#### STATE OF MICHIGAN DEPARTMENT OF ATTORNEY GENERAL



7109 W. Saginaw Hwy., 3rd Fl. Lansing, Michigan 48917

BILL SCHUETTE ATTORNEY GENERAL

December 21, 2018

Ms. Kavita Kale Executive Secretary Michigan Public Service Commission 7109 W. Saginaw Highway Lansing, MI 48917

# Re: MPSC Case No. U-20162 Official Exhibits

Dear Ms. Kale:

Attached are Staff's Official Exhibits in the above-referenced matter, including Staff Exhibits S-19 through S-22, which were admitted into evidence during the hearings in this case. They are attached in sequential order. Confidential Exhibit S-13.8 has been filed under seal.

If you have any questions, please feel free to contact me.

Sincerely,

Amit T. Singh Assistant Attorney General Public Service Division Telephone: (517) 284-8140

ATS/car Enclosures cc: ALJ Sally Wilson Parties of record Michigan Public Service Commission DTE Electric Company Projected Revenue Deficiency (Sufficiency) Projected 12 Month Period Ending April 30, 2020 (\$000)

	(a)	(b)	(c)	(d)	(e)
Line No.	Description	Source	Company Projection	Staff Adjustment	Staff Projection
1	Rate Base	Exh. A-12, Sch. B1	17,172,558	(212,665)	16,959,893
2	Adjusted Net Operating Income	Exh. A-13, Sch. C1	750,856	164,246	915,102
3	Overall Rate of Return	Line 2 ÷ Line 1	4.37%	1.02%	5.40%
4	Projected Rate of Return	Exh. A-14, Sch. D1	5.76%	-0.31%	5.45%
5	Income Requirements	Line 1 x Line 4	988,985	(65,285)	923,700
6	Income Deficiency (Sufficiency)	Line 5 - Line 2	238,129	(229,531)	8,598
7	Revenue Conversion Factor	Exh. A-13, Sch. C2	1.3496		1.3496
8	Revenue Deficiency / (Sufficiency)	Line 6 x Line 7	321,387	(309,783)	11,604
9	Revenue Deficiency / (Sufficiency)-Tree Trim Surge	Staff Witness Evans	7,053	(7,053)	
10	Revenue Deficiency / (Sufficiency)-Total	Line 8 + Line 9	328,440	(316,836)	11,604
11	U-20105 TCJA Rate Impact with New Rates Effective in the Instant Case	Staff Witness Pung		-	148,237
12	Net Rate Increase	Line 10 + Line 11		-	\$ 159,840

Michigan Public Service Commission	Case No.:	U-20162
DTE Electric Company	Exhibit:	S-3
Projected Net Operating Income	Schedule:	C1
Projected 12 Month Period Ending Apr. 30, 2020	Witness:	RFNichols
(\$000)	Page:	1 of 1

(b)

(c)

(d)

(e)

(a)

Line No.	Description	Source	Company Projection	Staff Adjustments	Staff Projection
1	Operating Revenues	Exh. A-13, Sch. C3	4,785,349	-	4,785,349
2	Operating Expenses				
3	Fuel and Purchased Power	Exh. A-13, Sch. C4	1,385,795	-	1,385,795
4	Operations and Maintenance Expenses	Exh. A-13, Sch. C5	1,312,396	(32,587)	1,279,809
5	Depreciation and Amortization	Exh. A-13, Sch. C6	948,986	(187,933)	761,053
6	Property Taxes	Exh. A-13, Sch. C7, C7.1	275,525	-	275,525
7	Other Taxes	Exh. A-13, Sch. C7	52,234	-	52,234
8	State & Local Income Taxes	Exh. A-13, Sch. C9, C10	42,543	14,049	56,592
9	Federal Income Taxes	Exh. A-13, Sch. C8	44,936	44,147	89,083
10	Other Utility (Income)/Deductions	Exh. A-13, Sch. C13	2,134	-	2,134
11	Total Operating Expenses		4,064,549	(162,324)	3,902,225
12	Operating Income		720,800	720,800	883,124
13	Operating Income Adjustments				
14	Allowance for Funds Used During Constructio	Exh. A-13, Sch. C11	32,973	1,923	34,896
15	Loss on Reaquired Securities	Exh. A-13, Sch. C12	(3,214)	-	(3,214)
16	Income Tax Effect of Interest	Exh. A-13, Sch. C14	179	-	179
17	Interest Synchronization Tax Adjustment	Exh. A-13, Sch. C15	118		118
18	Total Operating Income Adjustments		30,056	1,923	31,978
19	Adjusted Net Operating Income		750,856	164,246	915,102

#### MICHIGAN PUBLIC SERVICE COMMISSION

#### DTE Electric Energy Company

Projected Net Operating Income for the Test Year Ended April 30, 2020 (\$000)

			Rever	nue		Expenses				NOI								
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(I)	(m)	(n)	(o)	(p)	(q)	(r)
			Base Fuel &	Other		Fuel and					State &		Other Utility				Other	
Line		Sales	Purchase	Revenue		Purchased	Other O&M	Depreciation	Property	Other	Local		(Income) /				Operating	Adjusted
No.	Description (Witness)	Revenue	Power Rev.	and R2	Total	Power	Expense	& Amort.	Taxes	Taxes	Income	FIT	Deductions	Total	NOI	AFUDC	Income Adj.	NOI
	Company Filed																	
1	Operating Income	3 300 210	1 385 705	00 345	1 785 340	1 385 705	1 312 306	048 086	275 525	52 234	12 5 1 3	44 036	2 1 3 4	4 064 540	720 800	32 073	(2.017)	750 856
		5,505,210	1,303,793	50,545	4,705,545	1,305,795	1,512,550	940,900	215,525	52,254	42,040	44,930	2,134	4,004,049	720,000	52,975	(2,917)	750,050
	Staff Adjustments																	
2	Inflation (Welke)				-		(12 338)				766	2 430		(9 141)	9 141			9 141
3					-		(12,000)				-	-		-	-			-
4	Injuries and Damages (Welke)				-		(892)				55	176		(661)	661			661
5	Incentive Compensation (McMilla	n-Sepkoski)			-		(27.083)				1.682	5.334		(20.067)	20.067			20.067
6	Uncollectibles (Welke)	in cophoona)			-		(234)				15	46		(173)	173			173
7	Active Healthcare Credit Amortiza	ation (Welke)			-		(1.733)				108	341		(1.284)	1.284			1.284
8	Incremental Charge Forward O&N	M (Ozar)			-		(1,168)				73	230		(865)	865			865
9	Meter Reading (Matthews)	()			-		(2,147)				133	423		(1.591)	1.591			1.591
10	Tree Trimming O&M Expense (Ev	(ans)			-		13.007				(808)	(2.562)		9.637	(9.637)			(9.637)
11					-		,				-	-		-	-			-
12	AFUDC Adjustment (Gerken)				-						-	-		-	-	1.923		1.923
13	Depreciation Rate Adjustment (Ed	delvn)			-			(175.795)			10.917	34.624		(130.254)	130.254	,		130.254
14	Cap Ex. Adj. Impact on Depreciati	ion Expense			-			(12,138)			754	2,391		(8,993)	8,993			8,993
15	Excess DFIT Amortization Adj. (N	lichols)			-						-	(411)		(411)	411			411
16	Proforma Interest (Nichols)	,			-						354	1,124		1,478	(1,478)			(1,478)
17	Interest Synchronization (Nichols)	-		-							0	. 1		1	(1)			(1)
18	Total Adjustments	-	-	-	-	-	(32,587)	(187,933)	-	-	14,049	44,147	-	(162,324)	162,324	1,923	-	164,246
19	Staff NOI - Test Year	3,309,210	1,385,795	90,345	4,785,349	1,385,795	1,279,809	761,053	275,525	52,234	56,592	89,083	2,134	3,902,225	883,124	34,896	(2,917)	915,102

Michigan Public Service Commission	Case No.:	U-20162
DTE Electric Company	Exhibit:	S-3
Projected Income Tax Effect of Interest	Schedule:	C14
Allowed in Ratemaking Formula	Witness:	RFNichols
12 Months Ended 12/31/2017 and 4/30/2020	Page:	1 of 1
(\$000)		

	(a)	(b)	(c)		
Line No.	Description	Source	Staff Projection		
1	Rate Base	Exh.A-12, Sch. B1	\$ 16,959,893		
2	Weighted Cost of Debt	Exh.A-14, Sch. D1	1.643%		
3	Interest Allowed in Ratemaking Formula	Line 1 x Line 2	\$ 278,673		
4	Interest Included by Company	WP-KLS-3	<u>\$ 284,378</u>		
5	Interest Deduction Change	Line 3 - Line 5	\$ (5,705)		
6	Composite State and Municipal Income Tax Rate	Exh. A-13, Sch. C2	6.21%		
7	Effect on State and Municipal Income Tax Expense	(Line 6 x Line 7) x -1	\$ 354		
8	Effect on Federal Taxable Income	(Line 6 + Line 8) x -1	\$ (5,351)		
9	Federal Income Tax Rate	Exh. A-13, Sch. C2	21.00%		
10	Effect on Federal Tax Expense	Line 9 x Line 10	<u>\$ 1,124</u>		
11	Total Tax Effect on Net Operating Income	(Line 8 + Line 11) x -1	\$ 1,478		

Michigan Public Service Commission	Case No.:	U-20162
DTE Electric Company	Exhibit:	S-3
Projected Tax Effect of Interest - Synchronization Adjustment	Schedule:	C15
12 Months Ended 12/31/2017 and 4/30/2020	Witness:	RFNichols
(\$000)	Page:	1 of 1

	(a)	(b)	(c)
Line No.	Description	Source	 Staff Projection
1	Rate Base	Exh.A-12, Sch. B1	\$ 16,959,893
2	Weighted Cost of JDITC Debt	Exh.A-14, Sch. D1	 0.003%
3	Interest Allowed in Ratemaking Formula	Line 1 x Line 2	\$ 449
4	Interest Included by Company	WP-KLS-3	455
5	Interest Deduction Change	Line 3 - Line 5	\$ (6
6	Composite State and Municipal Income Tax Rate	Exh. A-13, Sch. C2	6.21%
7	Effect on State and Municipal Income Tax Expense	(Line 6 x Line 7) x -1	\$ 0
8	Effect on Federal Taxable Income	(Line 6 + Line 8) x -1	\$ (5
9	Federal Income Tax Rate	Exh. A-13, Sch. C2	 21.00%
10	Effect on Federal Tax Expense	Line 9 x Line 10	\$ 1
11	Total Tax Effect on Net Operating Income	(Line 8 + Line 11) x -1	\$ 1

MPSC Case No.:	<u>U-20162</u>
Requestor:	R. Nichols
<b>Question No.:</b>	RFN-1.1
Respondent:	S. L. Wisniewski
Page:	1 of 1

**Question:** In regards to Witness Wisniewski's testimony page 17, line 1 through 3,

- 1) please provide the final amounts for the re-measurement of deferred taxes and the new regulatory liability;
- **Answer:** Upon completion of the 2017 Federal income tax return, the remeasurement of deferred taxes and new regulatory liability were updated. Revised amounts are as follows:
  - The finalized amount for the one-time reduction to DTE Electric's total recoverable deferred income tax liability is \$1,447,436,000. Of this total, \$89,756,000 is related to non-base rate surcharges (Renewable Energy Plan, Energy Waste Reduction and TRM), leaving \$1,357,680,000 to be reflected in this rate case. This is a change of \$35,466,000 from the preliminary amount reflected in the Company's initial filling.
  - The one-time reduction to MERC's deferred income tax liability is \$2,793,000. This is a change of \$11,000 from the preliminary amount reflected in the Company's initial filing.
  - In accordance with the Commission Order in Case No. U-18494 dated December 27, 2017, the reduction in the deferred tax liabilities of DTE Electric and MERC were offset by a new regulatory liability of \$1,360,473,000. This is a change of \$35,477,000 (\$35,466,000 plus \$11,000) from the preliminary amount reflected in the Company's initial filling.

Attachments: N/A

MPSC Case No.:	<u>U-20162</u>
Requestor:	R. Nichols
<b>Question No.:</b>	RFN-1.2
Respondent:	S. L. Wisniewski
Page:	1 of 1

**Question:** In regards to Witness Wisniewski's testimony page 17, line 1 through 3,

- 2) provide an updated exhibit A-13, Schedule C8.1 and the projected test period amortization amount;
- Answer: See attachment "U-20162 RFN-1.2 revised Exh. A-13 C8.1".

The new amortization amount for the test period May 1, 2019 through April 30, 2020 is \$55,359,000.

Upon preparing this analysis, the Company discovered formula errors in the calculation of the amortization on Exhibit A-13, Schedule C8.1. The change in the regulatory liability discussed in response to RFN-1.1 increased the amortization; however, the correction of the formula errors reduced the amortization. The result is a net increase in the projected test period amortization of \$411,000 from the preliminary amount reflected in our initial filing.

Attachments: U-20162 RFN-1.2 revised Exh. A-13 C8.1

MPSC Case No.:	<u>U-20162</u>
Requestor:	R. Nichols
<b>Question No.:</b>	RFN-1.3
Respondent:	K. L. Slater
Page:	1 of 1

**Question:** In regards to Witness Wisniewski's testimony page 17, line 1 through 3,

- 3) provide the impacts to the projected capital structure, Exhibit A-14, Schedule D1;
- Answer: Since the re-measurement amount is offset by the new regulatory liability within Deferred Income Taxes (Net), the only change to the projected capital structure will result from the change in amortization of \$411,000. The additional amortization will reduce the average Deferred Income Tax balance by \$205,500 (\$411,000 ÷ 2). This would result in \$100,695 higher debt and \$104,805 equity (49% debt-51% equity split). This has a negligible impact on the weighted cost percentages.

Michigan Public Service Commission DTE Electric Company Projected Tax Reform Regulatory Liability Projected 12 Month Period Ending Apr. 30, 2020 (\$000)		A F Rev	Audit Response: Revised Exhibit: vised Schedule: Witness: Page:	RFN 1.2 A-13 C8.1 S. L. Wisniewski 1 of 1
(a)	(b)	(c)	(d)	(e)

		Protected	Unprotected			Per U-20162 Initial	
Line No.	Description	Plant	Plant	Non-Plant	Total DTE Electric	Filing	Change
1	Amoritization Period	ARAM	23	14			
2	Tax Reform Liability Before Gross Up						
3	DTE Electric Company in total	(718,880)	(621,506)	(107,050)	(1,447,436)	(1,448,490)	1,054
4	Less: Non-Base Rate	108,621	-	(18,865)	89,756	126,275	(36,519)
5	Add: MERC	(2,887)		94	(2,793)	(2,782)	(11)
	General Rate Case Tax Reform Regulatory Liability before						
6	gross up	(613,146)	(621,506)	(125,821)	(1,360,473)	(1,324,996)	(35,477)
7							

							Test Period	
						Test Period	Amortization Per U-	
8	Amortization Schedule					Amortization	20162 Initial Filing	Change
9	2019	(11,486)	(18,015)	(5,991)	(35,492)	(35,492)	(35,634)	
10	2020	(23,590)	(27,022)	(8,987)	(59,599)	(19,866)	(19,314)	
11	2021	(24,958)	(27,022)	(8,987)	(60,967)	(55,359)	(54,948)	(411)
12	2022	(21,594)	(27,022)	(8,987)	(57,603)			
13	2023	(23,113)	(27,022)	(8,987)	(59,122)			
14	2024	(25,015)	(27,022)	(8,987)	(61,024)			
15	2025	(23,133)	(27,022)	(8,987)	(59,142)			
16	2026	(21,879)	(27,022)	(8,987)	(57,889)			
17	2027	(19,778)	(27,022)	(8,987)	(55,788)			
18	2028	(17,698)	(27,022)	(8,987)	(53,708)			
19	2029	(18,398)	(27,022)	(8,987)	(54,407)			
20	2030	(19,009)	(27,022)	(8,987)	(55,018)			
21	2031	(21,588)	(27,022)	(8,987)	(57,597)			
22	2032	(21,604)	(27,022)	(8,987)	(57,613)			
23	2033	(20,252)	(27,022)	(2,996)	(50,270)			
24	2034	(17,369)	(27,022)	-	(44,391)			
25	2035	(17,913)	(27,022)	-	(44,935)			
26	2036	(20,969)	(27,022)	-	(47,991)			
27	2037	(23,147)	(27,022)	-	(50,169)			
28	2038	(24,582)	(27,022)	-	(51,604)			
29	2039	(24,026)	(27,022)	-	(51,048)			
30	2040	(23,112)	(27,022)	-	(50,134)			
31	2041	(22,300)	(27,022)	-	(49,322)			
32	2042	(18,860)	(9,007)	-	(27,867)			
33								
34	Amortization beyond 2042	(107,771)	(0)	-	(107,771)			
35	Total Amortization	(613,146)	(621,506)	(125,821)	(1,360,473)			

### Schedule C5

Michigan Public Service Commission	Case No.:	U-20162
DTE Electric Company	Exhibit:	S-3
Operation and Maintenance Expense	Schedule:	C5
For the Projected 12-Month Period Ending April 30, 2020	Witness:	Welke
(000's)	Page:	1 of 1

Ln	Description	Source	-	Company Projection	A	Adjustment	Staff Projection		
	(a.)	(b.)		(c.)		(d.)		(e.)	
1	Steam Power Generation	WP-BAW-14	\$	284,732	\$	(3,637)	\$	281,095	
2	Fuel Supply & MERC Fuel Handling	WP-BAW-15		8,666		(112)		8,554	
3	Nuclear Power Generation	WP-BAW-16		166,803		(1,895)		164,908	
4	Hydraulic Power Generation & Other	WP-BAW-17		26,569		(339)		26,230	
5	Distribution	WP-BAW-18		330,533		10,004		340,537	
6	Customer Service	WP-BAW-9		97,380		(3,217)		94,163	
7	Uncollectible Accounts Expense	WP-BAW 1 & 12		51,620		(234)		51,386	
8	Injuries and Damages	WP-BAW-19		13,546		(892)		12,654	
9	Marketing	WP-BAW-10		14,483		(1,301)		13,182	
10	Corporate Support	WP-BAW-11		171,212		(30,963)		140,249	
11	Pension and Benefits	Exhibit S-8		146,853		(1)		146,852	
12	TOTAL	Sum Lines 1 through 11	\$	1,312,397	\$	(32,587)	\$	1,279,810	

#### Reconciliation

Inflation (WP-BAW-2)	\$ (12,338)
Injuries and Damages	(892)
Incentive Compensation	(27,083)
Uncollectibles	(234)
Active Healthcare Credit Amortization	(1,733)
Incremental Charge Forward O&M	(1,168)
Meter Reading	(2,147)
Tree Trimming Expense	 13,007
Total	\$ (32,587)

#### Schedule C5.1

DTE Electric Company Exhibit:	S-3
Projected Operation and Maintenance Expense: Schedule:	C5.1
Uncollectibles 3 Year Average Calculation Witness: W	Welke
Page:	1 of 1

Line	Description	Source	2015			2016		2017	Projection	
	(a.)	(b.)		(c.)		(d.)		(e.)		(f.)
1	Write-Offs (Including Low-Income Match W/O's)	WP-BAW-1	\$	58,512,139	\$	59,199,912	\$	64,077,782		
2	Collections	WP-BAW-1		(5,719,312)		(7,956,525)		(14,391,450)		
3	Net Write-Offs	Add Lines 1 & 2		52,792,827		51,243,387		49,686,332		
4	Revenues		4	4,600,769,000	2	,940,615,000		4,792,186,000		
5	Net Write-Offs / Revenues	Line 3 / Line 4		1.1475%		1.0372%		1.0368%		
6	Three Year Average of Net Write-Offs to Revenues	Avg. Line 5								1.0738%
7	Projected Revenues						Exh	A-13 sch C1	4	,785,349,000
8	Uncollectible Accounts Expense 3-Year Avg.	Line 6 x Line 7							\$	51,386,426

# Schedule C5.2

	Michigan Public Service Commi	ission				Case No.:	U-20162					
	DTE Electric Company					Exhibit:	S-3					
	Projected Operation and Mainte	Projected Operation and Maintenance Expense:										
	Injuries and Damages 5 Year Av	erage Calcula	ntion			Witness:	Welke					
						Page:	1 of 1					
Ln.	Desctiption			Year								
	(a.)	(b.)	(c.)	(d.)	(e.)	(f.)	(g.)					
		2013	2014	2015	2016	2017						
	MPSC P-521	17,996	13,018	8,042	10,972	13,244						

Five Year Average

12,654

31 32 33	26 27 20 30	22 22 22 23 25 25	ЯL	16 17 18	15 15	9 10 12	0876	ω 4. τυ	1	Line No.		Second Second	M				Injuries an	DTE Electr	Michigan
2/ Normalization Adjustment Employee Incentive Plan Adjustment	Disallowed Advertising Expenses Disallowed Advertising Expense Eliminate MOM Rent Expense Total Rate Case Adjustments	1/ Rate Case Adjustments: Eliminate Executive Incentive Plan Compensation Eliminate Renewable Energy Program	Grand Total Operation & Maintenance Expense	Maintenance Maintenance of General Plant I otal Maintenance Expense	Miscellaneous General Expenses Kents Total Operation Expense	Franchise Requirements Regulatory Commission Expenses (Less) Duplicate Charges-Cr. General Advertising Expenses	Outside Services Employeed Property Insurance Injuries and Damages	Administrative and General Salaries Office Supplies and Expenses (Less) Administrative Expenses Transferred-Cr.	Administrative and General Expenses Operation	Description	(8)	E Electric Company giected Operation and Maintenance Expenses doministrative and General Expenses 000)	higan Public Service Commission				d Damages Expense Projectic	ic Company	Public Service Commission
920	930.1 930.2 931	<u>Account</u> 920 920 924		935	930.2 931	927 929 930.1	923 924	920 921 922		Account	(d)						n: ∪		
(3,469)	(1,463) (758) (23,889)	Historical Adjustment (15,175) (5,069) (556)	208,503	5,210 5,210	5,045 5,561 203,292	- 344 3,621	25,579 4,657 13,018	139,787 35,300 (29,619)		12/31/14 - 12/31/14 Historical Test Period	(c)						-18014		
			(23,889)	   .	(758) (808) (23,889)	- - (1,483)	(558)	(20,244)		Rate Case I Adjustments	(d)								
	4/ Other Project Change from Lia Property Insurar Injuries & Dama	3/ Annual Inflatic No. of Months Pro-rated Infla	(3,408)	   .   .	- (3,469)			(3,469)		Normalization Adjustments	<u>(</u>								
	ed Adjustment: ability to Equity A noe based on fiv ges based on fiv	on Rate in Period tion Rate	181,144	5,210 5,210	4,287 4,093 175,934	- 344 2,158	25,579 4,100 13,018	116,074 35,300 (29,619)	sum (c) thru (e)	Adjusted Historical Test Period	Э								
	vocting for Perf. : e year historical re year historical	1/1/15 - 12/31/15 2.3% 12 2.3%	3,179	120	99 3,659	ຮ່∞່	· · 58	2,675 813 (682)		12/31/15 12/31/15 Inflation Adj 3/	(9)								
	Shares average average	1/1/16 - 12/31/18 2.7% 12 2.7%	4,540	144	119 130 4,395	8' 1'	708	3,213 977 (820)		1/1/16 - 12/31/16 Inflation Adj I 3/	(h) Projected Ad								
	Account 920 924 925	1/1/17 - 7/31/17 2.8% 7 1.8%	2,843	80	74 2,753	- 6 37	• • 443	2,012 612 (513)		7/1/17 - 7/31/17 Inflation Adj <i>P</i>	(i) justments								
(11,080)	Amount (22,265) 3,581 7,604		(11,080)		- (11,080)		- 3,581 7,604	(22,265)		Other Adjustments	0					S		~	
			8	355	292 319 (271)	- 23 147	1,741 3,581 7,604	(14,385) 2,402 (2.016)	sum (f) thru (j)	Total Projected Adjustments	(4)	Exhibit Schedule: Witness: Page:	Case No.	Page	Witnes	chedule	Exhibi	Case No	
			181,228	5,565	4,578 5,013 175,863	- 367 - 2,305	27,320 7,681 20,622	101,709 37,703 (31,635)	$(f) \leftarrow (k)$	Projected Test Period	0)	A-10 C5.8 T. M. Uzenski 1 of 1	U-18014		?:			:.	
															_			C-2	

-20162 S-3 C5.3 Welke 1 of 1

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Michigan Public Service Commission	Case No.:	U-20162
DTE Electric Company	Exhibit:	S-2
Projected Rate Base	Schedule:	B1
Projected Average Balances Period Ending April 30, 2020	Witness:	MLEdelyn
(\$000)	Page:	1 of 1

	(a)	(b)	(c)	(d)	(e)
Line No.	Description	Description Source		Staff Adjustments	Staff Projection
1	Litility Plant in Service				
2	Plant in Service	Exh. A-12, Sch. B2, L6	21.317.591	(265,853)	21.051.738
3	Plant Held for Future Use	Exh. A-12, Sch. B2, L7	57.923	(,) _	57.923
4	Construction Work in Progress	Exh. A-12, Sch. B2, L8	1,679,418	-	1,679,418
5	Acquisition Adjustments	Exh. A-12, Sch. B2, L9	116,148	-	116,148
6	Total Utility Plant	Sum Lines 2 thru 5	23,171,079	(265,853)	22,905,226
7	Depreciation Reserve	Exh. A-12, Sch. B3, L6	(7,639,577)	103,775	(7,535,802)
8	Net Utility Plant	Line 6 + Line 7	15,531,502	(162,078)	15,369,424
9 10	Net Capital Lease Property Net Nuclear Fuel Property	Exh. A-12, Sch. B4.1, col. (c), L10 Exh. A-12, Sch. B4.1, col. (c), L11	6,222 112,164	-	6,222 112,164
11	Total Utility Property and Plant	Sum Lines 8 thru 10	15,649,888	(162,078)	15,487,810
12	Less: Capital Lease Obligations	Exh. A-12, Sch. B4.1, col. (c), L68 + L80	6,324		6,324
13	Net Plant	Line 11 - Line 12	15,643,564	(162,078)	15,481,486
14	Allowance for Working Capital	Exh.A-12, Sch. B4	1,528,994	(50,586)	1,478,408
15	Total Rate Base	Line 13 + Line 14	17,172,558	(212,665)	16,959,893

Michigan Public Service Commission	Case No:	U-20162
DTE Electric Company	Exhibit:	S-2
Projected Working Capital	Schedule:	B4
Periods Ending December 31, 2017 and April 30, 2020	Witness:	MLEdelyn
(\$000)	Page:	1 of 1

(b)

(c)

(d)

(a)

Line No.	Description	Company Projection	Staff Adjustments	Staff Projection	
		(Average Balances)	(Average Balances)	(Average Balances)	
1	OTHER PROPERTY AND INVESTMENTS	477		477	
2	Non-Current Portion of Allowances	4//	-	4//	
3	Nuclear Decommissioning Trust Funds	32,003	-	32,003	
5	TOTAL OTHER PROPERTY & INVESTMENTS	33.160		33.160	
-					
6	CURRENT ASSETS				
7	Cash	14,673	-	14,673	
8	Notes Receivable	0	-	0	
9	Accounts Receivable	535,668	-	535,668	
10		(20,966)	-	(20,866)	
12		(30,000)	-	(30,000)	
12	Inventories - Fuel	126 102	_	126 102	
14	Inventories - Material and Supplies	274 936	-	274 936	
15	Prepayments	77.317	-	77.317	
16	Other Current Assets	121	-	121	
17	TOTAL CURRENT ASSETS	1,330,748	-	1,330,748	
18	DEFERRED DEBITS				
19	Unamortized Loss on Reacquired Debt	40,157	-	40,157	
20	Reg Asset - Fermi 2	0	-	0	
21	Der Debit - Prepaid Pension Asset	841,087	(44,623)	796,464	
22	Reg Asset - Pension FAS 158	227	-	0	
23	Reg Asset - Enternrise Business System (EBS)	527		527	
25	Reg Asset - Transitional Recovery Mechanism (TRM)	-	-	-	
26	Reg Asset - Customer 360	38.613	-	38.613	
27	Reg Asset - Program Eval. Review Committee (PERC)	44,205	-	44,205	
28	Reg Asset - Advanced Distribution Management System (ADMS	4,917	-	4,917	
29	Reg Asset - Charging Forward	793	(793)	-	
30	Reg Asset - Pension Capitalized	14,108	-	14,108	
31	Def Debit - Prepaid OPEB	73,301	-	73,301	
32	Def Debit - Combined Operating License (COL)	-	-	-	
33	Def Debit - Cost To Achieve	0	-	0	
34	Other Deferred Debits	21,711	(793)	20,919	
35	TOTAL DEFERRED DEBITS	1,079,218	(46,208)	1,033,010	
36	TOTAL ASSETS AND OTHER DEBITS	2,443,126	(46,208)	2,396,918	
37	NON-CURRENT LIABILITIES				
38	Accumulated Provision for Injuries and Damages	28 597	-	28 597	
39	Accrued Post Retirement Benefits	0	-	0	
40	Accrued Pension Liabilities	0	-	0	
41	Other Non-Current Liabilities	12,980	-	12,980	
42	TOTAL NON-CURRENT LIABILITES	41,577	-	41,577	
43	CURRENT LIABILITIES				
44	Accounts Payable	502,359	-	502,359	
45	Laxes Payable	17,969	-	17,969	
46	Interest Payable Other Current Liebilities	73,951	45	73,996	
47		142,439		142,439	
48	TOTAL CURRENT LIABILITIES	736,717	45	/36,/62	
49	DEFERRED CREDITS				
50	Regulatory Liab-Other Post Empl Benefits (OPEB)	90,602	-	90,602	
51	Regulatory Liab-OPEB Capitalized	19,898	-	19,898	
52	Fermi 2 Decommissioning	0	-	0	
53	Other Deferred Credits	25,337	4,334	29,670	
54	TOTAL DEFERRED CREDITS	135,837	4,334	140,170	
55	TOTAL LIABILITIES AND OTHER CREDITS	914,132	4,379	918,510	
50	Tatal Warking Conital	4 500 004	(50 500)	4 470 400	
90	rotar working Capital	1,528,994	(50,586)	1,478,408	

MPSC Case No.:	<u>U-20162</u>
Requestor:	M. Edelyn
<b>Question No.:</b>	MLE-8.1
Respondent:	T. M. Uzenski
Page:	1 of 1

- **Question:** Regarding MLE-6, is there a corresponding impact on rate base for the projected test year if the Company used depreciation rates from the most recent approved order in Case U-16117 instead of projected rates of its pending depreciation case U-18150? If yes, please delineate the impacts of each on the test year.
- Answer: The \$175.795 million reduction in depreciation expense would result in an <u>increase</u> in average rate base of \$87.897 million (\$175.795 divided by 2) for the projected test year.

MPSC Case No.:	<u>U-20162</u>
<b>Requestor:</b>	ABATE
<b>Question No.:</b>	ABDE-5.54a
Respondent:	T. M. Uzenski
Page:	1 of 1

- **Question:** Referring to Exhibit A-12, Schedule B4, line 21 "Deferred Debit Prepaid Pension Asset," and the Direct Testimony of Theresa Uzenski, at page 54, she states the line 35 "Prepaid Pension" represents the funded pension obligation, based on the year-over-year difference between pension expense accruals that are offset by pension fund contributions. With respect to the prepaid pension deferred debit balance please provide the following:
  - a. On an electronic spreadsheet with all formulas intact, please outline the annual pension expense, calculated consistent with Generally Accepted Accounting Principles, and DTE actual annual pension contributions that comprise the annual accumulation of this deferred debit or prepaid pension asset, that is shown on Schedule B4 for both 2017 and for the 12-month pro forma test year.
- **Answer:** See attached for a reconciliation of the prepaid pension asset for the historical through the projected period. Upon preparing this analysis, the Company discovered a formula error in the filing related to the prepaid pension asset. The average projected balance of the prepaid pension asset as filed on Exhibit A-12, Schedule B4, was \$841.087 million, but the correct balance should have been \$796.464 million. The attachment includes a reconciliation for both the filed and corrected balance. The revenue deficiency impact of this overstatement of working capital within rate base is \$3.208 million (\$44.623 million x 7.19% overall pre-tax cost of capital).

Attachments: U-20162 ABDE-5.54a Prepaid Pension Asset.xls

DTE Electric Company Case No. U-20162 Auditor: Request No: Respondent: Page:

M. Edelyn MLE-5.1a T. M. Uzenski 1 of 1

## **Request:**

- Staff's review of the Company's projected working capital found the Company had included the Charging Forward Reg Asset Deferral and Amortization in the balance of both line 29 – Reg Asset – Charging Forward and line 34 – Other Deferred Debits on Exhibit A-12, Schedule B4.
  - a. Does the Company agree or disagree?

### Response:

Agree. The balance for Charging Forward Reg Asset was inadvertently double-counted.

DTE Electric Company Case No. U-20162 Auditor: Request No: Respondent: Page: M. Edelyn MLE-5.1b T. M. Uzenski 1 of 1

## **Request:**

- Staff's review of the Company's projected working capital found the Company had included the Charging Forward Reg Asset Deferral and Amortization in the balance of both line 29 – Reg Asset – Charging Forward and line 34 – Other Deferred Debits on Exhibit A-12, Schedule B4.
  - b. If the Company agrees, please provide what the impact would be on the Company's projected working capital.

### Response:

The average balance of projected working capital was overstated by \$793,000.

MPSC Case No.:	<u>U-20162</u>
<b>Requestor:</b>	K. Trachsel
Question No.:	KT-1.2
Respondent:	[T. M. Uzenski
-	K. L. Slater
Page:	1 of 1

- Question: Company Witness Uzenski, within your exhibits adjustments are made for the renewable energy program. Would you please describe what you mean by "renewable energy program" and confirm what impact the renewable energy program has on the rate case U-20162. Did the amounts within your schedules net out completely the renewable energy program revenue and expenses and thus have no impact on this rate case? Please reference where in this case the adjustments have occurred and reference where within the renewable energy plan/reconciliations (Act 295 cases) the adjusted amounts are derived from. If the adjustments in this case do not tie to the renewable energy cases, please explain/reconcile the differences. The schedules and columns or line items in question are: Exhibit A-2, Schedule B6.1, pages 1 and 2 of 2, column h Exhibit A-2, Schedule B6.2, pages 1 and 2 of 2, column h Exhibit A-3, Schedule C1.1, line number 13 Exhibit A-13. Schedule C5.5. column d Exhibit A-13, Schedule C5.9, column d
- Answer: Costs recovered from other mechanisms are excluded from the financial statements in the rate case, consistent with treatment in past cases. One of these mechanisms is the Renewable Energy program which is recovered through a separate surcharge established by the Commission's order in Case No. U-15806. The adjustments/eliminations included in my schedule are based on amounts recorded for the Renewable Energy Program on the books of DTE Electric as of December 31, 2017, which are comparable to the 2017 Renewable Energy Reconciliation filing in case no. U-20172. (See attachment for a comparison of Rate Base, Net Operating Income and O&M.)

As a result of this audit, the Company has discovered a formula error which resulted in overstating the Renewables deferred income tax balance used to derive the adjusted capital structure in this rate case. The balance was overstated by \$97.3 million (Deferred Tax Asset for Production Tax Credits was inadvertently omitted). This caused Deferred Income Taxes within the Company's capital structure to be understated while permanent capital (Long Term Debt and Common Equity) was overstated. The Company has recalculated the capital structure and rate of return on Exhibit A-14 Schedule D1 as well as the Revenue Deficiency on Exhibit A-11 Schedule A1. (The Revenue Deficiency is overstated by \$8.8 million.)

Attachments: U-20162 KT-1.2 Renewable Comparison U-20162 KT-1.2 Revenue Deficiency Correction

DTE Electric Company	Exhibit:	A-11
Projected Revenue Deficiency (Sufficiency)	Schedule:	A1
Projected 12 Month Period Ending April 30, 2020	Witness:	K. L. Slater
(\$000)	Page:	1 of 1

#### Deferred Tax eliminated for Renewables was overstated in the Filing (Audit KT-1.2)

	(a)	(b)	(c)	(d)	
Line No.	Description	As Filed	Corrected	Difference	
1	Rate Base	17,172,558	17,172,512	(45)	Minor impacts on interest payable/taxes payable
2	Adjusted Net Operating Income	750,856	750,282	(574)	Increased income tax as a result of lower interest
3	Overall Rate of Return	4.37%	4.37%	0.00%	
4	Projected Rate of Return	5.76%	5.72%	-0.04%	Impact of shifting \$97M to DFIT from LTD/Equity
5	Income Requirements	988,985	981,873	(7,112)	
6	Income Deficiency (Sufficiency)	238,129	231,591	(6,538)	
7	Revenue Conversion Factor	1.3496	1.3496	<u> </u>	
8	Revenue Deficiency / (Sufficiency)	321,387	312,563	(8,824)	
9	Revenue Deficiency / (Sufficiency)-Tree Trim Surge	7,053	7,053	<u> </u>	
10	Revenue Deficiency / (Sufficiency)-Total	328,440	319,616	(8,824)	

Michigan Public Service Commission DTE Electric Company Projected Rate of Return Summary For Period Ending April 30, 2020

CORRECTED

Case No.: U-20162 Exhibit: A-14 Schedule: D1 Witness: K. L. Slater Page: 1 of 1

	(a)			(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
			_	Сар	ital Structure						
					Percent	Percent			Weig	hted Costs	
Line			~	Amounts	Permanent	of Total	Cost	Permanent	Total	Conversion	Pre-Tax
NO.	Description	Filed	Change	(\$000)	Capital (1)	Capital	Rate %	Capital	Cost %	Factor	Return
1	Long-Term Debt	6,432,689	(49,914)	6,382,775 (2	) 49.00%	37.17%	4.36% (3)	2.14%	1.62%	100.000%	1.62%
2	Preferred Stock			-	0.00%	0.00%	0.00% (4)	0.00%	0.00%	134.964%	0.00%
3	Common Shareholders' Equity	6,695,426	(46,502)	6,648,924 (2	) 51.00%	38.72%	10.50% (5)	5.36%	4.07%	134.964%	5.49%
4	Total	13, 128, 115	(96,416)	13,031,699	100.00%			7.49%			
5	Short-Term Debt	113,841	(966)	112,875 (2	)	0.66%	3.56% (6)		0.02%	100.000%	0.02%
6	Investment Tax Credit (ITC) - Debt	10,433	-	10,433		0.06%	4.36%		0.00%	100.000%	0.00%
7	Investment Tax Credit (ITC) - Equity	10,858	-	10,858		0.06%	10.50%		0.01%	134.964%	0.01%
8	Total Investment Tax Credit (ITC)	21,291	-	21,291 (2	)						
9	Deferred Income Taxes (Net)	3,909,311	97,337	4,006,648 (2	)	23.33%	0.000%	-	0.00%	_	0.00%
10	Total	17,172,558	(45)	17,172,512		100.00%		=	5.72%	=	7.14%
11	Rate Base per Exh. A-12, Sch. B1		_	17,172,512							

(1) Excludes Short-Term Debt, Deferred Investment Tax Credit, and Deferred Income Taxes to calculate the rate of return for Investment Tax Credit purposes in accordance with Internal Revenue Service Income Tax Regulation section 1.46-6

(2) See Exh. A-12, Sch. B4.1, Cols. (e) thru (i), Line 97

(3) See Exh. A-14, Sch. D2

(4) See Exh. A-14, Sch. D4

(5) See Exh. A-14, Sch. D5.19

(6) See Exh. A-14, Sch. D3

Michigan Public Service Commission DTE Electric Company

# Projected Rate of Return Summary

For Period Ending April 30, 2020

AS FILED

Case No.: U-20162 Exhibit: A-14 Schedule: D1 Witness: K. L. Slater Page: 1 of 1

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
		Capital Structure							
Line No.	Description	Amounts (\$000)	Percent Permanent Capital (1)	Percent of Total Capital	Cost Rate %	Permanent Capital	Weig Total Cost %	hted Costs Conversion Factor	Pre-Tax Return
1	Long-Term Debt	6,432,689	(2) 49.00%	37.46%	4.36% (3)	) 2.14%	1.63%	100.000%	1.63%
2	Preferred Stock	0	0.00%	0.00%	0.00% (4)	) 0.00%	0.00%	134.964%	0.00%
3	Common Shareholders' Equity	6,695,426	(2) 51.00%	38.99%	10.50% (5)	)5.36%_	4.09%	134.964%	5.53%
4	Total	13,128,115	100.00%			7.49%			
5	Short-Term Debt	113,841	(2)	0.66%	3.56% (6)	)	0.02%	100.000%	0.02%
6 7 8	Investment Tax Credit (ITC) - Debt Investment Tax Credit (ITC) - Equity Total Investment Tax Credit (ITC)	10,433 10,858 21,291	(2)	0.06% 0.06%	4.36% 10.50%		0.00% 0.01%	100.000% 134.964%	0.00% 0.01%
9	Deferred Income Taxes (Net)	3,909,311	(2)	22.76%	0.000%	-	0.00%	_	0.00%
10	Total	17,172,558		100.00%		=	5.76%	=	7.19%
11	Rate Base per Exh. A-12, Sch. B1	17,172,512							

 Excludes Short-Term Debt, Deferred Investment Tax Credit, and Deferred Income Taxes to calculate the rate of return for Investment Tax Credit purposes in accordance with Internal Revenue Service Income Tax Regulation section 1.46-6

(2) See Exh. A-12, Sch. B4.1, Cols. (e) thru (i), Line 97

(3) See Exh. A-14, Sch. D2

(4) See Exh. A-14, Sch. D4

(5) See Exh. A-14, Sch. D5.19

(6) See Exh. A-14, Sch. D3

#### Michigan Public Service Commission DTE Electric Company

**Projected Depreciation and Amortization Expense** 

Projected 12 Month Period Ending Apr. 30, 2020

(\$000)

		Instant Case (based on U-18150 Proposed Rates)			Recalcul					
	(a)	(b)	(C)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
				Average				Average		
		Projected Depr	eciation Rate	Plant Bal.	Projected	Projected Dep	reciation Rate	Plant Bal.	Projected	
Line			Composite	4/30/2019	Depr. Expense		Composite	4/30/2019	Depr. Expense	
No.	Description	Source	Depr. Rate 1/	- 4/30/2020	4/30/20	Source	Depr. Rate 1/	- 4/30/2020	4/30/20	Difference
					(c) x (d)				(g) x (h)	(e) - (i)
1	Depreciable Plant:									
2	Production Plant, Steam	U-18150 Filed	4.07%	7,788,845	317,006	U-16117 Order	1.99%	7,788,845	154,998	162,008
3	Production Plant, Nuclear	U-18150 Filed	4.26%	1,209,686	51,533	U-16117 Order	4.03%	1,209,686	48,750	2,782
4	Production Plant, Hydraulic	U-18195 Order	4.14%	556,551	23,041	U-18195 Order	4.14%	556,551	23,041	-
5	Production Plant, Other	U-18150 Filed	1.93%	618,989	11,946	U-16117 Order	4.09%	618,989	25,317	(13,370)
6	Production Plant, MERC	U-10348 Order	2.81%	92,115	2,588	U-10348 Order	2.81%	92,115	2,588	-
7	Transmission Plant	U-18150 Filed	2.51%	86,150	2,162	U-16117 Order	1.65%	86,150	1,421	741
8	Distribution Plant	U-18150 Filed	3.94%	8,676,916	341,870	U-16117 Order	3.91%	8,676,916	339,267	2,603
9	Distribution Plant, AMI	U-18150 Filed	5.15%	391,298	20,152	U-16117 Order	5.00%	391,298	19,565	587
10	General Plant, Amortizable	Specified Years	7.51%	297,926	22,378	Specified Years	7.51%	297,926	22,378	-
11	General Plant, Depreciable	U-18150 Filed	7.21%	814,492	58,725	U-16117 Order	4.70%	814,492	38,281	20,444
12	General Plant, Amortizable 5 Yr.	5 Years	20.00%	50,918	10,169	5 Years	20.00%	50,918	10,169	-
13	Total Depreciable Plant			20,583,885	861,571			20,583,885	685,776	175,795
14	Depreciation & Amort (403-407, 411,	1)								
15	Plant DD&A (403, 403.1)				861,571				685,776	175,795
16	Software Amortization / Intangible	(405)			76,759				76,759	-
17	Subtotal Plant Depr. & Amortization	n			938.330				762.535	175.795
18	Amortization of COL (405)				4.893				4.893	-
19	Amort. of Utility Plant Acq. Adj. (40	6)			5,791				5,791	-
20	Amort. of CTA and DTE2 Regulato	ory Assets			-				-	-
21	AFUDC-Reg Asset Amort (407.3)	,			148				148	-
22	Amortization of Capitalized Pension	n (407.3)			723				723	-
23	Amortization of Capitalized OPEB	(407.4)			(899)				(899)	
24	Depreciation & Amortization				948,986				773,191	175,795

Case No.: U-20162

Audit Response: MLE-6.1

Witness: T. M. Uzenski

Based on Exhibit & Schedule: A-13 C6

1/ Composite rates have been updated based on 2017 year-end plant balances (see U-20162 MLE-4.1 for calculated rates)

Uzenski

MPSC Case No.:	<u>U-20162</u>
<b>Requestor:</b>	J. Gerken
Question No.:	JSG-6.3a
<b>Respondent:</b>	[K. L. Slater / T.M.
Page:	1 of 1

- **Question:** It is Staff's understanding that although the Company included \$32,973,000 to offset the impact of the return on projected test year CWIP for AFUDC eligible CWIP items in its revenue requirement calculation that the actual AFUDC which is embedded in the Company's projected test year CWIP is not offset. In other words, the revenue requirement calculation applies the overall rate of return to rate base and CWIP is a part of rate base. Since CWIP is made up of AFUDC eligible CWIP items as well as the actual AFUDC related to those AFUDC eligible CWIP items and CWIP items which are not AFUDC eligible the revenue requirement calculation is still applying the overall rate of return to both the non-eligible CWIP items and the actual AFUDC embedded in CWIP. Is Staff's understanding correct?
  - a. If yes, please provide the impact on the Company's projected revenue deficiency if the return on the actual AFUDC embedded in the Company's projected test year CWIP was to be offset.
- Answer: Yes. The projected period CWIP balance includes the \$32,973,000 of AFUDC credited to income. Thus, the rate base to which the required return is applied includes the \$32,973,000. The full year return on this balance is \$2,594,975. (\$32,973,000 \* 7.87%, pre-tax return). Technically, the portion applicable to the revenue deficiency would be 50% of this amount since we use an average balance of rate base to determine the revenue deficiency. However, assuming the beginning balance of CWIP has some embedded AFUDC, it would be reasonable to estimate the impact using the full year amount.

Case No.:	U-20162
Witness:	K.D. Megginson
Exhibit No:	S-4
Schedule:	Revised D-1
page:	1 of 1
Date:	Nov. 07, 2018

# DTE Electric Company Staff Recommended Ratemaking Capital Structure For Test Year Ending April 30, 2020

#### **Revised Schedule D-1**

				Total				Pre-Tax
			Permanent	Capital	Cost	Weighted	Convrsn	Weighted
Line	Description	Amount	Ratio	Ratio	Rate	Cost	Factor	Cost
	(a)	(b)	(ċ)	(d)	(e)	(f)	(g)	(h)
1	Long-Term Debt <sup>1</sup>	\$6,382,775,000	48.98%	37.17%	4.36%	1.62%	1.0000	1.62%
2	Preferred Stock	\$0	0.00%	0.00%	0.00%	0.00%	1.3496	0.00%
3	Common Equity <sup>2</sup>	\$6,648,925,000	51.02%	38.72%	9.80%	3.79%	1.3496	5.12%
4	Total Permanent Capital	\$13,031,700,000	100.00%					
5	Short-Term Debt <sup>3</sup>	\$ 112,875,000		0.66%	3.56%	0.02%	1.0000	0.02%
6	Deferred FIT <sup>4</sup>	\$4,006,648,000		23.33%	0.00%	0.00%	1.0000	0.00%
7	JDITC							
8	Def JDITC - Long Term Debt	\$10,428,084		0.06%	4.36%	0.00%	1.0000	0.00%
9	Def JDITC - Preferred Stock	\$0		0.00%	0.00%	0.00%	1.3496	0.00%
10	Def JDITC - Common Equity	\$10,862,916		0.06%	9.80%	0.01%	1.3496	0.01%
11	Total JDITC	\$21,291,000				0.01%		0.01%
12	Total Capitalization	\$17,172,514,000		100.00%		5.45%		6.78%
			-				•	

## <u>Note</u>

Staff agreed with the Company's balances shown on Exhibit A-12, Schedule B4.1, Line 97, page 2 of 2.

1) Staff agreed with the Company's balance but modified it by \$49.9 million to account for a DFIT adjustment

2) Staff agreed with the Company's balance but modified it by \$46.5 million to account for a DFIT adjustment

3) Staff agreed with the Company's balance but modified it by \$966 thousand to account for a DFIT adjustment

4) Staff agreed with the Company's balance but modified it up by \$97.3 million to account for a formula error on the Company's behalf

# DTE Electric Company Staff Recommended Long-Term Debt Balance and Cost Rate For Test Year Ending April 30, 2020

Case No.:	U-20162
Witness:	K.D. Megginson
Exhibit No:	S-4
Schedule:	D-2
page:	1 of 1
Date:	Nov. 07, 2018

#### Schedule D-2

	(a)	(b)	(ċ)	(d)	(e)	(f)	(g)	(h)
					Amount of	Cost Based	Amount	Annual
		Date		Interest	Offering	On Net	Outstanding	Cost
Line	Mortgage Bonds	<u>Sold</u>	<u>Maturity</u>	<u>Rate</u>	<u>(000)</u>	<u>Proceeds</u>	<u>(000)</u>	<u>(000)</u>
1	Series 1991 BB (CP)	05/20/91	05/01/21	7.000%	32,800	7.29%	32,800	2,390
2	Series E 1991 (DP)	05/01/91	08/01/21	6.900%	37,600	7.13%	37,600	2,680
3	Series 1992 AA (AP)	03/24/92	09/01/22	6.950%	66,000	7.16%	66,000	4,725
4	Series 1995 CC	09/01/16	09/01/21	1.450%	82,350	1.56%	82,350	1,285
5	2002 Series B	10/23/02	10/15/32	6.350%	225,000	6.47%	225,000	14,566
6	2005 Series BR	02/07/05	02/15/35	5.450%	200,000	5.55%	200,000	11,098
7	2005 Series C	09/29/05	10/01/23	5.190%	100,000	5.23%	100,000	5,232
8	2005 Series E	10/06/05	10/01/37	5.700%	250,000	5.81%	250,000	14,523
7	2006 Series A	06/01/06	06/01/36	6.625%	250,000	6.71%	250,000	16,766
10	2007 Series A	12/18/07	03/15/38	6.470%	50,000	6.53%	50,000	3,266
11	2008 Series ET	09/01/16	09/01/21	1.450%	59,175	1.56%	59,175	923
12	Series 2008KT	06/01/09	07/01/20	5.625%	32,375	5.83%	32,375	1,889
13	2010 Series A	09/15/10	09/15/20	4.890%	300,000	4.96%	300,000	14,893
14	2010 Series B	08/19/10	10/01/20	3.450%	300,000	3.59%	300,000	10,772
15	2011 Series B	05/18/11	06/01/21	3.900%	250,000	4.03%	250,000	10,074
16	2011 Series D	09/01/11	09/01/23	4.310%	102,000	4.37%	102,000	4,461
17	2011 Series E	09/01/11	09/01/26	4.460%	77,000	4.51%	77,000	3,476
18	2011 Series F	09/01/11	09/01/41	5.670%	46,000	5.71%	46,000	2,627
19	2011 Series H	09/20/11	09/01/41	4.500%	140,000	4.64%	140,000	6,490
20	2012 Series A	06/22/12	06/15/22	2.650%	250,000	2.76%	250,000	6,900
21	2012 Series B	06/22/12	06/15/42	3.950%	250,000	4.03%	250,000	10,086
22	2013 Series A	03/27/13	04/01/43	4.000%	375,000	4.09%	375,000	15,327
23	2013 Series B	08/27/13	03/15/24	3.650%	400,000	3.79%	400,000	15,156
24	2014 Series A	06/04/14	06/01/26	3.770%	100,000	3.83%	100,000	3,834
25	2014 Series B	06/04/14	06/01/44	4.600%	150,000	4.64%	150,000	6,957
26	2014 Series D	07/02/14	03/01/25	3.375%	350,000	3.48%	350,000	12,180
27	2014 Series E	07/02/14	07/01/44	4.300%	350,000	4.37%	350,000	15,296
28	2015 Series A	03/11/15	03/11/45	3.700%	500,000	3.77%	500,000	18,854
29	2016 Series A	05/17/16	06/01/46	3.700%	300,000	3.77%	300,000	11,310
30	2017 Series B	08/09/17	08/15/47	3.750%	440,000	3.81%	440,000	16,764
31	2018 Series A	05/01/18	05/01/48	4.050%	525,000	4.13%	525,000	21,683
32	2019 Series A	04/01/19	04/01/49	4.420%	250,000	4.48%	250,000	11,200
33	2019 Series B	10/01/19	10/01/49	4.420%	305,000	4.48%	305,000	13,664
34	Average				-	4.36%	7,145,300	311,345
	Ratemaking Long-term	debt balance	and cost rate <sup>1</sup>	I	=	4.36%	6,432,689	

#### <u>Notes</u>

1- Staff's ratemaking LT-debt balance is aligned with the Company's average LT-debt balance as shown on Exhibit A-12, Schedule B4.1, pg 2 of 2. The LT-debt cost rate took into account the proposed new debt issuances in 2018 & 2019 and Staff did not alter the Company's estimated cost rates. Staff's Ratemaking LT-debt balance is adjusted for issuance premiums/discounts, other debits and unamortized debt expenses.

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Witness:	K.D. Megginson
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# DTE Electric Staff Recommended 2017 Short-Term Debt Balance and Cost Rate For Test Year Ending April 30, 2020

### Schedule D-3

(a)		(b)	(c)
Description		Amount	Cost Rate
Forecast LIBOR rate			2.77%
LIBOR Spread			<u>0.09%</u>
Base Short-term interest rate			2.86%
Average Short-term Borrowing	\$	113,841,000.00	
Credit Agreement fees	\$	802,000.00	
Cost Rate of fees			0.70%
Short-term Debt Amount & Rate <sup>1</sup>	\$	113,841,000.00	3.56%
	(a) <u>Description</u> Forecast LIBOR rate LIBOR Spread Base Short-term interest rate Average Short-term Borrowing Credit Agreement fees Cost Rate of fees Short-term Debt Amount & Rate <sup>1</sup>	(a) <u>Description</u> Forecast LIBOR rate LIBOR Spread Base Short-term interest rate Average Short-term Borrowing \$ Credit Agreement fees \$ Cost Rate of fees Short-term Debt Amount & Rate <sup>1</sup> \$	(a) (b) <u>Description</u> <u>Amount</u> Forecast LIBOR rate LIBOR Spread Base Short-term interest rate Average Short-term Borrowing \$ 113,841,000.00 Credit Agreement fees \$ 802,000.00 Cost Rate of fees Short-term Debt Amount & Rate <sup>1</sup> <u>\$ 113,841,000.00</u>

### <u>Notes</u>

1 - Adopting Company's short-term debt balance and cost rate

 Case No.:
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### Inflation (CPI - All Urban)

(a)	(b)	(c)	(d)	(e)	
Line <u>No.</u>	Source	<u>2018</u>	<u>2019</u>	<u>2020</u>	Notes
1	Value Line	2.10%	2.60%	2.70%	Selection & Opinion: 6/1/18 page 2315
2	Global Insight	2.60%	2.10%	2.30%	US Economic Outlook: July 2018
4	Energy Information Administration	2.86%	1.99%		Short Term Energy Outlook, July 2018
5	Average	2.52%	2.23%	2.50%	

6 Staff Estimation

#### Notes

Date Performed:

July 31, 2018

#### **Actual Inflation Rates**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ave
2018	2.07%	2.21%	2.36%	2.46%	2.80%	2.87%	2.95%						2.53%
2017	2.50%	2.74%	2.38%	2.20%	1.87%	1.63%	1.73%	1.94%	2.23%	2.04%	2.20%	2.11%	2.13%
2016	1.37%	1.02%	0.85%	1.13%	1.02%	1.01%	0.84%	1.06%	1.46%	1.64%	1.69%	2.07%	1.26%
2015	-0.09%	-0.03%	-0.07%	-0.20%	-0.40%	0.12%	0.17%	0.20%	-0.04%	0.17%	0.50%	0.73%	0.09%
2014	1.58%	1.13%	1.51%	1.95%	2.13%	2.07%	1.99%	1.70%	1.66%	1.66%	1.32%	0.08%	1.56%
2013	1.59%	1.98%	1.47%	1.06%	1.36%	1.75%	1.96%	1.52%	1.18%	0.96%	1.24%	1.50%	1.46%
2012	2.93%	2.87%	2.65%	2.30%	1.70%	1.66%	1.41%	1.69%	1.99%	2.16%	1.76%	1.74%	2.07%
2011	1.63%	2.11%	2.68%	3.16%	3.57%	3.56%	3.63%	3.77%	3.87%	3.53%	3.39%	2.96%	3.16%
2010	2.63%	2.14%	2.31%	2.24%	2.02%	1.05%	1.24%	1.15%	1.14%	1.17%	1.14%	1.50%	1.64%
2009	0.03%	0.24%	-0.38%	-0.74%	-1.28%	-1.43%	-2.10%	-1.48%	-1.29%	-0.18%	1.84%	2.72%	-0.34%
2008	4.28%	4.03%	3.98%	3.94%	4.18%	5.02%	5.60%	5.37%	4.94%	3.66%	1.07%	0.09%	3.85%
2007	2.08%	2.42%	2.78%	2.57%	2.69%	2.69%	2.36%	1.97%	2.76%	3.54%	4.31%	4.08%	2.85%
2006	3.99%	3.60%	3.36%	3.55%	4.17%	4.32%	4.15%	3.82%	2.06%	1.31%	1.97%	2.54%	3.24%
2005	2.97%	3.01%	3.15%	3.51%	2.80%	2.53%	3.17%	3.64%	4.69%	4.35%	3.46%	3.42%	3.39%
2004	1.93%	1.69%	1.74%	2.29%	3.05%	3.27%	2.99%	2.65%	2.54%	3.19%	3.52%	3.26%	2.68%
2003	2.60%	2.98%	3.02%	2.22%	2.06%	2.11%	2.11%	2.16%	2.32%	2.04%	1.77%	1.88%	2.27%
2002	1.14%	1.14%	1.48%	1.64%	1.18%	1.07%	1.46%	1.80%	1.51%	2.03%	2.20%	2.38%	1.59%
2001	3.73%	3.53%	2.92%	3.27%	3.62%	3.25%	2.72%	2.72%	2.65%	2.13%	1.90%	1.55%	2.83%
2000	2.74%	3.22%	3.76%	3.07%	3.19%	3.73%	3.66%	3.41%	3.45%	3.45%	3.45%	3.39%	3.38%

Source: InflationData.com

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# DTE Electric Preferred Stock Balance and Cost Rate

#### Schedule D-4

(a)	(b)	(ċ)	(d)
	Amount	Cost	Annual
	Outstanding	<u>Rate</u>	<u>Cost</u>
Preferred Stock	-	0.00%	-

Case No.:	U-20162
Witness:	K.D. Megginson
Exhibit No:	S-4
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# DTE Electric Staff Recommended Common Equity Balance For Test Year Ending April 30, 2020

	(a)	(b)
Line	Component	 Balance
1	Common Stock	\$ 5,138,738,000
2	Retained Earnings	\$ 1,554,021,000
3	Other Comprehesive Income	\$ 2,668,000
4	Subtotal	\$ 6,695,427,000
5	Misc. Other Comon Stock Adjustments	\$ -
6	Total Common Equity <sup>1</sup>	\$ 6,695,427,000

# <u>Notes</u>

(1) Staff adopted balance shown on Exhibit A-9, Schedule B5.1, Line 93, page 2 of 2.

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Witness:	K.D. Megginson
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#### **Electric Proxy Group Corporate Statistics**

	(a)	(b)	( c )	(d)	(e)	(f)	(g)	(h)	<u>(i)</u>	(j)
			Net	% Reg	S&P	Moody's	Dividend	Value	Last	Date
Line		Ticker	Plant	Elec	Issuer	Issuer	Payout	Line	Allowed	of ROE
No.	<u>Company</u>	<u>Symbol</u>	<u>(\$Millions)</u>	<u>Revs</u>	Rating	Rating	<u>(%)</u>	<u>Beta</u>	<u>ROE<sup>1</sup></u>	<u>Order</u>
1	Alliant Energy	LNT	10,798	86	A-	Baa1	72	0.65	9.98%	2/2/2018
2	Ameren, Inc.	AEE	21,466	73	BBB+	Baa1	64	0.60	8.40%	12/6/2017
3	CMS Energy Corp**	CMS	16,761	69	BBB+	Baa1	63	0.55	10.00%	6/28/2018
4	Edison International	EIX	\$ 39,050	90	BBB+	Baa1	53	0.60	10.30%	10/26/2017
5	Eversource Utilities	ES	23,617	75	A+	Baa1	61	0.60	9.25%	4/18/2018
6	OGE Energy Corp	OGE	8,340	100	A-	A3	67	0.90	9.50%	5/18/2017
7	Pinnacle West	PNW	13,445	100	A-	A3	62	0.65	10.00%	8/15/2017
8	PNM Resources, Inc.	PNM	4,980	100	BBB+	Baa3	62	0.75	10.13%	12/20/2017
9	Portland General Electric	POR	6,741	100	BBB+	A3	64	0.65	9.50%	12/18/2017
10	WEC Energy Group	WEC	21,347	80	A-	A3	67	0.55	10.20%	11/14/2014
11	Xcel Energy	XEL	34,329	85	A-	A3	61	0.60	9.80%	12/7/2017
12	Average		18,261	87	A-/BBB+	A3/Baa1	63	0.65	9.73%	

13	DTE Electric*	13,746	80	А	Aa3	68	10.00%

Proxy Group Selection Criteria:

- Net plant in excess of \$4.0 billion less than \$40 billion
- Regulated electric revenues approximately 50% or greater
- Investment grade credit rating within three notches of DTE Electric's rating
- currently paying dividends to shareholders
- not involved in a major merger or utility company acquisition

Source: Value Line Investment Survey (July - September 24, 2018)

SNL research data from SNL.com (Site uses several data sources)

(1) column (i) is the most recent authorized electric ROE or average ROE if based on multi-state utility ROE decisions (from the SNL rate case history tab)

\*DTE Electric: data obtained from Company witness Exhibits A-18, Schedules H1, page 1 of 1

-Net plant data from Exhibit A-2, Schedule B5, page 1 of 2 for period ending Dec. 31, 2017

\*\*CMS Energy's subsidiary - Consumers Energy Electric Division - current authorized ROE

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#### The boxed Credit ratings are within three notches (+) or (-) of DTE Electric's **Issuer** <u>S&P</u> Moody's rating AAA Aaa Aa1 AA+ AA Aa2 Aa3<── AA-DTE Electric A1 A+ Moody's rating A2 DTE Electric = А A3 S&P rating A-BBB+ Baa1 BBB Baa2 Baa3 BBB-

# **Proxy Group Rating's Criteria**

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# Electric Proxy Group & DTE Electric Return On Common Equity (%)

(a)	(b)	(ċ)	(d)	(e)	(f)	(g)	(h)	(i)
		Ticker						
Line	<u>Company</u>	<u>Symbol</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>Average</u>
1			11 0	10.0	10.0	0.7	10.0	10 Г
I	Alliant Energy	LNI	11.3	10.9	10.2	9.7	10.9	10.5
2	Ameren, Inc.	AEE	7.8	8.7	8.3	9.2	9.4	8.5
3	CMS Energy Corp	CMS	13.1	13.0	13.3	13.0	13.7	13.1
4	Edison International	EIX	12.5	8.2	8.5	8.8	10.0	9.5
5	Eversource Utilities	ES	8.2	8.2	8.5	8.8	8.9	8.4
6	OGE Energy Corp	OGE	12.8	12.2	10.2	9.8	10.0	11.3
7	Pinnacle West	PNW	9.7	9.1	9.5	9.2	9.9	9.4
8	PNM Resources, Inc.	PNM	6.8	6.5	7.1	7.0	9.1	6.9
9	Portland General Electric	POR	7.5	9.2	7.6	8.2	8.4	8.2
10	WEC Energy Group	WEC	13.6	13.3	7.4	10.5	10.5	11.1
11	Xcel Energy	XEL	9.9	10.0	10.0	10.2	10.2	<u>10.1</u>
12	Average							9.71
13	DTE Electric*		11.1	10.8	10.0	10.9	10.0	10.56

Source: Value Line Investment Survey (July - September 24, 2018)

\* DTE Electric's figures derived from 2013-2017 Monthly Financial Reports

Case No.:U-20162Witness:K.D. MegginsonExhibit No:S-4Schedule:D-5page:5 of 13Date:Nov. 07, 2018

#### **Discounted Cash Flow (DCF) Analysis**

#### Stock Price & Dividend Analysis

	(a)	(b)	(ċ)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
			Closing	Closing	Closing	Avg.	Most		Current	Adjusted <sup>1</sup>
			Monthly	Monthly	Monthly	Closing	Recent	Current	Annual	Annual
		Ticker	Stock Price	Stock Price	Stock Price	Monthly	Quarterly	Annualized	Dividend	Dividend
Line	<u>Company</u>	<u>Symbol</u>	<u>Aug. 1, 2018</u>	<u>Sep. 1, 2018</u>	<u>Oct. 1, 2018</u>	Stock Price	Dividend	Dividend	Yield	Yield
										[A]
1	Alliant Energy	LNT	42.84	42.57	42.56	42.66	0.335	1.34	3.14%	3.23%
2	Ameren, Inc.	AEE	63.23	63.22	63.82	63.42	0.4575	1.83	2.89%	2.99%
3	CMS Energy Corp	CMS	49.24	49	49.01	49.08	0.358	1.43	2.92%	3.02%
4	Edison International	EIX	65.73	67.68	68.88	67.43	0.605	2.42	3.59%	3.67%
5	Eversource Utilities	ES	62.43	61.44	61.37	61.75	0.505	2.02	3.27%	3.36%
6	OGE Energy Corp	OGE	36.83	36.32	36.5	36.55	0.365	1.46	3.99%	4.10%
7	Pinnacle West	PNW	78.55	79.18	81.68	79.80	0.695	2.78	3.48%	3.56%
9	PNM Resources, Inc.	PNM	38.95	39.45	38.53	38.98	0.265	1.06	2.72%	2.80%
9	Portland General Electric	POR	46.4	45.61	45.48	45.83	0.363	1.45	3.17%	3.23%
10	WEC Energy Group	WEC	67.58	66.76	67.94	67.43	0.553	2.212	3.28%	3.37%
11	Xcel Energy	XEL	48.05	47.21	47.64	47.63	0.38	1.52	3.19%	3.28%

	Growth Rate Forecast		Analysts				
			Yahoo <sup>2</sup>	Value Line <sup>3</sup>	Zacks <sup>4</sup>	Average	One-Step
			5-Year	5-7 Year	3-5 Year	Analyst	DCF
		Ticker	Growth	Growth	Growth	Growth	Cost of Equity
Line	<u>Company</u>	<u>Symbol</u>	<u>Forecast</u>	<u>Forecast</u>	<u>Forecast</u>	Forecast	<u>Estimate</u>
						[B]	[A] + [B]
1	Alliant Energy	LNT	5.75%	6.50%	5.49%	5.91%	9.15%
2	Ameren, Inc.	AEE	6.90%	7.50%	6.46%	6.95%	9.94%
3	CMS Energy Corp	CMS	6.97%	7.00%	6.18%	6.72%	9.73%
4	Edison International	EIX	3.54%	4.50%	5.85%	4.63%	8.30%
5	Eversource Utilities	ES	5.74%	5.00%	5.93%	5.56%	8.92%
6	OGE Energy Corp	OGE	5.30%	6.00%	5.17%	5.49%	9.59%
7	Pinnacle West	PNW	3.75%	5.00%	4.47%	4.41%	7.97%
9	PNM Resources, Inc.	PNM	4.95%	7.50%	4.64%	5.70%	8.49%
9	Portland General Electric	POR	4.95%	4.00%	3.13%	4.03%	7.26%
10	WEC Energy Group	WEC	4.54%	7.00%	4.13%	5.22%	8.59%
11	Xcel Energy	XEL	5.95%	5.50%	5.78%	5.74%	9.03%

12 Average ROE Estimate

8.82%

#### Notes and Sources

1. Adjusted div. yield is 1/2 the annual growth rate to account for dividend distributions throughout year: equation = Div. yield\*(1+0.5\*avg. growth rate)

2. Yahoo Finance Analyst Estimates; October 16, 2018

3. Value Line: August - September 24, 2018

4. Zack's Estimates: October 16, 2018
| Case No.:   | U-20162        |
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| Witness:    | K.D. Megginson |
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#### Statistics for CAPM Analysis

		Large	Long Term Goy Bonds	
Line		Total Returns	Income	
No.	Period	Returns (%)	Returns (%)	Difference
1	1926	11.62	3.73	7.89
3	1928	43.61	3.22	40.39
4	1929	(8.42)	3.47	(11.89)
5 -	1930	(24.90)	3.32	(28.22)
7	1931	(8.19)	3.69	(11.88)
8	1933	53.99	3.12	50.87
9	1934	(1.44)	3.18	(4.62)
10 _	1935	47.67	2.81	44.86
12	1937	(35.03)	2.66	(37.69)
13	1938	31.12	2.64	28.48
14	1939	(0.41)	2.40	(2.81)
16	1941	(11.59)	1.94	(13.53)
17	1942	20.34	2.46	17.88
18	1943	25.90	2.44	23.46
20	1945	36.44	2.34	34.10
21	1946	(8.07)	2.04	(10.11)
22	1947 1948	5.71	2.13	3.58
24	1949	18.79	2.25	16.54
25	1950	31.71	2.12	29.59
26 27	1951	24.02	2.38	21.64
28	1952	(0.99)	2.84	(3.83)
29	1954	52.62	2.79	49.83
31	1955	31.56	2.75	28.81
32	1950	(10.78)	3.44	(14.22)
34	1958	43.36	3.27	40.09
35	1959	11.96	4.01	7.95
36	1960	26.89	3.83	23.06
38	1962	(8.73)	4.00	(12.73)
39	1963	22.80	3.89	18.91
40	1965	12.45	4.15	8.26
42	1966	(10.06)	4.49	(14.55)
43	1967	23.98	4.59	19.39
44 45	1968	(8.50)	5.50	5.56
46	1970	4.01	6.74	(2.73)
47	1971	14.31	6.32	7.99
48 49	1972	18.98	5.87	(21.17)
50	1974	(26.47)	7.27	(33.74)
51	1975	37.20	7.99	29.21
52	1976	23.84	7.89	(14.32)
54	1978	6.56	7.90	(1.34)
55	1979	18.44	8.86	9.58
56 57	1980	(4.91)	9.97	(16.46)
58	1982	21.41	13.50	7.91
59	1983	22.51	10.38	12.13
60 61	1984 1985	6.27	11.74	(5.47) 20.91
62	1986	18.47	8.98	9.49
63	1987	5.23	7.92	(2.69)
64 65	1988	16.81	8.97	7.84
66	1990	(3.17)	8.19	(11.36)
67	1991	30.55	8.22	22.33
69	1992	/.0/	7.17	0.41
70	1994	1.31	6.59	(5.28)
71	1995	37.43	7.60	29.83
72	1996	23.07 33.36	6.18 6.64	26.72
74	1998	28.58	5.83	22.75
75	1999	21.04	5.57	15.47
76 77	2000	(9.11)	6.50 5.53	(15.61)
78	2002	(22.10)	5.59	(27.69)
79	2003	28.70	4.80	23.90
80 81	2004 2005	10.87	5.02	5.85
82	2005	15.80	4.68	11.12
83	2007	5.49	4.86	0.63
84 85	2008	(37.00) 26.46	4.45	(41.45)
86	2009	15.06	4.25	10.81
87	2011	2.11	3.81	-1.7
88	2012	16.00	2.4	13.6
90	2013	13.69	3.12	29.55
91	2015	1.38	2.47	-1.09
92	2016	11.96	2.3	9.66
32	2017	21.83	2.07	19.10
94	1926 - 2017 AVE	12.06	4.99	7.07
95	1952 - 2017 AVE	12.31	5.88	6.44

	Case No.:	U-20162
	Witness:	K.D. Megginson
	Exhibit No:	S-4
	Schedule:	D-5
Electric Proxy Group	page:	7 of 13
Capital Asset Pricing Model	Date:	Nov. 07, 2018

3.73%

Ibbotson Historical Return<sup>(1)</sup>

	Proxy Group	Proxy Group
	<u>(1926 - 2017)</u>	<u>(1952 - 2017)</u>
Average Common Stock Return	12.06%	12.31%
Average LT Government Bond Return	<u>4.99%</u>	<u>5.88%</u>
Risk Premium	7.07%	6.44%

Risk Free Rate: Long-term Treasury Bond Yield<sup>(2)</sup>

	(a)	(b)	(ċ)	(d)	(e)	(f)	(g)	(h)
		Ticker	Valule Line	Risk Free	Full Term	1952 - 2017	Full Term	Fed-Accord*
<u>Line</u>	<u>Company</u>	<u>Symbol</u>	<u>Beta</u>	Rate	<u>Risk Premium</u>	<u>Risk Premium</u>	<u>CAPM</u>	<u>CAPM</u>
1	Alliant Energy	LNT	0.65	3.73%	7.07%	6.44%	8.33%	7.92%
2	Ameren, Inc.	AEE	0.60	3.73%	7.07%	6.44%	7.97%	7.59%
3	CMS Energy Corp	CMS	0.55	3.73%	7.07%	6.44%	7.62%	7.27%
4	Edison International	EIX	0.60	3.73%	7.07%	6.44%	7.97%	7.59%
5	Eversource Utilities	ES	0.60	3.73%	7.07%	6.44%	7.97%	7.59%
6	OGE Energy Corp	OGE	0.90	3.73%	7.07%	6.44%	10.09%	9.53%
7	Pinnacle West	PNW	0.65	3.73%	7.07%	6.44%	8.33%	7.92%
8	PNM Resources, Inc.	PNM	0.75	3.73%	7.07%	6.44%	9.03%	8.56%
9	Portland General Electric	POR	0.65	3.73%	7.07%	6.44%	8.33%	7.92%
10	WEC Energy Group	WEC	0.55	3.73%	7.07%	6.44%	7.62%	7.27%
11	Xcel Energy	XEL	0.60	3.73%	7.07%	6.44%	7.97%	7.59%
13	Average					-	8.29%	7.89%

Source: <sup>1</sup>Ibbotson SBBI 2018 Classic Yearbook - as noted on Schedule D5, page 6

<sup>(2)</sup>Value Line 2019-2020 LT-Treasury bond rate forecast = 3.40% (August 2018)
 Global Insight 2019-2020 -30yr Bond yield forecast = 4.05% (May 2018)
 Average: 3.73%

\*The 1951 Treasury-Federal Reserve Accord marked the birth of the modern day Fed. Background information from Hetzel & Leach, "The Treasury-Fed Accord: A New Narrative Account", Federal Reserve Bank of Richmond, *Economic Quarterly*, Volume 87/1, Winter 2001.

