%	127
202	01/03/24	Duke Energy Carolinas LLC	FMB	Aa3/A		01/15/54	30 FXD	\$425	5.400%	118
203	01/03/24	Duke Energy Carolinas LLC	FMB	Aa3/A		01/15/34	10 FXD	\$575	4.850%	100
204	01/03/24	PacifiCorp	FMB	A2/A		02/15/29	5 FXD	\$500	5.100%	120
205	01/03/24	PacifiCorp	FMB	A2/A		02/15/31	7 FXD	\$700	5.300%	140
206	01/03/24	PacifiCorp	FMB	A2/A		02/15/34	10 FXD	\$1,100	5.450%	155
207	01/03/24	PacifiCorp	FMB	A2/A		01/15/55	30 FXD	\$1,500	5.800%	175
208	01/03/24	Union Electric Co	FMB	A2/A		01/15/54	30 FXD	\$350	5.250%	123
209	01/04/24	Essential Properties Realty Trust	Senior	Baa2/A-		01/15/34	10 FXD	\$500	5.375%	140
210	01/08/24	National Grid PLC	Senior	Baa2/BBB		01/11/34	10 FXD	\$750	5.418%	142
211	01/08/24	Southern California Edison Co	FMB	A2/A-		06/01/34	10 FXD	\$900	5.200%	120
212	01/08/24	Southern California Edison Co	FMB	A2/A-		02/01/27	3 FXD	\$500	4.875%	75
213	01/09/24	Liberty Utilities Finance GP 1	Senior	Baa2/BBB		01/31/29	5 FXD	\$500	5.577%	160
214	01/09/24	Liberty Utilities Finance GP 1	Senior	Baa2/BBB		01/31/34	10 FXD	\$350	5.869%	185
215	01/11/24	Niagara Mohawk Power Corp	Senior	Baa1/BBB+		01/17/34	10 FXD	\$500	5.290%	130
216	01/11/24	Niagara Mohawk Power Corp	Senior	Baa1/BBB+		01/17/54	30 FXD	\$700	5.664%	145
217	01/16/24	Connecticut Light and Power Co/The	FMB	A1/A+		01/01/29	5 FXD	\$350	4.650%	75
218	01/16/24	Eversource Energy	Senior	Baa2/BBB+		01/01/34	10 FXD	\$650	5.500%	150
219	01/16/24	Eversource Energy	Senior	Baa2/BBB+		01/01/27	3 FXD	\$350	5.000%	100
220	01/22/24	MidAmerican Energy Co	FMB	Aa2/A-		02/01/55	31 FXD	\$600	5.300%	98
221	01/24/24	National Rural Utilities Cooperative Finance Corp	Senior	A2/A-		02/05/27	3 FXD	\$600	4.800%	62.5
222	01/24/24	National Rural Utilities Cooperative Finance Corp	Senior	A2/A-		02/07/29	5 FXD	\$500	4.850%	77
223	01/24/24	National Rural Utilities Cooperative Finance Corp	Senior	A2/A-		02/07/31	7 FXD	\$450	5.000%	90
224	01/24/24	National Rural Utilities Cooperative Finance Corp	Senior	A2/A-		02/05/27	3 FRN	\$300	--	80
225	01/25/24	Tampa Electric Co	Senior	A3/BBB+		03/01/29	5 FXD	\$500	4.900%	87.5
226	01/29/24	NextEra Energy Capital Holdings Inc	Senior	Baa1/BBB+		01/29/26	2 FRN	\$600	--	76
227	01/29/24	NextEra Energy Capital Holdings Inc	Senior	Baa1/BBB+		01/29/26	2 FXD	\$1,000	4.950%	65
228	01/29/24	NextEra Energy Capital Holdings Inc	Senior	Baa1/BBB+		03/15/29	5 FXD	\$900	4.900%	95
229	01/29/24	NextEra Energy Capital Holdings Inc	Senior	Baa1/BBB+		03/15/34	10 FXD	\$1,100	5.250%	120
230	01/29/24	NextEra Energy Capital Holdings Inc	Senior	Baa1/BBB+		03/15/54	30 FXD	\$800	5.550%	125
231	01/29/24	Northern Natural Gas Co	Senior	A2/A-		02/01/54	30 FXD	\$500	5.625%	127

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232	02/05/24	Spire	Senior	Baa2/BBB+		03/01/26	2 FXD	\$350	5.300%	85
233	02/12/24	DTE Energy	Senior	Baa2/BBB		03/01/29	5 FXD	\$1,200	5.100%	103
234	02/20/24	American Water Capital Corp	Senior	Baa1/A		03/01/54	30 FXD	\$700	5.450%	107
235	02/20/24	American Water Capital Corp	Senior	Baa1/A		03/01/34	10 FXD	\$700	5.150%	92
236	02/20/24	DTE Electric Co	FMB	Aa3/A		12/01/26	3 FXD	\$500	4.850%	47
237	02/20/24	DTE Electric Co	FMB	Aa3/A		03/01/34	10 FXD	\$500	5.200%	93
238	02/20/24	Georgia Power Co	Senior	Baa1/BBB+		02/23/27	3 FXD	\$500	5.004%	62
239	02/20/24	Georgia Power Co	Senior	Baa1/BBB+		03/15/34	10 FXD	\$900	5.250%	102
240	02/21/24	Massachusetts Electric Co	Senior	Baa1/BBB+		02/26/54	30 FXD	\$400	5.867%	138
241	02/22/24	Exelon	Senior	Baa2/BBB		03/15/53	29 FXD	\$400	5.600%	130
242	02/22/24	Exelon	Senior	Baa2/BBB		03/15/29	5 FXD	\$650	5.150%	87.5
243	02/22/24	Exelon	Senior	Baa2/BBB		03/15/34	10 FXD	\$650	5.450%	115
244	02/22/24	Northern States Power Co/MN	FMB	Aa3/A+		03/15/54	30 FXD	\$700	5.400%	97
245	02/26/24	CenterPoint Energy Houston Electric LLC	Secured	A2/A		03/01/34	10 FXD	\$400	5.150%	90
246	02/26/24	Duke Energy Indiana LLC	FMB	Aa3/A		03/01/34	10 FXD	\$300	5.250%	100
247	02/26/24	Pacific Gas and Electric Co	FMB	Baa2/BBB		01/15/53	29 FXD	\$300	6.750%	170
248	02/26/24	Pacific Gas and Electric Co	FMB	Baa2/BBB		05/15/29	5 FXD	\$850	5.550%	125
249	02/26/24	Pacific Gas and Electric Co	FMB	Baa2/BBB		05/15/34	10 FXD	\$1,100	5.800%	153
250	02/26/24	Potomac Electric Power Co	FMB	A2/A		03/15/34	10 FXD	\$375	5.200%	95
251	02/26/24	Potomac Electric Power Co	FMB	A2/A		03/15/54	30 FXD	\$300	5.500%	110
252	02/26/24	Southern Co/The	Senior	Baa2/BBB		03/15/29	5 FXD	\$400	5.500%	85
253	02/26/24	Southern Co/The	Senior	Baa2/BBB		03/15/34	10 FXD	\$400	5.700%	117
254	02/26/24	Xcel Energy	Senior	Baa1/BBB+		03/15/34	10 FXD	\$800	5.500%	125
255	02/27/24	NextEra Energy Capital Holdings Inc	Jr Sub	Baa2/BBB		09/01/54	31NC5 FXD/FXD	\$1,000	6.700%	0.067
256	02/27/24	Southern California Edison Co	FMB	A2/A-		03/01/26	2 FXD	\$600	5.350%	62
257	02/27/24	Southern California Edison Co	FMB	A2/A-		06/01/29	5 FXD	\$600	5.150%	83
258	02/27/24	Southern California Edison Co	FMB	A2/A-		04/15/54	30 FXD	\$400	5.750%	135
259	02/28/24	Public Service Electric and Gas Co	FMB	A1/A		03/01/34	10 FXD	\$450	5.200%	93
260	02/28/24	Public Service Electric and Gas Co	FMB	A1/A		03/04/54	30 FXD	\$550	5.450%	108
261	03/04/24	Entergy Louisiana LLC	CTB	A2/A		03/15/34	10 FXD	\$500	5.350%	115
262	03/04/24	Entergy Louisiana LLC	CTB	A2/A		03/15/54	30 FXD	\$700	5.700%	135
263	03/04/24	Wisconsin Power and Light Co	Senior	Baa1/A		03/30/34	10 FXD	\$300	5.375%	118
264	03/07/24	Indianapolis Power & Light Co	FMB	A2/A-		04/01/54	30 FXD	\$650	5.700%	147
265	03/08/24	IPALCO Enterprises Inc	Senior Secured	Baa2/BBB-		04/01/34	10 FXD	\$400	5.750%	170
266	03/11/24	AEP Transmission Co LLC	Senior	A2/BBB+		04/01/34	10 FXD	\$450	5.150%	105
267	03/11/24	Duke Energy Ohio Inc	FMB	A2/A		03/15/54	30 FXD	\$425	5.550%	130
268	03/11/24	Duke Energy Progress LLC	FMB	Aa3/A		03/15/34	10 FXD	\$500	5.100%	103
269	03/11/24	Nisource	Senior	Baa2/BBB+		04/01/34	10 FXD	\$650	5.350%	128
270	03/11/24	Sempra	Jr Sub	Baa3/BBB-		10/01/54	31NC5 FXD/FXD	\$600	6.875%	0.06875
271	03/12/24	Constellation Energy Generation LLC	Senior	Baa2/BBB+		03/15/54	30 FXD	\$900	5.750%	145
272	03/12/24	Southern California Gas Co	FMB	Aa3/A+		04/01/54	30 FXD	\$500	5.600%	133
273	03/18/24	Appalachian Power Co	Senior	Baa1/BBB+		04/01/34	10 FXD	\$400	5.650%	135
274	03/18/24	San Diego Gas & Electric Co	FMB	A1/A		04/15/54	30 FXD	\$600	5.550%	115
275	03/19/24	Public Service Co of New Hampshire	FMB	A1/A+		10/01/33	9 FXD	\$300	5.350%	95
276	03/21/24	Narragansett Electric Co/The	Senior	A3/A-		05/01/34	10 FXD	\$500	5.350%	108
277	03/25/24	Public Service Enterprise	Senior	Baa2/BBB		04/01/29	5 FXD	\$750	5.200%	100
278	03/25/24	Public Service Enterprise	Senior	Baa2/BBB		04/01/34	10 FXD	\$500	5.450%	122
279	03/25/24	Union Electric Co	FMB	A2/A		04/01/34	10 FXD	\$500	5.200%	98
280	03/26/24	Algonquin Power & Utilities Corp	Senior	NR/BBB-		06/15/26	2 FXD	\$1,150	5.365%	115
281	04/01/24	Evergy Metro Inc	FMB	A2/A		04/01/34	10 FXD	\$300	5.400%	110
282	04/01/24	Public Service Co of Colorado	FMB	A1/A		05/15/34	10 FXD	\$450	5.350%	105
283	04/01/24	Public Service Co of Colorado	FMB	A1/A		05/15/54	30 FXD	\$750	5.750%	130
284	04/03/24	Engie SA	Senior	Baa1/BBB+		04/10/29	5 FXD	\$750	5.250%	100
285	04/03/24	Engie SA	Senior	Baa1/BBB+		04/10/34	10 FXD	\$750	5.625%	128
286	04/03/24	Engie SA	Senior	Baa1/BBB+		04/10/54	30 FXD	\$500	5.875%	148
287	04/09/24	Vistra Operations Co LLC	Senior Secured	Baa3/BBB-		04/15/34	10 FXD	\$500	6.000%	165
288	04/11/24	RWE Finance US LLC	Senior	Baa2/NR		04/16/34	10 FXD	\$1,000	5.875%	135
289	04/11/24	RWE Finance US LLC	Senior	Baa2/NR		04/16/54	30 FXD	\$1,000	6.250%	160

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Line No.	Offer Date	(a) Issuer	(c) Secured (?)	(d) Credit Ratings		(f) Maturity	(g) Tenor	(h) Amount (\$MM)	(i) Coupon	(j) Spread
				Moody's	S&P					
290	04/15/24	Electricite de France SA	Senior	Baa1/BBB		04/22/29	5 FXD	\$650	--	105
291	04/15/24	Electricite de France SA	Senior	Baa1/BBB		04/22/34	10 FXD	\$650	--	135
292	04/15/24	Electricite de France SA	Senior	Baa1/BBB		04/22/64	40 FXD	\$750	--	185
293	04/15/24	Eversource Energy	Senior	Baa2/BBB+		07/15/34	10 FXD	\$700	5.950%	135
294	04/15/24	Eversource Energy	Senior	Baa2/BBB+		04/15/31	7 FXD	\$700	5.850%	120
295	04/29/24	DTE Energy	Senior	Baa2/BBB		06/01/34	10 FXD	\$850	5.850%	125
296	05/02/24	Ohio Power Co	Senior	Baa1/BBB+		06/01/34	10 FXD	\$350	5.650%	110
297	05/06/24	Arizona Public Service Co	Senior	Baa1/BBB+		08/15/34	10 FXD	\$450	5.700%	125
298	05/06/24	Commonwealth Edison Co	FMB	A1/A		06/01/34	10 FXD	\$400	5.300%	85
299	05/06/24	Commonwealth Edison Co	FMB	A1/A		06/01/54	30 FXD	\$400	5.650%	105
300	05/06/24	Consolidated Edison Co of New York Inc	Senior	A3/A-		05/15/34	10 FXD	\$400	5.375%	90
301	05/06/24	Consolidated Edison Co of New York Inc	Senior	A3/A-		05/15/54	30 FXD	\$1,000	5.700%	110
302	05/06/24	Dominion Energy	Jr Sub	Baa3/BBB-		02/01/55	31NC10 FXD/FXD	\$1,000	6.875%	0.07
303	05/06/24	Dominion Energy	Jr Sub	Baa3/BBB-		06/01/54	30NC6 FXD/FXD	\$1,000	7.000%	0.06875
304	05/06/24	ITC Holdings Corp	Senior	Baa2/BBB+		05/09/34	10 FXD	\$400	5.650%	118
305	05/06/24	Oge Energy	Senior	Baa1/BBB		05/15/29	5 FXD	\$350	5.450%	100
306	05/06/24	Southern California Edison Co	FMB	A2/A-		06/01/31	7 FXD	\$750	5.450%	97
307	05/07/24	Entergy Arkansas LLC	FMB	A2/A		06/01/34	10 FXD	\$400	5.450%	100
308	05/07/24	Entergy Arkansas LLC	FMB	A2/A		06/01/54	30 FXD	\$400	5.750%	118
309	05/07/24	National Rural Utilities Cooperative Finance Corp	Senior	A2/A-		05/06/27	3 FXD	\$450	5.100%	48
310	05/07/24	National Rural Utilities Cooperative Finance Corp	Senior	A2/A-		06/15/29	5 FXD	\$350	5.150%	73
311	05/07/24	SCE Trust VIII	Jr Sub	Baa3/BBB-		NA	PerpNC5 FXD	\$350	6.950%	0.0695
312	05/07/24	Wisconsin Electric Power Co	Senior	A2/A-		05/15/29	5 FXD	\$350	5.000%	60
313	05/08/24	Centerpoint Energy	Senior	Baa2/BBB		06/01/29	5 FXD	\$700	5.400%	95
314	05/13/24	Black Hills	Senior	Baa2/BBB+		01/15/35	10 FXD	\$450	6.000%	155
315	05/13/24	Entergy Mississippi LLC	FMB	A2/A		06/01/54	30 FXD	\$300	5.850%	123
316	05/13/24	Nisource	Jr Sub	Baa3/BBB-		11/30/54	31NC5 FXD/FXD	\$500	6.950%	0.0695
317	05/13/24	Northern States Power Co/WI	FMB	Aa3/A		06/15/54	30 FXD	\$400	5.650%	105
318	05/15/24	Oncor Electric Delivery Co LLC	Senior Secured	A2/A+		05/15/31	7 FXD	\$500	--	80
319	05/16/24	Aes	Jr Sub	Ba1/BB		01/15/55	31NC5 FXD/FXD	\$950	7.600%	0.076
320	05/20/24	AEP Texas Inc	Senior	Baa2/BBB+		05/15/29	5 FXD	\$500	5.450%	100
321	05/20/24	AEP Texas Inc	Senior	Baa2/BBB+		05/15/34	10 FXD	\$350	5.700%	130
322	05/20/24	Entergy	Jr Sub	Baa3/BBB-		12/01/54	31NC5 FXD/FXD	\$1,200	7.125%	0.07125
323	05/20/24	NSTAR Electric Co	Senior	A2/A		06/01/34	10 FXD	\$600	5.400%	98
324	05/21/24	Evergy Missouri West Inc	FMB	A3/A		06/01/34	10 FXD	\$300	5.650%	125
325	05/28/24	Florida Power & Light Co	FMB	Aa2/A+		06/15/29	5 FXD	\$750	5.150%	60
326	05/28/24	Florida Power & Light Co	FMB	Aa2/A+		06/15/34	10 FXD	\$750	5.300%	80
327	05/28/24	Florida Power & Light Co	FMB	Aa2/A+		06/15/54	30 FXD	\$850	5.600%	95
328	05/28/24	Sempra	Jr Sub	Baa3/BBB-		10/01/54	30NC5 FXD/FRN	\$500	6.875%	0.071
329	06/03/24	Alliant Energy Finance LLC	Senior	Baa2/BBB+		06/06/27	3 FXD	\$375	5.400%	80
330	06/03/24	Baltimore Gas and Electric Co	Senior	A3/A		06/01/34	10 FXD	\$400	5.300%	93
331	06/03/24	Baltimore Gas and Electric Co	Senior	A3/A		06/01/54	30 FXD	\$400	5.650%	110
332	06/03/24	Southwestern Public Service Co	FMB	A3/A-		06/01/54	30 FXD	\$600	6.000%	150
333	06/04/24	Puget Sound Energy Inc	Senior Secured	A2/A-		06/15/34	10 FXD	\$400	5.330%	100
334	06/04/24	Puget Sound Energy Inc	Senior Secured	A2/A-		06/15/54	30 FXD	\$400	5.685%	120
335	06/05/24	Duke Energy	Senior	Baa2/BBB		06/15/34	10 FXD	\$750	5.450%	118
336	06/05/24	Duke Energy	Senior	Baa2/BBB		06/15/54	30 FXD	\$750	5.800%	140
337	06/05/24	NextEra Energy Capital Holdings Inc	Jr Sub	Baa2/BBB		06/15/54	30NC10 FXD/FXD	\$1,200	6.750%	0.0675
338	06/10/24	EUSHI Finance, Inc	Jr Sub	Ba1/BB+		12/15/54	30NC6 FXD/FXD	\$500	7.625%	0.07625
339	06/17/24	Ameren Illinois Co	FMB	A1/A		07/01/54	30 FXD	\$625	5.550%	115
340	06/17/24	American Electric Power	Jr Sub	Baa3/BBB-		12/15/54	31 FXD/FXD	\$400	7.050%	0.0705
341	06/17/24	American Electric Power	Jr Sub	Baa3/BBB-		12/15/54	31 FXD/FXD	\$600	6.950%	0.0695
342	06/17/24	CenterPoint Energy Resources Corp	Senior	A3/BBB+		07/01/34	10 FXD	\$400	5.400%	115
343	06/17/24	Nisource	Senior	Baa2/BBB+		07/01/29	5 FXD	\$600	5.200%	95
344	06/17/24	Oncor Electric Delivery Co LLC	Senior Secured	A2/A+		06/15/54	30 FXD	\$750	5.550%	115
345	06/18/24	Atmos Energy	Senior	A1/A-		11/15/33	9 FXD	\$325	5.900%	95
346	06/18/24	Enel Finance International NV	Senior	Baa1/BBB		06/26/29	5 FXD	\$1,250	5.125%	115
347	06/18/24	Enel Finance International NV	Senior	Baa1/BBB		06/26/34	10 FXD	\$750	5.500%	150

**Michigan Public Service Commission
DTE Gas Company
Recent Utility Corporate Bond Issuances**

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Line No.	Offer Date	(a) Issuer	(c) Secured (?)	(d) Credit Ratings		(f) Maturity	(g) Tenor	(h) Amount (\$MM)	(i) Coupon	(j) Spread
				Moody's	S&P					
348	06/18/24	Oglethorpe Power Corp	FMB	Baa1/BBB+		06/01/54	30 FXD	\$350	5.800%	145
349	06/24/24	Hannon Armstrong Sustainable Infrastructure Capital Inc.	Senior	Baa3/BB+		07/01/34	10 FXD	\$700	6.375%	225
350	06/25/24	Edison	Senior	Baa2/BBB-		06/15/29	5 FXD	\$500	5.450%	120
351	07/15/24	Brooklyn Union Gas Co/The	Senior	Baa2/BBB+		09/15/33	10 FXD	\$150	6.388%	167
352	07/15/24	Brooklyn Union Gas Co/The	Senior	Baa2/BBB+		07/18/54	30 FXD	\$450	6.415%	195
353	07/29/24	Consumers Energy Co	FMB	A1/A		01/15/30	5 FXD	\$700	4.700%	68
354	07/29/24	DTE Energy	Senior	Baa2/BBB		07/01/27	3 FXD	\$1,200	4.950%	80
355	08/01/24	New York State Electric & Gas Corp	Senior	Baa1/A-		08/15/34	10 FXD	\$525	5.300%	135
356	08/01/24	Public Service Electric and Gas Co	Senior	A1/A		08/01/34	10 FXD	\$600	4.850%	90
357	08/01/24	Public Service Electric and Gas Co	Senior	A1/A		08/01/54	30 FXD	\$500	5.300%	105
358	08/06/24	Entergy Louisiana LLC	FMB	A2/A		09/15/34	10 FXD	\$700	5.150%	130
359	08/06/24	PPL Capital Funding Inc	Senior	Baa1/BBB+		09/01/34	10 FXD	\$750	5.250%	143
360	08/06/24	Spire Missouri Inc	FMB	A1/A		08/15/34	10 FXD	\$320	5.150%	130
361	08/06/24	The Connecticut Light & Power Co	FMB	A1/A+		08/15/34	10 FXD	\$300	4.950%	110
362	08/06/24	Virginia Electric & Power Co	Senior	A2/BBB+		08/15/34	10 FXD	\$600	5.050%	120
363	08/06/24	Virginia Electric & Power Co	Senior	A2/BBB+		08/15/54	30 FXD	\$600	5.550%	140
364	08/07/24	Idaho Power Co	FMB	A2/A-		08/15/34	10 FXD	\$300	5.200%	125
365	08/07/24	Tucson Electric Power Co	Senior	A3/A-		09/15/34	10 FXD	\$400	5.200%	128
366	08/08/24	Essential Properties Realty Trust	Senior	Baa2/BBB+		08/15/27	3 FXD	\$500	4.800%	90
367	08/08/24	National Rural Utilities Cooperative Finance Corp	Senior	A1/A-		08/15/34	10 FXD	\$350	5.000%	110
368	08/08/24	Southern California Gas Co	FMB	Aa3/A+		09/01/34	10 FXD	\$600	5.050%	110
369	08/12/24	Centerpoint Energy	Jr Sub	Baa3/BBB-		02/15/55	31NC5 FXD/FXD	\$400	7.000%	0.07
370	08/12/24	Centerpoint Energy	Jr Sub	Baa3/BBB-		02/15/55	31NC11 FXD/FXD	\$400	6.850%	0.0685
371	08/12/24	Entergy Texas Inc	FMB	A3/A		09/15/54	30 FXD	\$350	5.550%	140
372	08/12/24	Oklahoma Gas and Electric Co	Senior	A3/A-		04/01/53	30 FXD	\$350	5.600%	130
373	08/12/24	Piedmont Natural Gas Co Inc	Senior	A3/BBB+		02/15/35	10 FXD	\$375	5.100%	120
374	08/19/24	Duke Energy	Jr Sub	Baa3/BBB-		09/01/54	30NC10 FXD/FXD	\$1,000	6.450%	0.0645
375	09/03/24	FirstEnergy Transmission LLC	Senior	Baa2/BBB+		01/15/30	5 FXD	\$400	4.550%	92
376	09/03/24	FirstEnergy Transmission LLC	Senior	Baa2/BBB+		01/15/35	10 FXD	\$400	5.000%	117
377	09/03/24	Nisource	Jr Sub	Baa3/BBB-		03/31/55	31NC11 FXD/FXD	\$500	6.375%	0.06375
378	09/03/24	PECO Energy Co	FMB	Aa3/A		09/15/54	30 FXD	\$575	5.250%	112
379	09/03/24	Pacific Gas and Electric Co	FMB	Baa2/BBB		09/04/25	1 FRN	\$1,000	--	95
380	09/03/24	Pacific Gas and Electric Co	FMB	Baa2/BBB		10/01/54	30 FXD	\$750	5.900%	180
381	09/03/24	Southern California Edison Co	FMB	A2/A-		09/06/26	2 FXD	\$500	4.400%	55
382	09/03/24	Southern Co Gas Capital Corp	Senior	Baa1/A-		09/15/34	10 FXD	\$450	4.950%	115
383	09/04/24	Interstate Power and Light Co	Senior	Baa1/A-		09/30/34	10 FXD	\$350	4.950%	120
384	09/04/24	Interstate Power and Light Co	Senior	Baa1/A-		09/30/54	30 FXD	\$300	5.450%	140
385	09/04/24	Sempra	Jr Sub	Baa3/BBB-		10/01/54	30NC10 FXD/FXD	\$1,250	6.400%	0.064
386	09/04/24	Southern Co/The	Senior	Baa2/BBB+		03/15/35	10 FXD	\$750	4.850%	110
387	09/09/24	National Rural Utilities Cooperative Finance Corp	Senior	A2/A-		06/15/29	5 FXD	\$150	5.150%	73
388	09/09/24	National Rural Utilities Cooperative Finance Corp	Senior	A2/A-		09/16/27	3 FXD	\$550	4.120%	58
389	09/09/24	National Rural Utilities Cooperative Finance Corp	Senior	A2/A-		09/16/27	3 FRN	\$300	--	82
390	09/09/24	PG&E	Jr Sub	Ba3/B		03/15/55	31NC5 FXD/FXD	\$1,000	7.375%	0.07375
391	09/09/24	Wisconsin Electric Power Co	Senior	A2/A-		10/01/34	10 FXD	\$300	4.600%	90
392	09/09/24	Wisconsin Electric Power Co	Senior	A2/A-		10/01/54	30 FXD	\$300	5.050%	108
393	09/16/24	AltaGas Ltd	Jr Sub	BB/BB+		10/15/54	30NC10 FXD/FXD	\$900	7.200%	0.072
394	09/17/24	Atmos Energy	Senior	A1/A-		12/15/54	30 FXD	\$650	5.000%	108
395	09/30/24	Union Electric Co	FMB	A2/A		03/15/55	30 FXD	\$450	5.125%	102
396	10/07/24	Eastern Energy Gas Holdings LLC	Senior	Baa1/A-		10/15/54	30 FXD	\$900	5.650%	135
397	10/29/24	Centerpoint Energy	Senior	Baa3/BBB-		05/15/55	30 FXD/FXD	\$500	6.700%	0.067
398	10/30/24	CenterPoint Energy Houston Electric LLC	Secured	A2/A-		03/01/35	10 FXD	\$500	5.050%	83
399	10/31/24	Edison	Senior	Baa2/BBB-		03/15/32	7 FXD	\$550	5.250%	105
400	11/08/24	Oncor Electric Delivery Co LLC (ONCRTX)	FMB	A2/A+		11/01/29	5 FXD	\$550	4.650%	52
401	11/14/24	Co of New York Inc	Senior	A3/A-		11/18/27	3 FRN	\$350	--	52
402	11/14/24	Co of New York Inc	Senior	A3/A-		03/15/35	10 FXD	\$450	5.125%	70
403	11/14/24	Co of New York Inc	Senior	A3/A-		03/15/55	30 FXD	\$650	5.500%	95
404	11/14/24	Dominion Energy	Jr Sub	Baa3/BBB-		05/15/55	30NC10 FXD/FXD	\$1,250	6.625%	0.06625
405	11/18/24	Sempra	Jr Sub	Baa3/BBB-		04/01/55	30NC5 FXD/FXD	\$400	6.625%	0.06625

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				Moody's	S&P					
406	11/18/24	Sempra		Jr Sub	Baa3/BBB-	04/01/55	30NC10 FXD/FXD	\$600	6.550%	0.0655
407	11/19/24	Vistra Operations Co LLC		Senior Secured	Baa3/BBB-	12/30/26	2 FXD	\$500	5.050%	80
408	11/19/24	Vistra Operations Co LLC		Senior Secured	Baa3/BBB-	12/30/34	10 FXD	\$750	5.700%	133
409	12/02/24	Evergy		Sub	Baa3/BBB-	06/01/55	30NC5 FXD/FXD	\$500	6.650%	0.0665
410	12/02/24	Georgia Power Co		Senior	A3/A	03/15/30	5 FXD	\$600	4.550%	52
411	12/02/24	Jersey Central Power & Light Co		Senior	A3/BBB	01/15/35	10 FXD	\$700	5.100%	95
412	12/02/24	Wisconsin Public Service Corp		Senior	A2/A-	12/01/29	5 FXD	\$300	4.550%	48
413	12/03/24	Public Service Co of Oklahoma		Senior	Baa1/BBB+	01/15/35	5 FXD	\$600	5.200%	52
414	12/03/24	System Energy Resources Inc		FMB	Baa2/BBB+	12/15/34	10 FXD	\$300	5.300%	112.5
415	12/04/24	The AES Corporation		Jr Sub	Ba1/BB	07/15/55	31 FXD/FXD	\$500	7.000%	0.0695
416	01/02/25	ENTERGY LOUISIANA LLC		FMB	A2/A	03/15/55	30 FXD	\$750	5.800%	103
417	01/02/25	DUKE ENERGY CAROLINAS		FMB	Aa3/A	03/15/35	10 FXD	\$700	5.250%	72
418	01/02/25	DUKE ENERGY CAROLINAS		FMB	Aa3/A	03/15/30	5 FXD	\$400	4.850%	50
419	01/02/25	DOMINION ENERGY SOUTH		FMB	A2/A	01/15/35	10 FXD	\$450	5.300%	75
420	01/06/25	Southern California Edison Co		FMB	A2/A-	03/01/55	30 FXD	\$650	5.900%	108
421	01/06/25	Southern California Edison Co		FMB	A2/A-	03/01/35	10 FXD	\$850	5.450%	85
422	01/06/25	Electricite de France SA		Senior	Baa1/BBB	01/13/55	30 FXD	\$800	6.375%	155
423	01/06/25	Electricite de France SA		Senior	Baa1/BBB	01/13/35	10 FXD	\$700	5.750%	120
424	01/06/25	Electricite de France SA		Senior	Baa1/BBB	04/22/64	40 FXD	\$400	6.000%	170
425	01/06/25	Connecticut Light and Power Co/The		FMB	A1/A	01/15/30	5 FXD	\$400	4.950%	55
426	01/07/25	Boston Gas Co		Senior	Baa1/BBB+	01/10/35	10 FXD	\$500	5.843%	115
427	01/08/25	The Southern Company		Jr Sub	Baa2/BBB	03/15/85	60 FXD	\$565	6.500%	0.065
428	01/13/25	Eastern Energy Gas Holdings LLV		Senior	Baa1/A-	01/15/55	30 FXD	\$500	6.200%	125
429	01/13/25	Eastern Energy Gas Holdings LLV		Senior	Baa1/A-	01/15/35	10 FXD	\$700	5.800%	105
430	01/22/25	Oglethorpe Power Corp		FMB	A3/BBB+	02/01/55	30 FXD	\$350	5.900%	110
431	01/30/25	NextEra Energy Capital Holdings Inc		Senior	Baa1/BBB+	03/15/55	30 FXD	\$750	5.900%	113
432	01/30/25	NextEra Energy Capital Holdings Inc		Senior	Baa1/BBB+	03/15/35	10 FXD	\$1,000	5.450%	98
433	01/30/25	NextEra Energy Capital Holdings Inc		Senior	Baa1/BBB+	03/15/32	7 FXD	\$750	5.300%	88
434	01/30/25	NextEra Energy Capital Holdings Inc		Senior	Baa1/BBB+	03/15/30	5 FXD	\$1,000	5.050%	73
435	01/30/25	NextEra Energy Capital Holdings Inc		Senior	Baa1/BBB+	02/04/28	3 FRN	\$500	--	80
436	01/30/25	NextEra Energy Capital Holdings Inc		Senior	Baa1/BBB+	02/04/28	3 FXD	\$1,000	4.850%	60
437	01/30/25	Nevada Power Co		Jr Sub	Baa2/BBB	05/15/55	30NC5 FXD/FXD	\$300	6.250%	6.25
438	02/04/25	NextEra Energy Capital Holdings Inc		Jr Sub	Baa2/BBB	08/15/55	31NC11 FXD/FXD	\$1,000	6.500%	6.5
439	02/04/25	NextEra Energy Capital Holdings Inc		Jr Sub	Baa2/BBB	08/15/55	31NC6 FXD/FXD	\$1,500	6.375%	6.375
440	02/04/25	National Rural Utilities Cooperative Finance Corp		Senior	A2/NR	02/07/30	5 FXD	\$500	4.950%	67
441	02/04/25	National Rural Utilities Cooperative Finance Corp		Senior	A2/NR	02/07/28	3 FXD	\$600	4.750%	52
442	02/13/25	Exelon		Jr Sub	Baa3/BBB	03/15/55	30 FXD/FXD	\$1,000	6.500%	6.5
443	02/18/25	Tucson Electric Power Co		Senior	A3/A-	04/15/55	30 FXD	\$300	5.900%	115
444	02/18/25	Florida Power & Light Co		FMB	Aa2/A+	03/15/65	40 FXD	\$700	5.800%	105
445	02/18/25	Florida Power & Light Co		FMB	Aa2/A+	03/15/55	30 FXD	\$950	5.700%	93
446	02/18/25	Florida Power & Light Co		FMB	Aa2/A+	06/15/34	10 FXD	\$350	5.300%	73
447	02/18/25	Exelon		Senior	Baa2/BBB+	03/15/55	30 FXD	\$500	5.875%	113
448	02/18/25	Exelon		Senior	Baa2/BBB+	03/15/31	6 FXD	\$500	5.125%	75
449	02/18/25	DTE Energy		Senior	Baa2/BBB	04/01/30	5 FXD	\$1,100	5.200%	85
450	02/18/25	CMS Energy		Jr Sub	Baa3/BBB-	06/01/55	30NC10 FXD/FXD	\$1,000	6.500%	6.5
451	02/24/25	Pacific Gas and Electric Co		FMB	Baa2/BBB	03/01/55	30 FXD	\$750	6.150%	150
452	02/24/25	Pacific Gas and Electric Co		FMB	Baa2/BBB	03/01/35	10 FXD	\$1,000	5.700%	130
453	02/24/25	NSTAR Electric Co		Senior	A2/A-	03/01/30	5 FXD	\$400	4.850%	65
454	02/24/25	NSTAR Electric Co		Senior	A2/A-	03/01/35	10 FXD	\$400	5.200%	85
455	02/24/25	Georgia Power Co		Senior	A3/A	03/15/35	10 FXD	\$700	5.200%	83
456	02/24/25	Georgia Power Co		Senior	A3/A	03/15/31	6 FXD	\$500	4.850%	65
457	02/24/25	Georgia Power Co		Senior	A3/A	09/15/26	2 FRN	\$400	--	28
458	02/24/25	Entergy Texas Inc		FMB	A3/A	04/15/35	10 FXD	\$500	5.250%	88
459	02/24/25	CenterPoint Energy Houston Electric LLC (CNP)		Senior	A2/A	03/15/30	5 FXD	\$500	4.800%	60
460	02/24/25	American Water Capital Corp		Senior	Baa1/A	03/01/35	10 FXD	\$800	5.250%	90
461	02/24/25	Ameren Illinois Co		FMB	A1/A	03/01/55	30 FXD	\$350	5.625%	95
462	02/25/25	Southern Co/The		Jr Sub	Baa2/BBB	03/15/55	30NC10 FXD/FXD	\$1,800	6.375%	6.375
463	02/27/25	Public Service Electric and Gas Co		Senior	A1/A	03/01/55	30 FXD	\$500	5.500%	98