CAPM Equation = Risk Free + Beta\*(Risk Premium)

Case No.:	U-20134
Witness:	Kirk D. Megginson
Exhibit No:	S-4
Schedule:	D-5
Date:	September 10, 2018
page:	8 of 13

Projected Capital Asset Pricing Model

<u>Line</u>	Value Line Market Return Description <sup>1</sup>	<u>Estimate</u>
1	Median Dividend Yield, next 12 months	2.10%
2	Median Price Appreciation 3-5 years, 1700 stocks	45.00%
3	Annualized Price Appreciation: Line 2 / 4 years	11.25%
4	Total Market Return: Line 1 + Line 3	13.35%
5	<u>Value Line Bond Yield Forecast<sup>2</sup></u> Long-Term Treasury Bond Rate: 2019 -2020	3.40%
~	Forecast Market Risk Premium	0.050(
6	Total Market Return - LT-Bond Rate: Line 4 - Line 5	9.95%
7	Average Beta of Proxy Group <sup>3</sup> :	0.65
8	Risk Premium of Proxy Group: Line 6 * Line 7	6.47%
9	Forecast CAPM ROE: Line 5 + Line 8	9.87%

# <u>Source</u>

<sup>1</sup> Value Line Investment Survey (Summary & Index)	[October 19, 2018]
<sup>2</sup> Value Line Economic Forecast (Selection & Opinion)	[August 31, 2018]
<sup>3</sup> Average proxy group beta derived from Schedule D5,	page 2, col g, line 10

Case No.:	U-20162
Witness:	K.D. Megginson
Exhibit No:	S-4
Schedule:	D-5
page:	9 of 13
Date:	Nov. 07, 2018

# Dow Jones Utility Average

(2000 - 2017)

	(a)	(b)	(ċ)	(d)	(e)
<u>Line</u>	Date	Index value	Price Return %	TR Index Value	Total Return %
1	3-Jan-00	276.72		577.38	
2	29-Dec-00	412.16	48.95	890.95	54.31
3	31-Dec-01	293.94	(28.68)	656.90	(26.27)
4	31-Dec-02	215.18	(26.79)	503.29	(23.38)
5	31-Dec-03	266.90	24.04	651.22	29.39
6	31-Dec-04	334.95	25.50	848.16	30.24
7	30-Dec-05	405.11	20.95	1061.35	25.14
8	29-Dec-06	456.77	12.75	1237.84	16.63
9	31-Dec-07	532.69	16.62	1486.82	20.11
10	31-Dec-08	370.76	(30.40)	1072.94	(27.84)
11	31-Dec-09	398.01	7.35	1206.78	12.47
12	31-Dec-10	404.99	1.75	1284.76	6.46
13	30-Dec-11	464.88	14.79	1537.94	19.71
14	31-Dec-12	453.09	(2.54)	1563.18	1.64
15	31-Dec-13	490.57	8.27	1761.56	12.69
16	31-Dec-14	618.08	25.99	2301.45	30.65
17	31-Dec-15	577.82	(6.51)	2230.94	(3.06)
18	31-Dec-16	659.61	14.15	2636.44	18.18
19	31-Dec-17	723.37	9.67	2988.41	13.35

### <u>Source</u>

Column (d): data downloaded from Marketwatch.com with reference to the Dow Jones Utility Average Total Return as of December 29, 2017. Address is https://www.marketwatch.com/investing/index/djutr/charts?countrycode=xx

Case No.: U-20162

Witness: K.D. Megginson

Exhibit	: No:	S-4

ALL UTILITY

Schedule:	D-5
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Date:	Nov. 07, 2018

		Electric Utility Common S	Stocks		ALL
		Capital Gain/Loss %	Dividend Yield on Elec	Total Return	Yields on A-Rated
Doriod	Market Price - Weighted Average -	Growth (Loss) on Elec	Utility Stock (End of Dec)	(Capital Gain	Public Utility Bonds
1931	43.23	SIUCK	(Mergent) 7.40	+Dividend Tield)	6 24
1932	39.42	(8.81)	5.63	(3.18)	5.85
1933	28.73	(27.12)	6.09	(21.03)	7.22
1934	21.06	(26.70)	6.74	(19.96)	5.36
1935	36.06	71.23	3.69	74.92	4.29
1936	41.60	15.36	4.28	19.64	3.83
1937	24.24	(41.73)	6.93	(34.80)	4.03
1938	27.55	13.66	5.26	18.92	3.74
1939	28.85	4.72	5.23	9.95	3.38
1940	13.45	(22.98)	9.44	(13.91)	3.06
1942	14.29	6.25	8.96	15.21	3.06
1943	21.01	47.03	6.66	53.69	2.99
1944	21.09	0.38	6.40	6.78	2.97
1945	31.14	47.65	4.40	52.05	2.75
1946	32.71	5.04	4.52	9.56	2.76
1947	25.60	(21.74)	6.17	(15.57)	3.05
1948	26.20	2.34	6.22	8.56	3.06
1949	30.57	16.68	5.50	22.18	2.78
1950	30.81	0.79	6.00	6.79	2.86
1951	33.83	9.87	5.07	15.48	3.29
1952	39.61	4 65	5.28	9.93	3.22
1954	47.56	20.07	4.50	24.57	3.11
1955	49.35	3.76	4.60	8.36	3.35
1956	48.96	(0.79)	4.84	4.05	3.91
1957	50.30	2.74	4.89	7.63	4.36
1958	66.37	31.95	3.87	35.82	4.49
1959	65.77	(0.90)	4.01	3.11	4.96
1960	76.82	16.80	3.57	20.37	4.65
1961	99.32	29.29	2.88	32.17	4.65
1962	96.49	(2.85)	3.18	0.33	4.44
1903	102.51	0.05	3.25	9.28	4.46
1965	114.86	(0.59)	3 50	2.91	4.54
1966	105.99	(7.72)	3.94	(3.78)	5.67
1967	98.19	(7.36)	4.52	(2.84)	6.67
1968	104.04	5.96	4.40	10.36	6.87
1969	84.62	(18.67)	5.47	(13.20)	8.59
1970	88.59	4.69	5.34	10.03	8.48
1971	85.56	(3.42)	5.62	2.20	7.90
1972	83.61	(2.28)	5.88	3.60	7.48
1973	60.87	(27.20)	8.28	(18.92)	8.24
1974	41.17	(32.30)	8.07	(20.63)	10.27
1975	66 29	19.10	7 92	27.02	8 62
1977	68.19	2.87	8.33	11.20	8.64
1978	59.75	(12.38)	10.01	(2.37)	9.70
1979	56.41	(5.59)	11.24	5.65	11.79
1980	54.42	(3.53)	12.26	8.73	14.63
1981	57.20	5.11	12.52	17.63	16.29
1982	70.26	22.83	10.87	33.70	14.43
1983	72.03	2.52	11.11	13.63	13.52
1984	80.16	11.29	10.44	21.73	13.11
1985	94.98	18.49	9.17	27.00	0.12
1980	94 24	(17.09)	9.68	(7.41)	10.98
1988	100.94	7.11	8.63	15.74	10.06
1989	122.52	21.38	7.22	28.60	9.44
1990	117.77	(3.88)	7.44	3.56	9.73
1991	144.02	22.29	6.26	28.55	8.88
1992	141.06	(2.06)	6.25	4.19	8.43
1993	146.70	4.00	6.16	10.16	7.34
1994	115.50	(21.27)	7.80	(13.47)	8.76
1995	142.90	23.72	6.34	30.06	7.23
1996	136.00	(4.83)	6.67	1.84	7.59
1997	191.84	14.51	J.82 4.40	20.33	6.91
1999	137.30	(24.49)	5.87	(18.62)	8.14
2000	227.09	65.40	3.84	69.24	7.84
2001	200.50	(11.71)	4.47	(7.24)	7.83
2002	169.50	(15.46)	5.21	(10.25)	6.93
			Dow Jones Utility Average (	Total Return)	
2003				29.39	6.27
2004				30.24	5.92
2005				25.14	5.80
2006				16.63	5.81
2007				20.11	0.10
2008				(27.84)	0.54 5.79
2010				6.46	5.56
2011				19.71	4.33
2012				1.64	4.00
2013				12.69	4.81
2014				30.65	3.94
2015				(3.06)	4.39
2016				18.18	4.22
2017	17. Electric Trans. o new States	Hillian Dan 1.4		13.35	3.75
1932 - 20	117: Electric Utility & "A" Rated U	∪unty Bond Average Retu	rus	11.05	6.44

Switched to 1932 from 1931 as beginning point because the Mergent/Moody info for market returns only goes back to 1932 Mergent's (formerly Moody's) Public Utility Manual 2003 Edition (dec to dec gain/loss + yrly ave yield) 2003-2017 Dow Jones Utility Average TR Index from DJAverages.com as noted on Exhibit S-4, Schedule D-5, page 9 of 13 Col (g) - Mergent Public Utility Manual & Bond Record & Bloomberg

Case No.:	U-20162
Witness:	K.D. Megginson
Exhibit No:	S-4
Schedule:	D-5
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## **Risk Premium Method**

	(a)	(b)	(ċ)		
<u>Line No.</u>	Historical Premium				
1	Electric Utility Realized Market Return Average (1932 - 2017) <sup>(1)</sup>	11.05%	11.05%		
2	Realized Utility Bond Yield Average (1932 - 2017) <sup>(2)</sup>	6.44%	6.44%		
3	Historical Spread [1]	4.61%			
4	Projected Premium Electric Proxy Risk Premium from Projected CAPM <sup>2</sup> [3]	6.47%			
5	Value Line Long Term Utility Bond Returns <sup>(a)</sup> [2]	<u>A</u> 4.37%	<u>Baa/BBB</u> 4.58%		
6	Historical Cost of Equity Estimate [1] + [2]	8.97%	9.18%		
7	Projected Cost of Equity Estimate [2] + [3]	10.84%	11.05%		

## Sources

(a) Value Line Selected Yields: Corporate Bonds - Utility 25/30 Year

Date Date	Utility A-rated	Utility Baa/BBB-rated	
10/19/2018	4.51	4.27	
9/28/2018	4.40	4.81	
9/14/2018	4.28	4.62	
8/17/2018	4.28	4.61	
Ave	4.37	4.58	

(1) Historical Market data from Mergent Public Utility Manual for 1932-2002, per Exhibit S-4, Schedule D5, pg 10

- 2003-2017 data derived from the Dow Jones Utility Average TR Index per Exhibit S-4, Schedule D-5, page 9 of 13 and shown at the bottom of Exhibit S-4, Schedule D-5, page 10 of 13.

Case No.:	U-20162
Witness:	K.D. Megginson
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Allowed Returns on Common Equity Electric Utility Rate Case Decisions From other State Commissions

<u>Time Period</u>	No. of Cases	Avegarge ROE
2016 Full Year Average	41	9.77%
2017 Full Year Average	48	9.74%
2018 Average up to September	37	9.64%

Source: S&P Global Market Intelligence Regulatory Research Associates RRA Regulatory Focus Major Rate Case Decision - January-September 2018 Publication Date: October 11, 2018

Case No.:	U-20162			
Witness:	K.D. Megginson			
Exhibit No:	S-4			
Schedule:	D-5			
page:	13 of 13			
Date:	Nov. 07, 2018			

# STAFF Cost of Equity Review

<u>Method</u>	<u>ROE</u>
DCF Model Average	8.82%
Historical CAPM Full Range Average:	8.29%
Historical CAPM Fed-Accord Average:	7.89%
Projected CAPM Average	9.87%
Historical Risk Premium - A-Rated Utilities:	8.97%
Historical Risk Premium - Baa/BBB Rated Utilities:	9.18%
Projected Risk Premium - A-Rated Utilities:	10.84%
Projected Risk Premium - BBB-Rated Utilities:	11.05%
Average Authorized ROEs from Electric Utility Rate Decisions Across the U.S. in 2016:	9.77%
Average Authorized ROEs from Electric Utility Rate Decisions Across the U.S. in 2017:	9.74%
Average Authorized ROEs from Electric Utility Rate Decisions Across the U.S. through Sept. 2018:	9.64%
Recommended Cost of Equity Range:	9.00% - 10.00%
ROE used in Overall Cost of Capital:	9.80%

	Michigan Public Service Commission DTE Electric Company U-20162 Distribution Capex w/ Staff Adjustments (\$000) (a)	(b) Capital Expenditures	(c)	(d)	(e)	(f)	(g)	(h)	Case: U-20162 Witness: N. M. Evans Exhibit: S-10.0 Date: 11/7/18 Page 1 of 1 (i)
		Historical		Projected Bridge Period				Projected Test Year	
Line		12 mos. ended		12 mos. ending		4 mos. ending		12 mos. ending	
No.	Description	12/31/2017	Staff Adjustments	12/31/2018	Staff Adjustments	4/30/2019	Staff Adjustments	4/30/2020	Staff Adjustments
2	2 Emergent Replacements								
3	3 Storm	122.588		90.580	0	31.069	0	94.139	0
2	Non - Storm	126,187		87,437	49,985	29,991	0	90,872	0
5	Substation Reactive	35,495		28,282	15,010	9,701	0	29,393	0
6	Emergent Replacement Reduction Based on Strategic Spend	-		(4,195)	0	(2,827)	707	(9,824)	1,965
	January 2018 - August 2018 Overspend				29,939		0		0
7	Subtotal Emergent Replacements	284,270		202,104	94,934	67,933	707	204,580	1,965
٤	Customer Connections, Relocations & Other								
ç	Connections and New Load	132,483		133,282	0	45,766	0	138,468	0
10	) Relocations	16,375		30,864	0	13,122	0	15,331	0
11	Electric System Equipment	45,230		46,587	0	15,979	0	48,417	0
12	NRUC and Improvement Blankets	15,778		16,252	0	5,574	0	16,890	0
13	General Plant, Tools & Equipment and Miscellaneous	4,020		4,141	0	1,420	0	4,303	0
14	Subtotal Customer Connections, Relocations & Other	213,886		231,125	0	81,862	0	223,410	0
15	Customer Advances for Construction	(28,472)		(29,204)	0	(10,017)	0	(30,351)	0
	Total Customer Connections & Other	185,414		201,921	0	71,845	0	193,059	0
17	Strategic Capital Programs								
18	Infrastructure Resilience and Hardening	119,448		199,054	(38,996) 1	1/ 67,000	0	201,078	0
19	Infrastructure Redesign	42,844		121,905	(66,031)	39,344	0	127,040	0
20	) Technology and Automation	19,397		85,174	(54,362)	39,435	0	104,820	0
21	Subtotal Strategic Capital Programs	181,689		406,132	(159,389)	145,779	(32,154)	432,939	(63,859)
22	? Total Capital	651,372	(88,615)	810,157	(64,455)	285,557	(31,447)	830,578	(61,894)

Notes:

1/ Includes -\$36,728,000 underspending adjustment and -\$2,268,000 for Substation Risk: Drexel.

#### **Michigan Public Service Commission** DTE Electric Company **Projected Capital Expenditures Distribution Plant** (\$000)

Case: U-20162 Witness: N. M. Evans Exhibit: S-10.1 Date: 11/7/18 Page 1 of 6

Case No.: U-18255 Exhibit: A-9 Schedule: B6.4 Witness: P. D. Whitman Page: 1 of 6

	(a)	(b)	(c)	(d)	(e)
			Capital Expe	enditures	
		Historical		Projected	
Line <u>No.</u>	Description	12 mos. ended 12/31/2016	10 mos. ending 7 10/31/2017	12 mos. ending 10/31/2018	22 mos. ending 10/31/2018
	Conital Funanditures				col. (c)+(d)
4					
ו 2	Customer Connections	60.060	50 227	72 700	132 017
2	Meters	6 220	5 334	6 5 5 5	11 880
⊿	Transformers	29 608	25 389	31 203	56 591
5	Customer Advances for Construction	(10.057)	(8 624)	(10 599)	(19 223)
6	Total New Business	94,840	81,325	99,949	181,274
7	System Strengthening and Reliability:				
8	Reliability 1/	94,699	143,896	252,384	396,280
9	General Load Growth 2/	9,535	16,362	10,903	27,265
10	New Business Specific Projects 3/	21,708	29,318	9,630	38,948
11	Major Equipment	23,575	11,787	13,484	25,271
12	Substation/Station Improvement 4/	72,051	65,750	78,315	144,065
13	Customer Advances for Construction	(3,562)	(3,055)	(3,754)	(6,809)
14	Subtotal System Strengthening and Reliability	218,006	264,059	360,961	625,020
15	System Strengthening Blankets:				
16	Increased Loads	13,185	11,306	13,895	25,201
17	System Improvements	1,628	1,396	1,716	3,112
18	Relocations	7,744	6,641	8,162	14,802
19	Normal Retirement Unit Changeouts	2,089	1,791	2,202	3,993
20	Emergency Retirement Unit Changeouts and Storm	144,751	124,124	152,549	276,673
21	Subtotal System Strengthening Blankets	169,398	145,259	178,523	323,781
22	Total System Strengthening, Reliability and Blankets	387,404	409,317	539,484	948,801
23	Miscellaneous				
24	Other Miscellaneous	11,189	4,160	5,113	9,272
25	Total Capital	493,433	494,802	644,545	1,139,348
26	Regulatory Asset				
27	Advanced Distribution Management System (ADMS) 1/,	5/	1,753	7,291	9,044
	1/ Exh A-9, Sch B6 4 - ng 2				
	2/Exh/3.9, Sch B6.4 - pg 2				
	3/ Exh A-9, Sch B6.4 - pg 3				
	o,, to, con bon pg f				

4/ Exh A-9, Sch B6.4 - pg 5

5/ Regulatory Asset treatment for Advanced Distribution Management System (ADMS) is sponsored by Witness Uzenski

Michigan Public Service Commission DTE Electric Company U-18255 Distribution Capital Expenditures	Case: U-20162 Witness: N. M. Evans Exhibit: S-10.1 Date: 11/7/18 Page 2 of 6		
Michigan Public Service Commission	Case No.:	U-18255	
DTE Electric Company	Exhibit:	A-9	
Projected Capital Expenditures	Schedule:	B6.4	
Distribution Plant - System Strengthening and Reliability	Witness:	P. D. Whitman	
(\$000)	Page:	2 of 6	

(a)

(b)

(c)

(d)

(e)

		Capital Expenditures					
			Historical		Projected		
Line			12 mos. ended	10 mos. ending	12 mos. ending	22 mos. ending	
No.	Description		12/31/2016	10/31/2017	10/31/2018	10/31/2018	
						col. (c)+(d)	
1	Reliability:						
2	4.8 kV Relay Improvement	1/	1,904	13,955	17,177	31,132	
3	Advanced Distribution Management System (ADMS)	1/	-	6,243	33,058	39,301	
4	AMI mesh network	1/	-	2,335	12,210	14,546	
5	Analog Lines Elimination		3,954	-	-	-	
6	Breaker Replacement Program	1/	7,439	10,823	9,703	20,526	
7	Brest Substation		1,613	85	17	103	
8	Cable Replacement Program	1/	1,263	5,696	11,415	17,111	
9	Calla Substation		357	628	786	1,414	
10	City of Detroit Infrastructure		66	1,880	2,578	4,457	
11	Conduit Replacement I-696/Dequindre Overpass		2	258	52	310	
12	4.8 kV Cortland Consolidation	1/	2,853	4,101	8,013	12,114	
13	Essex 24kV H-Breaker Decom & Bus Consolidation		249	870	174	1,044	
14	Extend CATLI DC 9128		4,809	-	-	-	
15	IT Applications		1,373	1,922	2,366	4,289	
16	Maxwell Transformer #2		2,081	3,538	708	4,245	
17	MCGRW1321_TRSD15736		687	-	-	-	
18	Misc. Reliability Projects/Programs		237	-	-	-	
19	Nunneley Switchgear Replacement		48	285	57	342	
20	OUTDR DC 1299 - Primary Main to URD Conv		(39)	157	31	188	
21	Pontiac Downtown UG Vault System		110	433	87	519	
22	Pole Top Maintenance	1/	17,977	23,596	32,609	56,205	
23	PR Recloser Replacement		524	586	117	703	
24	Reconductor		-	-	3,875	3,875	
25	Repetitive Outage Pocket Program	1/	7,245	9,614	11,843	21,456	
26	SCADA monitoring	1/	9,970	4,535	9,348	13,883	
27	Trk 2250 & Trk 2218 Relocation		7	142	28	171	
28	Construct Lark Substation to Relieve Spruce		5	2,256	1,552	3,808	
29	RELI0109 Tie 2648 Reconductor		1,036	1,635	327	1,962	
30	System Resiliency	1/	25,062	25,035	34,149	59,185	
31	Tiffany Switchgear Replacement		1,193	71	14	85	
32	UNLAK1692 Reliability		533	-	-	-	
33	URD Replacement Program	1/	1,073	8,551	11,727	20,279	
34	Ann Arbor Systems Improvement	1/	1,068	14,665	48,363	63,027	
35	Total Reliability Projects and Programs		94,699	143,896	252,384	396,280	
36	Regulatory Asset						
37	Advanced Distribution Management System (ADMS)	2/	-	1,753	7,291	9,044	

Source:

1/ Exhibit A-22, Schedule N1

2/ Regulatory Asset treatment for Advanced Distribution Management System (ADMS) is sponsored by Witness Uzenski

Michigan Public Service Commission DTE Electric Company U-18255 Distribution Capital Expenditures	Case: U-20162 Witness: N. M. Evans Exhibit: S-10.1 Date: 11/7/18 Page 3 of 6	Case: U-20162 Witness: N. M. Evans Exhibit: S-10.1 Date: 11/7/18 Page 3 of 6		
Michigan Public Service Commission	Case No.: U-18255			
DTE Electric Company	Exhibit: A-9			
Test Period Capital Project Details	Schedule: B6.4			
Distribution Plant - System Strengthening and Reliability	Witness: P. D. Whitm	nan		
(\$000)	Page: 3 of 6			

	(a)		(b)	(c)	(d)	(e)
				Capital Exp	enditures	
			Historical		Projected	
Line <u>No.</u>	Description		12 mos. ended 12/31/2016	10 mos. ending 10/31/2017	12 mos. ending 10/31/2018	22 mos. ending 10/31/2018
1	General Load Growth:					
2	Argo Overloads		553	942	188	1,130
3	Baldwin Rd. Relocation, Orion		19	1,987	894	2,881
4	Big Beaver Rd Conduit/Cable Relocation		1,033	-	-	-
5	Gordie Howe International Bridge	1/	3,320	12,365	8,874	21,238
6	Buckler Substation & Phoenix Station		213	-	-	-
7	Charles Ln Relocation		462	-	-	-
8	Dequindre Rd Relocation		445	-	-	-
9	Detroit Event Center Relocation/Removal		434	-	-	-
10	Extend CATLI9136 in Pontiac		736	-	-	-
11	John R, Troy Relocation		71	-	-	-
12	Misc. General Load Growth Projects		18	-	-	-
13	Opal Substation		374	-	-	-
14	Relocations		-	1,068	948	2,016
15	Rushton Rd Relocation		139	-	-	-
16	South Street Development in Ann Arbor		51	-	-	-
17	TRK8407 Relocation		1,245	-	-	-
18	M1 Rail		421	-	-	-
19	Total General Load Growth and Relocations		9,535	16,362	10,903	27,265

Source:

1/ Exh A-22, Sch N2

Michigan Public Service Commission DTE Electric Company U-18255 Distribution Capital Expenditures	Case: U-20162 Witness: N. M. Evans Exhibit: S-10.1 Date: 11/7/18 Page 4 of 6			
Michigan Public Service Commission	Case No.: U	-18255		
DTE Electric Company	Exhibit: A	-9		
Test Period Capital Project Details	Schedule: B	6.4		
Distribution Plant - System Strengthening and Reliability	Witness: P	. D. Whitman		
(\$000)	Page: 4	of 6		

(a)			(b)	(c)	(d)	(e)	
			Capital Expenditures				
			Historical		Projected		
Line			12 mos. ended	10 mos. ending	12 mos. ending	22 mos. ending	
No.	Description		12/31/2016	10/31/2017	10/31/2018	10/31/2018	
						col. (c)+(d)	
1	New Business Specific Projects:						
2	120kV Adams-Bunce Creek Tap		104	-	-	-	
3	40kV Tap on Tie 9205		19	-	-	-	
4	41.57 kV Tap on Tie 2025 for New Business		75	214	43	256	
5	Add PL 9178 Giddings for New Business		186	304	61	364	
6	New STDF for Hospital Expansion		265	623	125	748	
7	New Business fed from Neast Substation		29	-	-	-	
8	New Business fed from CATO Substation		1,260	626	125	751	
9	New Business fed from Navar Substation		60	-	-	-	
10	New Business for Headquarters in Dearborn		14	2,282	470	2,752	
11	Hospital Transformer #4		1,181	-	-	-	
12	New Business for Headquarters in Detroit		30	287	57	344	
13	M1 Rail		1,856	674	135	809	
14	New STDF for Hospital Expansion in Pt. Huron		320	2,390	478	2,868	
15	Misc. New Business Specific Projects		15	-	-	-	
16	New 120kV Class I Dusk		211	71	14	85	
17	New Business fed from SW Industrial Substation	1/	4,223	4,185	837	5,022	
18	New Business fed from Ruby Substation		2,474	-	-	-	
19	New Business fed from Virgo Substation		1,859	1,666	2,195	3,861	
20	New Business for Dairy Farm		522	-	-	-	
21	New Class I in Howell		1,512	-	-	-	
22	New Class I on Trunk 8215		934	-	-	-	
23	New STDF Trunk		819	1,362	272	1,634	
24	Duvall DC9644 & DC9460T		249	433	87	520	
25	New Business for Development in River Town		1,112	-	-	-	
26	New Class I on Trunk 3650		-	890	178	1,068	
27	Expand Explorer Substation for New Business		-	1,992	704	2,695	
28	New Class I in Detroit fed from 120kV Tap		-	1,201	304	1,504	
29	New Class I on Trunk 2032		-	2,568	2,037	4,605	
30	New Class I on the Bismarch-Lenox 120 kV line		-	991	198	1,189	
31	New Class I on Trunk 2907		-	1,698	340	2,037	
32	New Business fed from JSLYN 9182		-	1,028	206	1,233	
33	Rebuild FAWN 8799 for New Business		-	1,692	338	2,030	
34	New Business for Development in Detroit Park		845	-	-	-	
35	Add 3rd TRF at Skylark Substation for New Business		1,112	1,699	340	2,039	
36	New Business fed from Navar TRK346		373	-	-	-	
37	New Business for School in Detroit		46	444	89	533	
38	Total New Business Projects		21,708	29,318	9,630	38,948	

Source: 1/ Exh A-22, Sch N3

Michigan Public Service Commission DTE Electric Company U-18255 Distribution Capital Expenditures	Case: U-20162 Witness: N. M. Evans Exhibit: S-10.1 Date: 11/7/18 Page 5 of 6			
Michigan Public Service Commission DTE Electric Company	Case No.: U-18255 Exhibit: A-9			
Test Period Capital Project Details Distribution Plant - System Strengthening and Reliability	Schedule: B6.4 Witness: P. D. Whitma	an		
(\$000)	Page: 5 of 6			

	(a)		(b)	(c)	(d)	(e)			
			Capital Expenditures						
			Historical		Projected				
Line <u>No.</u>	Description		12 mos. ended 12/31/2016	10 mos. ending 10/31/2017	12 mos. ending 10/31/2018	22 mos. ending 10/31/2018			
						col. (c)+(d)			
1	Substation/Station Improvement:								
2	Major Equipment	1/	13,887	7,817	9,381	17,197			
3	Minor Equipment	1/	10,067	5,219	6,263	11,482			
4	Transformers/Regulators	1/	7,334	4,068	4,882	8,950			
5	Batteries and Chargers		1,607	911	1,093	2,004			
6	Non-Electrical (Environmental)		1,961	1,875	2,266	4,141			
7	Brooklyn Substation (CODI)	1/	-	1,253	4,654	5,907			
8	Install-40 KV Equip Reloc to Adams Stat		70	540	108	648			
9	Install-40KV-3 Phase-Gang Op Disc-Repl		1,041	-	-	-			
10	Pontiac Substation & Decommission BARTL	1/	-	877	10,451	11,328			
11	Stone Pool Exit Conduit (CODI)		-	2,256	451	2,707			
12	Tie 4512 / 120-40 kV station in Lima Twp.		4,248	39	8	47			
13	Trk 1518 Cable Replacement (YPSIL)		796	-	-	-			
14	Villa Breaker Replacement		234	-	-	-			
15	Misc. Substation/Station Improvement Projects		73	-	-	-			
16	Substation/Station Improvement	1/	25,998	32,571	29,596	62,167			
17	DG Distributed Generators		4,469	3,487	697	4,184			
18	MALTA Substation Switchgear	1/	265	3,236	8,144	11,380			
19	MALTA Substation Project Stranded Load		-	746	149	895			
20	SAVGE-Stranded Load Mitigation			856	171	1,028			
21	Total Substation/Station Improvement Projects		72,051	65,750	78,315	144,065			

Source:

1/ Exh A-22, Sch N4

Michigan Public Service Commission DTE Electric Company U-18255 Distribution Capital Expenditures	Case: U-20162 Witness: N. M. Evans Exhibit: S-10.1 Date: 11/7/18 Page 6 of 6
Michigan Public Service Commission	Case No.: U-18255
DTE Electric Company	Exhibit: A-9
Projected Capital Expenditures	Schedule: B6.4
Allowance for Funds Used During Construction (AFUDC)	Witness: P. D. Whitman
Distribution Operations (\$000)	Page: 6 of 6

	(a)	(b)	(c)
Line No.	Description	Adjusted Historical 12 mos. ended 12/31/2016	Projected 12 mos. ending 10/31/2018
1	Distribution Operations - Routine Expenditures 1/	617	719
2	Distribution Operations - Project Specific:		
3	Advanced Distribution Management System (ADMS)	-	1,265
4	Ann Arbor Systems Improvement	35	2,446
5	Gordie Howe International Bridge (GHIB) Relocations	300	2,002
6	Temple Substation	195	-
7	Ariel Substation	409	123
8	Zenon Substation	861	155
9	Hilton Substation	209	529
10	Belle Isle State Park Substation	-	400
11	Duval Substation	-	176
12	Scio Substation	-	245
13	M-1 Rail Relocation	52	-
14	Subtotal Project Specific	2,061	7,341
15	Total AFUDC - Distribution Operations	2,677	8,060

1/ AFUDC estimates for routine projects are developed at a high level based on historical trend 2/ the AFUDC amounts are based on the authorized U-18014 rate of 5.55%

	(a)		(b)	(c)	(d)	(e)
Line No.	Description		Projected 10 mos. ending 10/31/2017	Authorized Amount	12 mos. ending 10/31/2018	Authorized Amount
	Capital Expenditures					
1	New Business:					
2	Customer Connections		59.227		72,790	
3	Meters		5.334		6.555	
4	Transformers		25.389		31,203	
5	Customer Advances for Construction		(8.624)		(10,599)	
6	Total New Business	1/	81,325	80,930	99,949	99,068
7	System Strengthening and Reliability:					
8	Reliability	3/	143,896	114,693	252,384	199,846
9	General Load Growth		16,362	16,362	10,903	10,903
10	New Business Specific Projects		29,318	29,318	9,630	9,630
11	Major Equipment		11,787	11,787	13,484	13,484
12	Substation/Station Improvement		65,750	65,750	78,315	78,315
13	Customer Advances for Construction		(3,055)	(3,055)	(3,754)	(3,754)
14	Subtotal System Strengthening and Reliability		264,059	234,856	360,961	308,423
15	System Strengthening Blankets:					
16	Increased Loads		11,306		13,895	
17	System Improvements		1,396		1,716	
18	Relocations		6,641		8,162	
19	Normal Retirement Unit Changeouts		1,791		2,202	
20	Emergency Retirement Unit Changeouts and Storm		124,124		152,549	
21	Subtotal System Strengthening Blankets	2/	145,259	144,553	178,523	176,950
22	Total System Strengthening, Reliability and Blankets		409,317	379,409	539,484	485,373
23	Miscellaneous					
24	Other Miscellaneous		4,160	4,160	5,113	5,113
25	Total Capital		494,802	464,498	644,545	589,554

Source:

1/ Case No. U-18255, Direct Testimony of Donald J. Mazuchowski, page 9, lines 7-14; Case No. U-18255, Staff Exhibit S-10.0, page 1, line 3; Case No. U-18255, April 18, 2018 Order, pages 37-38.

2/ Case No. U-18255, Direct Testimony of Donald J. Mazuchowski, page 9, lines 7-14; Case No. U-18255, Staff Exhibit S-10.0, page 1, line 11; Case No. U-18255, April 18, 2018 Order, pages 37-38.

3/ Page 2, line 35.

	(a)		(b)	(c)	(d)	(e)
Line No.	Description		Projected 10 mos. ending 10/31/2017	Authorized Amount	12 mos. ending 10/31/2018	Authorized Amount
1	Reliability:					
2	4.8 kV Relay Improvement	3/	13,955	1,587	17,177	6,904
3	Advanced Distribution Management System (ADMS)	4/	6,243	0	33,058	6,243
4	AMI mesh network	5/	2,335	0	12,210	2,335
5	Analog Lines Elimination		0	0	0	0
6	Breaker Replacement Program		10,823	10,823	9,703	9,703
7	Brest Substation		85	85	17	17
8	Cable Replacement Program		5,696	5,696	11,415	11,415
9	Calla Substation		628	628	786	786
10	City of Detroit Infrastructure		1,880	1,880	2,578	2,578
11	Conduit Replacement I-696/Dequindre Overpass		258	258	52	52
12	4.8 kV Cortland Consolidation		4,101	4,101	8,013	8,013
13	Essex 24kV H-Breaker Decom & Bus Consolidation		870	870	174	174
14	Extend CATLI DC 9128		0	0	0	0
15	IT Applications		1,922	1,922	2,366	2,366
16	Maxwell Transformer #2		3,538	3,538	708	708
17	MCGRW1321_TRSD15736		0	0	0	0
18	Misc. Reliability Projects/Programs		0	0	0	0
19	Nunneley Switchgear Replacement		285	285	57	57
20	OUTDR DC 1299 - Primary Main to URD Conv		157	157	31	31
21	Pontiac Downtown UG Vault System		433	433	87	87
22	Pole Top Maintenance	6/	23,596	15,340	32,609	27,034
23	PR Recloser Replacement		586	586	117	117
24	Reconductor		0	0	3,875	3,875
25	Repetitive Outage Pocket Program		9,614	9,614	11,843	11,843
26	SCADA monitoring		4,535	4,535	9,348	9,348
27	Trk 2250 & Trk 2218 Relocation		142	142	28	28
28	Construct Lark Substation to Relieve Spruce		2,256	2,256	1,552	1,552
29	RELI0109 Tie 2648 Reconductor		1,635	1,635	327	327
30	System Resiliency		25,035	25,035	34,149	34,149
31	Tiffany Switchgear Replacement		71	71	14	14
32	UNLAK1692 Reliability		0	0	0	0
33	URD Replacement Program		8,551	8,551	11,727	11,727
34	Ann Arbor Systems Improvement		14,665	14,665	48,363	48,363
35	Total Reliability Projects and Programs		143,896	114,694	252,384	199,845

Source:

3/ Case No. U-18255, April 18, 2018 Order, pp. 9-11.
4/ Case No. U-18255, April 18, 2018 Order, pp. 11-12.
5/ Case No. U-18255, April 18, 2018 Order, pp. 12-13.
6/ Case No. U-18255, April 18, 2018 Order, pp. 13-15.

		(1)			ć	(0)		∋ 1 of 2
	(a)	(D)	(C)	(0)	ŧ Location in Exhibit A 1	(T) 2 Amount O	(g) (n) -	
Line No	11-18255 Category or Project	Schedule B6 /	Authorized*	O-20102 Equivalent Category of Project (Stan S	Schedule B5 /	2, Allount O	Comments	
1	Customer Connections	nage 1 line 2	\$60.968	Customer Connections (Net of CIAC)	nage / line 6	\$54 516	(\$6.452) Customer Advances for Construction taken or	l.
2	Meters	nage 1 line 3	\$6 427	Meters	nage 5 line 79	\$7.980	\$1 554	
3	Transformers	page 1, line 4	\$30,590	(Unknown)	N/A	<i>\$1,500</i>	(\$30,590)	
4	Reliability	page 1, line 8	\$148,001	(See comment)	N/A		Already accounted for- see lines 14 - 51	
5	General Load Growth	page 1, line 0	\$18 170	(See comment)	N/A		Already accounted for -see lines 52 - 68	
6	New Business Specific Projects	page 1, line 5	\$30,923	(See comment)	N/A		Already accounted for -see line 52 - 08.	
7	Major Equipment	nage 1 line 11	\$14,034	(Not found)	N/A		(\$14 034)	
, 8	Substation/Station Improvement	page 1, line 11	\$78,803	(See comment)	N/A		(14,054) Already accounted for- see lines 70-88	
9	Increased Loads	page 1, line 12	\$13,603	(Not found)	N/A		(\$13,672)	
10	System Improvements	page 1, line 10	\$1,622	System Improvements	nago Ellino 92	¢6 227	(JI3,022)	
11	Polocations	page 1, line 17	\$8,001	Subtotal Relocation Projects (Net of CIAC)?	page 5, line 35	\$1,327	(\$6,662)	
11	Relocations	page 1, inte 10	<b>J</b> 0,001	Subtotal Nelocation Projects (Net of CIAC):	page 3, lille 70	\$1,555	(\$0,002)	
12	Normal Retirement Unit Changeout	s page 1, line 19	\$2,158	NRUC and Improvement Blankets	page 1, line 12	\$15,778	\$13,620	-
	Emergency Retirement Unit		64.40 5.40					
13	Changeouts and Storm	page 1, line 20	\$149,549	Storm and Non-Storm	page 1, lines 3-4	\$248,775	\$99,226	i
14	4.8 kV Relay Improvement	nage 2 line 2	\$2 738	4.8 kV Relay Improvements	nage 7 line 25	\$1 753	(\$985) Authorized amounts taken from Exhibit S-10.2	line 2
15		p=8e =,e =	+-/	ADMS: EMS/GMS	nage 9 line 3	\$1.031	(+	,
16				ADMS: DMS/OMS	nage 9 line 4	\$1 438		
17				ADMS: Network Management System	nage 9 line 5	\$0 \$0		
18	ADMS	nage 2 line 3	\$1.041	Total ADMS	page 5, inte 5	\$2.469	\$1.429 Authorized amounts taken from Exhibit S-10.2	line 3
19	AMI Mesh Network	nage 2 line 4	\$389	AMI: 3G to 4G Communications Ungrades	nage 9 lines 6 and 7	\$39	(\$350) Authorized amounts taken from Exhibit 5-10.2	line 4
20	Analog Lines Elimination	page 2, line 4	\$0 \$0	Analog Lines Elimination	nage 9, line 12	\$1 150	(3550) Authorized amounts taken nom Exhibit 3-10.2	., 1110 4
20	Breaker Benjacement Program	page 2, line 5	\$12.440	Breaker Replacement Program	page 3, line 12	\$13 233	\$703	
21	Brest Substation	page 2, line 7	\$1,627	(Not found)	N/A	Ş15,255	(\$1.627)	
22	Brest Substation	page 2, inte 7	\$1,027	(Not round) Cable Replacement Program	nage 7 line 15	\$9.545	(\$1,027)	
23				Cable Replacement Harsen's Island	page 7, line 15	\$2,545		
24	Cable Replacement Program	nago 2 lino 9	¢7 500	Cable Replacement Total	page 7, mie 10	¢0 576	\$1.079	
25	Calla Substation	page 2, line 0	\$750		nago 9 lino 26	\$3,370 ¢0	Not actually \$0, already included in line 20	
20	City of Detroit Infractructure	page 2, line 3	\$7.55		page 8, line 20	30 60 E00	¢6 272	
27	Conduit Replacement I-	page 2, lille 10	\$2,510	CODI	page 6, intes 5-17	Ş8,382	\$6,272	
28	696/Dequindre Overpass	page 2, line 11	\$267	(Not found)	N/A		(\$267)	
29	4.8 kV Cortland Consolidation	page 2, line 12	\$5 437		nage 8 lines 18-32	\$22 188	\$16,752	
20	Essex 24 kV H-Breaker Decom & Bus	page 2) inte 12	<i>\$</i> 0,107		puge 0) intes 10 01	<i>QLL</i> )100	<i>410).0</i>	
30	Consolidation	page 2, line 13	\$899	(Not found)	N/A		(\$899)	
31	Extend CATLI DC 9128	page 2, line 14	\$0	(Not found)	N/A		\$0	
32	IT Applications	page 2, line 15	\$2,316	(Not found)	N/A		(\$2,316)	
33	Maxwell Transformer #2	page 2, line 16	\$3,656	(Not found)	N/A		(\$3,656)	
34	MCGRW1321 TRSD15736	page 2, line 17	\$0	(Not found)	N/A		\$0	
	_							
35	Misc. Reliabilty Projects/Programs	page 2, line 18	\$0	(Not found)	N/A		\$0	
36	Nunneley Switchgear Replacement	nage 2 line 10	\$205	Substation Risk: Nunneley?	nage 7 line 7	ŚŊ	Not actually \$0, already included in line 84	
50	Numicicy Switchgeur Replacement	page 2, line 15	Ş233	Substation risk. Numerey:	page 7, me 7	ŲŲ	Not actually 50, already included in line 64.	
	OUTDR DC 1299 - Primary Main to							
37	URD Conv	page 2, line 20	\$162	(Not found)	N/A		(\$162)	
38	Pontiac Downtown UG Vault System	page 2, line 21	\$448	Pontiac Vaults	page 7, line 19	\$6,571	\$6,124	
39	Pole Top Maintenance	page 2, line 22	\$19,846	Pole and Pole Top Hardware?	page 7, lines 13-14	\$19,595	(\$251) Authorized amounts taken from Exhibit S-10.2	?, line 22.
40	PR Recloser Replacement	page 2, line 23	\$606	(Not found)	N/A		(\$606)	
41	Reconductor	page 2, line 24	\$646	(Not found)	N/A		(\$646)	
				Frequent Outage Program (CEMI) including Circuit				
42	Repetitive Outage Pocket Program	page 2, line 25	\$11,588	Renewal?	page 7, line 17	\$20,671	\$9,083	
43	SCADA Monitoring	page 2, line 26	\$6,093	(Not found)	N/A		(\$6,093)	
44	Trk 2250 & Trk 2218 Relocation	page 2, line 27	\$147	(Not found)	N/A		(\$147)	
	Construct Lark Substation to Relieve	1						
45	Spruce	page 2, line 28	\$2,515	Substation Risk: Spruce?	page 7, line 10	\$0	Already included in line 84.	
46	REL10109 Tie 2648 Reconductor	page 2, line 29	\$1,690	(Not found)	N/A		(\$1,690)	
47	System Resiliency	page 2, line 30	\$30,727	System Resilency - Efficient Frontier	page 7, line 21	\$20,851	(\$9,876)	

#### Michigan Public Service Commission DTE Electric Company Crosswalk between distribution capex exhibits

10	Tiffany Switchgoor Poplacomont	nago 2 lino 21	¢72	Substation Pick: Tiffany	nago 7 lino 11	¢0	N	Page
40	LINI AK 1602 Poliability	page 2, line 31	\$75	(Not found)	page 7, line II	ŞU	ŚO	ot actually \$0, all eady included in line 84.
49	URD Replacement Program	page 2, line 32	\$U \$10 F06	(Not Ioulia)	N/A	67 77C	ېں (دع ۲۵۵)	
50	Ann Arbar Systems Improvements	page 2, line 55	\$10,500	Ann Arbor System Improvement	page 7, line 20	\$7,770	(\$2,750)	
51	Ann Arbor Systems improvements	page 2, inte 54	\$22,720	Ann Albor System improvement	page 8, intes 2-4	\$3,020	(\$19,700)	
52	Argo Overloads	page 3. line 2	\$973	4.8 kV CC: Argo/Buckler Load Transfer?	page 8. line 24	\$0	N	ot actually \$0. already included in line 29.
53	Baldwin Rd. Relocation. Orion	page 3, line 3	\$2,136	Baldwin Rd. Relocation. Orion	page 5, line 64	\$0	No	ot actually \$0. already included in line 11.
	Big Beaver Rd Conduit/Cable	p-80 - 0,	+-,	,	p-8)	7.5		
54	Relocation	page 3, line 4	\$0	Small Relocation Projects (Blanket)? See line 64.	N/A			
55	Gordie Howe International Bridge	page 3, line 5	\$13,844	Gordie Howe International Bridge	page 5, line 55	\$6,673	(\$7,171)	
	Buckler Substation & Phoenix							
56	Station	page 3, line 6	\$0	(Not found)	N/A			
57	Charles Ln Relocation	page 3, line 7	\$0	Small Relocation Projects (Blanket)? See line 64.	N/A			
58	Dequindre Rd Relocation Detroit Event Center Relocation/	page 3, line 8	\$0	Small Relocation Projects (Blanket)? See line 64.	N/A			
59	Removal	page 3. line 9	\$0	Small Relocation Projects (Blanket)? See line 64.	N/A			
60	Extend CATLI9136 in Pontiac	nage 3 line 10	\$0	(Not found)	ν/Δ			
61	John R. Troy Relocation	page 3 line 11	\$0	Small Relocation Projects (Blanket)? See line 64	N/A			
01	John K, Hoy Kelocation	page 5, me 11		Sinal Relocation Projects (Blanket): See line 04.	N/A			
62	Misc. General load Growth Projects	page 3, line 12	\$0	(Not found)	N/A			
63	Opal Substation	page 3, line 13	\$0	(Not found)	N/A			
64	Relocations	page 3, line 14	\$1,226	Small Relocation Projects (Blanket)?	page 5, line 52	\$7,004	\$5,778	
65	Rushton Rd Relocation	page 3, line 15	\$0	Small Relocation Projects (Blanket)? See line 64.	N/A			
	South Street Development in Ann							
66	Arbor	page 3, line 16	\$0	(Not found)	N/A			
67	TRK8407 Relocation	page 3, line 17	\$0	Small Relocation Projects (Blanket)? See line 64.	N/A			
68	M1 Rail	page 3, line 18	\$0	New Business for M1 Rail	page 4, line 32	\$0	\$0 No	ot actually \$0, already included in line 69.
69	New Business Specific Projects	page 4, line 38	\$30,923	Subtotal New Business Projects (Net of CIAC)	page 4, line 46	\$41,877	\$10,954	
70	Major Equipment	page 5, line 2	\$9,381	Major Equipment	page 5, line 78	\$14,531	\$5,151	
71	Minor Equpment	page 5, line 3	\$6,335	(Not found)	N/A		(\$6,335)	
72	Transformers/Regulators	page 5, line 4	\$4,882	Distribution Transformers and Regulators	page 5, line 77	\$22,719	\$17,837	
73	Batteries and Chargers	page 5, line 5	\$1,093	Batteries and Chargers	page 5, line 86	\$1,654	\$561	
74	Non-Electrical (Environmental)	page 5, line 6	\$2,253	(Not found)	N/A		(\$2,253)	
75	Brooklyn Substation (CODI)	page 5, line 7	\$2,029	(Not found)	N/A			
	Install - 40 kV Equipment Roloc to							
76	Adams Stat	page 5, line 8	\$558	(Not found)	N/A		(\$558)	
	Install - 40 KV -3 Phase-Gang Op Disc	>						
77	Repl	page 5, line 9	\$0	(Not found)	N/A		\$0	
	Pontiac Substation & Decommission							
78	BARTL	page 5, line 10	\$2,619	8.3 kV CC: Pontiac Overhead Conversion?	page 8, line 33	\$168	(\$2,451)	
79	Stone Pool Exit Conduit (CODI)	page 5, line 11	\$2,331	CODI: Stone Pool Exit Conduit	page 8, lines 16	\$0	No	ot actually \$0, already included in line 27.
	Tie 4512 / 120-40 kV station in Lima							
80	Twp.	page 5, line 12	\$40	(Not found)	N/A		(\$40)	
81	Trk 1518 Cable Replacement (YPSIL)	page 5, line 13	\$0	(Not found)	N/A		\$0	
82	Villa Breaker Replacement	page 5, line 14	\$0	(Not found)	N/A		\$0	
	Misc Substation / Station							
83	Improvement Projects	page 5, line 15	\$0	(Not found)	N/A		\$0	
84	Substation/Station Improvement	page 5, line 16	\$37,504	Substation Risk?	page 7, lines 3-11	\$6,589	(\$30,915)	
85	DG Distributed Generators	page 5, line 17	\$3,603	(Not found)	N/A		(\$3,603)	
86	MALTA Substation Switchgear	page 5, line 18	\$4,593	Substation Risk: Malta?	page 7, line 4	\$0	No	ot actually \$0, already included in line 84.
	MALTA Substation Project Stranded							
87	Load	page 5, line 19	\$771	Substation Risk: Malta?	page 7, line 4	\$0	No	ot actually \$0, already included in line 84.
88	SAVGE-Stranded Load Mitigation	page 5, line 20	\$885	(Not found)	N/A		(\$885)	

\* Amount Authorized = (10 mos. ending 10/31/2017) + ((12 mos. ending 10/31/2018)/12) x 2

MPSC Case No.:	<u>U-20162</u>
<b>Requestor:</b>	Staff
Question No.:	STDE-7.8a 2 <sup>nd</sup> Supplemental
Respondent:	M. A. Bruzzano
Page:	1 of 1

**Question:** Refer to Exhibit A-12, Schedule B5.4. Please provide actual spending for January 1, 2018 – July 31, 2018 for the following:

- a. Page 4, lines 1-50;
- Answer: Attachment "U-20162 STDE-7.8a 2<sup>nd</sup> Supplemental Actual Spending" compares actual to forecasted spending for January 1, 2018 through August 31, 2018, which is the latest period available at the time of this response. Overall distribution capital spending is 8% higher than the rate case year-to-date projection through August 31, 2018, as shown on page 1, line 23 of the attachment.

While in aggregate capital expenditures are in line with the rate case forecast, there are variations in specific categories. Emergent Replacement capital is higher than the rate case projection, driven in large part by high storm activity in the first half of the year and by higher volumes of non-storm trouble (including weather driven outages and substation equipment failures). Customer Connections, Relocations & Other net of CIAC is very close to the forecasted amount, as shown on U-20162 STDE-7.8a Supplemental, page 3 of 6, line 94. Strategic Capital Programs are below forecast, driven by a variety of factors, including delays in permitting, use of resources to address the impact of higher than normal storm volumes and adverse weather events in Michigan, some support of hurricane relief efforts in other states, changes to system loading conditions, and challenges in acquiring land for new substations.

While there have been delays in some of the Strategic Capital Programs, the Company fully intends and has plans to complete the projects identified in the Five-Year Plan and in this rate case.

Attachment U-20162 STDE-7.8a 2<sup>nd</sup> Supplemental provides a summary breakdown of the expenditures by category on page 1. Details of actual spend against forecast, along with an explanation of what has driven delays and rescheduling of projects for areas with the largest variances or for which expenditures have not yet occurred, are provided on attachment U-20162 STDE-7.8a 2<sup>nd</sup> Supplemental, pages 2-6, which correspond to pages 4, 5, 7, 8 and 9 of Exhibit A-12, Schedule B5.4.

Attachment: U-20162 STDE-7.8a 2<sup>nd</sup> Supplemental Actual Spending

MPSC Case No.:	<u>U-20162</u>
<b>Requestor:</b>	Staff
Question No.:	STDE-7.8b 2 <sup>nd</sup> Supplemental
Respondent:	M. A. Bruzzano
Page:	1 of 1

- **Question:** Refer to Exhibit A-12, Schedule B5.4. Please provide actual spending for January 1, 2018 July 31, 2018 for the following:
  - b. Page 5, lines 51-94;
- **Answer:** Please refer to the response to Question No. STDE-7.8a and see attachment "U-20162 STDE-7.8a 2<sup>nd</sup> Supplemental Actual Spending".
- Attachments: U-20162 STDE-7.8a 2<sup>nd</sup> Supplemental Actual Spending

MPSC Case No.:	<u>U-20162</u>
Requestor:	Staff
Question No.:	STDE-7.8c 2 <sup>nd</sup> Supplemental
Respondent:	M. A. Bruzzano
Page:	1 of 1

- **Question:** Refer to Exhibit A-12, Schedule B5.4. Please provide actual spending for January 1, 2018 July 31, 2018 for the following:
  - c. Page 7, lines 1-27;
- **Answer:** Please refer to the response to Question No. STDE-7.8a and see attachment "U-20162 STDE-7.8a 2<sup>nd</sup> Supplemental Actual Spending".
- Attachments: U-20162 STDE-7.8a 2<sup>nd</sup> Supplemental Actual Spending

MPSC Case No.:	<u>U-20162</u>
Requestor:	Staff
<b>Question No.:</b>	STDE-7.8d 2 <sup>nd</sup> Supplemental
Respondent:	M. A. Bruzzano
Page:	<u>1 of 1</u>

- **Question:** Refer to Exhibit A-12, Schedule B5.4. Please provide actual spending for January 1, 2018 July 31, 2018 for the following:
  - d. Page 8, lines 1-42;
- **Answer:** Please refer to the response to Question No. STDE-7.8a and see attachment "U-20162 STDE-7.8a 2<sup>nd</sup> Supplemental Actual Spending".
- Attachments: U-20162 STDE-7.8a 2<sup>nd</sup> Supplemental Actual Spending

MPSC Case No.:	<u>U-20162</u>
Requestor:	Staff
<b>Question No.:</b>	STDE-7.8e 2 <sup>nd</sup> Supplemental
Respondent:	M. A. Bruzzano
Page:	<u>1 of 1</u>

- **Question:** Refer to Exhibit A-12, Schedule B5.4. Please provide actual spending for January 1, 2018 July 31, 2018 for the following:
  - e. Page 9, lines 1-15.
- **Answer:** Please refer to the response to Question No. STDE-7.8a and see attachment "U-20162 STDE-7.8a 2<sup>nd</sup> Supplemental Actual Spending".
- Attachments: U-20162 STDE-7.8a 2<sup>nd</sup> Supplemental Actual Spending

### Distribution Operations - Rate Case View August 2018 Capital Expenditures (\$000)

Case No.: U-20162 Exhibit: A-12 Schedule: B5.4 Witness: M.A. Bruzzano Page: 1 of 10 \*\*

	(a)	(b)	(c)	(d)	(e)
Line <u>No.</u>	Description	YTD Actuals	YTD Forecast*	H/(L)	Commentary
1	Base Capital Programs				
2	Emergent Replacements				
3	Storm	102,052	60,387	41,665	
4	Non - Storm	99,970	58,291	41,679	
5	Substation Reactive	30,020	18,855	11,166	
6	Emergent Replacement Reduction Based on Strategic Spend		(2,797)	2,797	
7	Subtotal Emergent Replacements	232,043	134,736	97,307	
8	Customer Connections, Relocations & Other				
9	Connections and New Load	91,922	88,855	3,067	Page 2 of 6, line 48
10	Relocations	20,251	20,398	(147)	Page 3 of 6, line 72
11	Electric System Equipment	31,867	31,058	809	Page 3 of 6, line 80
12	NRUC and Improvement Blankets	11,335	10,834	501	Page 3 of 6, line 88
13	General Plant, Tools & Equipment and Miscellaneous	4,891	2,760	2,130	Page 3 of 6, line 90
14	Subtotal Customer Connections, Relocations & Other	160,266	153,906	6,360	
15	Customer Advances for Construction	(24,423)	(19,469)	(4,953)	Page 3 of 6, line 93
16	Total Base Capital Programs	367,886	269,172	98,714	
17	Strategic Capital Programs				
18	Infrastructure Resilience and Hardening	108,217	116,930	(8,713)	Page 4 of 6, line 27
19	Infrastructure Redesign	37,249	79,730	(42,481)	Page 5 of 6, line 44
20	Technology and Automation	20,541	25,035	(4,494)	Page 6 of 6, line 15
21	Subtotal Strategic Capital Programs	166,007	221,695	(55,688)	
22	Miscellaneous (Settlement to AUC, Pole Haul, etc.)	(3,037)		(3,037)	
23	Total Capital	530,857	490,868	39,989	

\* Year to Date Forecast is equal to 2018 Rate Case Forecast divided by 12 and multiplied by 8 unless otherwise noted

\*\*Page number is consistent with Exhibit A-12, Schedule B5.4

Case: U-20162 Witness: N. M. Evans Exhibit: S-10.4 Date: 11/7/18 Page 6 of 11

Michigan Public Service CommissionCase No.: U-20162DTE Electric CompanyExhibit: A-12August 2018 Capital ExpendituresSchedule: B5.4Distribution Plant - Connections, Relocations and OtherWitness: M.A. Bruzzano(\$000)Page: 4 of 10 \*\*(a)(b)(c)(b)(c)(d)

Line <u>No.</u>	Description	YTD Actuals	YTD Forecast*	H/(L)	Commentary
1	Connections and New Load				
2	Small Load Growth Projects (Blanket)	8,298	6,164	2,134	
3		-,	-, -	, -	
4	Customer Connections	57,739	48.852	8,887	
5	Customer Connections CIAC	(11.612)	(11,418)	(194)	
6	Customer Connections (Net of CIAC)	/6 127	37 /3/	8 693	
7		40,127	57,454	0,095	
8	New Business Projects:				
9	New Business fed from Boyne Substation	296	5.491	(5.195)	Construction is awaiting final customer approval.
10	New Business Auto Data Center	3.454	2.734	719	
11	New Class I for Research Facility	3.127	2.663	465	
12	Quaker Transformer Upgrade	1.773	2.177	(403)	
13	New Business Compressor Station	1,112	1,894	(782)	
14	New Business Health Co Campus	47	1,586	(1,539)	On hold until customer completes equipment layout.
15	New Business for generation facility	2,182	1,534	648	
	с ,				Delay caused by local permitting issues. The first feed has been installed, and the
16	New Business Data Center	484	1,517	(1,033)	permit for the second feed is expected by end of September.
17	New Class I from Warren Evergreen	1,272	1,422	(151)	
18	New Class I on Trunk 2032	435	1,364	(929)	
19	New Business fed from Hood Substation	857	1,246	(389)	
20	New Substation (Nitro) to support new load	470	1,065	(594)	
21	New Class I Farmington Hills	95	938	(844)	
22	New Business fed from Alamo Substation	85	930	(845)	
23	New Business fed from Fleming Substation	2,136	705	1,432	
24	Duvall DC9644 & DC9460T	805	603	202	
25	Expand Explorer Substation for New Business	1,269	598	670	
26	New Business for Apartments	146	585	(439)	
27	New Business Willis & Woodward	149	573	(424)	
28	New Business Henry St	32	570	(538)	
29	New Business fed from Willow Run Substation	21	567	(546)	
30	New Business fed from Cato, St Antoine	447	541	(94)	
31	New Class I on the Bismarck-Lenox 120 kV line	1,339	462	877	
32	New Business for M1 Rail	659	396	263	
33	New STDF for Hospital Expansion in Pt. Huron	781	393	388	
34	New Business for Development in Detroit Park	-	316	(316)	
35	New Business fed from JSLYN 9182	170	260	(90)	
30	New Class Les Trunk 2650	96	183	(87)	
31	Moroury MOS CL RPT9005	- 149	147	(147)	
20	New Class Lin Detroit fod from 120kV/Tap	140	140	22	
39	New Class I III Deli oli Teu Honi Tzok V Tap	596	121	23 503	
/11	New Business for Headquarters in Detroit	130	92 21	118	
42	Prior Year's New Business Projects 3/	725	-	725	
43	Expected New Business Projects	394	-	394	
11	Subtotal New Business Projects	25 884	33 830	(7.955)	
44 15	Now Rusingse Projects	(8 404)	(6 567)	(1,300)	
40		(0,404)	(0,007)	(1,030)	
46	Subtotal New Business Projects (net of CIAC)	17,480	27,272	(9,792)	
47					
48	Total Connections and New Load	91,922	88,855	3,067	
49	Total Connections and New Load CIAC	(20,016)	(17,984)	(2,032)	
50	Total Connections and New Load (Net of CIAC)	71,905	70,870	1,035	

(continued on next page)

\* Year to Date Forecast is equal to 2018 Rate Case Forecast divided by 12 and multiplied by 8 unless otherwise noted

\*\*Page number is consistent with Exhibit A-12, Schedule B5.4

Case: U-20162 Witness: N. M. Evans Exhibit: S-10.4 Date: 11/7/18 Page 7 of 11

Michigan Public Service Commission					Case No.: U-20162
DTE Electric Company					Exhibit: A-12
August 2018 Capital Expenditures			Schedule: B5.4		
Distribution Plant - Connections, Relocations and Othe	er				Witness: M.A. Bruzzano
(\$000)					Page: 5 of 10 **
(a)	(b)	(c)	(d)	(e)	

Line	Description	YTD Actuals	YTD Forecast*	ниц )	Commentary
<u></u>	Description	Actuals	Torecast		Commentary
51	Relocations				
52	Small Relocation Projects (Blanket)	6,839	4,809	2,030	
53 54	Major Infrastructure Relocation Project				
55	Gordie Howe International Bridge	7,193	9,169	(1,976)	YTD Forecast is latest forecast at time of filing.
56	-				
57	Relocation Projects (excl.Major Infrastructure Projects):	0.407	1 0 0 0	100	
58	Dearborn Relocation	2,127	1,939	189	
59	Relocate for rail right of way	88	1,381	(1,293)	Awaiting permits from rail companies.
60	I emple West block Relocation	565	790	(225)	
61	Mt. Elliot I-94 Bridge Relocation	1 160	738	(654)	
62	Vining Pd Pelocation	1,109	396	509	
64	Baldwin Rd, Relocation, Orion	94	332	(238)	
65	Armstrong Rd. relocation	336	185	152	
66	Prior Year's Relocation Projects	662	-	662	
67	Expected Relocation Projects	62	-	62	
68	Subtotal Relocation Projects	6,219	6,420	(201)	
69	Relocation Projects CIAC	(4,406)	(1,485)	(2,921)	
70 71	Subtotal Relocation Projects (Net of CIAC)	1,812	4,935	(3,122)	
72	Total Relocations	<b>20,251</b>	<b>20,398</b>	<b>(147)</b>	
73		(4,406)	(1,465)	(2,921)	
74 75	Total Relocations (Net of CIAC)	15,845	18,913	(3,068)	
76	Electric System Equipment				
77	Distribution Transformers & Regulators	17,928	15,601	2,327	
78	Major Equipment	8,063	9,978	(1,915)	Timing of large transformer purchases.
79	Meters	5,876	5,479	397	
80 81	Total Electric System Equipment	31,867	31,058	809	
82	NRUC and Improvement Blankets				
83	System Improvements	6,042	4,345	1,698	
84	Normal Retirement Unit Changeouts (NRUC)	1.967	3.495	(1.529)	
85	Operational Technologies	1.859	1.840	19	
86	Batteries and Chargers	1,435	1.136	299	
87	Animal Mitigation	31	18	13	
88	Total NRUC and Improvement Blankets	11 335	10.834	501	
00	Total NICOO and Improvement Dialikets	11,555	10,004	501	
89	Concret Plant Tools & Equipment and			-	
90	พารธราชาติบนร	4,891	2,760	2,130	
91					
92	Total Customer Connections, Relocations & Other	160,266	153,906	6,360	
93	Total Cust Connections, Relocations & Other CIAC	(24,423)	(19,469)	(4,953)	
94	Total Cust Connections, Relocations & Other				
	Net of CIAC	135,843	134,436	1,407	

\* Year to Date Forecast is equal to 2018 Rate Case Forecast divided by 12 and multiplied by 8 unless otherwise noted

\*\*Page number is consistent with Exhibit A-12, Schedule B5.4

Case: U-20162 Witness: N. M. Evans Exhibit: S-10.4 Date: 11/7/18 Page 8 of 11

#### Michigan Public Service Commission

DTE Electric Company

August 2018 Capital Expenditures

# **Distribution Plant - Infrastructure Resilience and Hardening**

(\$0	00)	•			Page: 7 of 10 *
	(a)	(b)	(c)	(d)	(e)
Line <u>No.</u>	Description	YTD Actuals	YTD Forecast*	H/(L)	Commentary
1	Infrastructure Resilience and Hardening				
2	Mobile Fleet Program	2,842	3,427	(585)	
3	Substation Risk: Chestnut	309	2,944	(2,635)	Project deferred due to changes in system loading conditions.
4	Substation Risk: Malta	3,394	2,451	943	
5	Substation Risk: Drexel	1,512	2,044	(532)	
6	Substation Risk: Apache	-	439	(439)	This project is part of a portfolio of substation work that has been bundled in an RFP to ensure cost-effective and timely execution. Bids have been received and are being evaluated.
7	Substation Risk: Nunneley	0.5	352	(351)	Final circuit cutovers are being scheduled for Q4 2018.
8	Substation Risk: Bloomfield	-	-	-	
9	Substation Risk: Savage	143		143	This project is part of a portfolio of substation work that has been bundled in an RFP to ensure cost-effective and timely execution. Bids have been received and are being evaluated.
10	Substation Risk: Spruce		-		
11	Substation Risk: Liffany	5	-	5	
12	4.8 kV Hardening	17,537	23,027	(5,490)	YTD forecast based on latest forecast at time of filing. Ramping up work in Q4 2018.
13	Pole and Pole Top Hardware	22,966	21,091	1,875	
14	Pole and Pole Top Hardware: Stockbridge Substation	1,286	990	296	
15	Cable Replacement Program	4,523	5,141	(618)	YTD forecast based on 2017 spending profile which incorporates summer shutdown restrictions.
16	Cable Replacement: Harsen's Island	168	1.272	(1.104)	Awaiting Army Corps of Engineers approval.
17	Frequent Outage Program (CEMI) including Circuit Renewal	16,693	17,777	(1,084)	
18	Breaker Replacement Program	7,193	9,314	(2,121)	
19	Pontiac Vaults	1,806	6,152	(4,345)	Equipment has been installed for testing at the first location. Vault replacement is being scheduled in the fourth quarter 2018/early 2019.
20	URD Replacement Program	8,579	6,086	2,493	
21	System Resiliency - Efficient Frontier	9,182	4,598	4,584	
22	Porcelain Cutout Replacement Program	4,098	3,515	583	
23	Relay Replacement: Warren	4,346	2,003	2,343	To better leverage shutdowns and resources, additional equipment was replaced for this project that would have been replaced as part of the Breaker Replacement Program.
24	Relay Replacement: Northeast	-	1,230	(1,230)	This project was postponed to leverage lessons learned from Warren Relay Replacement. Conceptual and detailed design are expected to be completed in 2018.
25	4.8 kV Relay Improvements (Delta Ground	700	4 750	(005)	Design is complete and construction is being actually at
00	Detection Program)	762	1,/58	(995)	Design is complete and construction is being scheduled.
26	Disconnect and Switcher Replacement	872	1,318	(446)	
27	Total Infrastructure Resilience and Hardening Projects and Programs	108,217	116,930	(8,713)	

\* Year to Date Forecast is equal to 2018 Rate Case Forecast divided by 12 and multiplied by 8 unless otherwise noted

\*\*Page number is consistent with Exhibit A-12, Schedule B5.4

Case No.: U-20162 Exhibit: A-12 Schedule: B5.4 Witness: M.A. Bruzzano Case: U-20162 Witness: N. M. Evans Exhibit: S-10.4 Date: 11/7/18 Page 9 of 11

#### Michigan Public Service Commission

DTE Electric Company

#### August 2018 Capital Expenditures

Distribution Plant - Infrastructure Redesign

(\$000)

(\$000)					
(a)		(b)	(c)	(d)	(e)
Line		YTD	YTD	<u> </u>	
No. Description	A	ctuals	Forecast*	H/(L)	Commentary
1 Infrastructure Redesign					
Ann Arber System Improvemente: State	Substation	10 454	14 022	(4 277)	VTD Ecroport is lettert forecast at time of filling. Delays caused by legal permitting issues
2 Ann Arbor System improvements: State		10,454	14,032	(4,377)	The Porecast is latest forecast at time of himry. Delays caused by local permitting issues.
3 Ann Arbor System Improvements: Apex	(Blue) Substation	5,721	11,865	(6,144)	The Porecast is latest forecast at time of filing. Delays caused by local permitting issues.
4 Ann Arbor System Improvements: Argo 40	KV Reconfiguration	122	-	122	Project was delayed in response to high storm activity in the first half of the year. Current plan is to complete the scheduled portion of the 2018
5 Subtransmission Hardening: Tie 4104		314	3,307	(2,993)	materials are due to be delivered on October 15.
6 Subtransmission Hardening: Tie 3416		964	2,077	(1,113)	
<b>•</b> • • • • • • • <b>-</b> • • •				(= ( = )	This project is part of a portfolio of substation work that has been bundled in an RFP to ensure cost-effective and timely execution. Bids have
7 Subtransmission Hardening: Tie 810		139	879	(740)	are being evaluated.
8 Subtransmission Hardening: Prior Year's		37	-	37	
9 CODI: Charlotte Network Conversion		3,281	12,374	(9,093)	Project delays due to local permitting issues. Assigned additional crews to meet project schedule.
10 CODI: Garfield Network Conversion		-	3,955	(3,955)	This project will follow the Charlotte project which as been delayed due to local permitting issues.
					This project is part of a portfolio of substation work that has been bundled in an RFP to ensure cost-effective and timely execution. Bids have
11 CODI: Midtown Substation Expansion		-	2,197	(2,197)	are being evaluated.
12 CODI: Corktown Substation		1,539	1,318	220	
13 CODI: Targeted Network Secondary Cable	Replacement	1,826	1,160	666	
14 CODI: Alfred Substation Expansion		-	-	-	
15 CODI: Kent/Gibson Conversion		-	-	•	
16 CODI: Stone Pool Exit Conduit		22	-	22	
17 CODI: Temple Cascades		488	-	488	
					Project has been rescheduled due to resource allocation to support hurricane restoration efforts (Puerto Rico and Florida) and to address em
18 4.8 kV CC: Hilton Substation and Circuit C	onversion	5,144	7,505	(2,361)	associated with storms in MIchigan and aging infrastructure.
					Project has been rescheduled due to resource allocation to support hurricane restoration efforts (Puerto Rico and Florida) and to address eme
19 4.8 kV CC: Cortland / Oakman / Linwood C	Consolidation	664	3,816	(3,152)	associated with storms in MIchigan and aging infrastructure.
					Project has been rescheduled due to resource allocation to support hurricane restoration offerts (Puerto Rice and Elerida) and to address am
20 4 8 kV CC: Ariel Subtation and Circuit Con	wersion	033	3 180	(2 247)	associated with storms in Michigan and acing infrastructure
20 4.0 kV CC: Zapan Substation and Circuit C	Conversion	2 405	2,162	(2,247)	
21 4.8 KV CC. Zenon Substation and Circuit C	Conversion	2,405	2,102	243	
22 4.8 kV CC: Belle Isle Substation and Circu	it Conversion	-	1,526	(1,526)	Project delayed due to land availability.
					Project has been rescheduled due to resource allocation to support hurricane restoration efforts (Puerto Rico and Florida) and to address eme
23 4.8 kV CC: Almont Relief and Circuit Conv	rersion	246	1,318	(1,072)	associated with storms in MIchigan and aging infrastructure.
24 4.8 kV CC: Argo / Buckler Load Transfer		138	923	(785)	
25 4.8 kV CC: I-94 Substation and Circuit Cor	nversion	493	879	(386)	
26 4.8 kV CC: Calla Circuit Conversion		9	659	(651)	Overhead design not approved by Townshp. Underground redesign required to complete.
		4	420	(400)	
27 4.8 KV CC: Lapeer - Elba Expansion and C		1	439	(439)	Project delayed due to land availability.
28 4.0 KV CC. HK Substation and Circuit Con	d Circuit Conversion	-	-	-	
29 4.0 KV CC: Write Lake Decommissioning at	and Circuit Conversion	-			
31 48 kV CC: Reno Decommissioning and C	ircuit Conversion	-			
32 4.8 kV CC: Northville Decommisioning and	d Circuit Conversion	48	-	48	
					This project is part of a portfolio of substation work that has been hundled in an REP to ensure cost-effective and timely execution. Bids have
33 8 3 kV/CC: Pontiac Overhead Conversion		_	130	(130)	are being evaluated
35 0.5 KV CO. I Onliac Overhead Conversion			400	(400)	
34 System Loading: Carleton		0.2	659	(659)	Project delayed to allow focus on Quaker in Q4 2018.
35 System Loading: Quaker/Hancock		-	-	-	
36 System Loading: Grayling		-	-	-	
37 System Loading: Wixom		-	-	-	
38 System Loading: Sheldon/Gilbert/Zachary		-	-	-	
39 System Loading: Prior Year's		-	-	-	
					RFP and engineering study to be completed in 2018. Trailer-mounted battery benchmarking is being completed to develop criteria for an RFF
40 Pilot: Non-Wire Alternatives		-	2,197	(2,197)	construction to follow for mobile unit.
41 Filmore Substation Access		-	63	(63)	
42 Sub-total Infrastructure Redesign Project	cts and Programs	34,988	79,730	(44,742)	
43 Other Infrastructure Redesign Projects		2,261	-	2,261	
	n d Duo ang	07.040	70 -00	(40.404)	
44 Total Intrastructure Redesign Projects a	and Programs	37,249	79,730	(42,481)	

\* Year to Date Forecast is equal to 2018 Rate Case Forecast divided by 12 and multiplied by 8 unless otherwise noted \*\*Page number is consistent with Exhibit A-12, Schedule B5.4 Case: U-20162 Witness: N. M. Evans Exhibit: S-10.4 Date: 11/7/18 Page 10 of 11

Case No.: U-20162 Exhibit: A-12 Schedule: B5.4 Witness: M.A. Bruzzano Page: 8 of 10 \*\*

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P. Design and

## **Michigan Public Service Commission**

## DTE Electric Company

August 2018 Capital Expenditures

**Distribution Plant - Technology and Automation** 

# (\$000)

	(a)	(b)	(c)	(d)	(e)
Line	Description	YTD	YTD	L/// )	Commentary
110.		Actuals	Torecast	11/(L)	
1	Technology and Automation				
2	SOC Modernization	3,543	4,907	(1,365)	YTD Forecast is latest forecast at time of filing.
3	ADMS: EMS/GMS	8,782	8,910	(128)	YTD Forecast is latest forecast at time of filing.
4	ADMS: DMS/OMS	280	470	(190)	YTD Forecast is latest forecast at time of filing.
5	ADMS: Network Management System	180	180	0	YTD Forecast is latest forecast at time of filing.
6	AMI: 3G to 4G Communication Upgrade	718	514	203	YTD Forecast is based on Witness Moccia's test
					YTD Forecast is based on Witness Moccia's
7	AMI: 3G to 4G Industrial Communication Upgrade	-	295	(295)	expected to ramp up in the fourth quarter of 2018
8	AMI: Installations	2,202	2,333	(131)	
9	AMI Leverage (PI, Analytics)	43	-	43	
10	Line Sensors	2,539	4,394	(1,855)	Purchase Order issued for approximately \$1.6M in \$
					Purchase Order issued for approximately \$628K in \$
11	13.2 kV Telecommunications	-	879	(879)	orders to be issued this year for additional locations.
12	Analog Lines Elimination	523	395	127	
13	40 kV: Automatic Pole Top Switch	669	879	(210)	
14	Pilot: Technology Programs	1,064	879	185	
15	Total Technology and Automation Projects and Programs	20,541	25,035	(4,494)	

\* Year to Date Forecast is equal to 2018 Rate Case Forecast divided by 12 and multiplied by 8 unless otherwise noted

\*\*Page number is consistent with Exhibit A-12, Schedule B5.4

Case: U-20162 Witness: N. M. Evans Exhibit: S-10.4 Date: 11/7/18 Page 11 of 11

# Case No.: U-20162 Exhibit: A-12 Schedule: B5.4 Witness: M.A. Bruzzano Page: 9 of 10 \*\*

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stimony.
's testimony. Project spending is 18.
n September.
n September. Additional purchase

Michigan Public Service Commission DTE Electric Company Staff Surge Proposal (\$000) Case: U-20162 Witness: N. M. Evans Exhibit: S-10.5 Date: 11/7/18 Page 1 of 1

	(a)	(b)	(c)		(d)	(e)	(f)
	Time Period Rates in	Authorized Annual Tree	Non-Surge Tree Trim		Annual Surge Expense	Actual Tree Trim	
Line No.	Effect*	Trim Expense	Expense		(b) - (c)	Revenue	Actual Surge Revenue
1	May 2019 - Sept 2020	108,099	95,092	1/	13,007	144,132	17,343
2	Sept 2020 - Jan 2022	130,000	100,000	2/	30,000	173,333	40,000
3	Jan 2022 - May 2023	154,000	103,000	3/	51,000	205,333	68,000
4	May 2023 - Sept 2024	175,000	106,000	4/	69,000	233,333	92,000
5	Sept 2024 - Jan 2026	182,000	112,500	5/	69,500	242,667	92,667
6	Jan 2026 - May 2027	190,000	115,000	6/	75,000	253,333	100,000
7	May 2027 - Sept 2028	118,000	118,000	7/	0	157,333	0

#### 8 Total

410,009

\*Assumes a new rate order every 16 months.