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464	02/27/25	Public Service Electric and Gas Co	Senior	A1/A	03/01/35	10 FXD	\$400	5.050%	78
465	02/27/25	Ameren	Senior	Baa1/BBB	03/15/35	10 FXD	\$750	5.375%	110
466	03/03/25	Virginia Electric and Power Co	Senior	A2/BBB+	03/15/55	30 FXD	\$625	5.650%	120
467	03/03/25	Virginia Electric and Power Co	Senior	A2/BBB+	03/15/35	10 FXD	\$625	5.150%	100
468	03/03/25	Tampa Electric Co	Senior	A3/BBB+	03/01/35	10 FXD	\$600	5.150%	100
469	03/03/25	Duke Energy Progress LLC	FMB	Aa3/A	03/15/55	30 FXD	\$750	5.550%	110
470	03/03/25	Duke Energy Progress LLC	FMB	Aa3/A	03/15/35	10 FXD	\$850	5.050%	90
471	03/03/25	Duke Energy Progress LLC	FMB	Aa3/A	03/06/27	2 FXD	\$500	4.350%	40
472	03/06/25	Public Service Enterprise Group	Senior	Baa2/BBB	03/15/35	10 FXD	\$400	5.400%	112
473	03/06/25	Public Service Enterprise Group	Senior	Baa2/BBB	03/15/30	5 FXD	\$600	4.900%	87
474	03/06/25	Evergy Kansas Central Inc	Senior	Baa1/BBB+	03/13/28	3 FXD	\$300	4.700%	73
475	03/06/25	Evergy Kansas Central Inc	FMB	A2/A	03/15/35	10 FXD	\$300	5.250%	100
476	03/06/25	Dominion Energy	Senior	Baa2/BBB	03/15/35	10 FXD	\$700	5.450%	120
477	03/06/25	Dominion Energy	Senior	Baa2/BBB	06/15/30	5 FXD	\$800	5.000%	95
478	03/10/25	Puget Energy Inc	Senior	Baa3/BBB-	03/15/35	10 FXD	\$600	5.725%	150
479	03/10/25	Idaho Power Co	Senior Secured	A2/A-	03/15/55	30 FXD	\$400	--	120
480	03/10/25	Entergy Mississippi LLC	FMB	A2/A	04/15/55	30 FXD	\$600	5.800%	125
481	03/11/25	Edison	Senior	Baa2/BBB-	03/15/30	5 FXD	\$550	6.250%	250
482	03/12/25	Southern California Edison Co	FMB	A2/A-	09/15/55	30 FXD	\$650	6.200%	160
483	03/12/25	Southern California Edison Co	FMB	A2/A-	03/15/30	5 FXD	\$850	5.250%	118
484	03/12/25	Northwest Natural Holding Co	Jr Sub	NR/BBB	09/15/55	30NC10 FXD/FXD	\$325	7.000%	7
485	03/12/25	NorthWestern	FMB	A3/A-	03/21/30	5 FXD	\$400	5.073%	100
486	03/12/25	AES Corp/The	Senior	Baa3/BBB-	03/15/32	7 FXD	\$800	5.800%	160
487	03/17/25	Public Service Co of Colorado	FMB	A1/A	05/15/55	30 FXD	\$600	5.850%	125
488	03/17/25	Public Service Co of Colorado	FMB	A1/A	05/15/34	10 FXD	\$400	5.350%	108
489	03/17/25	Oncor Electric Delivery Co LLC	Senior Secured	A2/A+	04/01/55	30 FXD	\$650	5.800%	120
490	03/17/25	Oncor Electric Delivery Co LLC	Senior Secured	A2/A+	04/01/35	10 FXD	\$650	5.350%	105
491	03/17/25	Oncor Electric Delivery Co LLC	Senior Secured	A2/A+	03/20/27	2 FXD	\$500	4.500%	45
492	03/18/25	Xcel Energy	Senior	Baa1/BBB	04/15/35	10 FXD	\$750	5.600%	135
493	03/18/25	Xcel Energy	Senior	Baa1/BBB	03/21/28	3 FXD	\$350	4.750%	85
494	03/18/25	PacifiCorp	Jr Sub	Baa2/BBB+	09/15/55	30NC5 FXD/FXD	\$850	7.375%	7.375
495	03/20/25	Nisource	Senior	Baa2/BBB+	04/01/55	30 FXD	\$750	5.850%	130
496	03/20/25	Alabama Power	Senior	A1/A	04/02/35	10 FXD	\$500	5.100%	88
497	03/24/25	San Diego Gas & Electric Co	FMB	A1/A	04/15/35	10 FXD	\$850	5.400%	110
498	03/24/25	Oklahoma Gas and Electric Co	Senior	A3/A-	04/01/55	30 FXD	\$350	5.800%	118
499	03/26/25	Union Electric Co	FMB	A2/A	04/15/35	7 FXD	\$500	5.250%	92
500	04/14/25	Trans-Allegheny Interstate Line Co	Senior	A3/A-	01/15/31	5 FXD	\$600	5.000%	100
501	04/28/25	Northern States Power Co/MN	FMB	Aa3/A	05/15/55	30 FXD	\$500	5.650%	98
502	04/28/25	Northern States Power Co/MN	FMB	Aa3/A	05/15/35	10 FXD	\$600	5.050%	83
503	04/28/25	Consumers Energy Co	FMB	A1/A	05/15/35	10 FXD	\$625	5.050%	87
504	04/28/25	Consumers Energy Co	FMB	A1/A	01/15/31	5 FXD	\$500	4.500%	67
505	04/29/25	Southwestern Public Service Co	FMB	A3/A-	05/15/35	10 FXD	\$500	5.300%	115
506	05/05/25	Entergy Arkansas LLC	FMB	A2/A	06/01/34	10 FXD	\$300	5.450%	97
507	05/05/25	DTE Electric Co	FMB	Aa3/A	05/15/55	30 FXD	\$500	5.850%	103
508	05/05/25	DTE Electric Co	FMB	Aa3/A	05/15/35	10 FXD	\$500	5.250%	93
509	05/05/25	DTE Electric Co	FMB	Aa3/A	05/14/27	2 FXD	\$300	4.250%	45
510	05/06/25	Dominion Energy	Senior	Baa2/BBB	05/18/28	3 FXD	\$1,000	4.600%	87.5
511	05/12/25	Southern California Gas Co	FMB	Aa3/A	06/15/55	30 FXD	\$500	6.000%	120
512	05/12/25	Southern California Gas Co	FMB	Aa3/A	06/15/35	10 FXD	\$600	5.450%	105
513	05/12/25	Pinnacle West Capital	Senior	Baa2/BBB	05/15/30	5 FXD	\$400	5.150%	108
514	05/12/25	Pinnacle West Capital	Senior	Baa2/BBB	05/15/28	3 FXD	\$400	4.900%	93
515	05/12/25	NextEra Energy Capital Holdings, Inc.	Jr Sub	Baa2/BBB	06/01/85	60NC5 FXD	\$850	6.500%	6.5
516	05/12/25	Duke Energy Indiana	FMB	Aa3/A	05/15/55	30 FXD	\$300	5.900%	103
517	05/12/25	Commonwealth Edison Co	FMB	A1/A	06/01/55	30 FXD	\$725	5.950%	105
518	05/12/25	AEP Transmission Co LLC	Senior	A2/BBB+	06/15/35	10 FXD	\$425	5.375%	100
519	05/13/25	Interstate Power and Light Co	Senior	Baa1/BBB+	06/29/35	10 FXD	\$600	5.600%	115
520	05/13/25	Capital Power	Senior	NA/BBB-	06/01/35	10 FXD	\$500	6.189%	170
521	05/13/25	Capital Power	Senior	NA/BBB-	06/01/28	3 FXD	\$700	5.257%	125

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				Moody's	S&P					
522	05/13/25	Baltimore Gas and Electric Co	Senior	A3/A		06/01/35	10 FXD	\$650	5.450%	98
523	05/14/25	PSEG Power LLC	Senior	Baa2/BBB		05/15/35	10 FXD	\$500	5.750%	127
524	05/14/25	PSEG Power LLC	Senior	Baa2/BBB		05/15/30	5 FXD	\$750	5.200%	107
525	05/20/25	Snam SpA	Senior	Baa2/A-		05/28/55	30 FXD	\$500	--	155
526	05/20/25	Snam SpA	Senior	Baa2/A-		05/28/35	10 FXD	\$750	--	130
527	05/20/25	Snam SpA	Senior	Baa2/A-		05/28/30	5 FXD	\$750	--	105
528	05/21/25	Ohio Edison Co	Senior	A3/BBB+		12/15/29	5 FXD	\$300	4.950%	80
529	05/28/25	System Energy Resources Inc	Senior	Baa2/BBB+		12/15/34	10 FXD	\$240	5.300%	120
530	06/02/25	Pacific Gas and Electric Co	FMB	Baa1/BBB		08/15/35	10 FXD	\$850	6.000%	160
531	06/02/25	Pacific Gas and Electric Co	FMB	Baa1/BBB		06/04/28	3 FXD	\$400	5.000%	115
532	06/02/25	Duke Energy Ohio Inc	FMB	A2/A		06/15/35	10 FXD	\$350	5.300%	88
533	06/12/25	HA Sustainable Infrastructure Capital Inc	Senior	Baa3/BBB-		07/15/35	10 FXD	\$400	6.750%	245
534	06/12/25	HA Sustainable Infrastructure Capital Inc	Senior	Baa3/BBB-		01/15/31	6 FXD	\$600	6.150%	225
535	06/16/25	Public Service Co of New Hampshire	FMB	A1/A-		07/01/28	3 FXD	\$300	4.400%	50
536	06/16/25	Atmos Energy	Senior	A2/A-		08/15/35	10 FXD	\$500	5.200%	80
537	06/23/25	Public Service Co of Oklahoma	Senior	Baa1/BBB+		01/15/36	10 FXD	\$800	5.450%	115
538	06/23/25	Nisource	Senior	Baa2/BBB+		07/15/35	10 FXD	\$900	5.350%	105
539	06/23/25	Nisource	Senior	Baa2/BBB+		04/01/55	30 FXD	\$750	5.850%	115
540	06/30/25	Niagara Mohawk Power Corp	Senior	Baa1/BBB+		07/03/55	30 FXD	\$750	5.996%	120
541	06/30/25	Niagara Mohawk Power Corp	Senior	Baa1/BBB+		10/03/30	5 FXD	\$500	4.647%	85
542	08/04/25	Public Service Co of Colorado	Senior	A1/A		09/15/35	10 FXD	\$800	5.150%	97
543	08/04/25	Public Service Co of Colorado	Senior	A1/A		05/15/55	30 FXD	\$200	5.850%	102
544	08/04/25	New York State Electric & Gas Corp	Senior	Baa1/A-		08/15/35	10 FXD	\$300	5.050%	88
545	08/04/25	Louisville Gas and Electric Co	FMB	A1/A		08/15/55	30 FXD	\$700	5.850%	105
546	08/04/25	Kentucky Utilities Co	FMB	A1/A		08/15/55	30 FXD	\$700	5.850%	105
547	08/04/25	Dominion Energy	Jr Sub	Baa3/BBB-		02/15/56	31NC10 FXD/FXD	\$700	6.200%	6.2
548	08/04/25	Dominion Energy	Jr Sub	Baa3/BBB-		02/15/56	31NC5 FXD/FXD	\$825	6.000%	6
549	08/04/25	CenterPoint Energy Houston Electric LLC	FMB	A2/A		08/15/35	10 FXD	\$600	4.950%	80
550	08/05/25	Essential Properties Realty Trust	Senior	Baa2/BBB+		08/15/35	10 FXD	\$500	5.250%	107
551	08/06/25	PPL Electric Utilities Corp	Senior	A1/A+		08/15/55	30 FXD	\$500	5.550%	77
552	08/06/25	Indianapolis Power & Light Co	Senior	A2/A-		08/15/35	10 FXD	\$350	5.050%	85
553	08/06/25	American Water Capital Corp	Senior	Baa1/A		09/01/55	30 FXD	\$900	5.700%	90
554	08/07/25	Public Service Electric and Gas Co	FMB	A1/A		08/15/35	10 FXD	\$450	4.900%	67
555	08/11/25	FirstEnergy Transmission LLC	Senior	Baa2/BBB+		01/15/33	7 FXD	\$450	4.750%	77
556	08/11/25	Evergy Metro Inc	FMB	A2/A		08/15/35	10 FXD	\$400	5.125%	87
557	08/12/25	Arizona Public Service Co	Senior	Baa1/BBB+		08/15/55	30 FXD	\$700	5.900%	105
558	08/12/25	Arizona Public Service Co	Senior	Baa1/BBB+		08/15/34	10 FXD	\$250	5.700%	90
559	08/14/25	Dayton Power & Light Co/The	FMB	Baa1/BBB+		08/15/30	5 FXD	\$375	4.550%	75
560	08/19/25	National Rural Utilities Cooperative Finance Corp	Senior	A2/NR		08/25/28	3 FXD	\$700	4.150%	48
561	08/26/25	Sempra	Jr Sub	Baa3/BBB-		04/01/56	31NC5 FXD/FXD	\$800	6.375%	6.375
562	09/02/25	Jersey Central Power & Light Co	Senior	A3/BBB-		01/15/29	3 FXD	\$350	4.150%	55
563	09/02/25	Jersey Central Power & Light Co	Senior	A3/BBB-		01/15/36	10 FXD	\$500	5.150%	90
564	09/02/25	Jersey Central Power & Light Co	Senior	A3/BBB-		01/15/31	5 FXD	\$500	4.400%	70
565	09/02/25	Alabama Power Co	Senior	A1/A		03/15/31	5 FXD	\$500	4.300%	60
566	09/03/25	Southern Co Gas Capital Corp	Senior	Baa1/A-		09/15/35	10 FXD	\$425	5.100%	93
567	09/03/25	Southern Co Gas Capital Corp	Senior	Baa1/A-		09/15/28	3 FXD	\$425	4.050%	52
568	09/03/25	PECO Energy Co	Secured	Aa3/AAA		09/15/55	30 FXD	\$525	5.650%	75
569	09/03/25	PECO Energy Co	Secured	Aa3/AAA		09/15/35	10 FXD	\$525	4.875%	68
570	09/03/25	New England Power Co	Senior	A3/BBB+		09/08/55	30 FXD	\$350	5.848%	95
571	09/04/25	Sierra Pacific Power Co	Jr Sub	Baa3/BBB		12/15/55	30NC5 FXD/FXD	\$450	6.200%	6.2
572	09/08/25	Virginia Electric and Power Co	Senior	A3/BBB+		09/15/55	30 FXD	\$875	5.600%	92
573	09/08/25	Virginia Electric and Power Co	Senior	A3/BBB+		09/15/35	10 FXD	\$825	4.900%	87
574	09/08/25	Puget Sound Energy Inc	FMB	A2/A-		09/15/55	30 FXD	\$500	5.598%	88
575	09/08/25	Interstate Power and Light Co	Senior	Baa1/BBB+		10/01/55	30 FXD	\$300	5.600%	95
576	09/08/25	Duke Energy	Senior	Baa2/BBB		09/15/55	30 FXD	\$750	5.700%	103
577	09/08/25	Duke Energy	Senior	Baa2/BBB		09/15/35	10 FXD	\$1,000	4.950%	95
578	09/08/25	DTE Energy	Senior	Baa3/BBB-		10/01/85	60NC5 FXD	\$600	6.250%	6.25
579	09/09/25	DTE Energy	Senior	Baa2/BBB		10/01/35	10 FXD	\$550	5.050%	102

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				Moody's	S&P					
580	09/09/25	DTE Energy	Senior	Baa2/BBB		06/01/28	3 FXD	\$250	4.875%	57
581	09/15/25	RWE Finance US LLC	Senior	Baa2/NR		09/18/55	30 FXD	\$1,000	5.875%	125
582	09/15/25	RWE Finance US LLC	Senior	Baa2/NR		09/18/35	10 FXD	\$1,000	5.125%	115
583	09/15/25	Ameren Illinois Co	FMB	A1/A		03/01/55	30 FXD	\$350	5.625%	75
584	09/16/25	Southern Power Co	Senior	Baa1/BBB+		10/01/35	10 FXD	\$550	4.900%	90
585	09/16/25	Southern Power Co	Senior	Baa1/BBB+		10/01/30	5 FXD	\$550	4.250%	70
586	09/18/25	Wisconsin Electric Power	Senior	A2/A-		10/15/30	5 FXD	\$500	4.150%	50
587	09/18/25	Wisconsin Electric Power	Senior	A2/A-		10/15/30	5 FXD	\$500	--	50
588	09/18/25	Atmos Energy	Senior	A2/A-		01/15/56	30 FXD	\$600	5.450%	77
589	09/22/25	AEP Texas Inc	Senior	Baa3/BBB+		10/15/55	30 FXD	\$750	5.850%	112
590	09/22/25	AEP Texas Inc	Senior	Baa3/BBB+		05/15/34	10 FXD	\$150	5.700%	97
591	09/23/25	Enel Finance International NV	Senior	Baa1/BBB+		09/30/55	30 FXD	\$1,000	5.750%	112
592	09/23/25	Enel Finance International NV	Senior	Baa1/BBB+		09/30/35	10 FXD	\$1,250	5.000%	100
593	09/23/25	Enel Finance International NV	Senior	Baa1/BBB+		09/30/30	5 FXD	\$1,250	--	80
594	09/23/25	Enel Finance International NV	Senior	Baa1/BBB+		09/30/28	3 FXD	\$1,000	4.125%	65
595	09/23/25	Enel Finance International NV	Senior	Baa1/BBB+		09/30/30	5 FXD	\$1,250	--	80
596	09/23/25	American Electric Power	Jr Sub	Baa3/BBB-		03/15/56	30NC10 FXD/FXD	\$900	6.050%	6.05
597	09/23/25	American Electric Power	Jr Sub	Baa3/BBB-		03/15/56	30NC5 FXD/FXD	\$1,100	5.800%	5.8
598	09/23/25	Alliant Energy	Jr Sub	Baa3/BBB-		04/01/56	31NC6 FXD/FXD	\$725	5.750%	5.75
599	09/24/25	NRG Energy	Senior Secured	Baa3/BBB-		10/15/35	10 FXD	\$625	5.407%	127
600	09/24/25	NRG Energy	Senior Secured	Baa3/BBB-		10/15/30	5 FXD	\$625	4.734%	102
601	09/24/25	Georgia Power Co	Senior	A3/A		10/01/55	30 FXD	\$500	5.500%	77
602	09/24/25	Georgia Power Co	Senior	A3/A		10/01/28	3 FXD	\$750	4.000%	42
603	09/24/25	Georgia Power Co	Senior	A3/A		03/15/31	7 FXD	\$250	4.850%	57
604	09/25/25	Black Hills	Senior	Baa2/BBB-		01/31/31	5 FXD	\$450	4.550%	80
605	09/29/25	Xcel Energy	Jr Sub	Baa2/BBB-		10/15/85	60NC5 FXD	\$900	6.250%	6.25
606	09/29/25	Eushi Finance Inc	Jr Sub	Ba1/BB+		04/01/56	30NC5 FXD/FXD	\$750	6.250%	6.25
607	09/29/25	Dominion Energy	Jr Sub	Baa3/BBB-		02/15/56	30NC10 FXD/FXD	\$625	6.200%	6.2
608	09/29/25	Dominion Energy	Jr Sub	Baa3/BBB-		02/15/56	30NC5 FXD/FXD	\$625	6.000%	6
609	09/30/25	Pacific Gas and Electric	FMB	Baa3/BBB		10/15/55	30 FXD	\$750	6.100%	137
610	09/30/25	Pacific Gas and Electric	FMB	Baa2/BBB		10/15/32	7 FXD	\$850	5.050%	115
611	09/30/25	Pacific Gas and Electric	FMB	Baa1/BBB		06/04/28	3 FXD	\$400	5.000%	80
612	09/30/25	Centerpoint Energy	Jr Sub	Baa3/BBB-		04/01/56	30NC5 FXD/FXD	\$700	5.950%	5.95
613	10/01/25	Vistra Operations Co LLC	Senior	Baa3/BBB-		10/15/28	3 FXD	\$750	4.300%	75
614	10/01/25	Vistra Operations Co LLC	Senior	Baa3/BBB-		10/15/35	10 FXD	\$750	5.250%	118
615	10/01/25	Vistra Operations Co LLC	Senior	Baa3/BBB-		10/15/30	5 FXD	\$500	4.600%	93
616	10/06/25	Basine Electric Power Cooperative	Senior	A3/A		10/15/55	30 FXD	\$700	--	110

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Line No.	(a)	(b)	(c)	(d)	(e)	(f)	(g)
1	Year-end 2024						
2	In Thousands of USD						
		Long-Term Debt	Current Long-Term Debt	Total Long-Term Debt	Equity	Total Permanent Capitalization	Equity/Permanent Capitalization
3	<i>Company Name</i>						
4	<u>Atmos Energy Corporation</u>						
5	Atmos Energy Corporation	8,429,134	-	8,429,134	12,780,481	21,209,615	60.26%
6							
7	<u>New Jersey Resources Corporation</u>						
8	New Jersey Natural Gas Company	1,597,845	50,000	1,647,845	2,090,144	3,737,989	55.92%
9							
10	<u>Nisource Inc.</u>						
11	Columbia Gas of Kentucky, Incorporated	290,375	-	290,375	307,582	597,957	51.44%
12	Columbia Gas of Maryland, Incorporated	128,355	-	128,355	139,063	267,418	52.00%
13	Columbia Gas of Ohio, Inc.	2,552,926	-	2,552,926	2,580,641	5,133,567	50.27%
14	Columbia Gas of Pennsylvania, Inc.	1,385,515	-	1,385,515	1,768,525	3,154,040	56.07%
15	Columbia Gas of Virginia, Incorporated	688,275	-	688,275	553,756	1,242,031	44.58%
16	Northern Indiana Public Service Company, LLC	4,433,965	-	4,433,965	6,182,706	10,616,671	58.24%
17							
18	<u>Northwest Natural Gas Company</u>						
19	Northwest Natural Gas Company	1,314,700	30,000	1,344,700	1,323,563	2,668,263	49.60%
20							
21	<u>ONE Gas, Inc.</u>						
22	Kansas Gas Service Company, Inc.	624,860	-	624,860	919,252	1,544,112	59.53%
23	Oklahoma Natural Gas Company	892,442	-	892,442	1,296,770	2,189,212	59.23%
24	Texas Gas Service Company, Inc.	735,800	-	735,800	1,119,969	1,855,769	60.35%
25							
26	<u>Southwest Gas Holdings, Inc.</u>						
27	Southwest Gas Corporation	3,526,533	-	3,526,533	3,271,862	6,798,395	48.13%
28							
29							
30						Average	54.28%
31							
32	<u>DTE Energy Company</u>						
33	DTE Gas	2,783,000	70,000	2,853,000	2,990,724	5,843,724	51.18%

source: S&P Global Market Intelligence, Texas Gas Service Company, Inc. includes year-end 2023 data, year-end 2024 data not available on S&P Global Market Intelligence

Michigan Public Service Commission
DTE Gas Company
Peer Authorized Common Equity %

Case No.: U-21973
Exhibit: A-17
Schedule: G4
Witness: T.J. Lepczyk
Page: 1 of 1

Line No.	(a)	(b)	(c)	(d)	(e)	(f)
	Company	State Filed	Authorized Common Equity %	Date Authorized	Case Number	Average per Company Group
1	Atmos Energy Corporation					57.97%
2	Atmos Energy Corporation	Colorado	58.00%	5/4/2023	D-22AL-0348G	
3	Atmos Energy Corporation	Kansas	56.32%	2/24/2020	D-19-ATMG-525-RTS	
4	Atmos Energy Corporation	Kentucky	53.50%	8/11/2025	C-2024-00276	
5	Atmos Energy Corporation	Tennessee	61.05%	7/15/2025	D-25-00007 (ARM)	
6	Atmos Energy Corporation	Texas	60.97%	6/17/2025	D-OS-24-00019196 (Mid-Tex)	
7						
8	New Jersey Resources Corporation					54.00%
9	New Jersey Natural Gas Company	New Jersey	54.00%	11/21/2024	D-GR24010071	
10						
11	Nisource Inc.					49.61%
12	Columbia Gas of Kentucky, Incorporated	Kentucky	52.64%	12/30/2024	C-2024-00092	
13	Columbia Gas of Maryland, Incorporated	Maryland	52.17%	4/22/2025	C-9754	
14	Columbia Gas of Ohio, Inc.	Ohio	50.60%	1/26/2023	C-21-0637-GA-AIR	
15	Columbia Gas of Pennsylvania, Inc.	Pennsylvania	54.19%	2/19/2021	D-R-2020-3018835	
16	Columbia Gas of Virginia, Incorporated	Virginia	35.66%	11/19/2024	C-PUR-2024-00103 (SAVE)	
17	Northern Indiana Public Service Company, LLC	Indiana	52.39%	7/31/2024	Ca-45967	
18						
19	Northwest Natural Gas Company					49.50%
20	Northwest Natural Gas Company	Oregon	50.00%	10/25/2024	D-UG-490	
21	Northwest Natural Gas Company	Washington	49.00%	10/21/2019	D-UG-181053	
22						
23	ONE Gas, Inc.					59.07%
24	Kansas Gas Service Company, Inc.	Kansas	NA	7/15/2025	D-25-KGSG-386-TAR (GSRS)	
25	Oklahoma Natural Gas Company	Oklahoma	58.55%	11/30/2021	Ca-PUD202100063	
26	Texas Gas Service Company, Inc.	Texas	59.58%	11/20/2024	D-OS-24-00017471(Central-Gulf)	
27						
28	Southwest Gas Holdings, Inc.					50.17%
29	Southwest Gas Corporation	Arizona	48.50%	3/27/2025	D-G-01551A-23-0341	
30	Southwest Gas Corporation	California	52.00%	3/25/2021	A-19-08-015 (SoCal)	
31	Southwest Gas Corporation	Nevada	50.00%	4/8/2024	D-23-09012 (Southern)	
		Average	53.11%			53.38%

Source: S&P Global

Michigan Public Service Commission
DTE Gas Company
Infrastructure Recovery Mechanism - Main Replacement
Incremental Revenue Requirement
(\$000)

Case No.: U-21973
Exhibit: A-18
Schedule: H1
Witness: K. M. Vangilder
Page: 1 of 2

Line No.	(a) Description	(b) Source	(c) Year 1 2027	(d) Year 2 2028	(e) Year 3 2029	(f) Year 4 2030	(g) Year 5 2031	(h) Total
1	Capital Investment							
2	Main Replacement	Exh. A-12, Sch. B5.3, L2	\$ 334,000	\$ 344,000	\$ 353,000	\$ 361,000	\$ 370,000	\$ 1,762,000
3	Net Rate Base							
4	Cumulative Capital Investment	Prior Yr plus Line2	\$ 334,000	\$ 678,000	\$ 1,031,000	\$ 1,392,000	\$ 1,762,000	
5	Accumulated Depreciation	Prior Yr plus Line -11	(3,424)	(13,797)	(31,314)	(56,150)	(88,478)	
6	Accum. Deferred Taxes	Exh A-18, Sch H1, P2, L6	(2,385)	(9,364)	(20,592)	(35,731)	(54,466)	
7	Ending Net Rate Base	Sum of Line 4 thru L6	328,192	654,840	979,095	1,300,119	1,619,056	
8	Average Net Rate Base	L7 (PY+CY)/2	164,096	491,516	816,967	1,139,607	1,459,587	
9	Total Cost of Service							
10	Return on Net Rate Base	L8 * 9.33% (1)	15,317	45,880	76,259	106,376	136,244	380,077
11	Depreciation (1/2 yr conv.)	(2)	3,424	10,373	17,517	24,836	32,329	88,478
12	Property Taxes	Exh A-18, Sch H1, P2, L25	-	3,604	12,720	21,499	29,935	67,759
13	Total Cost of Service (COS) Requirement	L10 thru L12	\$ 18,741	\$ 59,857	\$ 106,497	\$ 152,711	\$ 198,508	\$ 536,314

(1) Pre-tax rate of return
Exhibit A-14, Schedule D1

	Weighted Cost	Pre-tax Multiplier	Pre-tax Rate of Return
Long-Term Debt	2.29%	1.000	2.29%
Common Equity	5.20%	1.355	7.04%
Total	7.49%		9.33%

(2) Depreciation rate for Distribution Mains-Plastic is 2.05% based on the approved rates within 2023 DTE Gas Depreciation Case U-21384

Michigan Public Service Commission
DTE Gas Company
Infrastructure Recovery Mechanism - Main Replacement
Incremental Revenue Requirement
(\$000)

Case No.: U-21973
Exhibit: A-18
Schedule: H1
Witness: K. M. Vangilder
Page: 2 of 2

Line No.	(a) Description	(b) Source	(c) Year 1 2027	(d) Year 2 2028	(e) Year 3 2029	(f) Year 4 2030	(g) Year 5 2031
1	Deferred Tax Expense						
2	Tax Depreciation	Line 14	12,525	37,011	60,372	82,621	103,836
3	Book Depreciation	Exh A-18, Sch H1, P1, L11	3,424	10,373	17,517	24,836	32,329
4	Timing Difference	Line 2 - Line 3	9,102	26,638	42,855	57,785	71,508
5	Deferred Tax Expense	Line 4 X 26.2%	2,385	6,979	11,228	15,140	18,735
6	Accum. Deferred Tax Expense	Prior Yr plus L5	\$ 2,385	\$ 9,364	\$ 20,592	\$ 35,731	\$ 54,466
7	Tax Depreciation		<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>
8	MACRS Tax Depr Rate (20 Year)		3.750%	7.219%	6.677%	6.177%	5.713%
9	Year 1 Additions	Cost x MACRS Tax Rate	12,525	24,111	22,301	20,631	19,081
10	Year 2 Additions	Cost x MACRS Tax Rate		12,900	24,833	22,969	21,249
11	Year 3 Additions	Cost x MACRS Tax Rate			13,238	25,483	23,570
12	Year 4 Additions	Cost x MACRS Tax Rate				13,538	26,061
13	Year 5 Additions	Cost x MACRS Tax Rate	-	-	-	-	13,875
14	Total Tax Depreciation	Sum of L9 thru L13	\$ 12,525	\$ 37,011	\$ 60,372	\$ 82,621	\$ 103,836
15	Property Tax		<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>
16	Factor	WP-SLW-1, L60-64	0.93	0.87	0.81	0.76	0.71
17	Year 1 Taxable Value	Cost x Factor x 50%	155,310	145,290	135,270	126,920	118,570
18	Year 2 Taxable Value	Cost x Factor x 50%		159,960	149,640	139,320	130,720
19	Year 3 Taxable Value	Cost x Factor x 50%			164,145	153,555	142,965
20	Year 4 Taxable Value	Cost x Factor x 50%				167,865	157,035
21	Year 5 Taxable Value	Cost x Factor x 50%	-	-	-	-	172,050
22	Total Taxable Value	Sum of L17 thru L21	\$ 155,310	\$ 305,250	\$ 449,055	\$ 587,660	\$ 721,340
23	Millage	Exh. A-13, Sch C7.1	59.500	59.500	59.500	59.500	59.500
24	Property Tax Assessed	L22 x L23	\$ 9,241	\$ 18,162	\$ 26,719	\$ 34,966	\$ 42,920
25							
26	Property Tax Expense (1 Year lag: 39%)	L24 x 39% (1)	-	3,604	7,083	10,420	13,637
27	Property Tax Expense (2 Year lag: 61%)	L24 x 61% (1)	-	-	5,637	11,079	16,298
28	Property Tax Expense Incurred by Year	L26 + L27	\$ -	\$ 3,604	\$ 12,720	\$ 21,499	\$ 29,935