1/ Exhibit A-13, Schedule C5.6, page 3, column (h), line 5.

2/ Exhibit A-22, Schedule L1, page 1, column (e), line 7.

3/ Exhibit A-22, Schedule L1, page 1, column (f), line 7.

4/ Exhibit A-22, Schedule L1, page 1, column (g), line 7.

5/ Exhibit A-22, Schedule L1, page 1, column (i), line 7.

6/ Exhibit A-22, Schedule L1, page 1, column (j), line 7.

7/ Exhibit A-22, Schedule L1, page 1, column (k), line 7.

MPSC Case No.:	<u>U-20162</u>
Requestor:	Staff
Question No.:	STDE-3.24d
<b>Respondent:</b>	H. D. Rivard
Page:	<u>1 of 1</u>

**Question:** Refer to Exhibit A-13, Schedule C5.6, page 3:

- d. provide the actual total tree trim expense for all years from 2012 through 2016.
- **Answer:** The actual spend on Maintenance and Staff for 2012 2016 was as follows:

Year	\$ Millions
2012	53.1
2013	56.9
2014	42.3
2015	64.7
2016	74.2

Michigan Public Service Commission		Monthly Support Schedule												
Die Electric Company										<b>F</b> .	1.1.1.0 O.L	Case No.:	U-20162	
Projected Capital Expenditures										EX	mibit & Sch.	Supported:	A-12 B5.4 p	<i>i</i> .1
												winess.	IVI. A. DIUZZ	ano
(\$000)														
(a)			(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(i)	(k)	(1)	(m)
								(0)						
			<b>D</b> : 1	<b>B</b> · I	<b>B</b> · 1	<b>D</b> · I	B · I	B	B : I	B : I	B	<b>B</b> · I	B : I	B . I
Line No. Description		Due la shine Masha d	Bridge	Bridge	Bridge	Bridge	Bridge	Bridge	Bridge	Bridge	Bridge	Bridge	Bridge	Bridge
No. Description		Projection Method	Jan-18	Feb-18	Mar-18	Apr-18	iviay-18	Jun-18	Jul-18	Aug-18	Sep-18	OCI-18	NOV-18	Dec-18
1 Base Capital Programs														
2 Emergent Replacements	1/	IC Madel	7 5 4	7 5 4	7 5 40	7 5 4 9	7 5 4 9	7 5 4 9	7 540	7 5 4 9	7 5 4 9	7 5 4 9	7 540	7 5 4 9
3 Storm	1/	IS Model	7,548	7,54	5 7,548	7,548	7,548	7,548	7,548	7,548	7,548	7,548	7,548	7,548
4 Non - Storm	1/	IS Model	7,280	7,28	7,280	7,280	7,280	7,280	7,280	7,280	7,280	7,280	7,280	7,280
5 Substation Reactive	1/	IC Mandal	2,301	2,30	2,307	2,337	2,307	2,307	2,307	2,307	2,307	2,337	2,357	2,337
6 Emergeni Replacement Reduction Based on Strategic Spend			(35)	) (35)	) (350)	(350)	(350)	(350)	(350)	(350)	(350)	(350)	(350)	(350)
7 Subtotal Emergent Replacements		(Includes Trouble Environmental)	16,842	2 16,842	2 16,842	16,842	16,842	16,842	16,842	16,842	16,842	16,842	16,842	16,842
8 Customer Connections, Relocations & Other	0/	(Mart and full server actuals of Marian Deviate One Time Franch Viellation	44.40	44.40	44.407	44 407	44 407	44 407	44 407	44 407	44 407	44 407	44 407	44 407
9 Connections and New Load	21	(Most recent full year actuals +/- Major Projects, One-Time Events) X inflation	11,10	11,10	7 11,107	2,005	11,107	1,107	F 202	2 250	2 2 5 0	2.064	2 204	11,107
10 Relocations	3/	(Most recent full year actuals +/- Major Projects, One-Time Events) X inflation	1,19	2,00	2,051	3,005	2,001	1,082	3,382	2,359	3,308	2,004	2,394	2,048
In Electric System Equipment     NPUC and Immersion Plantate	3/	(Most recent juli year actuals +/- Major Projects, One-Time Events) X inflation	3,004	3,00	2 3,002	3,002	3,002	3,002	3,002	3,002	3,002	3,002	3,002	3,002
NRUC and Improvement Blankets     Constal Plant Table & Equipment and Missellenseus	3/	(Most recent full year actuals +/- Major Projects, One-Time Events) X inflation	1,304	1,30	+ 1,304 - 34E	1,304	1,304	1,304	1,304	1,304	1,304	1,304	1,354	1,304
General Plant, Tools & Equipment and Miscellaneous	3/	(wost recent juli year actuals +/- wajor Projects, One-Time Events) x injiation	47.000	0 34	343	10 604	40 740	40.070	00.074	40.047	00.047	40.750	40.000	40.007
14 Subtotal Customer Connections, Relocations & Other	21	(Mart and full services of Maria Devicets, One Time Franks) Viellation	17,880	) 19,35	18,739	19,694	18,749	18,370	22,071	19,047	20,047	18,753	19,083	19,337
15 Customer Advances for Construction	3/	(wost recent juli year actuals +/- wajor Projects, One-Time Events) x injiation	(2,43	(2,43 22,76	+) <u>(2,434</u> )	(2,434)	(2,434)	22,434)	26 470	22 455	24 455	(2,434)	(2,434)	(2,434)
10 Total Base Capital Programs			32,200	5 33,76	+ 33,140	34,102	33,156	32,110	30,479	33,455	34,455	33,101	33,491	33,745
17 Otesta sila Casiltal Des serves														
17 <u>Strategic Capital Programs</u>	41	Poliability Dian	16 59	16.59	16 599	16 599	16 599	16 599	16 599	16 599	16 599	16 599	16 599	16 599
10 Infrastructure Redesign	4/ E/	Poliability Plan	10,000	3 10,30	0,000	10,500	0,500	12,007	10,000	12 204	10,000	11 220	0.251	10,000
20 Technology and Automation	6/7/	Poliability Plan	0,555	4 21	5 605	5,629	6,055	6 130	6 192	6 400	0.411	10.059	10.699	10,405
21 Subtotal Strategic Capital Programs	0, 11	nellability fran	26.920	28.57	7 30 518	30 260	31 309	36 715	35 465	36 281	36 474	38 884	36 627	38 093
					00,010	00,200	01,000	00,710	00,400	00,201	00,414	00,004	00,021	00,000
22 Total Capital		DO Canital Budget	59 21	62.34	63 665	64 362	64 467	69 494	71 944	69 737	70 929	72 045	70 118	71 838
		bo capital bulget				01,002	01,101							
23 Regulatory Asset														
24 Advanced Distribution Management System (ADMS)	8/													
4/Exhibit A 40, Ontoniula DE 4, mars 0														
1/ Exhibit A-12, Schedule B5.4 - page 3														
2/ Exhibit A-12, Schedule B5.4 - page 4, line 48														
3/ Exhibit A-12, Schedule B5.4 - page 5, lines 72, 80, 88, 90 & 93														
4/ Exhibit A-12, Schedule B5.4 - page 7, line 27														
5/ Exhibit A-12, Schedule B5.4 - page 8, line 42														

6/ Exhibit A-12, Schedule B5.4 - page 9, line 15

# Michigan Public Service Commission DTE Electric Company Staff Adjustments to AMI Capital Expenditures

Witness: C. Matthews Exhibit: S-12.0 Page 1 of 1

	(a)	(b)	(c)	(d)	(e)	(f)	(g)			
			Capital Expenditures							
		Historical	Pro	ojected Calendar	Year	Bridge Period	Test Year			
Line		12 mos. ended	12 mos. ending	12 mos. ending	12 mos. ending	16 mos. ending	12 mos. ending			
No.	Description	12/31/2017	12/31/2018	12/31/2019	12/31/2020	4/30/2019	4/30/2020			
4	<b>-</b>									
1	lechnology and Automation	4 000	22 770	42.200	25 700	27.027	40.000			
2	SOC Modernization	1,223	23,770	42,200	35,700	37,837	40,033			
3	ADMS: EMS/GMS	1,031	14,273	6,498	-	19,471	1,300			
4	ADMS: DMS/OMS	1,438	1,713	25,367	27,908	10,169	26,214			
5	ADMS: Network Management System	-	2,751	11,439	2,603	6,564	10,229			
6	AMI: 3G to 4G Communication Upgrade	39	10,546	7,243	16,545	2,414	10,344			
7	Staff Adjustment						(9,600)			
8	AMI: 3G to 4G Industrial Communication Upgrade		5,273	2,634	5,091	878	3,453			
9	AMI: Installations	7,686	3,500			-	-			
10	AMI Leverage (PI, Analytics)	372	-	-	-	-	-			
11	Line Sensors	5,085	6,591	6,585	-	2,195	4,390			
12	13.2 kV Telecommunications	-	1,318	2,634	5,091	878	3,453			
13	Analog Lines Elimination	1,150	593	-	-	-	-			
14	40 kV: Automatic Pole Top Switch	331	1,318	2,634	5,091	878	3,453			
15	Pilot: Technology Programs	1,042	1,318	1,975	1,909	658	1,953			
16	Total Technology and Automation Projects and Programs	19,397	72,965	109,208	99,937	81,943	95,220			

Michigan Public Service Commission	Witness: C.
DTE Electric Company	Exh
Staff Adjustments to Demand Side Management Capital Expenditures	I

	(a)	(b)	(c)	(d)	(e)	(f)
			С			
		Historical	Pr	ojected Bridge P	eriod	Projected Test Year
Line No.	Description	12 mos. ended 12/31/2017	12 mos. ending 12/31/2018	4 mos. ending 4/30/2019	16 mos. ending 4/30/2019	12 mos. ending 4/30/2020
1	Interruptible Air Conditioning (IAC)	4,304	4,152	1,700	5,852	4,892
2	Programmable Communicating Thermostats (PCT)	2,074	4,600	1,567	6,167	3,426
3	Staff Adjustment		(4,600)	(1,567)	(6,167)	(3,426)
4	Other Demand Side Management		1,600	966	2,566	3,748
5	Subtotal Demand Response	6,378	5,752	2,665	8,417	8,641
6	DTE Energy Insight	6,295	701	250	951	2,918
7	Total Demand Side Management	12,673	6,453	2,915	9,368	11,559

itness: C. Matthews Exhibit: S-12.1 Page 1 of 1

Michigan Public Service Commission DTE Electric Company Staff Adjustments to Information Technology Capital Expenditures				W	/itness: C. Matthews Exhibit: S-12.2 Page 1 of 1
(a)	(b)	(c)	(d)	(e)	(f)

			C	apital Expenditur	res	
Line No.		Historical	Pro	ojected Bridge Po	eriod	Projected Test Year
	Description	12 mos. ended 12/31/2017	12 mos. ending 12/31/2018	4 mos. ending 4/30/2019	16 mos. ending 4/30/2019	Projected Test Year 12 mos. ending 4/30/2020 11,547 (625) 24,016 (400) (2,660) 10,098 (362) (553) (362) (353) (362) (333) (998) 19,202 14,693 (3,000)
1	Information Technology:					
2	Corporate Applications	7,291	5,798	3,125	8,922	11,547
	Staff Adjustment: ConnectUs Phase 4				-	(625)
3	Customer Service	29,982	30,936	4,953	35,889	24,016
	Staff Adjustment: IT Business Planning and Development Sustainment			(79)	(79)	(400)
	Staff Adjustment: Customer Digital Channels (MSA) Sustainment			(535)	(535)	(2,660)
4	Plant & Field	21,482	13,061	2,247	15,309	10,098
	Staff Adjustment: Fuel Supply Sustainment			(81)	(81)	(362)
	Staff Adjustment: GenOps Business Sustain			(124)	(124)	(553)
	Staff Adjustment: IT FosGen Business Sustainment			(81)	(81)	(362)
	Staff Adjustment: Fermi- Nuclear Gen Sustain		(181)	(75)	(256)	(333)
	Staff Adjustment: Work Management Sustainment (Maximo/Esri/Service Suite)				-	(998)
5	Shared Infrastructure	26,571	14,360	2,196	16,556	19,202
6	Information Technology for IT	1,359	8,359	4,730	13,089	14,693
	Staff Adjustment: 2018 Emergent		(1,457)	(800)	(2,257)	(3,000)
	Staff Adjustment: CoDE Sustainment		(307)	(170)	(477)	(437)
7	Total Information Technology	86,685	70,569	15,306	85,875	69,825
Witness: C. Matthews Exhibit: S-12.3 Page 1 of 13

Auditor: Request No: Respondent: Page: C. S. Matthews CSM-8.4 Revised J. L. Robinson 1 of 1

## **Request:**

4. How much did it cost the Company to install its initial 3G cellular relays? Please provide examples of signed completed work orders for this work.

## **Response:**

The initial installation cost of the 3G cellular relay network was part of a larger bundled contract for all project services with a major vendor. Services contracted included, but not limited to; RF study analysis, on-site engineering support, site selection, cell relay installation, repeater installation, modification rework to achieve contracted meter read rates, device replacement during the non-accepted period, etc. The Company installed approximately 3,000 3G cellular relays. The estimated cost to purchase and install the relays was approximately \$3.1 million. However, many of the cellular relays were installed in conjunction with meters and other equipment and there isn't an expedient way to separate installation costs.

Witness: C. Matthews Exhibit: S-12.3 Page 2 of 13

Auditor: Request No: Respondent: Page: C. S. Matthews CSM-8.6 J. L. Robinson 1 of 1

## **Request:**

6. With the 4G relays increased RF signal propagation, and the installation on pole tops, is DTE able to reduce the total number of cell relays needed on its system? Please provide the investigation DTE did on this showing the outcome.

## **Response:**

No. The Company will not be reducing the number of cell relays needed on the system. There will be an actual increase. The new devices are not only cell relays, which collect meter data and transmit cellularly, but they can also connect to an RF Lan backhaul if available. The new devices will strengthen our network and improve our read rates. These devices also allow forward compatibility with new technology. DTE worked with our vendor partners to develop this strategy.

Witness: C. Matthews Exhibit: S-12.3 Page 3 of 13

Auditor: Request No: Respondent: Page: C. S. Matthews CSM-3.1 B. V. Moccia 1 of 1

## **Request:**

1. Has DTE occurred any instanced of an opt-out customers meter continuing to send a reading after the customer has opted out? If so, how many instances have been discovered?

## **Response:**

Yes, 193 customers had meters that were still communicating on August 10<sup>th</sup>, 2018. In addition, on that date, there were 53 customers that were classified as opt out and had meters that were communicating, but on contact with these customers, they asked to be removed from the opt out program. DTE is aware of 21 additional customers whose meters may be communicating. DTE has attempted (and will continue to attempt) but has not been able to access those customers' meters.

Witness: C. Matthews Exhibit: S-12.3 Page 4 of 13

Auditor: Request No: Respondent: Page: C. S. Matthews CSM-3.3 B. V. Moccia 1 of 1

## Request:

3. Has the Company previously credited a customer that has opted out if the meter continued to send a signal? If so, how many of these credits have been given out?

## Response:

DTE has provided credits to the 246 customers in question 1. In addition, DTE is aware of some cases when customers called in to report that their meter was still communicating, and DTE was able to confirm that status. DTE credited those customers, but those credits were given as miscellaneous adjustments to accounts, and aren't separately tracked.

MPSC Case No.:	<u>U-20162</u>
<b>Requestor:</b>	N. Simpson
Question No.:	NS-1.1
Respondent:	I. M. Dimitry
Page:	5 of 9

expenditures approved in Case U-18014. The Commission indicated that showing of initial success in the program is required to support increased funding. Therefore, the Company has invested in the 10,000-unit enrollment effort since the fourth quarter of 2017 throughout 2018. The spent and ongoing capital expenditures are covering hardware purchases of the PCTs, the Distributed Energy Resource Management System (DERMS) software, IT integration and program implementation. In the current rate Case U-20162, DTE Electric is requesting additional capital investments that will enable enrollment of a total of 17,000 customers, up from the initial 10,000 customer level, by the end of the test period (April 30, 2020).

As of September 30, 2018, the Company has enrolled approximately 3,000 customers year-to-date in the year 2018, and expects to reach 4,500 enrolled customers by year end 2018, which is lower than the 7,000 enrolled customers previously projected by the time of submission of direct testimony in Rate Case U-20162. The Company has updated the projected customer enrollment data, and is expected to reach the total of 17,000 unit-enrollment by April 30, 2020.

A detail of the projected customer enrollment is as follows:

	Projected 12/31/2018	Projected 12/31/2019	Projected 4/30/2020
Cumulative Total Enrollment (Period Start)		4,500	11,500
New or Planned Enrollments	4,500	7,000	5,500
Cumulative Total Enrollment (Period End)	4,500	11,500	17,000

As mentioned in pages 13-14 of Witness Dimitry's direct testimony in Case U-20162, the Company collected data from three (3) DPP events in the 50-customer technology test in 2017. Similarly, in 2018, the Company called four (4) DPP events, which included increasing activated customer PCT units ranging from 883 (6/28/18) to 1,597 (8/28/2018). Representative data showed that in a DPP event where the PCT program is called upon by the Company, the PCT customers show a decline in usage during the critical hours of

## Michigan Public Service Commission DTE Electric Company Demand Response Programs and C&I Interruptible Rates

		20	)18			20	19			20	20	
Demand Response Program and Rates	1/1/2018 - 12/31/2018				1/1/2019 -	12/31/2019		1/1/2020 - 4/30/2020				
	Capital <sup>1</sup>	O&M <sup>2</sup>	MWs <sup>3</sup>	ZRCs <sup>4</sup>	Capital <sup>1</sup>	O&M <sup>2</sup>	MWs <sup>3</sup>	ZRCs <sup>4</sup>	Capital <sup>1</sup>	O&M <sup>2</sup>	MWs <sup>3</sup>	ZRCs <sup>4</sup>
Residential					-				-			
D1.1 Interrumptible A/C	\$4.2	(2)	135	150	\$4.6	(2)	143	158	\$2.0	(2)	172	190
D1.8 Dynamic Peak Pricing Rate <sup>5</sup>												
- Programmable Communicating Thermostat (PCT) Program	\$4.6	(2)	nyi	nyi	\$4.1	(2)	nyi	nyi	\$0.9	(2)	nyi	nyi
D5 Interruptible Hot Water Heating Service	n/a	n/a	5	6	n/a	n/a	5	6	n/a	n/a	5	6
Commercial and Industrial (C&I)												
D3.3 Interruptible General Service Rate	n/a	n/a	19	21	n/a	n/a	21	23	n/a	n/a	21	23
D8 Interruptible Supply Rate	n/a	n/a	82	91	n/a	n/a	89	98	n/a	n/a	89	98
R1.1 Alternative Electric Metal Melting	n/a	n/a	7	7	n/a	n/a	7	7	n/a	n/a	7	7
R1.2 Electric Process Heat	n/a	n/a	74	82	n/a	n/a	74	81	n/a	n/a	74	81
R10 Interruptible Suppy Rider	n/a	n/a	282	312	n/a	n/a	305	336	n/a	n/a	305	336
R12 Capacity Release	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5	6
Other DR Pilot Programs (Residential & C&I) <sup>6</sup>	\$1.6	(2)	nyd	nyd	\$4.0	(2)	nyd	nyd	\$0.7	(2)	nyd	nyd
Total	\$10.4	\$0.4	604	669	\$12.7	\$0.4	643	709	\$3.6	\$0.1	677	747

Notes:

1 Forecasted Capital in \$ Million

2 Forecasted O&M total expenses of \$0.4 Million per calendar year to support marketing and development of the portfolio of programs, including IAC, PCT, BYOD, and other potential residential and C&I programs

3 Installed Capacity (ICAP) - 2018 data represents MISO registrations for the Planning Year (PY) 2018/2019. 2019 and 2020 data represents PY 2019/2020 and PY 2020/2021, respectively, in 2019 PSCR Filing (Oct 1, 2018)

4 ZRCs or Zonal Resource Credits are equivalent to Unforced Capacity (UCAP), account for transmission losses and adjusted for PRM<sub>UCAP</sub>, and represent data for periods described in point 3 above 5 PCT Program in conjuction with DPP rate

6 Includes: Bring-Your-Own Device (BYOD) program (residential), C&I battery-storage programs, Non-Wires programs, company-controlled electric vehicle charging program or PEV-EPRI program, and other C&I tarif-based programs General notes:

- Planning Year (PY) ranges from June of the first year to May of the following year, for instance, PY 2018/2019 goes from June 2018 to May 2019

- n/a: Not applicable

- nyi: Not yet included in MISO filings

Witness: C. Matthews Exhibit: S-12.3 Page 6 of 13

MPSC Case No.: U-20162 Requestor: N. Simpson Question No.: NS-1.1 Witness: I.M.Dimitry Page: 1 of 1

ntial and C&I programs in 2019 PSCR Filing (Oct 1, 2018) 3 above

Witness: C. Matthews Exhibit: S-12.3 Page 7 of 13

Auditor: Request No: Respondent: Page: C. S. Matthews CSM-1.6a D. J. Griffin 1 of 1

## Request:

- 6. Referring to Exhibit B5.7.1, line 6:
  - a. Please describe the enhanced collaboration that will be obtained from the internal social media boards.

## **Response:**

The internal social media boards will enhance collaboration by improving internal employee communications and efficiently eliciting answers to questions through colleague responses. The spontaneity and real-time nature of such communications enables employees to stay up to date on emergent projects and company priorities. Social media boards provide an interconnected platform for knowledge sharing and employee engagement activities.

Witness: C. Matthews Exhibit: S-12.3 Page 8 of 13

Auditor: Request No: Respondent: Page: C. S. Matthews CSM-5.8a D. J. Griffin 1 of 1

## **Request:**

- 8. Referring to Exhibit B5.7.2, line 4:
  - a. Please explain what enhancements are being done.

## **Response:**

This portfolio has an ongoing backlog of requested enhancements. This Business Case is forecasted based on historical need for support of the Portfolio and emergent work required on an annual basis. Past years have required work to ensure and enhance application functionality/capacity. Typical Sustainment work regularly includes the addition of disk storage to account for growth, additional hardware for memory and performance enhancement, and end-of-life replacements. An example of items the Company is foreseeing for the next year are new assets such as an improved reporting database to support Community Lighting.

Witness: C. Matthews Exhibit: S-12.3 Page 9 of 13

Auditor: Request No: Respondent: Page: C. S. Matthews CSM-5.10a D. J. Griffin 1 of 1

## Request:

10. Referring to Exhibit B5.7.2, line 32:

a. Please provide specific details about what monthly enhancements are planned for this project.

## Response:

Each portfolio has an ongoing backlog of requested enhancements. This MSA Sustainment case is forecasted based on historical annual need for supporting our customer facing channels in a timely, effective manner. As these enhancements are prioritized they are bundled into enhancement releases which are done monthly. In this portfolio, enhancements include improvements to our Move-In-Move Out Processes, our IVR system and Customer-facing payment system functionality on our website. While the priority within our Release capacity is defect management, we plan to include enhancements such as the following over our next 12-18 months:

- Response time enhancements
- Kiosk payment improvements
- Outage trouble reporting
- Improve Move in Move out process on web
- IVR outage reporting enhancements
- Enhancements to Agency website for supporting low income customers
- Managing Customer Profile Information/Functionality

Witness: C. Matthews Exhibit: S-12.3 Page 10 of 13

Auditor: Request No: Respondent: Page: C. S. Matthews CSM-6.5 D. J. Griifin 1 of 1

## Request:

5. Referring to Exhibit B5.7.3, line 11, please provide detailed information about the planned work that is being done in this line item, please include costs, timeline and a breakdown of the work.

## **Response:**

Objectives of the Work Management Sustainment business case during the test period include workflow implementation for DO System Operations process, Fermi Work Order process enhancements, implementation of the MEP Corrective Action workflow process, enhancement of GAS Field Request process, and implementation of the DO Construction process. Communications related enhancements include Community Lighting Communication implementation, DO Unitization Task Management escalation notifications, and Nuclear PM Notification Enhancement. Interface enhancements include implementation of screen changes for Distribution Operations Systems, updates to Work Order Tracking forms, and API-based data entry. Additional deployments will support code changes to support embedded tests, Service Request application enhancements, and Facilities Field Change tracking. These enhancements are projected to cost \$962k.

Auditor: Request No: Respondent: Page: C. S. Matthews CSM-6.7 D. J. Griifin 1 of 2

# **Request:**

7. Referring to Exhibit B5.7.3, lines24, 32, 33,34, please provide detailed information about the planned work that is being done in this line item, please include costs, timeline and a breakdown of the work.

## Response:

B5.7.3 lines 24, 32, 33, and 34 contain financial information spanning both the historical period and ongoing effort within the projected test period.

Efforts occurring within the test period include:

Line 24: Fermi - Nuclear Generation Sustainment funds several initiatives such as the Upgrade of the Nuclear Generation Corrective Action Program, or eCard system, to a new hardware and software stack, improving the security of the system. The case also involves the implementation of failover and physical separation of the Sentinel Radiation Protection Management System, a development of the Automated Records Management System to improve usability, and Site business computer hardware. The Case has expended \$149.5k of the allotted capital expense as of Q2 2018, and is targeted to spend \$153.8k through Q4 2018

Line 32: Fuel Supply Sustainment involved upgrades to data interfaces for fuel shipping locations to the supported platform to improve information reliability for business processes, and the implementation of invoicing process enhancements for additional automation of more fuel types during Q1 and Q2 2018 at a cost of \$165k. The Company will implement a rail scheduling calendar which provides enhanced visual fuel transportation planning capabilities as well as a mobile enabled workflow to support business efforts at the point of activity during Q3 and Q4 2018 for a cost of \$197k.

Line 33: GenOps Business Sustainment funds the implementation of planned vendor software releases to the Generation Supply Management System and enhancements to the Energy Account Application. These important system improvements will ensure that the systems remain current and provide up to date functionality and capabilities. These enhancements were delivered in Q1 and Q2 2018 for a cost of \$237k. For the remainder of the year this case includes implementing load balancer and security enhancements to the Generation Supply Management System application, additional hardware for Profit & Loss and

Witness: C. Matthews Exhibit: S-12.3 Page 12 of 13

Auditor: Request No: Respondent: Page: C. S. Matthews CSM-6.7 D. J. Griifin 2 of 2

Settlement Analyzers to enable processing of growing data sets, the upgrade of generation data interfaces to supported platforms to ensure data reliability, and

logic upgrades in the Generation Supply Management System for new generation units in Q3 and Q4 2018 for a targeted cost of \$316k.

Line 34: Fossil Generation Business Sustainment funds allowed the Company to upgrade the Power Plant Performance Management (P3M) application hardware and platform to improve system reliability, security, and mobile device compatibility during Q1 and Q2 2018 for a cost of \$173.9k. Ongoing efforts include an upgrade to plant performance data safety tagging interfaces, and further upgrades of current systems to continue aligning targeted reliability and security during the period spanning Q3 and Q4 2018 for a cost of \$189k.

Witness: C. Matthews Exhibit: S-12.3 Page 13 of 13

Auditor: Request No: Respondent: Page: C. S. Matthews CSM-4.7 T. D. Johnson 1 of 1

## **Request:**

7. For the period of 2017 through the test period, please break out the number of meter readers by year.

## Response:

DTE Energy utilizes a service provider model for its meter reading services. In this model, DTE Energy outsources the meter reading function to a utility contractor provider. The service provider staffs it workforce such that weather and non-productive time do not impact its ability to complete the volume of meter reading routes that are contracted to read, and provides all management responsibilities for this work.

The chart below provides the number of contracted meter readers for the electric only and electric and gas territories.

Year	Number of Contracted Meter Readers
2015	141
2016	84
2017	58
2018	40
1/1/2019- 4/30/2019	28
5/1/2019- 4/30/2020	24

Michigan Public Service Commission DTE Electric Company Contingency

Michigan Public Service Commission	Case No.:	U-20162
DTE Electric Company	Audit Request:	MLE-1.2
Projected Capital Expenditures	Date of Request:	7/16/2018
Summary - Reserve or Contingency	Respondent:	T. M. Uzenski
(\$000)	Page:	1 of 1

## Exhibit A-12, Schedule B5

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
			c	apital Expenditur	res		
		Historical	Pro	jected Bridge Pe	riod	Projected Test Year	
Line No.	Description	12 mos. ended 12/31/2017	12 mos. ending 12/31/2018	4 mos. ending 4/30/2019	16 mos. ending 4/30/2019	12 mos. ending 4/30/2020	Reference
					col. (c)+(d)		
1	Production Plant:						
2	Steam	-	-	-	-	-	Exh. A-12, Sch. B5.1
3	Hydraulic	-	-	-	-	-	Exh. A-12, Sch. B5.1
4	Other	-	1,700	4,200	5,900	4,633	Exh. A-12, Sch. B5.1
5	MERC / Fuel Supply	-	-	-	-	-	Exh. A-12,Sch. B5.2
6	Nuclear (including Nuclear Fuel)	-	-	-	-	-	Exh. A-12, Sch.B5.3
7	Distribution	-	-	-	-	-	Exh. A-12, Sch.B5.4
8	Community Lighting	-	-	-	-	-	Exh. A-12, Sch. B5.5
9	Demand Side Management	-	-	-	-	-	Exh. A-12, Sch. B5.6
10	Information Technology	-	-	-	-	-	Exh. A-12, Sch. B5.7
11	Corporate Staff	-	733	1,232	1,965	2,505	Exh. A-12, Sch. B5.8
12	Charging Forward	-	-	-	-	-	Exh. A-12, Sch. B5.9
13	Customer 360	-	-		-	-	Exh. A-13, Sch. C5.12
14	Total Capital Expenditures		2,433	5,432	7,865	7,138	

#### STANDARD CONTRACT RIDERNO 18

Original Sheet No. D-111.00

**DISTRIBUTED GENERATION PROGRAM** 

## AVAILABILITY:

This Rider can be attached to any metered tariff, excluding riders, unless otherwise noted on the applicable metered tariff. The Distributed Generation Program is offered as authorized by 2008 PA 295, as amended by 2016 PA 342, 1939 PA 3, as amended by 2016 PA 341, Section (6) (a) (14), and the Commission in Case No. U-20162.

The Distributed Generation Program is available for eligible Distributed Generation customers beginning with the first day of the May 2019 Bill Month.

A customer participating in a net metering program approved by the Commission before April, , 2019 shall have the option to take service under this tariff at the time service under the terms and conditions of the previous net metering program terminates in accordance with MCL 463.0183(1).

The Distributed Generation Program is voluntary and available on a first come, first served basis for new customer participants or existing customer participants increasing their aggregate generation. The combined net metering (Rider 16) and Distributed Generation Program size is equal to 1.0% of the Company's average instate peak load for Full-Service customers during the previous 5 calendar years. Within the Program capacity, 0.5% is reserved for Category 1 Distributed Generation customers, 0.25% is reserved for Category 2 Distributed Generation customers and 0.25% is reserved for Category 3 Distributed Generation customers. The Company shall notify the Commission upon the Program reaching capacity in any Category.

If an existing customer who participates on Rider 16 increases their aggregate generation following the effective date of this rider, then all generation on site will be subject to the terms and conditions of this tariff.

#### **CHARACTER OF SERVICE:**

As specified under the applicable Base Rate. The term Base Rate refers to the Rate Schedule under which the Customer takes service and that this Rider is associated with.

### **DISTRIBUTED GENERATION DEFINITIONS**

- (1) A Category 1 distributed generation customer has one or more Eligible Electric Generators with an aggregate nameplate capacity of 20 kW or less that use equipment certified by a nationally recognized testing laboratory to IEEE 1547-2018 testing standards and is in compliance with UL 1741-SA and located on the customer's premises. and metered at a single point of contact.
- (2) A Category 2 distributed generation customer has one or more Eligible Electric Generators with an aggregate nameplate capacity greater than 20 kW but not more than 150 kW located on the customer's premises and metered at a single point of contact that use equipment certified by a nationally recognized testing laboratory to IEEE 1547-2018 testing standards and is in compliance with UL 1741-SA and located on the customer's premises. and metered at a single point of contact.

(Continued on Sheet No. D-112.00)

Issued\_\_\_\_\_, 2019 D. M. Stanczak Vice President Regulatory Affairs Effective for service rendered on and after\_\_\_\_\_, 2019

Issued under authority of the Michigan Public Service Commission dated\_\_\_\_\_, 2019 in Case No. U-20162

Original Sheet No. D-112.00

## (Continued from Sheet No. D-111.00)

#### STANDARD CONTRACT RIDER NO 18 (contd)

#### **DISTRIBUTED GENERATION PROGRAM**

- (3) A Category 3 distributed generation customer has one or more methane digesters with an aggregate nameplate capacity greater than 150 kW but not more than 550 kW located on the customer's premises and metered at a single point of contact that use equipment certified by a nationally recognized testing laboratory to IEEE 1547-2018 testing standards and is in compliance with UL 1741-SA and located on the customer's premises. and metered at a single point of contact.
- (4) Eligible Electric Generator a renewable energy system or a methane digester with a generation capacity limited to no more than 100% of the customer's electricity consumption for the previous 12 months and does not exceed the following:

   a. For a renewable energy system, 150 kW of aggregate generation at a single site

b. For a methane digester, 550 kW of aggregate generation at a single site

- (5) Inflow the metered inflow delivered by the Company to the customer during the billing month or timebased pricing period.
- (6) <u>Outflow the metered quantity of the customer's generation not used on site and exported to the utility during</u> the billing month or time-based pricing period.
- (7) Renewable Energy Resource a resource that naturally replenishes over a human, not a geological, timeframe and that is ultimately derived from solar power, water power or wind power. Renewable energy resource does not include petroleum, nuclear, natural gas, or coal. A renewable energy resource comes from the sun or from thermal inertia of the earth and minimizes the output of toxic material in the conversion of the energy and includes, but is not limited to, all of the following:
  - (i) <u>Biomass</u>
  - (ii) Solar and solar thermal energy
  - (iii) Wind energy
  - (iv) Kinetic energy of moving water, including the following:
    - (a) waves, tides or currents

(b) water released through a dam

- (v) Geothermal energy
- (vi) Thermal energy produced from a geothermal heatpump
- (vii) Any of the following cleaner energy resources:
  - (a) <u>Municipal solid waste</u>, including the biogenic and anthropogenic factions
  - (b) Landfill gas produced by municipal solid waste

(c) Fuel that has been manufactured in whole or significant part from waste, including, but not limited to, municipal solid waste. Fuel that meets the requirements of this subparagraph includes, but is not limited to, material that is listed under 40 CFR 241.3(b) or 241.4(a) or for which a nonwaste determination is made by the United States Environmental Protection Agency pursuant to 40 CFR 241.3(c). Pet coke, hazardous waste, coal waste, or scrap tires are not fuel that meets the requirements of this subparagraph.

(Continued on Sheet No. D-113.00)

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Original Sheet No. D-113.00

(Continued from Sheet No. D-112.00)

## STANDARD CONTRACT RIDER NO 18 (contd)

#### **DISTRIBUTED GENERATION PROGRAM**

## **CUSTOMER ELIGIBILITY**

In order to be eligible to participate in the Distributed Generation Program, customers must generate a portion or all of their own retail electricity requirements with an Eligible Electric Generator which utilizes a Renewable Energy Resource, as defined above.

A customer's eligibility to participate in the Distributed Generation Program is conditioned on the full satisfaction of any payment term or condition imposed on the customer by pre-existing contracts or tariffs with the Company, including those imposed by participation in the Distributed Generation Program, or those required by the interconnection of the customer's Eligible Electric Generator to the Company's distribution system.

#### CUSTOMER BILLING - CATEGORY 1, 2 AND 3 CUSTOMERS

Inflow

- (1) <u>Full Service Customers</u> <u>The customer will be billed according to their retail rate schedule, plus surcharges, and Power Supply Cost</u> <u>Recovery (PSCR) Factor on metered Inflow for the billing period or time-based pricing period.</u>
- (2) Retail Open Access Customers

The customer will be billed as stated on the customer's Retail Open Access Rate Schedule on metered Inflow for the billing period or time based pricing period.

#### <u>Outflow</u>

The customer will be credited on Outflow for the billing period or time-based pricing period. The credit shall be applied to the current billing month and shall be used to offset power supply and PSCR charges on that bill. The credit shall not offset any delivery charges or other surcharges. Any excess credit not used will be carried forward to subsequent billing periods. Unused Outflow Credit from previous months will be applied to the current billing month, if applicable, to offset the power supply component and PSCR components of charges on the customer's bill. Outflow Credit is nontransferrable.

(1) Full Service Customers

Power Supply Credit for Outflow:

<u>Customers on non time based rate schedules will be credited for each kWh of Outflow at the monthly average</u> real time locational marginal price for energy at the DTE Electric appropriate load node. Customers on time based rate schedules will be credited for each kWh of Outflow at the monthly average real time locational marginal price for energy at the DTE Electric appropriate load node during the time of use pricing period. Customers will be credited for Outflow according to the non-transmission power supply rates shown on each rate schedule. (Or at the Company's option, the rates may be shown in a table on this Rider.)

#### (2) Retail Open Access Customers

The Outflow Credit will be determined by the Retail Service Supplier.

(Continued on Sheet No. D-114.00)

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Issued under authority of the Michigan Public Service Commission dated\_\_\_\_\_, 2019 in Case No. U-20162

Original Sheet No. D-114.00

(Continued from Sheet No. D-113.00)

#### STANDARD CONTRACT RIDER NO 18 (contd)

**DISTRIBUTED GENERATION PROGRAM** 

#### System Access Contribution (SAC)

<u>Customers attaching this rider to residential secondary rate schedules, or to commercial secondary rate schedules that</u> <u>do not have delivery demand charges, shall be subject to the SAC charge. The SAC charge shall be as follows:</u>

Residential Customers: \$2.31 per kW of installed AC capacity, per month

Secondary Commercial Customers with no delivery demand charge: \$2.28 per kW of installed AC capacity, per month

#### APPLICATION FOR SERVICE

In order to participate in the Distributed Generation Program, a customer shall submit completed Interconnection and Distributed Generation Program Applications, including the application fee of \$50 to the Company.

The Distributed Generation Program application fee is waived if the customer is transitioning from the Net Metering Program.

If a customer does not act or correspond on an application for over 6 months, when some action is required by the customer, the application may voided by the Company.

## **GENERATOR REQUIREMENTS**

The Eligible Electric Generator(s) must be located on the customer's premises, serving only the customer's premises and must be intended primarily to offset a portion or all of the customer's requirement for electricity.

Systems will be limited in size, not to exceed the Customer's self-service needs of the Rate Schedule to which this Rider is attached. The customer's requirement for electricity shall be determined by one of the following methods:

- (1) The customer's annual energy usage, measured in kWh, during the previous 12-month period
- (2) In instances where complete and correct data is not available or where the customer is making changes on-site that will affect total usage, the Company and the customer shall mutually agree on a method to determine the customer's annual electric requirement

The customer is required to provide the Company with a capacity rating in kW of the generating unit and a projected monthly and annual Kilowatt-hour output of the generating unit, along with a one-line of system and site plan when completing the Company's Distributed Generation Program Application.

The customer need not be the owner or operator of the eligible generation equipment, but is ultimately responsible for ensuring compliance with all technical, engineering and operational requirements suitable for the Company's distribution system.

(Continued on Sheet No. D-115.00)

Issued\_\_\_\_\_, 2019 D. M. Stanczak Vice President Regulatory Affairs Effective for service rendered on and after\_\_\_\_\_, 2019

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Original Sheet No. D-115.00

Continued from Sheet No. D-114.00)

#### STANDARD CONTRACT RIDER NO 18 (contd)

**DISTRIBUTED GENERATION PROGRAM** 

#### **GENERATOR INTERCONNECTION REQUIREMENTS**

The requirements for interconnecting a generator with the Company's facilities are contained in Rule B8., Electric Interconnection and Distributed Generation Standards, the Michigan Electric Utility Generator Interconnection Requirements and the Company's Generator Interconnection Supplement to Michigan Electric Utility Generator Interconnection Requirements. All such interconnection requirements must be met prior to the effective date of a customer's participation in the Distributed Generation Program. The customer must sign an Interconnection and Operating Agreement with the Company and fulfill all requirements as specified in the Agreement. The customer shall pay actual interconnection costs associated with participating in the Distributed Generation Program, subject to limits established by the Michigan Public Service Commission.

The Company must approve in writing any subsequent changes in the interconnection configuration before such changes are allowed. Operating in parallel with the Company's system without the Company's written approval of the interconnection and written approval of any subsequent changes to the interconnection will subject the Customer's equipment to disconnection.

#### **METERING REQUIREMENTS**

Metering requirements shall be specified by the Company, as detailed below. All metering must be capable of recording inflow and outflow and all parameters metered on the customer's otherwise applicable retail rate schedule, for both Full Service and Retail Open Access customers.

#### **DISTRIBUTION LINE EXTENSION AND/OR EXTRAORDINARY FACILITIES**

The Company reserves the right to make special contractual arrangements with Distributed Generation Program customers whose utility service requires investment in electric facilities, as authorized by the Company's Standard Contract Rider No. 2, Special Purpose Facilities, Rule C1, Character of Service, and Rule C6., Distribution Systems, Line Extensions and Service Connections, as set out in the Company's Electric Rate Book. The Company further reserves the right to condition a customer's participation in the Distributed Generation Program on a satisfactory completion of any such contractual requirements.

### **CUSTOMER TERMINATION FROM THE DISTRIBUTED GENERATION PROGRAM**

A participating customer may terminate participation in the Company's Distributed Generation Program at any time for any reason on sixty days' notice. In the event that a customer who terminates participation in the Distributed Generation Program wishes to re-enroll, that customer must reapply as a new program participant, subject to program size limitations, application queue and application fees.

The Company may terminate a customer from the Distributed Generation Program if the customer fails to maintain the eligibility requirements, fails to comply with the terms of the interconnection and parallel operating agreement, or if the customer's facilities are determined not to be in compliance with technical, engineering, or operational requirements suitable for the Company's distribution system. The Company will provide sixty days' notice to the customer prior to termination from the Distributed Generation Program, except in situations the Company deems dangerous or hazardous. Such notice will include the reason(s) for termination.

(Continued on Sheet No. D-116.00)

Issued\_\_\_\_\_, 2019 D. M. Stanczak Vice President Regulatory Affairs Effective for service rendered on and after\_\_\_\_\_, 2019

Issued under authority of the Michigan Public Service Commission dated\_\_\_\_\_, 2019 in Case No. U-20162

Original Sheet No. D-116.00

#### (Continued from Sheet No. D-115.00)

#### STANDARD CONTRACT RIDER NO 18 (contd)

#### **DISTRIBUTED GENERATION PROGRAM**

Upon customer termination from the Distributed Generation Program, any existing credit on the customer's account will be forfeited either applied to the customer's bill or refunded to the customer. Distributed Generation Program credit is non-transferrable.

#### **COMPANY TERMINATION OF THE DISTRIBUTED GENERATION PROGRAM**

Company termination of the Distributed Generation Program may occur upon receipt of Commission approval.

Upon Company termination of the Distributed Generation Program, any existing credit on the customer's account will be forfeited either applied to the customer's bill or refunded to the customer. Distributed Generation Program credit is non-transferrable.

### DISTRIBUTED GENERATON PROGRAM STATUS AND EVALUATION REPORTS

The Company will submit an annual status report to the Commission Staff by March 31 of each year including Distributed Generation Program data for the previous 12 months, ending December 31. The report will include interconnection costs paid by each customer and the interconnection equipment provided by the Company during the reporting year. The Company's status report shall maintain customer confidentiality.

### **RENEWABLE ENERGY CREDITS**

Renewable Energy Credits (RECs) are owned by the customer. The Company may purchase Renewable Energy Credits from participating Distributed Generation Program customers who are willing to sell RECs generated if the customer has a generator meter in place to accurately measure and verify generator output. REC certification costs are the responsibility of the customer.

The Company will enter into a separate agreement with the customer for the purchase of any RECs.

Issued . 2019

D. M. Stanczak Vice President Regulatory Affairs Effective for service rendered on and after\_\_\_\_\_, 2019

Issued under authority of the Michigan Public Service Commission dated\_\_\_\_\_, 2019

Detroit, Michigan

in Case No. U-20162

Auditor:J. K. BaldwinRequest No:JKB-1.8Respondent:P. W. DennisPage:1 of 1

## Request:

8. The proposed tariff language provides for the customer to forfeit any existing credit on the customer's account upon company termination of the program. Please explain the company's reasoning for including this language.

## Response:

The Company's Rider 18 proposal states outflow credits can offset the power supply portion of a customer's bill (Exhibit A-16, Schedule F-10, Original Sheet No. D-113). If customers who terminate from the program could "cash out" any remaining outflow balance when service was terminated, the limitation on using the credits to only offset power supply charges would essentially be null. See also, testimony of C. Serna, page 62, lines 12 through 18.

In addition, Act 342, Section 177(4) states, "Notwithstanding any law or regulation, distributed generation customers shall not receive credits for electric utility transmission or distribution charges". Finally, assuming the Commission approves the Company's proposed Rider 18 rate structure, the Company does not anticipate customers to have much value in their banks, if at all, at time of termination.

Auditor:J. K. BaldwinRequest No:JKB-1.7Respondent:R. J. MuellerPage:1 of 1

## **Request:**

7. Based on the company's experience interconnecting more than 1,500 net metering customers, please describe some of the potential investment in electric facilities that could be necessary for a Category 1 distributed generation project. Please describe the electric facilities and the potential costs.

**Response:** To 'net' out the Kwh energy for the year, a DG must be sized to generate all of the required energy during daylight hours. This inherently creates a DG system that is larger than the normal demand of the site. This factor is typically 6-8x the average demand. DTE has many residential transformers that are 10KVa, 25KVa and 50KVa. Often more than one customer is connected to a transformer (typically 3-6).

The following is not a comprehensive list, but represents common scenarios

- If the generation at the site exceeds the household service entrance amperage, the subsequent upgrade may require replacement of secondary, this will be especially true in older neighborhoods as they were typically built with much smaller services than is standard today.
- 2) If the generation at the site exceeds the existing transformers rating, the transformer must be replaced with a larger one.
- 3) If the aggregate generation connected to a transformer exceeds the transformer rating the transformer will need to be replaced with a larger one.
- 4) If the aggregate of the generation on the line section approaches a line limit or produces a high voltage due to conductor impedance, then a conductor will need to be upgraded. The first customer may have no upgrades, subsequent installations in the same area require the upgrades.
- 5) In highly penetrated areas where multiple residences on the same section of line are all generating there may be protection issues that require fuses or reclosers to be replaced or reclosers and relays to have different settings.
- 6) As more generation is placed on the system the generation masks the load from metering since metering is 'net' rather than discrete inflow and outflow. When the generation goes away the load may still be present so the system must still be designed to handle the maximum load.
- 7) Additionally, as more electric vehicles are added to the system, customers may install additional DG to offset the usage from the vehicles potentially increased transformer sizes. This also produces an impact where the transformer will experience longer periods of peak loading as it sees peak load in reverse power for the DG during daylight hours and peak load in forward power when the vehicles are charging.
- 8) All of these above factors result in increases to the thermal load and duty cycle on the transformer and will require higher rated equipment.

Case: U-20162 Witness: J. J. DeCooman Exhibit S-13.0 Page 1 of 1

DTE Electric Company Case No. U-20162 Auditor: Request No: Respondent: Page: J. DeCooman JJD-2.10 M. T. Paul 1 of 1

## Request:

10. Please provide a more detailed description of the need for projects on lines 3, 4 and 5 in Exhibit A-12, schedule B5.1, page 2. Explain how the necessity for the expansion of fly ash storage capabilities works in conjunction with the fly ash processing project listed in line 6. In testimony, witness Paul states that this project will reduce the amount of fly ash transported to landfills. Are these projects designed to segue from wet to dry storage of fly ash? Are these projects inclusive of the cost of removal of wet fly ash storage facilities? Is the concrete transfer pad listed in line item 4 meant to be an intermittent storage location for fly ash before being transferred to the storage silos listed in line item 3?

## Response:

Projects identified on lines 3 and 4

The EPA CCR rule and ELG rule required DTE Electric to construct a dry ash landfill (Monroe Fly Ash Basin Vertical Extension, line 3) to allow Monroe PP to have a location to dispose of CCR while the wet ash basin is being dewatered (40CFR Parts 257, 262, and 423).

Line 6, Monroe ELG Fly Ash Processing project will be able to take fly ash coming from the new dry fly ash transportation system (Monroe ELG Fly Ash Dry Conversion – line 5) and divert a portion of the ash from going to the new dry ash impoundment (Monroe Fly Ash Basin Vertical Extension, line 3). The divergence of ash going to the new dry ash landfill will extend the time before additional dry ash storage will be required.

The two projects that will allow us to handle and permanently store dry fly ash are those shown on Line 5 and Line 3. Line 5, Monroe ELG Fly Ash Dry Conversion project will replace the existing wet fly ash transportation system with a dry fly ash transportation system. Line 3, Monroe Fly Ash Basin Vertical Extension is the permanent dry fly ash storage impoundment that will come from the dry fly ash transportation project (Monroe ELG Fly Ash Dry Conversion, line 5).

The dewatering of the wet ash basin project needs to start after Monroe PP is no longer placing wet fly ash into the basin. The compliance date for the EPA ELG rule requiring conversion to a dry fly ash transportation system is 2023. Therefore, none of the projects listed in Exhibit B5.1, page 2 of 9 includes a dewatering project.

The Monroe Coal Combustible Residuals Transfer Pad project, shown on line 4, is a temporary site to store fly ash that could not be collected when the new dry fly ash transportation system is unavailable (Monroe ELG Fly Ash Dry Conversion projectline 5). Fly ash from the transfer pad is transported by truck to the Monroe Fly Ash Basin Vertical Extension (line 3).

DTE Energ	V.						FOSSIL GENER	ATION PAT RE	VIEW REQUEST	FORM			
Calle Datasta		PAT-AT Agenda	Date:	Forecast	<b>—</b> 11	Scope Change		×	New Revision			Cancel	
3 Detroit	dison	PMP Project ID:		11512	• н	Schedule Change	e	-	Release of Contin	ngency			
A A A A A A A A A A A A A A A A A A A		PAT LVL/REV:	,	orecast	Project Title:	Monroe U1-4 Dr	v Fly Ash Process	ing System					
Project Site:	MONPP	Project Start Dat	te: 9	/4/2018	PMP Problem	Description & P	Project Objectiv	e (Project delivero	bles? Sum benefits-a	ttoch extra sheets if	required):		
Unit:	Common	Scope Baseline	Date:	N/A	Problem Descript	tion: Most of the	fly ash produced	at Monroe is not	viable for marketi	ng and must be la	andfilled. Startin	r in 2024, produc	tion ash must be transported in dry form.
Outage Related?	No	Constr. Start Da	te: 7	/8/2019								6	
Current IRR:	15%	Project I/S Date	12	/31/2020	Project Objective	Invest in techno	ology that is capab	le of processing	the production of	dry fly ash and co	onvert it into a m	arketable product	L.
SAP Profit Center #		Investment Rea	son:		- 67 - 7.5								
WBS Flement	<u> </u>												
Project Tune/Sustems:	14 Common												
Peropetilistion Category	Engineering & L	one Lead for Futur	re Projects	2									
Reconcination category.	Lugareering of th	ong ceau ior rutu	ie riojects										17.5.1 <u>11</u> .11.5.11.07
Brief Project Scope Summ	ary (Summarize pro	oducts & services pro	wided)		Reason for Sub	mittal (Stote rea	son for submittel, ce	tegorize requested	f dollar amount chan	ges, and explain any	r estimate at com	pletion (EAC) benefit	ts or IRR changes):
product. SAP Budget Approval Previously Approved PAT: PAT Change Request: Current PAT Request:	Prior Years	2019 50 50 50 50	2020 50 50 50	2021 50 50 50 50 50	This is for Pre-P.	ATO project initia	tion.						
Total PAT Request:	50	To	tal PAT Change:	50									
Forecart Charge		Current Appro	oved PAT Form			Forecast	Changes				Revise	d PAT Forecast	
Categories	2018	2019	2020	Future Years	2018	2019	2020	2021	2018	2019	2020	Future Years	Project Total (EAC)
DTE Labor (Direct)	50	50	SO	SO	\$50,000	\$500,000	\$500,000	50	\$\$0,000	\$500,000	\$500,000	50	\$1,050,000
Contract Labor (Direct)	SC	\$0	50	50	\$750,000	\$7,500,000	\$8,500,000	\$0	\$750,000	\$7,500,000	\$8,500,000	50	\$16,750,000
Material (Direct)	SC	50	\$0	50	\$0	\$15,000,000	\$12,000,000	50	50	\$15,000,000	\$12,000,000	50	\$27,000,000
Other (Direct)	SC	\$0	50	50	50	50	50	\$6,000,000	50	50	\$0	\$6,000,000	\$6,000,000
Shared Costs	SC	50	\$0	\$0	SO	\$0	50	\$0	50	\$0	50	50	\$0
Indirects	50	\$0	\$0	50	\$50,000	\$2,000,000	\$3,000,000	50	\$50,000	\$2,000,000	\$3,000,000	50	\$5,050,000
Sub-Total	50	\$0	\$0	50	\$850,000	\$25,000,000	\$24,000,000	\$6,000,000	\$850,000	\$25,000,000	\$24,000,000	\$6,000,000	\$55,850,000
Calculated Risk	50	50	50	50	\$150,000	\$5,000,000	\$4,800,000	\$1,200,000	\$150,000	\$5,000,000	\$4,800,000	\$1,200,000	\$11,150,000
TOTAL	50	50	50	50	\$1,000,000	\$30,000,000	\$28,800,000	\$7,200,000	\$1,000,000	\$30,000,000	\$28,800,000	\$7,200,000	\$67,000,000
						Chan	nge in Total EAC:	\$67,000,000					
Project Developer:	Rick Luberacki			APPROVAL DISE	POSITION:								
Project Engineer:	<b>Rich Nasutovich</b>	í		Without Calcula	ated Risk:								
Project Manager	Clint Murphy	2		With Calculated	Risk:	Approved by:					Date:		
fas full (fandard Wash Inste	uction) ALLOD CAL	03.004.011.064	2 for instructions	on filling out this	form	approved of							

Michigan Public Service Commission DTE Energy Company Monroe Dry Fly Ash Processing PMP Case: U-20162 Witness: J. J. DeCooman Exhibit S-13.1 Page 2 of 2

# Fos Gen Large Capital Projects

PMP #11512 Date: Preliminary Draft

Charter

Project Name: Monroe U1-4 Dry Fly Ash Processing System [System 2]

Investment Planning Rep.: Rick Luberacki

#### **Problem Statement**

The majority of flyash produced at Monroe Power Plant is collected and sluiced with water to an onsite Flyash Impoundment Basin where it is disposed. The remaining flyash is transported dry to a third party storage facility and is then trucked to concrete suppliers. Transporting the ash with water must cease by December 31, 2023 per EPA Effluent Limitation Guidelines (ELG).

#### Current State

Flyash produced by Units 1 & 2 that meets quality specifications can be transported in dry form via a third party collection system and then marketed to the concrete industry. To meet acceptance criteria for ash sales, those units are restricted from burning any significant amount of pet coke in the fuel mix since it results in higher LOI in the ash. The burning of pet coke in the fuel mix provides a significant PSCR cost savings to DTE customers. Flyash sales benefits the environment (avoids landfilling) and provides an O&M benefit to DTE. Flyash that is rejected from those units, or cannot be collected by the dry method, must be sluiced to the flyash impoundment basin located about 2 miles from the plant. Flyash produced by Units 3 & 4 must all be sluiced to that basin since a dry collection/transport system does not exist on those units.

Projects are being developed to convert all four units for 100% dry flyash collection to comply with ELG [System 1]. When those projects are completed, all flyash will be transported dry to temporary storage silos. Without an alternate solution, that ash would then be disposed of. That would require the ash to be loaded and trucked to the impoundment basin, but that basin doesn't have enough capacity to accept production ash for the projected remaining life of the plant (year 2040).

Technology exists that allows for the processing of high carbon ash so it can meet marketability standards. Two vendors submitted proposals that would take the dry flyash collected by a future "System 1" to process and market it to concrete suppliers, providing an economic benefit to both DTE and its customers, and provide a beneficial option for the environment.

Expected Benefits	Current State	Target State
Provide a "System 2" solution to manage all dry flyash after December 31, 2023 that also delivers long-term value to DTE, its customers and the environment	Once the Plant becomes ELG compliant for dry flyash collection by December 31, 2023, it cannot burn pet coke and market production ash through the existing Headwaters dry ash facility. Nor can the on-site flyash impoundment accept all future flyash production	The Plant would be able to burn the desired/acceptable amounts of pet coke and eliminate or minimize the amount of production flyash that must be landfilled and do so no later than December 31, 2023

Ideal State

The Plant would be able to blend a desired/acceptable amount pet coke in all four units and still be able to market all or most its flyash production as soon as possible but no later than December 2023.

#### Case for Change

Compliance with the EPA's ELG will require all flyash production be transported dry to its intended destination by December 31, 2023. By then if the plant burns the desired amount of pet coke in all four units, it will not be able to deliver marketable ash to the existing Boral/Headwaters facility, and all production ash would have to be disposed of. However, the existing on-site flyash impoundment does not have enough capacity remaining to accept all production ash for the remaining life of the Plant.

#### Gap to be Corrected

If the plant burns the desired amount of pet coke in all four units, without an alternate means to market their production flyash, it must be transported in dry form from proposed temporary storage silos and properly disposed of starting no later than December 2023.

#### Summary of Scope

Install a dry fly ash beneficiation system capable of processing 100% of the fly ash produced from Units 1-4.

#### Schedule Assumptions

Obtain funding approval in late-2018

Start detailed engineering in late-2018

Start construction in mid-2019

Commission system in late-2020

#### Total Estimated Project Cost = \$67M

Preliminary IRR = 15%

Challenges/Risks to Successful Completion

Monroe has been identified as a long-term asset in the fossil generation fleet.

Case: U-20162 Witness: J. J. DeCooman Exhibit S-13.2 Page 1 of 3

DTE Electric Company Case No. U-20162 Auditor: Request No: Respondent: Page: J. DeCooman JJD-2.2 M. T. Paul 1 of 1

# Request:

2. Please reference Exhibit A-12, schedule B5.1 page 2, lines 5 & 6. Please provide a more detailed description of the need for this project and the expected revenues associated with the sale of usable fly ash to concrete manufacturers. What revenue is the Company expecting to gain through this project? On page 36 of witness Paul's testimony, it is stated that "reducing the amount of fly ash placed in the landfill will minimize cost increases related to the new environmental requirements." Please provide an NPVRR analysis that supports this statement. What assumptions went into this analysis (i.e. additional O&M costs, reduced cost of landfill storage, rate of revenue from sales with concrete manufacturers) and what is the basis for these assumptions?

# Response:

The project referenced in Exhibit A-12, schedule B5.1 page 2, line 5 (Monroe ELG Fly Ash Dry Conversion) is required to attain compliance under Effluent Limitation Guidelines ("ELG").

Related to Exhibit A-12, schedule B5.1 page 2, line 6 (Monroe Dry Fly Ash Processing), the need for this project is substantiated by DTE's desire to drive customer value through the beneficial reuse of coal combustion residuals (CCR; i.e. fly ash and bottom ash) on all 4 units at Monroe Power Plant, and substantially reduce the amount of CCR material placed in DTE's landfill.

Based on our economic analysis, DTE expects to derive an average net revenue of \$8.0MM per year 2023 – 2040 from the sale of marketable ("usable") fly ash and bottom ash.

Please see the NPVRR analysis referenced as "U-20162 JJD-2.1 Monroe Ash Model". The basis of the assumptions used in this analysis is validated through conversations with DTE and external industry experts, Burns & McDonnell, peer utilities, and beneficiation technology vendors.

Scenarios		1	-	2	_	3		4		5
Assumptions	S	itatus Quo	(1	StatusQuo Vo PetCoke)		PetCoke All 4 Units)	н	Boral / eadwaters		SEFA
Start Date of Project		2023		2023		2023	Ì	2023		2023
Project Duration / Contract Length (Yrs)	2	17		17		17		17		17
Capital - \$ (000's)										
RFP Budgetary Estimate	S		\$	•	\$		S	63,320	S	77,708
Dry Ash Handling 3/4 Side				))			]		1	
Headwaters Buy-Out					]				0	
Ongoing / Maintenance CAPEX				U.						
Depreciation Class		20.00		20.00	Ŷ	20.00		20.00	1	20.00
ORM					-				0 	_
Trucking/Landfill Costs - (\$/top)	S	15	S	15	s	15	s	15	s	15
Boiler Benefits (\$, 000's)	S		S	80	s	(80)	S	(80)	s	(80)
PSCR Savings (S. 000's)	S	12.000	S	-	S	18,000	S	18.000	S	18,000
Other	S		S	-	5		S	-	S	
	÷								-	
Ash Marketing										
Fly Ash Production (Annual)		363,000		363,000		363,000		363,000		363,000
Bottom Ash Production (Annual)		100,000		100,000		100,000		100,000		100,000
Production Ash Market Price	S	45	S	45	s	45	s	45	\$	45
Bottom Ash Market Price	\$	6	S	6	\$	6	\$	6	\$	6
Production Ash Marketed Volumes		113,052		290,400				254,100	-	397,000
Bottom Ash Marketed Volumes		100,000		100,000		100,000		100,000	2	66,000
Revenue Share DTE / Price Threshold (SEFA)		50%		50%		50%		65%	\$	35
OPEX										
\$/ton		\$13.50		\$13.50		\$13.50	S	10.00	s	15.20
	_	\$20.20		510.00	_	220.00	2	20.00	-	13.20
Other Costs										
SEFA - Technology and SGA			9							\$10

Case: U-20162 Witness: J. J. DeCooman Exhibit S-13.2 Page 2 of 3

Financing Assumptions - \$ (000's)	Financing Assumptions - \$ (000's)							
Marginal Tax Rate	39%	39%	39%	39%	39%	39%	39%	
Ongoing / Maintenance CAPEX								
Depreciation Class	20	20	20	20	20	20	20	
MACRS	15	15	15	15	15	15	15	
Debt (%)	50%	50%	50%	50%	50%	50%	50%	
Utility Pre-Tax WACC	10.58%	10.58%	10.58%	10.58%	10.58%	10.58%	10.58%	
Rev Reg Discount Rate	7.98%	7.98%	7.98%	7.98%	7.98%	7.98%	7.98%	
Utility Interest Rate	4.61%	4.61%	4.61%	4.61%	4.61%	4.61%	4.61%	
Cost of Equity	10.10%	10.10%	10.10%	10.10%	10.10%	10.10%	10.10%	
Cost of Debt	4.61%	4.61%	4.61%	4.61%	4.61%	4.61%	4.61%	
After-Tax WACC	6.45%	6.45%	6.45%	6.45%	6.45%	6.45%	6.45%	

Commodity Pricing - \$ (000's)							
Market Price of Fly Ash	\$45.00	\$45.00	\$45.00	\$45.00	\$45.00	\$45.00	\$45.00
Market Price of Bottom Ash	\$6.00	\$6.00	\$6.00	\$6.00	\$6.00	\$6.00	\$6.00

# Michigan Public Service Commission DTE Energy Company Monroe Dry Fly Ash Processing NPV analysis

Case: U-20162 Witness: J. J. DeCooman Exhibit S-13.2 Page 3 of 3



#### Status Quo Status Quo (No PetCoke) PetCoke on All 4 Soral/Headwaters SEFA

IPV Deltas			
	SEFA	BORAL	DELTA
Authorized Return	\$43,414	\$35,376	(\$8,038)
Depreciation	\$39,019	\$31,794	(\$7,225)
O&M (Benefit)/Increase	(\$67,189)	(\$42,836)	\$24,354
Ash Sales	(\$66,420)	(\$56,246)	\$10,174
Trucking/Landfill	50	\$15,312	\$15,312
Boiler	(\$769)	(\$769)	\$0
PSCR (Benefit)/Increase	(\$173,114)	(\$173,114)	\$0
Property Tax	\$16,266	\$13,254	(\$3,012)
Change in Cost of Service	(\$141,604)	(\$135,525)	\$6,079

Michigan Public Service Commission DTE Energy Company Monroe Dry Fly Ash Processing budgetary approval status Case: U-20162 Witness: J. J. DeCooman Exhibit S-13.3 Page 1 of 1

 MPSC Case No.:
 U-20162

 Requestor:
 Staff

 Question No.:
 STDE-8.1

 Respondent:
 M. T. Paul

 Page:
 1 of 1

- Question: Please refer to Exhibit A-12, Schedule B5.1, p 2 of 9. Please answer whether DTE Electric has received internal budgetary approval from its management or board of directors for the costs shown on line 6 of this exhibit. If the answer is no, please answer what the expected timeframe is for this project to be reviewed and approved by the proper internal authority.
- Answer: For the Monroe Dry Fly Ash Processing project listed on line 6 of Exhibit A-12, Schedule B5.1, p 2 of 9, DTE Electric has received internal approval for benchmarking, legal due diligence, and conceptual design and engineering. We expect to receive the remaining project approvals in late 2018 or early 2019.

Attachments: None

Michigan Public Service Commission DTE Energy Company Monroe Dry Fly Ash Processing construction contract status Case: U-20162 Witness: J. J. DeCooman Exhibit S-13.4 Page 1 of 1

MPSC Case No.:	U-20162	
Requestor:	Staff	
Question No.:	STDE-8.2	
Respondent:	M. T. Paul	
Page:	1 of 1	

- Question: Please refer to Exhibit A-12, Schedule B5.1, p 2 of 9. Please answer yes or no as to whether a contract has been executed between DTE Electric and an Engineering, Procurement and Construction (EPC) contractor for the project shown on line 6 of this exhibit. If the answer is yes, provide a copy of the Gantt chart for this project with a breakout of construction and financial milestones. If no, please provide an expected date of execution for a contract.
- Answer: No, a contract has not been executed between DTE Electric and an Engineering, Procurement and Construction (EPC) contractor at this time. DTE Electric has not yet determined the contracting strategy related to this project, and therefore it is not yet known whether it will be necessary to execute a EPC contract.

Attachments: None

Michigan Public Service Commission DTE Energy Company Monroe Dry Fly Ash Processing 'Calculated Risk' Case: U-20162 Witness: J. J. DeCooman Exhibit S-13.5 Page 1 of 1

MPSC Case No.:	U-20162	
Requestor:	Staff	
<b>Question No.:</b>	STDE-8.3	
Respondent:	M. T. Paul	
Page:	1 of 1	

- Question: Please refer to the attachment titled "U-20162 JJD-2.3 PMP 11512" provided to Staff in audit response JJD-02. One of the categories under "Forecast Charge Categories" in the referenced attachment is titled "Calculated Risk". Please define this category, and the types of capital expenses that would fall under it.
- Answer: The category defined as "Calculated Risk" is meant to define potential project risks that, if the risks materialized, could result in incremental project capital expenses. For internal capital budgeting purposes, it defines the upper-bound for what capital expenditures could be if all potential risks materialized. None of the expenses designated in the Calculated Risk line are included in the Company's rate revenue request in this case.

Attachments: None

Case: U-20162 Witness: J. J. DeCooman Exhibit S-13.6 Page 1 of 1

MPSC Case No.:	U-20162
Requestor:	MECNRDCSCDE
Question No.:	MECNRDCSCDE-2.8ei
<b>Respondent:</b>	R. F. Feldmann
Page:	1 of 1

- Question: Refer to Robert Feldmann's direct testimony:
  - e. Did DTE Electric solicit bids or proposals for construction of the CHP plant from any entity other than DTE's P&I Group?
    - i. If yes, produce the solicitation and any responses.
- Answer: No. The Company requested a 3<sup>rd</sup> party assessment of the cost to construct this unit and the price that was estimated was significantly higher than the negotiated price with DTE's P&I group.

Michigan Public Service Commission DTE Energy Company CHP Plant LCOE calculation

Basic Assumptions			
	1	Steam Sales	
Capital - \$ / KW	\$1.832	2019 Annual Steam Sales	749,400
Total Cogen Capital	\$62,300	2026 Annual Steam Sales	592,334
Depreciation Class	10	Steam Factor (mmbtu/mlb)	1.25
		Steam Overhead Fee (\$/mlb)	0.00
0&M		2019 Steam Sales (mlbs/hr)	85.55
Fixed (\$ / KW)	\$0.00	2026 Steam Sales (mlbs/hr)	67.62
Variable (\$ / MWH)	\$0.00		
Allocated (\$000 / Year at COD)	\$0	Utility Pre-tax WACC	10.58%
Year 21 thru 30 O&M (2017\$)	\$0	Rev Reg Discount Rate	7.98%
Include Year 21 thru 30 O&M	no	Marginal Tax Rate	39.00%
		Inflation Rate	2.00%
		Industrial Real Millage Rate	72.00
Plant Capacity (MW)	34	Percent Industrial Real	60%
Capacity Factor	91.4%	Industrial Personal Millage Rate	48.00
MWH Produced (2020)	275,960	Percent Industrial Personal	40%
MWH Produced (2027)	272,299	Utility Interest Rate	4.61%
		Utility Leverage	50.00%
Heat Rate - Power 2019	7,751	Cost of Equity	10.10%
Heat Rate - Power 2026	7,726	Cost of Debt	4.61%
Boiler Efficiency	80%	Cost of Capital AFUDC	7.36%
Total Fuel (mmbtu) 2019	3.075.661	After-tax WACC	6.46%
Total Fuel (mmbtu) 2026	2,844,227		
	_,,	Net Margin Benefit to DTEE (2019)	\$0
		Project Life	30
		Commercial Operation Date ("COD")	12/31/2019
		COD Year	2019
		COD Month	12

Case: U-20162 Witness: J. J. DeCooman Exhibit S-13.7 Page 1 of 2

## Results

	LCOE
Return	13.6
Depreciation	8.4
Operating Expenses	0.0
Property Tax	7.6
Fuel	62.6
Steam Sale	(16.9)
Cost of Service	75.1
Levelized Cost of Energy	
Levelized Cost of Service	231,325
Levelized Energy	3,078,545
LCOE	75.1
LCOE (Rounded) \$/MWh	75

Case: U-20162 Witness: J. J. DeCooman Exhibit S-13.7 Page 2 of 2

DTE Electric Company	
Case No. U-20162	

Auditor: Request No: Respondent: Page:

J. DeCooman JJD-1.12 R. D. Feldmann 1 of 1

# Request:

12. Please reference page 7, lines 1-7 of witness Feldmann's testimony. Compare the CHP LCOE to that assumed for solar, wind and a CC gas plant.