(1) Property expense is calculated using a 39%/61% split on a one and two year lag, respectively.
This treatment is in line with how property tax expense is incurred within the rate case

Michigan Public Service Commission
DTE Gas Company
Infrastructure Recovery Mechanism - Meter Move-out
Incremental Revenue Requirement
(\$000)

Case No.: U-21973
Exhibit: A-18
Schedule: H2
Witness: K. M. Vangilder
Page: 1 of 2

Line No.	(a) Description	(b) Source	(c) Year 1 2027	(d) Year 2 2028	(e) Year 3 2029	(f) Year 4 2030	(g) Year 5 2031	(h) Total
1	Capital Investment							
2	Ultrasonic Metering Technology	Exh. A-12, Sch. B5.3, L3	\$ 7,666	\$ 11,450	\$ 11,450	\$ 11,450	\$ 11,450	\$ 53,466
3	MMO MAC Initiative	Exh. A-12, Sch. B5.3, L4	-	-	-	-	-	-
4	Total Meter Move-out	L2 + L3	\$ 7,666	\$ 11,450	\$ 11,450	\$ 11,450	\$ 11,450	\$ 53,466
5	Net Rate Base							
6	Cumulative Capital Investment	Prior Yr plus L4	\$ 7,666	\$ 19,116	\$ 30,566	\$ 42,016	\$ 53,466	
7	Accumulated Depreciation	Prior Yr plus - L13	(105)	(472)	(1,153)	(2,147)	(3,455)	
8	Accum. Deferred Taxes	Exh A-18, Sch H2, P2, L6	(48)	(209)	(494)	(887)	(1,374)	
9	Ending Net Rate Base	Sum of L6 thru L8	\$ 7,513	\$ 18,435	\$ 28,919	\$ 38,982	\$ 48,637	
10	Average Net Rate Base	L9 (PY+CY)/2	3,757	12,974	23,677	33,951	43,810	
11	Total Cost of Service							
12	Return on Net Rate Base	L10 * 9.33% (1)	351	1,211	2,210	3,169	4,089	11,030
13	Depreciation (1/2 yr conv.)	(2)	105	367	681	994	1,308	3,455
14	Property Taxes	Exh A-18, Sch H2, P2, L25	-	83	330	625	901	1,940
15	Total Cost of Service (COS) Requirement	L12 thru L14	\$ 456	\$ 1,661	\$ 3,221	\$ 4,789	\$ 6,299	\$ 16,425

(1) Pre-tax rate of return
Exhibit A-14, Schedule D1

	Weighted Cost	Pre-tax Multiplier	Pre-tax Rate of Return
Long-Term Debt	2.29%	1.000	2.29%
Common Equity	5.20%	1.355	7.04%
Total	7.49%		9.33%

(2) Depreciation rate for Distribution Meters is 2.74% based on the approved rates within 2023 DTE Gas Depreciation Case U-21384

Michigan Public Service Commission
DTE Gas Company
Infrastructure Recovery Mechanism - Meter Move-out
Incremental Revenue Requirement
(\$000)

Case No.: U-21973
Exhibit: A-18
Schedule: H2
Witness: K. M. Vangilder
Page: 2 of 2

Line No.	(a) Description	(b) Source	(c) Year 1 2027	(d) Year 2 2028	(e) Year 3 2029	(f) Year 4 2030	(g) Year 5 2031
1	Deferred Tax Expense						
2	Tax Depreciation	Line 14	287	983	1,768	2,494	3,166
3	Book Depreciation	Exh A-18, Sch H2, P1, L13	105	367	681	994	1,308
4	Timing Difference	Line 2 - Line 3	182	616	1,087	1,500	1,858
5	Deferred Tax Expense	Line 4 X 26.2%	\$ 48	\$ 161	\$ 285	\$ 393	\$ 487
6	Accum. Deferred Tax Expense	Prior Yr plus L5	\$ 48	\$ 209	\$ 494	\$ 887	\$ 1,374
7	Tax Depreciation		<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>
8	MACRS Tax Depr Rate (20 Year)		3.750%	7.219%	6.677%	6.177%	5.713%
9	Year 1 Additions	Cost x MACRS Tax Rate	287	553	512	474	438
10	Year 2 Additions	Cost x MACRS Tax Rate		429	827	765	707
11	Year 3 Additions	Cost x MACRS Tax Rate			429	827	765
12	Year 4 Additions	Cost x MACRS Tax Rate				429	827
13	Year 5 Additions	Cost x MACRS Tax Rate	-	-	-	-	429
14	Total Tax Depreciation	Sum of L9 thru L13	\$ 287	\$ 983	\$ 1,768	\$ 2,494	\$ 3,166
15	Property Tax		<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>
16	Factor	WP-SLW-1, L60-64	0.93	0.87	0.81	0.76	0.71
17	Year 1 Taxable Value	Cost x Factor x 50%	3,565	3,335	3,105	2,913	2,721
18	Year 2 Taxable Value	Cost x Factor x 50%		5,324	4,981	4,637	4,351
19	Year 3 Taxable Value	Cost x Factor x 50%			5,324	4,981	4,637
20	Year 4 Taxable Value	Cost x Factor x 50%				5,324	4,981
21	Year 5 Taxable Value	Cost x Factor x 50%	-	-	-	-	5,324
22	Total Taxable Value	Sum of L17 thru L21	\$ 3,565	\$ 8,659	\$ 13,410	\$ 17,855	\$ 22,015
23	Millage	Exh. A-13, Sch C7.1	59.500	59.500	59.500	59.500	59.500
24	Property Tax Assessed	L22 x L23	\$ 212	\$ 515	\$ 798	\$ 1,062	\$ 1,310
25							
26	Property Tax Expense (1 Year lag: 39%)	L24 x 39% (1)	-	83	201	311	414
27	Property Tax Expense (2 Year lag: 61%)	L24 x 61% (1)	-	-	129	314	487
28	Property Tax Expense Incurred by Year	L26 + L27	\$ -	\$ 83	\$ 330	\$ 625	\$ 901

(1) Property expense is calculated using a 39%/61% split on a one and two year lag, respectively.
This treatment is in line with how property tax expense is incurred within the rate case

Michigan Public Service Commission
DTE Gas Company
Infrastructure Recovery Mechanism - Pipeline Integrity
Incremental Revenue Requirement
(\$000)

Case No.: U-21973
Exhibit: A-18
Schedule: H3
Witness: K. M. Vangilder
Page: 1 of 2

Line No.	(a) Description	(b) Source	(c) Year 1 2027	(d) Year 2 2028	(e) Year 3 2029	(f) Year 4 2030	(g) Year 5 2031	(h) Total
1	Capital Investment							
2	Pipeline Integrity	Exh. A-12, Sch. B5.3, L6	\$ 6,000	\$ 6,000	\$ 350	\$ 6,000	\$ 6,000	\$ 24,350
3	Net Rate Base							
4	Cumulative Capital Investment	Prior Yr plus Line2	\$ 6,000	\$ 12,000	\$ 12,350	\$ 18,350	\$ 24,350	
5	Accumulated Depreciation	Prior Yr plus Line -11	(44)	(178)	(358)	(585)	(901)	
6	Accum. Deferred Taxes	Exh A-18, Sch H3, P2, L6	(47)	(185)	(360)	(568)	(850)	
7	Ending Net Rate Base	Sum of Line 4 thru L6	5,908	11,638	11,633	17,197	22,599	
8	Average Net Rate Base	L7 (PY+CY)/2	2,954	8,773	11,635	14,415	19,898	
9	Total Cost of Service							
10	Return on Net Rate Base	L8 * 9.33% (1)	276	819	1,086	1,346	1,857	5,384
11	Depreciation (1/2 yr conv.)	(2)	44	133	180	227	316	901
12	Property Taxes	Exh A-18, Sch H3, P2, L25	-	68	236	332	386	1,022
13	Total Cost of Service (COS) Requirement	L10 thru L12	\$ 320	\$ 1,020	\$ 1,503	\$ 1,905	\$ 2,560	\$ 7,307

(1) Pre-tax rate of return
Exhibit A-14, Schedule D1

	Weighted Cost	Pre-tax Multiplier	Pre-tax Rate of Return
Long-Term Debt	2.29%	1.000	2.29%
Common Equity	5.20%	1.355	7.04%
Total	7.49%		9.33%

(2) Depreciation rate for Transmission Mains is 1.48% based on the approved rates within 2023 DTE Gas Depreciation Case U-21384

**Michigan Public Service Commission
DTE Gas Company
Infrastructure Recovery Mechanism - Pipeline Integrity
Incremental Revenue Requirement
(\$000)**

Case No.: U-21973
Exhibit: A-18
Schedule: H3
Witness: K. M. Vangilder
Page: 2 of 2

Line No.	(a) Description	(b) Source	(c) Year 1 2027	(d) Year 2 2028	(e) Year 3 2029	(f) Year 4 2030	(g) Year 5 2031
1	Deferred Tax Expense						
2	Tax Depreciation	Line 14	225	658	847	1,022	1,395
3	Book Depreciation	Exh A-18, Sch H3, P1, L11	44	133	180	227	316
4	Timing Difference	Line 2 - Line 3	181	525	667	795	1,079
5	Deferred Tax Expense	Line 4 X 26.2%	47	137	175	208	283
6	Accum. Deferred Tax Expense	Prior Yr plus L5	\$ 47	\$ 185	\$ 360	\$ 568	\$ 850
7	Tax Depreciation		<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>
8	MACRS Tax Depr Rate (20 Year)		3.750%	7.219%	6.677%	6.177%	5.713%
9	Year 1 Additions	Cost x MACRS Tax Rate	225	433	401	371	343
10	Year 2 Additions	Cost x MACRS Tax Rate		225	433	401	371
11	Year 3 Additions	Cost x MACRS Tax Rate			13	25	23
12	Year 4 Additions	Cost x MACRS Tax Rate				225	433
13	Year 5 Additions	Cost x MACRS Tax Rate	-	-	-	-	225
14	Total Tax Depreciation	Sum of L9 thru L13	\$ 225	\$ 658	\$ 847	\$ 1,022	\$ 1,395
15	Property Tax		<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>
16	Factor	WP-SLW-1, L86-90	0.97	0.91	0.86	0.81	0.76
17	Year 1 Taxable Value	Cost x Factor x 50%	2,910	2,730	2,580	2,430	2,280
18	Year 2 Taxable Value	Cost x Factor x 50%		2,910	2,730	2,580	2,430
19	Year 3 Taxable Value	Cost x Factor x 50%			170	159	151
20	Year 4 Taxable Value	Cost x Factor x 50%				2,910	2,730
21	Year 5 Taxable Value	Cost x Factor x 50%	-	-	-	-	2,910
22	Total Taxable Value	Sum of L17 thru L21	\$ 2,910	\$ 5,640	\$ 5,480	\$ 8,079	\$ 10,501
23	Millage	Exh. A-13, Sch C7.1	59.500	59.500	59.500	59.500	59.500
24	Property Tax Assessed	L22 x L23	\$ 173	\$ 336	\$ 326	\$ 481	\$ 625
25							
26	Property Tax Expense (1 Year lag: 39%)	L24 x 39% (1)	-	68	131	127	187
27	Property Tax Expense (2 Year lag: 61%)	L24 x 61% (1)	-	-	106	205	199
28	Property Tax Expense Incurred by Year	L26 + L27	\$ -	\$ 68	\$ 236	\$ 332	\$ 386

(1) Property expense is calculated using a 39%/61% split on a one and two year lag, respectively.
This treatment is in line with how property tax expense is incurred within the rate case

Michigan Public Service Commission
DTE Gas Company
Calculation of Monthly Charges for Proposed Infrastructure Recovery Mechanism
2027 Year 1
(\$000)

Case No: U-21973
Exhibit: A-18
Schedule: H4
Witness: H. J. Maroun
Page: 1 of 6

Line No.	(a) Description	(b) Total Company	(c) Rate GS-1/GS-2	(d) Rate A	(e) Rate 2A	(f) Rate S	(g) Rate ST	(h) Rate LT	(i) Rate XLT	(j) Rate XXL	(k) Exelon
<u>Allocation Factors</u>											
1	Average & Peak (Alloc. 3)	1.0000	0.1658	0.4802	0.0153	0.0066	0.0463	0.0462	0.0699	0.1414	0.0284
2	A&P w/o XXL (Alloc. 3a)	1.0000	0.1931	0.5593	0.0178	0.0077	0.0539	0.0538	0.0814	-	0.0331
3	Weighted Customers - All (Alloc. 5)	1.0000	0.2209	0.7441	0.0170	0.0029	0.0111	0.0025	0.0009	0.0002	0.0004
4	Customers - All (Alloc. 8)	1.0000	0.0668	0.9282	0.0044	0.0002	0.0003	0.0001	0.0000	0.0000	0.0000
<u>Revenue Requirement</u>											
5	GRP Main Replacement (1)	18,741	3,618	10,481	333	144	1,011	1,009	1,525	-	620
6	GRP Meter Move-Out (2)	456	101	339	8	1	5	1	0	0	0
7	Pipeline Integrity (3)	320	53	154	5	2	15	15	22	45	9
8	Cathodic Protection (4)	1,006	194	563	18	8	54	54	82	-	33
9	Regulator Station Replacement (5)	736	122	353	11	5	34	34	51	104	21
10	Total - Revenue Requirement	21,259	4,088	11,890	375	160	1,119	1,113	1,681	149	683
11	Customers (6)	1,364,671	91,227	1,266,741	5,951	214	433	80	19	5	1
12	Monthly Charge \$/Meter		\$ 3.73	\$ 0.78	\$ 5.25	\$ 62.15	\$ 215.42	\$ 1,159.61	\$ 7,372.55	\$ 2,489.59	
13	Maximum customer charge						\$ 3,300	\$ 9,490	\$ 16,450	\$ 194,000	
14	Adjustment for Maximum Cap	-					-	-	-	-	
15	Reallocate using Customers (Line 4)	-	-	-	-	-	-	-	-	-	-
16	Revised Rev Req (Lines 10, 14 & 15)	21,259	4,088	11,890	375	160	1,119	1,113	1,681	149	683
17	Customers (Line 11)	1,364,671	91,227	1,266,741	5,951	214	433	80	19	5	1
18	Revised Monthly Charge \$/Meter		\$ 3.73	\$ 0.78	\$ 5.25	\$ 62.15	\$ 215.42	\$ 1,159.61	\$ 7,372.55	\$ 2,489.59	

(1) Col. (b): Exhibit A-18, Schedule H1, Page 1, Line 13; Cols. (c)-(g): Col. (b) * line 2
(2) Col. (b): Exhibit A-18, Schedule H2, Page 1, Line 15; Cols. (c)-(g): Col. (b) * line 3
(3) Col. (b): Exhibit A-18, Schedule H3, Page 1, Line 13; Cols. (c)-(g): Col. (b) * line 1
(4) Col. (b): Exhibit A-18, Schedule H7, Page 1, Line 13; Cols. (c)-(g): Col. (b) * line 2
(5) Col. (b): Exhibit A-18, Schedule H8, Page 1, Line 13; Cols. (c)-(g): Col. (b) * line 1
(6) Per Exhibit A-16, Schedule F1.2, Page 8, Column (b)

Michigan Public Service Commission
DTE Gas Company
Calculation of Monthly Charges for Proposed Infrastructure Recovery Mechanism
2028 Year 2
(\$000)

Case No: U-21973
Exhibit: A-18
Schedule: H4
Witness: H. J. Maroun
Page: 2 of 6

Line No.	(a) Description	(b) Total Company	(c) Rate GS-1/GS-2	(d) Rate A	(e) Rate 2A	(f) Rate S	(g) Rate ST	(h) Rate LT	(i) Rate XLT	(j) Rate XXLT	(k) Exelon
<u>Allocation Factors</u>											
1	Average & Peak (Alloc. 3)	1.0000	0.1658	0.4802	0.0153	0.0066	0.0463	0.0462	0.0699	0.1414	0.0284
2	A&P w/o XXLT (Alloc. 3a)	1.0000	0.1931	0.5593	0.0178	0.0077	0.0539	0.0538	0.0814	-	0.0331
3	Weighted Customers - All (Alloc. 5)	1.0000	0.2209	0.7441	0.0170	0.0029	0.0111	0.0025	0.0009	0.0002	0.0004
4	Customers - All (Alloc. 8)	1.0000	0.0668	0.9282	0.0044	0.0002	0.0003	0.0001	0.0000	0.0000	0.0000
<u>Revenue Requirement</u>											
5	GRP Main Replacement (1)	59,857	11,557	33,476	1,065	459	3,229	3,223	4,870	-	1,979
6	GRP Meter Move-Out (2)	1,661	367	1,236	28	5	18	4	2	0	1
7	Pipeline Integrity (3)	1,020	169	490	16	7	47	47	71	144	29
8	Cathodic Protection (4)	3,179	614	1,778	57	24	172	171	259	-	105
9	Regulator Station Replacement (5)	3,056	507	1,467	47	20	142	141	213	432	87
10	Total - Revenue Requirement	68,773	13,213	38,446	1,212	515	3,608	3,587	5,415	576	2,200
11	Customers (6)	1,364,671	91,227	1,266,741	5,951	214	433	80	19	5	1
12	Monthly Charge \$/Meter		\$ 12.07	\$ 2.53	\$ 16.97	\$ 200.43	\$ 694.36	\$ 3,736.15	\$ 23,751.25	\$ 9,608.09	
13	Maximum customer charge						\$ 3,300	\$ 9,490	\$ 16,450	\$ 194,000	
14	Adjustment for Maximum Cap	(1,665)					-	-	(1,665)	-	
15	Reallocate using Customers (Line 4)	1,665	111	1,545	7	0	1	0	-	0	0
16	Revised Rev Req (Lines 10, 14 & 15)	68,773	13,324	39,991	1,219	515	3,608	3,587	3,751	576	2,200
17	Customers (Line 11)	1,364,671	91,227	1,266,741	5,951	214	433	80	19	5	1
18	Revised Monthly Charge \$/Meter		\$ 12.17	\$ 2.63	\$ 17.07	\$ 200.53	\$ 694.47	\$ 3,736.25	\$ 16,450.00	\$ 9,608.19	

(1) Col. (b): Exhibit A-18, Schedule H1, Page 1, Line 13; Cols. (c)-(g): Col. (b) * line 2
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(6) Per Exhibit A-16, Schedule F1.2, Page 8, Column (b)

Michigan Public Service Commission
DTE Gas Company
Calculation of Monthly Charges for Proposed Infrastructure Recovery Mechanism
2029 Year 3
(\$000)

Case No: U-21973
Exhibit: A-18
Schedule: H4
Witness: H. J. Maroun
Page: 3 of 6

Line No.	(a) Description	(b) Total Company	(c) Rate GS-1/GS-2	(d) Rate A	(e) Rate 2A	(f) Rate S	(g) Rate ST	(h) Rate LT	(i) Rate XLT	(j) Rate XXLT	(k) Exelon
<u>Allocation Factors</u>											
1	Average & Peak (Alloc. 3)	1.0000	0.1658	0.4802	0.0153	0.0066	0.0463	0.0462	0.0699	0.1414	0.0284
2	A&P w/o XXLT (Alloc. 3a)	1.0000	0.1931	0.5593	0.0178	0.0077	0.0539	0.0538	0.0814	-	0.0331
3	Weighted Customers - All (Alloc. 5)	1.0000	0.2209	0.7441	0.0170	0.0029	0.0111	0.0025	0.0009	0.0002	0.0004
4	Customers - All (Alloc. 8)	1.0000	0.0668	0.9282	0.0044	0.0002	0.0003	0.0001	0.0000	0.0000	0.0000
<u>Revenue Requirement</u>											
5	GRP Main Replacement (1)	106,497	20,561	59,559	1,895	816	5,745	5,734	8,665	-	3,521
6	GRP Meter Move-Out (2)	3,221	711	2,397	55	9	36	8	3	1	1
7	Pipeline Integrity (3)	1,503	249	722	23	10	70	69	105	212	43
8	Cathodic Protection (4)	5,580	1,077	3,121	99	43	301	300	454	-	184
9	Regulator Station Replacement (5)	7,854	1,302	3,771	120	52	364	363	549	1,110	223
10	Total - Revenue Requirement	124,654	23,901	69,569	2,192	930	6,516	6,475	9,776	1,323	3,972
11	Customers (6)	1,364,671	91,227	1,266,741	5,951	214	433	80	19	5	1
12	Monthly Charge \$/Meter		\$ 21.83	\$ 4.58	\$ 30.69	\$ 362.06	\$ 1,253.95	\$ 6,745.10	\$ 42,876.76	\$ 22,057.36	
13	Maximum customer charge						\$ 3,300	\$ 9,490	\$ 16,450	\$ 194,000	
14	Adjustment for Maximum Cap	(6,025)					-	-	(6,025)	-	
15	Reallocate using Customers (Line 4)	6,025	403	5,593	26	1	2	0	-	0	0
16	Revised Rev Req (Lines 10, 14 & 15)	124,654	24,304	75,162	2,218	931	6,517	6,476	3,751	1,323	3,972
17	Customers (Line 11)	1,364,671	91,227	1,266,741	5,951	214	433	80	19	5	1
18	Revised Monthly Charge \$/Meter		\$ 22.20	\$ 4.94	\$ 31.06	\$ 362.43	\$ 1,254.31	\$ 6,745.47	\$ 16,450.00	\$ 22,057.72	

(1) Col. (b): Exhibit A-18, Schedule H1, Page 1, Line 13; Cols. (c)-(g): Col. (b) * line 2
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(6) Per Exhibit A-16, Schedule F1.2, Page 8, Column (b)

Michigan Public Service Commission
DTE Gas Company
Calculation of Monthly Charges for Proposed Infrastructure Recovery Mechanism
2030 Year 4
(\$000)

Case No: U-21973
Exhibit: A-18
Schedule: H4
Witness: H. J. Maroun
Page: 4 of 6

Line No.	(a) Description	(b) Total Company	(c) Rate GS-1/GS-2	(d) Rate A	(e) Rate 2A	(f) Rate S	(g) Rate ST	(h) Rate LT	(i) Rate XLT	(j) Rate XXLT	(k) Exelon
<u>Allocation Factors</u>											
1	Average & Peak (Alloc. 3)	1.0000	0.1658	0.4802	0.0153	0.0066	0.0463	0.0462	0.0699	0.1414	0.0284
2	A&P w/o XXLT (Alloc. 3a)	1.0000	0.1931	0.5593	0.0178	0.0077	0.0539	0.0538	0.0814	-	0.0331
3	Weighted Customers - All (Alloc. 5)	1.0000	0.2209	0.7441	0.0170	0.0029	0.0111	0.0025	0.0009	0.0002	0.0004
4	Customers - All (Alloc. 8)	1.0000	0.0668	0.9282	0.0044	0.0002	0.0003	0.0001	0.0000	0.0000	0.0000
<u>Revenue Requirement</u>											
5	GRP Main Replacement (1)	152,711	29,484	85,405	2,717	1,171	8,239	8,222	12,426	-	5,048
6	GRP Meter Move-Out (2)	4,789	1,058	3,563	82	14	53	12	4	1	2
7	Pipeline Integrity (3)	1,905	316	915	29	13	88	88	133	269	54
8	Cathodic Protection (4)	7,894	1,524	4,415	140	61	426	425	642	-	261
9	Regulator Station Replacement (5)	14,443	2,394	6,935	221	95	669	668	1,009	2,042	410
10	Total - Revenue Requirement	181,741	34,776	101,233	3,188	1,353	9,475	9,415	14,214	2,312	5,775
11	Customers (6)	1,364,671	91,227	1,266,741	5,951	214	433	80	19	5	1
12	Monthly Charge \$/Meter		\$ 31.77	\$ 6.66	\$ 44.65	\$ 526.56	\$ 1,823.46	\$ 9,807.68	\$ 62,343.33	\$ 38,533.83	
13	Maximum customer charge						\$ 3,300	\$ 9,490	\$ 16,450	\$ 194,000	
14	Adjustment for Maximum Cap	(10,769)					-	(305)	(10,464)	-	
15	Reallocate using Customers (Line 4)	10,769	720	9,997	47	2	3	-	-	0	0
16	Revised Rev Req (Lines 10, 14 & 15)	181,741	35,496	111,229	3,235	1,354	9,478	9,110	3,751	2,312	5,775
17	Customers (Line 11)	1,364,671	91,227	1,266,741	5,951	214	433	80	19	5	1
18	Revised Monthly Charge \$/Meter		\$ 32.42	\$ 7.32	\$ 45.31	\$ 527.22	\$ 1,824.12	\$ 9,490.00	\$ 16,450.00	\$ 38,534.49	

(1) Col. (b): Exhibit A-18, Schedule H1, Page 1, Line 13; Cols. (c)-(g): Col. (b) * line 2
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(5) Col. (b): Exhibit A-18, Schedule H8, Page 1, Line 13; Cols. (c)-(g): Col. (b) * line 1
(6) Per Exhibit A-16, Schedule F1.2, Page 8, Column (b)

Michigan Public Service Commission
DTE Gas Company
Calculation of Monthly Charges for Proposed Infrastructure Recovery Mechanism
2031 Year 5
(\$000)

Case No: U-21973
Exhibit: A-18
Schedule: H4
Witness: H. J. Maroun
Page: 5 of 6

Line No.	(a) Description	(b) Total Company	(c) Rate GS-1/GS-2	(d) Rate A	(e) Rate 2A	(f) Rate S	(g) Rate ST	(h) Rate LT	(i) Rate XLT	(j) Rate XXLT	(k) Exelon
<u>Allocation Factors</u>											
1	Average & Peak (Alloc. 3)	1.0000	0.1658	0.4802	0.0153	0.0066	0.0463	0.0462	0.0699	0.1414	0.0284
2	A&P w/o XXLT (Alloc. 3a)	1.0000	0.1931	0.5593	0.0178	0.0077	0.0539	0.0538	0.0814	-	0.0331
3	Weighted Customers - All (Alloc. 5)	1.0000	0.2209	0.7441	0.0170	0.0029	0.0111	0.0025	0.0009	0.0002	0.0004
4	Customers - All (Alloc. 8)	1.0000	0.0668	0.9282	0.0044	0.0002	0.0003	0.0001	0.0000	0.0000	0.0000
<u>Revenue Requirement</u>											
5	GRP Main Replacement (1)	198,508	38,326	111,017	3,531	1,522	10,709	10,688	16,152	-	6,562
6	GRP Meter Move-Out (2)	6,299	1,391	4,686	107	18	70	16	6	2	2
7	Pipeline Integrity (3)	2,560	424	1,229	39	17	119	118	179	362	73
8	Cathodic Protection (4)	10,125	1,955	5,662	180	78	546	545	824	-	335
9	Regulator Station Replacement (5)	21,223	3,518	10,191	324	140	983	981	1,483	3,000	602
10	Total - Revenue Requirement	238,714	45,615	132,786	4,182	1,774	12,427	12,349	18,643	3,363	7,574
11	Customers (6)	1,364,671	91,227	1,266,741	5,951	214	433	80	19	5	1
12	Monthly Charge \$/Meter		\$ 41.67	\$ 8.74	\$ 58.57	\$ 690.63	\$ 2,391.63	\$ 12,863.45	\$ 81,767.39	\$ 56,056.27	
13	Maximum customer charge						\$ 3,300	\$ 9,490	\$ 16,450	\$ 194,000	
14	Adjustment for Maximum Cap	(18,131)					-	(3,239)	(14,892)	-	
15	Reallocate using Customers (Line 4)	18,131	1,212	16,831	79	3	6	-	-	0	0
16	Revised Rev Req (Lines 10, 14 & 15)	238,714	46,827	149,617	4,261	1,777	12,433	9,110	3,751	3,363	7,574
17	Customers (Line 11)	1,364,671	91,227	1,266,741	5,951	214	433	80	19	5	1
18	Revised Monthly Charge \$/Meter		\$ 42.78	\$ 9.84	\$ 59.68	\$ 691.74	\$ 2,392.74	\$ 9,490.00	\$ 16,450.00	\$ 56,057.38	

(1) Col. (b): Exhibit A-18, Schedule H1, Page 1, Line 13; Cols. (c)-(g): Col. (b) * line 2
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(6) Per Exhibit A-16, Schedule F1.2, Page 8, Column (b)

Michigan Public Service Commission
DTE Gas Company
Calculation of Monthly Charges for Proposed Infrastructure Recovery Mechanism
Summary of Monthly Per Meter Charges by Year

Case No: U-21973
Exhibit: A-18
Schedule: H4
Witness: H. J. Maroun
Page: 6 of 6

Line No.	(a) Description	(b) Rate GS-1/GS-2	(c) Rate A	(d) Rate 2A	(e) Rate S	(f) Rate ST	(g) Rate LT	(h) Rate XLT	(i) Rate XXLT	(j) Source
1	Year									
2	2027	\$ 3.73	\$ 0.78	\$ 5.25	\$ 62.15	\$ 215.42	\$ 1,159.61	\$ 7,372.55	\$ 2,489.59	Page 1
3	2028	\$ 12.17	\$ 2.63	\$ 17.07	\$ 200.53	\$ 694.47	\$ 3,736.25	\$ 16,450.00	\$ 9,608.19	Page 2
4	2029	\$ 22.20	\$ 4.94	\$ 31.06	\$ 362.43	\$ 1,254.31	\$ 6,745.47	\$ 16,450.00	\$ 22,057.72	Page 3
5	2030	\$ 32.42	\$ 7.32	\$ 45.31	\$ 527.22	\$ 1,824.12	\$ 9,490.00	\$ 16,450.00	\$ 38,534.49	Page 4
6	2031	\$ 42.78	\$ 9.84	\$ 59.68	\$ 691.74	\$ 2,392.74	\$ 9,490.00	\$ 16,450.00	\$ 56,057.38	Page 5

Case No.: U-21973
Exhibit: A-18
Schedule: H5

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Michigan Public Service Commission
DTE Gas Company
Infrastructure Recovery Mechanism - Under Spend Impact
(\$000)

Case No.: U-21973
 Exhibit: A-18
 Schedule: H6
 Witness: K. M. Vangilder
 Page: 1 of 2

Line No.	(a) Description	(b) Source	(c) Year 1	(d) Year 2
1	Capital Investment			
2	Capital Under Spend		\$ (1,000)	\$ -
3	Net Rate Base			
4	Cumulative Capital Investment	Prior Yr plus L2	\$ (1,000)	\$ (1,000)
5	Accumulated Depreciation	Prior Yr plus - L11	11	32
6	Accum. Deferred Taxes	Exh A-18, Sch H6, P2, L6	7	20
7	Ending Net Rate Base	Sum of L4 thru L6	\$ (982)	\$ (948)
8	Average Net Rate Base	L7 (PY+CY)/2	(491)	(965)
9	Total Cost of Service			
10	Return on Net Rate Base	L8 * 9.33% (1)	(46)	(90)
11	Depreciation (1/2 yr conv.)	(2)	(11)	(21)
12	Property Taxes	Exh A-18, Sch H6 ,P2, L20	-	(11)
13	Total Cost of Service (COS) Requirement	L10 thru L12	\$ (56)	\$ (122)
14	Number of Customers	Exh A-13, Sch C3.1, L7	1,364,133	1,364,133
15	Monthly cost reduction per customer	L13 / L14 /12 * 1000	\$ (0.0034)	\$ (0.0075)
16	Summation of Year 1 and Year 2	Line 15, Col (c) + Col (d)		\$ (0.0109)
17	Average Rate Reduction	(Line 15 + Line 16)/2		\$ (0.0092)

(1) Pre-tax rate of return
 Exhibit A-14, Schedule D1

	Weighted Cost	Pre-tax Multiplier	Pre-tax Rate of Return
Long-Term Debt	2.29%	1.000	2.29%
Common Equity	<u>5.20%</u>	1.355	<u>7.04%</u>
Total	7.49%		9.33%

(2) Depreciation rates based on the approved rates within 2023 DTE Gas Depreciation Case U-21384

	Weighted Rate	Program Spend (\$000)	Weighting	
Distribution Mains-Plastic	2.05%	Main Replacement	1,762,000	83.3%
Distribution Meters	2.74%	Meter Moveout	53,466	2.5%
Distribution Mains - Metallic	2.27%	Cathodic Protection	88,000	4.2%
Total Distribution Plant	2.62%	Regulator Station Replacement	187,500	8.9%
Transmission Mains	<u>1.48%</u>	Pipeline Integrity	24,350	1.2%
Weighted Rate	2.12%		2,115,316	