# Response:

The project LCOE was \$75. At the time the decision was made in August of 2016 comparable cost for Solar was between \$130-\$530, Wind was \$70-85, and combined cycle gas plant was \$60-\$80.

# EXHIBIT S-13.8 IS CONFIDENTIAL AND BEING FILED UNDER SEAL WITH THE MPSC

Case: U-20162 Witness: J. J. DeCooman Exhibit S-13.9 Page 1 of 1

DTE Electric Company Case No. U-20162 Auditor: Request No: Respondent: M. Edelyn MLE-1.1 J. C. Davis, M. T. Paul, M. A. Bruzzano, T. M. Uzenski, I. M. Dimitry, D. J. Griffin 1 of 1

Page:

## Request:

 Please answer Yes or No to the following question. Does DTE Electric Company's Projected Capital Expenditures Summary Exhibit A-12, Schedule B5, include reserves or contingency costs?

## Response:

Yes.

Fossil Generation includes contingency for the Combined Cycle Plant on Line 11 of Exhibit A-12, Schedule B5.1, in the amount of \$5,900,000 for 16 months ending 4/30/2019 and \$4,633,000 for 12 months ending 4/30/2020. This is consistent with the contingency amounts approved by the Commission in U-18419.

Corporate Staff includes contingency for the Headquarters Energy Center on Line 5, page 1 of 2 of Exhibit A-12, Schedule B5.8, in the amount of \$1,965,000 for 16 months ending 4/30/2019 and \$2,505,000 for 12 months ending 4/30/2020.

These are larger, non-routine projects early in their lifecycle which require contingency to mitigate the risk of cost increases due to unforeseen circumstances. Other than these two exceptions, it is the Company's practice to <u>not</u> include reserves or contingency within the capital projections in the rate case based on previous disallowances.
Case: U-20162 Witness: J. J. DeCooman Exhibit S-13.10 Page 1 of 1

DTE Elect	ric Company
Case No.	U-20162

Auditor: Request No: Respondent: Page: J. DeCooman JJD-2.5 M. T. Paul 1 of 1

# Request:

 Please provide a complete list with detailed descriptions of the costs included in Exhibit A-12, schedule B5.1 page 2, column (c) line 30. Please differentiate between actual costs incurred this year through July 31, and costs that are expected to be incurred between August 1, 2018 and December 31, 2018.

## Response: Dollars in thousands

	Actuals	Forecast
	YTD 7/31/2018	8/1/2018 - 12/31/2018
Capital Expenditures		
ST Labor - Base Capital	682	504
OT Labor - Base Capital	10	0
Materials	0	0
Outside Services	70817	12113
Other Non-Labor	2040	5592
Total Directs	73549	18208
Benefits, Payroll Tax & REP - Total	386	283
Total Capex	73934	18491

CASE NO: U-20162 EXHIBIT: S-14 .0 (KG-1) WITNESS: KAREN M. GOULD PAGE: 1 of 1

MPSC Case No.:	<u>U-20162</u>
Requestor:	K. Gould
Question No.:	KG-1.2
Respondent:	M. B. Leuker
Page:	1 of 1

- Question: Please provide the exact amount of utility funded energy efficiency program savings presumed to have affected the forecasted sales figures represented on Exhibit A-15, Schedule E1, Page 1 of 3. Please provide these in a chart form broke out by customer class.
- Answer: DTE does not explicitly identify an exact amount of utility funded energy efficiency savings for the forecasted sales figures represented on Exhibit A-15, Schedule E1, Page 1 of 3. However, the Company analyzes the forecast results compared with historical performance to ensure consistency, assure historical trends and future EWR programs are implicitly captured.

Attachments: n/a

## 2002-2017 Service Area Sales (GWh)

-	DTE Electric Forecast	DTE Electric Actual Sales <sup>1</sup>	Percent Diff.
2017			
Residential	14,951	14,982	-0.20%
Commercial	20,013	19,939	0.37%
2016			
Residential	14,870	15,182	-2.10%
Commercial	20,277	20,219	0.29%
2015			
Residential	15,178	15,055	0.81%
Commercial	20,394	20,034	1.77%
2014			
Residential	15,359	15,115	1.59%
Commercial	19,762	19,874	-0.57%
2013			
Residential	15,248	15,248	0.00%
Commercial	19,839	19,801	0.19%
2012			
Residential	14,847	15,062	-1.45%
Commercial	19,384	19,574	-0.98%
2011			
Residential	14,621	15,213	-4.05%
Commercial	19,119	19,799	-3.56%
2010			
Residential	14,966	14,980	-0.10%
Commercial	19,336	19,469	-0.68%
2009			
Residential	15,453	15,218	1.52%
Commercial	20,336	19,941	1.94%
2008			
Residential	15,905	15,466	2.76%
Commercial	20,865	20,080	3.76%
2007			
Residential	16,163	15,808	2.20%
Commercial	20,931	20,687	1.16%
2006			
Residential	16,358	15,717	3.92%
Commercial	21,280	20,394	4.16%
2005			
Residential	16,398	15,851	3.34%
Commercial	21,342	20,303	4.87%
2004			
Residential	15,890	15,744	0.92%
Commercial	20,996	20,721	1.31%
2003		· · ·	
Residential	14,983	15,465	-3.22%
Commercial	20,355	20,360	-0.02%
2002	, •	,	
Residential	14,172	14,884	-5.02%
Commercial	19,747	20,011	-1.34%

<sup>1</sup> Actual historical sales are temperature normalized

Michigan F DTE Elect	Public Service Commission ric Company		Case Witn	e No.: ess:	U-20162 Kevin S. Krause					
System Ac	ccess Contribution (SAC)					Exhi Date	bit No.: :	S-17 11/7	, /2018	
	(a)		(b)		(c)		(d)		(e)	
		D	OTE as filed		Consume		All	All		
Line		Residential 1000 kWh					eneration	generation		
<u>No.</u>	No. Description		<u>A-16 F9</u>	more onsite	con	sumed onsite	exported			
1	Average Annual Inflow (kWh)		10,438		9,438		6,064		13,496	
2	Average Annual Outflow (kWh)		4,374		3,374				7,432	
3	Average Annual Generation (kWh)		7,432		7,432		7,432		7,432	
4	Average Annual Total on Site Usage (kWh)		13,496		13,496		13,496		13,496	
5	Revenue Requirement (\$ per kWh)	\$	0.06065	\$	0.06065	\$	0.06065	\$	0.06065	
6	Distribution Revenue Requirement per Site Average	\$	818.53	\$	818.53	\$	818.53	\$	818.53	
7	Distribution Revenue Recovered on Inflow	\$	633.06	\$	572.41	\$	367.78	\$	818.53	
8	Annual Distribution Revenue Deficiency	\$	185.47	\$	246.12	\$	450.75	\$	-	
9	Monthly Distribution Revenue Deficiency	\$	15.46	\$	20.51	\$	37.56	\$	-	
10	10 Average Installed Nameplate Capacity		6.7		6.7		6.7		6.7	
11	System Access Contribution	\$	2.31	\$	3.06	\$	5.61	\$	-	

	The Michigan Public Service Commiss DTE Electric Company	sion				Case No. Exhibit	U-20162 S-6
	Unbundled Cost of Service		Cos	t of Service Stud	iy	Schedule:	F1.1
	TME April 30, 2020 4CP 75-0-25	_		75-0-25		Witness	D. Gottschalk
	(thousands of dollars)		PRC	DUCTION COST	S	Page:	1 of 4
	, ,	(a)	(b)	(c) Total	(d)	(e) F-1 St Lat	
		Total Electric	Total Residential	Commercial Secondary	Total Primary	D9 OPL E-2 Signals	
1	Rate Base	9,501,731	4,328,436	2,341,847	2,809,827	21,620	
2	Revenue	3,114,982	1,278,937	771,712	1,053,403	10,931	
3	Expenses:						
4	Fuel	1,086,201	437,572	268,636	374,581	5,412	
5	Purchased Power	299,594	106,826	63,065	128,696	1,006	
6	O & M Expense	654,390	267,489	159,696	224,522	2,683	
7	Depreciation	334,079	154,308	82,287	96,804	681	
8	Other (Reg Assets, etc)	0	0	0	0	0	
9	Remove Reg Assets	0	0	0	0	0	
10	Accretion of Loss/ Gain on Sale	0	0	0	0	0	
11	Other Taxes	146,609	66,119	36,079	44,054	357	
12	Income Taxes	85,670	35,003	23,722	26,844	101	
13	Amortizations	-	-		-		
14	Total Expenses	2,606,544	1,067,317	633,486	895,502	10,239	
15	Net Oper Income	508,439	211,620	138,226	157,901	692	
16	AFUDC & Other	29,548	13,647	7,278	8,562	60	
17	Net Adjustments	168	-	41	50	0	
18	Adj Net Oper Income	538,154	225,344	145,545	166,513	752	
19	Rate of Return	5.66%	5.19%	6.21%	5.93%	3.48%	
20	Return @ 5.44637869359454 %	517,500	235,743	127,546	153,034	1,178	
21	Income Deficiency	(20,654)	10,399	(17,999)	(13,479)	425	
22 23	Base Revenue Def / (Sufficiency) Additional Rev Req	(27,876) 0	14,035	(24,292)	(18,192)	574	
24	Total Revenue Def/ (Sufficiency)	(27,876)	14,035	(24,292)	(18,192)	574	
25	Revenue Requirement	3,087,107	1,292,972	747,419	1,035,211	11,505	
26	Misc Revenue	35,318	26,531	4,952	3,782	52	
27	Rev Req Excl Misc Rev & Nuc Decomm	3,051,789	1,266,440	742,468	1,031,429	11,452	

The	Michigan Public Service Commission	n						-	Case No.	U-20162
DTE	E Electric Company					-			Exhibit	S-6
Unt	oundled Cost of Service				-	Cos	t of Service Stud	dy	Schedule:	F1.1
TME	E April 30, 2020 4CP 75-0-25						75-0-25		Witness	D. Gottscha
(tho	ousands of dollars)	(5)	<i>(</i> )	<i>(</i> )		PRC	DUCTION COST	S	Page:	2 of 4
		(†) D-1/Other Residential	(g) D-1.2 TOU	(h) D-2 Residential	(I) Total	(J) D-3/Other General	(k) D-3.2 Secondary	(I) D-4 Lg Genl	(m) Total Commercial	
		Service	-	Space Ht	Residential	Service	Schools	Service	Secondary	
1	Rate Base	4,231,513	38,729	58,195	4,328,436	1,832,058	38,048	471,741	2,341,847	
2	Revenue	1,245,718	13,021	20,198	1,278,937	596,631	12,994	162,086	771,712	
3	Expenses:									
4	Fuel	425,212	4,443	7,917	437,572	205,746	5,070	57,820	268,636	
5	Purchased Power	104,069	1,039	1,718	106,826	48,651	1,141	13,272	63,065	
6	O & M Expense	260,457	2,631	4,401	267,489	122,985	2,924	33,788	159,696	
7	Depreciation	150,928	1,360	2,020	154,308	64,503	1,322	16,462	82,287	
8	Other (Reg Assets, etc)	0	0	0	0	0	0	0	0	
8	Other (Reg Assets, etc)	0	0	0	0	0	0	0	0	
10	Accretion of Loss/ Gain on Sale	0	0	0	0	0	0	0	0	
11	Other Taxes	64,618	596	905	66,119	28,185	594	7,300	36,079	
12	Income Taxes	34,108	438	457	35,003	18,536	270	4,916	23,722	
13	Amortizations	-	-				<u> </u>	-		
14	Total Expenses	1,039,392	10,507	17,417	1,067,317	488,607	11,321	133,558	633,486	
15	Net Oper Income	206,326	2,514	2,781	211,620	108,024	1,674	28,528	138,226	
16	AFUDC & Other	13,348	120	179	13,647	5,705	117	1,456	7,278	
17	Net Adjustments	75	1	1	76	32	1	8	41	
18	Adj Net Oper Income	219,749	2,635	2,960	225,344	113,762	1,791	29,992	145,545	
19	Rate of Return	5.19%	6.80%	5.09%	5.21%	6.21%	4.71%	6.36%	6.21%	
20	Return @ 5.44637869359454 %	230,464	2,109	3,170	235,743	99,781	2,072	25,693	127,546	
21	Income Deficiency	10,716	(526)	209	10,399	(13,981)	281	(4,299)	(17,999)	
22	Base Revenue Def / (Sufficiency)	14,462	(710)	282	14,035	(18,869)	379	(5,803)	(24,292)	
23	Additional Rev Req	<u> </u>		<u> </u>				-	<u> </u>	
24	Total Revenue Def/ (Sufficiency)	14,462	(710)	282	14,035	(18,869)	379	(5,803)	(24,292)	
25	Revenue Requirement	1.260.180	12.312	20.480	1.292.972	577,762	13.374	156.283	747,419	
26	Misc Revenue	25,979	142	410	26,531	4,218	66	667	4,952	
27	Rev Reg Excl Misc Rev & Nuc Decomm	1.234.201	12,170	20.070	1.266.440	573,544	13,307	155,616	742,468	
		.,_0.,_01	,	20,010	.,,	0.0,011		,	, .00	

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The	Michigan Public Service Commission	า			-	Case No.	U-20162		
	Electric Company		•			Exhibit	S-6		
Unb	bundled Cost of Service	_	Cos	st of Service St	udy	Schedule:	F1.1		
TME	E April 30, 2020 4CP 75-0-25			75-0-25		Witness	D. Gottschalk		
(tho	usands of dollars)		PRO	DUCTION CO	STS	Page:	3 of 4		
		(n) D-11/Other	(o) D-6.2	(p) D-8	(q) R-1.1/R-1.2	(r) R-10	(s)		
		Primary	Primary Schools	Interrupt Supply	Metal Melt Process Heat	Interrupt Supply	Total Primary		
1	Rate Base	2,406,789	134,437	99,040	64,841	104,720	2,809,827		
2	Revenue	852,877	40,857	43,364	29,786	86,519	1,053,403		
3	Expenses:								
4	Fuel	315,621	15,759	17,422	12,740	13,040	374,581		
5	Purchased Power	71,823	3,703	3,490	2,452	47,229	128,696		
6	O & M Expense	183,483	9,394	9,108	6,444	16,093	224,522		
7	Depreciation	83,336	4,736	3,308	2,134	3,290	96,804		
8	Other (Reg Assets, etc)	0	0	0	0	0	0		
8	Other (Reg Assets, etc)	0	0	0	0	0	0		
10	Accretion of Loss/ Gain on Sale	0	0	0	0	0	0		
11	Other Taxes	37,474	2,076	1,572	1,038	1,893	44,054		
12	Income Taxes	23,486	673	1,273	739	672	26,844		
13	Amortizations	-		-		-			
14	Total Expenses	715,223	36,341	36,174	25,548	82,216	895,502		
15	Net Oper Income	137,654	4,516	7,190	4,238	4,303	157,901		
16	AFUDC & Other	7,371	419	293	189	291	8,562		
17	Net Adjustments	42	2	2	1	2	50		
18	Adj Net Oper Income	145,068	4,937	7,484	4,428	4,596	8,612		
19	Rate of Return	6.03%	3.67%	7.56%	6.83%	4.39%	0.31%		
20	Return @ 5.44637869359454 %	131,083	7,322	5,394	3,531	5,703	153,034		
21	Income Deficiency	(13,985)	2,385	(2,090)	(897)	1,108	(13,479)		
22	Base Revenue Def / (Sufficiency)	(18,874)	3,219	(2,821)	(1,210)	1,495	(18,192)		
23	Additional Rev Req	<u> </u>		-	<u> </u>	-			
24	Total Revenue Def/ (Sufficiency)	(18,874)	3,219	(2,821)	(1,210)	1,495	(18,192)		
25	Revenue Requirement	834,003	44,075	40,543	28,576	88,013	1,035,211		
26	Misc Revenue	3,043	147	159	109	325	3,782		
27	Rev Req Excl Misc Rev & Nuc Decomm	830,960	43,929	40,385	28,467	87,689	1,031,429		

The Mich DTE Elec	igan Public Service Commission tric Company			-		Case No. Exhibit	U-20162 S-6
Unbundle	ed Cost of Service	Cost	of Service	Study		Schedule:	F1.1
TME Apri	il 30, 2020 4CP 75-0-25		75-0-25			Witness	D. Gottschalk
(thousan	ds of dollars)	PRO	DUCTION C	OSTS		Page:	4 of 4
		-	(t)	(u)	(v)	(w)	
		-					
		- Alloc	D-9 OPL Residential	D-9 OPL Commercial	E-1 St Laht	E-2 Signals	
1	Pate Base	Alloc	120	1 570	10 206	0.407	
I	Nale Dase		425	1,579	10,200	9,407	
2	Revenue		319	833	5,975	3,805	
3	Expenses:						
4	Fuel		139	528	3,379	1,366	
5	Purchased Power		24	92	588	302	
6	O & M Expense		65	248	1,590	780	
7	Depreciation		12	47	301	320	
8	Other (Reg Assets, etc)	900	0	0	0	0	
8	Other (Reg Assets, etc)	900	0	0	0	0	
10	Accretion of Loss/ Gain on Sale	900	0	0	0	0	
11	Other Taxes		7	27	175	148	
12	Income Taxes		11	(21)	(25)	135	
13	Amortizations						
14	Total Expenses		259	921	6,008	3,051	
15	Net Oper Income		59	(88)	(33)	753	
16	AFUDC & Other		1	4	27	28	
17	Net Adjustments		0	0	0	0	
18	Adj Net Oper Income		61	(84)	(6)	782	
19	Rate of Return		14.13%	-5.31%	-0.06%	8.31%	
20	Return @ 5.44637869359454 %		23	86	556	512	
21	Income Deficiency		(37)	170	562	(270)	
22	Base Revenue Def / (Sufficiency)		(50)	229	758	(364)	
23	Additional Rev Req						
24	Total Revenue Def/ (Sufficiency)		(50)	229	758	(364)	
25	Revenue Requirement		268	1,062	6,733	3,441	
26	Misc Revenue		1	4	34	<u>1</u> 3	
27	Rev Req Excl Misc Rev & Nuc Decomm		267	1,059	6,699	3,427	

	RETURN		Distrik	oution by Voltage	Level					Case No.	U-20162
	DTE Electric Company Unbundled Cost of Service TME April 30, 2020 4CP 75-0-25 (thousands of dollars)	-	Cos	at of Service Stu	dy	-				Exhibit Schedule: Witness Page:	S-6 F-1.2 D. Gottschalk 1 of 1
	, , , , , , , , , , , , , , , , , , ,		DIST	<b>TRIBUTION COS</b>	тѕ					5	
		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
		Total Electric	Residential Secondary	Commercial Secondary	Primary	- <u>Subtransmission</u>	- Transmission	D-9 OPL Residential	D-9 OPL Commercial	_ E-1 St Lght	- - E-2 Signals
1	Rate Base	7,458,162	4,429,485	2,012,887	623,474	65,632	49,524	8,235	18,433	245,776	4,715
2	Revenue	1,670,367	1,043,931	430,689	121,060	13,561	12,375	1,484	4,414	42,310	543
3	Expenses:	0									
4	Fuel Purchased Power	0	-	-	-	-	-	-	-	-	-
6	O & M Expense	625 419	433 694	- 141 417	- 31 557	- 4 805	- 4 911	- 211	- 539	- 8 002	- 282
7	Depreciation	426 974	260 261	113 777	29 551	3 109	2 213	892	1 881	15 022	267
8	Other (Reg Assets, etc)	0,0.1	0	0	20,001	0	_, 0	0	0	0	0
9	Remove Reg Assets	0	0	0	0	0	0	0	0	0	0
10	Accretion of Loss/ Gain on Sale	0	0	0	0	0	0	0	0	0	0
11	Other Taxes	181,150	109.276	48.093	14.321	1.750	1.381	246	536	5.436	112
12	Income Taxes	60,005	32,911	17,646	6,069	598	594	16	209	1,981	(20)
13	Amortizations	-	-	-	-	-	-	-	-	-	-
14	Total Expenses	1,293,548	836,143	320,934	81,499	10,262	9,100	1,365	3,165	30,441	640
15	Net Oper Income	376,819	207,788	109,755	39,561	3,299	3,275	119	1,248	11,869	(97)
16	AFUDC & Other	0	-	-	-	-	-	-	-	-	-
17	Net Adjustments	129	77	35	11	1	1	0	0	4	0
18	Adj Net Oper Income	376,948	207,865	109,790	39,572	3,300	3,276	119	1,249	11,874	(97)
19	Rate of Return	5.05%	4.69%	5.45%	6.35%	5.03%	6.62%	1.44%	6.77%	4.83%	-2.06%
20	Return @ 5 44637869359454 %	406 200	241 247	109 629	33 957	3 575	2 697	449	1 004	13 386	257
21	Income Deficiency	29,252	33,381	(160)	(5,615)	274	(579)	330	(245)	1,512	354
22	Base Revenue Def / (Sufficiency)	39 479	45 053	(217)	(7 579)	370	(782)	445	(330)	2 041	478
23	Additional Rev Reg	0	0	0	(1,010)	0	0	0	(111)	_,	-
24	Total Revenue Def/ (Sufficiency)	39,479	45,053	(217)	(7,579)	370	(782)	445	(330)	2,041	478
05	Devenue Deguirement	4 700 040	1 000 00 1	400 470	140 404	40.004	44 504	4 000	4.00.4	44.054	4 004
20		1,709,846	1,088,984	430,472	113,481	13,931	2 2 2 2	1,929	4,084	44,351	1,021
26 27	Base Revenue Requirement	55,027 1,654,819	1,050,825	422,154	3,031 110,450	12,454	3,320 8,273	22 1,907	4,012	43,743	20 1,001
	Adjusted for Tree Trim Surge										
28	Total Revenue Def/ (Sufficiency)	39,479	45,053	(217)	(7,579)	370	(782)	445	(330)	2,041	478
29	Base Revenue Requirement	1,654,819	1,050,825	422,154	110,450	12,454	8,273	1,907	4,012	43,743	1,001

Printed 11/7/2018

The Michigan Public Service Commission DTE Electric Company Customer Charges by Voltage for Residential and Commercial Secondary TME April 30, 2020 4CP 75-0-25 (thousands of dollars)

Line	Account	Re	sidential	Commercial Secondary			
	Dist Operation Exp:						
1	586 Meters	\$	6,207.46	\$	925.74		
2	587 Customer Installs	\$	249.79	\$	37.25		
	Dist Maintenance Exp:						
3	597 Meters	\$	0.00	\$	0.00		
	Customer Accounts						
4	901 Supervision	\$	1,041.02	\$	109.07		
5	902 Meter Read	\$	1,236.18	\$	184.36		
6	903 Customer Records	\$	61,310.82	\$	5,752.37		
7	905 Miscellaneous	\$	106.06	\$	2.79		
	Cust Serv & Inf						
8	907 Supervision	\$	987.39	\$	102.26		
9	908 Customer Assist	\$	13,894.57	\$	1,438.98		
10	909 Info & Instr	\$	0.08	\$	0.01		
11	910 Miscellaneous	\$	8,511.06	\$	881.44		
	Depreciation Expense						
12	369 Services depreciation expense	\$	22,894.83	\$	3,195.21		
13	370 Meters depreciation expense	\$	19,447.66	\$	2,900.30		
	Return on Meters and Services in Rate Base						
14	369 Services	\$	373,801.52	\$	51,955.31		
15	370 Meters	\$	388,456.96	\$	57,932.04		
	Less:						
16	Depreciation reserve for services and meters	\$	(278,415.51)	\$	(39,163.92)		
17	Weighted average cost of capital (WACC)		5.45%		5.45%		
18	Return on Meters and Services	\$	26,351.92	\$	3,851.87		
	Property Tax						
19	Property Tax on meters and services	\$	10,164.72	\$	4,659.13		
20	Total Customer Related Cost	\$	172,403.55	\$	24,040.77		
21	Customers		1,997,944		206,915		
22	Cost per Customer per Year	_	86.29		116.19		
23	Cost per Customer per Month		7.19		9.68		

	Michigan Public Service Commission DTE Electric Company Unbundled Cost of Service TME April 30, 2020 4CP 75-0-25 (\$000)		(a) Total Electric	R	C Cc (b) Total esidential	C	CITY CHARG f Service Stu 75-0-25 ICTION COS (c) Total ommercial Secondary	GE dy TS	<sup>(d)</sup> Total Primary	E	Case No. Exhibit: Schedule: Witness: Page: (e) E-1 St Lgt D9 OPL E-2 Signals	U-20162 S-6 F1.4 D. Gottschalk 1 of 4
1 2 3 4 5 6 7	CAPACITY COSTS DETERMINATION Net Production Costs Rev. Req. (Exh A-16 Sch F1.1 Line 27) Proj 2018 Enrgy Sales Rev Net of Fuel (Per A-29, Sch S3, L 32) Less Fuel (Exh A-16 Sch F1.1 Line 4) Less MISO Energy in PP (Exh A-13 Sch C4 Lines 20-21) Less Other Energy in PP (WPA16PF1 Sch 11.5 Line 14) Less Variable O&M (Exh A-16 Sch F1.5 Page 5 Line 8) Capacity Revenue Requirement	\$ \$	3,051,789 (584,478) (1,086,201) (47,395) (156,542) (11,271) 1,165,902									
8	Allocator Sch 200B 4 CP Excl R10 Revenue Requirement		100.0000		49.3976		24.7925		25.7280		0.0819	
9	Capacity Revenue Requirement (Line 7 * Line 8/100)	\$	1,165,902	\$	575,928	\$	289,056	\$	299,963	\$	955	
10	Non-Capacity Revenue Requirement (Line 11 less Line 9)		1,885,887		690,513		453,411		731,466		10,498	
11	Total Production Revenue Requirement (Exh A-16 Sch F1.1 L 27)	\$	3,051,789	\$	1,266,440	\$	742,468	\$	1,031,429	\$	11,452	

Michigan Public Service Commission DTE Electric Company						C	APACITY CHAR	GE	Case No. Exhibit:	U-20162 S-6
Unbundled Cost of Service						Co	st of Service St	udy	Schedule:	F1.4
TME April 30, 2020 4CP 75-0-25							75-0-25		Witness:	D. Gottschalk
(\$000)						PR	ODUCTION CO	STS	Page:	2 of 4
	(f)	(g)	(h)	(i)	(j)	(k)	(I)	(m)	-	
	D-1/Other	D-1.2	D-2		D-3/Other	D-3.2	D-4	Total		
	Residential	TOU	Residential	Total	General	Secondary	Lg Genl	Commercial		
	Service		- Snace Ht	Residential	Service	Schools	Service	Secondary		

8	<u>Allocator</u> Sch 200B 4 CP Excl R10 <u>Revenue Requirement</u>	48.4217	0.4106	0.5653	49.3976	19.6338	0.3657	4.7930	24.7925		-
9	Capacity Rev Req (P1 Line 7 * Line 8/100) \$	564,550	\$ 4,787	\$ 6,591	\$ 575,928	\$ 228,911	\$ 4,264	\$ 55,882	\$ 289,056		
10	Non-Capacity Revenue Requirement (Line	669,651	 7,382	 13,479	 690,513	 344,633	 9,044	 99,734	 453,411		
11	Total Production Revenue Requirement (E \$	1,234,201	\$ 12,170	\$ 20,070	\$ 1,266,440	\$ 573,544	\$ 13,307	\$ 155,616	\$ 742,468		

Michigan Public Service Commission DTE Electric Company				CAPACITY CHARGI	Case No. Exhibit:	U-20162 S-6	
Unbundled Cost of Service			С	ost of Service Stud	ly	Schedule:	F1.4
TME April 30, 2020 4CP 75-0-25				75-0-25		Witness:	D. Gottschalk
(\$000)			P	RODUCTION COST	S	Page:	3 of 4
	(n)	(o)	(p)	(q)	(r)	(s)	
	D-11/Other	D-6.2	D-8	R-1.1/R-1.2	R-10		
		Primary	Interrupt	Metal Melt	Interrupt	Total	
	Primary	Schools	Supply	Process Heat	Supply	Primary	

8	Allocator Sch 200B 4 CP Excl R10	23.1300	1.4081	0.7544	0.4355	-		25.7280	-	
	Allocator									
9	Capacity Rev Req (P1 Line 7 * Line 8/10 \$	269,673	\$ 16,417	\$ 8,796	\$ 5,078	\$ -	\$	299,963		
10	Non-Capacity Revenue Requirement (Li	561,287	 27,512	 31,589	 23,389	 87,689	_	731,466		
11	Total Production Revenue Requirement \$	830,960	\$ 43,929	\$ 40,385	\$ 28,467	\$ 87,689	\$	1,031,429		

Michigan Public Service Commission	CAF	PACITY CHAI	RGE		Case No. Exhibit <sup>.</sup>	U-20162 S-6
Unbundled Cost of Service	Cost	of Service S	tudy		Schedule:	F1.4
TME April 30, 2020 4CP 75-0-25		75-0-25	-		Witness:	D. Gottschalk
(\$000)	PRO	DUCTION CO	OSTS		Page:	4 of 4
	(t)	(u)	(v)	(w)		
	D-9 OPL	D-9 OPL				
	Residential	Commercial	E-1 St Laht	E-2 Signals		

8	<u>Allocator</u> Sch 200B 4 CP Excl R10			-	-	0.0819
0	Allocator					
~		<u> </u>	<u> </u>			

•	/				
9	Capacity Rev Req (P1 Line 7 * Line 8/100)	\$ -	\$ -	\$ -	\$ 955
10	Non-Capacity Revenue Requirement (Line 11 less Line 9)	 267	 1,059	 6,699	 2,473
11	Total Production Revenue Requirement (Exh A-16 Sch F1.1 L 27)	\$ 267	\$ 1,059	\$ 6,699	\$ 3,427

DTE Electric Company Case No. U-20162 Auditor: Request No: Respondent: Page: D. J. Gottschalk DJG-3.3 T. D. Johnson 1 of 1

## **Request:**

3. Please provide 5 years of historical data of the number of customers eligible for the RIA and LIA programs, and the number of customers enrolled in each program over that same time frame.

# **Response:**

	2013	2014	2015	2016	2017
Eligible Electric RIA Customers *	130,000	103,000	97,000	86,000	79,000
Actual Electric RIA Customers	70,021	75,698	72,817	66,831	50,871

As there is no 5-year historical data, The Residential Service Special Low Income Pilot Rate (LIA) started in 2016. As per the Order Case No. U-18255, the Company is on track to meet the annual average of 32,000 customers enrolled. All electric only and combination customers enrolled in LSP in 2016 and 2017 received the Electric LIA credit.

\*Eligible Electric RIA Customers are estimated numbers based on customers who received state and federal assistance

Michigan Public Service Commission DTE Electric Company Staff's Projected Operating Revenue Projected 12 Month Period Ending Apr. 30, 2020 (\$000) Case No.: U-20162 Exhibit: S-6 Schedule: C3 Witness: M. J. Pung Page: 1 of 2

	(a)	(b)	(c)	(d)	(e)
Line No.	Description	Company Test-year 12 mos. Ending 04/30/20	Staff Projection Adjustments	Staff Test-year 12 mos. Ending 4/30/20	Reference
1	Electric Soles Povenue	2 200 210	(1 / 0 227)	2 160 072	
2	Base Fuel and Purchased Power Revenue	1,385,795	(140,237)	1,385,795	
3 4	Electric Sales Revenue (440-449.1, 456.1) Sales for Resale (447)	4,695,005	(148,237)	4,546,768	Exh. S-3, Sch. C3, page 2, line 6
5 6	Other Operating Revenues (450-456) Other Revenue Adjustment:	84,006	-	84,006	Detailed below on Lines 9 thru 17
7	R2 Special Purpose Facilities Rider	6,338	-	6,338	
8	Total Operating Revenue	4,785,349	(148,237)	4,637,113	
9	Other Operating Revenues (450-456)				
10	Late Payment Charges (450)	12,947	-	12,947	
11	Misc Service Charges (451)	9,304	-	9,304	
12	Sale of Water (453)	31	-	31	
13	Electric Property Rental (454)	14,614	-	14,614	
14	Interdept Rent/Shared Asset Rev (455)	43,621	-	43,621	
15	Other Misc Rev (456)	2,770	-	2,770	
16	Transmission of Others Elec (456.1)	720		720	
17	Total Misc Operating Revenue	84,006		84,006	

Mich DTE Staff Pro (\$0	nigan Public Service Commission Electric Company f's Projected Operating Revenue ojected 12 Month Period Ending Apr. 30, 2020 00)		Case: Exhibit: Schedule: Witness: Page:	U-20162 S-6 C3 M. J. Pung 2 of 2
	(a)	(b)		(c)
Line <u>No.</u>	Description	Test 12 mos. Ending 4/30/20	Re	ference
1	Total Electric Sales Revenue	4,703,174	1/ 2/	
2	Less: Nuclear Surcharge Revenue	33,664		
3	Energy Waste Reduction Surcharge Revenue	97,286		
4	Renewable Program Surcharge Revenue	-	Renewable surc	harge rate is zero
5	Low Income Energy Assistance Fund (LIEAF) Surcharge Revenue	25,456		
6	Electric Sales Revenue excluding Surcharges	4,546,768	Line 1 less Line	s 2 through 5

1/ Sponsored by Staff Witness M. J. Pung on Exhibit S-6, Schedule F2, Page 2, Line 44, Column (b)

2/ Excludes TRM Sales and Surcharge Revenue

Case No.: U-20162 Exhibit: S-6 Schedule: F2 Witness: M. J. Pung Page: 1 of 4

# DTE Electric Company Case No. U-20162 Staff's Summary Present and Proposed Revenue by Rate Schedule

Michigan Public Service Commission	Case No.:	U-20162
DTE Electric Company	Exhibit:	S-6
Staff's Summary of Present and Proposed	Schedule:	F2
Revenue by Rate Schedule	Witness: Page:	M. J. Pung 2 of 4

## **Total Revenues**

	(a)	(b)	(c)	(d)	(e)
Line No.	Residential	Total Present Revenue (\$000's)	Total Proposed Revenue (\$000's)	Total Net Increase/ (Decrease) (\$000's)	Total Net Increase/ (Decrease) (%)
1	D1/D1.6 Residential	\$2,202,636	\$2,257,594	\$54,958	2.5%
2	D1.1 Int. Air	\$44,397	\$45,608	\$1,212	2.7%
3	D1.2 TOD	\$23,803	\$23,574	(\$230)	(1.0%)
4	D1.7 TOD	\$11,151	\$12,222	\$1,071	9.6%
5	D1.8 Dynamic	\$17,939	\$18,409	\$470	2.6%
6	D1.9 Elec. Vehicle	\$504	\$516	\$12	2.4%
7	D2 Elec. Space Heat	\$41,148	\$42,304	\$1,156	2.8%
8	D5 Res. Water Ht.	\$14,698	\$15,138	\$439	3.0%
9	Total Residential	\$2,356,276	\$2,415,364	\$59,088	2.5%
10 11	Secondary				
12	D1.1 Int. Air	\$702	\$674	(\$28)	(4.0%)
13	D1.7 TOD	\$679	\$686	\$8	1.1%
14	D1.8 Dynamic	\$32	\$31	(\$1)	(4.1%)
15	D 1.9 Elec Vehicle	\$0	\$0	\$0	-
16	D3 Gen. Serv.	\$931,380	\$903,780	(\$27,600)	(3.0%)
17	D3.1 Unmetered	\$8,469	\$8,172	(\$297)	(3.5%)
18	D3.2 Sec. Educ.	\$27,980	\$29,849	\$1,869	6.7%
19	D3.3 Interruptible	\$10,327	\$9,889	(\$438)	(4.2%)
20	D4 Lg. Gen. Serv.	\$244,392	\$246,517	\$2,125	0.9%
21	D5 Com. Wat. Ht.	\$402	\$408	\$6	1.5%
22	E1.1 Eng. St. Ltg.	\$932	\$929	(\$3)	(0.3%)
23	R7 Greenhs. Ltg.	\$208	\$212	\$4	2.0%
24	R8 Space Cond.	\$8,610	\$8,342	(\$268)	(3.1%)
25	Total Secondary	\$1,234,113	\$1,209,490	(\$24,624)	(2.0%)
26	Deline on a				
27	Primary	<b>A</b> 000 045	<b>A</b> 044005	(004000)	(0.00())
28	D11 Prim. Supply	\$969,915	\$944,985	(\$24,930)	(2.6%)
29	D6.2 Pfl. Educ.	\$54,129	\$50,00Z	\$2,532 (\$2,296)	4.7%
3U 21	Do III. FIIIIary	φοι,/οι ¢2 224	⊕40,490 ¢2.025	(⊅3,200) (¢200)	(0.3%)
30	P1 1 Alt Mtl Molt	43,224 \$3,616	\$2,930 \$3,488	(\$209) (\$128)	(9.0%)
32	R12 EL Pr Hta	\$32,010	\$32 A83	(\$120)	(3.5%)
34	R3 Standby	\$9 029	\$8 798	(\$231)	(2.6%)
25	R10 Int. Supply	¢0,020	\$0,750 \$04,260	(ψ201) ¢1 11/	(2.070)
30	Total Brimany	¢93,100	\$94,209 \$1 101 715	φ1,114 (\$26.067)	(2.10/)
30	Total Filliary	φ1,217,703	φ1,191,715	(\$20,007)	(2.170)
38	Other				
30	D0 Protective L to	¢7 388	\$7 560	¢17/	2 10/
3 <del>9</del> 40	E1 Muni Street Lta	91,000 417 016	91,002 \$50 001	ወ 1/4 ድን በ10	2.470 6 10/
40 //1	E 1 Multi Street Ltg	947,910 000 kg	φ30,034 ¢4 407	Φ∠,919 ¢111	0.1%
41 12	Total Othor			Φ114 ¢2 207	5 /0/
42 43		\$J9,007	φ02,093	φ3,207	0.4%
44	Total All Classes	\$4,867,859	\$4,879,462	\$11,603	0.2%

#### **Power Supply Revenues**

Line	(a)	<sup>(b)</sup> Power Supply Sales	(c) Present Revenue	<sup>(d)</sup> Increase/ (Decrease)	(e) Proposed Revenue	<sup>(f)</sup> Capacity Revenue	<sup>(g)</sup> Non-Capacity Revenue
No.	Residential	(MWH)	(\$000's)	(\$000's)	(\$000's)	(\$000's)	(\$000's)
1	D1/D1.6 Residential	13,765,328	\$1,177,746	\$13,964	\$1,191,710	\$545,114	\$646,597
2	D1.1 Int. Air	321,293	\$21,775	\$258	\$22,034	\$10,079	\$11,955
3	D1.2 TOD	161,650	\$12,879	(\$710)	\$12,170	\$4,787	\$7,382
4	D1.7 TOD	107,048	\$5,377	\$64	\$5,440	\$2,488	\$2,952
5	D1.8 Dynamic	123,219	\$8,823	\$105	\$8,927	\$4,084	\$4,844
6	D1.9 Elec. Vehicle	3,625	\$282	\$3	\$285	\$130	\$155
7	D2 Elec. Space Heat	294,420	\$19,788	\$282	\$20,070	\$6,591	\$13,479
8	D5 Res. Water Ht.	125,084	\$5,736	\$68	\$5,804	\$2,655	\$3,149
9	Total Residential	14,901,667	\$1,252,405	\$14,035	\$1,266,440	\$575,928	\$690,513
10							
11	Secondary						
12	D1.1 Int. Air	6,171	\$425	(\$14)	\$411	\$164	\$247
13	D1.7 TOD	9,266	\$424	(\$13)	\$410	\$164	\$246
14	D1.8 Dynamic	278	\$21	(\$1)	\$20	\$8	\$12
15	D1.9 Elec. Vehicle	0	\$0	\$0	\$0	\$0	\$0
16	D3 Gen. Serv.	7,181,124	\$573,915	(\$18,280)	\$555,636	\$221,763	\$333,872
17	D3.1 Unmetered	76,768	\$5,251	(\$167)	\$5,083	\$2,029	\$3,055
18	D3.2 Sec. Educ.	197,953	\$12,928	\$379	\$13,307	\$4,264	\$9,044
19	D3.3 Interruptible	94,451	\$6,307	(\$201)	\$6,106	\$2,437	\$3,669
20	D4 Lg. Gen. Serv.	2,173,074	\$161,419	(\$5,803)	\$155,616	\$55,882	\$99,734
21	D5 Com. Wat. Ht.	4,844	\$228	(\$7)	\$221	\$88	\$133
22	E1.1 Eng. St. Ltg.	9,804	\$542	(\$17)	\$524	\$209	\$315
23	R7 Greenhs. Ltg.	2,686	\$123	(\$4)	\$119	\$47	\$71
24	R8 Space Cond.	73,929	\$5,179	(\$165)	\$5,014	\$2,001	\$3,013
25	Total Secondary	9,830,349	\$766,760	(\$24,292)	\$742,468	\$289,056	\$453,411
26							
27	Primary						
28	D11 Prim. Supply	12,738,048	\$841,301	(\$18,619)	\$822,682	\$267,722	\$554,959.88
29	D6.2 Pri. Educ.	608,689	\$40,710	\$3,219	\$43,929	\$16,417	\$27,512
30	D8 Int. Primary	713,288	\$43,205	(\$2,821)	\$40,385	\$8,796	\$31,589
31	D10 El.Schools	27,326	\$2,254	(\$50)	\$2,204	\$715	\$1,489
32	R1.1 Alt. Mtl. Melt.	55,770	\$3,238	(\$138)	\$3,099	\$594	\$2,505
33	R1.2 El. Pr. Htg.	464,927	\$26,439	(\$1,072)	\$25,368	\$4,483	\$20,884
34	R3 Standby	133,971	\$6,280	(\$206)	\$6,074	\$1,236	\$4,838
35	R10 Int. Supply	1,717,453	\$86,194	\$1,495	\$87,689	\$0	\$87,688.63
36	Total Primary	16,459,473	\$1,049,621	(\$18,192)	\$1,031,429	\$299,963	\$731,466
37							
38	Other						
39	D9 Protective Ltg.	28,974	\$1,147	\$152	\$1,298	\$0	\$1,298
40	E1 Muni Street Ltg	150,090	\$5,941	\$786	\$6,726	\$0	\$6,726
41	E2 Traffic Lights	56,023	\$3,791	(\$364)	\$3,427	\$955	\$2,473
42	Total Other	235,086	\$10,879	\$574	\$11,452	\$955	\$10,498
43							
44	Total All Classes	41,426,576	\$3,079,665	(\$27,877)	\$3,051,789	\$1,165,902	\$1,885,887

Michigan Public Service Commission	Case No.:	U-20162
DTE Electric Company	Exhibit:	S-6
Staff's Summary of Present and Proposed	Schedule:	F2
Revenue by Rate Schedule	Witness: Page:	M. J. Pung 4 of 4

#### **Distribution Revenues**

	(a)	(b)	(c)	(d)	(e)
Lino		Distribution	Present	Increase/	Proposed
No	Residential	(MWH)	(\$000's)	(becrease) (\$000's)	(\$000's)
110.	Reoldential	(	(\$000.0)	(\$000.0)	(\$000.0)
1	D1/D1.6 Residential	13,765,328	\$1,024,890	\$40,994	\$1,065,884
2	D1.1 Int. Air	321,293	\$22,621	\$953	\$23,575
3	D1.2 TOD	161,650	\$10,924	\$480	\$11,404
4	D1.7 TOD	107,048	\$5,775	\$1,007	\$6,782
5	D1.8 Dynamic	123,219	\$9,116	\$366	\$9,482
6	D1.9 Elec. Vehicle	3,625	\$222	\$9	\$231
7	D2 Elec. Space Heat	294,420	\$21,360	\$874	\$22,234
8	D5 Res. Water Ht.	125,084	\$8,962	\$371	\$9,333
9	I otal Residential	14,901,667	\$1,103,871	\$45,053	\$1,148,924
10 11	Secondary				
12		6 171	¢277	(\$15)	\$262
12		0,171	φ211 \$255	(\$15) ¢21	φ202 ¢276
13		9,427	φ200 ¢11	φ21 (¢1)	φ270 ¢11
14	D1.9 Eloc Vohicle	270	μι Φ	(J) \$0	11ψ ΟΦ
16	D3 Gen Serv	7 /08 306	φυ \$357 /65	ψυ (\$0.321)	ΨU \$3/8 1//
10	D3 1 Unmetered	7,430,330	φ337, <del>4</del> 03 \$3,218	(\$130)	\$3 080
18	D3 2 Sec. Educ	499 134	\$15,052	(\$130) \$1.490	\$16 542
10	D3 3 Interruptible	100 968	\$4,020	(\$237)	\$3 783
20	Dila Gen Serv	2 506 151	\$82 07 <i>1</i>	(ψ237) \$7 927	\$90,705 \$90,901
20	D5 Com Wat Ht	2,000,101	φ02,974 \$174	۶13, wi	\$187
21	E1 1 Eng St Ltg	9,804	\$300	\$13 \$14	\$405
23	R7 Greenhs I to	2 686	φ000 \$85	φ1+ \$8	φ+00 \$94
23	R8 Space Cond	75 717	\$3 431	φ0 (\$103)	\$3,328
25	Total Secondary	10 790 349	\$467,353	(\$331)	\$467,022
26		10,700,010	φ101,000	(4001)	\$101,02L
27	Primary				
28	D11 Prim. Supply	16,122,977	\$128,615	(\$6,311)	\$122,303
29	D6.2 Pri. Educ.	1,013,738	\$13,419	(\$686)	\$12,733
30	D8 Int. Primary	845,260	\$8,575	(\$465)	\$8,111
31	D10 El.Schools	36,675	\$969	(\$239)	\$731
32	R1.1 Alt. Mtl. Melt.	55,770	\$378	\$10	\$388
33	R1.2 El. Pr. Htg.	473,628	\$6,494	\$221	\$6,715
34	R3 Standby	127,822	\$2,750	(\$25)	\$2,725
35	R10 Int. Supply	1,717,453	\$6,962	(\$381)	\$6,581
36	Total Primary	20,393,323	\$168,162	(\$7,875)	\$160,286
37					
38	Other				
39	D9 Protective Ltg.	28,974	\$6,241	\$22	\$6,264
40	E1 Muni Street Ltg	150,090	\$41,975	\$2,133	\$44,108
41	E2 Traffic Lights	56,023	\$592	\$478	\$1,069
42	Total Other	235,086	\$48,808	\$2,633	\$51,441
43					
44	Total All Classes	46,320,426	\$1,788,194	\$39,479	\$1,827,673

Case No.: U-20162 Exhibit: S-6 Schedule: F3 Witness: M. J. Pung Page: 1 of 52

DTE Electric Company Case No. U-20162 Staff's Present and Proposed Revenue Calculations Michigan Public Service Commission DTE Electric Company Staff's Present and Proposed Revenue Calculations Residential Service Rate - D1 Current Structure Case No.: U-20162 Exhibit: S-6 Schedule: F3 Witness: M. J. Pung Page: 2 of 52

Line	(a)	(b)		(c)	(d)	(e)	(f)
<u>No.</u>	Description	Billing Deter	minants	Preser	nt	Propo	sed
	Full Service Power Supply	<u>Quantity</u>	<u>Units</u>	Rate	Revenue	Rate	Revenue
					(\$000)		(\$000)
1	Power Supply Charges	13 527 087	M\\/b	\$0.04744	641 768	\$0.04697	635 118
3	Capacity Charges:	13,327,307		\$0.04744	041,700	ψ0.04037	033,440
4	First 17 KWH/Day	9,195,578	MWh	\$0.03310	304.374	\$0.03452	317,451
5	Excess	4.332.409	MWh	\$0.04878	211.335	\$0.05039	218.301
6	Power Supply Subtotal	13,527,987	MWh	8.56¢	1,157,476		1,171,200
7							
8	PSCR	13,527,987	MWh	\$0.00000	0	\$0.00000	0
9	REPS	1,912,171	Meters	\$0.00000	0	\$0.00000	0
10	Total Full Service Power Supply	13,527,987	MWh	8.56¢	1,157,476	<b>8.66¢</b>	1,171,200
11							
12	Full Service Distribution	Quantity	<u>Units</u>				
13							
14	Service Charge	1,912,171	Cust.	\$7.50	172,095	\$7.50	172,095
15	Income Assistance	70,000	Cust.	(\$7.50)	(6,300)	(\$7.50)	(6,300)
16	Senior Citizen Provision	99,712	Cust.	(\$3.75)	(4,487)	(\$3.75)	(4,487)
17	Former D1 2 Custo, Distribution Charr	444 400		\$0.05000	25.014	¢0.05000	00.407
10	Distribution Charge	441,428	MW	\$0.05666	25,011	\$0.05996	20,407
20	Distribution Charge	12 527 097	MAN	\$0.03099	022 122	\$0.03990 <b>7 10</b> 4	072 412
20	Distribution System	13,327,907		0.89¢	932,123	7.19¢	972,412
21	Nuclear Decomm	13 527 087	M\\/b	\$0,000765	10 3/9	\$0,000765	10 3/0
22	Energy Waste Reduction	13,527,907	MW/h	\$0.000703	58 468	\$0.000703	58 468
24	LIFAF	1 912 171	Cust	\$0.93	21 340	\$0.004022	21,340
25	Distribution Surcharges	13 527 987	MWh	0.67¢	90,157	0.67¢	90,157
26	Storman Satorna goo	10,021,001					
27	Total Full Service Distribution			7.56¢	1.022.279	7.85¢	1.062.569
28	Total Full Service D1	13,527,987	MWh	16.11¢	2,179,756	16.51¢	2,233,769
29							
30	Choice	Quantity	Units	Rate	Revenue	Rate	Revenue
31					(\$000)		(\$000)
32	Capacity Charges:						
33	First 17 KWH/Day	0	MWh	\$0.03310	0	\$0.03452	0
34	Excess	0	MWh	\$0.04878	0	\$0.05039	0
35	Capacity Total	0	MWh		0		0
36							
37	Distribution Charges						
38	Service Charge	0	Cust.	\$7.50	0	\$7.50	0
39	Income Assistance	0	Cust.	(\$7.50)	0	(\$7.50)	0
40	Senior Citizen Provision	0	Cust.	(\$3.75)	0	(\$3.75)	0
41	Distribution Charge	0	M\\/b	\$0.05600	0	¢0.05006	0
42	Distribution System	0	MW/h	\$0.03099	0	\$0.05990	0
43	Distribution System	0			0		U
44 45	Nuclear Decomm	0	MW/h	\$0,000765	0	\$0,000765	0
46	Energy Waste Reduction	0	M\//h	\$0.000703	0	\$0.000703	0
47	LIEAF	0	Cust.	\$0.004022	0	\$0.93	0
48	Distribution Surcharges	0	MWh		0	<i><b>Q</b></i> 0.00	0
49		Ŭ					
50	Total Choice D1	0	MWh		0		0
51		v					
52	Total D1	13,527.987	MWh	16.11¢	2,179.756	16.51¢	2,233.769
53	Increase/Decrease (\$)	, , ,					54,013

Michigan Public Service Commission DTE Electric Company Staff's Present and Proposed Revenue Calculations Interruptible Space-Conditioning Service Rate - D1.1 Residential Case No.: U-20162 Exhibit: S-6 Schedule: F3 Witness: M. J. Pung Page: 4 of 52

Line	(a)	(b)		(c)	(d)		(e)	(f)	
<u>No.</u>	Description	Billing Detern	ninants	 Pres	ent	_	Proposed		
	Full Service Power Supply	Quantity	<u>Units</u>	Rate	Revenue		Rate	Revenue	
					(\$000)			(\$000)	
1	Power Supply Charges								
2	Non-Capacity Charge	321,293	MWh	\$0.03764	12,093		\$0.03721	11,955	
3	Capacity Charges			<b>*</b> *****			<b>A</b> A AAAA <b>T</b>		
4	Summer Energy	300,005	MWh	\$0.03182	9,546		\$0.03307	9,923	
5	Winter Winter	21,288	IVIVVn	 \$0.00638	136		\$0.00733	156	
6	Power Supply Subtotal	321,293	MWh		21,775			22,034	
/	DOOD	204 202		¢0,00000	0		¢0,0000	0	
0	POUR Total Full Carrian Dawar Supply	321,293	NAVA	\$0.00000	01.775		\$0.00000	0	
9	Total Full Service Power Supply	321,293	IVIVVII	0./0¢	21,775		0.00¢	22,034	
10	Full Convine Distribution	Quantity	Linita						
10	Full-Service Distribution	Quantity	<u>Units</u>						
12	Sorvice Charge (June Oct)		F	¢1 05	2.676		¢1 05	2 676	
1/	Service Charge (June-Oct)	274,500	5	\$1.95	2,070		\$1.95	2,070	
15	Distribution Charge	321 293	MW/h	\$0.05699	18 310		\$0.05996	19 264	
16	Distribution System	321,200	MWh	6 53¢	20 987	_	6 83¢	21 940	
17	Distribution Oystern	021,200	1010011	0.00¢	20,507		0.00¢	21,040	
18	Nuclear Decomm	321 293	MW/h	\$0 000765	246		\$0,000765	246	
19	Energy Waste Reduction	321,293	MWh	\$0.004322	1.389		\$0.004322	1.389	
20	Distribution Surcharges	321 293	MWh	0.51¢	1.634		0.51¢	1.634	
21	2.ouioucii euloinaigeo	021,200		0.0.7	.,		0.0.19	.,	
22	Total Full Service Distribution	321.293	MWh	7.04¢	22.621		7.34¢	23.575	
23	Total Full-Service D1.1	321 293	MWh	13.82¢	44.397		14.20¢	45.608	
24		021,200			,			,	
25	Choice	Quantity	Units	Rate	Revenue		Rate	Revenue	
26		daaning	01110	<u>rtato</u>	(\$000)		<u>. tuto</u>	(\$000)	
27	Capacity Charges				(\$555)			(\$000)	
28	Summer Energy	0	MWh	\$0.03182	0		\$0.03307	0	
29	Winter Energy	0	MWh	\$0.00638	0		\$0.00733	0	
30	Capacity Total	0	MWh		0			0	
31									
32	Distribution Charges								
33		Customers	Months						
34	Service Charge (June-Oct)	0	5	\$1.95	0		\$1.95	0	
35									
36	Distribution Energy	0	MWh	\$0.05699	0		\$0.05996	0	
37	Distribution System	0	MWh		0			0	
38									
39	Nuclear Decomm.	0	MWh	\$0.000765	0		\$0.000765	0	
40	Energy Waste Reduction	0	MWh	\$0.004322	0		\$0.004322	0	
41	Distribution Surcharges	0	MWh		0			0	
42									
43	Total Choice D1.1	0	MWh		0			0	
44				 		·			
45	Total D1.1	321,293	MWh	13.82¢	44,397		14.20¢	45,608	
46	Increase/Decrease (\$)			 				1,212	

#### Michigan Public Service Commission DTE Electric Company Staff's Present and Proposed Revenue Calculations Residential Time of Day Service Rate - D1.2

Case No.: U-20162 Exhibit: S-6 Schedule: F3 Witness: M. J. Pung Page: 5 of 52

Line	(a)	(b)			(c)	(d)	(e)	(f)
<u>No.</u>	Description	Billing Deter	minants		Prese	ent	Proposed	
	Full Service Power Supply	Quantity	<u>Units</u>		Rate	Revenue	Rate	Revenue
						(\$000)		(\$000)
1	Power Supply Charges	161 650			¢0.04954	¢7.047	¢0.04567	7 202
2	Consoity Charges	161,050	IVIVVII		<b>Ф</b> 0.04854	\$7,847	\$U.U4567	7,362
3	Summer:							
5	On-Peak	14 216	M\\/h		\$0.12626	1 705	\$0 11950	1 600
6	Off-Peak	46 925	MW/h		\$0.12020 \$0.01031	484	\$0.00994	466
7	Winter:	40,020	1010011		φ0.01001	+0+	φ0.00334	-00
8	On-Peak	21 387	MWh		\$0.09913	2 120	\$0.09387	2 008
9	Off-Peak	79 122	MWh		\$0,00801	634	\$0.00777	614
10	Power Supply Subtotal	161 650	MW/b		<i>\</i>	12 870	\$0.00777	12 170
10	Fower Supply Subiotal	101,030				12,079		12,170
12	PSCR	161 650	MWh		\$0,0000	0	\$0,0000	0
13	REPS	8 793	Meters		\$0,00000	0	\$0,00000	0
14	Total Full Service Power Supply	161 650	MWh		7 97¢	12 879	7 53¢	12 170
15	rotari an dervice i ower oupply	101,000	1010011		1.51¢	12,013	1.00¢	12,170
16	Full Service Distribution	Quantity	Unite					
17		Quantity	Units					
10	Sonvice Charge	9 702	Cust		¢7 50	701	¢7.50	701
10	Service Charge	0,795	Gusi.		φ1.50	791	φ1.50	751
20	Distribution Energy	161 650	M\\/h		\$0.05600	0 212	\$0.05006	0 602
20	Distribution System	161,650	MW/h		φ0.00099 6 19¢	10 004	\$0.03390	10 484
21	Distribution System	101,000			0.136	10,004	0.436	10,404
22	Nuclear Decomm	161 650	MM		\$0,000765	124	¢0,000765	124
23	Energy Waste Reduction	161,650	M\\/h		\$0.000703	600	\$0.000703	600
25		8 703	Cust		\$0.00 \$0.03	033	\$0.00 \$0.03	033
20	Distribution Surchargos	161 650	MW/h		0.57¢	90	0.53	020
20	Distribution Surcharges	101,030			0.37¢	920	0.37¢	520
28	Total Full Service Distribution	161 650	MW/h		6 76¢	10 924	7 05¢	11 404
20	Total Full-Service D1 2	161,650	MW/h		14 73¢	23 803	14.58¢	23 574
20		101,030			14.75¢	23,003	14.30¢	25,574
21	Choico	Quantity	Unite	1 —	Pato	Povonuo	Pato	Povonuo
22	Choice	Quantity	Units		Itale	(\$000)	Itale	(\$000)
3Z 22	Consoit Charges					(\$000)		(2000)
24	Summer							
35	On-Peak	0	M\\/h		\$0.12626	0	\$0 11950	0
36	Off-Peak	0	M\\/h		\$0.12020 \$0.01031	0	\$0.00904	0
37	Winter:	0			ψ0.01001	0	ψ0.00334	0
38	On-Peak	0	M\\/h		\$0.09913	0	\$0.09387	0
39	Off-Peak	0	MWh		\$0.00801	0	\$0.00777	0
40	Capacity Total	0	MW/h		φ0.00001	0	φ0.00111	Ű
40		0				v		U
41	Sonvice Charge	0	Cust		¢7 50	0	¢7.50	0
42	Service Charge	0	Gusi.		φ1.50	0	\$7.50	0
43	Distribution Chargo	0	MM		\$0.05600	0	\$0.05006	0
44	Distribution System	0	M\A/b		\$0.000 <del>9</del> 9	0	\$0.03990	0
40 46	Distribution System	U	11 1 1 1 1 1			U		U
40 47	Nuclear Decomm	0			\$0,000765	0	\$0.00076F	0
47	Enorgy Wests Poduction	U				0	φ0.000765 ¢0.004200	0
40		0	Cust		φ0.004322 ¢0.02	0	φ0.004322 ¢0.02	0
49 50		0		┨ ┝━━	ΦU.93	0	<b>Φ</b> 0.93	0
5U	Distribution Surcharges	0	IVIVV			U		0
51	Total Ohaina D4 C		N 43 4 /1					
52	Total Choice D1.2	0	WWh			U		0
53	T ( ) D ( 0	404.050						
54	Total D1.2	161,650	MWh		14.73¢	23,803	14.58¢	23,574
55	Increase/Decrease (\$)							(230)

Michigan Public Service Commission DTE Electric Company Staff's Present and Proposed Revenue Calculations Residential Service Special Low Income Pilot Rate - D1.6 Current Structure

Line	(a)	(b)			(c)	(d)	(e)	(f)
No.	Description	Billing Detern	ninants		Present		Proposed	
	Full Service Power Supply	Quantity	<u>Units</u>		Rate	Revenue	Rate	Revenue
1	Power Supply Charges					(\$000)		(\$000)
2	Non Canacity Charge	227 2/1	MM/b		¢0.04744	11 250	\$0.04607	11 140
2	Conscitu Charges	237,341			<b>\$0.04744</b>	11,239	\$0.04097	11,149
1		162 710			¢0.02210	E 410	¢0.02452	E 650
4	Filst 17 KWH/Day	72 622	M/M/b		\$0.03310 \$0.04979	3,419	\$0.03432	3,032
5		73,023		▎┝	\$0.04878	3,391	\$0.05039	3,710
6	Power Supply Subtotal	237,341	MWh		8.54¢	20,270	8.64¢	20,510
1	2002				•• ••••		<b>A A A A A A A A A A</b>	
8	PSCR	237,341	MVVn		\$0.00000	0	\$0.00000	0
9	REPS	32,000	Meters		\$0.00000	0	\$0.00000	0
10	Total Full Service Power Supply	237,341	MWh		8.54¢	20,270	<b>8.64</b> ¢	20,510
11								
12	Full Service Distribution	Quantity	<u>Units</u>					
13								
14	Service Charge	32,000	Cust.		\$7.50	2,880	\$7.50	2,880
15	Income Assistance	32,000	Cust.		(\$40.00)	(15,360)	(\$40.00)	(15,360)
16								
17	Distribution Charge	237,341	MWh		\$0.05699	13,526	\$0.05996	14,230
18	Distribution System	237,341	MWh		0.44¢	1,046	0.74¢	1,750
19								
20	Nuclear Decomm.	237,341	MWh		\$0.000765	182	\$0.000765	182
21	Energy Waste Reduction	237,341	MWh		\$0.004322	1,026	\$0.004322	1,026
22	LIEAF	32,000	Cust.		\$0.93	357	\$0.93	357
23	Distribution Subtotal	237,341	MWh		0.66¢	1,564	0.66¢	1,564
24								· · · ·
25	Total Full Service Distribution				1.10¢	2,611	1.40¢	3,315
26	Total Full Service D1.6	237 341	MWh		9.64¢	22,880	10.04¢	23,825
27		201,011			0.0.19	,000		
28	Choice	Quantity	Units	רו ו	Rate	Revenue	Rate	Revenue
29		daanny	<u>orne</u>		<u>nato</u>	(\$000)	<u></u>	(\$000)
30	Capacity Charges					(\$000)		(\$000)
31	First 17 KWH/Day	0.1	////h		\$0.03310	0	\$0.03452	0
32	Evcess	0 1	////h		\$0.04878	0	\$0.05432	0
33	Total Canacity	0	*****		ψ0.0+070	0	ψ0.00000	0
24	Total Capacity	0				U		v
25	Sanvias Charge	0	Cust		¢7 50	0	¢7 50	0
30		0	Cust.		\$7.50 (\$40.00)	0	\$7.50 (\$40.00)	0
30	Income Assistance	0	Cusi.		(\$40.00)	0	(\$40.00)	0
31	Distribution Charge	0			¢0.05600	0	¢0.05006	0
30	Distribution Charge	0			\$0.05 <del>0</del> 99	0	\$0.05996	0
39	Distribution System	0	IVIVIN			U		U
40					<b>A A A A A A A A A A</b>		<b>A A A A A A A A A A</b>	
41	Nuclear Decomm.	0	MWh		\$0.000765	0	\$0.000765	0
42	Energy Waste Reduction	0	MWh		\$0.004322	0	\$0.004322	0
43		0	Cust.		\$0.93	0	\$0.93	0
44	Distribution Subtotal	0	MWh			0		0
45				▏┕				
46	Total Choice D1.6	0	MWh			0		0
47				. —				
48	Total D1.6	237,341	MWh		9.64¢	22,880	10.04¢	23,825
49	Increase/Decrease (\$)							945

#### Michigan Public Service Commission DTE Electric Company Staff's Present and Proposed Revenue Calculations Geothermal Time of Day Service Rate - Residential D1.7

Line	(a)	(b)		(c)	(d)	(e)	(f)
<u>NO.</u>	Description	Billing Deter	minants	Prese	ent	Propo	sed
	Full Service Power Supply	Quantity	Units	Rate	Revenue	Rate	Revenue
					(\$000)		(\$000)
1	Power Supply Charges	407.040	N 43 A / I-	¢0,00000	¢0.007.04	¢0.00757	0.050
2	Non-Capacity Charge	107,048	IVIVI	\$0.02800	\$2,997.34	\$0.02757	2,952
3	Capacity Charges:						
4	On-Peak	5 704	M\\/b	\$0,10082	\$58/ 13	\$0 10277	505
6	Off-Peak	15 020	M\A/b	\$0.10082	\$220.10	\$0.10277	234
7	Winter Epergy (11 a m. Peak Start)	10,020		ψ0.01+00	ψΖΖΟ.13	ψ0.01009	204
8	On-Peak	18 307	M\\/b	\$0.02766	\$506.37	\$0.02875	526
a	Off-Peak	67 928	M\\/h	\$0.02700	\$1 068 50	\$0.02075	1 133
10	Dewer Cumply Subtetel	107.040	MA/h	\$0.01010	¢1,000.00	\$0.01001	F, 140
10	Power Supply Subiolal	107,048	IVIVII		\$5,376.53		5,440
12	PSCR	107 048	M\\/b	\$0,0000.02	0	\$0,0000	0
12	Total Bower Supply	107,040	M\/b	φ0.00000 5.02¢	5 277	φ0.00000 5.08¢	5 440
13	Total Fower Supply	107,040		J.02¢	3,377	J.00¢	3,440
14	Full Service Distribution	Quantity	Unito	4			
10	Full Service Distribution	Quantity	Units				
10	Convine Charge (C(dev))	0.010	Curat	¢0.067	100	¢0.067	100
17	Service Charge (\$/day)	8,010	Cusi.	\$0.067	196	\$0.067	190
10	Distribution Charge	107 049	MM/b	¢0.04702	E 024	¢0.05644	6 0/1
20	Distribution Charge	107,040	MW/b	\$0.04703	5,034	<b>Φ</b> 0.05044	6,041
20	Distribution System	107,048	IVIVII	4.69¢	5,230	0.83¢	0,237
21	Nuclear Decomm	407.040		¢0,000765	00	¢0,000765	00
22	Nuclear Decomm.	107,048		\$0.000765 \$0.004222	82 462	\$0.000765 \$0.004222	62
23	Energy Waste Reduction	107,048		\$0.004322	403	\$0.004322	463
24	Distribution Surcharges	107,048	IVIVI	0.51¢	545	0.51¢	545
25		107.040		5.00.1	E 335	0.041	0.700
26	Total Full Service Distribution	107,048	MWh	5.39¢	5,775	6.34¢	6,782
27	Total Full-Service D1.7	107,048	MWh	10.42¢	11,151	11.42¢	12,222
28		-			-		_
29	Choice	Quantity	Units	Rate	Revenue	Rate	Revenue
30					(\$000)		(\$000)
31	Capacity Charges:						
32	Summer Energy (11 a.m. Peak Start)	0		<b>A</b> 0 40000	0	<b>\$0,40077</b>	
33	Of Peak	0		\$0.10082	0	\$0.10277	0
34	Ult-Peak	0	IVIVVN	\$0.01466	0	\$0.01559	0
30	On Book	0	MM/b	¢0.02766	0	¢0.02975	0
27	Off Poak	0	M/M/b	\$0.02700	0	\$0.02075	0
20	Total Canacity	0	M/M/h	\$0.01573	0	\$0.01007	0
20	Total Capacity	0			U		U
39	Distribution Charges						
40	Distribution Charges	0	Cust	¢0.067	0	¢0.067	0
41	Service Charge (\$/day)	0	Gusi.	φ0.007	0	\$0.007	0
42	Distribution Charge	0	M\\/b	\$0.04703	0	\$0.05644	0
40	Distribution System	0	M\/b	\$0.04703	0	ψ0.03044	0
44	Distribution System	0			U		U
40	Nuclear Decomm	0	MMA	\$0.000765	0	\$0.000765	0
40 47	Energy Waste Reduction	0	M\\/h	\$0.000705	0	\$0.000765	0
71 10	Distribution Surcharges	0	MM/b	ψ0.00 <del>4</del> 022	0	ψ0.00 <del>1</del> 022	0
40 40	Distribution Surcharges	0	IVIVVII		U		0
43	Total Chaine D1 7	^		1			
50	Total Choice D1.7	0	IVIVV		U		0
51	Total D4 7	407.040		40.40	44.454	44.40	40.000
52		107,048	IVIVN	10.42¢	11,151	11.42¢	12,222
53	Increase/Decrease (\$)						1,071

Michigan Public Service Commission DTE Electric Company Staff's Present and Proposed Revenue Calculations Residential Dynamic Peak Pricing Rate - D1.8 Case No.: U-20162 Exhibit: S-6 Schedule: F3 Witness: M. J. Pung Page: 9 of 52

Line	(a)	(b)	
No.	Description	Billing Detern	ninants
	Full Service Power Supply	Quantity	Units
1	Non-Capacity Charge	123,219	MWh
2	Capacity Charges:		
3	Off-Peak (11pm-7am)	66,349	MWh
4	Mid-Peak (7pm-11pm, 7am-3pm)	41,927	MWh
5	On-Peak (3pm-7pm)	14,850	MWh
6	Critical Peak (3pm-7pm)	93	MWh
7	Power Supply Subtotal	123,219	MWh
8		,	
9	PSCR	123,219	MWh
10	REPS	14,500	Cust
11	Total Full Service Power Supply	123,219	MWh
12			
13	Full Service Distribution	Quantity	Units
14			
15	Sales Applied to Min.		MWh
16	Service Charge	14,500	Cust.
17	3		
18	Distribution Charge	123,219	MWh
19	Distribution System	123,219	MWh
20			
21	Nuclear Decomm	123 219	MWh
22	Energy Waste Reduction	123,219	MWH
23	LIEAF	14.500	cust
24	Distribution Surcharges	123 219	MWh
25		0,210	
26	Total Full Service Distribution		
27	Total Full Service D1 8	123 219	MWh
28	Increase/Decrease (\$)	120,213	
20			

(c)	(d)
Presen	it
Rate	Revenue
	(\$000)
\$0.04029	4,965
\$0.00711	472
\$0.04266	1,789
\$0.10191	1,513
\$0.90971	84
\$0.07160	8,823
\$0.00000	0
\$0.00000	0
7.16¢	8,823
\$7.50	1,305
\$0.05699	7,022
6.76¢	8,327
\$0.000765	94
\$0.004322	533
\$0.93	162
0.64¢	789
7.40¢	9,116
14.56¢	17,939

(e)	(f)
Propose	d
<u>Rate</u>	Revenue
	(\$000)
\$0.03931	4,844
<b>A</b> A AAAAA	
\$0.00866	574
\$0.04463	1,871
\$0.10459	1,553
\$0.91069	84
\$0.07245	8,927
<b>A</b> A <b>A</b> A <b>A</b> A	
\$0.00000	0
\$0.00000	0
7.24¢	8,927
\$7.50	1,305
\$0.05996	7,388
7.05¢	8,693
\$0.000765	94
\$0.004322	533
\$0.93	162
0.64¢	789
7.69¢	9,482
14.94¢	18,409

Michigan Public Service Commission DTE Electric Company Staff's Present and Proposed Revenue Calculations Residential Experimental Electric Vehicle Rate - D1.9 Case No.: U-20162 Exhibit: S-6 Schedule: F3 Witness: M. J. Pung Page: 10 of 52

Line	(a)	(b)		(c)		(d)	(e)	(f)
No.	Description	Billing Deter	minants		Present		Prop	osed
	Full Service Power Supply	<u>Quantity</u>	<u>Units</u>	Rate	Re	venue	Rate	<u>Revenue</u>
		_			(\$	5000)		(\$000)
1	Power Supply Charges	2 002						
2	On-Peak	2,903	M\/b	\$0.02	0.81	50	\$0.08915	50
4	Off-Peak	2 243	MW/h	\$0.00	245	50	\$0.00913	50
5	Capacity Charge	2,240	1010 0 11	φ0.02	240	00	φ0.02220	50
6	Option I							
7	On-Peak	660	MWh	\$0.07	256	48	\$0.07515	50
8	Off-Peak	2,243	MWh	\$0.01	814	41	\$0.01879	42
9		2,903	MWh					
10	Option II							
11	Monthly Flat Fee	150	Vehicles	\$46	5.39	83	\$46.94	84
12	On-Peak	340	MWh					
13	Off-Peak	383	MWh					
14		722	MWh					
15	<b>D00D</b>	0.000		<b>\$</b> 0.00			<b>*</b> 0.00000	0
16	PSCR	2,903	NIVVN	\$0.00	000	0	\$0.00000	0
17	I otal Full Service Power Supply	3,625	IVIVVN	1.	//¢	282	7.86¢	285
10	Full Service Distribution	Quantity	Unite	H				
20		Quantity	011115					
21	Option I Service Charge (\$/month)	1 803	Cust	\$1	95	42	\$1.95	42 1940
22		1,000	0401	Ŷ.			¢	
23	Distribution Charge	2,903	MWh	\$0.05	699	165	\$0.05996	174.0423
24	Distribution System	2,903	MWh	7.	15¢	208	7.45¢	216
25								
26	Nuclear Decomm.	2,903	MWh	\$0.000	765	2	\$0.000765	2
27	Energy Waste Reduction	2,903	MWh	\$0.004	322	13	\$0.004322	13
28	Distribution Surcharges	2,903	MWh	0.	51¢	15	0.51¢	15
29								
30	Total Full Service Distribution	2,903	MWh	7.	66¢	222	7.96¢	231
31	Total Full Service D1.9	3,625	MWh	13.	90¢	504	14.23¢	516
32	Chaine	Quantity	Unite	Data	Da		Data	Devenue
24	Choice	Quantity	Units	Kale	<u>Ke</u>		Kale	(\$000)
35	Capacity Charge				(4	5000)		(0000)
36	Option I							
37	On-Peak	0	MWh	\$0.07	256	0	\$0.07515	0
38	Off-Peak	0	MWh	\$0.01	814	0	\$0.01879	0
39	Total Capacity	0	MWh			0		0
40								
41	Distribution Charges							
42	Option I Service Charge (\$/month)	0	Cust.	\$1	.95	0	\$1.95	0
43				<b>^</b>			<b>*</b> • • <b>=</b> •••	
44	Distribution Charge	0	MWh	\$0.05	699	0	\$0.05996	0
45	Distribution System	0	wwn			U		U
46	Nuclear Decomm	0		¢0.000	765	_	\$0.00076F	0
47 28	Energy Waste Reduction	0	M\/h	\$0.000 \$0.004	200 200	0	\$0.000705 \$0.0007322	0
40 20	Distribution Surcharges	0	M\//h	φ0.004	JEE	0	ψ0.004322	0
50	Election outerlarges	0						
51	Total Choice D1.9	Ο	MWh			0		0
52		0						U
53	Total D1.9	3.625	MWh	13.	90¢	504	14.23¢	516
54	Increase/Decrease (\$)	-,		• I				12

Michigan Public Service Commission DTE Electric Company Staff's Present and Proposed Revenue Calculations Residential Space Heating Rate - D2

Line No	(a) Description	(b) Billing Deter	ninants	(c) Pres	(d) ent	(e) Propo	(f) sed
	Full Service Power Supply	Quantity	Units	Rate	Revenue	Rate	Revenue
		<u></u>		<u></u>	(\$000)		(\$000)
1	Power Supply Charges						. ,
2	Non-Capacity Charge	294,420	MWh	\$0.04624	13,614	\$0.04578	13,479
3	Capacity Charges						
4	Summer					•• •• ••	
5	First 17 KWH/Day	57,480	MWh	\$0.03429	1,971	\$0.03571	2,053
6	Excess	27,497	MWh	\$0.04997	1,374	\$0.05158	1,418
/ 0	First 20 KW/H/Dov	111 012	M\A/b	\$0.01064	2 106	¢0.02112	2 262
o Q	Flist 20 KWH/Day	97 629	M\A/b	\$0.01964	2,190	\$0.02113	2,302
9	Excess	97,029		\$0.00048	033	\$0.00770	756
10	PSCP	204 420	M\A/b	\$0,0000	0	\$0,0000	0
12	PEDS	294,420	Motors	\$0.00000	0	\$0.00000	0
12	Total Full Service Power Supply	204 420	MW/b	\$0.00000	10 788	\$0.00000	20.070
14	Total I di Service I ower Supply	234,420		0.726	13,700	0.02¢	20,070
15	Full Service Distribution	Quantity	Units				
16		Quantity	01113				
17	Service Charge	30 480	Cust	\$7.50	2 743	\$7.50	2 743
18	Colvico chargo	00,100	0000	φ1.00	2,7 10	¢1.00	2,710
19	Distribution Charge						
20	Summer	84,977	MWh	\$0.05699	4,843	\$0.05996	5,095
21	Winter	209,443	MWh	\$0.05699	11,936	\$0.05996	12,558
22	Distribution System	294,420	MWh	6.63¢	19,522	6.93¢	20,396
23	-						
24	Nuclear Decomm.	294,420	MWh	\$0.000765	225	\$0.000765	225
25	Energy Waste Reduction	294,420	MWh	\$0.004322	1,272	\$0.004322	1,272
26	LIEAF	30,480	Cust.	\$0.93	340	\$0.93	340
27	Distribution Surcharges	294,420	MWh	0.62¢	1,838	0.62¢	1,838
28							
29	Total Full Service Distribution	294,420	MWh	7.25¢	21,360	7.55¢	22,234
30	Total Full Service D2	294,420	MWh	13.98¢	41,148	14.37¢	42,304
31							
32	Choice	Quantity	<u>Units</u>	Rate	Revenue	Rate	Revenue
33					(\$000)		(\$000)
34	Capacity Charges						
35	Summer						
36	First 17 KWH/Day	0	MWh	\$0.03429	0	\$0.03571	0
37	Excess	0	MWh	\$0.04997	0	\$0.05158	0
38	Winter						
39	First 20 KWH/Day	0	MWh	\$0.01964	0	\$0.02113	0
40	Excess	0	MWh	\$0.00648	0	\$0.00776	0
41	I otal Capacity				0		0
42							
43	Distribution Charges	0	0	<b>*</b> 7 F0	0	<b>*</b> 7 50	0
44	Service Charge	0	Cust.	\$7.5U	0	\$7.5U	0
45 46	Distribution Charge						
40 47	Summer	0	M\A/b	\$0.05600	0	¢0.05006	0
47	Winter	0	MWh	\$0.05699	0	\$0.05990	0
40 40	Distribution System	0	MWh	ψ0.00000	0	ψ0:00000	0
50	Distribution bystem	Ū	1010011		v		v
51	Nuclear Decomm	0	MW/h	\$0,000765	0	\$0,000765	0
52	Energy Waste Reduction	0	MW/h	\$0.000700	ů N	\$0 004322	0
53	LIEAF	0	Cust.	\$0.93	ő	\$0.93	0
54	Distribution Surcharges	0	MWh	÷0.00	0	<i><b>Q</b></i> <b>0.00</b>	0
55		0					v
56	Total Choice D2	0	MW/h		0		0
57		0			U		J
58	Total D2	294 420	MWh	13,98¢	41,148	14.37¢	42,304
58 59	Total D2	294,420	MWh	13.98¢	41,148	14.37¢	<b>42,304</b> 1 156

Michigan Public Service Commission DTE Electric Company Staff's Present and Proposed Revenue Calculations Water Heating Service Rate - Residential D5 Case No.: U-20162 Exhibit: S-6 Schedule: F3 Witness: M. J. Pung Page: 12 of 52

Line	(a)	(b)		(c)	(d)	(e)	(f)
No.	Description	Billing Deterr	ninants	Pre	esent	Propo	osed
	Full Service Power Supply	Quantity	<u>Units</u>	Rate	<u>Revenue</u>	Rate	Revenue
					(\$000)		(\$000)
1	Non-Capacity Charge	125.084	MWh	\$0.02533	3.168	\$0.02518	3.149
2	Capacity Charge	125,084	MWh	\$0.02053	2,568	\$0.02123	2,655
3	2002			<b>A</b> 2 2222		<b>A a a a a a a a a a a</b>	
4	PSCR	125,084	MWh	\$0.00000	0	\$0.00000	0
с 6	Total Full Service Power Supply	125,084	IVIVII	4.59¢	5,730	4.04¢	5,604
7	Full-Service Distribution	Quantity	Units	4			
8							
9	Service Charge	51,167	Cust.	\$1.95	1,197	\$1.95	1,197
10		405 00 4		<b>\$0.05000</b>	7 400	<b>A</b> 0.05000	7 500
11	Distribution Charge	125,084	NIVIN	\$0.05699	7,129	\$0.05996	7,500
12	Distribution System	125,064		0.00¢	0,320	0.95¢	0,097
14	Nuclear Decomm.	125.084	MWh	\$0.000765	96	\$0.000765	96
15	Energy Waste Reduction	125,084	MWh	\$0.004322	541	\$0.004322	541
16	Distribution Surcharges	125,084	MWh	0.51¢	636	0.51¢	636
17							
18	Total Full Service Distribution	125,084	MWh	7.16¢	8,962	7.46¢	9,333
19	Total Full Service D5	125,084	MWh	11.75¢	14,698	12.10¢	15,138
20	Ohaina	Quantitu	Linite	Data	Dever	Data	Dever
21	Choice	Quantity	Units	Rate	(¢000)	Rate	(¢000)
22	Capacity Charge	0	MWh	\$0.02053	(\$000)	\$0 02123	(\$000)
24	Total Capacity	0		\$0.02000	0	\$0102120	0
25							
26	Distribution Charges						
27	Service Charge	0	Cust.	\$1.95	0	\$1.95	0
28	Distribution Charge	0	MM	\$0.05600	0	\$0.05006	0
29 30	Distribution System	0		\$0.03099	0	\$0.05996	0
31	Distribution Cystom	Ŭ			<u> </u>		v
32	Nuclear Decomm.	0	MWh	\$0.000765	0	\$0.000765	0
33	Energy Waste Reduction	0	MWh	\$0.004322	0	\$0.004322	0
34	Distribution Surcharges	0	MWh		0		0
35							
36	Total Choice Distribution D5	0	MWh		0		0
37		405.004	N 4) A / I-	44.75	44.000	40.10	45 400
38		125,084	IVIVN	11.75¢	14,698	12.10¢	15,138
39	increase/Decrease (\$)						439

Michigan Public Service Commission DTE Electric Company Staff's Present and Proposed Revenue Calculations Interruptible Space Conditioning Service Rate - Commercial D1.1 Case No.: U-20162 Exhibit: S-6 Schedule: F3 Witness: M. J. Pung Page: 13 of 52

Line No.	(a) Description	(b) Billing Deterr	minants	(c) Prese	(d) ent	(e) Propo	(f) sed
	Full Service Power Supply	Quantity	Units	Rate	Revenue	Rate	Revenue
					(\$000)		(\$000)
	Capacity						
1	Energy						
2	Summer	4,307	MWh	\$0.03563	153	\$0.03506	151
3	Winter	1,864	MWh	\$0.00763	14	\$0.00706	13
4							
5	Non-capacity energy	6,171		\$0.04166	257	\$0.04004	247
6	Power Supply Subtotal	6,171	MWh		425		411
7							
8	PSCR	6,171	MWh	\$0.00000	0	\$0.00000	0
9	REPS	912	Meters	\$0.00	0	\$0.00	0
10	Total Full Service Power Supply	6,171	MWh	6.88¢	425	6.66¢	411
11		-					
12	Full Service Distribution						
13							
14	Service Charge (June-Oct)	912	Cust.	\$1.95	9	\$1.95	9
15		0.474		<b>\$0,00005</b>		<b>*</b> 0.0005	004
16	Distribution Charge	6,171	NVVn	\$0.03865	239	\$0.03625	224
1/	Distribution System	6,171	MWh	4.01¢	247	3.77¢	233
18		0.474	N 4) A / I-	¢0.000705	F	¢0.000705	-
19	Nuclear Decomm.	6,171		\$0.000765	5	\$0.000765	5
20 21		912	Motors	\$1.30 \$0.03	15	\$1.30 \$0.03	15
21		6 171	MM/b	\$0.95 0.48¢	10	φ0.93	10
22	Distribution Surcharges	0,171		0.40¢	30	0.40¢	30
24	Total Distribution	6 171	MW/h	4 49¢	277	4 25¢	262
25	Total Full Service D1 1	6,171	MM/b	11 37¢	702	10.92¢	674
26		0,171	1010011	11.07¢	102	10.52¢	0/4
20	Choice Distribution	Quantity	Units	Rate	Revenue	Rate	Revenue
28		dedantity	onto	<u>rtuto</u>	(\$000)	<u>rtuto</u>	(\$000)
29	Capacity				(\$000)		(\$000)
30	Energy						
31	Summer	0	MWh	\$0.03563	0	\$0.03506	0
32	Winter	0	MWh	\$0.00763	0	\$0.00706	0
33							
34	Service Charge (June-Oct)	0	Cust.	\$1.95	0	\$1.95	0
35							
36	Distribution Charge	0	MWh	\$0.03865	0	\$0.03625	0
37	Distribution System	0	MWh		0		0
38							
39	Nuclear Decomm.	0	MWh	\$0.000765	0	\$0.000765	0
40	Energy Waste Reduction	0	Meters	\$1.36	0	\$1.36	0
41	LIEAF	0	Meters	\$0.93	0	\$0.93	0
42	Distribution Surcharges	0	MWh		0		0
43		-					
44	Total Choice D1.1	0	MWh		0		0
45		_					
46	Total D1.1	6,171	MWh	11.37¢	702	10.92¢	674
47	Increase/Decrease (\$)					I	(28)

**Michigan Public Service Commission** DTE Electric Company Staff's Present and Proposed Revenue Calculations Commercial Geothermal Time of Day (D1.7) Case No.: U-20162 Exhibit: S-6 Schedule: F3 Witness: M. J. Pung Page: 14 of 52

Line	(a)	(b)		(c)	(d)	(e)	(f)
<u>No.</u>	Description	Billing Deteri	ninants	Pres	Boyopulo	Prope	Boyonuo
	Full Service Fower Supply	Quantity	Units	Kale	Revenue	Kale	Revenue
	Capacity Charges				(\$000)		(\$000)
1	Energy				(, ,		(, ,
2	Summer (11 a.m. Peak Start)						
3	On-Peak	779	MWh	\$0.02861	22	\$0.02797	22
4	Off-Peak	1,816	MWh	\$0.01461	27	\$0.01397	25
5	Winter (11 a.m. Peak Start)						
6	On-Peak	1,701	MWh	\$0.01811	31	\$0.01747	30
7	Off-Peak	4,970	MWh	\$0.01811	90	\$0.01747	87
8							
9	Non-Capacity Energy	9,266	MWh	\$0.02741	254	\$0.02660	246
10	Power Supply Subtotal	9,266	MWh		424		410
11							
12	PSCR	9,266	MWh	\$0.00000	0	\$0.00000	0
13	REPS	133	Meters	\$0.00	0	\$0.00	0
14	Total Full Service Power Supply	9,266	MWh	4.57¢	424	4.43¢	410
15		_					
16	Full Service Distribution	<u>Quantity</u>	<u>Units</u>				
17							
18	Service Charge	133	Cust.	\$0.067	3	\$0.067	3
19							
20	Distribution Charge	9,266	MWh	\$0.02332	216	\$0.02565	238
21	Distribution System	9,266	MWh	2.37¢	219	<b>2.60¢</b>	241
22							
23	Nuclear Decomm.	9,266	MWh	\$0.000765	7	\$0.000675	6
24	Energy Waste Reduction	133	Meters	\$14.51	23	\$14.51	23
25	LIEAF	133	Meters	\$0.93	1	\$0.93	1
26	Distribution Surcharges	9,266	MWh	0.34¢	32	0.33¢	31
27							
28	Total Distribution	9,266	MWh	2.71¢	251	2.93¢	272
29	Total Full Service D1.7	9,266	MWh	7.28¢	675	7.36¢	682
30	Choice Distribution	Quantity	Unite	Data	Devenue	Data	Devenue
31	Choice Distribution	Quantity	Units	Rale	(theorem	Kale	(fooo)
32	One of the Observer				(\$000)		(\$000)
33							
34	Energy						
35	Summer (TT a.m. Peak Start)			¢0.00064	0	¢0,00707	0
30	Off-Peak Off-Deak			\$0.02861	0	\$0.02797 \$0.01207	0
31 20	Winter (11 o m. Dook Stort)			\$0.01401	0	φ0.01397	0
30 20	On Pook		MM/b	¢0.01911	0	¢0.01747	0
40			MA/b	\$0.01011 \$0.01911	0	\$0.01747 \$0.01747	0
40 11	OII-Feak			\$0.01011	0	\$0.01747	0
41	Service Charge	1	Cust	\$0.067	0	\$0.067	0
42	Service Charge	· · · · · · · · · · · · · · · · · · ·	Cusi.	φ0.007	0	φ0.007	0
43 44	Distribution Charge	161	MWh	\$0.02332	4	\$0,02565	4
45	Distribution System	161	MWh	2 35¢	4	2.58¢	4
46		101		2.000		2.000	-
40	Nuclear Decomm	161	M\\/h	\$0,000765	0	\$0,000765	0
48	Energy Waste Reduction	101	Metere	\$0.000705 \$17 F1	0	¢0.000703 ¢17 51	0
49	LIFAF	1	Meters	\$0.03	0	\$0.03	0
50	Distribution Surcharges	161	MW/h	0.19¢	Û	0 19¢	Ű
51		101		0.136	v	0.130	U U
52	Total Choice D1 7	161	MM	2.544		2 774	4
52 53		101	1111111	<b>2.</b> 34¢	4	2.11¢	4
54	Total D1 7	Q /27	M\\/b	7 204	679	7 284	223
55	Increase/Decrease (\$)	3,421	1010011	1.204	019	1.200	000 g
55	$(\psi)$						0

Michigan Public Service Commission DTE Electric Company Staff's Present and Proposed Revenue Calculations Commercial Dynamic Peak Pricing Rate - D1.8 Case No.: U-20162 Exhibit: S-6 Schedule: F3 Witness: M. J. Pung Page: 15 of 52

(1)

Line	(a)	(b)			(c)	(d)		(e)	(f)
No.	Description	Billing Deterr	ninants		Prese	ent		Propo	sed
	Full Service Power Supply	<u>Quantity</u>	<u>Units</u>		<u>Rate</u>	<u>Revenue</u>		<u>Rate</u>	<u>Revenue</u>
						(\$000)			(\$000)
	Capacity								
1	<u>Energy</u>								
2	Off-Peak (11pm-7am)	125	MWh		\$0.00131	0		\$0.00442	1
3	Mid-Peak (7 pm-11pm, 7am-3pm)	129	MWh		\$0.03631	5		\$0.03942	5
4	On-Peak (3 pm- 7 pm)	24	MWh		\$0.09631	2		\$0.09942	2
5	Critical Peak (3pm-7pm)	0	MWh		\$0.90069	0		\$0.85687	0
6									
7	Non-capacity energy	278	MWh		\$0.04931	14		\$0.04382	12.19
8									
9	Power Supply Subtotal	278	MWh			21			20
10									
11	PSCR	278	MWh		\$0.00000	0		\$0.00000	0
12	REPS	1	Cust.		\$0.00	0		\$0.00	0
13	Total Full Service Power Supply	278	MWh	1 1	7.53¢	21		7.29¢	20
14									
15	Full Service Distribution	Quantity	Units						
16		-							
17	Service Charge	1	Cust.		\$11.25	0		\$11.25	0
18	-								
19	Distribution Charge	278	MWh		\$0.03865	11		\$0.03625	10
20	Distribution System	278	MWh		3.91¢	11		3.67¢	10
21				I [			- [		
22	Nuclear Decomm.	278	MWh		\$0.000765	0		\$0.000765	0
23	Energy Waste Reduction	1	Cust.		\$14.51	0		\$14.51	0
24	LIEAF	1			\$0.93	0		\$0.93	0
25	Distribution Surcharges	278	MWh	1 [	0.14¢	0		0.14¢	0
26	Total Full Service D1.1								
27	Total Full Service Distribution	278	MWh		4.06¢	11		3.82¢	11
28	Total Full Service D1 8	278	MWh	1	11.59¢	32		11 11¢	31

**Michigan Public Service Commission** DTE Electric Company Staff's Present and Proposed Revenue Calculations Commercial Experimental Electric Vehicle Rate - D1.9

Case No.: U-20162 Exhibit: S-6 Schedule: F3 Witness: M. J. Pung Page: 16 of 52

Line <u>No.</u>	(a) Description	(b) Billing Deteri	ninants		(c) Prese	(d) ent	(e) Pi	(f) roposed
	Full Service Power Supply	Quantity	Units		Rate	Revenue	Rate	Revenue
						(\$000)		(\$000)
1	Power Supply Charges							
2	Capacity							
3	Option I							
4	On-Peak	0	MWh		\$0.07256	0	\$0.075 <sup>-</sup>	15 0
5	Off-Peak	0	MWh		\$0.01814	0	\$0.018	79 0
6		0	MWh					
7								
8	Non-capacity energy charge							
	On-Peak	0	MWh		\$0.08981	0	\$0.089	15 0
	Off-Peak	0	MWh		\$0.02245	0	\$0.022	28 0
9								
10	PSCR	0	MWh		\$0.00000	0	\$0.000	0 00
11						-		
12								
13	Total Full Service Power Supply	0	MWh			0		0
14								
15	Full Service Distribution							
16								
17	Option I Service Charge (\$/month)	0	Cust		\$1.950	0	\$1 Q	50 0
18	Option i Service Charge (@month)	U	Ousi.		ψ1.350	0	ψ1.5	0
10	Distribution Charge	0	MW/h		\$0.05699	0	\$0.059	0 96
20	Distribution System	0	M\//b	-	ψ0:000000	0	φ0.000	0
20	Distribution System	0		_		v		U
21	Nuclear Decomm	0	MM/b		¢0,000765	0	¢0,00070	
22	Forgy Wests Reduction	0	Motoro		\$0.000765 \$14 510000	0	\$0.0007	0 0
23		0	Meters		\$14.510000	0	\$14.51000 ¢0.02000	
24	LIEAF Distribution Questioner	0	MANA		\$0.930000	0	\$0.93000	0 0
25	Distribution Surcharges	0	IVIVVN	_		U		U
26								
27	Total Full Service Distribution	0	MWh			0		0
28	Total Full-Service D1.9	0	MWh			0		0
29								
30	Choice Distribution				<u>Rate</u>	<u>Revenue</u>	<u>Rate</u>	Revenue
31						(\$000)		(\$000)
32	Capacity							
33	Option I							
34	On-Peak	0	MWh				\$0.075 <sup>-</sup>	15 0
35	Off-Peak	0	MWh				\$0.018	79 0
36		0	MWh					
37	Option I Service Charge (\$/month)	0	Cust.		\$1.95	0	\$1.9	95 0
38								
39	Distribution Charge	0	MWh		\$0.05699	0	\$0.0599	96 0
40	Distribution System	0	MWh			0		0
41								
42	Nuclear Decomm.	0	MWh		\$0.000765	0	\$0.0007	65 0
43	Energy Waste Reduction	0	Meters		\$14.510000	0	\$14.5100	0 00
44	LIEAF	0	Meters		\$0.930000	0	\$0.93000	0 00
45	Distribution Subtotal	0	MWh			0		0
46								
47								
48	Total Choice D1.9	0	MWh			0		0
49		0		• -				U
50	Total D1 9	Ο	M\//b			0		0
51		0	1111111			U		U
51	$(\phi)$							-

**Michigan Public Service Commission** DTE Electric Company Staff's Present and Proposed Revenue Calculations General Service Rate - D3

Case No.: U-20162 Exhibit: S-6 Schedule: F3 Witness: M. J. Pung Page: 17 of 52

No.         Description         Billing Determinants         Present         Pr           Full Service Power Supply         Quantity         Units         Rate         Revenue         (\$000)           1         Capacity         Energy         7,181,124         MWh         \$0.03214         230,801         \$0.0306           3         Non-Capacity         5         Energy         7,181,124         MWh         \$0.04778         343,114         \$0.0464           6         7         PSCR         7,181,124         MWh         \$0.00000         0         \$0.000           8         REPS         191,238         Meters         \$0.00         0         \$0.00           9         Total Full Service Charge         191,238         Cust.         \$11.25         25,817         \$15.0           14         Service Charge         191,238         Cust.         \$11.25         25,817         \$15.0           15         Distribution Charge         7,181,124         MWh         \$0.000765         5,494         \$0.000765           16         Distribution System         7,181,124         MWh         \$0.576         40,926         0.577           18         Nuclear Decomm.         7,181,124         MWh <th>Revenue (\$000)           8         221,763           9         333,872           0         0           <b>c 555,636</b>           0         34,423</th>	Revenue (\$000)           8         221,763           9         333,872           0         0 <b>c 555,636</b> 0         34,423
Full Service Power Supply         Quantity         Units         Rate         Revenue (\$000)           1         Capacity         Energy         7,181,124         MWh         \$0.03214         230,801         \$0.0306           3         Non-Capacity         5         Energy         7,181,124         MWh         \$0.04778         343,114         \$0.0464           6         - <th>Revenue (\$000)           8         221,763           9         333,872           0         0           0         0           <b>¢ 555,636</b>           0         34,423</th>	Revenue (\$000)           8         221,763           9         333,872           0         0           0         0 <b>¢ 555,636</b> 0         34,423
1       Capacity       Capacity       (0000)       (0000)         2       Energy       7,181,124       MWh       \$0.03214       230,801       \$0.0308         3       4       Non-Capacity       5       Energy       7,181,124       MWh       \$0.04778       343,114       \$0.0464         6       7       PSCR       7,181,124       MWh       \$0.0000       0       \$0.0000         8       REPS       191,238       Meters       \$0.0000       0       \$0.0000         9       Total Full Service Power Supply       7,181,124       MWh <b>7.99e 573,915 7.74</b> 10       Full Service Charge       191,238       Cust.       \$11.25       25,817       \$15.0         12       Service Charge       191,238       Cust.       \$11.25       25,817       \$15.0         14       Distribution Charge       7,181,124       MWh       \$0.00365       277,550       \$0.03865         15       Distribution System       7,181,124       MWh       \$0.000765       \$,494       \$0.00076         18       Nuclear Decomm.       7,181,124       MWh       \$0.576       40,926       0.57         22       Total Full Servi	(0000) 8 221,763 9 333,872 0 0 0 0 0 <b>c</b> 555,636 0 34,423
Deport         Opport         T,181,124         MWh         \$0.03214         230,801         \$0.0306           3         Non-Capacity         5         Energy         7,181,124         MWh         \$0.03214         230,801         \$0.0306           4         Non-Capacity         5         Energy         7,181,124         MWh         \$0.04778         343,114         \$0.0464           6         7         PSCR         7,181,124         MWh         \$0.0000         0         \$0.0000           8         REPS         191,238         Meters         \$0.00         0         \$0.000           9         Total Full Service Distribution         Quantity         Units         \$11.25         25,817         \$15.0           12         13         Service Charge         191,238         Meters         \$0.03865         277,550         \$0.0386           14         10         10         \$0.000765         5,494         \$0.000765         \$4.94         \$0.000765           15         Distribution System         7,181,124         MWh         \$0.000765         5,494         \$0.000765         \$4.94         \$0.900765           19         Energy Optimization         191,238         Meters         \$0.57	8 221,763 9 333,872 0 0 0 0 0 <b>c</b> 555,636 0 34,423
a       Introduct       Introduct <t< td=""><td>9 333,872 0 0 <b>c</b> 555,636 0 34,423</td></t<>	9 333,872 0 0 <b>c</b> 555,636 0 34,423
4       Non-Capacity         5       Energy       7,181,124         6       \$0.04778       343,114         6       \$0.04778       343,114         6       \$0.0000       0         7       PSCR       7,181,124       MWh         8       EPS       191,238       Meters       \$0.0000       0         9       Total Full Service Distribution       Quantity       Units       \$11.25       25,817       \$15.0         10       11       Full Service Charge       191,238       Cust.       \$11.25       25,817       \$15.0         12       13       Service Charge       191,238       Cust.       \$11.25       25,817       \$15.0         14       15       Distribution Charge       7,181,124       MWh       \$0.03665       277,550       \$0.0362         16       Distribution System       7,181,124       MWh       \$0.000765       5,494       \$0.00076         18       Nuclear Decomm.       7,181,124       MWh       \$0.57¢       40,926       0.57         21       Distribution Surcharges       7,181,124       MWh       0.57¢       40,926       0.57         223       Total Full Service D3	9 333,872 0 0 0 0 0 <b>555,636</b> 0 34,423
100. Copy       7,181,124       \$0.04778       343,114       \$0.0464         6       7       PSCR       7,181,124       MWh       \$0.0000       0       \$0.0000         8       REPS       191,238       Meters       \$0.0000       0       \$0.0000         9       Total Full Service Power Supply       7,181,124       MWh       \$0.0000       0       \$0.0000         9       Total Full Service Distribution       Quantity       Units       \$11.25       25,817       \$15.0         10       Service Charge       191,238       Cust.       \$11.25       25,817       \$15.0         14       Distribution Charge       7,181,124       MWh       \$0.03865       277,550       \$0.0362         16       Distribution System       7,181,124       MWh       \$0.000765       \$,494       \$0.000765         18       Nuclear Decomm.       7,181,124       MWh       \$0.576       40,926       0.57         20       LIEAF       191,238       Meters       \$0.93       2,134       \$0.93         21       Distribution Surcharges       7,181,124       MWh <b>12.796</b> 918,209       12.41         223       Total Full Service D3       7,181,124	9 333,872 0 0 0 <b>c 555,636</b> 0 34,423
6       7, PSCR       7, 181, 124       MWh       \$0,0000       0       \$0,0000         8       REPS       191,238       Meters       \$0,0000       0       \$0,000         9       Total Full Service Power Supply       7,181,124       MWh       \$0,0000       0       \$0,000         11       Full Service Distribution       Quantity       Units       \$11,25       25,817       \$15,00         12       Service Charge       191,238       Cust.       \$11,25       25,817       \$15,00         14       Distribution Charge       7,181,124       MWh       \$0,03865       277,550       \$0,0362         16       Distribution System       7,181,124       MWh       \$0,000765       5,494       \$0,000765         18       Nuclear Decomm.       7,181,124       MWh       \$0,000765       5,494       \$0,000765         19       Energy Optimization       191,238       Meters       \$0,577       40,926       0.577         20       LIEAF       191,238       Meters       \$0,577       40,926       0.577         21       Distribution Surcharges       7,181,124       MWh       4.796       344,294       4.67         22       Total Full Service Di	0 0 0 0 0 <b>¢ 555,636</b> 0 34,423
7       PSCR       7,181,124       MWh       \$0.0000       0       \$0.0000         8       REPS       191,238       Meters       \$0.000       0       \$0.000         9       Total Full Service Dower Supply       7,181,124       MWh       \$0.0000       0       \$0.000         10       Full Service Distribution       Quantity       Units       \$11.25       \$573,915       \$7.74         10       Service Charge       191,238       Cust.       \$11.25       \$25,817       \$15.0         14       Distribution Charge       7,181,124       MWh       \$0.03865       277,550       \$0.0362         16       Distribution System       7,181,124       MWh       \$0.000765       \$,494       \$0.000765         18       Nuclear Decomm.       7,181,124       MWh       \$0.000765       \$,494       \$0.000765         19       Energy Optimization       191,238       Meters       \$0.93       2,134       \$0.93         21       Distribution Surcharges       7,181,124       MWh <b>4.79e 344,294</b> \$0.577         22       Total Full Service Distribution       7,181,124       MWh <b>12.79e 918,209 12.41</b> 24	0 0 0 0 0 <b>¢ 555,636</b> 0 34,423
8       REPS       191,238       Meters       \$0.00       0         9       Total Full Service Power Supply       7,181,124       MWh       \$0.00       0         10       Full Service Distribution       Quantity       Units       \$11.25       25,817       \$15.0         11       Full Service Distribution       Quantity       Units       \$0.03865       277,550       \$0.0362         12       13       Service Charge       7,181,124       MWh       \$0.03865       277,550       \$0.0362         14       Distribution System       7,181,124       MWh       \$0.00765       \$,494       \$0.00765         18       Nuclear Decomm.       7,181,124       MWh       \$0.000765       \$,494       \$0.000765         19       Energy Optimization       191,238       Meters       \$0.93       2,134       \$0.9         21       Distribution Surcharges       7,181,124       MWh <b>0.57c 40,926 0.57</b> 22       Total Full Service D3       7,181,124       MWh <b>12.79c 918,209 12.41</b> 23       Total Full Service D3       7,181,124       MWh <b>12.79c 918,209 12.41</b> 24       <	0 0 <b>c</b> 555,636 0 34,423
9       Total Full Service Power Supply       7,181,124       MWh         10       Full Service Distribution       Quantity       Units         11       Full Service Distribution       Quantity       Units         12       Service Charge       191,238       Cust.         14       Distribution Charge       7,181,124       MWh         15       Distribution System       7,181,124       MWh         16       Distribution System       7,181,124       MWh         17       Nuclear Decomm.       7,181,124       MWh         18       Nuclear Decomm.       7,181,124       MWh         19       Energy Optimization       191,238       Meters         20       LIEAF       191,238       Meters       \$0.000765       5,494         21       Distribution Surcharges       7,181,124       MWh       \$0.57c       40,926         22       Total Full Service Distribution       7,181,124       MWh       4.79c       344,294       \$0.57         22       Total Full Service D3       7,181,124       MWh       12.79c       918,209       12.41         24       Choice Distribution       Quantity       Units       Rate       Rate	<b>¢</b> 555,636 0 34,423
10       Full Service Distribution       Quantity       Units         11       Full Service Distribution       Quantity       Units         12       Service Charge       191,238       Cust.         14       Service Charge       191,238       Cust.         15       Distribution Charge       7,181,124       MWh         16       Distribution System       7,181,124       MWh         17       Nuclear Decomm.       7,181,124       MWh         18       Nuclear Decomm.       7,181,124       MWh         19       Energy Optimization       191,238       Meters         20       LIEAF       191,238       Meters       \$0.000765       5,494         21       Distribution Surcharges       7,181,124       MWh       \$0.093       2,134         21       Distribution Surcharges       7,181,124       MWh <b>4.79¢ 344,294</b> 22       Total Full Service D3       7,181,124       MWh <b>4.79¢ 344,294</b> 22       Total Full Service D3       7,181,124       MWh <b>12.79¢ 918,209</b> 22       Choice Distribution       Quantity       Units       Rate       Revenue       Rate	0 34,423
Full Service Distribution       Quantity       Units         12       12       13       Service Charge       191,238       Cust.       \$11.25       25,817       \$15.0         14       15       Distribution Charge       7,181,124       MWh       \$0.03865       277,550       \$0.0362         16       Distribution System       7,181,124       MWh <b>4.22¢ 303,368 4.10</b> 17       16       Distribution System       7,181,124       MWh <b>4.22¢ 303,368 4.10</b> 18       Nuclear Decomm.       7,181,124       MWh       \$0.000765       5,494       \$0.000765         19       Energy Optimization       191,238       Meters       \$0.93       2,134       \$0.93         20       LIEAF       191,238       Meters       \$0.93       2,134       \$0.93         21       Distribution Surcharges       7,181,124       MWh <b>4.79¢ 344,294 4.67</b> 22       Total Full Service D3       7,181,124       MWh <b>12.79¢ 918,209 12.41</b> 24       Choice Distribution       Quantity       Units       Rate       Revenue       Rate         27       <	0 34,423
12       10 <td< td=""><td>0 34,423</td></td<>	0 34,423
12       Service Charge       191,238       Cust.       \$11.25       25,817       \$15.0         14       Distribution Charge       7,181,124       MWh       \$0.03865       277,550       \$0.0362         16       Distribution System       7,181,124       MWh       4.22¢       303,368       4.10         17       Nuclear Decomm.       7,181,124       MWh       \$0.000765       5,494       \$0.00076         18       Nuclear Decomm.       191,238       Meters       \$14.51       33,298       \$14.5         20       LIEAF       191,238       Meters       \$0.0376       5,494       \$0.00076         21       Distribution Surcharges       7,181,124       MWh <b>0.57¢</b> 40,926 <b>0.57</b> 22       Total Full Service Distribution       7,181,124       MWh <b>4.79¢ 344,294 4.67</b> 24       Total Full Service D3       7,181,124       MWh <b>12.79¢ 918,209 12.41</b> 25       Choice Distribution       Quantity       Units       Rate       Revenue       Rate	0 34,423
13       Derive Charge       191,200       Cust.       \$1123       20,017       \$10,000         14       15       Distribution Charge       7,181,124       MWh       \$0.03865       277,550       \$0.0362         16       Distribution System       7,181,124       MWh       \$0.03865       277,550       \$0.0362         17       18       Nuclear Decomm.       7,181,124       MWh       \$0.000765       5,494       \$0.000765         19       Energy Optimization       191,238       Meters       \$0.933       2,134       \$0.057         20       LIEAF       191,238       Meters       \$0.057¢       40,926       0.577         21       Distribution Surcharges       7,181,124       MWh <b>4.79¢ 344,294 4.67</b> 22       Total Full Service Distribution       7,181,124       MWh <b>12.79¢ 918,209 12.41</b> 24       Choice Distribution       Quantity       Units       Rate       Revenue       Rate         27       Choice Distribution       Quantity       Units       Rate       Rate	0 54,425
1-7       Distribution Charge       7,181,124       MWh       \$0.03865       277,550       \$0.0362         16       Distribution System       7,181,124       MWh       \$0.03865       277,550       \$0.0362         16       Distribution System       7,181,124       MWh       \$0.03865       277,550       \$0.0362         17       Nuclear Decomm.       7,181,124       MWh       \$0.000765       5,494       \$0.000765         19       Energy Optimization       191,238       Meters       \$14.51       33,298       \$14.55         20       LIEAF       191,238       Meters       \$0.93       2,134       \$0.057         21       Distribution Surcharges       7,181,124       MWh <b>0.57¢ 40,926 0.57</b> 22       Total Full Service D3       7,181,124       MWh <b>4.79¢ 344,294 4.67</b> 24       Total Full Service D3       7,181,124       MWh <b>12.79¢ 918,209 12.41</b> 25       Choice Distribution       Quantity       Units       Rate       Revenue       Rate         26       Choice Distribution       Quantity       Units       Rate       Rate <td></td>	
Distribution Onlarge       1,101,124       MWh         16       Distribution System       7,181,124       MWh         17       18       Nuclear Decomm.       7,181,124       MWh         18       Nuclear Decomm.       7,181,124       MWh         19       Energy Optimization       191,238       Meters       \$14.51       33,298       \$14.52         20       LIEAF       191,238       Meters       \$0.93       2,134       \$0.557c       40,926       0.577c         21       Distribution Surcharges       7,181,124       MWh       0.577c       40,926       0.577c         22       23       Total Full Service Distribution       7,181,124       MWh       4.79c       344,294       4.67         24       Total Full Service D3       7,181,124       MWh       12.79c       918,209       12.41         25       26       Choice Distribution       Quantity       Units       Rate       Revenue (\$000)       Rate	5 260 293
Distribution Oystem       7,101,124       MWh         17       Nuclear Decomm.       7,181,124       MWh         18       Nuclear Decomm.       7,181,124       MWh         19       Energy Optimization       191,238       Meters       \$14.51       33,298       \$14.52         20       LIEAF       191,238       Meters       \$0.933       2,134       \$0.93         21       Distribution Surcharges       7,181,124       MWh <b>0.57¢ 40,926 0.57</b> 22	¢ 294 716
1/1       Nuclear Decomm.       7,181,124       MWh         18       Nuclear Decomm.       7,181,124       MWh         19       Energy Optimization       191,238       Meters       \$0.000765       5,494       \$0.00076         20       LIEAF       191,238       Meters       \$0.93       2,134       \$0.93         21       Distribution Surcharges       7,181,124       MWh <b>0.57¢ 40,926 0.57</b> 22       Total Full Service Distribution       7,181,124       MWh <b>4.79¢ 344,294 4.67</b> 24       Total Full Service D3       7,181,124       MWh <b>12.79¢ 918,209 12.41</b> 25       Choice Distribution       Quantity       Units       Rate       Revenue (\$000)       Rate	204,110
10       Indicisal Decomm.       17,131,124       Introduction       30,000703       5,434       \$0,000703       \$0,434	5 5 404
13       Life gy optimization       131,200       interests       314,11       30,230       314,12         20       LiEAF       191,238       Meters       \$0.93       2,134       \$0.5         21       Distribution Surcharges       7,181,124       MWh       0.57¢       40,926       0.57         22       Total Full Service Distribution       7,181,124       MWh       4.79¢       344,294       4.67         24       Total Full Service D3       7,181,124       MWh       12.79¢       918,209       12.41         25       26       Choice Distribution       Quantity       Units       Rate       Revenue (\$000)       Rate	1 33 208
21       Distribution Surcharges       7,181,124       MWh       0.57¢       40,926       0.57         23       Total Full Service Distribution       7,181,124       MWh       4.79¢       344,294       4.67         24       Total Full Service D3       7,181,124       MWh       12.79¢       918,209       12.41         25       Choice Distribution       Quantity       Units       Rate       Revenue       Rate         27       (\$000)       12.00       12.41       12.79¢       12.41	3 2 134
21       Distribution Substribution Substribution       7,181,124       MWh       0.374       40,320       0.37         22       Total Full Service Distribution       7,181,124       MWh       4.79¢       344,294       4.67         24       Total Full Service D3       7,181,124       MWh       12.79¢       918,209       12.41         25       26       Choice Distribution       Quantity       Units       Rate       Revenue       Rate         27       (\$000)       1	¢ 40.926
223       Total Full Service Distribution       7,181,124       MWh       4.79¢       344,294       4.67         224       Total Full Service D3       7,181,124       MWh       12.79¢       918,209       12.41         25       26       Choice Distribution       Quantity       Units       Rate       Revenue (\$000)       Rate	¢ 40,320
Total Full Service D3     7,181,124     MWh     12.79¢     918,209     12.41       25     26     Choice Distribution     Quantity     Units     Rate     Revenue     Rate       27     (\$000)     1000     1000     1000     1000     1000	¢ 335,642
25 26 Choice Distribution Quantity Units Rate Revenue Rate 27 (\$000)	¢ 891.278
Choice Distribution     Quantity     Units     Rate     Revenue     Rate       27     (\$000)	
	Revenue
	(\$000)
28 Capacity	(*****)
29 Energy 0 MWh 0.03214 0 \$0.0308	8 0
30	
31 Service Charge 2.079 Cust. \$11.25 281 \$15.0	0 374
32	
33 Distribution Charge 317,271 MWh \$0.03865 12,263 \$0.0362	5 11,500
34 Distribution System 317,271 MWh 3.95¢ 12,543 3.74	¢ 11,874
35	
36 Nuclear Decomm. 317.271 MWh \$0.000765 243 \$0.00076	5 243
37 Energy Optimization 2.079 Meters \$14.51 362 \$14.5	1 362
38 LIEAF 2.079 Meters \$ \$0.93 23 \$0.9	002
39 Distribution Surcharges 317.271 MWh 0.20c 628 0.20	3 23
40	3 23
41 Total Choice D3 317.271 MWh 4.15¢ 13.171 3.94	3 23 <b>¢ 628</b>
42	3 23 ¢ 628 t 12.502
43 Total D3 7,498,396 MWh 12.42¢ 931,380 12.05	3 23 ¢ 628 ¢ 12,502
44 Increase/Decrease (\$)	3 23 ¢ 628 ¢ 12,502 ¢ 903,780
## Michigan Public Service Commission DTE Electric Company Staff's Present and Proposed Revenue Calculations Unmetered General Service Rate - D3.1

Case No.: U-20162 Exhibit: S-6 Schedule: F3 Witness: M. J. Pung Page: 18 of 52

Line	(a)	(b)			(c)	(d)	(e)	(f)
No.	Description	Billing Detern	ninants		Prese	ent	 Propo	sed
		Quantity	<u>Units</u>	R	tate	<u>Revenue</u> (\$000)	Rate	<u>Revenue</u> (\$000)
1	Connected Load	219,336,264	Watts					· · ·
2								
3	Capacity							
4	Energy	76,768	MWh		0.04654	3,573	0.02643	2,029
5								
6	Non-capacity energy	76,768	MWh		0.05979	4,590	0.07604	5,837
7								
8	PSCR	76,768	MWh		0.00000	0	0	0
9								
10	Nuclear Decommissioning	76,768		(	).000765	0	0.000765	0
11								
12	Energy Waste Reduction	1,758	Meters		14.51	306	14.51	306
13								
14	REPS	1,758	Meters		0.00	0	0.00	0
15								
16	Total D3.1	76,768	MWh			8,469		8,172
	Increase/Decrease (\$)			-	_			(297)

**Michigan Public Service Commission** DTE Electric Company Staff's Present and Proposed Revenue Calculations Secondary Educational Institute - D3.2

Case No.: U-20162 Exhibit: S-6 Schedule: F3 Witness: M. J. Pung Page: 19 of 52

No.         Description         Billing Determinants         Present         Proposed           1         Capacity         Quanity         Units         Rate         Revenue         (\$000)           1         Capacity         So.02154         4.264           3         Non-capacity energy         197.953         MWh         \$0.04600         9.106         \$0.04569         9.044           6         PSCR         197.953         MWh         \$0.00000         0         \$0.0000         0           7         REPS         197.953         MWh         \$0.00000         0         \$0.0000         0           8         Total Full Service Distribution         Quanitity         Units         \$11.25         134         \$15.00         179           11         Service Charge         197.953         MWh         \$0.02825         5.582         \$0.03108         6.151           12         Service Charge         197.953         MWh         \$0.02825         5.582         \$0.03108         6.151           13         Distribution Charge         197.953         MWh         \$0.02825         5.592         \$0.03108         6.151           14         Distribution System         197.953         M	Line	(a)	(b)		(c)	(c) (d)		(f)
Full Service Power Supply         Quantity         Units         Rate         Revenue         Rate         Revenue         Rate         Revenue         (\$000)           1         Capacity         Energy         197,953         MWh         \$0.01931         3.822         \$0.02154         4.264           4         Non-capacity energy         197,953         MWh         \$0.04600         9,106         \$0.04569         9,044           5         PSCR         197,953         MWh         \$0.00000         0         \$0.00000         0           7         REPS         995         Meters         \$0.0000         0         \$0.00000         0           8         Total Full Service Distribution         Quantity         Units         \$11.25         134         \$15.00         179           10         Full Service Distribution         Quantity         Units         \$0.02825         5.592         \$0.03108         6.151           12         Service Charge         197,953         MWh         \$0.02825         5.592         \$0.03108         6.151           13         Distribution System         197,953         MWh         \$0.020765         151         \$0.03108         6.151           14         <	No.	Description	Billing Deter	minants	.,	Present	Proj	posed
Image: Construction         Constr		Full Service Power Supply	<u>Quantity</u>	<u>Units</u>	Rate	<u>Revenue</u>	Rate	<u>Revenue</u>
1         Capacity         Capacity         \$0.01931         3,822         \$0.02154         4,264           4         Non-capacity energy         197,953         MWh         \$0.01931         3,822         \$0.02154         4,264           6         PSCR         197,953         MWh         \$0.04600         9,106         \$0.04569         9,044           6         PSCR         197,953         MWh         \$0.00000         0         \$0.0000         0           7         REPS         995         MWh         \$0.00000         \$0.0000         0         \$0.00         0           7         Revise Distribution         Quantity         Units         \$11.25         134         \$15.00         179           11         Service Charge         995         Cust.         \$11.25         134         \$15.00         179           12         Service Charge         197,953         MWh         \$0.00765         151         \$0.000765         151           13         Distribution System         197,953         MWh         \$0.00765         151         \$0.00765         151           14         Energy Waste Reduction         197,953         MWh <b>0.176</b> 336 <b>0.1</b>						(\$000)		(\$000)
2         Energy         197,953         MWh         \$0.01931         3,822         \$0.02154         4,264           4         Non-capacity energy         197,953         MWh         \$0.04600         9,106         \$0.04569         9,044           5         PSCR         197,953         MWh         \$0.0000         0         \$0.000         0           6         PSCR         197,953         MWh         \$0.0000         0         \$0.000         0           7         REPS         995         Meters         \$0.000         0         \$0.000         0           8         Total Full Service Distribution         Quantity         Units         \$11.25         134         \$15.00         179           11         Service Charge         995         Cust.         \$11.25         134         \$15.00         179           12         Distribution Charge         197,953         MWh         \$0.02825         5,592         \$0.03108         6,151           13         Distribution System         197,953         MWh         \$0.000765         151         \$0.000765         151           14         Energy         0         MWh         \$0.017e         336         0.17e <td< td=""><td><u>1</u></td><td>Capacity</td><td></td><td></td><td></td><td></td><td></td><td></td></td<>	<u>1</u>	Capacity						
3         Non-capacity energy         197,953         MWh         \$0.04600         9,106         \$0.04569         9,044           6         PSCR         197,953         MWh         \$0.00000         0         \$0.0000         0           7         REPS         995         Metrs         \$0.0000         0         \$0.0000         0           8         Total Full Service Dower Supply         197,953         MWh         \$0.02825         5,592         \$0.03108         6,151           12         Service Charge         995         Cust.         \$11.25         134         \$15.00         179           14         Distribution Charge         197,953         MWh         \$0.02825         5,592         \$0.03108         6,151           15         Distribution System         197,953         MWh         \$0.020765         151         \$0.000765         151           18         Energy Waste Reduction         995         Meters         \$0.93         111         \$0.93         111           10         Distribution Surcharges         197,953         MWh         \$0.000765         151         \$0.000765         151           12         Total Full Service D3.2         197,953         MWh         \$0	2	Energy	197,953	MWh	\$0.019	31 3,822	\$0.02154	4,264
4       Non-capacity energy       197.953       MWh       \$0.04600       9.106       \$0.04569       9.044         6       PSCR       197.953       MWh       \$0.00000       0       \$0.0000       0         7       REPS       995       Meters       \$0.0000       0       \$0.0000       0         9       Total Full Service Power Supply       197.953       MWh       6.53¢       12,928       6.72¢       13,307         10       Full Service Distribution       Quantity       Units       6.53¢       12,928       6.72¢       13,307         11       Service Charge       995       Cust.       \$11.25       134       \$15.00       179         13       Distribution Charge       197.953       MWh       \$0.02825       5.592       \$0.03108       6,151         15       Distribution System       197.953       MWh       \$0.000765       151       \$0.000765       151         18       Energy Waste Reduction       995       Meters       \$0.33       11       0.17¢       336         10       Distribution Surcharges       197.953       MWh       0.017¢       366       0.022       3.37¢       6,666         22       Total	3							
Section         197.953         MWh         \$0.0000         0         \$0.0000         0           REPS         995         Meters         \$0.00         0         \$0.00         0           Image: Service Distribution         Quantity         Units         \$11.25         134         \$15.00         179           Image: Service Charge         995         Cust.         \$11.25         134         \$15.00         179           Image: Service Charge         197.953         MWh         \$0.02825         5.592         \$0.03108         6.131           Image: Service Charge         197.953         MWh         \$0.02825         5.592         \$0.03108         6.131           Image: Service Charge         197.953         MWh         \$0.00765         151         \$0.000765         161           Image: Service Charge         197.953         MWh         \$0.00765         151         \$0.000765         151         \$0.000765         151           Image: Service Distribution         197.953         MWh         \$0.066         6.062         3.376         6.6666           Image: Service Charge         197.953         MWh         \$0.0178         3.392         \$0.02154         0           Service Charge         <	4	Non-capacity energy	197,953	MWh	\$0.046	9,106	\$0.04569	9,044
b         PSCR         197,953         MWn         \$0.0000         0         \$0.0000         0         \$0.0000         0         \$0.0000         0         \$0.0000         0         \$0.0000         0         \$0.0000         0         \$0.0000         0         \$0.0000         0         \$0.0000         0         \$0.0000         0         \$0.0000         0         \$0.0000         0         \$0.00000         0         \$0.00000         0         \$0.00000         0         \$0.00000         0         \$0.00000         0         \$0.00000         0         \$0.00000         0         \$0.00000         0         \$0.00000         0         \$0.00000         0         \$0.00000         0         \$0.00000         0         \$0.00000         0         \$0.000000         \$0         \$0.00000         \$0         \$0.000000         \$0.000000         \$0.000000         \$0.0000000         \$0.0000000         \$0.00000000         \$0.00000000000000000000000000000000000	5	ROOD	407.050	N 4) A / I-	¢0.000		¢0.00000	0
Intervise       390 Meters       300 0       0       3000 0       0         8       Total Full Service Power Supply       197,953       MWh       6.53e       12,928       6.72e       13,307         9       Full Service Distribution       Quantity       Units       6.53e       12,928       6.72e       13,307         11       Service Charge       995       Cust.       \$11.25       134       \$15.00       179         12       Service Charge       197,953       MWh       \$0.02825       5,592       \$0.03108       6,151         13       Distribution System       197,953       MWh       \$0.000765       151       \$0.000765       151         14       Distribution Surcharges       197,953       MWh       \$0.000765       151       \$0.000765       151         17       Nuclear Decomm.       197,953       MWh       \$0.000765       151       \$0.93       11         10       Distribution       197,953       MWh       \$0.093       11       \$0.93       11         22       Total Full Service D3.2       197,953       MWh       \$0.959e       18,991       10.09e       19,947         24       Choice Distribution       Quantity	6 7		197,953	Notors	\$0.000 ¢0		\$0.00000	0
a       Iolar Lui Service Fower Supply       137,553       WWH       0.332       12,323       0.722       13,007         10       Full Service Distribution       Quantity       Units       \$11,25       134       \$15.00       179         11       Service Charge       995       Cust.       \$11,25       134       \$15.00       179         12       Service Charge       197,953       MWh       \$0.02825       5,592       \$0.03108       6,151         15       Distribution System       197,953       MWh       \$0.02825       151       \$0.000765       151         16       IEAF       995       Meters       \$14,51       173       \$14,51       173         11       Distribution Surcharges       197,953       MWh       \$0.000765       151       \$0.000765       151         12       Total Full Service Distribution       197,953       MWh <b>3.06e 6,062 3.37e 6,666</b> 23       Total Full Service D3.2       197,953       MWh <b>3.06e 6,062 3.37e 6,666</b> 24       Energy       0       MWh <b>3.000</b> \$0.02154       0         26       Choice Distribution<	0	Total Full Sancica Power Supply	107.053	MW/h		3¢ 12.028	\$0.00 6 72¢	12 207
Full Service Distribution         Quantity         Units           11         Service Charge         995         Cust.         \$11.25         134         \$15.00         179           13         Distribution Charge         197.953         MWh         \$0.02825         5.592         \$0.03108         6,151           15         Distribution System         197.953         MWh         \$0.02825         5.592         \$0.03108         6,151           16         Nuclear Decomm.         197.953         MWh         \$0.02825         151         \$0.000765         151           17         Nuclear Decomm.         197.953         MWh         \$0.000765         151         \$0.000765         151           120         Distribution Surcharges         197.953         MWh <b>0.17e 336 0.17e 336</b> 121         Total Full Service D3.2         197.953         MWh <b>0.17e 336 0.17e 336</b> 22         Total Full Service D3.2         197.953         MWh <b>9.59e 18.991 10.09e 19.974</b> 24         Choice Distribution         Quantity         Units <b>Rate</b> Revenue         (\$000) <td>0</td> <td>Total I ull Service Fower Supply</td> <td>197,955</td> <td></td> <td>0.5</td> <td>12,320</td> <td>0.724</td> <td>13,307</td>	0	Total I ull Service Fower Supply	197,955		0.5	12,320	0.724	13,307
Indice free branching         Openantial         Openantial           11         Service Charge         995         Cust.         \$11.25         134         \$15.00         179           14         Distribution Charge         197,953         MWh         \$0.02825         5,592         \$0.03108         6,151           15         Distribution System         197,953         MWh         \$0.020765         151         \$0.000765         151           18         Energy Waste Reduction         995         Meters         \$0.93         11         \$0.93         11           20         Distribution Surcharges         197,953         MWh         \$0.17e         336         0.17e         336           11         Distribution         197,953         MWh         \$0.06e         6,062         3.37e         6,666           10.09e         19,974         10.09e         19,974         0.095         10.09e         19,974           24         Total Full Service D3.2         197,953         MWh         9.59e         18,991         10.09e         19,974           26         Choice Distribution         Quantity         Units         Rate         Revenue         (\$000)         \$0.02154         0 <t< td=""><td>9 10</td><td>Full Service Distribution</td><td>Quantity</td><td>Unite</td><td>11</td><td></td><td></td><td></td></t<>	9 10	Full Service Distribution	Quantity	Unite	11			
12       Service Charge       995       Cust.       \$11.25       134       \$15.00       179         13       Distribution Charge       197,953       MWh       \$0.02825       5,592       \$0.3108       6,151         15       Distribution System       197,953       MWh       2.89e       5,727       3.20e       6,330         16       Nuclear Decomm.       197,953       MWh       \$0.000765       151       \$14.51       173         17       Nuclear Decomm.       197,953       MWh       \$0.000765       151       \$0.000765       151         18       Energy Waste Reduction       995       Meters       \$0.17e       336       0.17e       336         10       Distribution Surcharges       197,953       MWh       0.17e       336       0.17e       336         11       Distribution       197,953       MWh       3.06e       6,062       3.37e       6,6666         23       Total Full Service Distribution       197,953       MWh       9.59e       18,991       10.09e       19,974         24       Choice Distribution       Quantity       Units       Kate       Revenue       (\$000)       \$0.02154       0         28	11		Quantity	01113				
12       Derived onlage       197,953       MWh       \$0.02825       5,592       \$0.03108       6,151         14       Distribution Charge       197,953       MWh       \$0.02825       5,592       \$0.03108       6,151         15       Distribution System       197,953       MWh       \$0.02825       5,592       \$0.03108       6,151         16       Image: Solid online onlin	12	Service Charge	995	Cust	\$11	25 134	\$15.00	179
14         Distribution Charge         197,953         MWh         \$0.02825         5,592         \$0.03108         6,151           15         Distribution System         197,953         MWh         \$0.00765         151         \$0.000765         151           18         Energy Waste Reduction         197,953         MWh         \$0.000765         151         \$0.000765         151           20         Distribution Surcharges         197,953         MWh         \$0.17e         336         0.17e         336           21         Total Full Service Distribution         197,953         MWh <b>0.17e</b> 336         0.17e         336           23         Total Full Service D3.2         197,953         MWh <b>9.59e</b> 18,991         10.09e         19,974           24         Total Full Service D3.2         197,953         MWh <b>9.59e</b> 18,991         10.09e         19,974           26         Choice Distribution         Quantity         Units         Rate         Revenue         (\$000)         \$0.02154         0           28         Energy         0         MWh         \$0.02825         8,508         \$0.03108         9,359           33         Distribution Charg	13	Cervice Charge	000	0031.	ψ11.	20 104	ψ10.00	175
15       Distribution System       197,953       MWh         16       Nuclear Decomm.       197,953       MWh         16       Nuclear Decomm.       197,953       MWh         17       Nuclear Decomm.       197,953       MWh         18       Energy Waste Reduction       995       Meters       \$0.000765       151         19       LIEAF       995       Meters       \$0.93       11       \$0.17¢       336         20       Distribution Surcharges       197,953       MWh       \$0.17¢       336       \$0.93       11         21       Total Full Service Distribution       197,953       MWh       3.06¢       6,062       3.37¢       6,666         23       Total Full Service D3.2       197,953       MWh       3.06¢       6,062       3.37¢       6,666         23       Total Full Service D3.2       197,953       MWh       9.59¢       18,991       10.09¢       19,974         24       Energy       0       MWh       \$0.017\$       300,000)       \$0.02154       0         29       Service Charge       782       Cust.       \$11.25       106       \$15.00       141         30       Distribution Charge	14	Distribution Charge	197.953	MWh	\$0.028	25 5.592	\$0.03108	6.151
16         Nuclear Decomm.         197,953         MWh           18         Energy Waste Reduction         995         Meters         \$0.000765         151           19         LIEAF         995         Meters         \$0.93         11           20         Distribution Surcharges         197,953         MWh         0.17e         336           21         Total Full Service Distribution         197,953         MWh         0.17e         336           21         Total Full Service Distribution         197,953         MWh         9.59e         18,991         0.17e         336           23         Total Full Service D3.2         197,953         MWh         9.59e         18,991         10.09e         19,974           24         Energy         0         MWh         9.59e         18,991         10.09e         19,974           26         Choice Distribution         Quantity         Units         Rate         Revenue         (\$000)           27         Capacity         Energy         0         MWh         \$0.01931         0         \$0.02154         0           28         Energy         0         MWh         \$0.02825         8,508         \$0.03108         9,359 </td <td>15</td> <td>Distribution System</td> <td>197,953</td> <td>MWh</td> <td>2.8</td> <td>9¢ 5,727</td> <td>3.20¢</td> <td>6,330</td>	15	Distribution System	197,953	MWh	2.8	9¢ 5,727	3.20¢	6,330
17       Nuclear Decomm.       197,953       MWh       \$0.000765       151       \$0.000765       151         18       Energy Waste Reduction       995       Meters       \$0.93       111       \$14.51       173         19       LIEAF       995       Meters       \$0.93       111       \$0.93       111         20       Distribution Surcharges       197,953       MWh       0.17¢       336       0.17¢       336         21       Total Full Service Distribution       197,953       MWh       0.17¢       336       0.17¢       336         23       Total Full Service Distribution       197,953       MWh       9.59¢       18,991       10.09¢       19,974         24       Total Full Service D3.2       197,953       MWh       9.59¢       18,991       10.09¢       19,974         25       Choice Distribution       Quantity       Units       Kate       Rate       Revenue       (\$000)       (\$000)         26       Energy       0       MWh       \$0.01931       0       \$0.02154       0       9         29       Service Charge       782       Cust.       \$11.25       106       \$15.00       141         31	16	,						,
18       Energy Waste Reduction       995       Meters       \$14.51       173       \$14.51       173         19       LIEAF       995       Meters       \$0.93       11       \$0.93       11         20       Distribution Surcharges       197,953       MWh       0.17¢       336       \$0.93       11         21       Total Full Service Distribution       197,953       MWh       0.17¢       336       \$0.93       11         22       Total Full Service Distribution       197,953       MWh       9.59¢       18,991       10.09¢       19,974         24	17	Nuclear Decomm.	197,953	MWh	\$0.0007	65 151	\$0.000765	151
19       LIEAF       995       Meters       \$0.93       11       \$0.93       11         20       Distribution Surcharges       197,953       MWh       0.17¢       336       0.17¢       336         21       Total Full Service Distribution       197,953       MWh       3.06¢       6,062       3.37¢       6,6666         23       Total Full Service D3.2       197,953       MWh       9.59¢       18,991       10.09¢       19,974         24       Choice Distribution       Quantity       Units       Rate       Revenue       (\$000)       (\$000)         27       Capacity       0       MWh       \$0.01931       0       \$0.02154       0         28       Energy       0       MWh       \$0.01931       0       \$0.02154       0         29       Service Charge       782       Cust.       \$11.25       106       \$15.00       141         32       Distribution Charge       301,181       MWh       \$0.02825       8,508       \$0.03108       9,359         33       Distribution System       301,181       MWh       \$0.000765       230       \$0.000765       230	18	Energy Waste Reduction	995	Meters	\$14.	51 173	\$14.51	173
20       Distribution Surcharges       197,953       MWh       0.17¢       336       0.17¢       336         21       Total Full Service Distribution       197,953       MWh       3.06¢       6,062       3.37¢       6,666         23       Total Full Service D3.2       197,953       MWh       9.59¢       18,991       10.09¢       19,974         24       Choice Distribution       Quantity       Units       Rate       Revenue       (\$000)       (\$000)         27       Capacity       Energy       0       MWh       \$0.01931       0       \$0.02154       0         28       Energy       0       MWh       \$0.02825       8,508       \$0.02154       0         30       Service Charge       782       Cust.       \$11.25       106       \$15.00       141         32       Distribution Charge       301,181       MWh       \$0.02825       8,508       \$0.03108       9,359         33       Distribution System       301,181       MWh       \$0.000765       230       \$0.000765       230	19	LIEAF	995	Meters	\$0.	.93 11	\$0.93	11
21       Total Full Service Distribution       197,953       MWh       3.06¢       6,062       3.37¢       6,666         23       Total Full Service D3.2       197,953       MWh       9.59¢       18,991       10.09¢       19,974         24       Choice Distribution       Quantity       Units       Rate       Revenue       (\$000)       (\$000)         25       Choice Distribution       Quantity       Units       Rate       Revenue       (\$000)       (\$000)         26       Capacity       Energy       0       MWh       \$0.01931       0       \$0.02154       0         29       Service Charge       782       Cust.       \$11.25       106       \$15.00       141         31       Distribution Charge       301,181       MWh       \$0.02825       8,508       \$0.03108       9,359         33       Distribution System       301,181       MWh       \$0.000765       230       \$0.000765       230	20	Distribution Surcharges	197,953	MWh	0.1	7¢ 336	0.17¢	336
22       Total Full Service Distribution       197,953       MWh       3.06¢       6,662       3.37¢       6,666         23       Total Full Service D3.2       197,953       MWh       9.59¢       18,991       10.09¢       19,974         24       Choice Distribution       Quantity       Units       Rate       Revenue       (\$000)       (\$000)         26       Capacity       Energy       0       MWh       \$0.01931       0       (\$000)       (\$000)         28       Energy       0       MWh       \$0.01931       0       \$0.02154       0         30       Service Charge       782       Cust.       \$11.25       106       \$15.00       141         31       Distribution Charge       301,181       MWh       \$0.02825       8,508       \$0.03108       9,359         33       Distribution System       301,181       MWh       \$0.000765       230       \$0.000765       230	21							
23       Total Full Service D3.2       197,953       MWh       9.59¢       18,991       10.09¢       19,974         24       24       25       Choice Distribution       Quantity       Units       Rate       Revenue       (\$000)       (\$000)         26       26       (\$000)	22	Total Full Service Distribution	197,953	MWh	3.0	6¢ 6,062	3.37¢	6,666
24         Choice Distribution         Quantity         Units         Rate         Revenue         Rate         Rate <thr< td=""><td>23</td><td>Total Full Service D3.2</td><td>197,953</td><td>MWh</td><td>9.5</td><td>9¢ 18,991</td><td>10.09¢</td><td>19,974</td></thr<>	23	Total Full Service D3.2	197,953	MWh	9.5	9¢ 18,991	10.09¢	19,974
25         Choice Distribution         Quantity         Units         Rate         Revenue         Rate         Rate         Revenue           26         Capacity         Capacity         (\$000)	24				_		_	
26       (\$000)       (\$000)         27       Capacity       0       MWh       \$0.01931       0       \$0.02154       0         28       Energy       0       MWh       \$0.01931       0       \$0.02154       0         29       30       Service Charge       782       Cust.       \$11.25       106       \$15.00       141         31       32       Distribution Charge       301,181       MWh       \$0.02825       8,508       \$0.03108       9,359         33       Distribution System       301,181       MWh       \$0.000765       230       \$0.000765       230         34       35       Nuclear Decomm.       301,181       MWh       \$0.000765       230       \$0.000765       230	25	Choice Distribution	<u>Quantity</u>	<u>Units</u>	Rate	<u>Revenue</u>	Rate	Revenue
27       Capacity       0       MWh       \$0.01931       0       \$0.02154       0         28       Energy       0       MWh       \$0.01931       0       \$0.02154       0         29       Service Charge       782       Cust.       \$11.25       106       \$15.00       141         31       Distribution Charge       301,181       MWh       \$0.02825       8,508       \$0.03108       9,359         33       Distribution System       301,181       MWh <b>2.86¢ 8,614 3.15¢ 9,500</b> 34	26		_			(\$000)		(\$000)
28       Energy       0       MWh       \$0.01931       0       \$0.02154       0         29       30       Service Charge       782       Cust.       \$11.25       106       \$15.00       141         31       Distribution Charge       301,181       MWh       \$0.02825       8,508       \$0.03108       9,359         33       Distribution System       301,181       MWh       \$0.000765       230       \$0.000765       230         34       35       Nuclear Decomm.       301,181       MWh       \$0.000765       230       \$0.000765       230	27	Capacity						
29 30       Service Charge       782       Cust.       \$11.25       106       \$15.00       141         31       Distribution Charge       301,181       MWh       \$0.02825       8,508       \$0.03108       9,359         33       Distribution System       301,181       MWh       2.86¢       8,614       3.15¢       9,500         34       35       Nuclear Decomm.       301,181       MWh       \$0.000765       230       \$0.000765       230	28	Energy	0	MWh	\$0.019	031 0	\$0.02154	0
30       Service Charge       782       Cust.       \$11.25       106       \$15.00       141         31       Distribution Charge       301,181       MWh       \$0.02825       8,508       \$0.03108       9,359         33       Distribution System       301,181       MWh       2.86¢       8,614       3.15¢       9,500         34       35       Nuclear Decomm.       301,181       MWh       \$0.000765       230       \$0.000765       230	29							
31         31         31         31         31         31         31         31         31         31         31         32         33<	30	Service Charge	782	Cust.	\$11.	.25 106	\$15.00	141
32         Distribution Charge         301,181         MWh         \$0.02825         8,508         \$0.03108         9,359           33         Distribution System         301,181         MWh         2.86¢         8,614         3.15¢         9,500           34         35         Nuclear Decomm.         301,181         MWh         \$0.000765         230         \$0.000765         230	31				<b>*</b> *****		<b>A2 32 132</b>	
33         Distribution System         301,181         MWn         2.86c         8,614         3.15c         9,500           34         35         Nuclear Decomm.         301,181         MWh         \$0.000765         230         \$0.000765         230	32	Distribution Charge	301,181	MWh	\$0.028	8,508	\$0.03108	9,359
34         35         Nuclear Decomm.         301,181         MWh         \$0.000765         230         \$0.000765         230	33	Distribution System	301,181	MWh	2.8	6¢ 8,614	3.15¢	9,500
35 Nuclear Decomm. 301,181 Mivh \$0.000765 230 \$0.000765 230	34		004.404		<b>#</b> 0.0007		<b>A</b> 0 000705	000
00 Energy Waste Daduation 700 Maters 0 044.54 400 044.54 400	35	Nuclear Decomm.	301,181	IVIVVN	\$0.0007	65 230	\$0.000765	230
36 Energy Waste Reduction 782 Meters \$14.51 136 \$14.51 136	36		782	Meters	\$14.	51 136	\$14.51	136
37         LIEAF         702         Weiters         \$0.93         9         \$0.93         9           29         Distribution Surphoreno         201.191         MM/h         0.004         275         0.404         275	31		201 484		\$0.	.90 9	\$0.93	9
30 Justinbulion Surcharges 301,181 MWVN U.UU¢ 375	38 20	Distribution Surcharges	301,181	IVIVVN	0.0	U¢ 3/5	0.12¢	3/5
40 Total Chaine D2 2 201 191 MM/b 2004 000 000	39	Total Chaine D2 2	204 404			0.04 0.000	2.00	0.075
40 Total Choice D3.2 301,181 MWVN 2.98¢ 8,989 3.28¢ 9,875	40	Total Choice D3.2	301,181	IVIVVN	2.	90¢ 8,989	3.28¢	9,875
41 42 Total D2 2 400 424 MM/b E 644 27 090 5 094 20 940	41	Total D2 2	400 124	MMA		14 07.000	E 004	20.040
42         10tal D3.2         433,134         WWWII         3.01¢         21,300         5.98¢         29,849           43         Iperaseo/Decreaseo (\$)         1.950         1.950         1.950         1.950	42 42		499,134	11 1111	5.0	27,980	5.98¢	1 860

ncrease/Decrease (\$)

**Michigan Public Service Commission** DTE Electric Company Staff's Present and Proposed Revenue Calculations Interruptible General Service Rate - D3.3

Case No.: U-20162 Exhibit: S-6 Schedule: F3 Witness: M. J. Pung Page: 20 of 52

Line	(a)	(b)		(c)	(d)	(e)	(e) (f)		
<u>No.</u>	Description	Billing Deter	ninants	Pres	sent	Propo	sed		
	Full Service Power Supply	Quantity	<u>Units</u>	Rate	<u>Revenue</u>	Rate	<u>Revenue</u>		
					(\$000)		(\$000)		
1	Capacity								
2	Energy	94,451	MWh	\$0.02685	2,536	\$0.02580	2,437		
3									
4	Non-capacity energy	94,451	MWh	\$0.03992	3,770	\$0.03884	3,669		
5									
6	PSCR	94,451	MWh	\$0.00000	0	\$0.00000	0		
7	REPS	120	Meters	\$0.00	0	\$0.00	0		
8	Total Full Service Power Supply	94,451	MWh	6.68¢	6,307	6.46¢	6,106		
9									
10	Full Service Distribution	Quantity	Units						
11									
12	Service Charge	120	Cust.	\$11.25	16	\$15.00	22		
13				· · ·	-	• • • • •			
14	Distribution Charge	94,451	MWh	\$0.03865	3,651	\$0.03625	3,424		
15	Distribution System	94,451	MWh	3.88¢	3,667	3.65¢	3,445		
16	,	,							
17	Nuclear Decomm	94 451	MWh	\$0,000765	72	\$0,000765	72		
18	Energy Waste Reduction	120	Meters	\$14.51	21	\$14.51	21		
19	LIEAF	120	Meters	\$0.93	1	\$0.93	1		
20	Distribution Surcharges	94 451	MWh	0.10¢	94	0.10¢	94		
21	e louis autori e aronargoo	01,101		0.1.00	••	0	•.		
22	Full Service Distribution	94 451	MWh	3 98¢	3 761	3 75¢	3 540		
22	Total Full Service D2 2	04.451	MWh	10.66¢	10.069	10.21¢	0,645		
20	Total I dil Service D3.5	34,431		10.00¢	10,000	10.21¢	3,043		
24	Choice Distribution	Quantity	Unite	Pata	Povonuo	Pata	Povonuo		
20		Quantity	Units	Kale	(Cooo)	Kale	(Cooo)		
20	Canaaitu				(\$000)		(\$000)		
21		0		¢0,00005	0	¢0,00590	0		
20	Energy	0	IVIVVII	\$U.U2085	0	\$0.02580	0		
29	Convice Charge	7	Curet	¢11.05	4	¢15.00	4		
30	Service Charge	(	Cusi.	\$11.25	1	\$15.00	I		
31 22	Distribution Charge	6 517	MAA	¢0.02965	252	¢0,02625	226		
32	Distribution Charge	0,017		\$0.03805	232	\$0.03625	230		
33	Distribution System	6,517	IVIVVN	3.88¢	203	3.64¢	237		
34		0.547		¢0.000705	r.	¢0.000705	-		
35	Nuclear Decomm.	6,517	IVIVV N	\$0.000765	5	\$0.000765	5		
36	Energy Waste Reduction	7	Meters	\$14.510000	1	\$14.510000	1		
31		7	ivieters	\$0.93	0	\$0.93	0		
38	Distribution Surcharges	6,517	MWh	0.10¢	6	0.10¢	6		
39		1		-					
40	Total Choice D3.3	6,517	MWh	3.98¢	259	3.74¢	244		
41				a					
42	Total D3.3	100,968	MWh	10.23¢	10,327	9.79¢	9,889		
43	Increase/Decrease (\$)						(438)		

**Michigan Public Service Commission DTE Electric Company** Staff's Present and Proposed Revenue Calculations Large General Service Rate - D4

Line (a) (b) No. Description **Billing Determinants** Full Service Power Supply **Quantity** Units 1 Capacity 2 Demand Charge 5,159,967 3 Energy 4 First 200 Hrs. Use 1,032,901 1,140,174 5 Excess 2,173,074 6 Power Supply Subtotal 7 8 Non-capacity 9 Demand Charge 5,159,967 10 Energy 11 First 200 Hrs. Use 1,032,901 12 1,140,174 Excess 13 PSCR 2.173.074 REPS 14 8,286 Total Full Service Power Supply 15 2,173,074 16 17 Full Service Distribution Quantity 18 19 Service Charge 8,286 20 Distribution Demand Charge 21 5,159,967 Distribution Energy Charge 22 2,173,074 23 Distribution Charges 2,173,074 24 25 Nuclear Decomm. 2,173,074 26 Energy Waste Reduction 8,286 LIEAF 27 8,286 28 Distribution Surcharges 2,173,074 29 30 Total Full Service Distribution 2,173,074 **Total Full Service D4** 31 2,173,074 32 33 **Choice Distribution** <u>Quantity</u>