Michigan Public Service Commission
DTE Gas Company
Infrastructure Recovery Mechanism - Under Spend Impact
(\$000)

Case No.: U-21973
Exhibit: A-18
Schedule: H6
Witness: K. M. Vangilder
Page: 2 of 2

Line No.	(a) Description	(b) Source	(c) (d)	
			Year 1	Year 2
1	<u>Deferred Tax Expense</u>			
2	Tax Depreciation	Line 11	(38)	(72)
3	Book Depreciation	Exh A-18, Sch H6, P1, L11	(11)	(21)
4	Timing Difference	Line 2 - Line 3	(27)	(51)
5	Deferred Tax Expense	Line 4 X 26.2%	\$ (7)	\$ (13)
6	Accum. Deferred Tax Expense	Prior Yr plus L5	\$ (7)	\$ (20)
7	<u>Tax Depreciation</u>		<u>Year 1</u>	<u>Year 2</u>
8	MACRS Tax Depr Rate (20 Year)		3.750%	7.219%
9	Year 1 Additions	Cost x MACRS Tax Rate	(38)	(72)
10	Year 2 Additions	Cost x MACRS Tax Rate	-	-
11	Total Tax Depreciation	Sum of L9 thru L10	<u>\$ (38)</u>	<u>\$ (72)</u>
12	<u>Property Tax</u>		<u>Year 1</u>	<u>Year 2</u>
13	Factor	WP-SLW-1	0.93	0.87
14				
15	Year 1 Taxable Value	Cost x Factor x 50%	(465)	(435)
16	Year 2 Taxable Value	Cost x Factor x 50%	-	-
17	Total Taxable Value	Sum of L15 thru L16	\$ (465)	\$ (435)
18	Millage	Exh. A-13, Sch C7.1	59.500	59.500
19	Property Tax Assessed	L17 x L18	\$ (28)	\$ (26)
20	Property Tax Expense (1 Year lag: 39%)		\$ -	\$ (11)

Michigan Public Service Commission
DTE Gas Company
Infrastructure Recovery Mechanism - Cathodic Protection
Incremental Revenue Requirement
(\$000)

Case No.: U-21973
Exhibit: A-18
Schedule: H7
Witness: K. M. Vangilder
Page: 1 of 2

Line No.	(a) Description	(b) Source	(c) Year 1 2027	(d) Year 2 2028	(e) Year 3 2029	(f) Year 4 2030	(g) Year 5 2031	(h) Total
1	Capital Investment							
2	Cathodic Protection	Exh. A-12, Sch. B5.3, L8	\$ 17,600	\$ 17,600	\$ 17,600	\$ 17,600	\$ 17,600	\$ 88,000
3	Net Rate Base							
4	Cumulative Capital Investment	Prior Yr plus Line2	\$ 17,600	\$ 35,200	\$ 52,800	\$ 70,400	\$ 88,000	
5	Accumulated Depreciation	Prior Yr plus Line -11	(200)	(799)	(1,798)	(3,196)	(4,994)	
6	Accum. Deferred Taxes	Exh A-18, Sch H3, P2, L6	(121)	(469)	(1,022)	(1,754)	(2,645)	
7	Ending Net Rate Base	Sum of Line 4 thru L6	17,280	33,931	49,981	65,450	80,361	
8	Average Net Rate Base	L7 (PY+CY)/2	8,640	25,606	41,956	57,715	72,906	
9	Total Cost of Service							
10	Return on Net Rate Base	L8 * 9.33% (1)	806	2,390	3,916	5,387	6,805	19,306
11	Depreciation (1/2 yr conv.)	(2)	200	599	999	1,398	1,798	4,994
12	Property Taxes	Exh A-18, Sch H3, P2, L25	-	190	665	1,108	1,522	3,484
13	Total Cost of Service (COS) Requirement	L10 thru L12	\$ 1,006	\$ 3,179	\$ 5,580	\$ 7,894	\$ 10,125	\$ 27,784

(1) Pre-tax rate of return
Exhibit A-14, Schedule D1

	Weighted Cost	Pre-tax Multiplier	Pre-tax Rate of Return
Long-Term Debt	2.29%	1.000	2.29%
Common Equity	5.20%	1.355	7.04%
Total	7.49%		9.33%

(2) Depreciation rate for Distibution Mains - Metallic is 2.27% based on the approved rates within 2023 DTE Gas Depreciation Case U-21384

Michigan Public Service Commission
DTE Gas Company
Infrastructure Recovery Mechanism - Cathodic Protection
Incremental Revenue Requirement
(\$000)

Case No.: U-21973
Exhibit: A-18
Schedule: H7
Witness: K. M. Vangilder
Page: 2 of 2

Line No.	(a) Description	(b) Source	(c) Year 1 2027	(d) Year 2 2028	(e) Year 3 2029	(f) Year 4 2030	(g) Year 5 2031
1	Deferred Tax Expense						
2	Tax Depreciation	Line 14	660	1,931	3,106	4,193	5,198
3	Book Depreciation	Exh A-18, Sch H3, P1, L11	200	599	999	1,398	1,798
4	Timing Difference	Line 2 - Line 3	460	1,332	2,107	2,795	3,400
5	Deferred Tax Expense	Line 4 X 26.2%	121	349	552	732	891
6	Accum. Deferred Tax Expense	Prior Yr plus L5	\$ 121	\$ 469	\$ 1,022	\$ 1,754	\$ 2,645
7	Tax Depreciation		<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>
8	MACRS Tax Depr Rate (20 Year)		3.750%	7.219%	6.677%	6.177%	5.713%
9	Year 1 Additions	Cost x MACRS Tax Rate	660	1,271	1,175	1,087	1,005
10	Year 2 Additions	Cost x MACRS Tax Rate		660	1,271	1,175	1,087
11	Year 3 Additions	Cost x MACRS Tax Rate			660	1,271	1,175
12	Year 4 Additions	Cost x MACRS Tax Rate				660	1,271
13	Year 5 Additions	Cost x MACRS Tax Rate	-	-	-	-	660
14	Total Tax Depreciation	Sum of L9 thru L13	\$ 660	\$ 1,931	\$ 3,106	\$ 4,193	\$ 5,198
15	Property Tax		<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>
16	Factor	WP-SLW-1, L60-64	0.93	0.87	0.81	0.76	0.71
17	Year 1 Taxable Value	Cost x Factor x 50%	8,184	7,656	7,128	6,688	6,248
18	Year 2 Taxable Value	Cost x Factor x 50%		8,184	7,656	7,128	6,688
19	Year 3 Taxable Value	Cost x Factor x 50%			8,184	7,656	7,128
20	Year 4 Taxable Value	Cost x Factor x 50%				8,184	7,656
21	Year 5 Taxable Value	Cost x Factor x 50%	-	-	-	-	8,184
22	Total Taxable Value	Sum of L17 thru L21	\$ 8,184	\$ 15,840	\$ 22,968	\$ 29,656	\$ 35,904
23	Millage	Exh. A-13, Sch C7.1	59.500	59.500	59.500	59.500	59.500
24	Property Tax Assessed	L22 x L23	\$ 487	\$ 942	\$ 1,367	\$ 1,765	\$ 2,136
25							
26	Property Tax Expense (1 Year lag: 39%)	L24 x 39% (1)	-	190	368	533	688
27	Property Tax Expense (2 Year lag: 61%)	L24 x 61% (1)	-	-	297	575	834
28	Property Tax Expense Incurred by Year	L26 + L27	\$ -	\$ 190	\$ 665	\$ 1,108	\$ 1,522

(1) Property expense is calculated using a 39%/61% split on a one and two year lag, respectively.
This treatment is in line with how property tax expense is incurred within the rate case

Michigan Public Service Commission
DTE Gas Company
Infrastructure Recovery Mechanism - Regulator Station Replacement
Incremental Revenue Requirement
(\$000)

Case No.: U-21973
Exhibit: A-18
Schedule: H8
Witness: K. M. Vangilder
Page: 1 of 2

Line No.	(a) Description	(b) Source	(c) Year 1 2027	(d) Year 2 2028	(e) Year 3 2029	(f) Year 4 2030	(g) Year 5 2031	(h) Total
1	Capital Investment							
2	Regulator Station Replacement Program	Exh. A-12, Sch. B5.3, L7	\$ 12,500	\$ 25,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 187,500
3	Net Rate Base							
4	Cumulative Capital Investment	Prior Yr plus Line2	\$ 12,500	\$ 37,500	\$ 87,500	\$ 137,500	\$ 187,500	
5	Accumulated Depreciation	Prior Yr plus Line -11	(164)	(819)	(2,456)	(5,404)	(9,661)	
6	Accum. Deferred Taxes	Exh A-18, Sch H3, P2, L6	(80)	(390)	(1,144)	(2,448)	(4,236)	
7	Ending Net Rate Base	Sum of Line 4 thru L6	12,256	36,291	83,900	129,648	173,603	
8	Average Net Rate Base	L7 (PY+CY)/2	6,128	24,274	60,095	106,774	151,625	
9	Total Cost of Service							
10	Return on Net Rate Base	L8 * 9.33% (1)	572	2,266	5,610	9,967	14,153	32,567
11	Depreciation (1/2 yr conv.)	(2)	164	655	1,638	2,948	4,258	9,661
12	Property Taxes	Exh A-18, Sch H3, P2, L25	-	135	607	1,529	2,812	5,082
13	Total Cost of Service (COS) Requirement	L10 thru L12	\$ 736	\$ 3,056	\$ 7,854	\$ 14,443	\$ 21,223	\$ 47,311

(1) Pre-tax rate of return
Exhibit A-14, Schedule D1

	Weighted Cost	Pre-tax Multiplier	Pre-tax Rate of Return
Long-Term Debt	2.29%	1.000	2.29%
Common Equity	5.20%	1.355	7.04%
Total	7.49%		9.33%

(2) Depreciation rate for Total Distribution Plant is 2.62% based on the approved rates within 2023 DTE Gas Depreciation Case U-21384

Michigan Public Service Commission
DTE Gas Company
Infrastructure Recovery Mechanism - Regulator Station Replacement
Incremental Revenue Requirement
(\$000)

Case No.: U-21973
Exhibit: A-18
Schedule: H8
Witness: K. M. Vangilder
Page: 2 of 2

Line No.	(a) Description	(b) Source	(c) Year 1 2027	(d) Year 2 2028	(e) Year 3 2029	(f) Year 4 2030	(g) Year 5 2031
1	Deferred Tax Expense						
2	Tax Depreciation	Line 14	469	1,840	4,514	7,926	11,081
3	Book Depreciation	Exh A-18, Sch H3, P1, L11	164	655	1,638	2,948	4,258
4	Timing Difference	Line 2 - Line 3	305	1,185	2,877	4,979	6,824
5	Deferred Tax Expense	Line 4 X 26.2%	80	310	754	1,304	1,788
6	Accum. Deferred Tax Expense	Prior Yr plus L5	\$ 80	\$ 390	\$ 1,144	\$ 2,448	\$ 4,236
7	Tax Depreciation		<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>
8	MACRS Tax Depr Rate (20 Year)		3.750%	7.219%	6.677%	6.177%	5.713%
9	Year 1 Additions	Cost x MACRS Tax Rate	469	902	835	772	714
10	Year 2 Additions	Cost x MACRS Tax Rate		938	1,805	1,669	1,544
11	Year 3 Additions	Cost x MACRS Tax Rate			1,875	3,610	3,339
12	Year 4 Additions	Cost x MACRS Tax Rate				1,875	3,610
13	Year 5 Additions	Cost x MACRS Tax Rate	-	-	-	-	1,875
14	Total Tax Depreciation	Sum of L9 thru L13	\$ 469	\$ 1,840	\$ 4,514	\$ 7,926	\$ 11,081
15	Property Tax		<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>
16	Factor	WP-SLW-1, L60-64	0.93	0.87	0.81	0.76	0.71
17	Year 1 Taxable Value	Cost x Factor x 50%	5,813	5,438	5,063	4,750	4,438
18	Year 2 Taxable Value	Cost x Factor x 50%		11,625	10,875	10,125	9,500
19	Year 3 Taxable Value	Cost x Factor x 50%			23,250	21,750	20,250
20	Year 4 Taxable Value	Cost x Factor x 50%				23,250	21,750
21	Year 5 Taxable Value	Cost x Factor x 50%	-	-	-	-	23,250
22	Total Taxable Value	Sum of L17 thru L21	\$ 5,813	\$ 17,063	\$ 39,188	\$ 59,875	\$ 79,188
23	Millage	Exh. A-13, Sch C7.1	59.500	59.500	59.500	59.500	59.500
24	Property Tax Assessed	L22 x L23	\$ 346	\$ 1,015	\$ 2,332	\$ 3,563	\$ 4,712
25							
26	Property Tax Expense (1 Year lag: 39%)	L24 x 39% (1)	-	135	396	909	1,389
27	Property Tax Expense (2 Year lag: 61%)	L24 x 61% (1)	-	-	211	619	1,422
28	Property Tax Expense Incurred by Year	L26 + L27	\$ -	\$ 135	\$ 607	\$ 1,529	\$ 2,812

(1) Property expense is calculated using a 39%/61% split on a one and two year lag, respectively.
This treatment is in line with how property tax expense is incurred within the rate case

**Michigan Public Service Commission
DTE Gas Company
2025 Annual Incentive Plan and Rewarding Employees Plan Metrics:
DTE Gas Company**

Case No.: U-21973
Exhibit: A-19
Schedule: I2
Witness: M. A. Fix
Page: 1 of 1

Line No.	(a) Category	(b) Measure	(c) Weight		(e) Threshold	(f) Target	(g) Maximum
			AIP	REP			
1	Financial Performance						
2		DTE Gas Operating Earnings	15.00%	15.00%	\$305	\$315	\$325
3							
4		DTE Gas Cash From Operations	15.00%	15.00%	\$498	\$553	\$608
5							
6		DTE Energy Operating Earnings Per Share	10.00%	10.00%	\$7.09	\$7.16	\$7.23
7							
8	Total Financial Measures		40.00%	40.00%			
9							
10	Customer Satisfaction						
11		Net Promoter Score	15.00%	15.00%	31	34	37
12							
13	Safety & Engagement						
14		DTE Gas Employee Engagement-Gallup	5.00%	0.00%	4.17	4.27	4.42
15							
16		DTE Gas OSHA Recordable Incident Rate	5.00%	7.50%	1.15	0.8	0.59
17							
18		DTE Energy High Energy Serious Injury or Fatalit	5.00%	7.50%	3	2	0
19							
20			15.00%	15.00%			
21	Operating Excellence						
22		Gas Open Leak Balance	5.00%	5.00%	2,387	1,836	1,285
23							
24		Gas Distribution Leak Response Time	10.00%	5.00%	21.6	20.5	19.4
25							
26		Percent of Regulators with Qualifying Inspection	5.00%	10.00%	64.30%	66.30%	68.30%
27							
28		Percent of High Population Miles with TVC					
29		Pressure Test Records Remediated	10.00%	10.00%	67.25%	68.09%	68.24%
30							
31			30.00%	30.00%			
32							
33	Total Operating Measures		60.00%	60.00%			
34							
35	Total		100.00%	100.00%			

Michigan Public Service Commission
DTE Gas Company
2025 Annual Incentive Plan and Rewarding Employees Plan Metrics:
DTE Energy Corporate Services LLC

Case No.: U-21973
Exhibit: A-19
Schedule: I3
Witness: M. A. Fix
Page: 1 of 1

Line No.	(a) Category	(b) Measure	(c) Weight		(e) Threshold	(f) Target	(g) Maximum
			AIP	REP			
1	Financial Performance						
2		DTE Energy Operating Earnings Per Share	20.00%	20.00%	\$7.09	\$7.16	\$7.23
3							
4		DTE Energy Cash From Operations	20.00%	20.00%	\$2,989	\$3,321	\$3,653
5							
6	Total Financial Measures		40.00%	40.00%			
7							
8	Customer Satisfaction						
9		Net Promoter Score	15.00%	15.00%	31	34	37
10							
11	Safety & Engagement						
12		DTE Energy Employee Engagement-Gallup	5.00%	0.00%	4.17	4.27	4.42
13							
14		DTE Energy OSHA Recordable Incident Rate	5.00%	7.50%	0.68	0.55	0.42
15							
16		DTE Energy High Energy Serious Injury or Fatalit	5.00%	7.50%	3	2	0
17							
18			15.00%	15.00%			
19	Operating Excellence: Gas						
20		Gas Distribution Leak Response Time	30.00%	30.00%	21.6	20.5	19.4
21							
22			30.00%	30.00%			
23							
24	Total Operating Measures		60.00%	60.00%			
25							
26	Total		100.00%	100.00%			

Michigan Public Service Commission
DTE Gas Company
2027 Long-Term Incentive Plan Metrics

Case No.: U-21973
Exhibit: A-19
Schedule: I4
Witness: M. A. Fix
Page: 1 of 1

	(a)	(b)	(c)	(d)	(e)	(f)
<u>Line No.</u>	<u>Description</u>	<u>Weight</u>		<u>Threshold</u>	<u>Target</u>	<u>Maximum</u>
		<u>DTE Gas</u>	<u>DTE Energy Corporate Services LLC</u>			
1	Total DTE Energy Shareholder Return vs. Peer Group	80%	80%	25th Percentile	55th Percentile	80th Percentile
2	Three-Year Cumulative Operating Earnings Per Share	20%	20%	\$22.36	\$23.01	\$23.46
3	Total	100%	100%			

Michigan Public Service Commission
DTE Gas Company
2025 Incentive Plans Cost/Benefit Analysis
(\$000's)

Case No.: U-21973
Exhibit: A-19
Schedule: I5
Witness: M. A. Fix
Page: 1 of 1

Line No.	Description	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)
		Long Term Incentive Plan			Annual Incentive Plan			Rewarding Employees Plan			Total Incentive Plans			
		Expense	Benefit	Net	Expense	Benefit	Net	Expense	Benefit	Net	Expense	Benefit	Net	
1	Financial Performance													
2	Total DTE Energy Shareholder Return vs. Peer Group	3,916	0	3,916								3,916	0	3,916
3														
4	Three Year Cumulative Operating Earnings Per Share	979	0	979								979	0	979
5														
6	DTE Gas Operating Earnings				59	0	59	965	0	965	1,024	0	1,024	
7														
8	DTE Gas Cash From Operations				59	(391)	(332)	965	(6,392)	(5,427)	1,024	(6,783)	(5,759)	
9														
10	DTE Energy Operating Earnings Per Share				613	0	613	1,780	0	1,780	2,393	0	2,393	
11														
12	DTE Energy Cash From Operations				574	0	574	1,137	0	1,137	1,711	0	1,711	
13														
14	Total Financial Measures	4,895	0	4,895	1,305	(391)	914	4,847	(6,392)	(1,545)	11,047	(6,783)	4,264	
15														
16	Customer Satisfaction													
17	Net Promoter Score				314	(103)	211	1,072	(353)	719	1,386	(456)	930	
18														
19	Total Customer Satisfaction Measure				314	(103)	211	1,072	(353)	719	1,386	(456)	930	
20														
21	Safety & Engagement													
22	Employee Engagement-Gallup				105	(4,167)	(4,062)	0	0	0	105	(4,167)	(4,062)	
23														
24	OSHA Recordable Incident Rate				105	(101)	4	536	(517)	19	641	(618)	23	
25														
26	DTE Energy High Energy Serious Injury or Fatality				105	(101)	4	536	(517)	19	641	(618)	23	
27														
28	Total Employee Engagement Measures				315	(4,370)	(4,055)	1,072	(1,034)	38	1,387	(5,403)	(4,016)	
29														
30	Operating Excellence													
31	Gas Open Leak Balance				10	(358)	(348)	161	(5,764)	(5,603)	171	(6,122)	(5,951)	
32														
33	Gas Distribution Response Time				20	(7)	13	161	(56)	105	181	(63)	118	
34														
35	Percent of Regulators with Qualifying Inspection				10	(332)	(322)	323	(10,723)	(10,400)	333	(11,055)	(10,722)	
36														
37	Percent of High Population Miles with TVC													
38	Pressure Test Records Remediated				588	(594)	(6)	1,498	(1,514)	(16)	2,086	(2,108)	(22)	
39														
40	Total Operating Excellence				628	(1,291)	(663)	2,143	(18,058)	(15,915)	2,771	(19,348)	(16,577)	
41														
42	Total Operating Measures				1,257	(5,764)	(4,507)	4,287	(19,445)	(15,158)	5,544	(25,207)	(19,663)	
43														
44	Total	4,895	0	4,895	2,562	(6,155)	(3,593)	9,134	(25,837)	(16,703)	16,591	(31,990)	(15,399)	

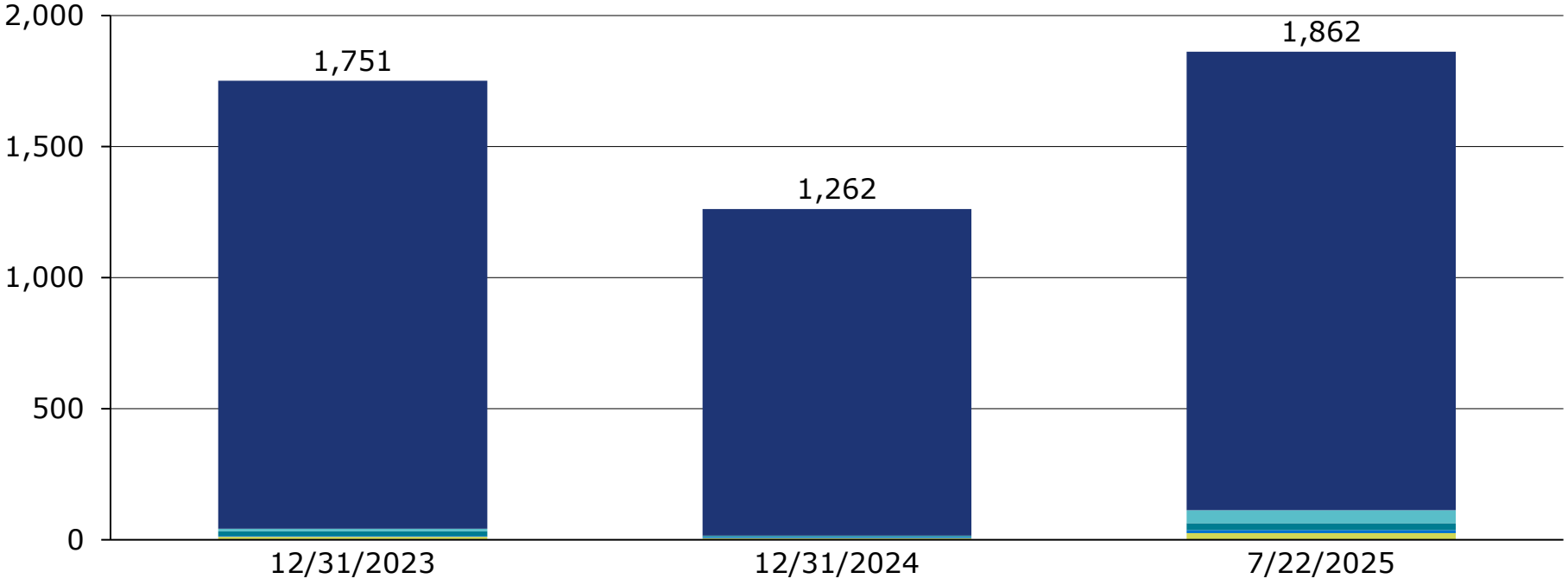


Leak Status

July 2025

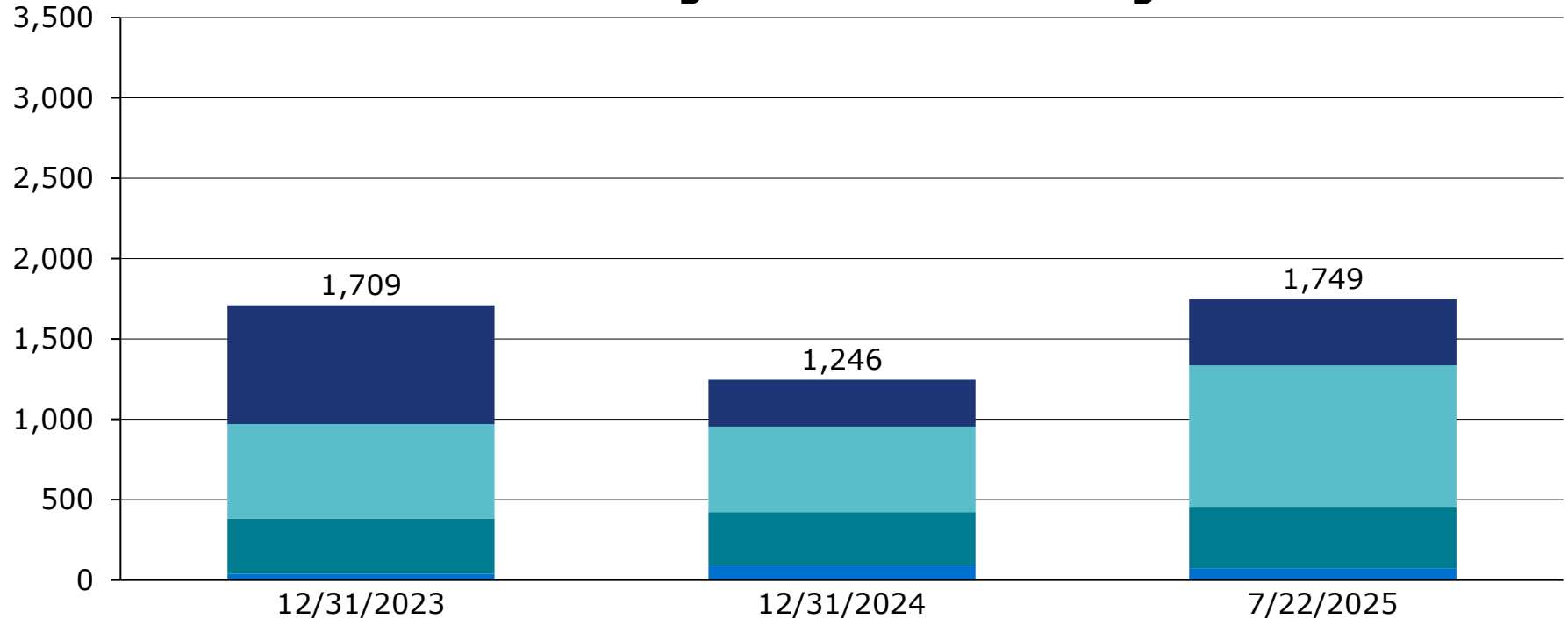
Leak Remediation Plan		2023	2024	2025 Forecast	2026 Forecast
	Beginning Inventory Balance	856	1,751	1,262	1,836
+	Incoming Leaks	6,383	5,336	4,202	4,516
-	Total Leaks Repaired	5,488	5,825	3,628	4,756
<hr/>					
=	Ending Inventory Balance	1,751	1,262	1,836	1,596

Total Pending Leaks Statewide by Region



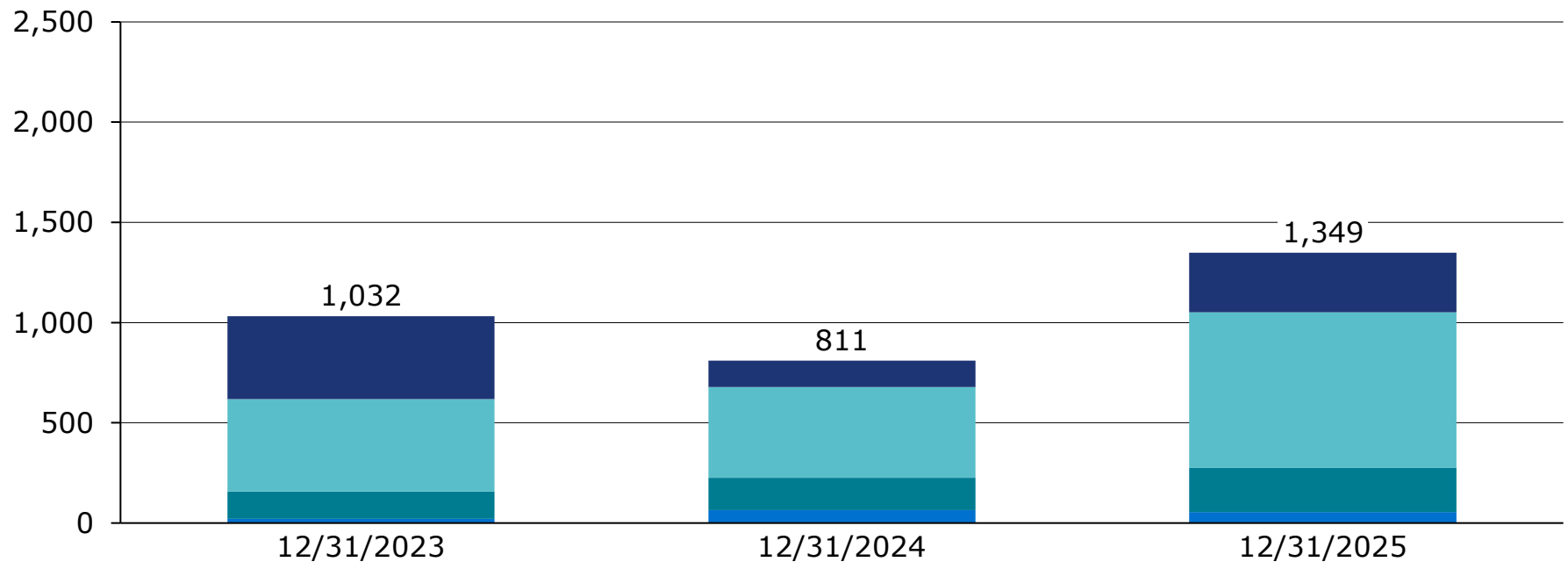
■ Southeast	1,709	1,246	1,749
■ Grand Rapids	9	1	50
■ Western	18	4	26
■ Central	3	5	12
■ Northern	12	6	25
Total	1,751	1,262	1,862

Total Pending Leaks Southeast Region



Allen Road	313	222	414
Lynch Road	315	294	883
Michigan Avenue	188	275	379
ICM	143	11	73
Total	959	802	1,749

Total Pending Main Leaks Southeast Region



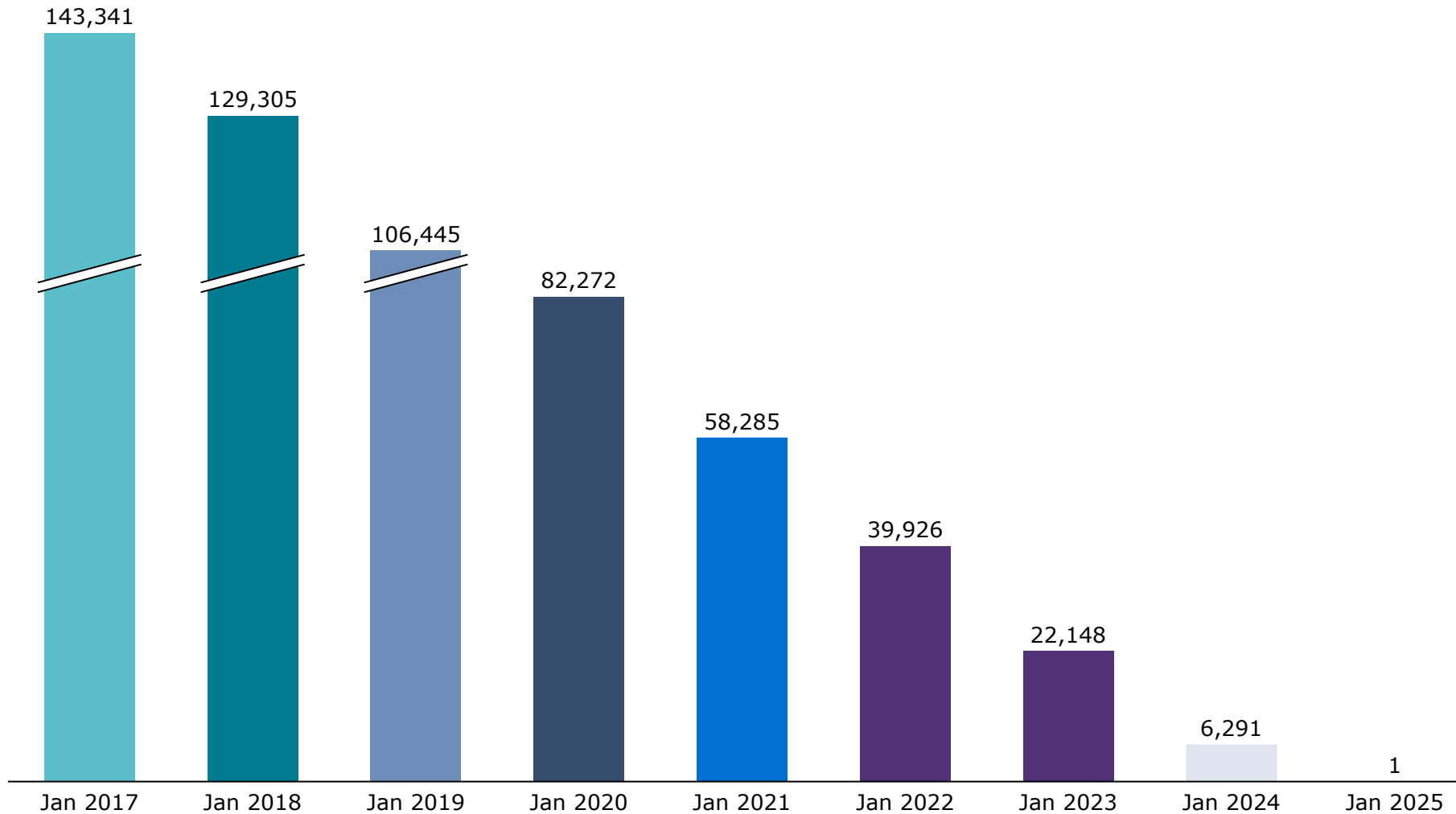
Allen Road	95	84	297
Lynch Road	234	189	777
Michigan Avenue	52	113	220
ICM	39	9	55
Total	420	395	1,349



Meter Assembly Check Status

July 2025

Trending Meter Assembly Check backlog



John C. Robertson III

“Jay Robertson” | jrobertson@westmonroe.com | [linkedin.com/in/jayrob4](https://www.linkedin.com/in/jayrob4)

Summary of Qualifications

Jay Robertson is a Senior Manager in West Monroe’s Energy & Utilities (E&U) Practice. He has extensive experience developing utility strategy and seeing those plans through via project planning, management, and delivery. He has broad exposure to utility technology projects across T&D, generation, and IT projects from strategy, engineering & construction, and regulatory perspectives.