5,159,967	kW	\$11.62	59,959	
1,032,901	MWh MWh	\$0.00000 \$0.00000	0	
1,140,174		\$0.00000	50.050	
2,173,074	IVIVVn		59,959	
5,159,967	kW	2.26	11,662	
1,032,901		0.04657	48,102	
1,140,174	MMA	¢0,00000	41,090	
2,173,074	Motors	\$0.0000 \$0.00	0	
2 172 074	MMA	<b>3</b> 0.00	161 410	
2,173,074	IVIVVII	1.43¢	101,419	
Quantity	<u>Units</u>			
8,286	Cust.	\$13.67	1,359	
5,159,967	kW	\$12.95	66,822	
2,173,074		\$0.00000	0	
2,173,074	MWh	3.14¢	68,181	
2,173,074	MWh	\$0.000765	1,662	
8,286	Meters	\$14.51	1,443	
8,286	Meters	\$0.93	92	
2,173,074	MWh	0.15¢	3,198	
2,173,074	MWh	3.28¢	71,378	
2,173,074	MWh	10.71¢	232,797	
<u>Quantity</u>	<u>Units</u>	<u>Rate</u>	<u>Revenue</u> (\$000)	
0	kW	\$11.62	0	
0	MWh	\$0.00000	0	
0	MWh	\$0.00000	0	
1,126	Cust.	\$13.67	185	
845.346	kW	\$12.95	10.947	
333.077	MWh	\$0.00000	0	
333,077	MWh	3.34¢	11,132	
222 077	MAA	\$0,000765	255	
1 126	Motors	\$14 510000	200	
1 126	Meters	\$0 Q2	130	
333.077	MWh	0.14¢	463	
,•				
333,077	MWh	3.48¢	11,595	
2,506,151	MWh	9.75¢	244,392	

(c)

Rate

Present

(d)

Revenue (\$000)

Case No.: U-20162 Exhibit: S-6 Schedule: F3 Witness: M. J. Pung Page: 21 of 52

(f)

(e)

Рюро	300
Rate	Revenue
	(\$000)
	(\$000)
¢10.02	EE 000
\$10.83	55,66Z
¢0,0000	0
\$0.00000	0
\$0.00000	0
•	
	55,882
\$3.07	15 819
+	,
\$0.04386	45 306
¢0,00000	00,040
\$0.03386	38,610
\$0,0000	0
¢0.00	0
\$0.00	0
7.16¢	155.616
	/
\$15.00	1 401
ψ10.00	1,-51
\$14.25	73 504
ψT4.25	75,504
\$0.000000	0
3 45¢	74 995
J.7J¢	14,333
\$0,000765	1 662
\$0.000705	1,002
\$14.510000	1,443
¢0.02	
	(1)
\$U.93	92
50.93 0.15¢	92 3,198
\$0.93 <b>0.15¢</b>	92 <b>3,198</b>
50.93 0.15¢	92 3,198
\$0.93 0.15¢ 3.60¢	3,198 78,193
\$0.93 0.15¢ 3.60¢	92 3,198 78,193 233,809
0.15¢ 3.60¢ 10.76¢	92 3,198 78,193 233,809
\$0.93 0.15¢ 3.60¢ 10.76¢	92 3,198 78,193 233,809
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0.93 0.15¢ 3.60¢ 10.76¢ <u>Rate</u>	92 3,198 78,193 233,809 <u>Revenue</u>
\$0.93 0.15¢ 3.60¢ 10.76¢ <u>Rate</u>	92 3,198 78,193 233,809 <u>Revenue</u> (\$000)
0.93 0.15¢ 3.60¢ 10.76¢ <u>Rate</u>	92 3,198 78,193 233,809 <u>Revenue</u> (\$000)
0.93 0.15¢ 3.60¢ 10.76¢ <u>Rate</u>	92 3,198 78,193 233,809 <u>Revenue</u> (\$000)
\$0.93 0.15¢ 3.60¢ 10.76¢ Rate \$10.83	92 3,198 78,193 233,809 <u>Revenue</u> (\$000) 0
\$0.93 0.15¢ 3.60¢ 10.76¢ <u>Rate</u> \$10.83	92 3,198 78,193 233,809 <u>Revenue</u> (\$000) 0
\$0.93 0.15¢ 3.60¢ 10.76¢ Rate \$10.83	92 3,198 78,193 233,809 <u>Revenue</u> (\$000) 0
\$0.93 0.15¢ 3.60¢ 10.76¢ Rate \$10.83 \$0.00000	92 3,198 78,193 233,809 <u>Revenue</u> (\$000) 0
\$0.93 0.15¢ 3.60¢ 10.76¢ Rate \$10.83 \$0.00000 \$0.00000	92 3,198 78,193 233,809 <u>Revenue</u> (\$000) 0 0
\$0.93 0.15¢ 3.60¢ 10.76¢ Rate \$10.83 \$0.00000 \$0.00000	92 3,198 78,193 233,809 <u>Revenue</u> (\$000) 0 0 0 0
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\$0.93 0.15¢ 3.60¢ 10.76¢ Rate \$10.83 \$0.00000 \$0.00000 \$15.00	92 3,198 78,193 233,809 <u>Revenue</u> (\$000) 0 0 0 203
\$0.93 0.15¢ 3.60¢ 10.76¢ Rate \$10.83 \$0.00000 \$0.00000 \$15.00 \$14.25	92 3,198 78,193 233,809 <u>Revenue</u> (\$000) 0 0 0 203 203
\$0.93 0.15¢ 3.60¢ 10.76¢ Rate \$10.83 \$0.00000 \$0.00000 \$15.00 \$14.25	92 3,198 78,193 233,809 <u>Revenue</u> (\$000) 0 0 0 203 12,042
\$0.93 0.15¢ 3.60¢ 10.76¢ Rate \$10.83 \$0.00000 \$0.00000 \$15.00 \$14.25 \$0.00000	92 <b>3,198</b> <b>78,193</b> <b>233,809</b> <u>Revenue</u> (\$000) 0 0 0 0 203 12,042 0
\$0.93 0.15¢ 3.60¢ 10.76¢ Rate \$10.83 \$0.00000 \$0.00000 \$15.00 \$14.25 \$0.00000 <b>3.68¢</b>	92 3,198 78,193 233,809 <u>Revenue</u> (\$000) 0 0 0 203 12,042 0 12,245
\$0.93 0.15¢ 3.60¢ 10.76¢ Rate \$10.83 \$0.00000 \$0.00000 \$15.00 \$14.25 \$0.00000 <b>3.68¢</b>	92 3,198 78,193 233,809 <u>Revenue</u> (\$000) 0 0 0 0 203 12,042 0 12,245
\$0.93 0.15¢ 3.60¢ 10.76¢ Rate \$10.83 \$0.00000 \$0.00000 \$15.00 \$14.25 \$0.00000 3.68¢	92 3,198 78,193 233,809 <u>Revenue</u> (\$000) 0 0 0 0 203 12,042 0 12,245
\$0.93 0.15¢ 3.60¢ 10.76¢ Rate \$10.83 \$0.00000 \$0.00000 \$15.00 \$14.25 \$0.00000 <b>3.68¢</b> \$0.00265	92 3,198 78,193 233,809 <u>Revenue</u> (\$000) 0 0 0 0 203 12,042 0 12,245 255
\$0.93 0.15¢ 3.60¢ 10.76¢ Rate \$10.83 \$0.00000 \$0.00000 \$15.00 \$14.25 \$0.00000 <b>3.68¢</b> \$0.000765	92 3,198 78,193 233,809 <u>Revenue</u> (\$000) 0 0 0 0 203 12,042 0 12,245 255
\$0.93 0.15¢ 3.60¢ 10.76¢ Rate \$10.83 \$0.00000 \$0.00000 \$15.00 \$14.25 \$0.00000 <b>3.68¢</b> \$0.000765 \$14.510000	92 3,198 78,193 233,809 Revenue (\$000) 0 0 0 0 0 203 12,042 0 12,245 196
\$0.93 0.15¢ 3.60¢ 10.76¢ Rate \$10.83 \$0.00000 \$0.00000 \$15.00 \$14.25 \$0.00000 <b>3.68¢</b> \$0.000765 \$14.510000 \$0.93	92 3,198 78,193 233,809 Revenue (\$000) 0 0 0 0 0 203 12,042 0 12,042 0 12,245 196 13
\$0.93 0.15¢ 3.60¢ 10.76¢ Rate \$10.83 \$0.00000 \$0.00000 \$15.00 \$14.25 \$0.00000 3.68¢ \$0.000765 \$14.510000 \$0.93 \$0.93 \$0.000765 \$14.510000 \$0.93 \$0.93 \$0.000765 \$14.510000 \$0.93 \$0.93 \$0.000765 \$0.000765 \$0.000765 \$0.000765 \$0.000765 \$0.000765 \$0.00000 \$0.93 \$0.00000 \$0.93 \$0.000000 \$0.00000 \$0.00000 \$0.00000 \$0.00000 \$0.00000 \$0.000000 \$0.000000 \$0.0000000 \$0.000000 \$0.0000000 \$0.0000000 \$0.000000 \$0.000000000 \$0.0000000000	92 3,198 78,193 233,809 Revenue (\$000) 0 0 0 0 0 0 0 0 0 0 0 0 0
\$0.93 0.15¢ 3.60¢ 10.76¢ Rate \$10.83 \$0.00000 \$0.00000 \$15.00 \$14.25 \$0.00000 <b>3.68¢</b> \$0.000765 \$14.510000 \$0.93 0.14¢	92 3,198 78,193 233,809 
\$0.93 0.15¢ 3.60¢ 10.76¢ Rate \$10.83 \$0.00000 \$0.00000 \$15.00 \$14.25 \$0.00000 3.68¢ \$0.000765 \$14.510000 \$0.93 0.14¢	92 3,198 78,193 233,809 Revenue (\$000) 0 0 0 0 0 0 203 12,042 0 12,042 0 12,245 196 13 463
\$0.93 0.15¢ 3.60¢ 10.76¢ Rate \$10.83 \$0.00000 \$0.00000 \$15.00 \$14.25 \$0.00000 \$14.25 \$0.00000 3.68¢ \$0.000765 \$14.510000 \$0.93 0.14¢	92 3,198 78,193 233,809 Revenue (\$000) 0 0 0 0 0 203 12,042 0 12,245 255 196 13 463
\$0.93 0.15¢ 3.60¢ 10.76¢ Rate \$10.83 \$0.00000 \$0.00000 \$15.00 \$14.25 \$0.00000 3.68¢ \$0.000765 \$14.510000 \$0.93 0.14¢ 3.82¢	92 3,198 78,193 233,809 Revenue (\$000) 0 0 0 0 0 203 12,042 0 12,042 0 12,245 196 13 463 463
\$0.93 0.15¢ 3.60¢ 10.76¢ Rate \$10.83 \$0.00000 \$0.00000 \$15.00 \$14.25 \$0.00000 \$0.00000 \$14.25 \$0.00000 \$14.25 \$0.00000 \$0.00000 \$14.25 \$0.00000 \$0.00000 \$14.25 \$0.00000 \$0.00000 \$0.00000 \$14.25 \$0.00000 \$0.00000 \$0.00000 \$0.00000 \$14.25 \$0.00000 \$0.00000 \$0.00000 \$0.00000 \$0.00000 \$0.000000 \$0.000000 \$0.00000 \$0.00000 \$0.00000 \$0.00000 \$0.00000 \$0.382¢	92 3,198 78,193 233,809 Revenue (\$000) 0 0 0 0 0 203 12,042 0 12,245 196 13 463 463
\$0.93 0.15¢ 3.60¢ 10.76¢ Rate \$10.83 \$0.00000 \$0.00000 \$15.00 \$14.25 \$0.00000 \$0.00000 \$14.25 \$0.00000 \$14.25 \$0.00000 \$0.00000 \$14.25 \$0.00000 \$0.00000 \$14.25 \$0.00000 \$0.00000 \$14.25 \$0.00000 \$0.00000 \$14.25 \$0.00000 \$0.00000 \$0.00000 \$14.25 \$0.00000 \$0.00000 \$0.93 \$0.4¢	92 3,198 78,193 233,809 Revenue (\$000) 0 0 0 0 0 0 203 12,042 0 12,245 196 13 463 12,708

2,125

Increase/Decrease (\$) 55

Total Choice D4

34 35

36

37

38

39

40 41

42 43

44

45

46 47

48

49

50

51

52

53

54

Capacity

Energy

Excess

Demand Charge

Service Charge

First 200 Hrs. Use

Distribution Demand Charge

Distribution Energy Charge

Energy Waste Reduction

Distribution Surcharges

Distribution System

Nuclear Decomm.

LIEAF

Total D4

**Michigan Public Service Commission** DTE Electric Company Staff's Present and Proposed Revenue Calculations Water Heating Service Rate - Commercial D5

Case No.: U-20162 Exhibit: S-6 Schedule: F3 Witness: M. J. Pung Page: 22 of 52

Line	(a)	(b)		(c)	(d)	(e)	(f)
No.	Description	Billing Deter	minants	Pres	ent	Propo	sed
	Full Service Power Supply	<u>Quantity</u>	<u>Units</u>	Rate	<u>Revenue</u>	Rate	Revenue
					(\$000)		(\$000)
1	Capacity			<b>A</b> 0.04000		<b>A</b> 0.04040	
2	Energy	4,844	MWh	\$0.01892	92	\$0.01818	88
3	Non conceitu energy	4.044		¢0,00040	100	¢0,00707	100
4	Non-capacity energy	4,044	IVIVVII	<b>Φ</b> 0.02813	130	\$0.02737	133
5	DSCD	1 911	MM/b	\$0,0000	0	\$0,0000	0
7	REPS	751	Meters	\$0.00	0	\$0.00	0
8	Total Full Service Power Supply	4 844	MWh	4.71¢	228	4.56¢	221
9		1,011			220	41000	
10	Full Service Distribution	Quantity	Units				
11		Quantity	onito				
12	Service Charge	751	Cust	\$1.95	18	\$1.95	18
13	Control Charge	101	0000	φ1.00	10	φ1.00	10
14	Distribution Charge	4.844	MWh	\$0.02719	132	\$0.02991	145
15	Distribution System	4,844	MWh	3.08¢	149	3.35¢	162
16		,-					
17	Nuclear Decomm.	4,844	MWh	\$0.000765	4	\$0.000765	4
18	Energy Waste Reduction	751	Meters	\$1.36	12	\$1.36	12
19	LIEAF	751	Meters	\$0.93	8	\$0.93	8
20	Distribution Surcharges	4,844	MWh	0.50¢	24	0.50¢	24
21							
22	Total Full Service Distribution	4,844	MWh	3.58¢	174	3.86¢	187
23	Total Full Service D5	4,844	MWh	8.29¢	402	8.41¢	407
24				8			
25	Choice Distribution	Quantity	<u>Units</u>	Rate	Revenue	Rate	Revenue
26		_			(\$000)		(\$000)
27	Capacity						
28	Energy	0	MWh	\$0.01892	0	\$0.01818	0
29							
30	Service Charge	3	Cust.	\$1.95	0	\$1.95	0
31							
32	Distribution Charge	5	MWh	\$0.02719	0	\$0.02991	0
33	Distribution System	5	MWh	<b>4.04</b> ¢	0	4.31¢	0
34							
35	Nuclear Decomm.	5	MWh	\$0.000765	0	\$0.000765	0
36	Energy Waste Reduction	3	Meters	\$1.36	0	\$1.36	0
37	LIEAF	3	Meters	\$0.93	0	\$0.93	0
38	Distribution Surcharges	5	MWh	1.62¢	0	1.62¢	0
39							
40	Total Choice D5	5	MWh	5.66¢	0	5.93¢	0
41		_					
42	Total D5	4,850	MWh	8.29¢	402	8.41¢	408
43	Increase/Decrease (\$)						6

**Michigan Public Service Commission** DTE Electric Company Staff's Present and Proposed Revenue Calculations Energy Only Street Lighting E1.1 Case No.: U-20162 Exhibit: S-6 Schedule: F3 Witness: M. J. Pung Page: 23 of 52

Line	(a)	(b)		(c)	(d)	(e) (f)	
No.	Description	Billing Deter	minants	Prese	ent	Propos	sed
	Full Service Power Supply	Quantity	<u>Units</u>	Rate	Revenue	Rate	Revenue
					(\$000)		(\$000)
1	Capacity						
2	Energy						
3	Secondary	9,767	MWh	\$0.02197	215	\$0.02107	206
4	Dusk to Midnight	37	MWh	\$0.09784	4	\$0.09694	4
5	Primary Energy	0	MWh	\$0.02197	0	\$0.02107	0
6							
7	Non-capacity charge	9,804		\$0.03300	324	\$0.03214	315
8	Power Supply Subtotal	9,804	MWh	5.53¢	542	5.35¢	524
9							
10	PSCR	9,804	MWh	\$0.00000	0	\$0.00000	0
11	REPS	226	Meters	\$0.00	0	\$0.00	0
12	Total Full Service Power Supply	9.804	MWh	5.53¢	542	5.35¢	524
13	· · ···· · · · · · · · · · · · · · · ·	-,					
14	Full Service Distribution						
15							
16	Distribution Charge	9 804	M\//b	\$0.03478	341	\$0.03625	355
17	Distribution System	9 804	MWh	\$0.00470 3.48¢	341	€0.00020 3.62¢	355
10	Distribution bystem	5,004	1010 011	0.400	541	0.02¢	000
10	Nuclear Decomm	0.904		¢0,000765	7	¢0,000765	7
19	Forgy Wests Bodystion	9,004	Motoro	\$0.000765 \$14 E1	20	\$0.000765 \$14.51	7 20
20		220	Motoro	\$14.51	39	\$14.51 \$0.02	39
21	Distribution Surphargan	0.804	MAN	\$0.93 0.50d	J	\$0.93 0 50¢	3
22	Distribution Surcharges	9,004		0.50¢	43	0.30¢	43
23	Total Distribution	0.804		2.094	200	4.424	405
24	Total Distribution	9,604		3.90¢	390	4.13¢	405
25	Total Full Service E1.1	9,804	IVIVVII	9.51¢	932	9.40¢	929
26					_		5
27	Choice Distribution	Quantity	Units	Rate	Revenue	Rate	Revenue
28					(\$000)		(\$000)
29	Capacity						
30	Energy						
31	Secondary	0	MWh	\$0.02197	0	\$0.02107	0
32	Dusk to Midnight	0	MWh	\$0.09784	0	\$0.09694	0
33	Primary Energy	0	MWh	\$0.02197	0	\$0.02107	0
34				<b>A A A A A A A A A A</b>		<b>A</b> 2 <b>2227</b>	
35	Distribution Charge	0	MWh	\$0.03478	0	\$0.03625	0
36	Distribution System	0	MWh		0		0
37							
38	Nuclear Decomm.	0	MWh	\$0.000765	0	\$0.000765	0
39	Energy Waste Reduction		Meters	\$14.51	0	\$14.51	0
40	LIEAF	0	Meters	\$0.93	0	\$0.93	0
41	Distribution Surcharges	0	MWh		0		0
42							
43	Total Choice E1.1	0	MWh		0		0
44							
45	Total E1.1	9,804	MWh	9.51¢	932	9.48¢	929
46	Increase/Decrease (\$)						(3)

Increase/Decrease (\$) 46

Michigan Public Service Commission DTE Electric Company Staff's Present and Proposed Revenue Calculations Greenhouse Lighting Service Rate - Standard Contract Rider No. R7

Case No.: U-20162 Exhibit: S-6 Schedule: F3 Witness: M. J. Pung Page: 24 of 52

Line	(a)	(b)		(c)	(d)	(e)	(f)
<u>No.</u>	Description	Billing Deter	minants	Prese	ent	Propo	sed
	Full Service Power Supply	Quantity	Units	Rate	Revenue	Rate	Revenue
					(\$000)		(\$000)
1	Capacity						
2	Energy	2,686	MWh	\$0.01836	49	\$0.01764	47
3							
4	Non-capacity						
5	Energy	2.686	MWh	\$0.02730	73	\$0.02656	71
6		_,				+	
7	PSCR	2 686	M\\/b	\$0,0000	0	\$0,0000	0
0	DEDS	2,000	Motore	\$0.00 0.02	0	00000.0¢	0
0	Total Full Satving Dowar Supply	2,696	MANA	4 EZ4	100	\$0.00	110
9	Total Full Service Fower Supply	2,000		4.57¢	123	4.42¢	119
10				4 1			
11	Full Service Distribution	Quantity	<u>Units</u>				
12							
13	Service Charge	8	Cust.	\$1.95	0	\$1.95	0
14							
15	Distribution Charge	2,686	MWh	\$0.03043	82	\$0.03347	90
16	Distribution System	2,686	MWh	3.05¢	82	3.35¢	90
17	,						
18	Nuclear Decomm	2 686	MWh	\$0,000765	2	\$0,000765	2
10	Energy Waste Reduction	2,000	Motors	\$14.51	-	\$14.51	-
20		•	Motoro	\$0.02	0	\$0.02	1
20		0	MANA/Is	\$0.93 0.434	0	\$0.93	0
21	Distribution Surcharges	2,000		0.13¢	4	0.13¢	4
22							
23	Total Distribution	2,686	MWh	3.18¢	85	3.49¢	94
24	Total Full Service R7	2,686	MWh	7.75¢	208	7.91¢	212
25							
26	Choice Distribution	Quantity	Units	Rate	Revenue	Rate	Revenue
27					(\$000)		(\$000)
28	Capacity						,
29	Energy	0	MWh	\$0.01836	0	\$0.01764	0
30	2.10.99	Ŭ		\$0.01000	Ũ	<i>\$0.01701</i>	Ũ
21	Sonvice Charge	0	Cust	\$1.05	0	¢1.05	0
22	Service Gharge	Ŭ	0031.	ψ1.55	U	ψ1.55	0
22	Distribution Charge	0	M/M/b	\$0.02042	0	¢0.02247	0
33	Distribution Charge	0	NIVIVI	\$0.03043	0	\$0.03347	0
34	Distribution System	0	IVIVVN		U		U
35							
36	Nuclear Decomm.	0	MWh	\$0.000765	0	\$0.000765	0
37	Energy Waste Reduction	0	Meters	\$14.51	0	\$14.51	0
38	LIEAF	0	Meters	\$0.93	0	\$0.93	0
39	Distribution Surcharges	0	MWh		0		0
40	-						
41	Total Choice R7	0	MWh		0		0
12		, v		- J	v		•
42	Total P7	0.600	MAA	7 75 4	200	7.047	040
43		2,080		1.13¢	208	1.91¢	212
44	increase/Decrease (\$)						4

Michigan Public Service Commission DTE Electric Company Staff's Present and Proposed Revenue Calculations Commercial Space Conditioning Rate - Standard Contract Rider No. R8

Case No.: U-20162 Exhibit: S-6 Schedule: F3 Witness: M. J. Pung Page: 25 of 52

Description	Billing Deter	minants	Pres	ent	Propo	sed
Full Service Power Supply	Quantity	Units	Rate	Revenue	Rate	Reven
	_			(\$000)		(\$000
Capacity Epergy						
Lincigy						
R8 All KWH- Separate Meter	19,403	MWh	\$0.04940	959	\$0.04871	
R8a initial Block of D3	1,546	MWh	\$0.03214	50	\$0.03088	
R8a Excess	315	MWh	\$0.04940	16	\$0.04871	
Winter Nov-May						
R8 First 1000 KWH- Sep Mtr	4.837	MWh	\$0.04940	239	\$0.04871	
R8 Excess	33,828	MWh	\$0.01563	529	\$0.01494	
R8a initial Block of D3	2,679	MWh	\$0.03214	86	\$0.03088	
Excess	11,320	MWh	\$0.01563	177	\$0.01494	
Non conscitu Chargo	72 020	MM/b	\$0.04226	2 1 2 4	\$0.04075	
Power Supply Subtotal	73,929	MWh	\$0.04220	5,124	\$0.04075	
	10,020			0,0		
PSCR	73,929	MWh	\$0.00000	0	\$0.00000	
REPS	1,737	Meters	\$0.00	0	\$0.00	
Total Full Service Power Supply	73,929	MWh	7.01¢	5,179	6.78¢	
	<b>O</b> and the	11.25				
Full Service Distribution	Quantity	Units				
Service Charge						
R8 Separate Meter	1,116	Cust.	\$11.25	151	\$15.00	
R8a	621	Cust.	\$11.25	84	\$15.00	
Distribution Charge	73,929	MWh	\$0.03865	2,857	\$0.03625	
Distribution System	73,929	MWh	4.18¢	3,092	4.05¢	
Nuclear Decomm	73 929	MWh	\$0,000765	57	\$0,000765	
Energy Waste Reduction	1.116	Meters	\$14.51	\$194	\$14.51	
LIEAF	1,116	Meters	\$0.93	12	\$0.93	
Distribution Surcharges	73,929	MWh	0.36¢	263	0.36¢	
Total Distribution	72 020	M\\/b	4.544	2 255	4.40¢	
Total Full Service R8	73,929	MWh	4.54¢	8.534	4.40¢	
				.,		
Choice Distribution	Quantity	Units	Rate	Revenue	Rate	Reven
Connaitu				(******		
anacity				(\$000)		(\$000
Energy				(\$000)		(\$000
Energy				(\$000)		(\$000
R8 All KWH- Separate Meter	0	MWh	\$0.04940	(\$000)	\$0.04871	(\$000
R8 All KWH- Separate Meter R8 a initial Block of D3	0 0	MWh MWh	\$0.04940 \$0.03214	(\$000) 0 0	\$0.04871 \$0.03088	(\$000
R8 All KWH- Separate Meter R8 a initial Block of D3 R8a Excess	0 0 0	MWh MWh MWh	\$0.04940 \$0.03214 \$0.04940	(\$000) 0 0 0	\$0.04871 \$0.03088 \$0.04871	(\$000
R8 All KWH- Separate Meter R8a initial Block of D3 R8a Excess	0 0 0	MWh MWh MWh	\$0.04940 \$0.03214 \$0.04940	(\$000) 0 0 0	\$0.04871 \$0.03088 \$0.04871	(\$000
R8 All KWH- Separate Meter R8a initial Block of D3 R8a Excess Winter Nov-May R8 First 1000 KWH- Sep Mtr	0000	MWh MWh MWh	\$0.04940 \$0.03214 \$0.04940 \$0.04940	(\$000) 0 0	\$0.04871 \$0.03088 \$0.04871 \$0.04871	(\$000
R8 All KWH- Separate Meter R8a initial Block of D3 R8a Excess Winter Nov-May R8 First 1000 KWH- Sep Mtr R8 Excess	0 0 0 0	MWh MWh MWh MWh	\$0.04940 \$0.03214 \$0.04940 \$0.04940 \$0.04940 \$0.01563	(\$000) 0 0 0 0	\$0.04871 \$0.03088 \$0.04871 \$0.04871 \$0.01494	(\$000
R8 All KWH- Separate Meter R8a initial Block of D3 <u>R8a Excess</u> <u>Winter Nov-May</u> R8 First 1000 KWH- Sep Mtr R8 Excess	0 0 0 0	MWh MWh MWh MWh	\$0.04940 \$0.03214 \$0.04940 \$0.04940 \$0.01563	(\$000) 0 0 0 0	\$0.04871 \$0.03088 \$0.04871 \$0.04871 \$0.01494	(\$000
R8 All KWH- Separate Meter R8a initial Block of D3 R8a Excess <u>Winter Nov-May</u> R8 First 1000 KWH- Sep Mtr R8 Excess R8a initial Block of D3	0 0 0 0 0 0	MWh MWh MWh MWh MWh	\$0.04940 \$0.03214 \$0.04940 \$0.04940 \$0.01563 \$0.03214	(\$000) 0 0 0 0 0 0 0	\$0.04871 \$0.03088 \$0.04871 \$0.04871 \$0.01494 \$0.03088	(\$000
R8 All KWH- Separate Meter R8a initial Block of D3 R8a Excess <u>Winter Nov-May</u> R8 First 1000 KWH- Sep Mtr R8 Excess R8a initial Block of D3 Excess	0 0 0 0 0 0 0	MWh MWh MWh MWh MWh MWh	\$0.04940 \$0.03214 \$0.04940 \$0.04940 \$0.01563 \$0.03214 \$0.01563	(\$000) 0 0 0 0 0 0 0 0 0 0 0	\$0.04871 \$0.03088 \$0.04871 \$0.04871 \$0.01494 \$0.03088 \$0.01494	(\$000
R8 All KWH- Separate Meter R8a initial Block of D3 R8a Excess <u>Winter Nov-May</u> R8 First 1000 KWH- Sep Mtr R8 Excess R8a initial Block of D3 Excess	0 0 0 0 0 0	MWh MWh MWh MWh MWh MWh	\$0.04940 \$0.03214 \$0.04940 \$0.04940 \$0.01563 \$0.03214 \$0.01563	(\$000) 0 0 0 0 0 0 0 0 0 0	\$0.04871 \$0.03088 \$0.04871 \$0.04871 \$0.01494 \$0.03088 \$0.01494	(\$000
R8 All KWH- Separate Meter R8a initial Block of D3 R8a Excess <u>Winter Nov-May</u> R8 First 1000 KWH- Sep Mtr R8 Excess R8a initial Block of D3 Excess <u>Service Charge</u> R8 Separate Meter	0 0 0 0 0 0	MWh MWh MWh MWh MWh MWh	\$0.04940 \$0.03214 \$0.04940 \$0.04940 \$0.01563 \$0.03214 \$0.01563	(\$000) 0 0 0 0 0 0 0 0 0	\$0.04871 \$0.03088 \$0.04871 \$0.04871 \$0.01494 \$0.03088 \$0.01494	(\$000
R8 All KWH- Separate Meter R8a initial Block of D3 R8a Excess Winter Nov-May R8 First 1000 KWH- Sep Mtr R8 Excess R8a initial Block of D3 Excess Service Charge R8 Separate Meter R8a	0 0 0 0 0 0 18 1	MWh MWh MWh MWh MWh MWh Cust. Cust.	\$0.04940 \$0.03214 \$0.04940 \$0.04940 \$0.01563 \$0.03214 \$0.01563 \$11.25 \$11.25	(\$000) 0 0 0 0 0 0 0 0 0 0 0 0 0 0	\$0.04871 \$0.03088 \$0.04871 \$0.04871 \$0.01494 \$0.03088 \$0.01494 \$15.00 \$15.00	(\$000
R8 All KWH- Separate Meter R8a initial Block of D3 R8a Excess Winter Nov-May R8 First 1000 KWH- Sep Mtr R8 Excess R8a initial Block of D3 Excess Service Charge R8 Separate Meter R8a	0 0 0 0 0 0 18 1	MWh MWh MWh MWh MWh MWh Cust. Cust.	\$0.04940 \$0.03214 \$0.04940 \$0.04940 \$0.01563 \$0.03214 \$0.01563 \$11.25 \$11.25	(\$000) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	\$0.04871 \$0.03088 \$0.04871 \$0.01494 \$0.03088 \$0.01494 \$15.00 \$15.00	(\$000
R8 All KWH- Separate Meter R8a initial Block of D3 R8a Excess Winter Nov-May R8 First 1000 KWH- Sep Mtr R8 Excess R8a initial Block of D3 Excess Service Charge R8 Separate Meter R8a Distribution Charge	0 0 0 0 0 0 0 18 1 1,788	MWh MWh MWh MWh MWh Cust. Cust. Cust.	\$0.04940 \$0.03214 \$0.04940 \$0.04940 \$0.01563 \$0.03214 \$0.01563 \$11.25 \$11.25 \$0.03865	(\$000) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	\$0.04871 \$0.03088 \$0.04871 \$0.01494 \$0.03088 \$0.01494 \$15.00 \$15.00 \$0.03625	(\$000
R8 All KWH- Separate Meter R8a initial Block of D3 R8a Excess Winter Nov-May R8 First 1000 KWH- Sep Mtr R8 Excess R8a initial Block of D3 Excess Service Charge R8 Separate Meter R8a Distribution Charge Distribution System	0 0 0 0 0 0 18 1 1 1,788 1,788	MWh MWh MWh MWh MWh Cust. Cust. Cust. MWh	\$0.04940 \$0.03214 \$0.04940 \$0.04940 \$0.01563 \$0.03214 \$0.01563 \$11.25 \$11.25 \$11.25 \$0.03865 <b>4.01</b> \$	(\$000) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	\$0.04871 \$0.03088 \$0.04871 \$0.01494 \$0.03088 \$0.01494 \$15.00 \$15.00 \$0.03625 <b>3.82¢</b>	(\$000
R8 All KWH- Separate Meter R8a initial Block of D3 R8a Excess Winter Nov-May R8 First 1000 KWH- Sep Mtr R8 Excess R8a initial Block of D3 Excess Service Charge R8 Separate Meter R8a Distribution Charge Distribution System	0 0 0 0 0 0 0 18 1 1,788 1,788	MWh MWh MWh MWh MWh Cust. Cust. Cust. MWh	\$0.04940 \$0.03214 \$0.04940 \$0.04940 \$0.01563 \$0.03214 \$0.01563 \$11.25 \$11.25 \$11.25 \$0.03865 <b>4.01c</b>	(\$000) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	\$0.04871 \$0.03088 \$0.04871 \$0.01494 \$0.03088 \$0.01494 \$15.00 \$15.00 \$0.03625 <b>3.82¢</b>	(\$000
R8 All KWH- Separate Meter R8a initial Block of D3 R8a Excess Winter Nov-May R8 First 1000 KWH- Sep Mtr R8 Excess R8a initial Block of D3 Excess Service Charge R8 Separate Meter R8a Distribution Charge Distribution System Nuclear Decomm.	0 0 0 0 0 0 0 18 1 1,788 1,788 1,788	MWh MWh MWh MWh MWh Cust. Cust. Cust. MWh MWh	\$0.04940 \$0.03214 \$0.04940 \$0.04940 \$0.01563 \$0.03214 \$0.01563 \$11.25 \$11.25 \$11.25 \$0.03865 <b>4.01c</b>	(\$000) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	\$0.04871 \$0.03088 \$0.04871 \$0.01494 \$0.03088 \$0.01494 \$15.00 \$15.00 \$15.00 \$0.03625 <b>3.82¢</b> \$0.000765	(\$000
R8 All KWH- Separate Meter R8 ali KWH- Separate Meter R8a initial Block of D3 <u>R8a Excess</u> <u>Winter Nov-May</u> R8 First 1000 KWH- Sep Mtr R8 Excess R8a initial Block of D3 <u>Excess</u> <u>Service Charge</u> R8 Separate Meter R8a <u>Distribution Charge</u> Distribution System Nuclear Decomm. Energy Waste Reduction LIEAF	0 0 0 0 0 0 18 1 1,788 1,788 1,788 1,788 1,788	MWh MWh MWh MWh MWh MWh Cust. Cust. Cust. Cust. MWh MWh MWh	\$0.04940 \$0.03214 \$0.04940 \$0.01563 \$0.03214 \$0.01563 \$11.25 \$11.25 \$11.25 \$0.03865 <b>4.01c</b> \$0.000765 \$14.51 \$0.93	(\$000) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	\$0.04871 \$0.03088 \$0.04871 \$0.04871 \$0.01494 \$0.03088 \$0.01494 \$15.00 \$15.00 \$0.03625 <b>3.82¢</b> \$0.000765 \$14.51 \$0.93	(\$000
R8 All KWH- Separate Meter R8 ali All KWH- Separate Meter R8a initial Block of D3 R8a Excess Winter Nov-May R8 First 1000 KWH- Sep Mtr R8 Excess R8a initial Block of D3 Excess Service Charge R8 Separate Meter R8a Distribution Charge Distribution System Nuclear Decomm. Energy Waste Reduction LIEAF Distribution Surcharges	0 0 0 0 0 0 18 1 1,788 1,788 1,788 1,788 1,788 1,788 1,788	MWh MWh MWh MWh MWh MWh Cust. Cust. Cust. Cust. MWh MWh MWh	\$0.04940 \$0.03214 \$0.04940 \$0.01563 \$0.03214 \$0.01563 \$11.25 \$11.25 \$11.25 \$0.03865 <b>4.01c</b> \$0.000765 \$14.51 \$0.93 <b>0.26c</b>	(\$000) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	\$0.04871 \$0.03088 \$0.04871 \$0.01494 \$0.03088 \$0.01494 \$15.00 \$15.00 \$15.00 \$0.03625 <b>3.82¢</b> \$0.000765 \$14.51 \$0.93 <b>0.26¢</b>	(\$000
R8 All KWH- Separate Meter R8 ali All KWH- Separate Meter R8a initial Block of D3 R8a Excess Winter Nov-May R8 First 1000 KWH- Sep Mtr R8 Excess R8a initial Block of D3 Excess Service Charge R8 Separate Meter R8a Distribution Charge Distribution System Nuclear Decomm. Energy Waste Reduction LIEAF Distribution Surcharges	0 0 0 0 0 0 18 1 1,788 1,788 1,788 1,788 1,788 1,788 1,788	MWh MWh MWh MWh MWh MWh Cust. Cust. Cust. Cust. MWh MWh MWh Meters Meters MWh	\$0.04940 \$0.03214 \$0.04940 \$0.01563 \$0.03214 \$0.01563 \$11.25 \$11.25 \$11.25 \$0.03865 <b>4.01c</b> \$0.000765 \$14.51 \$0.93 <b>0.26c</b>	(\$000) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	\$0.04871 \$0.03088 \$0.04871 \$0.01494 \$0.03088 \$0.01494 \$15.00 \$15.00 \$0.03625 <b>3.82¢</b> \$0.000765 \$14.51 \$0.93 <b>0.26¢</b>	(\$000
R8 All KWH- Separate Meter R8 ali All KWH- Separate Meter R8a initial Block of D3 R8a Excess Winter Nov-May R8 First 1000 KWH- Sep Mtr R8 Excess R8a initial Block of D3 Excess Service Charge R8 Separate Meter R8a Distribution Charge Distribution System Nuclear Decomm. Energy Waste Reduction LIEAF Distribution Surcharges Total Choice R8	0 0 0 0 0 0 18 1 1,788 1,788 1,788 1,788 1,788 1,788	MWh MWh MWh MWh MWh MWh Cust. Cust. Cust. Cust. Cust. MWh MWh Meters Meters Meters MWh	\$0.04940 \$0.03214 \$0.04940 \$0.01563 \$0.03214 \$0.01563 \$11.25 \$11.25 \$11.25 \$0.03865 <b>4.01c</b> \$0.000765 \$14.51 \$0.93 <b>0.26c</b> <b>4.27c</b>	(\$000) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	\$0.04871 \$0.03088 \$0.04871 \$0.01494 \$0.03088 \$0.01494 \$15.00 \$15.00 \$15.00 \$0.03625 <b>3.82¢</b> \$0.000765 \$14.51 \$0.93 <b>0.26¢</b> <b>4.08¢</b>	(\$000
R8 All KWH- Separate Meter R8 All KWH- Separate Meter R8 a initial Block of D3 R8a Excess Winter Nov-May R8 First 1000 KWH- Sep Mtr R8 Excess R8a initial Block of D3 Excess Service Charge R8 Separate Meter R8a Distribution Charge Distribution System Nuclear Decomm. Energy Waste Reduction LIEAF Distribution Surcharges Total Choice R8	0 0 0 0 0 0 0 0 18 1 1,788 1,788 1,788 1,788 1,788 1,788 1,788	MWh MWh MWh MWh MWh MWh Cust. Cust. Cust. Cust. Cust. Cust. MWh MWh MWh Meters MWh	\$0.04940 \$0.03214 \$0.04940 \$0.01563 \$0.03214 \$0.01563 \$11.25 \$11.25 \$11.25 \$0.03865 <b>4.01c</b> \$0.000765 \$14.51 \$0.93 <b>0.26c</b> <b>4.27c</b>	(\$000) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	\$0.04871 \$0.03088 \$0.04871 \$0.01494 \$0.03088 \$0.01494 \$15.00 \$15.00 \$15.00 \$0.03625 <b>3.82¢</b> \$0.000765 \$14.51 \$0.93 <b>0.26¢</b> <b>4.08¢</b>	(\$000

Michigan Public Service Commission DTE Electric Company Staff's Present and Proposed Revenue Calculations Primary Supply Rate - D11 All Voltages

Line	(a)	(b)		(c)	(d)	(e)	(f)
<u>No.</u>	Description	Billing Deter	minants		Present	Prop	osed
	Full Service Power Supply	Quantity	Units	Rate	Revenue	Rate	Revenue
	Capacity				(\$000)		(\$000)
1	Power Supply Demand	23,705,447	kW	11.87	7 281,384	11.55	273,865
2	Voltage Level Discount						
3	Subtransmission	3,169,834	kW	(0.58	8) (1,839)	(0.49)	(1,541)
4	Transmission	6,337,749	kW	(0.87	7) (5,514)	(0.73)	(4,602)
5				` `	·/ 、· ·	· · ·	
6	Enerav						
7	On-Peak	3.273.946	MWh	0.00000	n 0		0
8	Off-Peak	9.464.102	MWh	0.0000	0 0		0
9	Total Energy	12,738,048	MWh	0.00000	, .		-
10	Total Enorgy	12,100,012					
11	Voltaga Level Discount						
12	Subtransmission	1 864 174	MW/b	0.0000	0 0	0.0000	0
1∠ 12	Transmission	1,004,174	MAA/b	0.00000		0.00000	0
14	Total Capacity	12 738 048	M\A/b	0.00000	274.031	0.00000	267 722
14	Total Capacity	12,100,040	101 0 0 11		214,001		201,122
16	Non-Canacity						
17	Power Supply Demand	23 705 447	k\N/	5.14	4 121.846	5.46	129 364
10	Voltage Lovel Adjustment	20,100,7-11	<b>I</b> . V V	0.1	+ 121,070	0.70	120,001
10		2 160 924	L14/	(0.2)	r) (702)	(0.22)	(729)
19		3,103,034	KVV LAA/	(0.23	5) (192) 5) (2,409)	(0.23)	(1∠0) (2.174)
20	I ransmission	0,001,140	KVV	(0.50	3) (2,400)	(0.34)	(2,174)
21	Energy	2 070 0 40		0.0404	- 110.050	2 0 4 4 0 7	
22	On-Peak	3,273,946	MWh	0.04343	5 142,253	0.04187	137,070
23	Off-Peak	9,464,102	MWh	0.03345	5 316,574	0.03187	301,591
24	Voltage Level Discount						
25	Subtransmission	1,864,174	MWh	(0.00114	4) (2,125)	(0.00114)	(2,129)
26	Transmission	4,163,921	MWh	(0.00194	4) (8,078)	(0.00193)	(8,035)
27	Power Supply Subtotal	12,738,048	MWh		841,301		822,682
28							
29	PSCR	12,738,048	MWh	0.00000	0 0	0.00000	0
30	REPS	2,125	Cust.	0.0	0 0	0.0	0
31	Total Full Service Power Supply	12,738,048	MWh	6.60	¢ 841,301	6.46¢	822,682
32							
33	Full Service Distribution	Quantity	Units				
34							
35	Service Charge - P\/	1 993	Cust	275	5 6 5 7 8	275	6 578
36	Service Charge - 1 V	131	Cust	37	5 591	375	591
37	Service Charge - Sv, Tv	101	Ousi.	0.0	5 551	010	001
31 20	Distribution Charges						
30	Distribution Charges	47 406 009	1-14/	2.7		2.50	60.805
39	Primary	17,400,920	KVV	3.11	/ 00,024	3.50	60,895
40		6,709,953	Nivvn				0,400
41	Subtransmission	4,269,529	kW	1.4t	o 6,234	1.51	6,429
42		1,864,174	MWh				
43	Transmission	7,323,875	kW	0.73	3 5,346	0.68	4,970
44		4,163,921	MWh				
45	Substation Credit						
46	Demand	3,724,493	kW	(0.30	0) (1,117)	(0.30)	(1,117)
47	Energy	240,044	MWh	(0.0004	4) (96)	(0.0004)	(96)
48	Distribution System	12,738,048	MWh	0.65	j¢ 83,160	0.61¢	78,249
49							
50	Nuclear Decommissioning	12,738,048	MWh	0.00076	5 9,745	0.000765	9,745
51	Energy Waste Reduction	2,507	Meters	245.0	0 7,370	245.0	7,370
52	LIEAF	2,507	Meters	0.93	3 28	0.93	28
53	Distribution Surcharges	12,738,048	MWh	0.13	3¢ 17,142	0.13¢	17,142
54							
55	Total Full Service Distribution	12,738,048	MWh	0.79	¢ 100,302	0.75¢	95,391
56	Total Full Service D11	12,738.048	MWh	7.39	¢ 941.603	7.21¢	918,073

Michigan Public Service Commission DTE Electric Company Staff's Present and Proposed Revenue Calculations Primary Supply Rate - D11 (Cont'd) All Voltages

No.         Description         Billing Determinants         Present         Present         Present         Present         Present         Rate         Rate <thrate< th=""> <thrate< th="">         Rate<th>Line</th><th>(a)</th><th>(b)</th><th></th><th>(0</th><th>;)</th><th>(d)</th><th>(e)</th><th>(f)</th></thrate<></thrate<>	Line	(a)	(b)		(0	;)	(d)	(e)	(f)
Sr. Choice Distribution         Quantity         Units         Rate         Revenue         Rate         Revenue           Separity         (\$000)         (\$000)         (\$000)         11.57         0           Valage Level Discount         (\$0.68)         0         (\$0.49)         0           Subtransmission         0         kW         (\$0.58)         0         (\$0.49)         0           Energy         0         kW         (\$0.87)         0         (\$0.73)         0           Mathematical Level Discount         0         kWh         0.00000         0         0.00000         0         0.00000         0         0.00000         0         0.00000         0         0.00000         0         0.00000         0         0.00000         0         0.00000         0         0.00000         0         0.00000         0         0.00000         0         0.00000         0         0         0.00000         0         0.00000         0 </td <td>No.</td> <td>Description</td> <td>Billing Deter</td> <td>minants</td> <td></td> <td>Pre</td> <td>sent</td> <td>Prop</td> <td>osed</td>	No.	Description	Billing Deter	minants		Pre	sent	Prop	osed
Size         Capacity         (\$000)         (\$000)           Power Supply Demand         0         kW         (\$000)         11.55         0           Subtransmission         0         kW         (0.87)         0         (0.49)         0           G         Tarasmission         0         kW         (0.87)         0         (0.73)         0           G         On-Peak         0         MWh         0.00000         0         0.00000         0           G         On-Peak         0         MWh         0.00000         0         0.00000         0           G         Off-Peak         0         MWh         0.00000         0         0.00000         0           G         Total Energy         0         MWh         0.00000         0         0.00000         0           G         Total Energy         0         MWh         0         0.00000         0         0.00000         0         0         0.00000         0         0.00000         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0	57	Choice Distribution	<u>Quantity</u>	Units	Ra	ite	Revenue	Rate	Revenue
59         Power Supply Demand         0         KW         11.87         0         11.55         0           61         Subtransmission         0         kW         (0.58)         0         (0.49)         0           62         Transmission         0         kW         (0.57)         0         (0.73)         0           64         Energy         0         MWh         0.00000         0         0.00000         0           7         Valtage Level Discount         0         MWh         0         0.00000         0	58	Capacity	-				(\$000)		(\$000)
60         Voltage Level Discount         0         kW         (0.58)         0         (0.49)         0           61         Subtransmission         0         kW         (0.58)         0         (0.49)         0           63         0         WW         (0.58)         0         (0.73)         0           64         0         MWh         0.00000         0         0.00000         0           65         0         0         MWh         0.00000         0         0.00000         0           66         0         MWh         0.00000         0         0.00000         0         0.00000         0           7         Total Capacity         0         MWh         0         0         0         0           7         Total Capacity         0         MWh         0         0         0         0           7         Service Charge - PV         537         Cust.         375         63         375         63           7         Distribution Charges         7         2057.48         MWh         3.50         17.580           8         Subtransmission         1.401.837         KW         1.46         2.047	59	Power Supply Demand	0	kW	-	1.87	0	11.55	0
61         Subtransmission         0         kW         (0.58)         0         (0.49)         0           61         Subtransmission         0         kW         (0.87)         0         (0.49)         0           63	60	Voltage Level Discount							
62       Transmission       0       kW       (0.87)       0       (0.73)       0         63       Energy       0       WWh       0.00000       0       0.00000       0         65       On-Peak       0       MWh       0.00000       0       0.00000       0         66       On-Peak       0       MWh       0.00000       0       0.00000       0         67       Total Energy       0       MWh       0.00000       0       0.00000       0         70       Subtransmission       0       MWh       0.00000       0       0.00000       0         72       Total Capacity       0       MWh       0       0       0       0         73       Service Charge - PV       537       Cust.       275       1,770       275       1,770         74       Distribution Charges       7       2,057,408       MWh       3,77       18,945       3,50       17,580         75       Subtransmission       1,401,837       kW       1,46       2,047       1,511       2,111         80       Subtransmission       1,402,5,474       kWh       0,73       1,406       0.68       1,307	61	Subtransmission	0	kW		(0.58)	0	(0.49)	0
63         Energy         0 </td <td>62</td> <td>Transmission</td> <td>0</td> <td>kW</td> <td></td> <td>(0.87)</td> <td>0</td> <td>(0.73)</td> <td>0</td>	62	Transmission	0	kW		(0.87)	0	(0.73)	0
64         Energy         0         MWh         0.00000         0         0.00000         0           65         On-Peak         0         MWh         0.00000         0         0.00000         0           67         Total Energy         0         MWh         0.00000         0         0.00000         0           70         Subtransmission         0         MWh         0.00000         0         0.00000         0           71         Total Capacity         0         MWh         0.00000         0         0.00000         0           72         Total Capacity         0         MWh         0.00000         0         0.00000         0           73         Evrice Charge - PV         537         Cust.         275         1.770         275         1.770           75         Service Charge - SV, TV         14         Cust.         375         63         375         63           76           2.057,498         MWh         3.77         18,945         3.50         17,580           7         Distribution Charges           0.73         1,406         0.688         1,307           7	63								
65         On-Peak         0         MWh         0.00000         0         0.00000         0           66         Off-Peak         0         MWh         0.00000         0         0.00000         0           7         Total Energy         0         MWh         0.00000         0         0.00000         0           70         Subtransmission         0         MWh         0.00000         0         0.00000         0           71         Total Capacity         0         MWh         0.00000         0         0.00000         0           73         Service Charge - PV         537         Cust.         275         1,770         275         1,770           75         Service Charge - SV, TV         14         Cust.         375         63         375         17,58           70         Distribution Charges         7         2,057,498         MWh         1.46         2,047         1.51         2,111           8         Miray         2,057,498         MWh         1.46         2,047         1.51         2,111           8         Transmission         1,225,547         KW         0.73         1,406         0.688         1,307	64	Energy							
66         Off-Peak         0         MWh         0.00000         0         0.00000         0           70         Total Energy         0         MWh         0         0         0.00000         0           69         Voltage Level Discount         0         MWh         0.00000         0         0.00000         0           70         Subtransmission         0         MWh         0.00000         0         0.00000         0           71         Total Capacity         0         MWh         0         0         0.00000         0           72         Total Capacity         0         MWh         0         0         0         0           73         Service Charge - PV         537         Cust.         275         1,770         275         1,770           75         Service Charge - SV, TV         14         Cust.         375         63         375         63           76         Primary         5,025,320         KW         3,77         18,945         3,50         17,580           78         Primary         5,025,427         KW         0.73         1,406         0.668         1,307           712,843         MWh	65	On-Peak	0	MWh	0.0	0000	0	0.00000	0
67       Total Energy       0       MWh       0       0         68       Voltage Level Discount       0       MWh       0.00000       0       0.00000       0         70       Subtransmission       0       MWh       0.00000       0       0.00000       0         71       Total Capacity       0       MWh       0       0       0.00000       0         74       Service Charge - PV       537       Cust.       275       1,770       275       1,770         75       Service Charge - SV, TV       14       Cust.       375       63       375       63         76       Distribution Charges       7       2,057,498       MWh       0       0       0         70       Subtransmission       1,401,837       kW       1.46       2,047       1.51       2,111         80       Subtransmission       1,925,547       KW       0.73       1,406       0.68       1,307         81       Substation Credit       0       0       0.00       0       0.0004       (2)       (0.0004)       (2)         70       Distribution System       3,384,929       MWh       0.70¢       23,788       0.666¢	66	Off-Peak	0	MWh	0.0	0000	0	0.00000	0
Voltage Level Discount         Voltage Level Discount<	67	Total Energy	0	MWh					
Voltage Level Discount         Understand         Units	68								
Subtransmission         0         MWh         0.00000         0         0.00000         0           Transmission         0         MWh         0.00000         0         0.00000         0           Total Capacity         0         MWh         0         0.00000         0         0.00000         0           74         Service Charge - PV         537         Cust.         275         1,770         275         1,770           5         Service Charge - SV, TV         14         Cust.         375         63         375         63           70         Distribution Charges	69	Voltage Level Discount							
1       Transmission       0       MWh       0.00000       0       0.00000       0         72       Total Capacity       0       MWh       0       0       0       0         74       Service Charge - PV       537       Cust.       275       1,770       275       1,770         75       Service Charge - SV, TV       14       Cust.       375       63       375       63         76       Primary       5,025,320       KW       3.77       18,945       3.50       17,580         79       2,057,498       MWh       1.46       2,047       1.51       2,111         81       614,589       MWh       0.73       1,406       0.68       1,307         84       Substation Credit       0       0       0.000765       2,589       0.000765       2,589         95       Demand       1,469,463       KW       0.000765       2,589       0.000765       2,589         96       Nuclear Decommissioning       3,384,929       MWh       0.000765       2,589       0.000765       2,589         91       LIEAF       656       Meters       0.33       7       0.13a       4,524 <t< td=""><td>70</td><td>Subtransmission</td><td>0</td><td>MWh</td><td>0.0</td><td>0000</td><td>0</td><td>0.00000</td><td>0</td></t<>	70	Subtransmission	0	MWh	0.0	0000	0	0.00000	0
72       Total Capacity       0       MWh       0       0       0         73       Service Charge - PV       537       Cust.       375       63       375       63         76       Distribution Charges       7       Distribution Charges       7       2057,498       MWh       14       Cust.       375       63       375       63         77       Distribution Charges       7       2,057,498       MWh       1.46       2,047       1.51       2,111         80       Subtransmission       1,401,837       kW       1.46       2,047       1.51       2,111         81       614,589       MWh       1.46       2,047       1.51       2,111         82       Transmission       1,925,547       kW       0.73       1,406       0.68       1,307         83       Demand       1,459,463       kW       0.030       (441)       (0.30)       (441)         84       Substation Credit       0.000765       2,589       0.000765       2,589         90       Energy       5.325       MWh       0.13e       1,928       0.456e       22,388         91       LIEAF       6666       Meters       0.9	71	Transmission	0	MWh	0.0	0000	0	0.00000	0
73       Service Charge - PV       537       Cust.       275       1,770       375       63         74       Service Charge - SV, TV       14       Cust.       375       63       375       63         76       Distribution Charges       7       375       63       75       537       63       75       537       63       75       <	72	Total Capacity	0	MWh			0		0
74     Service Charge - PV     537     Cust.     275     1,770     275     1,770       75     Service Charge - SV, TV     14     Cust.     375     63     375     63       76     Primary     5,025,320     kW     3.77     18,945     3.50     17,580       79     2,057,488     MWh     3.77     18,945     3.50     17,580       79     2,057,488     MWh     1.46     2,047     1.51     2,111       80     Subtransmission     1,401,837     kW     0.73     1,406     0.68     1,307       81     614,559     MWh     1.46     2,047     1.51     2,111       82     Transmission     1,225,547     kW     0.73     1,406     0.68     1,307       84     Substation Credit     0     0.000     (441)     (0.30)     (441)       84     Substation System     3,384,929     MWh     0.000765     2,589     0.666     22,388       90     Energy Waste Reduction     656     Meters     0.93     7     0.33     7       91     LIEAF     666     Meters     0.93     7     0.33     7       92     Distribution Surcharges     3,384,929     MWh	73								
75       Service Charge - SV, TV       14       Cust.       375       63       375       63         76       Distribution Charges       7       14       Cust.       375       63       375       63         77       Distribution Charges       7       18,945       3.50       17,580         79       2,057,498       MWh       3.77       18,945       3.50       17,580         80       Subtransmission       1,401,837       kW       1.46       2,047       1.51       2,111         81       614,589       MWh       0.73       1,406       0.68       1,307         82       Transmission       1,25,547       kW       0.73       1,406       0.68       1,307         84       Substation Credit       8       0.73       1,406       0.68       1,307         85       Demand       1,469,463       kW       (0.0004)       (2)       (0.0004)       (2)         90       Energy       5,325       MWh       0.70¢       23,788       0.66¢       22,388         91       LIEAF       656       Meters       0.93       7       0.13¢       4,524         92       Distribution Surcharges	74	Service Charge - PV	537	Cust.		275	1,770	275	1,770
76       Distribution Charges         78       Primary       5,025,320       kW         80       Subtransmission       1,401,837       kW         81       614,589       MWh         82       Transmission       1,925,547       kW         83       712,843       MWh         84       Substation Credit       0.668       1,307         85       Demand       1,469,463       kW       0.73       1,406       0.688       1,307         87       Distribution System       3,384,929       MWh       0.70¢       23,788       0.666¢       22,388         89       Nuclear Decommissioning       3,384,929       MWh       0.000765       2,589       0.000765       2,589         90       Energy Waste Reduction       656       Meters       0.93       7       0.13¢       4,524       0.13¢       4,524         91       LIEAF       656       Meters       0.93       7       0.13¢       4,524       0.13¢       4,524         94       Total Choice D11       3,384,929       MWh       0.84¢       28,313       0.80¢       26,512         95       Total D11       16,122,977       MWh       6.02¢ <td>75</td> <td>Service Charge - SV, TV</td> <td>14</td> <td>Cust.</td> <td></td> <td>375</td> <td>63</td> <td>375</td> <td>63</td>	75	Service Charge - SV, TV	14	Cust.		375	63	375	63
77       Distribution Charges         78       Primary       5,025,320       kW         79       2,057,498       MWh         80       Subtransmission       1,401,837       kW         81       614,589       MWh         82       Transmission       1,925,547       kW         84       Substation Credit       712,843       MWh         85       Demand       1,469,463       kW         86       Demand       1,469,463       kW         87       Distribution System       3,384,929       MWh         88       Nuclear Decommissioning       3,384,929       MWh         90       Energy       5,325       MWh         91       LIEAF       656       Meters         92       Distribution Surcharges       3,384,929       MWh         94       Total Choice D11       3,384,929       MWh         95       Total D11       16,122,977       MWh       0.80¢       26,02¢         96       Total D11       16,122,977       MWh       6.02¢       969,915       5.86¢       944,985	76								
78       Primary       5,025,320       kW       3.77       18,945       3.50       17,580         79       2,057,498       MWh       1.401,837       kW       1.46       2,047       1.51       2,111         80       Subtransmission       1,401,837       kW       1.46       2,047       1.51       2,111         81       614,589       MWh       0.73       1,406       0.68       1,307         82       Transmission       1,925,547       kW       0.73       1,406       0.68       1,307         84       Substation Credit       712,843       MWh       0.73       1,406       0.68       1,307         87       Distribution System       3,384,929       MWh       0.70¢       23,788       0.66¢       22,388         88       Nuclear Decommissioning       3,384,929       MWh       0.000765       2,589       0.000765       2,589         90       Energy Waste Reduction       656       Meters       0.93       7       0.93       7         92       Distribution Surcharges       3,384,929       MWh       0.13¢       4,524       0.13¢       4,524         94       Total Choice D11       3,384,929       MWh	77	Distribution Charges							
79       2,057,498       MWh         80       Subtransmission       1,401,837       kW         81       614,589       MWh         82       Transmission       1,925,547       kW         83       712,843       MWh         84       Substation Credit       712,843       MWh         85       Demand       1,469,463       kW       (0.30)       (441)         90       Energy       5,325       MWh       (0.300)       (441)       (0.0004)       (2)         90       Decommissioning       3,384,929       MWh       0.70¢       23,788       0.66¢       22,388         90       Energy Waste Reduction       656       Meters       0.93       7       0.93       7         91       LIEAF       656       Meters       0.93       7       0.93       7         92       Distribution Surcharges       3,384,929       MWh       0.13¢       4,524       0.13¢       4,524         93       Total Choice D11       3,384,929       MWh       0.84¢       28,313       0.80¢       26,912         94       Total Choice D11       3,384,929       MWh       0.84¢       28,313       0.80¢	78	Primary	5,025,320	kW		3.77	18,945	3.50	17,580
80       Subtransmission       1,401,837       kW       1.46       2,047       1.51       2,111         81       614,589       MWh       0.73       1,406       0.68       1,307         82       Transmission       1,925,547       kW       0.73       1,406       0.68       1,307         83       712,843       MWh       MWh       0.73       1,406       0.68       1,307         84       Substation Credit       90       Demand       1,469,463       kW       (0.30)       (441)       (0.30)       (441)         85       Demand       1,469,463       kW       (0.0004)       (2)       (0.0004)       (2)         9       Nuclear Decommissioning       3,384,929       MWh       0.70¢       23,788       0.66¢       22,388         90       Energy Waste Reduction       656       Meters       0.93       7       0.93       7         91       LIEAF       656       Meters       0.93       7       0.13¢       4,524       0.13¢       4,524         94       Total Choice D11       3,384,929       MWh       0.84¢       28,313       0.80¢       26,912         96       Total Choice D11	79		2,057,498	MWh					
81       614,589       MWh         82       Transmission       1,925,547       kW         83       712,843       MWh         84       Substation Credit         85       Demand       1,469,463       kW         86       Energy       5,325       MWh         87       Distribution System       3,384,929       MWh         89       Nuclear Decommissioning       3,384,929       MWh         89       Nuclear Decommissioning       3,384,929       MWh         81       LIEAF       656       Meters         90       Energy Waste Reduction       656       Meters       0.93       7         91       Distribution Surcharges       3,384,929       MWh       0.13¢       4,524         92       Distribution Surcharges       3,384,929       MWh       0.13¢       4,524         93       Total Choice D11       3,384,929       MWh       0.13¢       4,524         94       Total Choice D11       3,384,929       MWh       0.84¢       28,313       0.80¢       26,912         96       Total D11       16,122,977       MWh       6.02¢       969,915       5.86¢       944,985 <td>80</td> <td>Subtransmission</td> <td>1,401,837</td> <td>kW</td> <td></td> <td>1.46</td> <td>2,047</td> <td>1.51</td> <td>2,111</td>	80	Subtransmission	1,401,837	kW		1.46	2,047	1.51	2,111
82       Transmission       1,925,547       kW       0.73       1,406       0.68       1,307         83       712,843       MWh       MWh       0.73       1,406       0.68       1,307         84       Substation Credit       9       Demand       1,469,463       kW       (0.30)       (441)       (0.30)       (441)         86       Energy       5,325       MWh       0.70¢       23,788       0.66¢       22,388         87       Distribution System       3,384,929       MWh       0.000765       2,589       0.60¢       22,388         90       Energy Waste Reduction       656       Meters       0.93       7       0.93       7         91       LIEAF       656       Meters       0.93       7       0.93       7         92       Distribution Surcharges       3,384,929       MWh       0.13¢       4,524       0.13¢       4,524         93       Total Choice D11       3,384,929       MWh       0.84¢       28,313       0.80¢       26,912         94       Total Choice D11       3,384,929       MWh       0.84¢       28,313       0.80¢       26,912         95       Total Choice D11       3,3	81		614,589	MWh					
83       712,843       MWh         84       Substation Credit       1,469,463       kW         85       Demand       1,469,463       kW         86       Energy       5,325       MWh         87       Distribution System       3,384,929       MWh       0.0004       (2)         88       Nuclear Decommissioning       3,384,929       MWh       0.70¢       23,788       0.66¢       22,388         90       Energy Waste Reduction       656       Meters       245.0       1,928       245.0       1,928         91       LIEAF       656       Meters       0.93       7       0.93       7         92       Distribution Surcharges       3,384,929       MWh       0.13¢       4,524       0.13¢       4,524         93       Total Choice D11       3,384,929       MWh       0.84¢       28,313       0.80¢       26,912         94       Total Choice D11       3,384,929       MWh       0.84¢       28,313       0.80¢       26,912         95       Total D11       16,122,977       MWh       6.02¢       969,915       5.86¢       944,985	82	Transmission	1,925,547	kW		0.73	1,406	0.68	1,307
84       Substation Credit         85       Demand       1,469,463       kW         86       Energy       5,325       MWh         87       Distribution System       3,384,929       MWh         88       0.0004)       (2)         90       Nuclear Decommissioning       3,384,929       MWh         91       LIEAF       656       Meters         92       Distribution Surcharges       3,384,929       MWh       0.000765       2,589         93       Total Choice D11       3,384,929       MWh       0.13¢       4,524         94       Total Choice D11       3,384,929       MWh       0.84¢       28,313       0.80¢       26,912         95       Total D11       16,122,977       MWh       6.02¢       969,915       5.86¢       944,985	83		712,843	MWh					
85       Demand       1,469,463       kW       (0.30)       (441)       (0.30)       (441)         86       Energy       5,325       MWh       (0.0004)       (2)       (0.0004)       (2)         87       Distribution System       3,384,929       MWh       0.70¢       23,788       0.66¢       22,388         89       Nuclear Decommissioning       3,384,929       MWh       0.000765       2,589       0.000765       2,589         90       Energy Waste Reduction       656       Meters       245.0       1,928       245.0       1,928         91       LIEAF       656       Meters       0.93       7       0.93       7         92       Distribution Surcharges       3,384,929       MWh       0.84¢       28,313       0.80¢       26,912         94       Total Choice D11       3,384,929       MWh       0.84¢       28,313       0.80¢       26,912         95       Total D11       16,122,977       MWh       6.02¢       969,915       5.86¢       944,985         97       Iberrace@Descreege.(%)       16,122,977       MWh       6.02¢       969,915       5.86¢       944,985 <td>84</td> <td>Substation Credit</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	84	Substation Credit							
86       Energy       5,325       MWh       (0.0004)       (2)       (0.0004)       (2)         87       Distribution System       3,384,929       MWh       0.70¢       23,788       0.66¢       22,388         89       Nuclear Decommissioning       3,384,929       MWh       0.000765       2,589       0.000765       2,589         90       Energy Waste Reduction       656       Meters       245.0       1,928       245.0       1,928         91       LIEAF       656       Meters       0.93       7       0.93       7         92       Distribution Surcharges       3,384,929       MWh       0.13¢       4,524       0.13¢       4,524         94       Total Choice D11       3,384,929       MWh       0.84¢       28,313       0.80¢       26,912         96       Total D11       16,122,977       MWh       6.02¢       969,915       5.86¢       944,985         97       Increace/Descreace (%)       16,122,977       MWh       6.02¢       969,915       5.86¢       944,985	85	Demand	1,469,463	kW		(0.30)	(441)	(0.30)	(441)
87       Distribution System       3,384,929       MWh       0.70¢       23,788       0.66¢       22,388         88       Nuclear Decommissioning       3,384,929       MWh       0.000765       2,589       0.000765       2,589         90       Energy Waste Reduction       656       Meters       245.0       1,928       245.0       1,928         91       LIEAF       656       Meters       0.93       7       0.93       7         92       Distribution Surcharges       3,384,929       MWh       0.13¢       4,524       0.13¢       4,524         94       Total Choice D11       3,384,929       MWh       0.84¢       28,313       0.80¢       26,912         96       Total D11       16,122,977       MWh       6.02¢       969,915       5.86¢       944,985	86	Energy	5,325	MWh	(0.	0004)	(2)	(0.0004)	(2)
88       Nuclear Decommissioning       3,384,929       MWh       0.000765       2,589       0.000765       2,589         90       Energy Waste Reduction       656       Meters       0.93       7       0.93       7         91       LIEAF       656       Meters       0.93       7       0.93       7         92       Distribution Surcharges       3,384,929       MWh       0.13¢       4,524       0.13¢       4,524         94       Total Choice D11       3,384,929       MWh       0.84¢       28,313       0.80¢       26,912         96       Total D11       16,122,977       MWh       6.02¢       969,915       5.86¢       944,985	87	Distribution System	3,384,929	MWh		0.70¢	23,788	0.66¢	22,388
89       Nuclear Decommissioning       3,384,929       MWh       0.000765       2,589       0.000765       2,589         90       Energy Waste Reduction       656       Meters       0.93       7       0.93       7         91       LIEAF       656       Meters       0.93       7       0.93       7         92       Distribution Surcharges       3,384,929       MWh       0.13¢       4,524       0.13¢       4,524         94       Total Choice D11       3,384,929       MWh       0.84¢       28,313       0.80¢       26,912         96       Total D11       16,122,977       MWh       6.02¢       969,915       5.86¢       944,985	88								
90       Energy Waste Reduction       656       Meters       245.0       1,928       245.0       1,928         91       LIEAF       656       Meters       0.93       7       0.93       7         92       Distribution Surcharges       3,384,929       MWh       0.13¢       4,524       0.13¢       4,524         94       Total Choice D11       3,384,929       MWh       0.84¢       28,313       0.80¢       26,912         96       Total D11       16,122,977       MWh       6.02¢       969,915       5.86¢       944,985	89	Nuclear Decommissioning	3,384,929	MWh	0.00	0765	2,589	0.000765	2,589
91         LIEAF         656         Meters         0.93         7         0.93         7           92         Distribution Surcharges         3,384,929         MWh         0.13¢         4,524         0.13¢         4,524           94         Total Choice D11         3,384,929         MWh         0.84¢         28,313         0.80¢         26,912           95         Total D11         16,122,977         MWh         6.02¢         969,915         5.86¢         944,985           7         0.93         7         0.93         7         0.13¢         4,524	90	Energy Waste Reduction	656	Meters	2	245.0	1,928	245.0	1,928
92       Distribution Surcharges       3,384,929       MWh       0.13¢       4,524       0.13¢       4,524         93       Total Choice D11       3,384,929       MWh       0.84¢       28,313       0.80¢       26,912         95       Total D11       16,122,977       MWh       6.02¢       969,915       5.86¢       944,985         97       Increase (Decrease (S))       16,122,977       MWh       6.02¢       969,915       5.86¢       944,985	91	LIEAF	656	Meters		0.93	7	0.93	7
93	92	Distribution Surcharges	3,384,929	MWh		0.13¢	4,524	0.13¢	4,524
94     Total Choice D11     3,384,929     MWh     0.84¢     28,313     0.80¢     26,912       95       96     Total D11     16,122,977     MWh     6.02¢     969,915     5.86¢     944,985       97     Ipgraphy (Degraphy (S))     10,122,977     MWh     6.02¢     969,915     5.86¢     944,985	93		-						
95 96 Total D11 16,122,977 MWh 6.02¢ 969,915 5.86¢ 944,985 97 Ipreses (Decrease (S)	94	Total Choice D11	3,384,929	MWh		0.84¢	28,313	0.80¢	26,912
96 Total D11 16,122,977 MWh 6.02¢ 969,915 5.86¢ 944,985	95				•				
	96	Total D11	16.122.977	MWh		6.02¢	969,915	5.86¢	944,985
2/ IIIUEdaeUEUEdaeU0 (74 930)	97	Increase/Decrease (\$)	-, ,-						(24,930)

Michigan Public Service Commission DTE Electric Company Staff's Present and Proposed Revenue Calculations Primary Educational Institute - D6.2 All Voltages

Line	(a)	(b)		(c)	(d)	(e)	(f)		
<u>No.</u>	Description	Billing Deter	minants	Prese	ent	Propo	Proposed		
	Full Service Power Supply	Quantity	<u>Units</u>	Rate	Revenue	Rate	Revenue		
4	Capacity	4 261 222	L\\/	11.70	(\$000)	10.00	(\$000)		
2	Power Supply Demand	1,301,322	KVV	11.72	15,949	12.28	16,716		
3	Voltage Level Adjustment								
1	Subtransmission	578,412	kW		0	(0.52)	(299)		
;	Transmission	0	kW		0	(0.77)	) Ó		
5						· · ·			
,	Energy								
	On-Peak	171,643	MWh	0.00000	0	0.00000	0		
	Off-Peak	437,046	MWh	0.00000	0	0.00000	0		
)	Total Energy	608,689	MWh						
	Valtana Laval Diagonat								
2	Voltage Level Discount	290 470	MAA	0.00000	0	0.00000	0		
2 1	Transmission	209,479	MW	0.00000	0	0.00000	0		
+	Total Capacity	0	MW/h	0.00000	15 949	0.00000	16 417		
, ;	Total Capacity	000,000	1010011		10,040		10,417		
,	Non-Capacity								
	Power Supply Demand	1,361,322	kW	0.58	790	0.00	0		
)	Energy								
	On-Peak	171,643	MWh	0.04215	7,235	0.04808	8,252		
	Off-Peak	437,046	MWh	0.03915	17,110	0.04508	19,701		
	Voltage Level Discount								
	Subtransmission	289,479	MWh	(0.00129)	(373)	(0.00152)	(441)		
	Transmission	0	MWh	(0.00219)	0		0		
	Power Supply Subtotal	608,689	MWh		40,710		43,929		
	PSCR	608,689	MWh Cust	0.00000	0	0.00000	0		
	Total Full Service Power Supply	608 689	MW/h	0.0 6.69¢	40 710	0.0 7 22¢	43 929		
		000,000		0.000			40,020		
	Full Service Distribution	Quantity	Units						
		_							
	Service Charge - PV	95	Cust.	275	313	275	313		
	Service Charge - SV, TV	6	Cust.	375	27	375	27		
	Distribution Charges								
	Primary	1,011,319	kW	3.77	3,813	3.50	3,538		
		319,221	MWh						
	Subtransmission	719,317	kW	1.46	1,050	1.51	1,083		
		289,479	MWh						
	Transmission	0	kW MWb	0.73	0	0.68	0		
	Substation Credit	0	1010011						
	Demand	94 402	kW	(0.30)	(28)	(0.30)	(28)		
	Energy	38 875	MWh	(0.004)	(20)	(0.004)	(20)		
	Distribution System	608,689	MWh	0.85¢	5.159	0.81¢	4.917		
		,		,	-,		,-		
	Nuclear Decommissioning	608,689	MWh	0.000765	466	0.000765	466		
	Energy Waste Reduction	144	Meters	245.0	423	245.0	423		
	LIEAF	144	Meters	0.93	2	0.93	2		
	Distribution Surcharges	608,689	MWh	0.15¢	890	0.15¢	890		
	Total Full Service Distribution	608 690	M\//b	0.004	6.049	0.054	5 807		
•	Total Full Service D6 2	608,600	MW/b	0.99¢	46 750	0.95¢	3,007		
		000.009	IVIVVII	300.1		0.1/6	97.1.30		

Michigan Public Service Commission DTE Electric Company Staff's Present and Proposed Revenue Calculations Primary Educational Institute - D6.2 (Cont'd) All Voltages

Case No.: U-20162 Exhibit: S-6 Schedule: F3 Witness: M. J. Pung Page: 29 of 52

Line	(a)	(b)		(c)	(d)	(e)	(f)		
No.	Description	Billing Deter	minants	Pres	ent	Propo	Proposed		
56	Choice Distribution	Quantity	Units	Rate	Revenue	Rate	Revenue		
57	Capacity				(\$000)		(\$000)		
58	Power Supply Demand		kW	11.72	0	12.28	0		
59									
60	Energy								
61	On-Peak		MWh	0.00000	0	0.00000	0		
62	Off-Peak		MWh	0.00000	0	0.00000	0		
63	Total Energy		MWh						
64									
65	Voltage Level Discount								
66	Subtransmission		MWh	0.00000	0	0.00000	0		
67	Transmission		MWh	0.00000	0	0.00000	0		
68	Total Capacity						0		
69									
70	Service Charge - PV	142	Cust.	275	468	275	468		
71	Service Charge - SV. TV	0	Cust.	375	0	375	0		
72					-				
73	Distribution Charges								
74	Primary	1.636.007	kW	3.77	6.168	3.50	5.723		
75		405.048	MWh	_	-,		-, -		
76	Subtransmission	0	kW	1.46	0	1.51	0		
77		0	MWh		-	-			
78	Transmission	0	kW	0.73	0	0.68	0		
79		0	MWh		-				
80	Substation Credit								
81	Demand	0	kW	(0.30)	0	(0.30)	0		
82	Energy	0	MWh	(0.0004)	0	(0.0004)	0		
83	Distribution System	405,048	MWh	1.64¢	6,636	1.53¢	6,191		
84	,	,			,		,		
85	Nuclear Decommissioning	405.048	MWh	0.000765	310	0.000765	310		
86	Energy Waste Reduction	144	Meters	245.0	423	245.0	423		
87	LIEAF	144	Meters	0.93	2	0.93	2		
88	Distribution Surcharges	405.048	MWh	0.18¢	735	0.18¢	735		
89	g	,							
90	Total Choice D6.2	405,048	MWh	1.82¢	7,370	1.71¢	6,926		
91									
92	Total D6.2	1,013,738	MWh	5.34¢	54,129	5.59¢	56,662		
93	Increase/Decrease (\$)						2 532		

93 Increase/Decrease (\$)

Michigan Public Service Commission DTE Electric Company Staff's Present and Proposed Revenue Calculations Interruptible Supply Rate - D8 All Voltages

Case No.: U-20162 Exhibit: S-6 Schedule: F3 Witness: M. J. Pung Page: 30 of 52

Line	(a)	(b)		(c)	(d)	(e)	(f)
No.	Description	Billing Deter	minants	Prese	ent	Propo	sed
	Full Service Power Supply	Quantity	Units	Rate	Revenue	Rate	Revenue
	Capacity				(\$000)		(\$000)
1	Power Supply Demand	1,332,725	kW	6.67	8,889	4.97	6,625
2	Voltage Level Adjustment			()	(10)	(* * * *	(= ()
3	Subtransmission	126,338	kW	(0.32)	(40)	(0.25)	(31)
4	Iransmission	128,590	KVV	(0.49)	(63)	(0.37)	(47)
5	Draduat Drataction Damand	200.240	1.1.1/	44.07	0.070	44.55	0.014
7	Voltage Lovel Adjustment	200,310	KVV	11.07	2,370	11.55	2,314
8	Subtransmission	643	k/M	(0.58)	(0)	(0.49)	(0)
q	Transmission	89 241	kW/	(0.30)	(78)	(0.73)	(65)
10	Tanomioolon	00,241	i	(0.07)	(10)	(0.70)	(00)
11	Energy						
12	On-Peak	189.869	MWh	0.00000	0	0.00000	0
13	Off-Peak	523,419	MWh	0.00000	0	0.00000	0
14	Total Energy	713,288	MWh				
15							
16	Voltage Level Discount						
17	Subtransmission	67,617	MWh	0.00000	0	0.00000	0
18	Transmission	120,109	MWh	0.00000	0	0.00000	0
19	Total Capacity	713,288	MWh		11,086		8,796
20							
21	Non-Capacity						
22	Power Supply Demand	1,332,725	kW	4.31	5,744	4.71	6,271
23	Voltage Level Adjustment						
24	Subtransmission	126,338	kW	(0.21)	(27)	(0.20)	(26)
25	Transmission	128,590	kW	(0.32)	(41)	(0.30)	(39)
26	Deadwet Deate diese Dearand	000 040	1.3.47	5.4.4	4 000	5.40	4 000
27	Product Protection Demand	200,310	KVV	5.14	1,030	5.46	1,093
28	Voltage Level Discount	640	1.1.1/	(0.25)	(0)	(0.22)	(0)
29	Transmission	043 90.244	KVV LVV	(0.25)	(0)	(0.23)	(0)
30	Talishission	09,241	KVV	(0.36)	(34)	(0.34)	(31)
32	Energy						
33	On-Peak	189 869	MWh	0.04345	8 250	0.04187	7 949
34	Off-Peak	523 419	MWh	0.03345	17 508	0.03187	16 680
35	Voltage Level Discount	020,110		0.00010	,000	0.00101	10,000
36	Subtransmission	67.617	MWh	(0.00114)	(77)	(0.00114)	(77)
37	Transmission	120,109	MWh	(0.00194)	(233)	(0.00193)	(232)
38	Power Supply Subtotal	713,288	MWh		43,205		40,385
39							
40	PSCR	713,288	MWh	0.00000	0	0.00000	0
41	REPS	161	Cust.	0.00	0	0.00	0
42	Total Full Service Power Supply	713,288	MWh	6.06¢	43,205	<b>5.66¢</b>	40,385
43							
44	Full Service Distribution	Quantity	Units				
45							
46	Service Charge - PV	156	Cust.	275	514	275	514
47	Service Charge - SV, TV	5	Cust.	375	23	375	23
48							
49	Distribution Charges						
50	Primary	1,480,035	kW	3.77	5,580	3.50	5,178
51		525,562	MWh				
52	Subtransmission	131,960	kW	1.46	193	1.51	199
53		67,617	MWh				
54	Transmission	268,487	kW	0.73	196	0.68	182
55		120,109	IVIVVN				
56	Substation Credit			(5.5.5)	(***)	(2.2.2)	()
57	Demand	282,019	kW	(0.30)	(85)	(0.30)	(85)
58	Energy	0	MWh	(0.0004)	0	(0.0004)	0
59	Distribution System	713,288	MWh	0.90¢	6,420	0.84¢	6,010
60	Nuclear December 1	7/0 00-		0.00076-		0.00076-	- / -
61	Inuclear Decommissioning	/13,288	MWh	0.000765	546	0.000765	546
62	Energy Waste Reduction	183	Meters	245.0	538	245.0	538
63 64	LIEAF Distribution Surphannes	183	weters	0.93	2	0.93	2
04 65	Distribution Surcharges	113,288		0.15¢	1,086	0.15¢	1,086
66	Total Full Service Distribution	713 288	MW/h	1.05#	7 506	በ ዓዓታ	7 096
67	Total Full Service D8	713,288	MWh	7,11¢	50,712	6.66¢	47,481

Michigan Public Service Commission DTE Electric Company Staff's Present and Proposed Revenue Calculations Interruptible Supply Rate - D8 (Cont'd) All Voltages

Case No.: U-20162 Exhibit: S-6 Schedule: F3 Witness: M. J. Pung Page: 31 of 52

No.         Description         Billing Determinants         Present         Proposed           66         Choice Distikution         Quantity         Units         Rate         Revenue         (\$000)           70         Power Supply Demand         0         kW         6.67         0         4.97         0           72         Subtrammission         0         kW         (0.32)         0         (0.25)         0           74         -         -         -         0         (0.25)         0         0           74         -         -         -         0         (0.25)         0	Line	(a)	(b)		(c)	(d)	(e)	(f)
Call         Division         Quantity         Units         Rate         Revenue (\$000)           0         Capacity         0         kW         (\$000)         (\$000)           7         Prover Supply Demand         0         kW         (\$000)         (\$000)           7         Subtransmission         0         kW         (\$0.32)         0         (\$0.25)         0           7         Transmission         0         kW         (\$0.49)         0         (\$0.32)         0           7         Subtransmission         0         kW         (\$0.59)         0         (\$0.49)         0           7         Subtransmission         0         kW         (\$0.59)         0         (\$0.673)         0           7         Subtransmission         0         kW         (\$0.59)         0         (\$0.673)         0           8         Carpeak         0         NWh         0.00000         0         0.00000         0           9         Ortheak         0         NWh         0.00000         0         0.00000         0         0.00000         0           9         Subtransmission         0         MWh         0.00000         0	No.	Description	Billing Deter	minants	Pres	sent	Propo	sed
Geogracity         (\$000)         (\$000)           Power Supply Demand         0         kW         6.67         0         4.97         0           72         Subtransmission         0         kW         (0.32)         0         (0.25)         0           73         Transmission         0         kW         (0.43)         0         (0.25)         0           74         -	68	Choice Distribution	<u>Quantity</u>	<u>Units</u>	Rate	Revenue	Rate	Revenue
70         Power Supply Demand         0         kW         6.67         0         4.97         0           72         Subtransmission         0         kW         (0.32)         0         (0.25)         0           73         Transmission         0         kW         (0.49)         0         (0.37)         0           73         Transmission         0         kW         (0.49)         0         (0.37)         0           74         Product Protection Demand         0         kW         (0.69)         0         (0.49)         0           77         Subtransmission         0         kW         (0.87)         0         (0.73)         0           70         Product Protection Demand         0         kW         (0.87)         0         (0.49)         0           71         Transmission         0         MWh         0.00000         0         0.00000         0           70         Transmission         0         MWh         0.00000         0         0.00000         0           71         Tatasmission         0         MWh         0.00000         0         0.00000         0           7         Transmission	69	Capacity	-			(\$000)		(\$000)
11       Voltage Level Discount       0       kW       (0.32)       0       (0.25)       0         73       Transmission       0       kW       (0.32)       0       (0.37)       0         74       -       -       -       0       (0.32)       0       (0.37)       0         74       -       -       -       0       (0.49)       0       (0.37)       0         74       -       -       -       0       (0.49)       0       (0.49)       0         74       -       -       -       0       (0.49)       0	70	Power Supply Demand	0	kW	6.67	0	4.97	0
72         Subtransmission         0         kW         (0.32)         0         (0.25)         0           73         Transmission         0         kW         (0.49)         0         (0.37)         0           74         Product Protection Demand         0         kW         11.87         0         11.55         0           75         Product Protection Demand         0         kW         (0.65)         0         (0.49)         0           76         Transmission         0         kW         (0.67)         0         (0.73)         0           77         Subtransmission         0         kW         (0.87)         0         (0.73)         0           76         Preak         0         MWh         0.00000         0         0.00000         0           701         Total Energy         0         MWh         0.00000         0         0.00000         0           80         Service Charge - PV         10         Cust.         275         33         275         33           9         Service Charge - FV         10         Cust.         275         33         275         33           9         Service Charge - FV </td <td>71</td> <td>Voltage Level Discount</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	71	Voltage Level Discount						
73       Transmission       0       kW       (0.49)       0       (0.37)       0         74       Product Protection Demand       0       kW       11.87       0       11.55       0         75       Voltage Level Discount       0       kW       (0.58)       0       (0.49)       0         78       Transmission       0       kW       (0.58)       0       (0.49)       0         78       Transmission       0       kW       (0.58)       0       (0.49)       0         78       Transmission       0       MWh       0.00000       0       0.00000       0         79       Transmission       0       MWh       0.00000       0       0.00000       0         70       Transmission       0       MWh       0.00000       0       0.00000       0         70       Transmission       0       MWh       0.00000       0       0.00000       0       0.00000       0       0.00000       0       0.00000       0       0.00000       0       0.00000       0       0.00000       0       0.00000       0       0.00000       0       0.00000       0       0.00000       0 <td< td=""><td>72</td><td>Subtransmission</td><td>0</td><td>kW</td><td>(0.32)</td><td>0</td><td>(0.25)</td><td>0</td></td<>	72	Subtransmission	0	kW	(0.32)	0	(0.25)	0
74     Voltage Level Discount     0     kW     11.87     0       75     Product Protection Demand     0     kW     (0.58)     0     (0.49)     0       77     Subtransmission     0     kW     (0.58)     0     (0.49)     0       78     Product Protection Demand     0     kW     (0.58)     0     (0.73)     0       78     Product Protection Demand     0     MWh     0.00000     0     0.00000     0       79     0     MWh     0.00000     0     0.00000     0     0.00000     0       80     Dr-Peak     0     MWh     0.00000     0     0.00000     0     0.00000     0       741     Transmission     0     MWh     0.00000     0     0.00000     0       90     Service Charge - PV     10     Cust.     275     33     275     33       91     Distribution Charges     9     3.77     801     3.50     743       94     Primary     212.342     kW     3.77     801     3.50     743       95     Subtransmission     61.847     kW     0.630     0     (0.0004)     0       95     Subtransmission     61.847 <td>73</td> <td>Transmission</td> <td>0</td> <td>kW</td> <td>(0.49)</td> <td>0</td> <td>(0.37)</td> <td>0</td>	73	Transmission	0	kW	(0.49)	0	(0.37)	0
75       Product Protection Demand       0       kW       11.87       0       11.55       0         76       Valtage Level Discount       0       kW       (0.58)       0       (0.49)       0         78       Product Protection Demand       0       kW       (0.58)       0       (0.49)       0         78       Promuce X       0       KW       (0.57)       0       (0.73)       0         70       Promode X       0       MWh       0.00000       0       0.00000       0         70       Product Preak       0       MWh       0.00000       0       0.00000       0         71       Total Energy       0       MWh       0.00000       0       0.00000       0         71       Total Capacity       0       MWh       0.00000       0       0.00000       0         72       10       Cust.       275       33       275       33         73       Service Charge - PV       10       Cust.       3.77       801       3.50       743         74       Mitmary       24,453       MWh       0.46       90       1.51       93         74       Mitmary	74							
Voltage Level Discount         Unitage Level Discount<	75	Product Protection Demand	0	kW	11.87	0	11.55	0
Subtransmission         0         kW         (0.58)         0         (0.49)         0           77         Subtransmission         0         kW         (0.58)         0         (0.49)         0           78         Transmission         0         kW         (0.87)         0         (0.73)         0           70         Energy         0         MWh         0.00000         0         0.00000         0           80         Energy         0         MWh         0.00000         0         0.00000         0           81         Ort-Peak         0         MWh         0.00000         0         0.00000         0           83         Total Energy         0         MWh         0.00000         0         0.00000         0           90         Service Charge - PV         10         Cust.         275         33         275         33           91         Service Charge - SV, TV         2         Cust.         2375         9         375         9           92         Primary         212.342         kW         1.46         90         1.51         93           93         Distribution Charges         Primary         212	76	Voltage Level Discount						
Transmission       0       kW       (0.87)       0       (0.73)       0         Preray       0n-Peak       0       MWh       0.00000       0       0.00000       0         Total Energy       0       MWh       0.00000       0       0.00000       0       0.00000       0         Yoltage Level Discount       5       Subtransmission       0       MWh       0.00000       0       0.00000       0         Transmission       0       MWh       0.00000       0       0.00000       0       0.00000       0         Total Capacity       0       MWh       0.00000       0       0.00000       0       0.00000       0       0.00000       0       0.00000       0       0.00000       0       0.00000       0       0.00000       0       0.00000       0       0.00000       0       0.00000       0       0.00000       0       0       0.00000       0       0       0.00000       0       0       0.00000       0	77	Subtransmission	0	kW	(0.58)	0	(0.49)	0
Party         Party <th< td=""><td>78</td><td>Transmission</td><td>0</td><td>kW</td><td>(0.87)</td><td>0</td><td>(0.73)</td><td>0</td></th<>	78	Transmission	0	kW	(0.87)	0	(0.73)	0
80         Energy         0         Wh         0.00000         0         0.00000         0           81         On-Peak         0         MWh         0.00000         0         0.00000         0           83         Total Energy         0         MWh         0.00000         0         0.00000         0           84         Voltage Level Discount         Subtransmission         0         MWh         0.00000         0         0.00000         0           86         Subtransmission         0         MWh         0.00000         0         0.00000         0           87         Transmission         0         MWh         0.00000         0         0.00000         0           9         Forice Charge - PV         10         Cust.         275         33         275         33           91         Service Charge - SV, TV         2         Cust.         377         801         3.50         743           94         Primary         212,342         KW         1.46         90         1.51         93           96         Subtransmission         6.18/47         KW         1.46         90         1.51         93           97	79							
81         On-Peak         0         MWh         0.00000         0         0.00000         0           82         Off-Peak         0         MWh         0.00000         0         0.00000         0           84         Off-Peak         0         MWh         0.00000         0         0.00000         0           84         Voltage Level Discount	80	Energy						
82         Off-Peak         0         MWh         0.00000         0         0.00000         0           83         Total Energy         0         MWh         0.00000         0         0.00000         0           84         Yoltage Level Discount         0         MWh         0.00000         0         0.00000         0           86         Subtransmission         0         MWh         0.00000         0         0.00000         0           76         Transmission         0         MWh         0.00000         0         0.00000         0           86         Service Charge - PV         10         Cust.         275         33         275         33           91         Service Charge - SV, TV         2         Cust.         377         801         3.50         743           92         Primary         212,342         kW         1.46         90         1.51         93           93         Distribution Charges         107,520         MWh         0.73         0         0.68         0           94         Primary         24,453         MWh         0.713         0         0.67¢         878           95         Substati	81	On-Peak	0	MWh	0.00000	0	0.00000	0
83         Total Energy         0         MWh           84         Voltage Level Discount         0         MWh         0.00000         0         0.00000         0           86         Subtransmission         0         MWh         0.00000         0         0.00000         0           87         Transmission         0         MWh         0.00000         0         0.00000         0           88         Total Capacity         0         MWh         0.00000         0         0.00000         0           89         Service Charge - SV, TV         2         Cust.         375         9         375         9           91         Distribution Charges         Primary         212,342         kW         3.77         801         3.50         743           96         Subtransmission         61.847         kW         1.46         90         1.51         93           97         24.453         MWh         0.73         0         0.68         0           98         Transmission         0         kW         0.73         0         0.676         878           105         Substation Credit         0         0         0.000765         <	82	Off-Peak	0	MWh	0.00000	0	0.00000	0
84         0           85         Voltage Level Discount           86         Subtransmission         0           87         Voltage Level Discount         0           88         Subtransmission         0         MWh           89         Transmission         0         MWh           89         Transmission         0         MWh           89         Service Charge - PV         10         Cust.         275         33           91         Service Charge - SV, TV         2         Cust.         375         9         375         9           92         9         107,520         MWh         1.46         90         1.51         93           93         Transmission         61,847         KW         1.46         90         1.51         93           94         Primary         24,453         MWh         0.73         0         0.68         0           95         107,520         MWh         0.300         0         0         0.00004/td>         0         0.00004/td>         0         0.00004/td>         0         0.00004/td>         0         0.00004/td>         0         0.00004/td>         0         0.000765         101         <	83	Total Energy	0	MWh				
Voltage Level Discount         Voltage Level Discount<	84							
86         Subtransmission         0         MWh         0.00000         0         0.00000         0           87         Transmission         0         MWh         0.00000         0         0.00000         0           88         Total Capacity         0         MWh         0         0.00000         0         0.00000         0           90         Service Charge - PV         10         Cust.         275         33         275         33           91         Service Charge - SV, TV         2         Cust.         375         9         375         9           92         Distribution Charaes	85	Voltage Level Discount						
87         Transmission         0         MWh         0.00000         0         0.00000         0           88         Total Capacity         0         MWh         0         0         0         0         0           89         service Charge - PV         10         Cust.         275         33         275         33           91         Service Charge - SV, TV         2         Cust.         375         9         375         9           92	86	Subtransmission	0	MWh	0.00000	0	0.00000	0
88         Total Capacity         0         MWh           90         Service Charge - PV         10         Cust.         275         33         275         33           91         Service Charge - SV, TV         2         Cust.         375         9         375         9           92         Distribution Charges         9         107,520         MWh         3.77         801         3.50         743           96         Subtransmission         61,847         kW         1.46         90         1.51         93           97         Transmission         0         kW         0.73         0         0.68         0           98         Transmission         0         kW         0.73         0         0.68         0           99         0         MWh         0.73         0         0.68         0         0           101         Demand         0         kW         0.0004         0         0.00004         0         0.00004         0         0.00004         0         0.0000765         101         0.000765         101         0.000765         101         0.000765         101         0.000765         101         0.000         0.0	87	Transmission	0	MWh	0.00000	0	0.00000	0
89       Service Charge - PV       10       Cust.       275       33       275       33         91       Service Charge - SV, TV       2       Cust.       375       9       375       9         93       Distribution Charges       9       375       9       375       9         94       Primary       212,342       kW       3.77       801       3.50       743         96       Subtransmission       61,847       kW       1.46       90       1.51       93         97       24,453       MWh       0.73       0       0.68       0         98       Transmission       0       kW       0.73       0       0.68       0         99       0       MWh       0.0004)       0       (0.30)       0       (0.30)       0         101       Demand       0       kW       0.000765       101       0.000765       101         105       Nuclear Decommissioning       131,973       MWh       0.000765       101       0.000765       101         106       Energy Waste Reduction       12       Meters       0.93       0       0.10¢       136       0.10¢       136	88	Total Capacity	0	MWh				0
90       Service Charge - PV       10       Cust.       275       33       275       33         91       Service Charge - SV, TV       2       Cust.       375       9       375       9         92       Image: Service Charge - SV, TV       2       Cust.       375       9       375       9         93       Distribution Charges       Image: Service Charge - SV, TV       2       Cust.       377       801       3.50       743         94       Primary       212,342       kW       3.77       801       3.50       743         95       107,520       MWh       1.46       90       1.51       93         97       24,453       MWh       0.73       0       0.68       0         98       Transmission       0       kW       0.73       0       0.68       0         99       0       MWh       0.0030       0       (0.30)       0       (0.30)       0         102       Energy       0       MWh       0.71¢       933       0.67¢       878         104       111       111,973       MWh       0.000765       101       0.000765       101         105 <td>89</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	89							
91       Service Charge - SV, TV       2       Cust.       375       9       375       9         92       Distribution Charges       9       375       9       375       9         93       Distribution Charges       9       3.77       801       3.50       743         94       Primary       212,342       kW       3.77       801       3.50       743         96       Subtransmission       61,847       kW       1.46       90       1.51       93         97       24,453       MWh       0.73       0       0.68       0         99       0       MWh       0.73       0       0.68       0         99       0       MWh       0.73       0       (0.0004)       0         100       Substation Credit	90	Service Charge - PV	10	Cust.	275	33	275	33
92         Distribution Charges           94         Primary         212,342         kW           95         107,520         MWh           96         Subtransmission         61,847         kW           97         24,453         MWh           98         Transmission         0         kW           99         0         MWh           910         Subtransmission         0         kW           92         0         MWh         0.73         0           93         Transmission         0         kW         0.73         0           94         Demand         0         kW         0.030)         0         0           94         Distribution System         131,973         MWh         0.71¢         933         0.67¢         878           104         0         12         Meters         0.93         0         0.000765         101         0.000765         101         0.000765         101         0.10¢         136         0.10¢         136         0.10¢         136         0.10¢         136         0.10¢         136         0.10¢         136         0.10¢         136         0.10¢         136	91	Service Charge - SV, TV	2	Cust.	375	9	375	9
93         Distribution Charges         94         Primary         212,342         kW         3.77         801         3.50         743           95         107,520         MWh         107,520         MWh         1.46         90         1.51         93           96         Subtransmission         61,847         kW         1.46         90         1.51         93           97         24,453         MWh         0.73         0         0.68         0           98         Transmission         0         kW         0.73         0         0.68         0           99         0         MWh         0.730         0         0.68         0           910         Demand         0         kW         0.730         0         0.0004         0           102         Energy         0         MWh         0.71¢         933         0.67¢         878           104         131,973         MWh         0.000765         101         0.000765         101           105         Nuclear Decommissioning         131,973         MWh         0.933         0         0.933         0           108         Distribution Surcharges         131,	92	- · ·						
94         Primary         212,342         kW         3.77         801         3.50         743           95         Subtransmission         61,847         kW         1.46         90         1.51         93           97         24,453         MWh         1.46         90         1.51         93           98         Transmission         0         kW         0.73         0         0.68         0           99         0         MWh         0.300         0         (0.30)         0         0           100         Substation Credit         0         WWh         0.0300         0         (0.0004)         0           102         Energy         0         MWh         0.00040         0         (0.0004)         0           103         Distribution System         131,973         MWh         0.000765         101         0.000765         101           106         Energy Waste Reduction         12         Meters         0.93         0         0.93         0         0.93         0         0.93         0         0.93         0         0.93         0         0.10¢         136         0.10¢         136         0.10¢         136	93	Distribution Charges						
95       107,520       MWh         96       Subtransmission       61,847       kW         97       24,453       MWh         98       Transmission       0       kW         99       0       MWh         99       0       MWh         100       Substation Credit       0         101       Demand       0       kW         102       Energy       0       MWh         103       Distribution System       131,973       MWh         104       Nuclear Decommissioning       131,973       MWh         105       Nuclear Decommissioning       131,973       MWh         106       Energy Waste Reduction       12       Meters         107       LEAF       12       Meters       0.93         108       Distribution Surcharges       131,973       MWh       0.81¢       1.069         108       Distribution Surcharges       131,973       MWh       0.81¢       0.10¢       136         109       Total Choice D8       131,973       MWh       0.81¢       1.069       0.77¢       1.014         111       Total D8       845,260       MWh       6.13¢	94	Primary	212.342	kW	3.77	801	3.50	743
96         Subtransmission         61,847         kW         1.46         90         1.51         93           97         24,453         MWh         0         kW         0.73         0         0.68         0           98         Transmission         0         kW         0.73         0         0.68         0           99         0         MWh         0.30)         0         0.68         0           100         Substation Credit         0         MWh         0.030)         0         0.0004         0           101         Demand         0         MWh         0.0004         0         0.0004         0           102         Energy         0         MWh         0.000765         101         0.000765         101           103         Distribution System         131,973         MWh         0.000765         101         0.000765         101           105         Nuclear Decommissioning         131,973         MWh         0.10¢         136         0.10¢         136           104         Total Choice D8         131,973         MWh         0.81¢         1,069         0.77¢         1,014           111         Total Choice	95		107.520	MWh				
97       24,453       MWh         98       Transmission       0       kW       0.73       0       0.68       0         99       0       MWh       0.73       0       0.68       0         100       Substation Credit       0       MWh       0.030)       0       (0.30)       0         101       Demand       0       kW       (0.30)       0       (0.004)       0         102       Energy       0       MWh       (0.0004)       0       (0.0004)       0         103       Distribution System       131,973       MWh       0.71¢       933       0.67¢       878         104       Nuclear Decommissioning       131,973       MWh       0.000765       101       0.000765       101         105       Energy Waste Reduction       12       Meters       0.93       0       0.10¢       136       0.10¢       136         104       Total Choice D8       131,973       MWh       0.81¢       1,069       0.77¢       1,014         111       Total D8       845,260       MWh       6.13¢       51,781       5.74¢       48,495         113       Increase/Decrease (\$)       (3,28	96	Subtransmission	61.847	kW	1.46	90	1.51	93
98       Transmission       0       kW       0.73       0       0.68       0         99       0       MWh       0.30)       0       0.68       0         100       Substation Credit       0       kW       0.30)       0       0.30)       0         101       Demand       0       kW       0.0004)       0       0.0004)       0         102       Energy       0       MWh       0.71¢       933       0.67¢       878         104       0       131,973       MWh       0.71¢       933       0.67¢       878         104       0       12       Meters       245.0       35       245.0       35         104       1EAF       12       Meters       0.93       0       0.10¢       136       0.10¢       136         109       Istribution Surcharges       131,973       MWh       0.81¢       1,069       0.77¢       1,014         111       112       Total Choice D8       131,973       MWh       6.13¢       51,781       5.74¢       48,495         113       Increase/Decrease (\$)       51,260       MWh       6.13¢       51,781       5.74¢       48,495	97		24,453	MWh			-	
99       0       MWh       0       MWh         100       Substation Credit       0       KW       (0.30)       0         101       Demand       0       kW       (0.30)       0       (0.30)       0         102       Energy       0       MWh       (0.0004)       0       (0.0004)       0         103       Distribution System       131,973       MWh       0.71¢       933       0.67¢       878         104       1       131,973       MWh       0.000765       101       0.000765       101         105       Nuclear Decommissioning       131,973       MWh       0.400765       101       0.000765       101         106       Energy Waste Reduction       12       Meters       0.93       0       0.93       0         107       LIEAF       12       Meters       0.93       0       0.10¢       136         109       Total Choice D8       131,973       MWh       0.81¢       1,069       0.77¢       1,014         111       Total D8       845,260       MWh       6.13¢       51,781       5.74¢       48,495         13       Increase/Decrease (\$)       (3.286) <t< td=""><td>98</td><td>Transmission</td><td>0</td><td>kW</td><td>0.73</td><td>0</td><td>0.68</td><td>0</td></t<>	98	Transmission	0	kW	0.73	0	0.68	0
Substation Credit         0         KW         (0.30)         0         (0.30)         0           101         Demand         0         kW         (0.30)         0         (0.30)         0           102         Energy         0         MWh         (0.0004)         0         (0.0004)         0           103         Distribution System         131,973         MWh         0.71¢         933         0.67¢         878           104	99		0	MWh		-		
101         Demand         0         kW         (0.30)         0         (0.30)         0           102         Energy         0         MWh         (0.30)         0         (0.30)         0           103         Distribution System         131,973         MWh         0.71¢         933         0.67¢         878           104         0         0.000765         101         0.000765         101         0.000765         101           105         Nuclear Decommissioning         131,973         MWh         0.335         245.0         35         245.0         35           107         LIEAF         12         Meters         0.93         0         0.93         0           108         Distribution Surcharges         131,973         MWh         0.10¢         136         0.10¢         136           109         Increase/Decrease (\$)         131,973         MWh         0.81¢         1,069         0.77¢         1,014           111         Total D8         845,260         MWh         6.13¢         51,781         5.74¢         48,495           113         Increase/Decrease (\$)         (3.286)         (3.286)         (3.286)	100	Substation Credit						
Energy         0         MWh         (0.0004)         0           Distribution System         131,973         MWh         (0.0004)         0           103         Distribution System         131,973         MWh         (0.0004)         0           104	101	Demand	0	kW	(0.30)	0	(0.30)	0
Interpret         Interpret <t< td=""><td>102</td><td>Energy</td><td>0</td><td>MWh</td><td>(0.0004)</td><td>0</td><td>(0.0004)</td><td>0</td></t<>	102	Energy	0	MWh	(0.0004)	0	(0.0004)	0
104     105     Nuclear Decommissioning     131,973     MWh     0.000765     101     0.000765     101       105     Nuclear Decommissioning     131,973     MWh     0.000765     101     0.000765     101       106     Energy Waste Reduction     12     Meters     0.93     0     0.93     0       107     LIEAF     12     Meters     0.93     0     0.93     0       108     Distribution Surcharges     131,973     MWh     0.81¢     1,069     0.77¢     1,014       110     Total Choice D8     131,973     MWh     0.81¢     1,069     0.77¢     1,014       111     Total D8     845,260     MWh     6.13¢     51,781     5.74¢     48,495       113     Increase/Decrease (\$)     (\$).286     (\$).286     (\$).286     (\$).286	103	Distribution System	131 973	MWh	0.71¢	933	0.67¢	878
Nuclear Decommissioning         131,973         MWh         0.000765         101         0.000765         101           106         Energy Waste Reduction         12         Meters         245.0         35         245.0         35           107         LIEAF         12         Meters         0.93         0         0.93         0           108         Distribution Surcharges         131,973         MWh         0.10¢         136         0.10¢         136           109         Intra Choice D8         131,973         MWh         0.81¢         1,069         0.77¢         1,014           111         Total D8         845,260         MWh         6.13¢         51,781         5.74¢         48,495           113         Increase/Decrease (\$)         (3,286)         (3,286)         (3,286)         (3,286)	104		101,010		0.1.10		0.010	0.0
Interview         Interview <t< td=""><td>105</td><td>Nuclear Decommissioning</td><td>131 973</td><td>MWh</td><td>0 000765</td><td>101</td><td>0.000765</td><td>101</td></t<>	105	Nuclear Decommissioning	131 973	MWh	0 000765	101	0.000765	101
107     LIEAF     12     Meters     0.93     0       108     Distribution Surcharges     131,973     MWh     0.10¢     136       109     100     136     0.10¢     136       110     Total Choice D8     131,973     MWh     0.81¢     1,069       111     111       112     Total D8     845,260     MWh     6.13¢     51,781       113     Increase/Decrease (\$)     (3,286)	106	Energy Waste Reduction	12	Meters	245.0	35	245.0	35
108         Distribution Surcharges         131,973         MWh         0.10¢         136         0.10¢         136           109         Total Choice D8         131,973         MWh         0.81¢         1,069         0.77¢         1,014           111         Total D8         845,260         MWh         6.13¢         51,781         5.74¢         48,495           13         Increase/Decrease (\$)         (3,286)         (3,286)         (3,286)         (3,286)	107	LIEAF	12	Meters	0.93	0	0.93	0
Image: State of the state o	108	Distribution Surcharges	131,973	MWh	0.10¢	136	0.10¢	136
Total Choice D8         131,973         MWh         0.81¢         1,069         0.77¢         1,014           1111         111         1111         111<	109	Distribution Caronalgoo	101,010		01100	100	01100	100
111         6.13c         51,781         5.74c         48,495           113         Increase/Decrease (\$)         (3,286)         (3,286)         (3,286)	110	Total Choice D8	131,973	MWh	0.81¢	1,069	0.77¢	1,014
Total D8         845,260         MWh         6.13¢         51,781         5.74¢         48,495           113         Increase/Decrease (\$)         (3,286)         (3,286)         (3,286)         (3,286)	111							
113 Increase/Decrease (\$) (3,286)	112	Total D8	845,260	MWh	6.13¢	51,781	5.74¢	48,495
	113	Increase/Decrease (\$)						(3,286)

Michigan Public Service Commission DTE Electric Company Staff's Present and Proposed Revenue Calculations All Electric School Building Rate - D10 Primary Voltage

Case No.: U-20162 Exhibit: S-6 Schedule: F3 Witness: M. J. Pung Page: 32 of 52

Line	(a)	(b)		(c)	(d)	(e)	(f)	
No.	Description	Billing Deter	Billing Determinants		nt	Proposed		
	Full Service Power Supply	Quantity	<u>Units</u>	Rate	Revenue	Rate	Revenue	
	Capacity				(\$000)		(\$000)	
1	<u>Energy</u>							
2	Energy Winter	18,057	MWh	0.02018	364	0.02007	362	
3	Energy Summer	9,269	MWh	0.03819	354	0.03808	353	
4	Total Capacity	27,326	MWh		718		715	
5								
6	Non-Capacity	07.000		0.05004	4 500	0.05440	4 400	
/	Energy	27,326	IVIVVN	0.05621	1,536	0.05449	1,489	
8	Power Supply Subtotal							
9 10	PSCP	27 326	MMb	0.00000	0	0.0000	0	
11	REPS	27,520	Cust	0.0000	0	0.00000	0	
12	Total Full Service Power Supply	27 326	MWh	8.25¢	2 254	8.07¢	2 204	
13	Total I un octvice I ower oupply	21,520	1010011	0.230	2,234	0.07¢	2,204	
14	Full Service Distribution	Quantity	Units					
15		<u></u>	<u></u>					
16	Service Charge	26	Cust.	275	87	275	87	
17	g-						•	
18	Distribution Charges							
19	Primary	27,326	MWh	0.01930	527	0.01279	350	
20	Distribution System	27,326	MWh	2.25¢	614	1.60¢	437	
21								
22	Nuclear Decommissioning	27,326	MWh	0.000765	21	0.000765	21	
23	Energy Waste Reduction	26	Meters	245.0	77	245.0	77	
24	LIEAF	26	Meters	0.93	0	0.93	0	
25	Distribution Surcharges	27,326	MWh	0.36¢	99	0.36¢	99	
26								
27	Total Full Service Distribution	27,326	MWh	2.61¢	713	1.96¢	535	
28	Total Full Service D10	27,326	MWh	10.86¢	2,967	10.02¢	2,739	
29	Chaine Distribution	Quentitu	l letite	Dete	Deverse	Dete	Devee	
30		Quantity	Units	Rate	<u>Revenue</u>	Kate	<u>Revenue</u>	
31					(\$000)		(\$000)	
32	Energy Energy Winter	0	MM	0.02018	0	0.02007	0	
აა 24	Energy Willier	0	MM/b	0.02018	0	0.02007	0	
35	Total Capacity	0	MW/b	0.03619	0	0.03808	0	
36		0					0	
37	Service Charge	11	Cust	275	36	275	36	
38	connec enalge		e dell	2.0		2.0		
39	Distribution Charges							
40	Primary	9.349	MWh	0.01930	180	0.01279	120	
41	Distribution System	9,349	MWh	2.32¢	217	1.67¢	156	
42	,							
43	Nuclear Decommissioning	9,349	MWh	0.000765	7	0.000765	7	
44	Energy Waste Reduction	11	Meters	245.0	32	245.0	32	
45	LIEAF	11	Meters	0.93	0	0.93	0	
46	Distribution Surcharges	9,349	MWh	0.42¢	40	0.42¢	40	
47								
48	Total Choice D10	9,349	MWh	2.74¢	256	2.09¢	196	
49								
50	Total D10	36,675	MWh	8.79¢	3,224	8.00¢	2,935	
51	Increase/Decrease (\$)						(289)	

51 Increase/Decrease (\$)

Michigan Public Service Commission DTE Electric Company Staff's Present and Proposed Revenue Calculations Alternative Metal Melting Rider - R1.1

No.         Description         Billing Determinants         Present         Proposed           Full Service Power Supply         Quantity         Linis         Rate         Revenue         (\$000)           2         Secondary         Secondary         Secondary         Secondary         Secondary         Secondary           3         First 100 Hours Use         2.071         MWh         0.02751         57         0.03340         48           5         Primary         5.787         MWh         0.02751         18         0.01739         101           7         Excess Hours Use         5.787         MWh         0.02045         118         0.01739         101           7         Excess Hours Use         3.233         MWh         0.00064         240         0.05059         191           11         Transmission         3         0         0.01440         0         0.00477         0           12         First 100 Hours Use         0         MWh         0.00664         2.005059         191           11         Transmission         0         MWh         0.00664         0         0.004432         2.505           12         First 100 Hours Use         55.770	Line	(a)	(b)			(c)	(d)	(e)	(f)		
Full Service Power Supply         Quantity         Linits         Rate         Revenue         Rate         Revenue           1         Energy         -	No.	Description	Billing Deter	minants		Preser	nt	Propos	ed		
Capacity         (\$000)         (\$000)           2         Secondary         (\$000)         (\$000)           2         Secondary         (\$000)         (\$000)           4         Excess Hours Use         582         MWh         0.02751         57         0.02340         48           4         Excess Hours Use         582         MWh         0.02745         118         0.01738         101           7         Excess Hours Use         5.787         MWh         0.02245         118         0.01738         101           7         Excess Hours Use         5.787         MWh         0.002045         18         0.00684         246           9         First 100 Hours Use         14.477         MWh         0.01683         0         0.01440         0           10         Excess Hours Use         0         MWh         0.00684         0         0.00447         0           11         Torarenmission         0         MWh         0.00683         0         0.004492         2.505           11         Torarenmission         0         0.00000         0         0.00000         0         0.0000         0         0.0000         0         0.0000		Full Service Power Supply	<u>Quantity</u>	<u>Units</u>	l [	Rate	<u>Revenue</u>	Rate	Revenue		
1         Energy         Secondary         First 100 Hours Use         2.071 MWh         0.02751 57         0.02340 48           2         Secondary         582 MWh         0.01038 6         0.00883 5           5         Primary         0.00747 4         0.0035 3         0.00883 5           6         First 100 Hours Use         5.767 MWh         0.00747 4         0.0035 3         3           8         Subtransmission         -		Capacity					(\$000)		(\$000)		
2         Secondary	1	Energy									
3         First 100 Hours Use         2.071         MWh         0.02751         57         0.02240         48           Excess Hours Use         582         MWh         0.01038         6         0.00883         5           6         First 100 Hours Use         5.767         MWh         0.00747         4         0.00835         3           6         First 100 Hours Use         14.477         MWh         0.00747         4         0.00635         3           7         First 100 Hours Use         14.477         MWh         0.00747         4         0.00635         3           9         First 100 Hours Use         0         MWh         0.01698         224         0.00590         191           11         Transmission         Total Capacity         55.770         MWh         0.0453         2.539         0.04492         2.605           17         Energy         55.770         MWh         0.0455         2.539         0.04492         2.605           17         Cust         7044         Quantity         Units         8         8         8         3.099           17         Energy         55.770         MWh         0.0000         0         0.000	2	Secondary									
4         Excess Hours Use         582         MWh         0.01038         6         0.00883         5           6         First 100 Hours Use         5.787         MWh         0.02045         118         0.01739         101           6         First 100 Hours Use         5.787         MWh         0.00045         118         0.01739         101           8         Subtransmission         1         MWh         0.00064         224         0.01698         246           11         Transmission         1         MWh         0.001693         239         0.01440         0           12         First 100 Hours Use         0         MWh         0.00661         0         0.01440         0           12         First 100 Hours Use         0         MWh         0.00651         0         0.01440         0           13         Excess Hours Use         0         MWh         0.04653         2.539         0.04492         2.505           14         Total Full Service Power Supply Subtotal         3.238         0.04492         2.506         3.039         3.039           14         Full Service Power Supply Subtotal         State         3.238         State         3.238         3	3	First 100 Hours Use	2,071	MWh		0.02751	57	0.02340	48		
5         Primary	4	Excess Hours Use	582	MWh		0.01038	6	0.00883	5		
6         First 100 Hours Use         5,787         MWh         0.02045         118         0.01739         101           8         Subtransmission         510         MWh         0.00747         4         0.00635         3           9         First 100 Hours Use         14,477         MWh         0.01996         289         0.01698         246           11         Transmission         1	5	Primary									
Facess Hours Use         510         MWh         0.00747         4         0.00835         3           8         Subtransmission         14,477         MWh         0.01996         289         0.01688         246           10         Excess Hours Use         32,343         MWh         0.00694         224         0.00830         191           12         First 100 Hours Use         0         MWh         0.00694         224         0.00477         0           14         Total Capacity         55,770         MWh         0.00651         0         0.01440         0           14         Total Capacity         55,770         MWh         0.04553         2,539         0.04422         2,505           16         Non-Capacity         0         0.0000         0         0.000         0         0.000         0         0.000         0         0.000         0         0.000         0         0.000         0         0.000         0         0.000         0         0.000         0         0.000         0         0.000         0         0.000         0         0.000         0         0.000         0         0.000         0         0.000         0         0.000	6	First 100 Hours Use	5,787	MWh		0.02045	118	0.01739	101		
8         Subtrasmission         9         First 100 Hours Use         14,477         MWh         0.01996         289         0.01693         0         0.01693         0         0.01440         0           11         Transmission         1         0         0.01693         0         0.01440         0           12         First 100 Hours Use         0         MWh         0.00561         0         0.01440         0           13         Excess Hours Use         0         MWh         0.00561         0         0.04492         2,505           16         Non-Capacity         55,770         MWh         0.00000         0         0.00000         0         0.00000         0         0.00000         0         0.00000         0         0.00000         0         0.0000         0         0.0000         0         0.0000         0         0.0000         0         0.0000         0         0.0000         0         0.0000         0         0.0000         0         0.0000         0         0.0000         0         0.0000         0         0.0000         0         0.0000         0         0.0000         0         0.0000         0         0.0000         0         0         0.00	7	Excess Hours Use	510	MWh		0.00747	4	0.00635	3		
9         First 100 Hours Use         14,477         MWh         0.01996         289         0.01698         246           11         Transmission         0         MWh         0.00694         224         0.00590         191           11         Transmission         0         MWh         0.01698         200         0.01440         0           12         First 100 Hours Use         0         MWh         0.01693         0         0.01440         0           13         Excess Hours Use         0         MWh         0.005561         0         0.00477         0           14         Total Capacity         55,770         MWh         699         .	8	Subtransmission									
Intersection         Excess Hours Use         32,343         MWh         0.00694         224         0.00590         191           12         First 100 Hours Use         0         MWh         0.01693         0         0.01440         0           13         Excess Hours Use         0         MWh         0.00561         0         0.01440         0           14         Total Capacity         55,770         MWh         0.01693         0         0.01440         0           16         Non-Capacity         55,770         MWh         0.04553         2,539         0.04492         2,505           18         Power Supply Subtotal         -         3,238         0.00000         0         0.000         0           10         Total Full Service Power Supply         55,770         MWh         0.000         0         0.000         0         0.000         0         0.000         0         0.000         0         0.000         0         0.000         0         0.000         0         0.000         0         0.000         0         0.000         0         0.000         0         0.000         0         0.000         0         0.000         0         0         0.000	9	First 100 Hours Use	14,477	MWh		0.01996	289	0.01698	246		
11       Transmission       -       <	10	Excess Hours Use	32,343	MWh		0.00694	224	0.00590	191		
12         First 100 Hours Use         0         MWh         0.01693         0         0.01440         0           13         Excess Hours Use         0         MWh         0.00681         0         0.00477         0           14         Total Capacity         55,770         MWh         699         594           15         Energy         55,770         MWh         0.04553         2,539         0.04492         2,505           16         Power Supply Subtotal         3.238         3.099         3.039         3.099           10         REPS         17         Cust.         0.00         0         0.0000         0         0.0000         0         0.0000         0         0.0000         0         0.000         0         0.000         0         0.000         0         0.000         0         0.000         0         0.000         0         0.000         0         0.000         0         0.000         0         0.000         0         0.000         0         0.000         0         0.000         0         0.000         0         0.000         0         0         0.000         0         0         0.000         0         0.000         0	11	Transmission									
Excess Hours Use         0         MWh         0.00561         0         0.00477         0           14         Total Capacity         55,770         MWh         699         594           16         Non-Capacity         55,770         MWh         699         594           16         Non-Capacity         9         55,770         MWh         0.04553         2,595           17         Energy         55,770         MWh         0.04553         2,595         3,099           19         SCR         55,770         MWh         0.0000         0         0.0000         0           19         SCR         55,770         MWh         0.0000         0         0.0000         0           21         REPS         17         Cust         0.00         0         0.000         0           22         Total Full Service Distribution         Quantity         Units         Rate         Revenue         Rate         Revenue         (\$000)         (\$000)         (\$000)         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0	12	First 100 Hours Use	0	MWh		0.01693	0	0.01440	0		
14       Total Capacity       55,770       MWh       699       594         15       Non-Capacity       5,770       MWh       0.04553       2,539       0.04492       2,505         17       Energy       55,770       MWh       0.04553       2,539       0.04492       2,505         17       Energy       55,770       MWh       0.00000       0       0.00000       0         10       REPS       17       Cust       0.00000       0       0.00000       0       0.00       0       0       0.00       0       0       0.00       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0 <t< td=""><td>13</td><td>Excess Hours Use</td><td>0</td><td>MWh</td><td></td><td>0.00561</td><td>0</td><td>0.00477</td><td>0</td></t<>	13	Excess Hours Use	0	MWh		0.00561	0	0.00477	0		
15         Non-Capacity         16         Non-Capacity         17         Cust         3,238         0.04492         2,505         3,099           19         PSCR         55,770         MWh         0.00000         0         0.00000         0         0.00000         0         0.0000         0         0.0000         0         0.00000         0         0.00         0         0.00         0         0.00000         0         0.00000         0         0.00000         0         0.00         0         0.00         0         0.00         0         0.00         0         0.00         0         0         0.00000         0         0.00000         0         0.00000         0         0         0.00000         0         0         0         0         0         0         0         0         0         0         0	14	Total Capacity	55,770	MWh			699		594		
In Son-Capacity         Non-Capacity         Son-Capacity         Son-Capaci	15										
17       Energy       55,770       MWh       0.04553       2,539       0.04492       2,505         18       Power Supply Subtotal       3,238       3,099       3,000       0         10       PSCR       55,770       MWh       0.00000       0       0.0000       0         10       REPS       17       Cust.       0.00       0       0.00       0       0.00       0         11       First Full Service Distribution       Quantity       Units       Rate       Revenue       (\$000)       (\$000)       0       0.00       0       0.00       0       0.00       0       0.00       0       0.00       0       0.00       0       0.00       0       0.00       0       0.00       0       0.00       0       0.00       0       0.00       0       0.00       0       0       0.00       0       0       0.00       0       0       0       0.00       0	16	Non-Capacity									
18         Power Supply Subtotal         3,238         3,099           19         PSCR         55,770         MWh         0.00000         0         0.0000         0           21         REPS         17         Cust.         0.0000         0         0.0000         0           22         Total Full Service Power Supply         55,770         MWh         5.816         3,238         6.566         3,099           24         Full Service Distribution         Quantity         Units         Rate         Revenue         (\$000)         0           24         Full Service Distribution         Quantity         Units         Rate         Revenue         (\$000)         0           26         Secondary         (\$000)         0.02442         51         0.02686         56           27         Secondary         (\$000)         0.01114         64         0.01141         66           30         Primary         Trats 100 Hours Use         5,787         MWh         0.00347         50         0.00352         511           31         First 100 Hours Use         0         MWh         0.00189         0         0.00138         0           35         Excess Hours Use	17	Energy	55,770	MWh		0.04553	2,539	0.04492	2,505		
19         PSCR         55,770         MWh         0.00000         0         0.00000         0           22         Total Full Service Power Supply         55,770         MWh         5.81e         3,238         5.56e         3,099           23         Full Service Distribution         Quantity         Units         Rate         Revenue         (\$000)         0           24         Full Service Distribution         Quantity         Units         Rate         Revenue         (\$000)         0           26         Distribution Charges         Secondary         0         0.02442         51         0.02686         56           29         Excess Hours Use         5,787         MWh         0.01114         64         0.01141         66           32         Subtransmission         3         Subtransmission         3         3         0         0.00352         511           39         First 100 Hours Use         14.477         MWh         0.00189         0         0.00138         0           315         Excess Hours Use         0         MWh         0.00189         0         0.00138         0           34         Transmission         1         1         0.000765	18	Power Supply Subtotal					3,238		3,099		
20         PSCR         55,770         MWh         0.00000         0         0.00000         0           11         REPS         17         Cust.         0.000         0         0	19										
21         REPS         17         Cust.         0.00         0         0.00         0           22         Total Full Service Power Supply         55,770         MWh         5.81e         3,238         5.56e         3,099           23         Full Service Distribution         Quantity         Units         Rate         Revenue         (\$000)         6           25         Distribution Charges	20	PSCR	55,770	MWh		0.00000	0	0.00000	0		
22         Total Full Service Power Supply         55,770         MWh           33         5.81e         3,238           44         Full Service Distribution         Quantity         Units           55         Rate         Revenue         Rate         Revenue           55         Secondary         Secondary         Secondary         Secondary         Secondary         Secondary           71         First 100 Hours Use         5,787         MWh         0.02442         51         0.02686         56           30         Primary         Sisti 100 Hours Use         5,787         MWh         0.01114         64         0.01141         66           31         First 100 Hours Use         5,787         MWh         0.00347         50         0.00352         51           32         Excess Hours Use         32,343         MWh         0.00114         66         0.00352         114           47         First 100 Hours Use         0         MWh         0.00189         0         0.00138         0           37         First 100 Hours Use         0         MWh         0.00189         0         0.00138         0           38         Excess Hours Use         0	21	REPS	17	Cust.		0.00	0	0.00	0		
23         Rate         Revenue	22	Total Full Service Power Supply	55,770	MWh		5.81¢	3,238	5.56¢	3,099		
24         Full Service Distribution         Quantity         Units         Rate         Revenue (\$000)           26         Distribution Charges         (\$000)         (\$000)         (\$000)           28         First 100 Hours Use         2,071         MWh         0.02442         51         0.02686         56           29         Excess Hours Use         5,82         MWh         0.02442         14         0.02686         16           30         Primary         31         First 100 Hours Use         5,787         MWh         0.01114         64         0.01141         66           32         Subtransmission	23										
25         (\$000)         (\$000)           26         Distribution Charges	24	Full Service Distribution	Quantity	<u>Units</u>		Rate	Revenue	Rate	Revenue		
26         Distribution Charges           27         Secondary           28         First 100 Hours Use         2,071         MWh           30         Primary         0.02442         51         0.02686         56           30         Primary         31         First 100 Hours Use         5,787         MWh         0.01114         64         0.01141         66           32         Subtransmission         3         Subtransmission         3         0.00347         50         0.00352         51           35         Excess Hours Use         32,343         MWh         0.00147         12         0.00352         114           36         Transmission         3         3         0.00138         0         0.00138         0           37         First 100 Hours Use         0         MWh         0.00189         0         0.00138         0           38         Excess Hours Use         0         MWh         0.00189         0         0.00138         0           37         First 100 Hours Use         0         MWh         0.00189         0         0.00138         0           38         Excess Hours Use         0         MWh         0.00189 <td>25</td> <td></td> <td>-</td> <td></td> <td></td> <td></td> <td>(\$000)</td> <td></td> <td>(\$000)</td>	25		-				(\$000)		(\$000)		
27         Secondary           28         First 100 Hours Use         2,071         MWh         0.02442         51         0.02686         56           29         Excess Hours Use         582         MWh         0.02442         14         0.02686         16           30         Primary         31         First 100 Hours Use         5,787         MWh         0.01114         64         0.01141         66           32         Excess Hours Use         510         MWh         0.00347         50         0.00352         51           34         First 100 Hours Use         14,477         MWh         0.00347         50         0.00352         51           35         Excess Hours Use         32,343         MWh         0.00189         0         0.00352         114           6         Transmission	26	Distribution Charges					(. ,		(, ,		
28         First 100 Hours Use         2,071         MWh         0.02442         51         0.02686         56           29         Excess Hours Use         582         MWh         0.02442         14         0.02686         16           30         Primary         5787         MWh         0.01114         64         0.01141         66           32         Excess Hours Use         5,787         MWh         0.01114         64         0.01141         66           32         Excess Hours Use         510         MWh         0.00347         50         0.00352         51           35         Excess Hours Use         32,343         MWh         0.00189         0         0.00138         0           36         Excess Hours Use         0         MWh         0.00189         0         0.00138         0           37         First 100 Hours Use         0         MWh         0.00189         0         0.00138         0           38         Excess Hours Use         0         MWh         0.00189         0         0.00138         0           41         Energy         4,002         MWh         0.51¢         285         1.48¢         296	27	Secondary									
29         Excess Hours Use         582         MWh         0.02442         14         0.02686         16           30         Primary	28	First 100 Hours Use	2,071	MWh		0.02442	51	0.02686	56		
30       Primary         31       First 100 Hours Use       5,787       MWh       0.01114       64       0.01141       66         32       Excess Hours Use       510       MWh       0.01114       64       0.01141       66         33       Subtransmission	29	Excess Hours Use	582	MWh		0.02442	14	0.02686	16		
31       First 100 Hours Use       5,787       MWh       0.01114       64       0.01141       66         32       Excess Hours Use       510       MWh       0.01114       64       0.01141       66         33       Subtransmission	30	Primary									
32       Excess Hours Use       510       MWh       0.01114       6       0.01141       6         33       Subtransmission       -       -       -       0.00347       50       0.00352       51         34       First 100 Hours Use       14,477       MWh       0.00347       50       0.00352       51         35       Excess Hours Use       32,343       MWh       0.00347       112       0.00352       114         36       Transmission       -<	31	First 100 Hours Use	5.787	MWh		0.01114	64	0.01141	66		
33       Subtransmission       34       First 100 Hours Use       14,477       MWh       0.00347       50       0.00352       51         35       Excess Hours Use       32,343       MWh       0.00347       112       0.00352       114         36       Transmission       37       First 100 Hours Use       0       MWh       0.00189       0       0.00138       0         37       First 100 Hours Use       0       MWh       0.00189       0       0.00138       0         38       Excess Hours Use       0       MWh       0.00189       0       0.00138       0         39	32	Excess Hours Use	510	MWh		0.01114	6	0.01141	6		
34       First 100 Hours Use       14,477       MWh       0.00347       50       0.00352       51         35       Excess Hours Use       32,343       MWh       0.00347       112       0.00352       114         36       Transmission       - <td< td=""><td>33</td><td>Subtransmission</td><td>0.0</td><td></td><td></td><td>0.0111</td><td>0</td><td>0.01111</td><td>0</td></td<>	33	Subtransmission	0.0			0.0111	0	0.01111	0		
1       International optimization       1,1,1,1       International optimization       0,00347       112       0,00352       114         35       Excess Hours Use       0       MWh       0,00347       112       0,00352       114         36       Transmission       1       0,00347       112       0,00352       114         37       First 100 Hours Use       0       MWh       0,00189       0       0,00138       0         38       Excess Hours Use       0       MWh       0,00189       0       0,00138       0         40       Substation Credit	34	First 100 Hours Use	14 477	MWh		0 00347	50	0 00352	51		
36       Transmission       Transmission       11       0.000189       0       0.00138       0         37       First 100 Hours Use       0       MWh       0.00189       0       0.00138       0         38       Excess Hours Use       0       MWh       0.00189       0       0.00138       0         39       Substation Credit       (0.00300)       (12)       (0.00300)       (12)         41       Energy       4,002       MWh       0.51¢       285       1.48¢       296         42       Distribution System       55,770       MWh       0.000765       43       0.000765       43         44       Nuclear Decommissioning       55,770       MWh       0.000765       43       0.000765       43         45       Energy Optimization       17       Meters       0.93       0       0.93       0         46       LIEAF       17       Meters       0.93       0       0.17¢       93         49       Total Full Service Distribution       55,770       MWh       0.68¢       378       0.70¢       388         50       Total Full Service R1.1       55,770       MWh       0.68¢       3.616       6.25¢ <td>35</td> <td>Excess Hours Use</td> <td>32 343</td> <td>MWh</td> <td></td> <td>0.00347</td> <td>112</td> <td>0.00352</td> <td>114</td>	35	Excess Hours Use	32 343	MWh		0.00347	112	0.00352	114		
37       First 100 Hours Use       0       MWh       0.00189       0       0.00138       0         38       Excess Hours Use       0       MWh       0.00189       0       0.00138       0         39	36	Transmission	02,010			0.000 11		0.00002			
1       1       1       0       0       1       1       0	37	First 100 Hours Lise	0	MWh		0 00189	0	0.00138	0		
39       Substation Credit	38	Excess Hours Lise	0	MWh		0.00189	0	0.00138	ů 0		
Substation Credit         (0.00300)         (12)         (0.00300)         (12)           41         Energy         4,002         MWh         (0.00300)         (12)         (0.00300)         (12)           42         Distribution System         55,770         MWh         0.51¢         285         1.48¢         296           43         Nuclear Decommissioning         55,770         MWh         0.000765         43         0.000765         43           45         Energy Optimization         17         Meters         245.0         50         245.00         50           46         LIEAF         17         Meters         0.93         0         0.93         0           47         Distribution Surcharges         55,770         MWh         0.68¢         378         0.17¢         93           49         Total Full Service R1.1         55,770         MWh         6.48¢         3.616         6.25¢         3.488	39		Ŭ			0.00100	0	0.00100	0		
Ho         Destruction orean           41         Energy         4,002         MWh         (0.00300)         (12)         (0.00300)         (12)           42         Distribution System         55,770         MWh         0.51¢         285         1.48¢         296           43         Nuclear Decommissioning         55,770         MWh         0.000765         43         0.000765         43           45         Energy Optimization         17         Meters         245.0         50         245.00         50           46         LIEAF         17         Meters         0.93         0         0.93         0           47         Distribution Surcharges         55,770         MWh         0.68¢         378         0.70¢         388           49         Total Full Service R1.1         55,770         MWh         6.48¢         3.616         6.25¢         3.488	40	Substation Credit									
1       1       1       0.00000       (12)         42       Distribution System       55,770       MWh       0.51¢       285         43       1       0.51¢       285       1.48¢       296         44       Nuclear Decommissioning       55,770       MWh       0.000765       43       0.000765       43         45       Energy Optimization       17       Meters       245.0       50       245.00       50         46       LIEAF       17       Meters       0.93       0       0.93       0         47       Distribution Surcharges       55,770       MWh       0.68¢       378       0.17¢       93         49       Total Full Service R1.1       55,770       MWh       6.48¢       3.616       6.25¢       3.488	41	Energy	4 002	MW/b		(0.00300)	(12)	(0.00300)	(12)		
42       Distribution system       55,770       MWh       0.01%       203       1.40%       233         43       43       Nuclear Decommissioning       55,770       MWh       0.000765       43       0.000765       43         45       Energy Optimization       17       Meters       245.0       50       245.00       50         46       LIEAF       17       Meters       0.93       0       0.93       0         47       Distribution Surcharges       55,770       MWh       0.17¢       93       0.17¢       93         49       Total Full Service Distribution       55,770       MWh       0.68¢       378       0.70¢       388         50       Total Full Service R1.1       55,770       MWh       6.48¢       3.616       6.25¢       3.488	12	Distribution System	55 770	MM/b		0.51¢	285	(0.00300)	296		
44         Nuclear Decommissioning         55,770         MWh         0.000765         43         0.000765         43           45         Energy Optimization         17         Meters         245.0         50         245.00         50           46         LIEAF         17         Meters         0.93         0         0.93         0           47         Distribution Surcharges         55,770         MWh         0.17¢         93         0.17¢         93           49         Total Full Service Distribution         55,770         MWh         0.68¢         378         0.70¢         388           50         Total Full Service R1.1         55,770         MWh         6.48¢         3.616         6.25¢         3.488	42	Distribution bystern	55,770	1010011		0.016	200	1. <del>4</del> 0¢	290		
44       Notice Decommissioning       55,770       MWin       0.000705       43       0.000705       45         45       Energy Optimization       17       Meters       245.0       50       245.00       50         46       LIEAF       17       Meters       0.93       0       0.93       0         47       Distribution Surcharges       55,770       MWh       0.17¢       93       0.17¢       93         49       Total Full Service Distribution       55,770       MWh       0.68¢       378       0.70¢       388         50       Total Full Service R1.1       55,770       MWh       6.48¢       3.616       6.25¢       3.488	43	Nuclear Decommissioning	55 770	MM/b		0 000765	13	0.000765	13		
Total Full Service R1.1     55,770     MWh     0.68¢     378     0.70¢     388	44 15	Energy Ontimization	33,770	Motore		0.000765	43	0.000705	43		
HERAF         I/         I//         I// <th <="" th=""> <th <="" th=""></th></th>	<th <="" th=""></th>		40		17	Motors		240.0	50	245.00	50
47         Distribution Solidarges         55,770         MWn         0.17¢         93         0.17¢         93           48         49         Total Full Service Distribution         55,770         MWh         0.68¢         378         0.70¢         388           50         Total Full Service R1.1         55,770         MWh         6.48¢         3.616         6.25¢         3.488	40 47	LIEAF Distribution Surpharass	17 EE 770	MAN		0.93	0	0.93	0		
Total Full Service Distribution         55,770         MWh         0.68¢         378         0.70¢         388           50         Total Full Service R1.1         55,770         MWh         6.48¢         3.616         6.25¢         3.488	47 48	Distribution Surcharges	55,770			0.17¢	93	0.17¢	93		
50 Total Full Service R1.1 55.770 MWh 6.48¢ 3.616 6.25¢ 3.488	49	Total Full Service Distribution	55 770	MWh		0.68¢	378	0.70¢	388		
	50	Total Full Service R1.1	55,770	MWh		6.48¢	3.616	6.25¢	3.488		

Michigan Public Service Commission DTE Electric Company Staff's Present and Proposed Revenue Calculations Alternative Metal Melting Rider - R1.1 (Cont'd)

Line	(a)	(b)		(c)	(d)	(e)	(f)
No.	Description	Billing Deter	minants	 Preser	nt	Propos	ed
51	Choice Distribution	Quantity	<u>Units</u>	<u>Rate</u>	Revenue	Rate	<u>Revenue</u>
52	Capacity	_			(\$000)		(\$000)
53	Energy						
54	Secondary						
55	First 100 Hours Use	0	MWh	0.02751	0	0.02340	0
56	Excess Hours Use	0	MWh	0.01038	0	0.00883	0
57	Primary						
58	First 100 Hours Use	0	MWh	0.02045	0	0.01739	0
59	Excess Hours Use	0	MWh	0.00747	0	0.00635	0
60	Subtransmission						
61	First 100 Hours Use	0	MWh	0.01996	0	0.01698	0
62	Excess Hours Use	0	MWh	0.00694	0	0.00590	0
63	Transmission						
64	First 100 Hours Use	0	MWh	0.01693	0	0.01440	0
65	Excess Hours Use	0	MWh	0.00561	0	0.00477	0
66	Total Capacity	0	MWh				0
67							
68	Distribution Charges						
69	Secondary						
70	First 100 Hours Use	0	MWh	0.02442	0	0.02686	0
71	Excess Hours Use	0	MWh	0.02442	0	0.02686	0
72	Primary						
73	First 100 Hours Use	0	MWh	0.01114	0	0.01141	0
74	Excess Hours Use	0	MWh	0.01114	0	0.01141	0
75	Subtransmission						
76	First 100 Hours Use	0	MWh	0.00347	0	0.00352	0
77	Excess Hours Use	0	MWh	0.00347	0	0.00352	0
78	Transmission						
79	First 100 Hours Use	0	MWh	0.00189	0	0.00138	0
80	Excess Hours Use	0	MWh	0.00189	0	0.00138	0
81							
82	Substation Credit						
83	Energy	0	MWh	(0.00300)	0	(0.00300)	0
84	Distribution System	0	MWh		0		0
85							
86	Nuclear Decommissioning	0	MWh	0.000765	0	0.000765	0
87	Energy Optimization	0	Meters	245.0	0	245.00	0
88	LIEAF	0	Meters	0.93	0	0.93	0
89	Distribution Surcharges	0	MWh		0		0
90							
91	Total Choice R1.1	0	MWh		0		0
92							
93		55,770	MWh	6.48¢	3,616	6.25¢	3,488
94	increase/Decrease (\$)						(128)

Michigan Public Service Commission DTE Electric Company Staff's Present and Proposed Revenue Calculations Electric Process Heat Rider - R1.2

Line	(a) Description	(b) Billing Deter	minanto	(c) Broco	(d)	(e) Brong	(f)
INU.	Full Service Power Supply		Unite	Pate	Revenue	Pate	Povonuo
	Capacity	Quantity	Units	Itale	(\$000)	Itale	(\$000)
1	Energy				(0000)		(\$000)
2	Secondary						
2	First 100 Hours Llos	10 477	MAA	0.02751	509	0.02240	422
3	Filst 100 Hours Use	10,477		0.02751	506	0.02340	432
4	Excess Hours Use	35,008	IVIVVN	0.01038	363	0.00883	309
5	Primary						
6	First 100 Hours Use	96,530	MWh	0.02045	1,974	0.01739	1,679
7	Excess Hours Use	263,053	MWh	0.00747	1,965	0.00635	1,671
8	Subtransmission						
9	First 100 Hours Use	6,819	MWh	0.01996	136	0.01698	116
10	Excess Hours Use	25,301	MWh	0.00694	176	0.00590	149
11	Transmission						
12	First 100 Hours Use	3,358	MWh	0.01693	57	0.01440	48
13	Excess Hours Use	16,381	MWh	0.00561	92	0.00477	78
14	Total Capacity	464.927	MWh		5.271		4.483
15					-, · ·		.,
16	Non-Capacity						
17	Energy	464,927	MWh	0.04553	21,168	0.04492	20,884
18	Power Supply Subtotal	464,927			26,439		25,368
19							
20	PSCR	464,927	MWh	0.00000	0	0.00000	0
21	REPS	192	Cust.	0.00	0	0.00	0
22	Total Full Service Power Supply	464,927	IVIVVN	0.09¢	20,439	<b>0.40</b> ¢	20,308
23	Full Service Distribution	Quantity	Linite				
24		Quantity	Units				
26	Distribution Charges						
27	Secondary						
28	First 100 Hours Lise	18 477	MWh	0 02442	451	0.02686	496
20	Excess Hours Lise	35,008	MW/h	0.02442	855	0.02686	940
20	Brimony	55,000	1010011	0.02442	000	0.02000	540
30	Finday First 100 Hours Lise	96 530	MM/b	0.01114	1 075	0.011/1	1 101
32	Excess Hours Use	263 053	MWh	0.01114	2 930	0.01141	3 001
33	Subtransmission	200,000		0.01111	2,000	0.01111	0,001
34	First 100 Hours Use	6,819	MWh	0.00347	24	0.00352	24
35	Excess Hours Use	25,301	MWh	0.00347	88	0.00352	89
36	Transmission						
37	First 100 Hours Use	3,358	MWh	0.00189	6	0.00138	5
38	Excess Hours Use	16,381	MWh	0.00189	31	0.00138	23
39	Substation Cradit						
40	Energy	0	MWh	(0.00300)	0	(0.00300)	0
42	Distribution System	464,927	MWh	(0.00000) 1.17¢	5.461	(0.00000) 1.22¢	5.680
43					-,		-,
44	Nuclear Decommissioning	464,927	MWh	0.000765	356	0.000765	356
45	Energy Waste Reduction	192	Meters	245.0	563	245.00	563
46	LIEAF	192	Meters	0.93	2	0.93	2
47	Distribution Surcharges	464,927	MWh	0.20¢	921	0.20¢	921
48 40	Total Full Capitas Distribution	404.007		4.07/	C 204	4.40 :	0.000
49 50	Total Full Service Distribution	464,927		1.3/¢	0,381	1.42¢	0,000
50	Total Full Service K1.2	464,927	IVIVVI	7.06¢	32,821	0.88¢	31,968

Michigan Public Service Commission DTE Electric Company Staff's Present and Proposed Revenue Calculations Electric Process Heat Rider - R1.2 (Cont'd) Case No.: U-20162 Exhibit: S-6 Schedule: F3 Witness: M. J. Pung Page: 36 of 52

Line	(a)	(b)		(c)	(d)	(e)	(f)
No.	Description	Billing Deter	minants	Prese	ent	Propo	sed
	Choice Distribution	<u>Quantity</u>	<u>Units</u>	Rate	<u>Revenue</u>	Rate	<u>Revenue</u>
51	Capacity	-			(\$000)		(\$000)
52	Energy						
53	Secondary						
54	First 100 Hours Use	0	MWh	0.02751	0	0.02340	0
55	Excess Hours Use	0	MWh	0.01038	0	0.00883	0
56	Primary						
57	First 100 Hours Use	0	MWh	0.02045	0	0.01739	0
58	Excess Hours Use	0	MWh	0.00747	0	0.00635	0
59	Subtransmission						
60	First 100 Hours Use	0	MWh	0.01996	0	0.01698	0
61	Excess Hours Use	0	MWh	0.00694	0	0.00590	0
62	Transmission						
63	First 100 Hours Use	0	MWh	0.01693	0	0.01440	0
64	Excess Hours Use	0	MWh	0.00561	0	0.00477	0
65	Total Capacity	0	MWh				0
66							
67	Distribution Charges						
68	Secondary						
69	First 100 Hours Use	0	MWh	0.02442	0	0.02686	0
70	Excess Hours Use	0	MWh	0.02442	0	0.02686	0
71	Primary						
72	First 100 Hours Use	2,118	MWh	0.01114	24	0.01141	24
73	Excess Hours Use	6,583	MWh	0.01114	73	0.01141	75
74	Subtransmission						
75	First 100 Hours Use	0	MWh	0.00347	0	0.00352	0
76	Excess Hours Use	0	MWh	0.00347	0	0.00352	0
77	Transmission						
78	First 100 Hours Use	0	MWh	0.00189	0	0.00138	0
79	Excess Hours Use	0	MWh	0.00189	0	0.00138	0
80							
81	Substation Credit						
82	Energy			(0.00300)	0	(0.00300)	0
83	Distribution System	8,701	MWh	1.11¢	97	1.14¢	99
84							
85	Nuclear Decommissioning	8,701	MWh	0.000765	7	0.000765	7
86	Energy Waste Reduction	3	Meters	245.0	9	245.00	9
87	LIEAF	3	Meters	0.93	0	0.93	0
88	Distribution Surcharges	8,701	MWh	0.18¢	16	0.18¢	16
89	-						
90	Total Choice Distribution R1.2	8,701	MWh	1.29¢	112	1.32¢	115
91		-, -					
92	Total R1.2	473,628	MWh	6.95¢	32,933	6.77¢	32,083
93	Increase/Decrease (\$)			0.000			(850)
00							(000)

Michigan Public Service Commission DTE Electric Company Staff's Present and Proposed Revenue Calculations Parallel Operation And Standby Service Rider - R3 All Voltages