He has 13+ years of experience in various engineering, construction, planning, and strategy roles. Of that time, more than 10 years have been solely focused on the energy and utility industry, predominately helping utilities conceive, plan, and deploy capital projects. He has experience developing a variety of energy and utility projects involving solar generation, EV charging infrastructure, software, communications, distribution automation, grid hardening, analytics, and more. He has experience developing cost estimates, performing cost-benefit analyses (“CBA”), pursuing regulatory approvals, and managing implementations.

Since 2021, he has been employed by West Monroe in the Energy and Utilities practice, predominately helping a variety of regulated investor-owned utility clients across the United States plan and execute grid modernization initiatives. From 2016-2021, he was employed by Louisville Gas & Electric and Kentucky Utilities (“LG&E and KU”) in Emerging Technology program development and implementation roles, during which he developed costs estimates for and managed implementation of PV solar generation facilities and electric vehicle charging infrastructure sites. Prior to 2016, he was employed in various engineering roles, which also entailed designing, estimating, and managing implementation of energy and industrial projects.

He earned his MBA from Indiana University (Bloomington, IN), and a Bachelor of Science in Civil Engineering from the University of Florida (Gainesville, FL). He is a licensed (inactive) professional engineer.

Skills & Specialties

- Energy Technology Technical and Financial Analysis
- Utility Regulatory Advisory and Ratemaking
- Alternative Forms of Ratemaking
- Construction Project Management
- DER Planning and Utility Strategy
- Utility Program Design and Development

Professional Experience

West Monroe Partners

September 2021 – Present

Sr. Manager, Energy & Utilities

Strategy development, new initiative planning, and regulatory advisory for predominately regulated utilities across the US.

- Supported a Midwest IOU in developing 20+ programs comprised of hundreds of projects, estimating costs and benefits for said investments, developing filing materials, and supporting the regulatory process.
- Supported a multi-disciplinary team of software engineers and utility experts to develop a Salesforce platform using agile methodologies for a northeast energy research and development entity.
- Supported a multi-national industrial conglomerate in identifying opportunities for federal funding support for dozens of planned capital projects across hundreds of grant opportunities. Supported preliminary development of project cost estimates to confirm alignment with funding availability.
- Supported a battery manufacturer conceptualize a large-scale battery manufacturing plant, compile project estimates, and author a federal grant application.

- Developed a total cost of ownership analysis for a West Coast IOU's telecom asset population, which included statistically derived estimates for replacement costs, maintenance costs, and capital investment needs.
- Supported a Southern US IOU in forecasting electric vehicle growth and developing an understanding of utility impacts including development of preliminary estimates of associated capital investment needs and resiliency considerations.
- Supported an East Coast IOU with understanding the landscape of regulatory structures and treatment across peer utilities in the US with the intent of improving the efficiency of regulatory filings while maintaining both utility flexibility to serve customers and stakeholder transparency into utility investments.

Louisville Gas & Electric and Kentucky Utilities

January 2016 – August 2021

Sr. Emerging Business Specialist

June 2019 – August 2021

Strategy and product development focusing on renewable energy, electric transportation, and energy storage.

- Led inter-department study that quantified the economic impact of electric vehicle adoption. Findings of the study were used to validate the need for future utility investment in the electric transportation space.
- Developed comprehensive electric vehicle strategy to address electric transportation market. The strategy led to two utility programs filed with the Kentucky Public Service Commission (KPSC) and nearly \$4M in budgeted investment as of 2021.
- Led a collaborative of the six largest utilities in Kentucky to develop a state-wide electric vehicle fast-charging network.
- Developed business case and obtained internal support to build utility-owned fast charging plazas. Involved in rate development, project estimating, procurement, station design, and regulatory filing support.

Program Manager - Emerging Technologies

January 2016 – June 2019

Business development and program management for renewable energy and electric transportation projects.

- Developed a 4MW community solar program for residential and commercial customers. Instrumental in project design, estimation, procurement, rate design, and marketing of the program.
- Served as renewable energy consultant to LG&E and KU's largest C&I customers. Led the project design, cost estimating, sales, project management, financial analysis, and regulatory filings of utility-owned, customer-sited solar arrays.
- Deployed 20 Level 2 electric vehicle charging stations across Kentucky, accounting for 20% of the public charging infrastructure across the state at the time. Responsible for site selection, cost estimation, and deployment, including budget management.

Earthwell Energy | *Sales Engineer*

June 2014 – December 2015

- Led solar project sales, engineering design, and construction management for six C&I solar projects between 6 kW and 1.9 MW.
- Responsible for project design and cost estimation across a wide variety of C&I projects including PV solar, energy efficiency retrofits, submetering equipment, and more.

BTM Engineering | *Project Engineer*

November 2011 – May 2014

- Performed civil and structural engineering design work for industrial, commercial, and multi-family residential clients.
- Monitored construction progress, validated conformity with design documents, managed project risks and uncertainty in real-time construction environments.

Education

Indiana University, Kelley School of Business, Bloomington, IN
Graduated 2022

Master of Business Administration, Finance and Strategy Focus

University of Florida, College of Engineering, Gainesville, FL
Graduated 2011

Bachelor of Science in Civil Engineering, Minor in Business Administration

Professional Publications and Industry Engagement

- Wiley Journal of Climate and Energy Author: “The Value of Electrification: Leveraging Electrification and Distributed Resources for Customer Benefit” (2025)
- Financial Research Institute Advanced Seminar on Transformational Pricing & Rate Design (2025)
- DistribuTECH Presentation: “Making the business case for advanced inspection tools” (2025)
- Electric Power Research Institute: Electric Vehicle Program Advisor (2016-2021)
- ACE Mentoring: Lead team of mentors for high school students interested in pursuing STEM careers (2018-2021)
- Licensed Professional Engineer: Electric Power Discipline (inactive)

Summary of the AACE Cost Estimate Classification Systems

The following summary details West Monroe's interpretation of AACE International Recommended Practice Nos. 17R-97 and 18R-97 and its Guide to Cost Estimate Classification Systems as it pertains to DTE Electric projects.

Overview

The AACE Cost Estimate Classification System is a guideline for, among other things, classifying project cost estimates. The Cost Estimate Classification System is not a methodology; it is a classification system. It does not replace other estimation methodologies. Instead, it interprets and categorizes cost estimates, by mapping "the phases and stages of project cost estimating together with a generic project scope definition maturity and quality matrix."¹ There are five AACE classes, labeled as classes 1-5, with 'Class 1' utilizing the most deterministic methodology and associated with a higher expected accuracy. The primary characteristic that determines the estimate class, is the maturity of project definition deliverables. The secondary characteristics of end usage, methodology, and expected accuracy range are generally associated to the primary characteristic/class determination. Guidelines are based on empirical research and are broadly accepted in the engineering and construction communities.

¹ AACE International Recommended Practice No. 17R-97, pg. 1

Application of the AACE Cost Estimate Classification Systems

The AACE classification system can apply to projects in which there is an appropriate Recommended Practice document, and specific key planning and design deliverables exist with which to determine the estimate class. The general practices that can apply across a wide variety of industries can be found in AACE International Recommended Practice No. 17R-97. Recommended practices providing extensions and additional detail that can apply to specific industries can be found in twelve (12) supplemental AACE International Recommended Practice documents. One of these, Recommended Practice No. 18R-97, was utilized in previous MPSC interpretation of DTE Electric cost estimates and applies specifically to project estimates for engineering, procurement, and construction (“EPC”) work for the process industries. The scope of this particular document includes facilities built for, among other industries, utilities. This document applies to projects that may rely on process flow diagrams (“PFD”), piping and instrument diagrams (“P&ID”) and electrical one-lines as primary scope defining documents. Estimates typically center on mechanical and chemical process equipment, and they have significant amounts of process piping, electrical, instrumentation, and process controls involved as well as civil/structural work associated with the plant. Substations, a common element of process plant facilities, are covered as well. It also includes pumping and compression stations, and terminal tank facilities for pipelines projects.

AACE estimate classes should only be applied to a project for which 1) AACE has published an industry RP relevant to the project, and 2) an assessment as prescribed by that document can be completed. For projects in which RP No. 18R-97 applies, for example, assignment to a specific class is primarily dependent on the maturity level of project

definition deliverables. This process is generally subjective, but AACE recommends that “having standards for the design input data, completeness and quality of the design deliverables will serve to make the determination more objective.”² AACE provides in Table 3 of RP No. 18-97R an Estimate Input Checklist and Maturity Matrix, which lists dozens of common project deliverables and the status (e.g., Not Required, Preliminary, Defined) commonly associated with each AACE class. In order to assign a class to a cost estimate, this Checklist should be used, along with a scoring rubric to determine the maturity level of the project deliverable, and thus AACE class. As the class estimate becomes more determinant, more deliverables become defined. For example, for Class 1, 65-100% of project deliverables are defined and complete.

For process industries in which RP 18R-97 applies, the maturity level of project definition is the most objective determinant of estimate class. The maturity of project definition is based on the percentage completion of key planning and design deliverables. The artifacts assessed in determining project definition include as many as dozens that define scope, project management and other project details, and technical documentation. Other characteristics are generally correlated with the maturity level of the project, but are not the determinant of class, include: the purpose of the estimate, estimating methodology, and expected accuracy range. The length of time between estimate development and the actual intended project execution is not a direct indicator of class. To the extent that estimates are “long-range” and expected to be maintained periodically over time, the estimate should be rated as Class 5 and the Expected Accuracy Ranges in Table 1 should apply. While AACE does not define “long-range” explicitly, it provides “perhaps several decades” as an

² AACE International Recommended Practice No. 18R-97, pg. 5

example interpretation. It also provides “several years” as an example interpretation for “short-term” projects, in which an automatic assignment to Class 5 would not apply. In classifying projects to AACE RP No. 18R-97, projects with a “several year” or less time horizon, and certainly those to be completed within the next year, should be assigned an AACE class based on the scope and project planning definition and technical deliverable completion as the key determinant of class.

Cost Estimate Expected Accuracy Ranges

AACE provides Expected Accuracy Ranges that are an indication of the degree to which the final cost outcome for a given project will vary from the estimated cost. These Expected Accuracy Ranges represent “typical variation in low and high ranges after the application of contingency (determined at a 50% of confidence). Typically, this represents about 80% confidence that the actual cost will fall within the bounds of the low and high ranges if contingency appropriately forecasts uncertainty and risks.”³

³ AACE International Recommended Practice No. 18R-97, pg. 6

AACE RP 18R-97 defines the following expected accuracy ranges by estimate class⁴:

ESTIMATE CLASS	<i>Primary Characteristic</i>	<i>Secondary Characteristic</i>		
	MATURITY LEVEL OF PROJECT DEFINITION DELIVERABLES Expressed as % of complete definition	END USAGE Typical purpose of estimate	METHODOLOGY Typical estimating method	EXPECTED ACCURACY RANGE Typical variation in low and high ranges at an 80% confidence interval
Class 5	0% to 2%	Concept screening	Capacity factored, parametric models, judgment, or analogy	L: -20% to -50% H: +30% to +100%
Class 4	1% to 15%	Study or feasibility	Equipment factored or parametric models	L: -15% to -30% H: +20% to +50%
Class 3	10% to 40%	Budget authorization or control	Semi-detailed unit costs with assembly level line items	L: -10% to -20% H: +10% to +30%
Class 2	30% to 75%	Control or bid/tender	Detailed unit cost with forced detailed take-off	L: -5% to -15% H: +5% to +20%
Class 1	65% to 100%	Check estimate or bid/tender	Detailed unit cost with detailed take-off	L: -3% to -10% H: +3% to +15%

The assigned estimate class and, in turn, the accuracy range for each estimate is dependent on the technical and project deliverables and risks associated with the estimate. As project definition progresses, project-specific risks become more prevalent and drive the accuracy range. During the early stages of project definition, systemic risks are the primary driver of accuracy:

- Level of familiarity with technology
- Unique/remote nature of project locations and conditions and the availability of reference data for those
- Complexity of the project and its execution
- Quality of reference cost estimating data
- Quality of assumptions used in preparing the estimate
- Experience and skill level of the estimator

⁴ AACE International Recommended Practice No. 18R-97, 'Table 1', pg. 3

- Estimating techniques employed
- Time and level of effort budgeted to prepare the estimate
- Market and pricing conditions
- Currency exchange

AACE Expected Accuracy Ranges assume the inclusion of “appropriate contingency.”

AACE emphasizes that the determination of contingency amounts should be based on a thorough risk analysis of the specific project. The recommended practice does not prescribe fixed contingency percentages but instead advocates for a systematic evaluation of project-specific risks and uncertainties to establish “appropriate” contingency levels. This approach ensures that contingencies accurately reflect the unique characteristics and potential challenges of each project.

Michigan Public Service Commission
DTE Gas Company
Digital Self-Service IT Investment
2025-2027 Call Volume Reduction and O&M Savings Summary

Case No.: U-21973
Exhibit: A-22
Schedule: L1
Witness: J. Sparks
Page: 1 of 2

	(a)	(b)	(c)	(d)	(e)
Line No.		2025P	2026P	2027P (9 months)	Total
1	Beginning Calls	3,380,089	3,300,089	3,165,089	
2	Annual Reduction	80,000	135,000	75,000	290,000
3	Year-end Calls	3,300,089	3,165,089	3,090,089	
4	Annual Savings	\$ 1,041,600	\$ 1,757,700	\$ 976,500	\$ 3,775,800
5	<i>DTE Gas Portion (34%)</i>				\$ 1,283,772

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	
	Manual Categorization			Speech Analytics Categorization ⁴						
Line No.	Handled Calls by Transaction	2021A	2022A	2023A ³	2023A ⁴	2024A	2025P	2026P	2027P	2028P
1	Billing	840,000	674,000	572,279	557,255	470,000	460,000	430,000	415,000	415,000
2	Collections	880,000	995,000	951,500	1,245,089	1,030,000	1,030,000	1,030,000	1,030,000	1,030,000
3	Collection Adjustment (due to disallowance) ¹	-	-	-	-	215,089	215,089	215,089	215,089	215,089
4	MIMO	690,000	717,000	526,312	577,498	510,000	480,000	455,000	440,000	430,000
5	Outage	400,000	313,000	388,414	352,922	330,000	320,000	300,000	275,000	245,000
6	Payments	650,000	720,000	438,977	294,745	295,000	295,000	265,000	240,000	215,000
7	Other and Short Calls ²	620,000	814,000	744,652	594,627	530,000	500,000	470,000	450,000	450,000
8	Total	4,080,000	4,233,000	3,622,134	3,622,136	3,380,089	3,300,089	3,165,089	3,065,089	3,000,089
9	Total Handled Calls with 2024 Collection Reduction					3,165,000				
	Handled Call Volume Reduction		2022A	2023A^{3,5}		2024P^{5,6}	2025P^{5,7}	2026P⁵	2027P⁵ (9 months)	2028P
10	Billing		166,000	101,721		87,255	10,000	30,000	11,250	-
11	Collection (net of disallowance)		(115,000)	43,500		-	-	-	-	-
12	MIMO		(27,000)	190,688		67,498	30,000	25,000	11,250	10,000
13	Outage		87,000	(75,414)		22,922	10,000	20,000	18,750	30,000
14	Payments		(70,000)	281,023		(255)	-	30,000	18,750	25,000
15	Other and Short Calls ^{5,6,7}		(194,000)	69,348		64,627	30,000	30,000	15,000	-
16	Total		(153,000)	610,866		242,047	80,000	135,000	75,000	65,000
	Digital Investment O&M Cost Savings		2022A	2023A^{3,5}		2024P^{5,6}	2025P^{5,7}	2026P⁵	2027P⁵ (9 months)	2028P
17	Billing		\$ 1,882,440	\$ 1,153,516		\$ 1,007,795	\$ 130,200	\$ 390,600	\$ 146,475	\$ -
18	Collection (net of disallowance)		\$ (1,304,100)	\$ 493,290		\$ -	\$ -	\$ -	\$ -	\$ -
19	MIMO		\$ (306,180)	\$ 2,162,402		\$ 779,602	\$ 390,600	\$ 325,500	\$ 146,475	\$ 130,200
20	Outage		\$ 986,580	\$ (855,195)		\$ 264,749	\$ 130,200	\$ 260,400	\$ 244,125	\$ 390,600
21	Payments		\$ (793,800)	\$ 3,186,801		\$ (2,945)	\$ -	\$ 390,600	\$ 244,125	\$ 325,500
22	Other and Short Calls ^{5,6,7}		\$ (2,199,960)	\$ 786,406		\$ 746,442	\$ 390,600	\$ 390,600	\$ 195,300	\$ -
23	Total		\$ (1,735,020)	\$ 6,927,220		\$ 2,795,643	\$ 1,041,600	\$ 1,757,700	\$ 976,500	\$ 846,300
24	Cumulative Total		\$ (1,735,020)	\$ 5,192,200		\$ 7,987,843	\$ 9,029,443	\$ 10,787,143	\$ 11,763,643	\$ 12,609,943
25	34% DTE Gas Portion⁸							2025-2027 Savings	\$ 1,283,772	
26	Cost Per Call		2020-2023	2024	2025-2028					
			\$ 11.34	\$ 11.55	\$ 13.02					

Notes

- Due to the full disallowance of 2022-2025 Collection Self-Service Digital IT investments of \$10.7 million in the Final Order to MPSC Case No. U-21534, collection call reductions and associated call reduction O&M savings have been removed.
- Other and Short Calls are calls that are not included in any of the transactions and calls that last less than 45 seconds in talk time.
- The 2023 actual call reduction was calculated based on comparing 2023 to 2022 handled calls using the manual method.
- With the implementation of Speech Analytics in 2023, calls were more accurately categorized and a new baseline of calls by transaction was established for calculating future call reductions.
- The reduction in Other calls is from the re-categorization of calls to the appropriate transaction and an estimated 2023-2027 reduction of 30,000 calls from the Other calls category attributed to the 2023 Advanced Analytics Use Case for Contact Center Natural Language Enhancement.
- 4,500 calls of the 2024 forecasted call reduction benefits is attributed to the 2024 Advanced Analytics Use Case: Contact Center Journey Mapping and Modeling (reflecting a partial-year benefit).
- 13,000 calls of the 2025 forecasted call reduction benefits is attributed to the 2024 Advanced Analytics Use Case: Contact Center Journey Mapping and Modeling (reflecting a full-year benefit).
- This is the DTE Gas portion (34%) of the Call Reduction O&M savings deducted in the Customer Service Operation and Maintenance Expenses Exhibit A-13, Schedule C5.4 for Customer Records and Collection Expenses on line 5 in column (k), Note 4.

**Michigan Public Service Commission
DTE Gas Company
Corporate Memberships**

Case No.: U-21973
Exhibit: A-23
Schedule: M1
Witness: J. L. Huffman
Page: 1 of 5

	(a)	(b)	(c)	(d)	(e)	(f)
LINE NO.	ORGANIZATION	DESCRIPTION	BENEFITS	CUSTOMER BENEFITS	BUSINESS UNIT(S)	MEMBERSHIP COSTS
1	American Gas Association (AGA)	Serves as a strategic industry liaison, offering regulatory updates and market intelligence to support cross-functional business decisions.	<ul style="list-style-type: none"> • Benchmarking • Best Practices • Networking • Research 	Refer to the testimony of Witness Huffman and Witness Kehoe.	Various	\$819,886
2	American Society of Employers (ASE)	Michigan-based nonprofit trade association founded in 1902 that supports businesses in HR services, compliance guidelines and workforce development to enhance organizational effectiveness.	<ul style="list-style-type: none"> • Benchmarking • Research 	Cost-effective way to gain information and support regarding benefit and compensation practices.	Human Resources	\$2,367
3	Chartwell	Delivers customer experience benchmarking that informs operational excellence and client retention strategies.	<ul style="list-style-type: none"> • Benchmarking • Best Practices • Networking • Research 	Provides access to utility-specific benchmarking, best practices, and peer collaboration for customer service.	Customer Service	\$37,069

**Michigan Public Service Commission
DTE Gas Company
Corporate Memberships**

Case No.: U-21973
Exhibit: A-23
Schedule: M1
Witness: J. L. Huffman
Page: 2 of 5

LINE NO.	(a) ORGANIZATION	(b) DESCRIPTION	(c) BENEFITS	(d) CUSTOMER BENEFITS	(e) BUSINESS UNIT(S)	(f) MEMBERSHIP COSTS
4	Common Ground Alliance	Strengthens infrastructure safety and compliance in distribution through best practices and public awareness programs.	<ul style="list-style-type: none"> • Benchmarking • Best Practices • Networking • Research 	See link for more information: What We Do	Distribution	\$2,727
5	Council on State Taxation	The Council on State Taxation (COST) is the premier state tax organization representing taxpayers. COST is a nonprofit trade association consisting of over 500 multi-state corporations engaged in interstate and international business.	<ul style="list-style-type: none"> • Networking • Research 	See link for more information: COST - Member Benefits	Tax	\$382
6	E Source Companies LLC	Equips customer service with data-driven insights to optimize energy engagement, program delivery, and service innovation.	<ul style="list-style-type: none"> • Benchmarking • Best Practices • Networking • Research 	See link for more information: Electric and gas utilities	Customer Service	\$7,112
7	Gartner LLC	Provides high-impact research and advisory services for audit and strategy teams, enhancing technology and risk governance.	<ul style="list-style-type: none"> • Benchmarking • Best Practices • Networking 	Provides research at a lower cost than DTE Gas could do on its own. Also provides industry-wide expertise that DTE Gas may not otherwise have access to.	Internal Audit	\$25,759

**Michigan Public Service Commission
DTE Gas Company
Corporate Memberships**

Case No.: U-21973
Exhibit: A-23
Schedule: M1
Witness: J. L. Huffman
Page: 3 of 5

LINE NO.	(a) ORGANIZATION	(b) DESCRIPTION	(c) BENEFITS	(d) CUSTOMER BENEFITS	(e) BUSINESS UNIT(S)	(f) MEMBERSHIP COSTS
8	HR Policy Association	Offers executive-level HR advocacy and policy insight, helping shape workforce strategies and organizational transformation.	<ul style="list-style-type: none"> • Benchmarking • Best Practices 	Helps improve HR operations and policies, manage costs, and sustain a skilled workforce.	Human Resources	\$4,231
9	Inforum	Michigan-based nonprofit organization dedicated to accelerating the careers of women and advancing gender diversity in the workplace.	<ul style="list-style-type: none"> • Benchmarking • Best Practices 	Customers benefit from a gas utility's participation in Inforum through stronger leadership, industry collaboration, and professional development that enhance service quality and operational efficiency.	Human Resources	\$259
10	Institute for Corp Productivity	Drives human capital innovation through high-performance workforce research aligned with future-focused leadership.	<ul style="list-style-type: none"> • Best Practices • Research 	Provides insights on topics related to organizational culture change, employee collaboration, the attraction and retention of talent and diversity, equity and inclusion issues. The importance of these topics was amplified during the COVID-19 pandemic and its after affects.	Human Resources	\$22,326

**Michigan Public Service Commission
DTE Gas Company
Corporate Memberships**

Case No.: U-21973
Exhibit: A-23
Schedule: M1
Witness: J. L. Huffman
Page: 4 of 5

	(a)	(b)	(c)	(d)	(e)	(f)
LINE NO.	ORGANIZATION	DESCRIPTION	BENEFITS	CUSTOMER BENEFITS	BUSINESS UNIT(S)	MEMBERSHIP COSTS
11	Midwest Energy Association (MEA)	Facilitates enterprise-wide training, technical collaboration, and operational forums across utility functions.	<ul style="list-style-type: none"> • Benchmarking • Best Practices • Networking • Research 	See link for more information: Mission, Vision, and Statements – MEA	Various	\$35,807
12	National Association of Corporate Directors	Elevates board governance and leadership capacity through peer engagement, training, and strategic oversight tools.	<ul style="list-style-type: none"> • Benchmarking • Best Practices • Networking • Research 	See link for more information: National Association of Corporate Directors NACD	Various	\$1,481
13	North American Energy Standards Board	Serves as an industry forum for the development and promotion of standards and protocols for natural gas markets.	<ul style="list-style-type: none"> • Benchmarking • Best Practices • Networking • Research 	See link for more information: North American Energy Standards Board	Various	\$8,725
14	Operations Technology Development	Invests in advanced distribution technologies to streamline operations and deliver competitive advantages in gas delivery.	<ul style="list-style-type: none"> • Benchmarking • Best Practices 	Refer to the testimony of Witness Huffman	Distribution	\$654,364

**Michigan Public Service Commission
DTE Gas Company
Corporate Memberships**

Case No.: U-21973
Exhibit: A-23
Schedule: M1
Witness: J. L. Huffman
Page: 5 of 5

LINE NO.	(a) ORGANIZATION	(b) DESCRIPTION	(c) BENEFITS	(d) CUSTOMER BENEFITS	(e) BUSINESS UNIT(S)	(f) MEMBERSHIP COSTS
15	The Conference Board Inc.	Enables data-driven strategic planning through economic insights, executive learning, and industry benchmarking.	<ul style="list-style-type: none"> • Networking • Research 	See link for more information: About Us The Conference Board	Various	\$31,474
16	The Engineering Society of Detroit	A leading multi-disciplinary organization that fosters professional growth, innovation, and collaboration through youth outreach, technical conferences, awards, and networking events for engineers and allied professionals.	<ul style="list-style-type: none"> • Best Practices • Networking 	See link for more information: About – Engineering Society of Detroit	Distribution	\$10,906
17	Utilization Technology Development	Accelerates innovation in gas applications, supporting commercialization efforts and cross-sector marketing initiatives.	<ul style="list-style-type: none"> • Best Practices • Research 	Refer to the testimony of Witness Huffman	Marketing	\$381,712

Michigan Public Service Commission
DTE Gas Company
Alternate Cost of Service Study
Plant In Service
(\$000)

Case No: U-21973
Exhibit: A-24
Schedule: N1
Witness: H. J. Maroun
Page: 1 of 8

Line No.	(a) Description	(b) Total Company	(c) Rate GS-1/GS-2	(d) Rate A	(e) Rate 2A	(f) Rate S	(g) Rate ST	(h) Rate LT	(i) Rate XLT	(j) Rate XXLT	(k) Exelon	(l) Allocation Schedule
	Plant In Service											
1	Production Plant	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	1
2	Storage Plant	673,470	134,611	385,288	12,520	5,317	21,709	21,431	32,311	46,570	13,714	4
3	Transmission Plant	1,254,774	208,015	602,543	19,167	8,260	58,124	58,011	87,664	177,375	35,616	3
4	Distribution Plant											
5	Distribution Plant - Other	340,559	56,457	163,537	5,202	2,242	15,776	15,745	23,793	48,141	9,667	3
6	Mains - Hi (1)	476,482	83,753	242,668	7,718	3,327	23,319	21,495	30,805	49,128	14,269	3T
7	Mains - Lo (1)	2,877,866	593,568	1,732,574	55,145	23,579	153,203	112,117	108,834	-	98,846	3H
8	Customer Related Plant											
9	Services	2,377,219	525,083	1,768,779	40,523	6,897	26,327	6,027	2,163	569	852	5
10	Meters	411,114	92,201	310,587	7,116	1,211	-	-	-	-	-	6
11	Meter/Reg Installation	520,225	116,672	393,017	9,004	1,532	-	-	-	-	-	6
12	Large Volume Installation	71,881	-	-	-	-	52,660	12,054	4,326	1,138	1,703	7
13												
14	Subtotal - CRP	\$ 3,380,439	\$ 733,956	\$ 2,472,382	\$ 56,642	\$ 9,640	\$ 78,987	\$ 18,081	\$ 6,489	\$ 1,708	\$ 2,555	
15												
16	Subtotal - Dist. Plant	\$ 7,075,346	\$ 1,467,735	\$ 4,611,160	\$ 124,707	\$ 38,789	\$ 271,284	\$ 167,437	\$ 169,921	\$ 98,977	\$ 125,337	
17												
18	Total - Plant in Service	\$ 9,003,589	\$ 1,810,361	\$ 5,598,991	\$ 156,394	\$ 52,365	\$ 351,118	\$ 246,878	\$ 289,895	\$ 322,921	\$ 174,667	

(1) Mains Split based on percentages calculated in Wp HJM-15

Source: Col. (b): WP HJM-7 and Company Books and Records; Cols. (c) to (l) = Col. (b) * Alloc. Factor Percentage on Page 7.

Michigan Public Service Commission
DTE Gas Company
Alternate Cost of Service Study
Base O&M
(\$000)

Case No: U-21973
Exhibit: A-24
Schedule: N1
Witness: H. J. Maroun
Page: 2 of 8

Line No.	(a) Description	(b) Total Company	(c) Rate GS-1/GS-2	(d) Rate A	(e) Rate 2A	(f) Rate S	(g) Rate ST	(h) Rate LT	(i) Rate XLT	(j) Rate XXLT	(k) Exelon	(l) Allocation Schedule
Base O&M												
1	O&M Production	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	1
2	Storage	11,638	2,326	6,658	216	92	375	370	558	805	237	4
3	Transmission	115,733	19,186	55,575	1,768	762	5,361	5,351	8,086	16,360	3,285	3
4	Distribution (2)	151,835	31,497	98,954	2,676	832	5,822	3,593	3,646	2,124	2,690	12
5	Lost & Company Use Gas	27,838	7,068	19,826	667	277	-	-	-	-	-	1
6	Customer Accounts - Supv.	1,466	324	1,091	25	4	16	4	1	0	1	5
7	Meter Reading Expenses	5,144	1,136	3,828	88	15	57	13	5	1	2	5
8	Customer Records	37,475	8,278	27,883	639	109	415	95	34	9	13	5
9	Merchant Fees	-	-	-	-	-	-	-	-	-	-	Direct
10	Customer Accts. - Other	60,143	4,021	55,827	262	9	19	4	1	0	0	8
11	Customer Assistance - Supv.	0	0	0	0	0	0	0	0	0	0	8
12	Customer Services	2,880	193	2,674	13	0	1	0	0	0	0	8
13	Customer Communications	0	-	0	0	-	-	-	-	-	-	10
14	Misc Customer Exp	2,416	162	2,243	11	0	1	0	0	0	0	8
15												
16	Total; Base O&M	<u>\$ 416,568</u>	<u>\$ 74,189</u>	<u>\$ 274,558</u>	<u>\$ 6,365</u>	<u>\$ 2,101</u>	<u>\$ 12,067</u>	<u>\$ 9,430</u>	<u>\$ 12,331</u>	<u>\$ 19,300</u>	<u>\$ 6,228</u>	

(2) Allocator changed from 12A to 12

Source: Col. (b): WP HJM-3, Col. f; Cols. (c) to (l) = Col. (b) * Alloc. Factor Percentage on Page 7.

Michigan Public Service Commission
DTE Gas Company
Alternate Cost of Service Study
Rate Base
(\$000)

Case No: U-21973
Exhibit: A-24
Schedule: N1
Witness: H. J. Maroun
Page: 3 of 8

Line No.	(a) Description	(b) Total Company	(c) Rate GS-1/GS-2	(d) Rate A	(e) Rate 2A	(f) Rate S	(g) Rate ST	(h) Rate LT	(i) Rate XLT	(j) Rate XXLT	(k) Exelon	(l) Allocation Schedule
Rate Base												
1	Production Plant	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	1
2	Storage Plant	673,470	134,611	385,288	12,520	5,317	21,709	21,431	32,311	46,570	13,714	4
3	Transmission Plant	1,254,774	208,015	602,543	19,167	8,260	58,124	58,011	87,664	177,375	35,616	3
4	Distribution Plant - Other	340,559	56,457	163,537	5,202	2,242	15,776	15,745	23,793	48,141	9,667	3
5	Mains - Hi (1)	476,482	83,753	242,668	7,718	3,327	23,319	21,495	30,805	49,128	14,269	3T
6	Mains - Lo (1)	2,877,866	593,568	1,732,574	55,145	23,579	153,203	112,117	108,834	-	98,846	3H
7	Services	2,377,219	525,083	1,768,779	40,523	6,897	26,327	6,027	2,163	569	852	5
8	Meters	411,114	92,201	310,587	7,116	1,211	-	-	-	-	-	6
9	Meter/Reg Installation	520,225	116,672	393,017	9,004	1,532	-	-	-	-	-	6
10	Large Volume Installation	71,881	-	-	-	-	52,660	12,054	4,326	1,138	1,703	7
11	General Plant	512,939	103,137	318,977	8,910	2,983	20,003	14,065	16,515	18,397	9,951	13
12	Intangible Plant	51,597	10,375	32,086	896	300	2,012	1,415	1,661	1,851	1,001	13
13	Intang. Plt - MARS	64	11	31	1	0	3	3	4	9	2	3
14	Intang. Plt. - Transmission	2,507	416	1,204	38	17	116	116	175	354	71	3
15	Intang. Plt. - HPP	3,537	734	2,305	62	19	136	84	85	49	63	12
16	Plant Held FFU- Prod	-	-	-	-	-	-	-	-	-	-	13
17	Plant Held FFU- Transm	-	-	-	-	-	-	-	-	-	-	13
18	Plant Held FFU- Dist	-	-	-	-	-	-	-	-	-	-	13
19	CWIP Storage	136,901	27,363	78,321	2,545	1,081	4,413	4,356	6,568	9,467	2,788	4
20	CWIP Transmission	41,292	6,845	19,828	631	272	1,913	1,909	2,885	5,837	1,172	3
21	CWIP Distribution	163,751	33,969	106,720	2,886	898	6,279	3,875	3,933	2,291	2,901	12
22	CWIP Distribution - Main (2)	147,616	30,622	96,204	2,602	809	5,660	3,493	3,545	2,065	2,615	12
23	CWIP General	35,900	7,219	22,325	624	209	1,400	984	1,156	1,288	696	13
24	CWIP Intangible	10,669	2,145	6,635	185	62	416	293	344	383	207	13
25	Accum. Depr. - Production	-	-	-	-	-	-	-	-	-	-	1
26	Accum. Depr. - Storage	(218,052)	(43,584)	(124,746)	(4,054)	(1,721)	(7,029)	(6,939)	(10,461)	(15,078)	(4,440)	4
27	Accum. Depr. - Transmission	(401,985)	(66,641)	(193,033)	(6,140)	(2,646)	(18,621)	(18,585)	(28,084)	(56,825)	(11,410)	3
28	Accum. Depr. - Distribution	(1,070,830)	(222,137)	(697,884)	(18,874)	(5,871)	(41,058)	(25,341)	(25,717)	(14,980)	(18,969)	12
29	Accum. Depr. - Dist. Mains (2)	(965,315)	(200,248)	(629,117)	(17,014)	(5,292)	(37,012)	(22,844)	(23,183)	(13,504)	(17,100)	12
30	Accum. Depr. - Intangible	(46,276)	(9,305)	(28,778)	(804)	(269)	(1,805)	(1,269)	(1,490)	(1,660)	(898)	13
31	Accum. Depr. - General	(211,448)	(42,516)	(131,492)	(3,673)	(1,230)	(8,246)	(5,798)	(6,808)	(7,584)	(4,102)	13
32	Accum. Depr. - Future Use	-	-	-	-	-	-	-	-	-	-	13
33	WC-Taxes	824,697	165,823	512,848	14,325	4,796	32,161	22,613	26,553	29,578	15,999	13
34	WC-Rev Rec&Pay	(12,470)	(2,735)	(8,325)	(253)	(79)	(294)	(197)	(216)	(257)	(113)	15
35	WC- Sales Storage	24,941	6,332	17,763	598	248	-	-	-	-	-	1
36												
37	Total Rate Base	<u>\$ 8,033,624</u>	<u>\$ 1,618,186</u>	<u>\$ 5,000,863</u>	<u>\$ 139,885</u>	<u>\$ 46,951</u>	<u>\$ 311,565</u>	<u>\$ 219,112</u>	<u>\$ 257,360</u>	<u>\$ 284,603</u>	<u>\$ 155,100</u>	

(1) Mains Split based on percentages calculated in Wp HJM-15

(2) Allocator changed from 12A to 12

Source: Col. (b): WP HJM-7 and Company Books and Records (Plant) HJM-4 (Working Capital); Cols. (c) to (l) = Col. (b) * Alloc. Factor Percentage on Page 7.

Michigan Public Service Commission
DTE Gas Company
Alternate Cost of Service Study
Operating Expense Allocation
(\$000)

Case No: U-21973
Exhibit: A-24
Schedule: N1
Witness: H. J. Maroun
Page: 4 of 8

Line No.	(a) Description	(b) Total Company	(c) Rate GS-1/GS-2	(d) Rate A	(e) Rate 2A	(f) Rate S	(g) Rate ST	(h) Rate LT	(i) Rate XLT	(j) Rate XXLT	(k) Exelon	(l) Allocation Schedule
Operating Expenses												
1	O&M Production	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	1
2	Storage	11,638	2,326	6,658	216	92	375	370	558	805	237	4
3	Transmission	115,733	19,186	55,575	1,768	762	5,361	5,351	8,086	16,360	3,285	3
4	Distribution (2)	151,835	31,497	98,954	2,676	832	5,822	3,593	3,646	2,124	2,690	12
5	Lost & Company Use Gas	27,838	7,068	19,826	667	277	-	-	-	-	-	1
6	Customer Accounts - Supv.	1,466	324	1,091	25	4	16	4	1	0	1	5
7	Meter Reading Expenses	5,144	1,136	3,828	88	15	57	13	5	1	2	5
8	Customer Records	37,475	8,278	27,883	639	109	415	95	34	9	13	5
9	Merchant Fees	-	-	-	-	-	-	-	-	-	-	Direct
10	Customer Accts. - Other	60,143	4,021	55,827	262	9	19	4	1	0	0	8
11	Customer Assistance - Supv.	0	0	0	0	0	0	0	0	0	0	8
12	Customer Services	2,880	193	2,674	13	0	1	0	0	0	0	8
13	Customer Communications	0	-	0	0	-	-	-	-	-	-	10
14	Misc Customer Exp	2,416	162	2,243	11	0	1	0	0	0	0	8
15	A&G Expense	155,063	26,775	101,612	2,273	728	4,813	3,761	4,919	7,699	2,484	17
16	Depr Production	-	-	-	-	-	-	-	-	-	-	1
17	Storage	16,503	3,299	9,441	307	130	532	525	792	1,141	336	4
18	Transmission	21,990	3,646	10,560	336	145	1,019	1,017	1,536	3,109	624	3
19	Distribution	96,200	19,956	62,696	1,696	527	3,689	2,277	2,310	1,346	1,704	12
20	Distribution - Mains (2)	86,721	17,990	56,518	1,529	475	3,325	2,052	2,083	1,213	1,536	12
21	General	23,945	4,815	14,890	416	139	934	657	771	859	465	13
22	Amort. of Intangible Plt.	9,962	2,003	6,195	173	58	388	273	321	357	193	13
23	Amort. of Reg. Debits	(4,883)	(843)	(3,200)	(72)	(23)	(152)	(118)	(155)	(242)	(78)	17
24	Property Taxes	132,466	26,635	82,375	2,301	770	5,166	3,632	4,265	4,751	2,570	13
25	Other Taxes	5,092	1,024	3,167	88	30	199	140	164	183	99	13
26	Payroll Taxes	12,270	2,119	8,040	180	58	381	298	389	609	197	17
27	State/City Income Taxes	14,168	2,854	8,820	247	83	549	386	454	502	274	18
28												
29	Operating Expenses	<u>\$ 986,065</u>	<u>\$ 184,460</u>	<u>\$ 635,672</u>	<u>\$ 15,837</u>	<u>\$ 5,221</u>	<u>\$ 32,910</u>	<u>\$ 24,329</u>	<u>\$ 30,180</u>	<u>\$ 40,825</u>	<u>\$ 16,631</u>	

(2) Allocator changed from 12A to 12

Source: Col. (b): WP HJM-3 and Company Books and Records; Cols. (c) to (l) = Col. (b) * Alloc. Factor Percentage on Page 7.

Michigan Public Service Commission
DTE Gas Company
Alternate Cost of Service Study
Revenue Requirement By Rate Class
(\$000)

Case No: U-21973
Exhibit: A-24
Schedule: N1
Witness: H. J. Maroun
Page: 5 of 8

Line No.	(a) Description	(b) Total Company	(c) Rate GS-1/GS-2	(d) Rate A	(e) Rate 2A	(f) Rate S	(g) Rate ST	(h) Rate LT	(i) Rate XLT	(j) Rate XXL	(k) Exelon	(l) Allocation Schedule
Revenue Requirement												
1	Operating Expenses	\$ 986,065	\$ 184,460	\$ 635,672	\$ 15,837	\$ 5,221	\$ 32,910	\$ 24,329	\$ 30,180	\$ 40,825	\$ 16,631	
2	Amort. Of Debt Disc.	1,885	380	1,174	33	11	73	51	60	67	36	18
3	AFUDC	(12,988)	(2,620)	(7,995)	(229)	(81)	(486)	(361)	(446)	(517)	(251)	14
4	Income Required	558,306	112,458	347,541	9,721	3,263	21,653	15,227	17,886	19,779	10,779	18
5	Federal Income Tax	38,101	9,773	23,905	1,032	64	1,862	934	521	(195)	205	22
6	TCJA Amortization	(12,424)	(2,503)	(7,734)	(216)	(73)	(482)	(339)	(398)	(440)	(240)	18
7	Subtotal - COS	\$ 1,558,946	\$ 301,947	\$ 992,563	\$ 26,178	\$ 8,406	\$ 55,529	\$ 39,841	\$ 47,803	\$ 59,518	\$ 27,160	
8	Uncollectibles	23,540	4,936	15,460	440	155	615	441	530	660	301	20
9	Total Cost of Service	\$ 1,582,485	\$ 306,883	\$ 1,008,023	\$ 26,618	\$ 8,561	\$ 56,144	\$ 40,283	\$ 48,333	\$ 60,178	\$ 27,461	
10												
11	Storage Revenue	\$ (56,601)	\$ (11,313)	\$ (32,381)	\$ (1,052)	\$ (447)	\$ (1,825)	\$ (1,801)	\$ (2,715)	\$ (3,914)	\$ (1,153)	4
12	Off System Transp. Revenue	(78,489)	(13,012)	(37,691)	(1,199)	(517)	(3,636)	(3,629)	(5,484)	(11,095)	(2,228)	3
13	Subtotal - Midstream	\$ (135,090)	\$ (24,325)	\$ (70,071)	\$ (2,251)	\$ (963)	\$ (5,460)	\$ (5,430)	\$ (8,199)	\$ (15,009)	\$ (3,380)	
14	Appliance Service Programs	\$ (108,546)	\$ (22,517)	\$ (70,742)	\$ (1,913)	\$ (595)	\$ (4,162)	\$ (2,569)	\$ (2,607)	\$ (1,518)	\$ (1,923)	12
15	Gas-in-Kind Revenue	(21,767)	(5,526)	(15,502)	(522)	(216)	-	-	-	-	-	1
16	Other Revenue	(15,785)	(3,057)	(10,050)	(265)	(85)	(562)	(403)	(484)	(603)	(275)	19
17	Blue Lake Pipeline	(1,005)	(195)	(640)	(17)	(5)	(36)	(26)	(31)	(38)	(18)	19
18	Vector Pipeline	(2,727)	(528)	(1,736)	(46)	(15)	(97)	(70)	(84)	(104)	(48)	19
19	Subtotal - Other Revenue	\$ (149,830)	\$ (31,824)	\$ (98,670)	\$ (2,763)	\$ (917)	\$ (4,857)	\$ (3,068)	\$ (3,205)	\$ (2,264)	\$ (2,263)	
20	Low Income Assist. Pilot	\$ 28,776	\$ 6,035	\$ 18,900	\$ 538	\$ 190	\$ 752	\$ 540	\$ 648	\$ 806	\$ 368	20
21	Low Income Assist. Credit	(28,776)		(28,776)								
22	Less: Provision for Rt Refund	1,793	376	1,177	34	12	47	34	40	50	23	20
23	Customer Discount											
24	Re Alloc Cust. Discount											
25	Standby Chgs. / Min Vol. Rev.	(2,434)	(7)	-	-	-	(434)	(770)	(125)	(1,097)	-	Direct
26	Subtotal - Other Dist. Rev.	\$ (641)	\$ 6,403	\$ (8,699)	\$ 572	\$ 202	\$ 365	\$ (196)	\$ 563	\$ (240)	\$ 391	
27	Revenue Requirement	\$ 1,296,924	\$ 257,138	\$ 830,582	\$ 22,176	\$ 6,883	\$ 46,192	\$ 31,589	\$ 37,491	\$ 42,665	\$ 22,208	

Source: Col. (b): WP HJM-3 and Company Books and Records; Cols. (c) to (l) = Col. (b) * Alloc. Factor Percentage on Page 7.

Alt Rev Req Lockdown \$ 1,296,924 \$ 257,138 \$ 830,582 \$ 22,176 \$ 6,883 \$ 46,192 \$ 31,589 \$ 37,491 \$ 42,665 \$ 22,208

Michigan Public Service Commission
DTE Gas Company
Alternate Cost of Service Study
Allocation Factors

Case No: U-21973
Exhibit: A-24
Schedule: N1
Witness: H. J. Maroun
Page: 6 of 8

Line No.	(a) Description	(b) Total Company	(c) Rate GS-1/GS-2	(d) Rate A	(e) Rate 2A	(f) Rate S	(g) Rate ST	(h) Rate LT	(i) Rate XLT	(j) Rate XXLT	(k) Exelon	(l) Allocation Schedule
1	Commodity	100.0000%	25.389%	71.219%	2.398%	0.994%	0.000%	0.000%	0.000%	0.000%	0.000%	1
2	Throughput	100.0000%	12.820%	35.963%	1.211%	0.502%	5.486%	6.208%	9.615%	24.793%	3.403%	2
3	Average & Peak	100.0000%	16.578%	48.020%	1.528%	0.658%	4.632%	4.623%	6.986%	14.136%	2.838%	3
3T	A&P w/o Trans Vol	100.0000%	17.577%	50.929%	1.620%	0.698%	4.894%	4.511%	6.465%	10.310%	2.995%	3T
3H	A&P w/o Trans + Hi Dist Vol	100.0000%	20.625%	60.203%	1.916%	0.819%	5.323%	3.896%	3.782%	0.000%	3.435%	3H
4	Storage	100.0000%	19.988%	57.209%	1.859%	0.789%	3.223%	3.182%	4.798%	6.915%	2.036%	4
5	Weighted Customers - All	100.0000%	22.088%	74.405%	1.705%	0.290%	1.107%	0.254%	0.091%	0.024%	0.036%	5
6	Weighted Customers - R & C	100.0000%	22.427%	75.547%	1.731%	0.295%	0.000%	0.000%	0.000%	0.000%	0.000%	6
7	Weighted Customers - LV	100.0000%	0.000%	0.000%	0.000%	0.000%	73.259%	16.770%	6.018%	1.584%	2.369%	7
8	Customer - All	100.0000%	6.685%	92.824%	0.436%	0.016%	0.032%	0.006%	0.001%	0.000%	0.000%	8
9	Customer - R & C	100.0000%	6.688%	92.861%	0.436%	0.016%	0.000%	0.000%	0.000%	0.000%	0.000%	9
10	Customer - Res.	100.0000%	0.000%	99.532%	0.468%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	10
11	Customer Related Plant	100.0000%	21.712%	73.138%	1.676%	0.285%	2.337%	0.535%	0.192%	0.051%	0.076%	11
12	Distribution Plant	100.0000%	20.744%	65.172%	1.763%	0.548%	3.834%	2.366%	2.402%	1.399%	1.771%	12
12A	Dist Plant no XXLT	100.0000%	21.039%	66.097%	1.788%	0.556%	3.889%	2.400%	2.436%	0.000%	1.797%	12A
13	Plant in Service	100.0000%	20.107%	62.186%	1.737%	0.582%	3.900%	2.742%	3.220%	3.587%	1.940%	13
14	CWIP	100.0000%	20.175%	61.559%	1.767%	0.621%	3.745%	2.781%	3.438%	3.978%	1.936%	14
15	Revenue	100.0000%	21.932%	66.762%	2.033%	0.633%	2.356%	1.582%	1.732%	2.062%	0.909%	15
16	Revenue Less Cost of Gas	100.0000%	20.091%	64.389%	1.838%	0.441%	3.610%	2.425%	2.655%	3.159%	1.392%	16
17	O&M Expense Less Gas	100.0000%	17.267%	65.529%	1.466%	0.469%	3.104%	2.426%	3.172%	4.965%	1.602%	17
18	Rate Base	100.0000%	20.143%	62.249%	1.741%	0.584%	3.878%	2.727%	3.204%	3.543%	1.931%	18
19	COSS Allocation	100.0000%	19.369%	63.669%	1.679%	0.539%	3.562%	2.556%	3.066%	3.818%	1.742%	19
20	COSS + COG Allocation	100.0000%	20.971%	65.678%	1.870%	0.660%	2.614%	1.875%	2.250%	2.802%	1.279%	20
21	Open	0.0000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	21
22	Pre-Tax NOI	100.0000%	25.650%	62.742%	2.709%	0.168%	4.886%	2.451%	1.368%	-0.513%	0.539%	22

Source: Exh. A-16, Sch. F1.2 and Exh. A-24, Sch. N1 pages 7 & 8

Michigan Public Service Commission
DTE Gas Company
Alternate Cost of Service Study
Average & Peak Excluding Transmission-Served Volumes
Allocator 3T

Case No: U-21973
Exhibit: A-24
Schedule: N1
Witness: H. J. Maroun
Page: 7 of 8

Line No.	(a) Average Demand	(b) Annual Demand	(c) Direct Served Transmission	(d) Revised Annual Demand	(e) Daily Demand	(f) % of Total	(g) % of Average Portion	(h) % of Class Total
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	Rate GS-1/GS-2 - General	39,158,210	16,704	39,141,506	107,237	14.12%	4.46%	0.0%
2	Rate A - Residential	109,843,293	42,367	109,800,927	300,824	39.61%	12.52%	0.0%
3	Rate 2A - Multi-Family	3,698,115	265	3,697,850	10,131	1.33%	0.42%	0.0%
4	Rate S - Schools	1,532,824	-	1,532,824	4,200	0.55%	0.17%	0.0%
5	Rate ST Transportation	16,756,012	1,201	16,754,811	45,904	6.04%	1.91%	0.0%
6	Rate LT Transportation	18,961,456	1,423,587	17,537,869	48,049	6.33%	2.00%	7.5%
7	Rate XLT Transportation	29,366,915	3,598,537	25,768,378	70,598	9.30%	2.94%	12.3%
8	Rate XXLT Transportation	75,728,098	23,163,125	52,564,973	144,014	18.96%	6.00%	30.6%
9	Exelon	10,392,522	13,715	10,378,807	28,435	3.74%	1.18%	0.1%
10	Total	305,437,445	28,259,500	277,177,945	759,392	100.00%	31.61%	

	Peak Day Demand	Direct Served Transmission	Revised Peak Day Demand	% of Total	% of Peak Portion	
11	Rate GS-1/GS-2 - General	460,804	197	460,608	19.17%	13.11%
12	Rate A - Residential	1,349,557	521	1,349,036	56.16%	38.41%
13	Rate 2A - Multi-Family	42,088	3	42,085	1.75%	1.20%
14	Rate S - Schools	18,388	-	18,388	0.77%	0.52%
15	Rate ST Transportation	104,788	8	104,780	4.36%	2.98%
16	Rate LT Transportation	95,354	7,159	88,195	3.67%	2.51%
17	Rate XLT Transportation	141,157	17,297	123,860	5.16%	3.53%
18	Rate XXLT Transportation	218,370	66,793	151,577	6.31%	4.32%
19	Exelon	63,694	84	63,610	2.65%	1.81%
20	Total	2,494,200	92,061	2,402,139	100.00%	68.39%

Average and Peak		Schedule 31
21	Rate GS-1/GS-2 - General	17.58%
22	Rate A - Residential	50.93%
23	Rate 2A - Multi-Family	1.62%
24	Rate S - Schools	0.70%
25	Rate ST Transportation	4.89%
26	Rate LT Transportation	4.51%
27	Rate XLT Transportation	6.47%
28	Rate XXLT Transportation	10.31%
29	Exelon	2.99%
30	Total	100.00%

Source: WP HJM-16

Michigan Public Service Commission
DTE Gas Company
Alternate Cost of Service Study
Average & Peak Excluding Transmission and High-Pressure Served Volumes
Allocator 3H

Case No: U-21973
Exhibit: A-24
Schedule: N1
Witness: H. J. Maroun
Page: 8 of 8

Line No.	(a) Average Demand	(b) Annual Demand	(c) Direct Served Transmission & High Pressure	(d) Revised Annual Demand	(e) Daily Demand	(f) % of Total	(g) % of Average Portion	(h) % of Class Total
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	Rate GS-1/GS-2 - General	39,158,210	354,445	38,803,765	106,312	18.91%	4.94%	0.9%
2	Rate A - Residential	109,843,293	249,552	109,593,741	300,257	53.40%	13.96%	0.2%
3	Rate 2A - Multi-Family	3,698,115	698	3,697,416	10,130	1.80%	0.47%	0.0%
4	Rate S - Schools	1,532,824	13,753	1,519,071	4,162	0.74%	0.19%	0.9%
5	Rate ST Transportation	16,756,012	1,197,837	15,558,176	42,625	7.58%	1.98%	7.1%
6	Rate LT Transportation	18,961,456	5,979,701	12,981,755	35,566	6.32%	1.65%	31.5%
7	Rate XLT Transportation	29,366,915	16,436,607	12,930,308	35,426	6.30%	1.65%	56.0%
8	Rate XXL Transportation	75,728,098	75,728,098	-	-	0.00%	0.00%	100.0%
9	Exelon	10,392,522	226,932	10,165,590	27,851	4.95%	1.30%	2.2%
10	Total	305,437,445	100,187,622	205,249,824	562,328	100.00%	26.15%	

	Peak Day Demand	Direct Served Transmission & High Pressure	Revised Peak Day Demand	% of Total	% of Peak Portion	
11	Rate GS-1/GS-2 - General	460,804	4,171	456,633	21.23%	15.68%
12	Rate A - Residential	1,349,557	3,066	1,346,491	62.61%	46.24%
13	Rate 2A - Multi-Family	42,088	8	42,080	1.96%	1.45%
14	Rate S - Schools	18,388	165	18,223	0.85%	0.63%
15	Rate ST Transportation	104,788	7,491	97,297	4.52%	3.34%
16	Rate LT Transportation	95,354	30,071	65,283	3.04%	2.24%
17	Rate XLT Transportation	141,157	79,006	62,152	2.89%	2.13%
18	Rate XXL Transportation	218,370	218,370	0	0.00%	0.00%
19	Exelon	63,694	1,391	62,303	2.90%	2.14%
20	Total	2,494,200	343,739	2,150,461	100.00%	73.85%

	Average and Peak	Schedule 3H
21	Rate GS-1/GS-2 - General	20.63%
22	Rate A - Residential	60.20%
23	Rate 2A - Multi-Family	1.92%
24	Rate S - Schools	0.82%
25	Rate ST Transportation	5.32%
26	Rate LT Transportation	3.90%
27	Rate XLT Transportation	3.78%
28	Rate XXL Transportation	0.00%
29	Exelon	3.43%
30	Total	100.00%

Source: WP HJM-16

The logo for DTE, consisting of the letters 'DTE' in a bold, blue, sans-serif font. The logo is positioned on the left side of the slide, with a decorative background of thin, light blue lines radiating from behind it.

Electrification Consideration Study – Among Propane Households

Prepared by:



October 2025

Background and Objectives

- DTE markets natural gas to residents across its territory in GRMI that are currently heating their homes with propane, with the goal of getting these residents to switch from propane to natural gas, sometimes with a cost to expand the gas lines. It's usually advantageous for these residents to switch because the cost of heating your home with natural gas is up to 50% more affordable than heating with propane.
- DTE needs quantitative research of residential homeowners in the state of Michigan, outside of the Detroit metro area/Southeast Michigan, related to the energy they use, the energy they prefer and opinions regarding the possible conversion from propane to either Natural Gas or Electric. By quantifying homeowner energy preference and opinions, the Company can better position their marketing and growth strategies.

Methodology

WHAT:

A non-sponsored quantitative study with an online panel provided by RepData.

WHO:

Propane consumers in Michigan who do not use natural gas, are 18 years old or older, who make/share in home energy decisions, and own a condo, duplex, single family home or mobile home.

A total of 513 surveys were completed: 365 in the DTE footprint and 148 outside DTE footprint but in upper Michigan.

WHEN:

The survey was fielded from September 4 to October 3, 2025.

WHY:

To understand home energy usage, satisfaction and preference.

Key Findings

01: Slide 6

Among Propane users, the preferred energy sources for home heating and water heating are mostly shared between Natural Gas and Propane.

02: Slide 7

Among Propane users, Natural Gas is the preferred home energy source by 4 to 1 over Electricity.

03: Slide 7

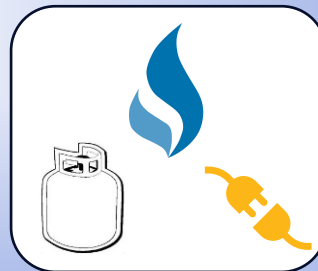
Main reason for preferring Natural Gas to Electricity is the cost.

04: Slide 15

Among propane users, Natural Gas is considered the most affordable and most reliable when compared to Electricity, Propane and other energy sources.



Preferred Energy Source

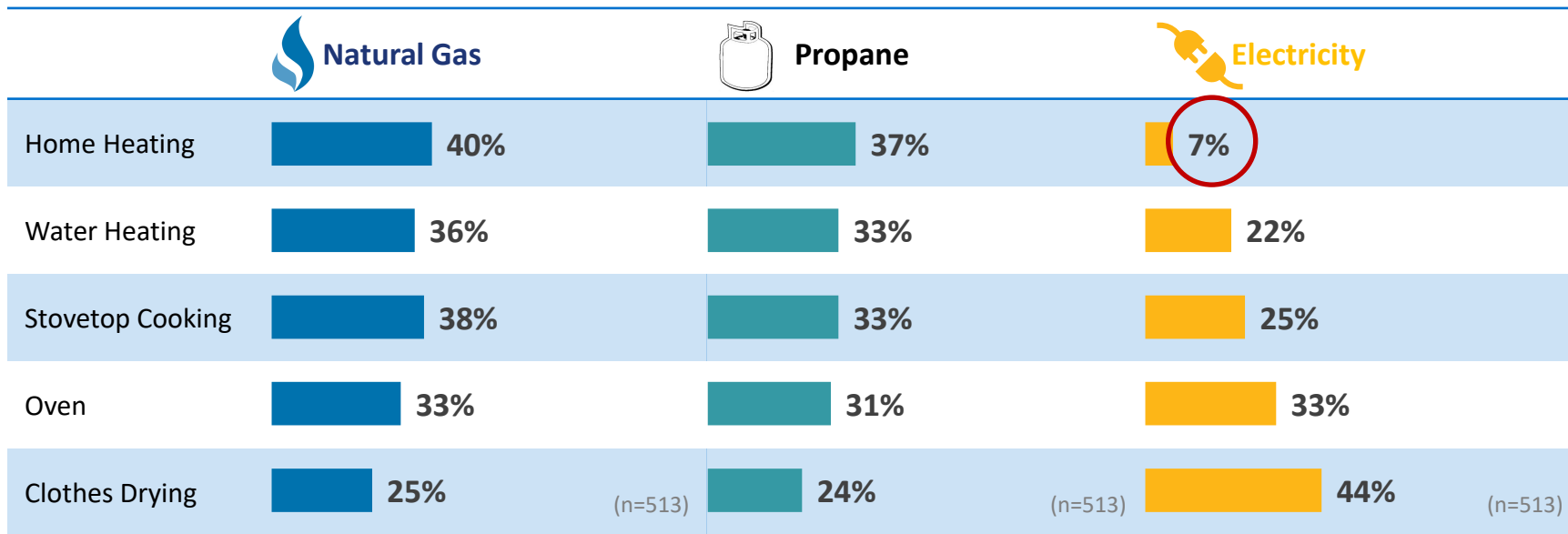


Preferred Energy Type Among Propane Users

Natural Gas and Propane are the more preferred energy source for Home heating, Water heating and Stovetop cooking.

Electricity is the preferred source for clothes drying.

Note that less than one out ten respondents prefer electricity for home heating.



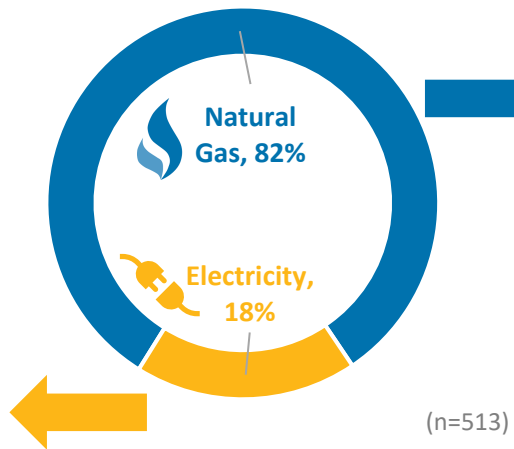
Energy Preference: Electricity vs. Natural Gas

Natural Gas is the preferred energy source over Electricity mostly due to being less expensive.

Top Reasons for Choosing Electricity (n=94)

- 24% Easier to use
- 22% Safety reasons
- 19% Cost, less expensive
- 15% More readily available/more supply
- 14% Cleaner, better for environment

Energy Preference



Top Reasons for Choosing Natural Gas (n=419)

- 62% Cost, less expensive
- 12% Less/fewer outages
- 11% More efficient

See select verbatim comments on the next page.

Select Verbatim Comments Regarding Choosing Natural Gas Over Electricity

"Electric is very expensive and if the lights go out, I can still cook and heat the house with natural gas."

"I'm not sure but it is naturally occurring where electricity requires conversion of other fuels to create."

"It is a very efficient heat source and would not cause my power bill to spike into a higher tier."

"It's what I feel most comfortable using and the most efficient way to heat a home."

"Because it is efficient and I would simply have a monthly bill for my usage."

"Strong awareness of environmental protection, using natural gas to reduce pollution."

"I like natural gas for cooking and baking. I think it would be cheaper than electricity to run the furnace and other appliances. Plus, it is all on one bill."

"Less expensive and more efficient. Natural gas heats faster than electric."

"The supply of natural gas is relatively stable and is not easily affected by power outages, especially in extreme weather conditions."

"Because my parents recently switched from propane to natural gas for most of the same appliances, and it is way less expensive and there's never any fear of running out of it."

"I feel like natural gas heats up better than electric, and it's way more comfy. Plus, when you're cooking, it warms up super fast and is just easier to use."

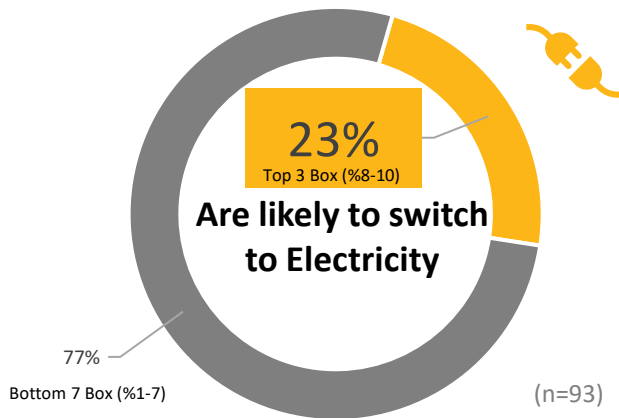
Likelihood to Switch to Electric

Asked to those who prefer Electricity over Natural Gas

Likelihood to Switch to Electric

(Asked to those who say they would choose Electric over Natural Gas)

Among those who say they prefer Electricity over Natural Gas, slightly less than one-fourth way they are very likely to switch to electric even if their monthly energy bills doubled and there were additional cost to switching.

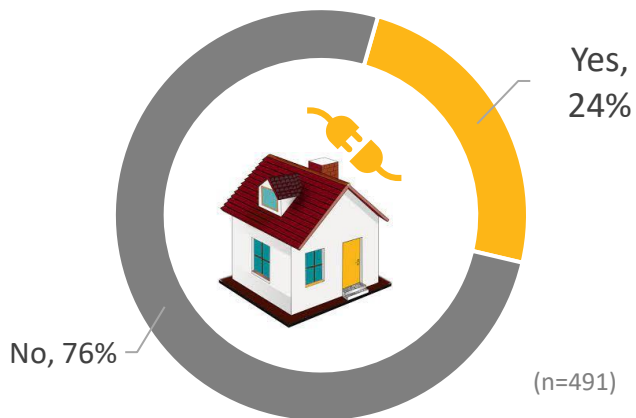


Considered Switching Home Heating Energy Source to Electric

Asked if Propane Used for Home Heating


Among those who use propane for home heating, one out of four say they have considered switching to electric before. The most mentioned reason for not already making the switch is the expense of changing.

Considered Switching Home Energy to Electric



Top Reasons for Not Switching

(Among those who considered switching)

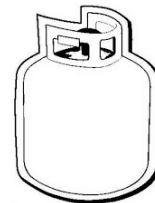
- 73% Too expensive/too expensive to change 
- 9% Need more information
- 8% Like what I'm currently using
- 7% Not available where I live (n=119)

Note: Among those who say they have considered switching to Electricity, almost 7 out of 10 (68%) say they prefer Natural Gas over Electricity.

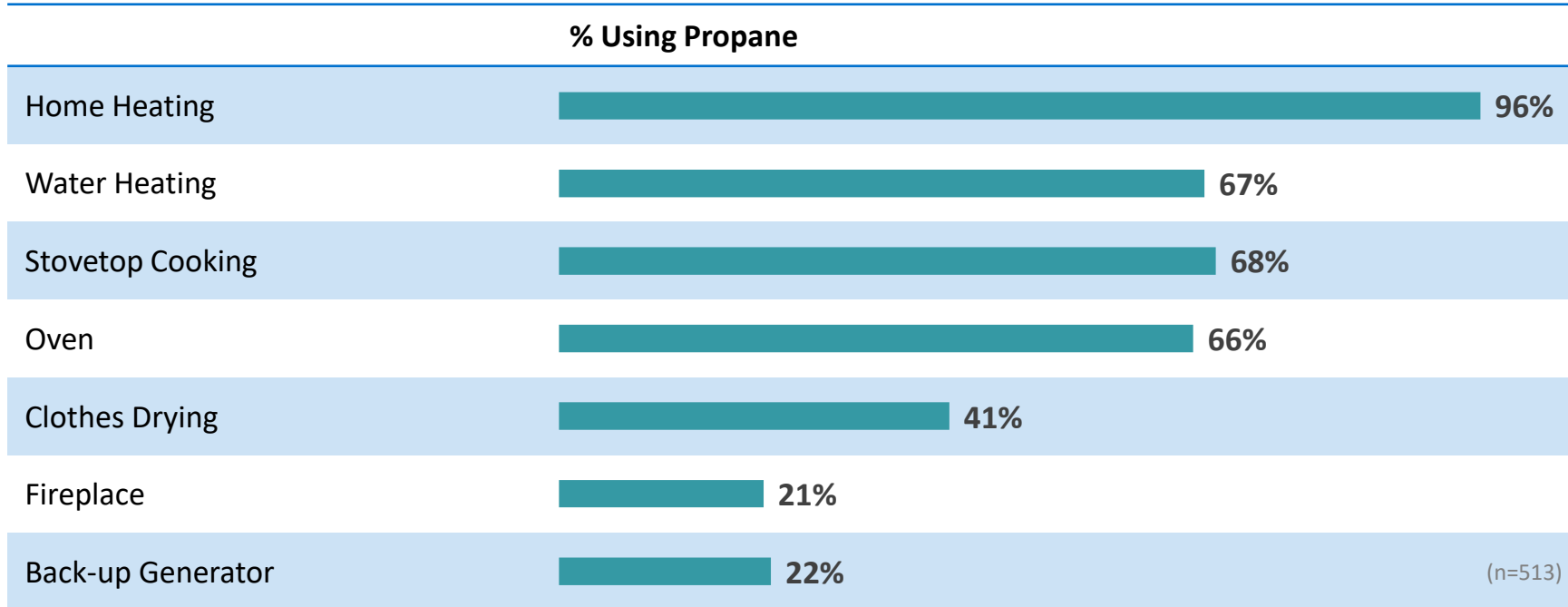
DTE

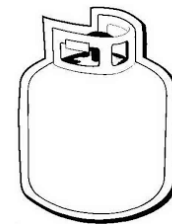
Propane Usage





Propane is Energy Type Primarily Used

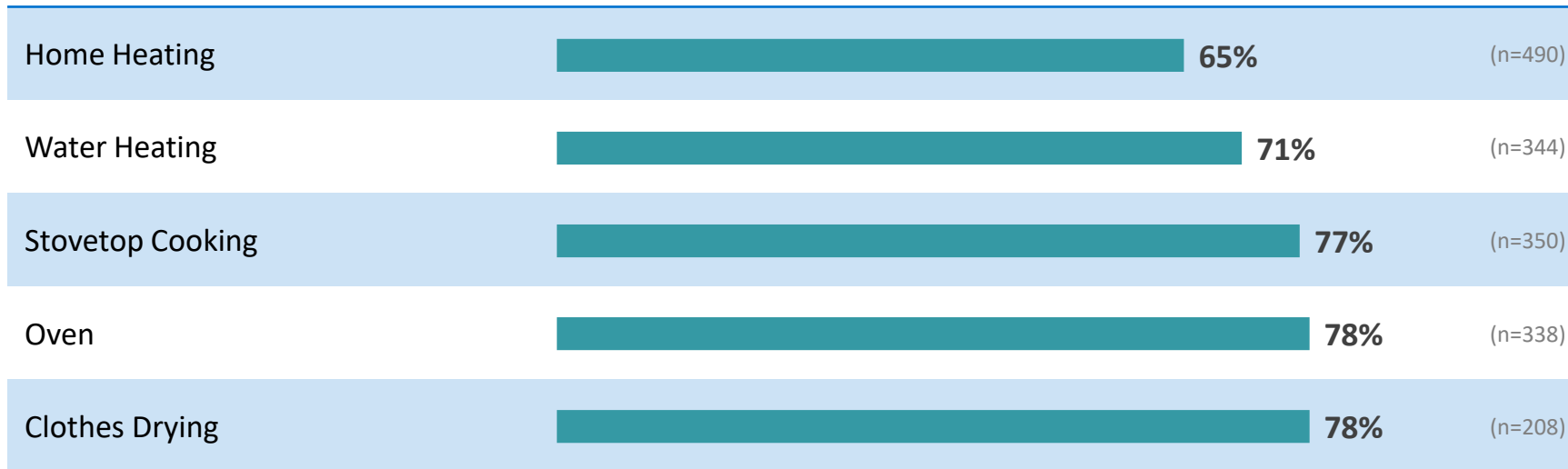




Overall Satisfaction with Propane Usage

Respondents are moderately satisfied with Propane as an energy source.

Top 3 Box (%8-10) Rating













The logo for DTE, consisting of the letters 'DTE' in a bold, dark blue, sans-serif font. The letters are set against a background of thin, light blue lines that radiate outwards from the top left corner, creating a sunburst or fan-like effect.











Natural Gas



Agreement About Natural Gas

Agreement ratings about Natural Gas range from 67% for being reliable to 47% for environmentally friendly.

Natural Gas...	Top 3 Box (%8-10)
Is a reliable energy source	 67%
Provides abundant energy supply	 63%
Is an efficient energy source	 63%
Provides the most comfortable home heating	 62%
Costs less for water heating	 59%
Provides more continuous hot water	 59%
Costs less for home heating	 59%
Best overall value for household energy	 58%
Provides the energy needed to generate electricity	 58%
Supports our nation's energy independence	 56%

Natural Gas...	Top 3 Box (%8-10)
Is the best choice for cooking	 56%
Is the best energy for higher end luxury appliances	 55%
Is a safe energy source	 55%
Is an affordable energy source	 55%
Increases the value of your home	 55%
Is good for the economy	 53%
Is energy that will help achieve carbon emission goals	 50%
Energy prices are stable over time	 49%
Is a clean (produces less carbon emissions) energy source	 48%
Is an environmentally friendly energy source	 47%

(n=513)

Energy Source Perception

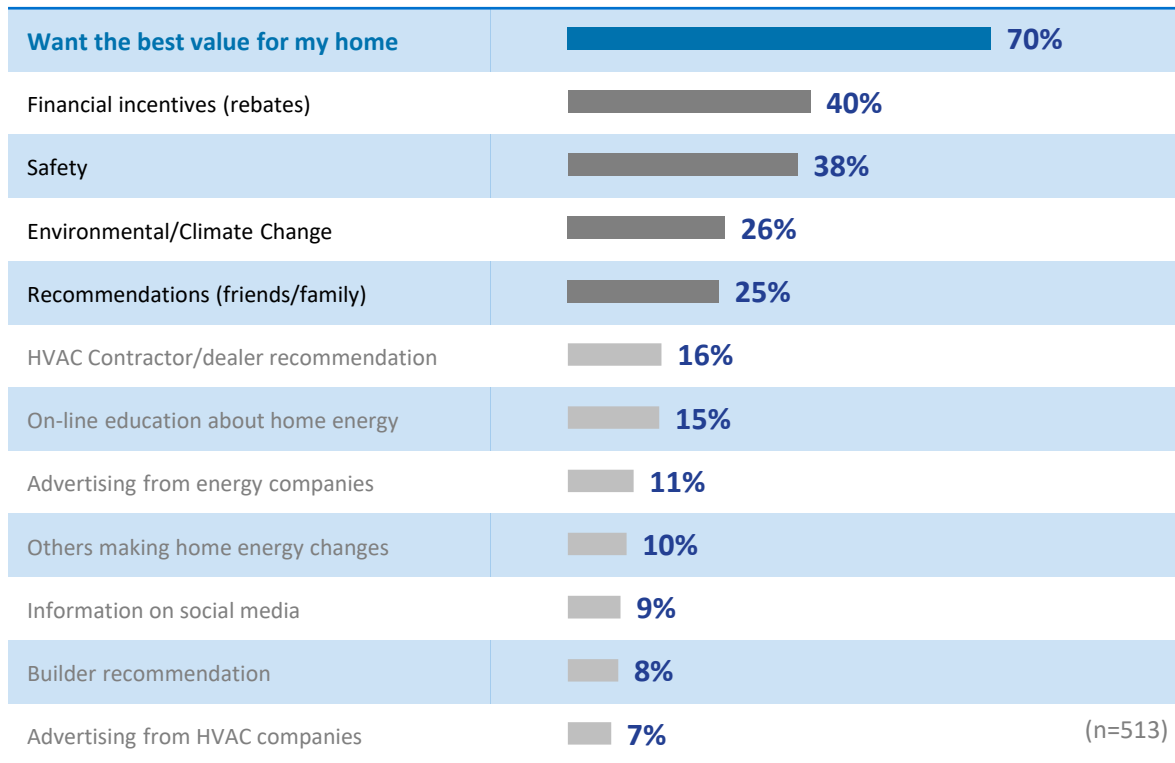
Among energy sources, **Natural Gas** is perceived as: most affordable and most reliable.

	Most affordable	Most reliable	Cleanest	Least Negative	Most Negative
Electric	9%	13%	11%	10%	15%
Natural Gas	47%	43%	26%	17%	11%
Propane	24%	31%	13%	12%	12%
Heating Oil	1%	1%	0%	1%	46%
Geothermal	5%	6%	11%	15%	5%
Solar	11%	4%	29%	31%	6%
Wind	3%	1%	10%	15%	6%

(n=513)

Influences of Home Energy Decisions

Top 3 Box (%8-10)



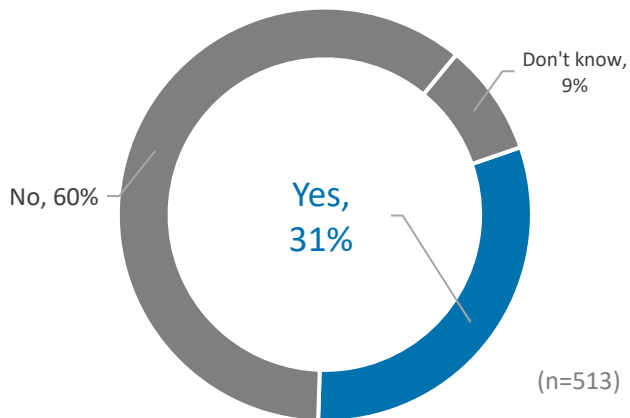
Best value for the home main reason of influence identified when it comes to making home energy decisions.

Financial incentives through rebates and **overall safety** are the next most important influencers.

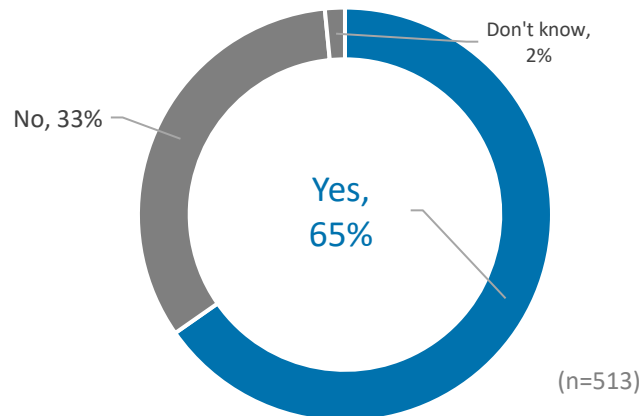
Natural Gas as an Option / Used in Previous Home

Three out of ten respondents say Natural Gas is currently available as an option for their home. Two out of three say they have used Natural Gas in the past.

Natural Gas Currently Available as an Option



Used Natural Gas In Previous Home



Michigan Public Service Commission
DTE Gas Company
Gas Demand Response Expenditures 2021-2026

Case No.: U-21973
Exhibit: A-26
Schedule: P1
Witness: K. O. Farrell
Page: 1 of 1

<u>Line No.</u>	(a) Description	(b) 2021	(c) 2022	(d) 2023	(d) 2024	(e) Total
	Gas DR Expenses					
1	Labor	\$ 52,402	\$ 98,143	\$ 135,973	\$ -	\$ 286,518
2	Contractors/Outside Service	\$ 226,370	\$ 79,925	\$ 243,745	\$ -	\$ 550,040
3	Other Non-Labor	\$ 482,976	787,424	484,279	-	\$ 1,754,678
4	Total Gas DR Expenses	\$ 761,748	\$ 965,492	\$ 863,696	\$ -	\$ 2,591,236

**Michigan Public Service Commission
DTE Gas Company
Projected Operation and Maintenance Net Savings
Voluntary Separation Incentive Program (VSIP)
(\$000)**

Case No.: U-21973
Exhibit: A-27
Schedule: Q1
Witness: S. Shpargel
Page: 1 of 1

Line No.	(a) Business Unit	(b) Labor	(c) Operating Incentives	(d) Financial Incentives	(e) Subtotal O&M Savings	(f) Benefits, net of Pension & OPEB Deferral	(g) Payroll Tax	(h) Projected Savings
					sum (b) thru (d)			sum (e) thru (g)
1	Gas Operations	2,010	37	87	2,133	442	157	2,732
2	Customer Service	513	37	96	646	163	49	858
3	Audit Services	3	0	1	3	1	0	5
4	Controller's Office	113	8	21	142	36	11	189
5	Fleet & Facilities	78	6	15	98	25	7	131
6	Supply Chain	152	11	28	191	48	14	254
7	Corporate & Gov Affairs	(4)	(0)	(1)	(5)	(1)	(0)	(7)
8	Corporate Citizenship	64	5	12	80	20	6	107
9	Corporate Communications	17	1	3	22	5	2	29
10	Community Engagement	487	35	91	613	155	46	814
11	Corporate Strategy	25	2	5	31	8	2	42
12	Environmental Mgmt & Res	54	4	10	68	17	5	91
13	General Counsel	66	5	12	83	21	6	110
14	Human Resources	291	21	54	366	93	28	486
15	Information Technology	501	36	93	631	160	48	838
16	Project Management Office	62	4	11	78	20	6	103
17	Regulatory Affairs	(8)	(1)	(1)	(10)	(2)	(1)	(13)
18	Tax	(19)	(1)	(4)	(24)	(6)	(2)	(32)
19	Treasury	68	5	13	86	22	6	114
20	Investor Relations	27	2	5	33	8	3	44
21	Annual Savings	<u>4,499</u>	<u>215</u>	<u>551</u>	<u>5,265</u>	<u>1,235</u>	<u>394</u>	<u>6,894</u>
						<i>To Exh A-13, Sch C5.9</i>	<i>To Exh A-13, Sch C7</i>	
22	2025 Savings	1,125	54	138	1,316	309	99	1,724
	<i>Carried to Exh A-13, Schedule:</i>							
23	C5.3			L1	533			
24	C5.4			L2	161			
25	C5.6			Sum L3 to L20	<u>621</u>			
26					<u>1,316</u>			

**Michigan Public Service Commission
DTE Gas Company
Large EUT 12-Month Consumption Detail**

Case No.: U-21973
Exhibit: A-28
Schedule: R1
Witness: J. L. Huffman
Page: 1 of 1

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Residential Heat Pump Breakeven Analysis

Presentation to the
Michigan EWR
Collaborative

March 15, 2022



Disclaimer

This deliverable was prepared by Guidehouse Inc. for the sole use and benefit of, and pursuant to a client relationship exclusively with DTE Energy (“Client”). The work presented in this deliverable represents Guidehouse’s professional judgement based on the information available at the time this report was prepared. The information in this deliverable may not be relied upon by anyone other than Client. Accordingly, Guidehouse disclaims any contractual or other responsibility to others based on their access to or use of the deliverable.

Project Background

- In support of GHG emissions reduction in the buildings sector, electric heat pumps (HPs) have seen renewed interest for residential and commercial space conditioning, even in colder climates such as Michigan.
 - HPs can offer substantial GHG emissions savings when supplied with low carbon electricity.
- The national HP penetration rate for residential space heating is 13% today.*
 - Some US regions (South – HP penetration rate of 24%), are well suited for HP adoption due to favorable climate and fuel costs.
 - The Northeast and Midwest (HP penetration rate of 4% each) face adoption challenges due to colder climate and potentially unfavorable economics.
- Electric HPs have very small market share in MI – with only 3% of existing homes using an electric HP as the primary heating equipment (2020 MI Residential Baseline Study, RECS 2015 suggests ~1%).

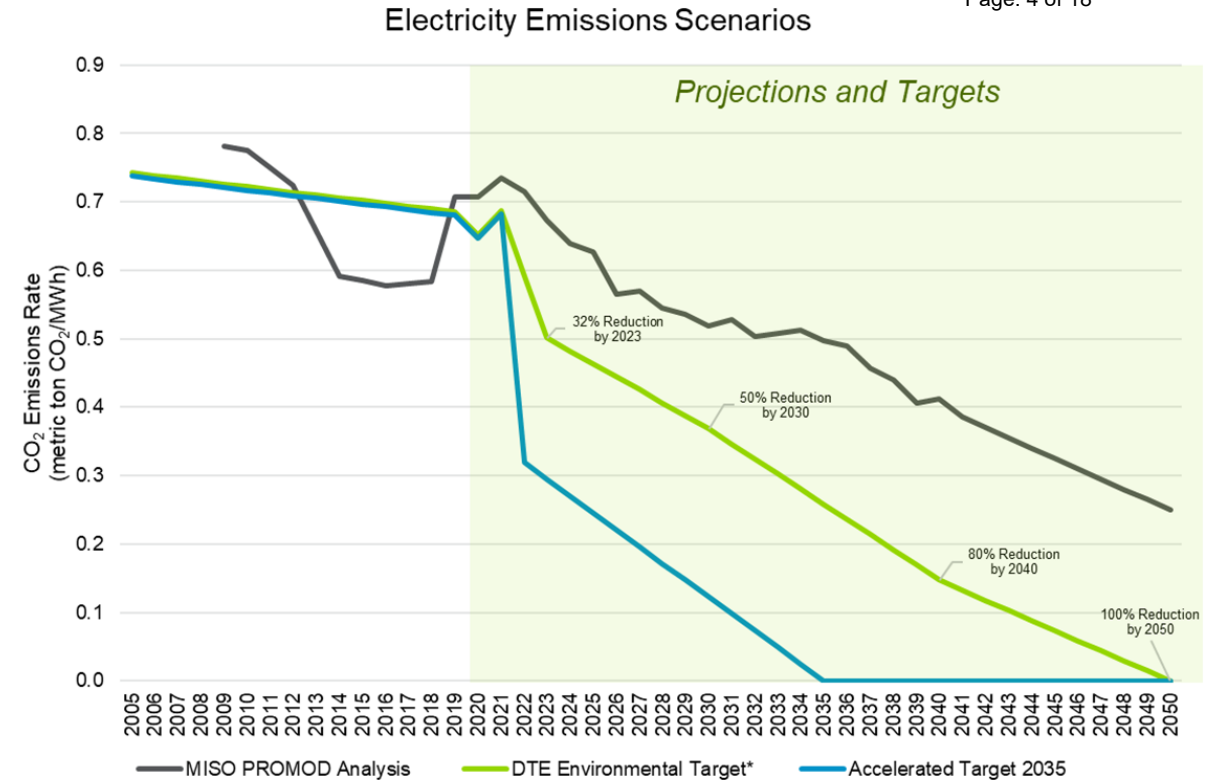
Primary heating fuel source for existing homes in Michigan - 2015

Natural Gas	77%
Electricity	9%
Heat Pump	1-3%
Propane	9%
Other Fuels (wood)	4%
Fuel Oil	1%

Source: RECS 2015, 2020 MI Baseline Study

Project Goals and Objectives

- Although existing studies suggest that HPs are unlikely to provide lifetime cost savings to MI consumers in the near term, HPs align with long-term decarbonization goals in the state.
 - As the state’s electric grid decarbonizes, the GHG emissions savings from HPs will grow.
 - Electric grid decarbonization, changes in energy prices, technological improvements in HPs, and increased market acceptance are just a few factors that might change the economic outlook for heating electrification in the future.



To help DTE better understand the outlook of HPs when replacing electric resistance, propane, fuel oil, and natural gas heating, Guidehouse conducted an analysis across the multiple HP systems and building types to determine break-even points for lifecycle cost, lifecycle emissions, and other factors.

Methodology Overview

User Inputs

- Baseline space and water heating system
- HP replacement system
- Efficiency Level
- Vintage
- Type of housing (SF, MF)
- Location
- Electrical and other upgrades required
- Gas pipeline cost avoided

Data Inputs*

- Equipment Costs
 - Installed cost
 - Maintenance cost
 - Upgrade cost
- Utility rates (low, current, high)
- Delivered fuel rates (low, current, high)
- Weather data
- GHG emissions rate (MISO, DTE, accelerated 2035)

Analysis

- Heat pump COP and capacity degradation analysis**
- Cost analysis
 - Installed costs
 - Operating costs
 - Lifecycle costs
- GHG emissions analysis
 - Annual emissions
 - Lifecycle emissions

**HP performance depends on outdoor ambient temperatures and will decrease at lower outdoor temperatures in winter. To model the requirement for back up electric resistance heat, the HP performance degradation needs to be modeled to location-specific outdoor temperatures.

Outputs

- Cost comparisons for baseline and HP systems
 - Installed costs
 - Operating costs
 - Lifetime costs
- Emissions comparisons for baseline and HP systems
 - Annual emissions
 - Lifecycle emissions
- Breakeven analysis for HP vs. baseline
 - Cost breakeven
 - Emissions breakeven

*Aligned with MEMD prototypes as closely as possible including coordinating with the Morgan Marketing Partners team on MEMD building simulation outputs. See next slide for details.

Methodology: Residential Prototypes

Parameter	Vintage	Housing type	Location	Fuel types	Efficiency	Modeling Scenarios
Number	3	2	7	5	2	3
Description	<ul style="list-style-type: none"> • Existing (Pre 1978 construction) • Existing (1978-2015 construction) • New construction (Recent construction conforming to the Michigan State Uniform Energy Code) 	<ul style="list-style-type: none"> • Single family 2 story house, 2930 sq. ft. • Multi-family 950 sq. ft. per unit 	<ul style="list-style-type: none"> • Detroit, MI • Traverse City • Alpena • Muskegon • Saginaw • SS Marie • Lansing 	<ul style="list-style-type: none"> • Gas • Propane • Oil • Electric resistance • Electric HP 	<ul style="list-style-type: none"> • Standard Efficiency (Current DOE energy conservation standards) • High Efficiency (ENERGY STAR specifications) 	<ul style="list-style-type: none"> • Grid Electricity Emissions factors <ul style="list-style-type: none"> • Current projections (MISO projections) • DTE targets • 2035 Accelerated targets • Fossil fuel prices (low, high, current) • Electricity prices (low, high, current)
Data Sources*	<ul style="list-style-type: none"> • <i>Michigan Energy Measures Database (MEMD) Weather Sensitive Support Document 2020</i> 	<ul style="list-style-type: none"> • <i>Michigan Energy Measures Database (MEMD) Weather Sensitive Support Document 2020</i> • Building loads* : 2016 DTE studies of energy efficiency potential of natural gas and electricity 	<ul style="list-style-type: none"> • <i>TMY3 Weather data</i> <i>Weather data was used to model the HP performance degradation as outdoor temperature decreased</i> 	<ul style="list-style-type: none"> • <i>EIA Technology Forecast Updates</i> • <i>MEMD</i> 	<ul style="list-style-type: none"> • <i>EIA Technology Forecast Updates</i> • <i>NEEP database (for cold climate HP efficiency)</i> 	<ul style="list-style-type: none"> • <i>EIA Annual Energy Outlook 2021</i> • <i>Current fuel and utility prices from EIA</i> • <i>Grid Electricity Emission factors** from DTE projections and MISO projections***</i>

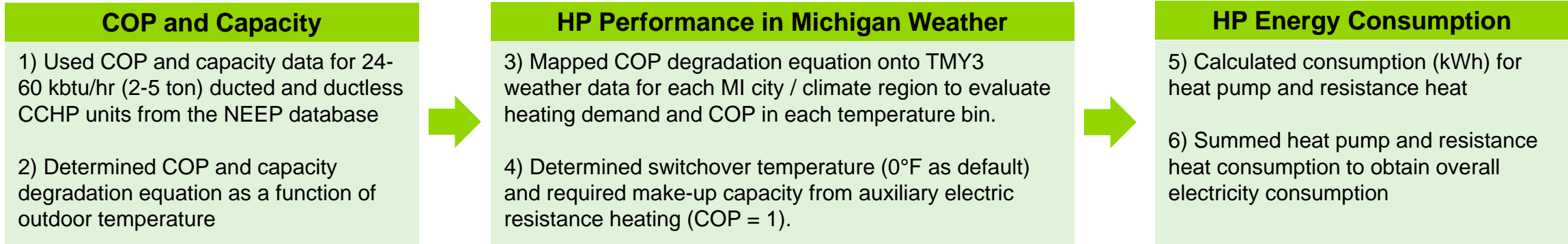
* Electricity loads (in kWh) were converted to MMBtu by using the factor of x 3,412 to compare with fuel-fired loads

**Detailed descriptions of the emissions scenarios and data sources used can be found in the Appendix

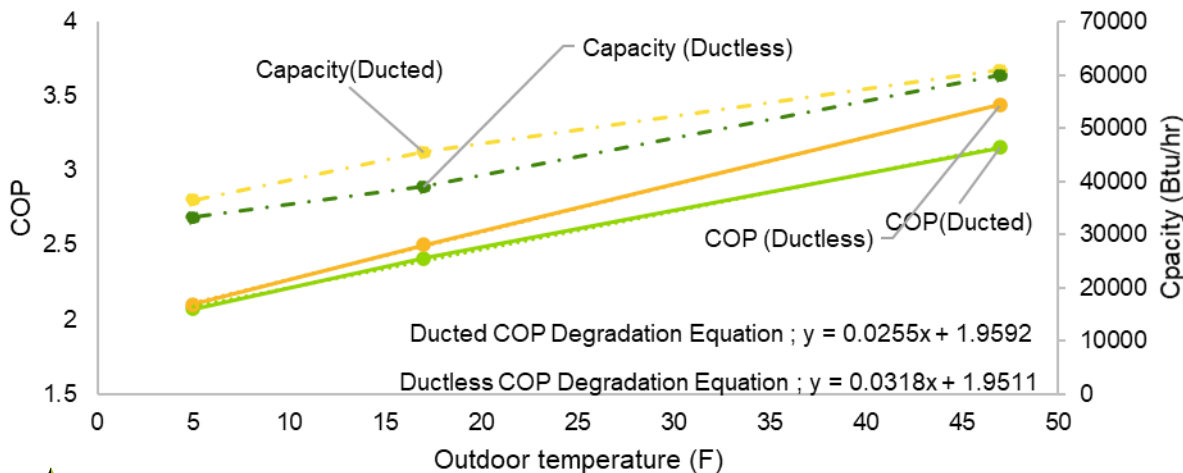
*** GHG emissions forecast for MISO electric generation based on August 2021 Guidehouse research to evaluate GHG emissions impact for lifetime EWR savings.

Methodology: CCHP Performance Modeling

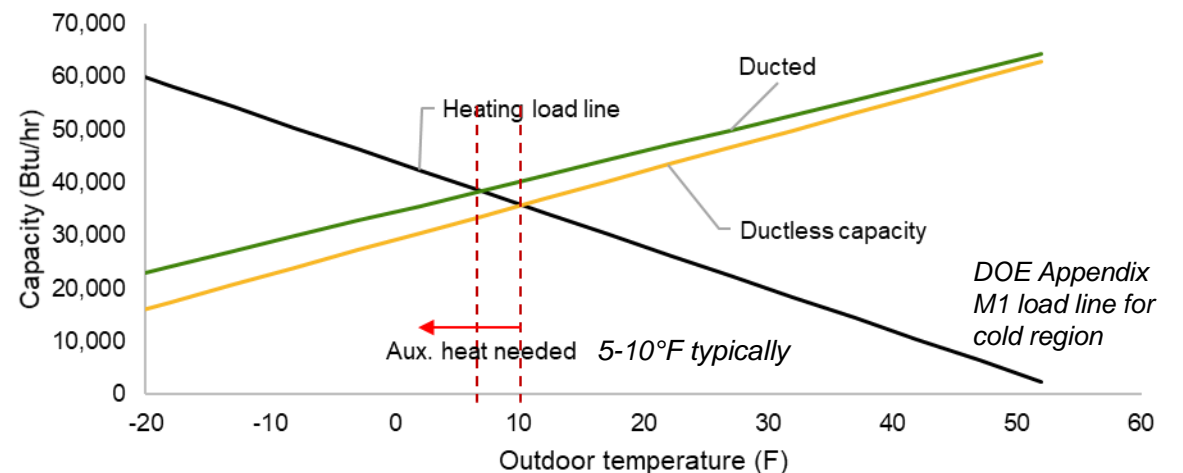
Guidehouse modeled heat pump performance as a function of temperature using Michigan weather data and performance curves from the Northeast Energy Efficiency Partnership (NEEP) database and manufacturer literature. *The availability of lab-verified CCHP performance data will improve in future years with recent changes to DOE and ENERGY STAR test standards.*



**Averaged COP and Capacity
 (≥5 ton Ducted and Ductless CCHPs)**



Building Load Line vs 5 ton (60,000 Btu/hr) Ducted and Ductless Unit Nominal Capacities

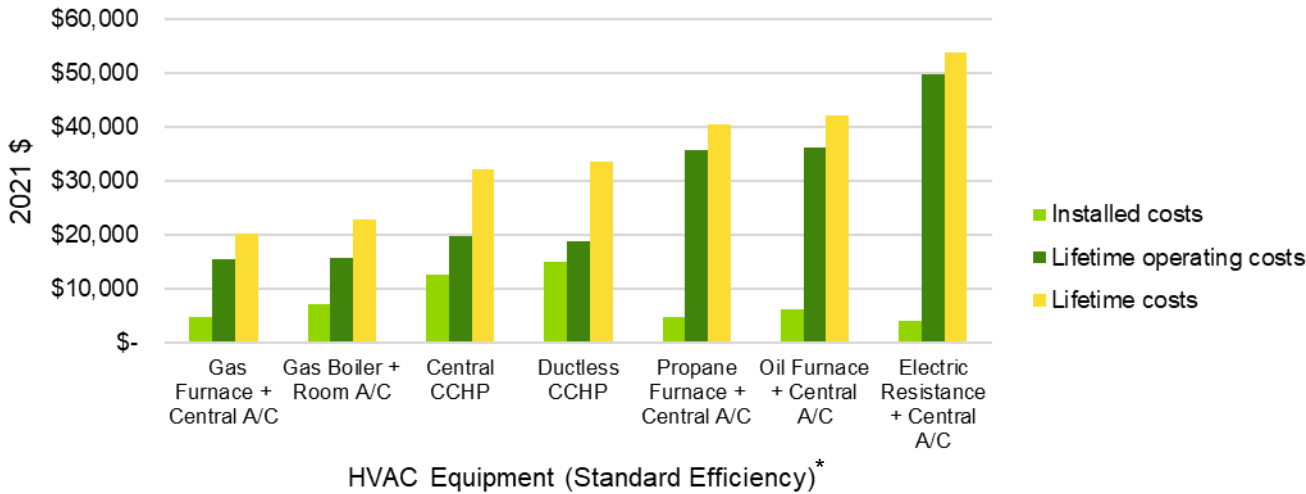


Results: HVAC and WH Costs

Existing Single-Family Pre-1978 Home in Detroit, MI – *results are largely representative of all scenarios.*

Space Heating

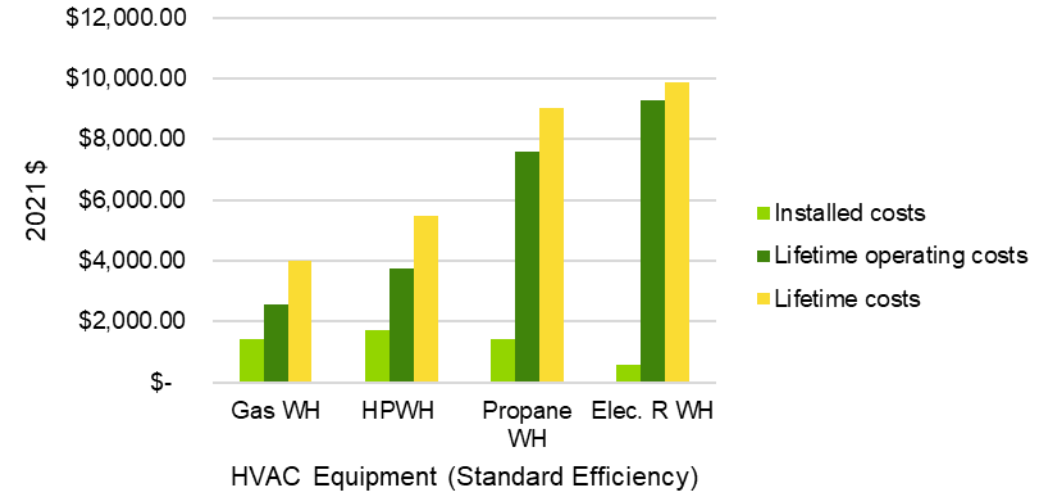
Cost Comparisons for an Existing Single Family Pre-1978 Home in Detroit, MI



- Central CCHP have **lower lifecycle costs** than oil & propane furnace and electric resistance heating, but **higher lifecycle costs** compared to gas furnace and boilers.
- A gas furnace/AC system has **lower lifecycle cost** than a central CCHP over a 15 yr. lifetime, primarily due to **upfront cost differences**.
- Existing homes may require **electrical system upgrades** (e.g., panel, wiring) of around **\$2,500** when replacing a fuel-fired option with an electric HP system.
- All-electric new construction can save up to **\$6,000** in **avoided gas pipeline costs**.

Water Heating

Cost Comparisons for an Existing Single Family Pre-1978 Home in Detroit, MI

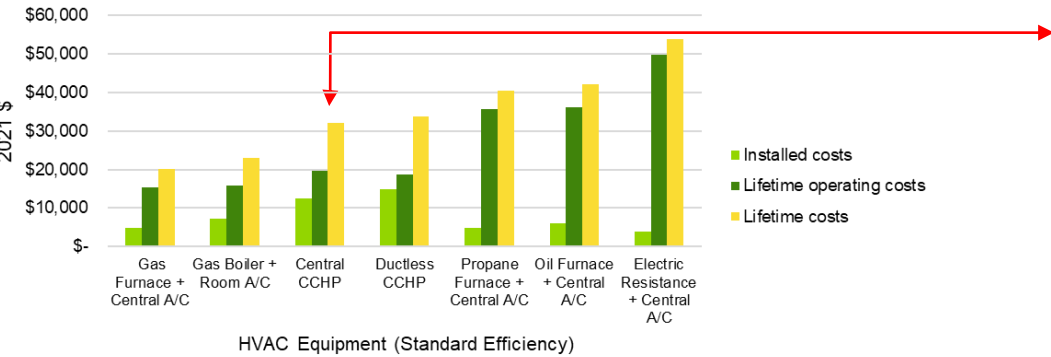


- HPWHs have a **lower lifecycle cost** compared to propane and electric resistance WHs, but **higher lifecycle cost** compared to gas.
- Existing homes with gas WHs may require **minor electrical system upgrades** (e.g., dedicated 110 or 220V line) when switching to a HPWH (upgrades likely only needed once for both SH and WH and more recent vintages i.e 1980s-1990s may avoid this altogether)
- The **lifecycle cost difference** between gas WH and HPWH is **~\$2000**.

Results: HVAC and WH Costs

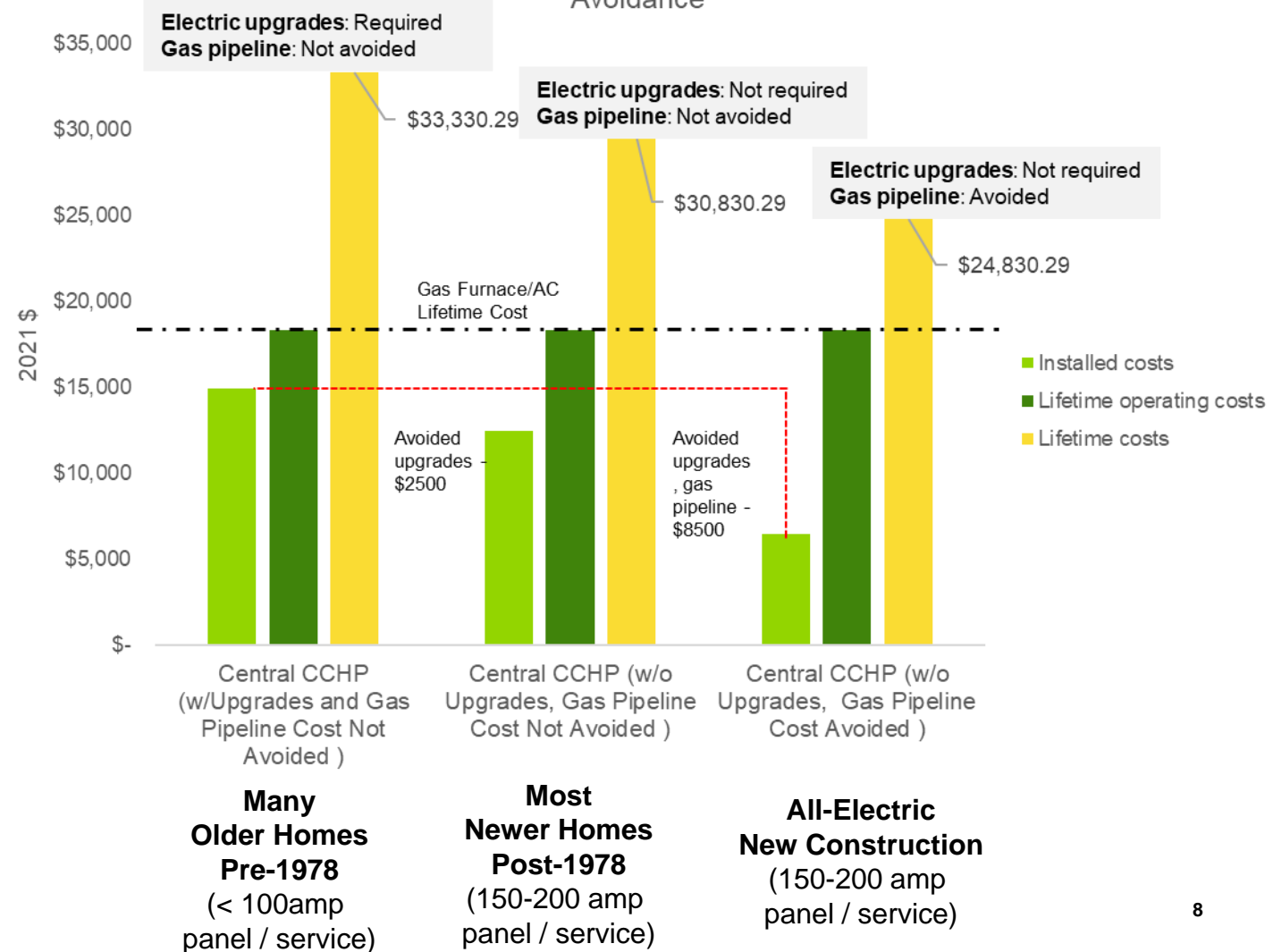
Electrical upgrade needs and the ability to avoid gas pipelines can significantly shift the economics for electric HPs. *Federal, state, utility or other incentive programs can also reduce lifecycle costs by lowering upfront installed costs.*

Cost Comparisons for an Existing Single Family Pre-1978 Home in Detroit, MI



- HP installed costs can range by about \$8,500 depending on whether electric upgrades are needed and gas pipeline costs can be avoided for new construction.
- Details on the sensitivities for these upgrade costs and savings can be found in the Appendix.
- Even with this consideration, a central HP is more expensive compared to a gas furnace + A/C over a 15 yr. lifetime. However, the cost differential between the two is now only ~\$4,500.

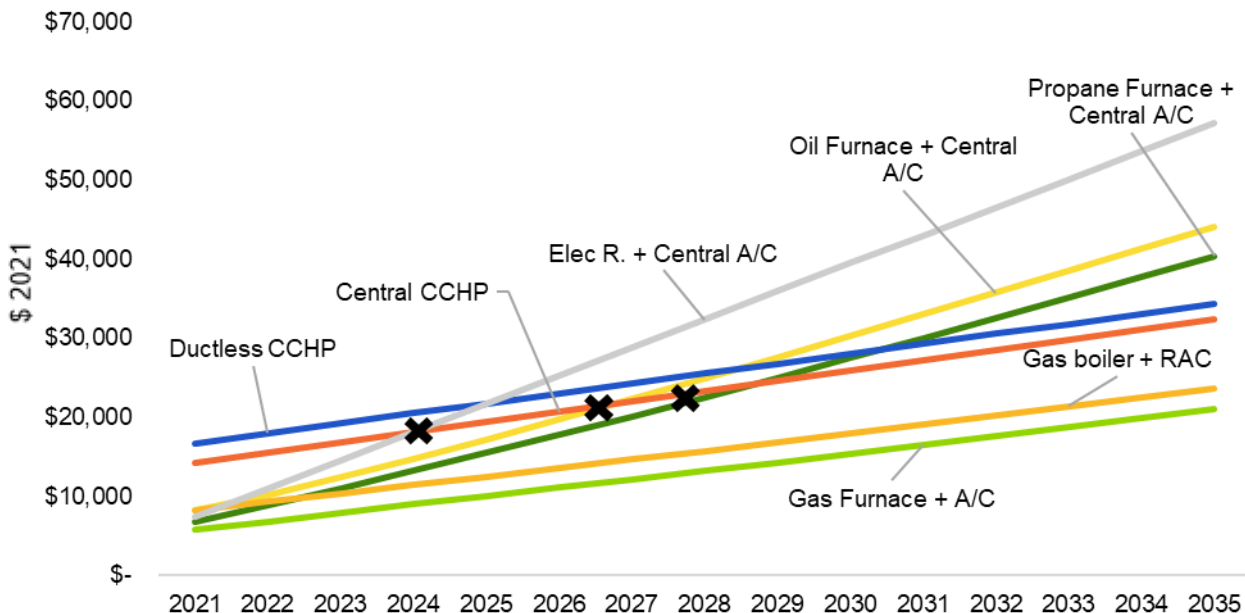
HVAC - Cost Comparisons of CCHP w and w/o Upgrades and Gas Pipeline Avoidance



Results: HVAC and WH Cost Breakeven Points

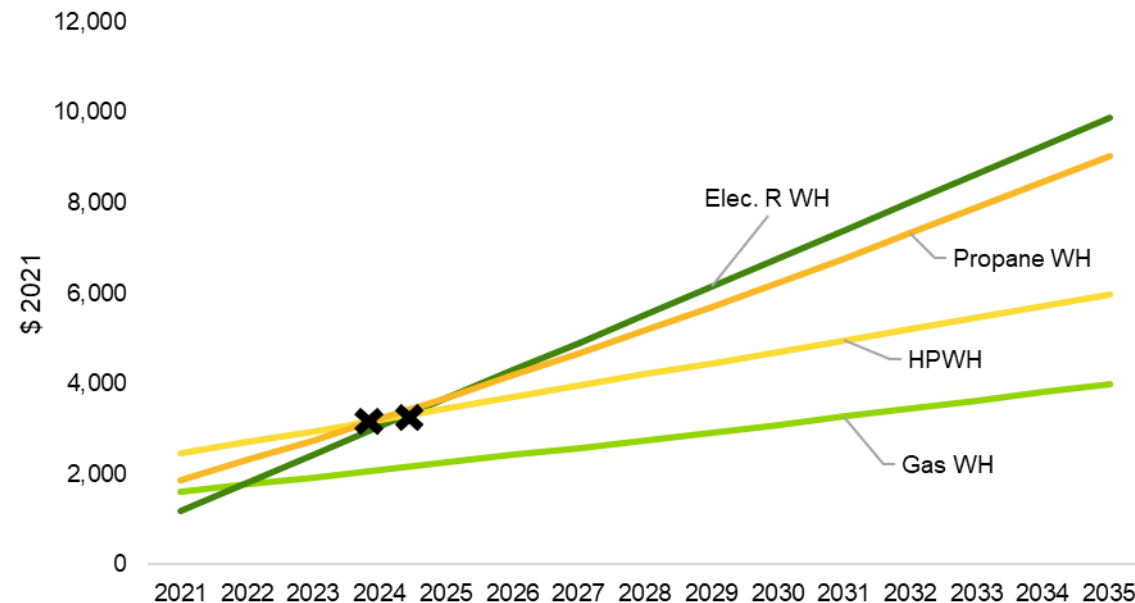
Existing Single-Family Pre-1978 Home in Detroit, MI

HVAC – Cumulative Costs by Year for Baseline and HP Equipment in an Existing Pre-1978 Home in Detroit, MI



- Central CCHP (installed in 2021) **breaks even** with:
 - Electric resistance heating/AC in **4 years**,
 - Oil furnace + A/C in **7 years**, and
 - Propane furnace + A/C in **8 years**
 - Natural gas furnace + A/C **no payback**
 - Sensitivity around delivered fuel costs and electricity rates can shift this breakeven by **±2 years. Necessary or avoided infrastructure costs will also shift payback.**
- Upfront incentives would reduce installed cost and lead to earlier payback.

WH – Cumulative Costs by Year for Baseline and HP Equipment in an Existing Pre-1978 Home in Detroit, MI



- HPWHs **do not breakeven with gas WH** for the duration of the equipment lifetime for any period in this analysis.
- Sensitivity around gas and electricity rates does not change this result.
- HPWH (installed in 2021) **breaks even** with propane WH and elec. R WH in **3 years**.

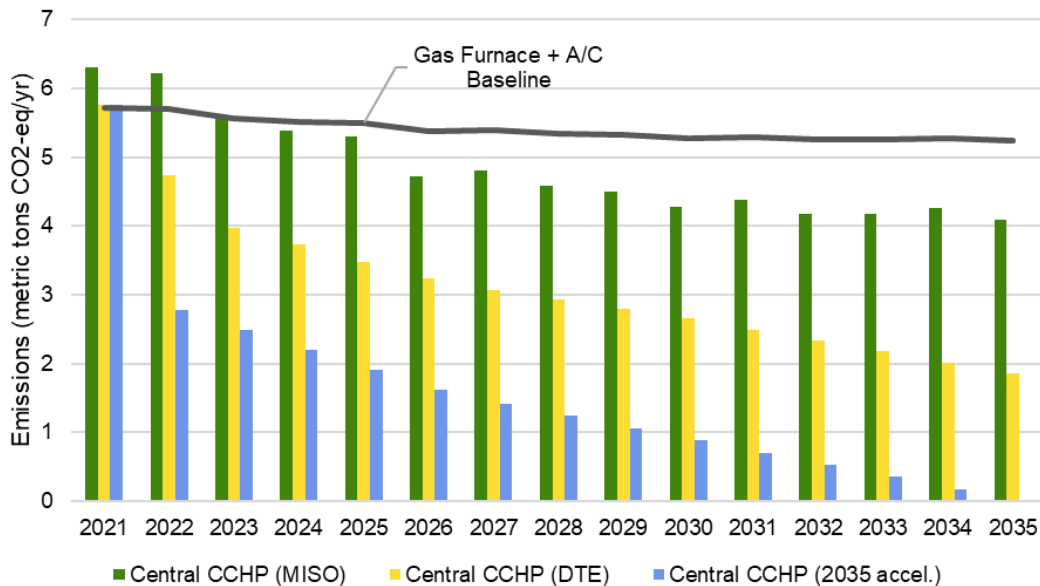
Results: HVAC and WH Annual Emissions

Existing Single-Family Pre-1978 Home in Detroit, MI – *results are largely representative of all scenarios.*

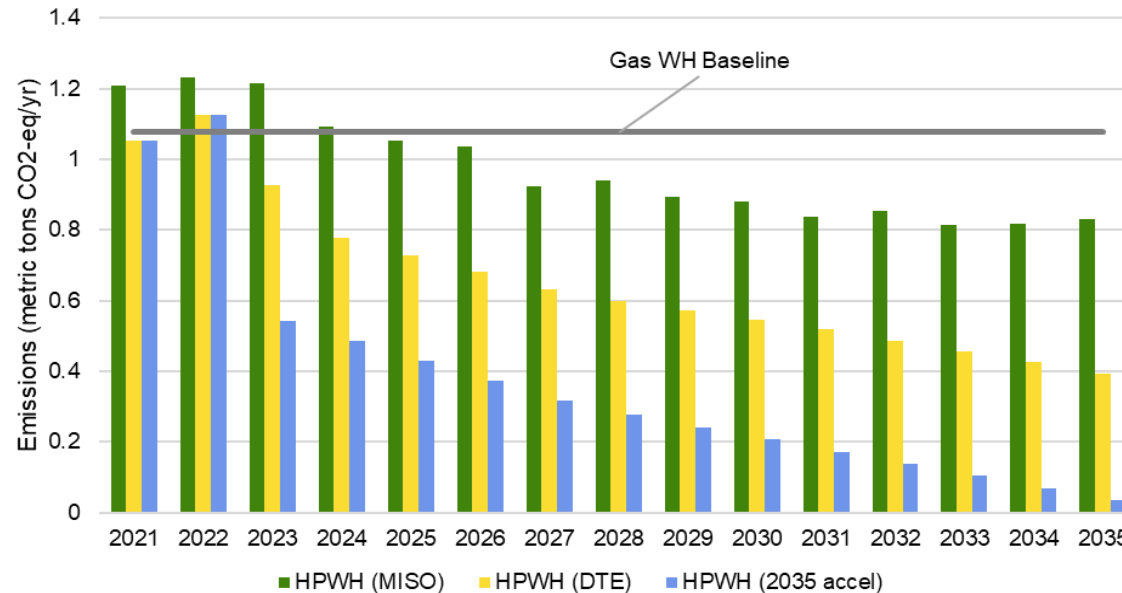
Space Heating

Water Heating

Annual Emissions for Central CCHP vs Baseline Gas Furnace/AC Based on Various Emissions Factor Scenarios



Annual Emissions for HPWH vs Baseline Gas WH Based on Various Emissions Factor Scenarios



- All three electricity emissions factor forecast scenarios* show **decreases in heat pump emissions** over time with the **2035 accelerated targets** being the most aggressive.
- Central CCHPs (installed in 2021) have lower annual emissions starting immediately (2021) per the DTE and 2035 accelerated electricity emissions targets, and lower total emissions starting 2023 per the MISO model.

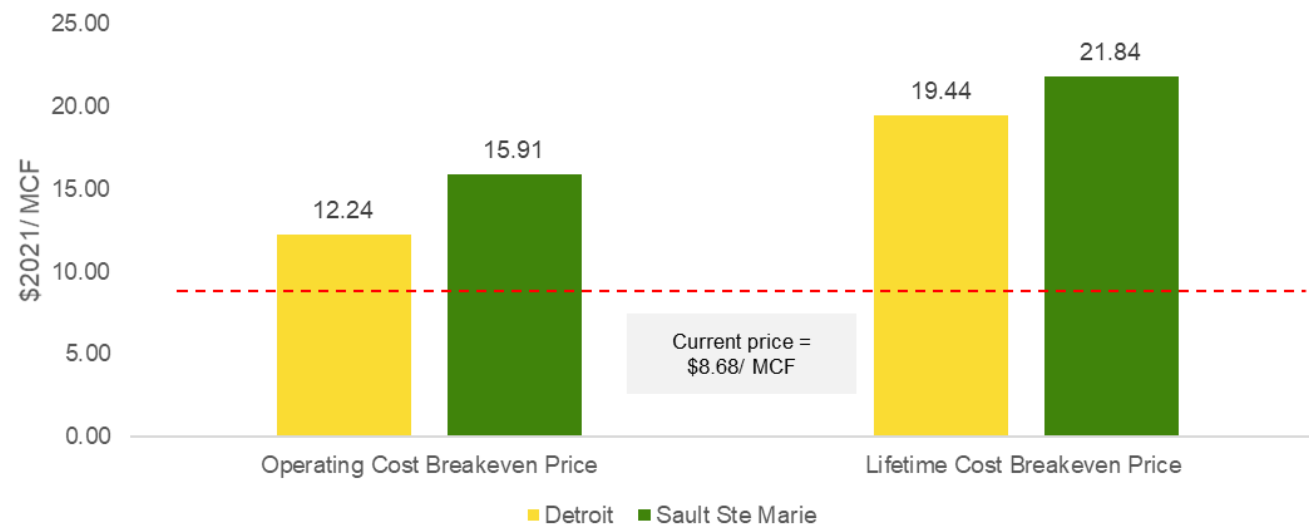
- All three electricity emissions factor forecast scenarios* show a **decrease in water heating emissions over time** with the 2035 accelerated projection being the most aggressive.
- HPWHs (installed in 2021) has lower annual emissions starting immediately (2021) per the DTE and 2035 accelerated targets, and lower emissions starting 2025 per the MISO model.

*Detailed descriptions of the emissions scenarios (MISO, DTE, 2035 accelerated) and data sources used can be found in the Appendix

Analysis: Natural Gas Price Breakeven

- For the DTE breakeven analysis, the natural gas price was modeled as \$ 8.68 per MCF delivered to MI residential customers (2020 annual).*
- Guidehouse investigated what future natural gas prices would achieve operating cost and lifecycle cost parity with CCHP systems.
- The graph on the right shows the absolute values of the natural gas prices required for parity:
 - Operating cost breakeven is \$12 – 16 per MCF,**
 - Lifetime cost breakeven is \$19 – 22 per MCF.**
 - Colder climate in Sault Ste Marie pushes the price to the upper bound, because of the performance degradation of the CCHP at lower temperatures (i.e., more electric resistance)
- These ‘breakeven’ gas prices represent a significant increase from the base value of \$8.68 per MCF. The table to the lower right shows the % increase required from the base price to reach these parity prices. In some cases, the breakeven gas price is more than double today’s rates (i.e., greater than 100% increase).
- Natural gas rates may increase due to future supply shortages, stranded asset costs, Renewable Natural Gas (RNG) requirements, carbon taxes, or other market effects.

The Average Price of Natural Gas That Would Lead to Breakeven Between CCHP and Gas Furnace



NG price %increase needed to breakeven with CCHP (\$) – Current model price = \$8.68/ MCF				
Location	Breakeven type	Existing (Pre-1978)	Existing (1978-2015)	New Construction (post-2015)
Detroit	Operating cost breakeven	40%	41%	42%
	Lifetime cost breakeven	115%	123%	134%
Sault Ste Marie	Operating cost breakeven	83%	83%	84%
	Lifetime cost breakeven	159%	149%	147%

*Natural gas prices for Michigan and nationally are from the [US EIA](#)

CCHP Cost Estimates and Sensitivity

- Although utility cost differences are the most significant factor in this analysis, assumptions for installed cost also contribute to the lifecycle cost comparison between technologies.
- Whole-home CCHPs are still a relatively new technology, particularly in the Midwest, so detailed installed cost estimates for MI are unavailable. Nevertheless, several resources provide CCHP cost examples and highlight the large range in estimates.

CCHP Cost Resources	CCHP Installed Cost	Details	Link
Estimate Used in This Study	\$12,500	<ul style="list-style-type: none"> • Based on NYSERDA study below, and upsized to a 4-5 ton model 	n/a
NYSERDA Renewable Heating and Cooling Framework (2017)	\$12,000	<ul style="list-style-type: none"> • 3 ton model, Table 4.4 	Link
NYS Carbon Neutral Buildings Report (2021)	\$15,000-\$20,000 (2x installed cost as gas baseline)	<ul style="list-style-type: none"> • HVAC+WH equipment costs for cold climate systems are at least 2x the cost of the gas/oil baseline equipment • The study also analyzes how significant shell improvements can lower this cost premium by using smaller capacity HVAC equipment (although shell upgrades have high cost). 	Link
MassCEC ASHP Comparison Tool (2021)	\$3,694 / ton	<ul style="list-style-type: none"> • Entries based on incentivized projects • Median project size 2.1 tons, project cost \$3,694 per ton 	Link
MassCEC Whole Home Heat Pump Solutions (2021)	>\$18,000	<ul style="list-style-type: none"> • \$18,400 per home average for 1,603 SF per home over 168 projects • Only covered HVAC, not water heating 	Link
MEEA You're Getting Warmer (2018)	>\$9,000	<ul style="list-style-type: none"> • 10.5 HSPF ccASHP cost \$9,406 national average with range of \$8,878 to \$11,690 for the cities studied. 	Link

Results Summary

While system efficiency, location, fuel & electricity rates influence the results of each analyzed scenario, the following insights are largely representative of all scenarios considered.

Space Heating & Cooling

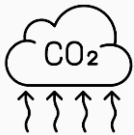
Water Heating



Cost Breakeven Point

- Central cold-climate heat pump (CCHP) and ductless CCHP costs **do not breakeven with gas furnace + A/C or gas boiler + RAC.**
- Central CCHP (installed in 2021) **breaks even in 4-9 years** with electric resistance, oil, and propane heating w/ AC systems
- This happens because natural gas rates are low, electricity rates are relatively high and delivered fuels are expensive

- HPWH costs **do not breakeven with gas WH** for the duration of the equipment lifetime. Sensitivity around gas and electricity rates does not change this result.
- HPWH costs (installed in 2021) break even with electric resistance WH costs in **~3 years.**



Emissions Breakeven Points

- Central CCHPs (installed in 2021) have **emissions benefits** compared to electric resistance, oil, and propane **starting immediately for all electricity emissions scenarios.**
- Central CCHP and ductless CCHP (installed in 2021) emissions break even with gas furnace + A/C and gas boiler+ RAC **in 0-2 years** (DTE targets) and in **3-10 years** (MISO scenario) – with the upper range representative of colder cities (such as SS Marie).

- HPWHs installed in 2021 have **emissions benefits** compared to electric resistance WH starting immediately for all projections.
- Emissions breakeven with gas WH occurs in **2028** (MISO scenario) and in **2022** (DTE targets)

- Given the low natural gas rates in Michigan, gas customers would likely not see lifetime economic savings from heating electrification unless CCHPs and HPWHs cost significantly less than gas-systems because of the operating cost premium for HP systems.
- Upfront cost incentives and avoiding gas pipeline costs (e.g., new construction) can shift the upfront cost outlook for CCHPs.

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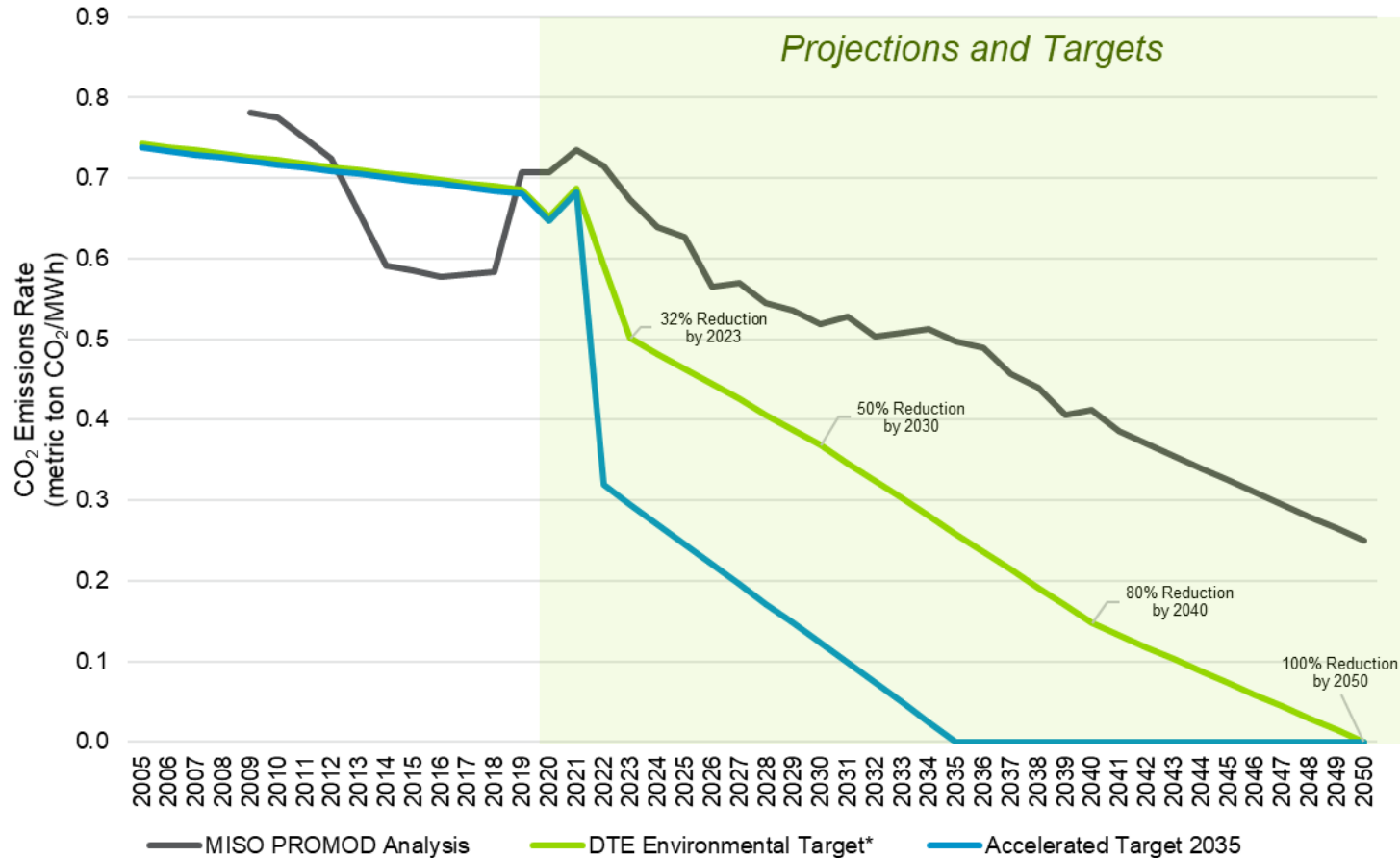
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Electricity Emissions Scenarios

Electricity Emissions Scenarios



- This study examined three electricity emissions scenarios
 - 1. MISO Analysis**
 - GHG emissions forecast for MISO electric generation based on August 2021 Guidehouse research to evaluate GHG emissions impact for lifetime EWR savings
 - 2. DTE Environmental Targets**
 - Zero-emissions by 2050
 - 3. Accelerated Targets 2035**
 - Zero-emissions by 2035

*DTE Environmental Targets use 2005 as the baseline for reductions

Sensitivities for Technology Cost Comparison

- Depending on the site-specific situation, installing electric heat pumps may require changes to the building infrastructure, which can increase or decrease costs substantially.
- Some homes may need infrastructure upgrades for HPWH (up to \$500 for condensate line and dedicated 110/220V line) and full electrification (\$2,500 or greater for panel and service line upgrades). The number of homes that would need upgrades and their cost is highly uncertain.
- New construction could avoid the gas line or fuel storage with all-electric designs, which may save consumers approximately \$6,000.

Impact on Electrification Cost	Cost Sensitivity	Potential Situations	Cost Range (Res-Com)
Increases Costs & Decreases Attractiveness	Wiring Upgrades (Water Heating) – installing 110V or 220 V outlet near HPWH	Existing buildings with gas WH	\$300 (R), \$700 (C) based on 2019 E3 (Link) and 2016 TRC (Link)
	Condensate Piping (Water Heating) – piping / pump to floor or laundry drain	Existing buildings with gas / electric WH	\$200 (R), \$200 (C) based on 2019 E3 (Link) and 2016 TRC (Link)
	Airflow Requirements (Water Heating) – installing louvered doors or airflow ducts if located in small space	Existing buildings with electric WH	Varies
	Panel / Service Upgrades – increasing from 60-100A to 200A panel, and may require upgraded connection from utility	Older homes, especially without central AC	Varies, est. \$4,000 (R), \$0 (C) based on 2019 E3 (Link) 2016 TRC (Link)
	Decommissioning Costs for Fuel Storage	Existing buildings with oil / propane	Varies, removing gas meter may have costs for former gas customers
	Complicating Factors Not Considered in Analysis (no ducts, hydronic heating, high-rises, backup electric needs)	Wide variety	Varies, can add significant cost
Decreases Costs & Increases Attractiveness	Avoided Gas Line and Fuel Storage (all-electric for heating, water heating, cooking, laundry, and misc. loads)	New all-electric buildings	\$6,000 (R), \$12,000 (C) based on 2019 E3 (Link) 2016 TRC (Link)

Key Data Sources

- **Weather**
 - TMY3 data set for all seven MEMD climate regions (publicly available at: [Whitebox](#))
- **Building load**
 - MEMD (primary source)
 - Michigan Energy Efficiency Studies (secondary check)
 - [Gas study](#)
 - [Electric study](#)
 - Data from Morgan Managing Partners
- **Equipment costs**
 - [EIA Technology forecast updates](#)
 - Except for CCHP units
- **Efficiency**
 - [EIA Technology forecast updates](#)
- **Residential Prototypes**
 - [MEMD](#)
- **Utility rates**
 - Current rates
 - [DTE electricity rates](#)
 - [Michigan natural gas rates](#)
 - Projections: EIA AEO2021
 - [Electricity](#)
 - [Natural Gas](#)
- **Delivered fuel prices**
 - Current prices
 - [Heating oil](#)
 - [Propane](#)
 - Projections: [EIA AEO2021](#)
- **GHG emissions factors**
 - ISO Level (MISO) from eGRID (2009-2018); ISO Level (MISO) from Guidehouse PROMOD Analysis (2019-2040)
 - [DTE targets](#)