Line	(a)	(b)		(c)	(d)	(e)	(f)	
No.	Description	Billing Deterr	ninants	Prese	ent	Proposed		
	Full Service Power Supply	Quantity	Units	Rate	Revenue	Rate	Revenue	
1	Station Power				(\$000)		(\$000)	
2	Capacity							
3	Administrative Charge	6,150	MWh	0.00000	0	0.00000	0	
4	Station Power Capacity	6,150	MWh		0		0	
5								
6	Non-Capacity							
7	MISO Energy Charge	6,150	MWh	0.02705	166	0.02705	166	
8	Net Trans MISO MKT	6,150	MWh	0.00736	45	0.00736	45	
9	Administrative Charge	6,150	MWh	0.01531	94	0.01618	99	
10	Station Power PS Subtotal	6,150	MWh		306		311	
11								
12	Standard R3							
13	Capacity							
14	Power Supply Demand							
15	Generation Reservation Fee	706,071	kW	0.43	304	0.42	294	
16	Daily Demand	716,542	kW	1.19	853	1.16	828	
17	Maintenance Demand	24,623	kW	0.59	15	0.58	14	
18								
19								
20								
21								
22								
23	Energy							
24	Secondary	3,211	MWh	0.03214	103	0.03088	99	
25	Primary Total	124.610	MWh	0.00000	0	0.00000	0	
26		127.822	MWh		i		-	
27		,						
 28								
29								
30								
31	Standard R3 Canacity	127 822	MWh		1 274		1 236	
32	Standard No Sapasity	121,022					1,200	
23	Non-Canacity							
34	Power Supply Demand							
35	Concration Reservation Fee	304 471	<i>L\\\</i>	0.10	73	0.20	78	
20	Deily Domond	716 542		0.13	368	0.20	301	
30 27	Maintenance Domand	7 10,042	KVV LAA	0.01	300	0.00	7	
31 20	Maintenance Demanu	24,023	KVV	0.20	0	0.∠≀	1	
38								
39	Energy	0.014		0.04770	450	0.04040	1.10	
40	Secondary	3,211	MVVh	0.04778	153	0.04649	149	
41	Primary Total	124,610	MVVh	0.04345	5,414	0.04187	5,217	
42	Primary Off-Peak Discount	112,758	MWh	(0.010000)	(1,128)	(0.010000)	(1,128)	
42								
43	Voltage Level Discount							
44	Subtransmission	34,530	MWh	(0.00114)	(39)	(0.00114)	(39)	
45	Transmission	76,535	MWh	(0.00194)	(148)	(0.00193)	(148)	
46	Standard R3 PS Subtotal	127,822			5,974		5,763	
47								
48	PSCR	127,822	MWh	0.00000	0	0.00000	0	
49	REPS	49	Cust.	0.00	0	0.00	0	
50	Total Full Service Power Supply	133,971	MWh	4.69¢	6,280	4.53¢	6.074	

Michigan Public Service Commission DTE Electric Company Staff's Present and Proposed Revenue Calculations Parallel Operation And Standby Service Rider - R3 (Cont'd) All Voltages

Line	(a)	(b)	
No.	Description	Billing Deterr	ninants
51	Full Service Distribution	Quantity	<u>Units</u>
52	Service Charge		
53	Secondary	19	Cust.
54	PV	15	Cust.
55	SV, TV	15	Cust.
56			
57	Distribution Charges		
58	Secondary	24,916	kW
59		3,211	MWh
60	Primary	124,062	kW
61		13,546	MWh
62	Subtransmission	970,981	kW
63		34,530	MWh
64	Transmission	254,741	kW
65		76,535	MWh
66	Substation Credit		
67	Demand	160,423	kW
68	Energy	51,698	MWh
69	Distribution System	127,822	MWh
70			
71	Nuclear Decommissioning	127,822	MWh
72	Energy Waste Reduction	49	Cust.
73	LIEAF	49	Meters
74	Distribution Surcharges	127,822	MWh
75			
76	Total Full Service Distribution	127,822	MWh
77	Total Full Service R3	133,971	MWh
78	Increase/Decrease (\$)		

(c)	(d)	(e)
Prese	nt	Prop
95	22	95
275	48	275
375	70	375
0.00	0.44	0.00
9.66	241	9.06
0.03865	124	0.03625
3.77	468	3.50
1.46	1.418	1.51
	, -	
0.73	186	0.68
(0.00)	(40)	(0.00)
(0.30)	(48)	(0.30)
(0.00040)	(21)	(0.00040)
1.96¢	2,507	1.94¢
0.000765	98	0.000765
245.0	144	245.0
0.03	1	0.93
0.35	2/3	0.93
0.15¢	243	0.13¢
2.15¢	2,750	2.13¢
6.74¢	9,029	6.57¢

Case No.: U-20162 Exhibit: S-6 Schedule: F3 Witness: M. J. Pung Page: 38 of 52

(f)

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1,462

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#### oposed 95 75 48 70 75 226 06 25 116 434

30) (48) 10) 1¢ (21 2,482 5 98 0 144 1 3 243 ¢, 2,725 8,798 (231) Michigan Public Service Commission DTE Electric Company Staff's Present and Proposed Revenue Calculations Interruptible Supply Rider - R10 All Voltages

No.         Description         Billing Determinants         Present         Proposet           Full Service Power Supply         Quantity         Units         Capaciy         Rate	Line	(a)	(b)		(C)	(d)	(e)	(f)	
Full Service Power Supply         Quantity         Units         Rate         Revenue         Rate         Revenue           1         Capacity         1,717,453         MWh         0.00000         0         0.00000         0           3         Total Capacity         1,717,453         MWh         0.01531         26,291         0.01618           6         Administrative Charge         1,717,453         MWh         0.02705         46,457         0.02705           7         MISO Energy Charge         1,717,453         MWh         0.00736         12,640         0.00736           9         Voltage Level Service Adder         0         0.00736         12,640         0.00736           1         Subtransmission         1463,338         MWh         2%         1%         2%           1         Transmission         1463,598         MWh         1%         503624         1%           17         Full Service Charge - FV         1/1         Cust         275         55         275           18         Full Service Charge - FV         1/1         Cust         375         198         375           19         Service Charge - FV         1/1         Cust         375         198<	No.	Description	Billing Deter	minants	Prese	nt	Proposed		
I         Capacity         (\$000)         (\$0000)           Administrative Charge         1,717,453         MWh         0.00000         0         0.00000           Total Capacity         1,717,453         MWh         0.01531         26,291         0.01618           MISO Energy Charge         1,717,453         MWh         0.02705         46,457         0.02705           Net Trans MISO MKT         1,717,453         MWh         0.02705         46,457         0.00736           Voltage Level Service Adder         73,517         MWh         0.00736         12,640         0.00736           Voltage Level Service Adder         73,517         MWh         0.000         0         0.000           Primary         73,517         MWh         1%         503,624         1%         1%           Subtransmission         1,463,589         MWh         1%         503,624         1%         1%           Primary         0         0         0.00         0         0.00         0         0.00           Service Charge - PV         17         Cust.         375         198         375           Service Charge - PV         17         Cust.         375         198         375		Full Service Power Supply	Quantity	Units	Rate	Revenue	Rate	Revenue	
2         Administrative Charge         1,717,453         MWh         0.00000         0         0.00000           3         Total Capacity         1,717,453         MWh         0.01531         26,291         0.01618           4         Administrative Charge         1,717,453         MWh         0.02705         46,457         0.02705           8         Net Trans MISO MKT         1,717,453         MWh         0.02705         46,457         0.02705           9         Voltage Level Service Adder	1	Capacity				(\$000)		(\$000)	
3       Total Capacity       1,717,453       MWh         4       4       5       0.01531       26,291       0.01618         6       Administrative Charge       1,717,453       MWh       0.02705       46,457       0.02705         8       Net Trans MISO MKT       1,717,453       MWh       0.00736       12,640       0.00736         9       Voltage Level Service Adder       1,717,453       MWh       0.00736       12,640       0.00736         9       Voltage Level Service Adder       1,717,453       MWh       0.00736       12,640       0.00736         11       Subtransmission       1,80,338       MWh       2%       124,109       2%         12       Transmission       1,463,588       MWh       1%       50,262       86,194         14       REPS       0       meters       0.00       0       0.00         17       Full Service Distribution       Quantity       Units       9       5.022       86,194       5.11e         18       Full Service Charge - PV       17       Cust.       375       198       375         19       Subtransmission       459,955       KW       1.46       672       1.51 <td>2</td> <td>Administrative Charge</td> <td>1,717,453</td> <td>MWh</td> <td>0.00000</td> <td>0</td> <td>0.00000</td> <td>0</td>	2	Administrative Charge	1,717,453	MWh	0.00000	0	0.00000	0	
4         Non-Capacity         0 <t< td=""><td>3</td><td>Total Capacity</td><td>1,717,453</td><td>MWh</td><td></td><td></td><td></td><td></td></t<>	3	Total Capacity	1,717,453	MWh					
5         Non-Capacity	4								
6       Administrative Charge       1,717,453       MWh       0.01531       26,291       0.01618         7       MISO Energy Charge       1,717,453       MWh       0.02705       46,457       0.02705         9       Voltage Level Service Adder       7%       177,453       MWh       0.00736       12,640       0.00736         10       Primary       73,517       MWh       7%       177.082       7%         11       Subtransmission       140,338       MWh       2%       124.109       2%         12       Transmission       1,463,598       MWh       1%       503.624       1%         13       Power Supply Subtotal       1,717,453       MWh       86,194       0.00       0.00         14       Total Full Service Power Supply       1,717,453       MWh       5.02e       86,194       5.11e         17       Service Charge - PV       17       Cust.       275       55       275         18       Full Service Distribution       Quantity       Units       375       198       375         19       Subtransmission       489,900       kW       3.77       1,847       3.50         11       Total Full Service Charge - SV, TV <td>5</td> <td>Non-Capacity</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	5	Non-Capacity							
7       MISO Energy Charge       1,717,453       MWh       0.02705       46,457       0.02705         8       Net Trans MISO MKT       1,717,453       MWh       0.00736       12,640       0.00736         9       Primary       73,517       MWh       7%       177.082       7%         11       Subtransmission       180,338       MWh       2%       124,109       2%         13       Power Supply Subtatal       1,717,453       MWh       86,194       1%       503,624       1%         14       Power Supply Subtatal       1,717,453       MWh       86,194       0.00       0.00         16       Total Full Service Power Supply       1,717,453       MWh       86,194       0.00       0.00         17       Full Service Charge - PV       17       Cust.       275       55       275         18       Full Service Charge - SV, TV       44       Cust.       275       55       275         20       Subtransmission       459,950       kW       3,77       1,847       3.50         21       Primary       489,900       kW       3,77       1,847       3.50         22       Subtransmission       5,230,573	6	Administrative Charge	1,717,453	MWh	0.01531	26,291	0.01618	27,786	
8         Net Trans MISO MKT         1,717,453         MWh         0.00736         12,640         0.00736           9         Voltage Level Service Adder         12,640         0.00736         12,640         0.00736           10         Primary         73,517         MWh         7%         177.082         7%           11         Subtransmission         180,338         MWh         2%         124,109         2%           12         Transmission         1,463,598         MWh         1%         503,624         1%           14         REPS         0         meters         0.00         0         0.00           16         Total Full Service Distribution         Quantity         Units         5.02e         86,194         5.11e           17         Full Service Charge - PV         17         Cust.         275         55         275           18         Full Service Charge - SV, TV         44         Cust.         3.77         1,847         3.50           22         Transmission         459,955         KW         1.46         672         1.51           36         Substraton Credit         Transmission         5,230,573         WWh         0.332e         5,648	7	MISO Energy Charge	1,717,453	MWh	0.02705	46,457	0.02705	46,457	
9         Voltage Level Service Adder           10         Primary         73,517         MWh         7%         177.082         7%           11         Subtransmission         180,338         MWh         2%         124.109         2%           12         Transmission         1,463,598         MWh         1%         503.624         1%           13         Power Supply Subtotal         1,717,453         MWh         86,194         1%         1%           14         Total Full Service Distribution         Quantity         Units         5.02e         86,194         5.11e           17         Full Service Charge - PV         1,717,453         MWh         5.02e         86,194         5.11e           19         Service Charge - PV         1,717,453         MWh         3.75         55         2.75           10         Stubtransmission         459,955         KW         3.77         1,847         3.50           27         Transmission         5.2057.3         KW         0.73         3,818         0.68           28         Transmission         5.2739,059         KW         0.000765         1,314         0.000765           30         Substation Credit         Dis	8	Net Trans MISO MKT	1,717,453	MWh	0.00736	12,640	0.00736	12,640	
10       Primary       73,517       MWh       7%       177.082       7%         11       Subtransmission       180,338       MWh       2%       124.109       2%         13       Power Supply Subtotal       1,717,453       MWh       1%       503.624       1%         13       Power Supply Subtotal       1,717,453       MWh       86,194       0.00       0         14       Transmission       Quantity       Units       0.00       0       0.00         16       Total Full Service Distribution       Quantity       Units       5.02e       86,194       5.11e         17       Service Charge - PV       17       Cust.       375       198       375         18       Full Service Charge - SV, TV       44       Cust.       375       198       375         2       Distribution Charges       2       148,338       MWh       3.377       1,847       3.50         2       Subtransmission       459,955       KW       1.466       672       1.51         2       Transmission       5,230,573       KW       0.73       3.818       0.68         3       Substation Credit       0       0.000765       1,314 </td <td>9</td> <td>Voltage Level Service Adder</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	9	Voltage Level Service Adder							
11       Subtransmission       180,338       MWh       2%       124,109       2%         12       Transmission       1,463,598       MWh       1%       503,624       1%         14       REPS       0       meters       0.00       0       0.00         16       Total Full Service Power Supply       1,717,453       MWh       86,194       0.00       0         17       Full Service Distribution       Quantity       Units       0.00       0       0.00         18       Full Service Charge - PV       1,717,453       MWh       3.75       198       375         20       Service Charge - SV, TV       44       Cust.       275       55       275         18       Full Service Distribution Charges	10	Primary	73,517	MWh	7%	177.082	7%	177.082	
12       Transmission       1,463,598       MWh       1%       503.624       1%         13       Power Supply Subtotal       1,717,453       MWh       86,194       0.00       0.00         14       Transmission       0       0.00       0       0.00       0       0.00         16       Total Full Service Power Supply       1,717,453       MWh       5.02e       86,194       5.11e         17       Transmission       Quantity       Units       0.00       0       0.00         18       Full Service Charge - PV       17       Cust.       275       55       275         20       Service Charge - SV, TV       44       Cust.       375       198       375         21       Distribution Charges	11	Subtransmission	180,338	MWh	2%	124.109	2%	124.109	
13       Power Supply Subtotal       1,717,453       MWh       86,194         14	12	Transmission	1,463,598	MWh	1%	503.624	1%	503.624	
14       REPS       0       meters       0.00       0       0.00         15       REPS       0       meters       0.00       0       0.00         16       Total Full Service Power Supply       1,717,453       MWh       5.02¢       86,194       5.11¢         18       Full Service Distribution       Quantity       Units       0       0       0.00         19       Service Charge - PV       17       Cust.       275       55       275         21       Service Charge - SV, TV       44       Cust.       375       198       375         22       Distribution Charges	13	Power Supply Subtotal	1,717,453	MWh		86,194		87,689	
16       Total Full Service Power Supply       1,717,453       MWh         17       Full Service Distribution       Quantity       Units         18       Full Service Distribution       Quantity       Units         19       Service Charge - PV       17       Cust.       275       55       275         21       Service Charge - SV, TV       44       Cust.       375       198       375         22       Distribution Charges       Primary       489,900       kW       3.77       1,847       3.50         24       Primary       489,900       kW       3.77       1,847       3.50         25       Subtransmission       459,955       kW       1.46       672       1.51         26       Subtransmission       5,230,573       kW       0.73       3,818       0.68         29       1,463,598       MWh       0.33¢       5,648       0.31¢         31       Demand       2,739,059       kW       0.00004)       (121)       (0.0004)         30       Substation Credit       0.010005       1,314       0.000765       1,314       0.000765         31       Demand       0.717,453       MWh       0.03¢ <t< td=""><td>14 15</td><td>REPS</td><td>0</td><td>meters</td><td>0.00</td><td>0</td><td>0.00</td><td>0</td></t<>	14 15	REPS	0	meters	0.00	0	0.00	0	
17       Full Service Distribution       Quantity       Units         19       Service Charge - PV       17       Cust.       275       55       275         21       Service Charge - SV, TV       44       Cust.       375       198       375         22       23       Distribution Charges       73,517       MWh       3.77       1,847       3.50         24       Primary       489,900       kW       3.77       1,847       3.50         25       73,517       MWh       1.46       672       1.51         26       Subtransmission       5,230,573       kW       0.73       3,818       0.68         29       1,463,598       MWh       0.73       3,818       0.68       0.31¢         30       Substation Credit       0       0.0004)       (121)       (0.0004)       (0.0004)         31       Demand       2,739,059       kW       (0.0004)       (121)       (0.0004)       (0.0004)         32       Distribution System       1,717,453       MWh       0.000765       1,314       0.000765         34       Nuclear Decommissioning       1,717,453       MWh       0.08¢       1,314       0.08¢	16	Total Full Service Power Supply	1.717.453	MWh	5.02¢	86,194	5.11¢	87.689	
Full Service Distribution         Quantity         Units           19         Service Charge - PV         17         Cust.         275         55         275           20         Service Charge - SV, TV         44         Cust.         375         198         375           21         Service Charge - SV, TV         444         Cust.         375         198         375           22         Distribution Charges         73,517         MWh         3.77         1,847         3.50           24         Primary         489,900         kW         3.77         1,847         3.50           25         73,517         MWh         1.46         672         1.51           26         Subtransmission         5,230,573         kW         0.73         3,818         0.68           29         1,463,598         MWh         0.73         3,818         0.68           21         Demand         2,739,059         kW         (0.0004)         (121)         (0.0004)           31         Demand         2,739,059         kW         (0.33¢         5,648         0.31¢           34         -         -         -         -         -         -         - <td>17</td> <td></td> <td>, ,</td> <td></td> <td></td> <td></td> <td></td> <td></td>	17		, ,						
19       Service Charge - PV       17       Cust.       275       55       275         21       Service Charge - SV, TV       44       Cust.       375       198       375         22       Distribution Charges       73,517       MWh       3.77       1,847       3.50         24       Primary       489,900       kW       3.77       1,847       3.50         25       73,517       MWh       1.46       672       1.51         26       Subtransmission       459,955       kW       0.73       3,818       0.68         29       1,463,598       MWh       0.73       3,818       0.68         29       1,463,598       MWh       0.33¢       5,648       0.31¢         30       Substation Credit       31       Demand       2,739,059       kW       (0.0004)       (121)       (0.0004)         31       Demand       1,717,453       MWh       0.33¢       5,648       0.31¢         34       5       Nuclear Decommissioning       1,717,453       MWh       0.000765       1,314       0.000765         38       Distribution Surcharges       1,717,453       MWh       0.08¢       1,314       0.08¢ <td>18</td> <td>Full Service Distribution</td> <td>Quantity</td> <td>Units</td> <td></td> <td></td> <td></td> <td></td>	18	Full Service Distribution	Quantity	Units					
20       Service Charge - PV       17       Cust.       275       55       275         21       Service Charge - SV, TV       44       Cust.       375       198       375         22       Distribution Charges       7       7,3517       MWh       3.77       1,847       3.50         24       Primary       489,900       kW       3.77       1,847       3.50         25       73,517       MWh       3.77       1,847       3.50         26       Subtransmission       459,955       kW       1.46       672       1.51         26       Subtransmission       5,230,573       kW       0.73       3,818       0.68         29       1,463,598       MWh       0.73       3,818       0.68         29       1,463,598       MWh       0.33¢       5,648       0.31¢         30       Substation Credit       301,342       MWh       0.33¢       5,648       0.31¢         31       Demand       2,739,059       kW       0.000765       1,314       0.000765         34       Nuclear Decommissioning       1,717,453       MWh       0.000765       1,314       0.000765         35       Nucl	19								
21       Service Charge - SV, TV       44       Cust.       375       198       375         22       Distribution Charges       73,517       MWh       3.77       1,847       3.50         24       Primary       489,900       kW       3.77       1,847       3.50         25       73,517       MWh       1.46       672       1.51         26       Subtransmission       5,230,573       kW       0.73       3,818       0.68         29       1,463,598       MWh       0.73       3,818       0.68       0.30         21       Demand       2,739,059       kW       (0.30)       (822)       (0.30)         32       Energy       301,342       MWh       0.33¢       5,648       0.31¢         35       Nuclear Decommissioning       1,717,453       MWh       0.000765       1,314       0.000765         36       Energy Waste Reduction       0       Meters       0.93       0       0.93         37       VHWF       0       Meters       0.93       0       0.93       0.93         38       Distribution Surcharges       1,717,453       MWh       0.416       6,9622       0.38¢ <t< td=""><td>20</td><td>Service Charge - PV</td><td>17</td><td>Cust.</td><td>275</td><td>55</td><td>275</td><td>55</td></t<>	20	Service Charge - PV	17	Cust.	275	55	275	55	
22       Distribution Charges         24       Primary       489,900       kW         25       73,517       MWh         26       Subtrasmission       459,955       kW         27       180,338       MWh         28       Transmission       5,230,573       kW         30       Substation Credit       0.73       3,818         31       Demand       2,739,059       kW         32       Energy       301,342       MWh         33       Distribution System       1,717,453       MWh         34       Nuclear Decommissioning       1,717,453       MWh         35       Nuclear Decommissioning       1,717,453       MWh         36       Energy Waste Reduction       0       Meters         37       VHWF       0       Meters       0.93         38       Distribution Surcharges       1,717,453       MWh       0.416 (6,962)       0.386 (1,314)         41       Total Full Service Distribution       1,717,453       MWh       0.416 (6,962)       0.386 (1,314)	21	Service Charge - SV, TV	44	Cust.	375	198	375	198	
23       Distribution Charges         24       Primary       489,900       kW         25       73,517       MWh         26       Subtransmission       459,955       kW         27       180,338       MWh         28       Transmission       5,230,573       kW         29       1,463,598       MWh         30       Substation Credit       0.73       3,818         31       Demand       2,739,059       kW       (0.30)       (822)         12       Energy       301,342       MWh       0.33¢       5,648         32       Energy       301,342       MWh       0.33¢       5,648         34       0.000765       1,314       0.000765         35       Nuclear Decommissioning       1,717,453       MWh       0.000765       1,314         36       Energy Waste Reduction       0       Meters       0.93       0       0.93         38       Distribution Surcharges       1,717,453       MWh       0.416       6,962       0.38¢         41       Total Full Service Distribution       1,717,453       MWh       0.416       6,962       0.38¢	22	-							
24       Primary       489,900       kW       3.77       1,847       3.50         25       73,517       MWh       1.46       672       1.51         26       Subtransmission       459,955       kW       1.46       672       1.51         27       180,338       MWh       0.73       3,818       0.68         29       1,463,598       MWh       0.73       3,818       0.68         29       1,463,598       MWh       0.73       3,818       0.68         21       Demand       2,739,059       kW       (0.30)       (822)       (0.30)         20       Energy       301,342       MWh       0.33¢       5,648       0.31¢         30       Distribution System       1,717,453       MWh       0.000765       1,314       0.000765         31       Decommissioning       1,717,453       MWh       0.000765       1,314       0.000765         32       Energy Waste Reduction       0       Meters       0.93       0       0.93         38       Distribution Surcharges       1,717,453       MWh       0.08¢       1,314       0.08¢         39       O       Noteers       0.93	23	Distribution Charges							
25       73,517       MWh         26       Subtransmission       459,955       kW         27       180,338       MWh         28       Transmission       5,230,573       kW         29       1,463,598       MWh         30       Substation Credit	24	Primary	489,900	kW	3.77	1,847	3.50	1,714	
26         Subtransmission         459,955         kW         1.46         672         1.51           27         180,338         MWh         0.73         3,818         0.68           28         Transmission         5,230,573         kW         0.73         3,818         0.68           29         1,463,598         MWh         0.73         3,818         0.68           30         Substation Credit         (0.30)         (822)         (0.30)           31         Demand         2,739,059         kW         (0.0004)         (121)           32         Energy         301,342         MWh         0.33¢         5,648         0.31¢           34         1         5         Nuclear Decommissioning         1,717,453         MWh         0.000765         1,314         0.000765           35         Nuclear Decommissioning         1,717,453         MWh         0.030¢         245.0         0           36         Distribution Surcharges         1,717,453         MWh         0.08¢         1,314         0.08¢           39         0         1,717,453         MWh         0.41¢         6,962         0.38¢           40         Total Full Service Distribution	25	-	73,517	MWh					
27       180,338       MWh         28       Transmission       5,230,573       kW         29       1,463,598       MWh         30       Substation Credit       1         31       Demand       2,739,059       kW         32       Energy       301,342       MWh         33       Distribution System       1,717,453       MWh         34	26	Subtransmission	459,955	kW	1.46	672	1.51	693	
28       Transmission       5,230,573       kW       0.73       3,818       0.68         29       1,463,598       MWh       0.73       3,818       0.68         30       Substation Credit       30       2,739,059       kW       (0.30)       (822)       (0.30)         31       Demand       2,739,059       kW       (0.300)       (822)       (0.30)         32       Energy       301,342       MWh       0.33¢       5,648       0.31¢         34       34       35       Nuclear Decommissioning       1,717,453       MWh       0.000765       1,314       0.000765         35       Nuclear Decommissioning       1,717,453       MWh       0.000765       1,314       0.000765         36       Energy Waste Reduction       0       Meters       0.93       0       0.93         38       Distribution Surcharges       1,717,453       MWh       0.08¢       1,314       0.08¢         40       Total Full Service Distribution       1,717,453       MWh       0.41¢       6,962       0.38¢         41       Total Full Service Distribution       1,717,453       MWh       5,424       024,555       5,414	27		180,338	MWh					
29       1,463,598       MWh         30       Substation Credit       301,342       MWh         31       Demand       2,739,059       kW       (0.30)       (822)       (0.30)         32       Energy       301,342       MWh       (0.0004)       (121)       (0.0004)         33       Distribution System       1,717,453       MWh       0.33¢       5,648       0.31¢         34       36       Nuclear Decommissioning       1,717,453       MWh       0.000765       1,314       0.000765         36       Energy Waste Reduction       0       Meters       0.93       0       0.93         38       Distribution Surcharges       1,717,453       MWh       0.08¢       1,314       0.08¢         39       0       Total Full Service Distribution       1,717,453       MWh       0.41¢       6,962       0.38¢         41       Total Full Service Distribution       1,717,453       MWh       0.41¢       6,962       0.38¢	28	Transmission	5,230,573	kW	0.73	3,818	0.68	3,549	
30         Substation Credit           31         Demand         2,739,059         kW         (0.30)         (822)         (0.30)           32         Energy         301,342         MWh         (0.30)         (822)         (0.30)           33         Distribution System         1,717,453         MWh         0.33¢         5,648         0.31¢           34	29		1,463,598	MWh					
31       Demand       2,739,059       kW       (0.30)       (822)       (0.30)         32       Energy       301,342       MWh       (0.0004)       (121)       (0.0004)         33       Distribution System       1,717,453       MWh       0.33¢       5,648       0.31¢         34	30	Substation Credit							
32         Energy         301,342         MWh         (0.0004)         (121)         (0.0004)           33         Distribution System         1,717,453         MWh         0.33¢         5,648         0.31¢           34	31	Demand	2,739,059	kW	(0.30)	(822)	(0.30)	(822)	
33       Distribution System       1,717,453       MWh       0.33¢       5,648       0.31¢         34       Nuclear Decommissioning       1,717,453       MWh       0.000765       1,314       0.000765         35       Nuclear Decommissioning       1,717,453       MWh       0.000765       1,314       0.000765         36       Energy Waste Reduction       0       Meters       0.93       0       0.93         37       VHWF       0       Meters       0.93       0       0.93         38       Distribution Surcharges       1,717,453       MWh       0.08¢       1,314       0.08¢         40       Total Full Service Distribution       1,717,453       MWh       0.41¢       6,962       0.38¢         41       Total Full Service P10       1,717,453       MWh       5,424       024,555       5,404	32	Energy	301,342	MWh	(0.0004)	(121)	(0.0004)	(121)	
34	33	Distribution System	1,717,453	MWh	0.33¢	5,648	0.31¢	5,267	
35         Nuclear Decommissioning         1,717,453         MWh         0.000765         1,314         0.000765           36         Energy Waste Reduction         0         Meters         245.0         0         245.0           37         VHWF         0         Meters         0.93         0         0.93           38         Distribution Surcharges         1,717,453         MWh         0.08¢         1,314         0.08¢           40         Total Full Service Distribution         1,717,453         MWh         0.41¢         6,962         0.38¢           41         Total Full Service P10         1,717,453         MWh         5,424         02455         5,404	34								
36         Energy Waste Reduction         0         Meters         245.0         0         245.0           37         VHWF         0         Meters         0.93         0         0.93           38         Distribution Surcharges         1,717,453         MWh         0.08¢         1,314         0.08¢           40         Total Full Service Distribution         1,717,453         MWh         0.41¢         6,962         0.38¢	35	Nuclear Decommissioning	1,717,453	MWh	0.000765	1,314	0.000765	1,314	
37         VHWF         0         Meters         0.93         0         0.93           38         Distribution Surcharges         1,717,453         MWh         0.08¢         1,314         0.08¢           39	36	Energy Waste Reduction	0	Meters	245.0	0	245.0	0	
38         Distribution Surcharges         1,717,453         MWh         0.08¢         1,314         0.08¢           39	37	VHWF	0	Meters	0.93	0	0.93	0	
39         39           40         Total Full Service Distribution         1,717,453         MWh         0.41¢         6,962         0.38¢           41         Total Full Service P10         1,717,453         MWh         5,424         09,455         5,404	38	Distribution Surcharges	1,717,453	MWh	0.08¢	1,314	0.08¢	1,314	
40         Total Full Service Distribution         1,717,453         MWh         0.41¢         6,962         0.38¢           41         Total Full Service P10         1,717,453         MWh         5,424         02,455         5,404	39								
41 Total Full Service P10 1717 453 MWb 5 424 02 455 5 404	40	Total Full Service Distribution	1,717,453	MWh	0.41¢	6,962	0.38¢	6,581	
1,717,433 WWII 3.42¢ 33,133 3.49¢	41	Total Full Service R10	1,717,453	MWh	5.42¢	93,155	5.49¢	94,269	

Michigan Public Service Commission DTE Electric Company Staff's Present and Proposed Revenue Calculations Interruptible Supply Rider - R10 (Cont'd) All Voltages

Line	(a)	(b)		(c)	(d)	(e)	(f)
<u>No.</u>	Description	Billing Deter	minants	 Prese	nt	Propos	sed
42	Choice Distribution	<u>Quantity</u>	<u>Units</u>	Rate	Revenue	Rate	Revenue
43	Capacity				(\$000)		(\$000)
44	Administrative Charge	0	MWh	0.00000		0.00000	C
45	Total Capacity	0	MWh				C
46							
47	Service Charge - PV	0	Cust.	275	0	275	C
48	Service Charge - SV, TV	0	Cust.	375	0	375	C
49							
50	Distribution Charges						
51	Primary	0	kW	3.77	0	3.50	C
52							
53	Subtransmission	0	kW	1.46	0	1.51	C
54							
55	Transmission	0	kW	0.73	0	0.68	C
56							
57	Substation Credit						
58	Demand	0	kW	(0.30)	0	(0.30)	C
59	Energy	0	MWh	(0.0004)	0	(0.0004)	C
60	Distribution System	0	MWh		0		C
61							
62	Nuclear Decommissioning			0.000765	0	0.000765	C
63	Energy Waste Reduction			245.0	0	245.0	C
64	LIEAF	0	Meters	0.93	0	0.93	C
65	Distribution Surcharges				0		C
66							
67	Total Choice Distribution R10	0	MWh		0		0
68							
69	Total R10	1,717,453	MWh	5.42¢	93,155	5.49¢	94,269
70	Increase/Decrease (\$)						1,114

Michigan Public Service Commission DTE Electric Company Staff's Present and Proposed Revenue Calculations Outdoor Protective Lighting - D9 Residential

Case No.: U-20162 Exhibit: S-6 Schedule: M. J. Pung Witness: F3 Page: 41 of 52

Line <u>No.</u>	(a) Description	(b) Billing Determinants		(c) (d) Present			(e)	(e) (f) (g) (h) (i) Proposed			
									Non-		
				Rate	Non-Capacity Energy	Capacity Energy	Revenue	Rate (\$/luminairo/	Capacity Energy	Capacity Energy	Revenue
		Quantity	Units	(s/luminaire/ mth)	(¢/kWh)	(¢/kWh)	(\$000)	(a/luminaire/ mth)	(¢/kWh)	(¢/kWh)	(\$000)
1	Overhead										
2	Mercury Vapor										
3	100 W	0	Lamps	12.60	3.96	0.00	0	11.89	4.48	0.00	0
4	175 W	2,502	Lamps	16.01	3.96	0.00	568	15.49	4.48	0.00	564
5	250 W	4	Lamps	19.43	3.96	0.00	1	19.09	4.48	0.00	1
7	1 000 W	45	Lamps	59.80	3.90	0.00	0	49.95	4.40	0.00	0
8	1,000 11	Ŭ	Lamps	00.00	0.00	0.00	0	10.00	4.40	0.00	0
9	High Pressure Sodium Vapor										
10	100 W	3,645	Lamps	11.32	3.96	0.00	577	10.48	4.48	0.00	551
11	150 W	1	Lamps	12.94	3.96	0.00	0	12.26	4.48	0.00	0
12	250 W	523	Lamps	15.93	3.96	0.00	126	15.45	4.48	0.00	127
13	360 W	0	Lamps	20.16	3.96	0.00	0	18.92	4.48	0.00	0
14	400 W	57	Lamps	21.70	3.96	0.00	19	20.18	4.48	0.00	19
15	1,000 W	5	Lamps	34.19	3.96	0.00	3	43.00	4.48	0.00	4
17	Metal Halide										
18	100 W	0	Lamps	13.97	3.96	0.00	0	13.41	4.48	0.00	0
19	150 W	0	Lamps	16.02	3.96	0.00	0	15.58	4.48	0.00	0
20	175 W	0	Lamps	17.05	3.96	0.00	0	16.66	4.48	0.00	0
21	250 W	0	Lamps	20.13	3.96	0.00	0	19.90	4.48	0.00	0
22	320 W	0	Lamps	23.01	3.96	0.00	0	22.93	4.48	0.00	0
23	400 W	0	Lamps	26.29	3.96	0.00	0	26.39	4.48	0.00	0
24	1,000 W	2	Lamps	44.22	3.96	0.00	1	55.02	4.48	0.00	2
25	LED										
20	20 - 29 W	0	Lamne	7.73	3.96	0.00	0	8.18	4.48	0.00	0
28	30 - 39 W	0	Lamps	8.23	3.96	0.00	0	8.78	4.48	0.00	0
29	40 - 49 W	0	Lamps	8.72	3.96	0.00	0	9.38	4.48	0.00	0
30	50 - 59 W	0	Lamps	9.21	3.96	0.00	0	9.98	4.48	0.00	0
31	60 - 69 W	2,608	Lamps	9.70	3.96	0.00	332	10.58	4.48	0.00	363
32	70 - 79 W	1	Lamps	10.19	3.96	0.00	0	11.18	4.48	0.00	0
33	80 - 89 W	0	Lamps	10.68	3.96	0.00	0	11.82	4.48	0.00	0
34	90 - 99 W	0	Lamps	11.18	3.96	0.00	0	12.46	4.48	0.00	0
35	100 - 109 W	0	Lamps	12.16	3.90	0.00	0	13.10	4.48	0.00	0
37	120 - 129 W	0	Lamps	12.65	3.96	0.00	0	14.38	4.40	0.00	0
38	130 - 139 W	49	Lamps	13.14	3.96	0.00	9	15.02	4.48	0.00	10
39	140 - 149 W	0	Lamps	13.58	3.96	0.00	0	15.54	4.48	0.00	0
40	150 - 159 W	0	Lamps	14.01	3.96	0.00	0	16.05	4.48	0.00	0
41	160 - 169 W	0	Lamps	14.45	3.96	0.00	0	16.56	4.48	0.00	0
42	170 - 179 W	0	Lamps	14.88	3.96	0.00	0	17.08	4.48	0.00	0
43	180 - 189 W	0	Lamps	15.32	3.96	0.00	0	17.59	4.48	0.00	0
44	190 - 199 W	0	Lamps	16.19	3.96	0.00	0	18.62	4.48	0.00	0
40	210 - 219 W	0	Lamps	16.62	3.96	0.00	0	19.13	4.40	0.00	0
47	220 - 229 W	ő	Lamps	17.06	3.96	0.00	0	19.64	4.48	0.00	0
48	230 - 239 W	0	Lamps	17.49	3.96	0.00	0	20.15	4.48	0.00	0
49	240 - 249 W	0	Lamps	17.93	3.96	0.00	0	20.67	4.48	0.00	0
50	250 - 259 W	0	Lamps	18.36	3.96	0.00	0	21.18	4.48	0.00	0
51	260 - 269 W	0	Lamps	18.80	3.96	0.00	0	21.69	4.48	0.00	0
52	270 - 279 W	0	Lamps	19.23	3.96	0.00	0	22.21	4.48	0.00	0
53	280 - 289 W	19	Lamps	19.67	3.96	0.00	5	22.72	4.48	0.00	6
54 55	200 - 209 W	0	Lamps	20.53	3.90	0.00	0	23.75	4.40	0.00	0
56	310 - 319 W	0	Lamps	20.97	3.96	0.00	0	24.26	4.48	0.00	0
57	320 - 329 W	0	Lamps	21.40	3.96	0.00	ŏ	24.77	4.48	0.00	0
58	330 - 339 W	0	Lamps	21.84	3.96	0.00	0	25.28	4.48	0.00	0
59	340 - 349 W	0	Lamps	22.27	3.96	0.00	0	25.80	4.48	0.00	0
60	350 - 359 W	0	Lamps	22.71	3.96	0.00	0	26.31	4.48	0.00	0
61	360 - 369 W	0	Lamps	23.14	3.96	0.00	0	26.82	4.48	0.00	0
62	370 - 379 W	0	Lamps	23.58	3.96	0.00	0	27.34	4.48	0.00	0
64	300 - 389 W 390 - 399 W	0	Lamps	24.01	3.96	0.00	0	27.00	4.48 4 / R	0.00	0
04	330 - 333 W	U	Lamps	27.75	3.50	0.00	0	20.00	4.40	0.00	0

Michigan Public Service Commission DTE Electric Company Staff's Present and Proposed Revenue Calculations Outdoor Protective Lighting - D9 Residential (Cont'd)

Case No.: U-20162 Exhibit: S-6 Schedule: M. J. Pung Witness: F3 Page: 42 of 52

Line <u>No.</u>	(a) Description	(b) Billing Deter	ninants	(c) Present	(d)		(e)	(f)	(g) Propos	(h) Sed	(i)
				Rate	Non-Capacity Energy	Capacity Energy	Revenue	Rate (\$//uminaira/	<u>Non-</u> Capacity Energy	Capacity Energy	Revenue
		Quantity	<u>Units</u>	<u>(s/luminaire/</u> <u>mth)</u>	<u>(¢/kWh)</u>	<u>(¢/kWh)</u>	<u>(\$000)</u>	<u>(s/luminaire/</u> <u>mth)</u>	<u>(¢/kWh)</u>	<u>(¢/kWh)</u>	<u>(\$000)</u>
65 66	Underground Mercury Vapor										
67	100 W	52	Lamps	29.44	3.96	0.00	19	30.27	4.48	0.00	20
68	175 W	17	Lamps	31.68	3.96	0.00	7	32.34	4.48	0.00	7
69 70	250 W	0	Lamps	34.97	3.96	0.00	0	35.29	4.48	0.00	0
70	1.000 W	0	Lamps	73.27	3.96	0.00	0	64.33	4.40	0.00	0
72											
73	High Pressure Sodium Vapor			00.00				07.00			
74	70 W	0	Lamps	28.86	3.96	0.00	0	27.23	4.48	0.00	0
76	150 W	0	Lamps	30.69	3.96	0.00	0	29.41	4.48	0.00	0
77	250 W	0	Lamps	32.97	3.96	0.00	0	32.14	4.48	0.00	0
78	400 W	0	Lamps	36.39	3.96	0.00	0	36.03	4.48	0.00	0
79 80	1,000 W	0	Lamps	50.09	3.96	0.00	0	51.62	4.48	0.00	0
81	Metal Halide										
82	100 W	0	Lamps	26.15	3.96	0.00	0	28.05	4.48	0.00	0
83	150 W	0	Lamps	27.92	3.96	0.00	0	29.41	4.48	0.00	0
84	175 W	0	Lamps	28.81	3.96	0.00	0	30.09	4.48	0.00	0
86	400 W	0	Lamps	36.78	3.96	0.00	0	36.03	4.48	0.00	0
87	1,000 W	0	Lamps	58.03	3.96	0.00	0	51.62	4.48	0.00	0
88											
89	LED	0	Lomno	22.26	2.06	0.00	0	25.00	4.40	0.00	0
90	20 - 29 W 30 - 39 W	0	Lamps	23.36	3.96	0.00	0	25.90	4.48	0.00	0
92	40 - 49 W	0	Lamps	24.14	3.96	0.00	0	26.75	4.48	0.00	0
93	50 - 59 W	0	Lamps	24.52	3.96	0.00	0	27.18	4.48	0.00	0
94	60 - 69 W	172	Lamps	24.91	3.96	0.00	53	27.61	4.48	0.00	59
95	70 - 79 W	1	Lamps	25.30	3.96	0.00	0	28.04	4.48	0.00	0
97	90 - 99 W	0	Lamps	26.07	3.96	0.00	0	28.90	4.48	0.00	0
98	100 - 109 W	0	Lamps	26.46	3.96	0.00	0	29.33	4.48	0.00	0
99	110 - 119 W	0	Lamps	26.85	3.96	0.00	0	29.75	4.48	0.00	0
100	120 - 129 W	0	Lamps	27.24	3.96	0.00	0	30.18	4.48	0.00	0
101	140 - 149 W	0	Lamps	27.98	3.96	0.00	0	31.00	4.40	0.00	0
103	150 - 159 W	Ő	Lamps	28.33	3.96	0.00	0	31.39	4.48	0.00	0
104	160 - 169 W	0	Lamps	28.69	3.96	0.00	0	31.78	4.48	0.00	0
105	170 - 179 W	0	Lamps	29.04	3.96	0.00	0	32.17	4.48	0.00	0
106	180 - 189 W	0	Lamps	29.40	3.96	0.00	0	32.57	4.48	0.00	0
108	200 - 209 W	0	Lamps	30.11	3.96	0.00	0	33.35	4.48	0.00	0
109	210 - 219 W	0	Lamps	30.47	3.96	0.00	0	33.74	4.48	0.00	0
110	220 - 229 W	0	Lamps	30.82	3.96	0.00	0	34.13	4.48	0.00	0
111	230 - 239 W	0	Lamps	31.18	3.96	0.00	0	34.52	4.48	0.00	0
112	240 - 249 W 250 - 259 W	0	Lamps	31.89	3.96	0.00	0	35.30	4.40	0.00	0
114	260 - 269 W	0	Lamps	32.24	3.96	0.00	0	35.69	4.48	0.00	0
115	270 - 279 W	0	Lamps	32.60	3.96	0.00	0	36.08	4.48	0.00	0
116	280 - 289 W	0	Lamps	32.95	3.96	0.00	0	36.47	4.48	0.00	0
118	290 - 299 W 300 - 309 W	0	Lamps	33.66	3.96	0.00	0	37.25	4.40	0.00	0
119	310 - 319 W	0	Lamps	34.02	3.96	0.00	0	37.64	4.48	0.00	0
120	320 - 329 W	0	Lamps	34.37	3.96	0.00	0	38.03	4.48	0.00	0
121	330 - 339 W	0	Lamps	34.73	3.96	0.00	0	38.43	4.48	0.00	0
122	340 - 349 W 350 - 359 W	0	Lamps	35.08	3.96	0.00	0	38.82	4.48	0.00	0
124	360 - 369 W	0	Lamps	35.79	3.96	0.00	ő	39.60	4.48	0.00	0
125	370 - 379 W	0	Lamps	36.15	3.96	0.00	0	39.99	4.48	0.00	0
126	380 - 389 W	0	Lamps	36.50	3.96	0.00	0	40.38	4.48	0.00	0
127	390 - 399 W	0 704	Lamps	36.86	3.96	0.00	1 740	40.77	4.48	0.00	1 752
120	Lamp rotai	9,704	Lamps				1,740				1,752
130	PSCR	6,029	MWh	s -			0	\$ -			0
131											
132	Additional Light Credit	0	Lamps	-97.92			0	-97.92			0
133	Post Charge	30	Posts	0.00			0	79.80			2
135	Other Charges										
136		Number of Poles		\$ /Pole/Year				\$ /Pole/Year			
137	New Poles	1,718	Poles	24.48			42	24.48			42
138	Subtotal						1,782				1,796
140	Nuclear Decommissioning	6 029	MWb	0.000765			5	0.000765			5
141	Subtotal	9,704	Lamps	0.000100			1,787	0.000100			1,801
142			-					1			
143	Consider Facilities	Investment		Carrying Charg	e/Year		(0)	Carrying Charg	e/Year		100
144 145	Subtotal	16,967 9 704	Lamos	-18%			(3)	-18%			(3) 1 798
146		5,704	Lampa				.,/04	1			1,150
147	Energy Waste Reduction	6,029	MWh	0.04322			261	0.043220			261
148	REPS	8,545	Meters	0.00%			0				0
149 150	Increase/Decrease (\$)	6,029	M₩				2,044				2,058
100											14

Michigan Public Service Commission DTE Electric Company Staff's Present and Proposed Revenue Calculations Outdoor Protective Lighting - D9 Commercial

Case No.: U-20162 Exhibit: S-6 Schedule: M. J. Pung Witness: F3 Page: 43 of 52

Line No.	(a) Description	(b) Billing Determinants		(c) (d) Present			(e) (f) (g) (h) (i) Proposed				(i)
140.	Description	Dining Deter	minanto		116361	n.	1	T	Non-	364	
				Rate	Non-Capacity Energy	Capacity Energy	Revenue	Rate (\$/luminairo/	Capacity Energy	Capacity Energy	Revenue
		Quantity	Units	mth)	(¢/kWh)	(¢/kWh)	(\$000)	mth)	(¢/kWh)	(¢/kWh)	(\$000)
1	Overhead	<u></u>			<u></u>	<u>,</u>	100007		<u>()</u>	<u>, e</u>	
2	Mercury Vapor										
3	100 W	0	Lamps	12.60	3.96	0.00	0	11.89	4.48	0.00	0
4	175 W	2,419	Lamps	16.01	3.96	0.00	549	15.49	4.48	0.00	545
5	250 W	103	Lamps	19.43	3.96	0.00	29	19.09	4.48	0.00	29
6	400 W	711	Lamps	25.30	3.96	0.00	269	25.26	4.48	0.00	276
7	1,000 W	0	Lamps	59.80	3.96	0.00	0	49.95	4.48	0.00	0
0 0	High Pressure Sodium Vapor										
10	100 W	2 649	Lamns	11.32	3.96	0.00	419	10.48	4 4 8	0.00	401
11	150 W	2,010	Lamps	12.94	3.96	0.00	0	12.26	4.48	0.00	0
12	250 W	5,452	Lamps	15.93	3.96	0.00	1,318	15.45	4.48	0.00	1,324
13	360 W	0	Lamps	20.16	3.96	0.00	0	18.92	4.48	0.00	0
14	400 W	3,021	Lamps	21.70	3.96	0.00	1,020	20.18	4.48	0.00	996
15	1,000 W	90	Lamps	34.19	3.96	0.00	53	43.00	4.48	0.00	65
16											
17	Metal Halide			10.07				10.11			
18	100 W	0	Lamps	13.97	3.96	0.00	0	13.41	4.48	0.00	0
20	175 W	0	Lamps	17.05	3.90	0.00	0	15.56	4.40	0.00	0
20	250 W	0	Lamps	20.13	3.90	0.00	1	10.00	4.40	0.00	1
22	320 W	0	Lamps	23.01	3.96	0.00	0	22.93	4.48	0.00	0
23	400 W	4	Lamps	26.29	3.96	0.00	2	26.39	4.48	0.00	2
24	1,000 W	336	Lamps	44.22	3.96	0.00	237	55.02	4.48	0.00	288
25											
26	LED										
27	20 - 29 W	0	Lamps	7.73	3.96	0.00	0	8.18	4.48	0.00	0
28	30 - 39 W	0	Lamps	8.23	3.96	0.00	0	8.78	4.48	0.00	0
29	40 - 49 W	0	Lamps	8.72	3.96	0.00	0	9.38	4.48	0.00	0
30	50 - 59 W	2 770	Lamps	9.21	3.96	0.00	490	9.98	4.48	0.00	525
32	70 - 79 W	3,770	Lamps	9.70	3.90	0.00	460	10.56	4.40	0.00	525
33	80 - 89 W		Lamps	10.68	3.96	0.00	0	11.82	4.48	0.00	0
34	90 - 99 W	0	Lamps	11.18	3.96	0.00	0	12.46	4.48	0.00	0
35	100 - 109 W	0	Lamps	11.67	3.96	0.00	0	13.10	4.48	0.00	0
36	110 - 119 W	0	Lamps	12.16	3.96	0.00	0	13.74	4.48	0.00	0
37	120 - 129 W	0	Lamps	12.65	3.96	0.00	0	14.38	4.48	0.00	0
38	130 - 139 W	1,115	Lamps	13.14	3.96	0.00	201	15.02	4.48	0.00	229
39	140 - 149 W	0	Lamps	13.58	3.96	0.00	0	15.54	4.48	0.00	0
40	150 - 159 W	0	Lamps	14.01	3.96	0.00	0	16.05	4.48	0.00	0
41	160 - 169 W	0	Lamps	14.45	3.96	0.00	0	10.50	4.48	0.00	0
42	180 - 189 W	0	Lamps	15.32	3.96	0.00	0	17.00	4.40	0.00	0
44	190 - 199 W	0	Lamps	15.75	3.96	0.00	0	18.10	4.48	0.00	0
45	200 - 209 W	0	Lamps	16.19	3.96	0.00	0	18.62	4.48	0.00	0
46	210 - 219 W	14	Lamps	16.62	3.96	0.00	3	19.13	4.48	0.00	4
47	220 - 229 W	0	Lamps	17.06	3.96	0.00	0	19.64	4.48	0.00	0
48	230 - 239 W	0	Lamps	17.49	3.96	0.00	0	20.15	4.48	0.00	0
49	240 - 249 W	0	Lamps	17.93	3.96	0.00	0	20.67	4.48	0.00	0
50	250 - 259 W	0	Lamps	18.36	3.96	0.00	0	21.18	4.48	0.00	0
51	260 - 269 W	0	Lamps	18.80	3.96	0.00	0	21.69	4.48	0.00	0
52	270 - 279 W	600	Lamps	19.23	3.96	0.00	172	22.21	4.48	0.00	100
54	290 - 299 W	30	Lamps	20.10	3.96	0.00	9	23.23	4.40	0.00	10
55	300 - 309 W	0	Lamps	20.53	3.96	0.00	ő	23.75	4.48	0.00	.0
56	310 - 319 W	0	Lamps	20.97	3.96	0.00	0	24.26	4.48	0.00	0
57	320 - 329 W	0	Lamps	21.40	3.96	0.00	0	24.77	4.48	0.00	0
58	330 - 339 W	0	Lamps	21.84	3.96	0.00	0	25.28	4.48	0.00	0
59	340 - 349 W	0	Lamps	22.27	3.96	0.00	0	25.80	4.48	0.00	0
60	350 - 359 W	0	Lamps	22.71	3.96	0.00	0	26.31	4.48	0.00	0
61	360 - 369 W	0	Lamps	23.14	3.96	0.00	0	26.82	4.48	0.00	0
62	370 - 379 W	0	Lamps	23.58	3.96	0.00	0	27.34	4.48	0.00	0
63 64	390 - 399 W	0	Lamps	24.01 24.45	3.96	0.00	0	27.85	4.48 4.48	0.00	0

Michigan Public Service Commission DTE Electric Company Staff's Present and Proposed Revenue Calculations Outdoor Protective Lighting - D9 Commercial (Cont'd)

Case No.: U-20162 Exhibit: S-6 Schedule: M. J. Pung Witness: F3 Page: 44 of 52

Line <u>No.</u>	(a) Description	(b) Billing Detern	ninants	(c) Present	(d)		(e)	(f)	(g) Propos	(h) sed	(i)
				Pate	Non-Capacity	Capacity Energy	Revenue	Pate	Non- Capacity Energy	Capacity Energy	Revenue
		Quantita	1.1-11-	(\$/luminaire/	(+ DAM(h)	(called)	Kevenue	(\$/luminaire/	(cliants)	(clubble)	(thoop)
65	Underground	Quantity	Units	mm	(\$76,0011)	<u>(¢/KVVII)</u>	(3000)	<u></u>	<u>(¢/KVVII)</u>	<u>(¢/KVVII)</u>	(\$000)
66 67	Mercury Vapor 100 W	33	Lamos	29.44	3.96	0.00	12	30.27	4 48	0.00	13
68	175 W	107	Lamps	31.68	3.96	0.00	44	32.34	4.48	0.00	46
69 70	250 W 400 W	23	Lamps	34.97 40.65	3.96 3.96	0.00	11	35.29 40.33	4.48 4.48	0.00	11
71	1,000 W	0	Lamps	73.27	3.96	0.00	0	64.33	4.48	0.00	0
72 73	High Pressure Sodium Vapor										
74	70 W	25	Lamps	27.23	3.96	0.00	9	27.23	4.48	0.00	9
75 76	100 W 150 W	36	Lamps	29.55	3.96	0.00	14	28.05	4.48	0.00	13
77	250 W	7	Lamps	32.97	3.96	0.00	3	32.14	4.48	0.00	3
78 79	400 W 1 000 W	3	Lamps	36.39	3.96	0.00	2	36.03	4.48	0.00	2
80	1,000 W	0	Lamps	30.09	3.50	0.00	0	51.02	4.40	0.00	0
81	Metal Halide	0	Lamps	26.15	2.06	0.00	0	28.05	4 49	0.00	0
83	150 W	0	Lamps	27.92	3.96	0.00	0	29.41	4.48	0.00	0
84	175 W	0	Lamps	28.81	3.96	0.00	0	30.09	4.48	0.00	0
85 86	400 W	0	Lamps	31.46	3.96	0.00	0	32.14 36.03	4.48 4.48	0.00	0
87	1,000 W	0	Lamps	58.03	3.96	0.00	0	51.62	4.48	0.00	0
88 89	LED										
90	20 - 29 W	0	Lamps	23.36	3.96	0.00	0	25.90	4.48	0.00	0
91 92	30 - 39 W 40 - 49 W	48 0	Lamps Lamps	23.75 24.14	3.96 3.96	0.00	14	26.33 26.75	4.48 4.48	0.00	15 0
93	50 - 59 W	0	Lamps	24.52	3.96	0.00	0	27.18	4.48	0.00	0
94 95	60 - 69 W 70 - 79 W	313 128	Lamps Lamps	24.91 25.30	3.96 3.96	0.00	97 40	27.61 28.04	4.48 4.48	0.00	108 45
96	80 - 89 W	0	Lamps	25.69	3.96	0.00	0	28.47	4.48	0.00	0
97 98	90 - 99 W 100 - 109 W	0	Lamps	26.07 26.46	3.96 3.96	0.00	0	28.90 29.33	4.48 4.48	0.00	0
99	110 - 119 W	o	Lamps	26.85	3.96	0.00	0	29.75	4.48	0.00	0
100	120 - 129 W 130 - 139 W	0	Lamps	27.24	3.96	0.00	0	30.18	4.48	0.00	0
102	140 - 149 W	0	Lamps	27.98	3.96	0.00	0	31.00	4.48	0.00	0
103	150 - 159 W	0	Lamps	28.33	3.96	0.00	0	31.39	4.48	0.00	0
104	170 - 179 W	0	Lamps	28.69	3.96	0.00	0	32.17	4.48	0.00	0
106	180 - 189 W	0	Lamps	29.40	3.96	0.00	0	32.57	4.48	0.00	0
107 108	190 - 199 W 200 - 209 W	0	Lamps Lamps	29.75 30.11	3.96	0.00	0	32.96	4.48 4.48	0.00	0
109	210 - 219 W	0	Lamps	30.47	3.96	0.00	0	33.74	4.48	0.00	0
110 111	220 - 229 W 230 - 239 W	0	Lamps Lamps	30.82 31.18	3.96 3.96	0.00	0	34.13 34.52	4.48 4.48	0.00	0
112	240 - 249 W	0	Lamps	31.53	3.96	0.00	0	34.91	4.48	0.00	0
113 114	250 - 259 W 260 - 269 W	0	Lamps Lamps	31.89 32.24	3.96 3.96	0.00	0	35.30 35.69	4.48 4.48	0.00	0
115	270 - 279 W	0	Lamps	32.60	3.96	0.00	0	36.08	4.48	0.00	0
116 117	280 - 289 W 290 - 299 W	52	Lamps	32.95 33.31	3.96 3.96	0.00	23	36.47 36.86	4.48 4.48	0.00	26
118	300 - 309 W	0	Lamps	33.66	3.96	0.00	0	37.25	4.48	0.00	0
119	310 - 319 W	0	Lamps	34.02	3.96	0.00	0	37.64	4.48	0.00	0
120	330 - 339 W	0	Lamps	34.73	3.96	0.00	0	38.43	4.48	0.00	0
122	340 - 349 W	0	Lamps	35.08	3.96	0.00	0	38.82	4.48	0.00	0
123	360 - 369 W	0	Lamps	35.44 35.79	3.96	0.00	0	39.21	4.48 4.48	0.00	0
125	370 - 379 W	0	Lamps	36.15	3.96	0.00	0	39.99	4.48	0.00	0
126	380 - 389 W 390 - 399 W	0	Lamps	36.50	3.96	0.00	0	40.38	4.48 4.48	0.00	0
128	Lamp Total	21,332	Lamps				5,128				5,285
129	PSCR	22,944	MWh	s -			0	\$-			0
131											
132 133	Additional Light Credit Post Charge	12 39	Lamps Posts	-97.92			(1)	-97.92 79.80			(1)
134											
135 136	Other Charges	Number of Poles		\$ /Pole/Year				\$ /Pole/Year			
137	New Poles	2,738	Poles	24.48			67	24.48			67
138 139	Subtotal	21,332	Lamps				5,193				5,354
140	Nuclear Decommissioning			0.000765			18	0.000765			18
141	Subtotal	21,332	Lamps				5,211				5,371
143		Investment		Carrying Charg	e/Year			Carrying Charg	e/Year		
144 145	Special Facilities Subtotal	123,823	Lampe	-18%			(22)	-18%			(22)
146		21,332	Lamps				3,109				3,348
147	Energy Waste Reduction	9,500	Meters	\$ 1.36			155	\$ 1.36			155
148 149	Total Commercial	22,944	MWh	0.00%			0 5,344	0.00%			5,504
150	Increase/Decrease (\$)	1-									160

## Michigan Public Service Commission DTE Electric Company Staff's Present and Proposed Revenue Calculations Municipal Street Lighting - E1 Option I - Company Owned Overhead

Case No.: U-20162 Exhibit: S-6 Schedule: M. J. Pung Witness: F3 Page: 45 of 52

Line	(a)	(b)		(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
No.	Description	Billing Dete	rminants		Prese	nt			Propo	sed	
									Non-		
					Non-Capacity	Capacity			Capacity	Capacity	
				Rate	Energy	Energy	Revenue	Rate	Energy	Energy	Revenue
		Quantity	Linita	(\$/luminaire/	(#////h)	(a/4/M/b)	(\$000)	(\$/luminaire/	(#///h)	(a/l/h/h)	(\$000)
	Overhead	Quantity	Units	muny	<u>(¢/kvvn)</u>	<u>(¢/KVVN)</u>	(\$000)	<u>mun)</u>	<u>(¢/kvvn)</u>	<u>(¢/kvvn)</u>	(2000)
1	Overnead										
2	Mercury Vapor										
3	100 W	74	Lamps	13.36	3.96	0.00	13	17.24	4.48	0.00	17
4	175 W	7,618	Lamps	16.30	3.96	0.00	1,756	21.03	4.48	0.00	2,223
5	250 W	497	Lamps	18.50	3.96	0.00	135	24.20	4.48	0.00	172
6	400 W	982	Lamps	24.11	3.96	0.00	358	31.69	4.48	0.00	457
7	1.000 W	13	Lamps	46.91	3.96	0.00	10	62.09	4.48	0.00	12
8	.,										. –
0	High Brossura Sadium Vapor										
3		4 405	1	40.04	0.00	0.00	0.40	40.05	4.40	0.00	0.45
10	70 W	1,425	Lamps	13.21	3.96	0.00	248	12.85	4.48	0.00	245
11	100 W	14,850	Lamps	13.86	3.96	0.00	2,804	14.47	4.48	0.00	2,955
12	150 W	19	Lamps	15.05	3.96	0.00	4	17.10	4.48	0.00	5
13	250 W	7,589	Lamps	17.44	3.96	0.00	1,973	21.91	4.48	0.00	2,431
14	360 W	6	Lamps	21.96	3.96	0.00	2	27.09	4.48	0.00	2
15	400 W	1 443	Lamps	22 14	3.96	0.00	495	29.00	4 48	0.00	628
16	1.000 W	.,	Lamps	42.02	2.06	0.00	29	56.00	1 19	0.00	26
10	1,000 W	41	Lamps	42.03	3.90	0.00	20	50.00	4.40	0.00	30
17											
18	Metal Halide										
19	70 W	1	Lamps	18.50	3.96	0.00	0	17.04	4.48	0.00	0
20	100 W	1	Lamps	19.35	3.96	0.00	0	18.46	4.48	0.00	0
21	150 W	0	Lamps	21.33	3.96	0.00	0	20.89	4.48	0.00	0
22	175 W	48	Lamps	22.33	3.96	0.00	15	22.11	4.48	0.00	15
23	250 W	12	Lamps	25.15	3.96	0.00	4	27 23	4 48	0.00	5
24	320 W		Lamps	28.40	3.96	0.00		31.62	1 18	0.00	0
24	320 W	-	Lamps	20.43	0.00	0.00	0	00.04	4.40	0.00	0
25	400 W	5	Lamps	32.31	3.96	0.00	2	30.64	4.48	0.00	3
26	1,000 W	1	Lamps	55.71	3.96	0.00	1	73.23	4.48	0.00	1
27											
28	De-Energized										
29	Mercury Vapor										
30	100 W	0	Lamps	9.01	3.96	0.00	0	11.47	4.48	0.00	0
31	175 W	1	Lamps	10.74	3.96	0.00	0	14.59	4.48	0.00	0.175
32	250 W	0	l amps	13.60	3.96	0.00	0	17.35	4 48	0.00	0
33	400 W	0	Lamps	18 21	3.96	0.00	0	23.25	1 18	0.00	0
0.0	400 W	0	Lamps	10.21	3.30	0.00	0	23.23	4.40	0.00	0
34	1,000 W	0	Lamps	36.96	3.96	0.00	0	47.23	4.48	0.00	0
35											
36	High Pressure Sodium Vapor										
37	70 W	0	Lamps	8.72	3.96	0.00	0	8.60	4.48	0.00	0
38	100 W	4	Lamps	9.22	3.96	0.00	0	9.95	4.48	0.00	0
39	150 W	0	Lamps	10.69	3.96	0.00	0	12.14	4.48	0.00	0
40	250 W	2	Lamps	11.01	3.96	0.00	0	16.01	4.48	0.00	0
41	360 W	0	Lamps	16.65	3.96	0.00	0	20.19	4 48	0.00	0
12	400 W	0	Lamps	17.15	2.06	0.00	õ	21.77	1 19	0.00	0
42	400 W	0	Lamps	17.15	3.90	0.00	0	21.77	4.40	0.00	0
43	1,000 W	U	Lamps	34.30	3.90	0.00	0	43.95	4.40	0.00	0
44											
45	Dusk-Midnight										
46	Mercury Vapor										
47	100 W	0	Lamps	12.30	3.96	0.00	0	16.18	4.48	0.00	0
48	175 W	0	Lamps	14.44	3.96	0.00	0	19.17	4.48	0.00	0
49	250 W	0	Lamps	15.85	3.96	0.00	0	21.55	4.48	0.00	0
50	400 W	0	l amps	19.87	3.96	0.00	0	27 45	4 48	0.00	0
51	1.000 W	0	Lamps	26.21	2.06	0.00	0	51.10	1 19	0.00	0
51	1,000 W	0	Lamps	30.31	3.90	0.00	0	51.45	4.40	0.00	0
52											
53	High Pressure Sodium Vapor										
54	70 W	0	Lamps	12.15	3.96	0.00	0	12.10	4.48	0.00	0
55	100 W	0	Lamps	12.80	3.96	0.00	0	13.41	4.48	0.00	0
56	150 W	0	Lamps	13.99	3.96	0.00	0	15.51	4.48	0.00	0
57	250 W	2	Lamps	16.38	3.96	0.00	0	19.26	4.48	0.00	1
58	360 W	0	Lamps	20.90	3,96	0.00	0	23.28	4.48	0.00	0
50	400 W	л И	Lampe	21.08	3.00	0.00	1	24.76	4 / 9	0.00	1
60	1,000 W	4	Lampo	40.07	3.06	0.00		15 40	1 10	0.00	0
00	1,000 W	0	∟amps	40.97	3.90	0.00	U	40.40	4.40	0.00	0

Michigan Public Service Commission DTE Electric Company Staff's Present and Proposed Revenue Calculations Municipal Street Lighting - E1 Option I - Company Owned Overhead (Cont'd) Case No.: U-20162 Exhibit: S-6 Schedule: M. J. Pung Witness: F3 Page: 46 of 52

Line No.	(a) Description	(b) Billing Determ	ninants	(c)	(d) Presei	(e)	(f)	(g)	(h) Propo	(i) sed	(j)
									Non-		
				Poto	Non-Capacity	Capacity Enorgy	Rovonuo	Poto	Capacity Enormy	Capacity	Rovonuo
				(\$/luminaire/	Litergy	Litergy	Revenue	(\$/luminaire/	Litergy	Litergy	Revenue
		Quantity	Units	mth)	<u>(¢/kWh)</u>	(¢/kWh)	<u>(\$000)</u>	mth)	(¢/kWh)	<u>(¢/kWh)</u>	<u>(\$000)</u>
61	LED	0	Lompo	40.04	2.00	0.00	0	0.05	4.40	0.00	0
62 63	20 - 29 W	0	Lamps	10.31	3.96	0.00	0	9.85	4.48	0.00	0
64	40 - 49 W	73	Lamps	10.94	3.96	0.00	10	11.29	4.48	0.00	11
65	50 - 59 W	0	Lamps	11.26	3.96	0.00	0	12.01	4.48	0.00	0
66	60 - 69 W	45,078	Lamps	11.58	3.96	0.00	6,749	12.73	4.48	0.00	7,437
67	70 - 79 W	1	Lamps	11.91	3.96	0.00	0	13.46	4.48	0.00	0
68	80 - 89 W	301	Lamps	12.25	3.96	0.00	48	14.23	4.48	0.00	56
69	90 - 99 W	1,533	Lamps	12.58	3.96	0.00	256	15.02	4.48	0.00	304
70	100 - 109 W	88	Lamps	12.94	3.96	0.00	15	15.85	4.48	0.00	18
71	110 - 119 W	0	Lamps	13.33	3.96	0.00	0	16.73	4.48	0.00	0
72	120 - 129 W	57	Lamps	13.72	3.96	0.00	11	17.61	4.48	0.00	13
73	130 - 139 W	12,871	Lamps	14.13	3.96	0.00	2,471	18.25	4.48	0.00	3,146
74	140 - 149 W	1	Lamps	14.42	3.96	0.00	0	18.65	4.48	0.00	0
75	150 - 159 W	401	Lamps	14.71	3.96	0.00	81	19.04	4.48	0.00	103
70	160 - 169 W	107	Lamps	15.01	3.96	0.00	22	19.44	4.48	0.00	28
70	190 190 W	0	Lamps	15.52	3.90	0.00	0	20.29	4.40	0.00	0
70	190 - 199 W	0	Lamps	15.03	3.90	0.00	0	20.28	4.40	0.00	0
80	200 - 209 W	29	Lamps	16.25	3.96	0.00	7	21.12	4.48	0.00	8
81	210 - 219 W	20	Lamps	16.59	3.96	0.00	0	21.12	4 48	0.00	0
82	220 - 229 W	0	Lamps	16.93	3.96	0.00	0	22.03	4.48	0.00	0
83	230 - 239 W	0	Lamps	17.27	3.96	0.00	0	22.48	4.48	0.00	0
84	240 - 249 W	0	Lamps	17.61	3.96	0.00	0	22.94	4.48	0.00	0
85	250 - 259 W	6	Lamps	17.95	3.96	0.00	2	23.39	4.48	0.00	2
86	260 - 269 W	0	Lamps	18.29	3.96	0.00	0	23.85	4.48	0.00	0
87	270 - 279 W	0	Lamps	18.63	3.96	0.00	0	24.30	4.48	0.00	0
88	280 - 289 W	396	Lamps	18.97	3.96	0.00	109	24.76	4.48	0.00	139
89	290 - 299 W	0	Lamps	19.34	3.96	0.00	0	25.25	4.48	0.00	0
90	300 - 309 W	15	Lamps	19.71	3.96	0.00	4	25.75	4.48	0.00	5
91	310 - 319 W	0	Lamps	20.10	3.96	0.00	0	26.26	4.48	0.00	0
92	320 - 329 W	4	Lamps	20.48	3.96	0.00	1	26.77	4.48	0.00	2
93	330 - 339 W	0	Lamps	20.86	3.96	0.00	0	27.28	4.48	0.00	0
94	340 - 349 W	0	Lamps	21.25	3.96	0.00	0	27.80	4.48	0.00	0
95	350 - 359 W	0	Lamps	21.63	3.96	0.00	0	28.31	4.48	0.00	0
96	360 - 369 W	0	Lamps	22.02	3.96	0.00	0	28.82	4.48	0.00	0
97	370 - 379 W	0	Lamps	22.40	3.96	0.00	0	29.33	4.48	0.00	0
98	380 - 389 W	0	Lamps	22.79	3.96	0.00	0	29.85	4.48	0.00	0
100	390 - 399 W	05 500	Lamps	23.17	3.90	0.00	17 627	30.36	4.40	0.00	20.495
100	Subiotal	95,599	Lamps				17,037				20,465
102	PSCR	52,390	MWh	0			0	\$-			0
103		,		-			-	Ť			-
104	Multiple Lamp Discount	885	Lamps	(\$12.24)			(11)	-12.24			(11)
105	Subtotal	95,599	Lamps				17,626				20,474
106											
107	Nuclear Decomm.	52,390	MWh	0.000765			40	0.000765			40
108	Subtotal	95,599	Lamps				17,666				20,514
109	Energy Ontimization	515	Motors	¢ 1/51			90	\$ 14.51			00
111		515	MELEIS	φ 14.51			50	ψ 14.51			90
112	Total E1 - Option 1	52,390	MWh				17,756				20,603
113	Increase/Decrease (\$)										2,848

## Michigan Public Service Commission Staff's Present and Proposed Revenue Calculations Municipal Street Lighting - E1 Option I - Company Owned Ornamental

Case No.: U-20162 Exhibit: S-6 Schedule: M. J. Pung Witness: F3 Page: 47 of 52

Line <u>No.</u>	(a) Description	(b) Billing Detern	ninants	(c)	(d) Prese	(e) nt	(f)	(g)	(h) Propo	(i) sed	(j)
				<u>Rate</u> (\$/luminaire/	Non-Capacity Energy	Capacity Energy	<u>Revenue</u>	<u>Rate</u> (\$/luminaire/	<u>Non-</u> Capacity Energy	Capacity Energy	<u>Revenue</u>
		Quantity	<u>Units</u>	<u>mth)</u>	<u>(¢/kWh)</u>	<u>(¢/kWh)</u>	<u>(\$000)</u>	<u>mth)</u>	<u>(¢/kWh)</u>	<u>(¢/kWh)</u>	<u>(\$000)</u>
1	Co. Owned Ornamental										
2	100 W	9	Lamps	28.56	3.96	0.00	3	27.32	4.48	0.00	3
3	175 W	1,884	Lamps	31.69	3.96	0.00	782	30.38	4.48	0.00	761
4	250 W	3	Lamps	34.53	3.96	0.00	1	35.16	4.48	0.00	1
5	400 W	337	Lamps	40.35	3.96	0.00	188	43.44	4.48	0.00	204
6 7	1,000 W	9	Lamps	59.21	3.96	0.00	8	77.70	4.48	0.00	10
8	High Pressure Sodium Vapor	100	Lamps	25.79	2.06	0.00	22	22.04	1 10	0.00	20
9 10	100 W	24 423	Lamps	25.78	3.96	0.00	8 233	22.94	4.40	0.00	29 7 742
11	150 W	567	Lamps	27.96	3.96	0.00	209	26.50	4.48	0.00	202
12	250 W	10,900	Lamps	31.73	3.96	0.00	4,703	30.77	4.48	0.00	4,650
13	360 W	4	Lamps	37.62	3.96	0.00	2	35.36	4.48	0.00	2
14	400 W	3,622	Lamps	37.41	3.96	0.00	1,906	36.96	4.48	0.00	1,923
15 16	1,000 W	4	Lamps	48.86	3.96	0.00	3	64.66	4.48	0.00	4
17	Metal Halide										
18	70 W	195	Lamps	33.32	3.96	0.00	81	26.98	4.48	0.00	66
19	100 W	83	Lamps	34.04	3.96	0.00	36	28.17	4.48	0.00	30
20	150 W	14	Lamps	38.97	3.96	0.00	7	30.21	4.48	0.00	6
21	175 W	642	Lamps	38.87	3.96	0.00	322	31.22	4.48	0.00	266
22	250 W	279	Lamps	43.00	3.96	0.00	158	35.90	4.48	0.00	136
23	320 W	0	Lamps	47.11	3.96	0.00	0	39.94	4.48	0.00	0
24	400 W	610	Lamps	51.82	3.96	0.00	426	44.56	4.48	0.00	379
25 26	1,000 W	0	Lamps	87.09	3.90	0.00	0	79.10	4.40	0.00	0
20	De-Energized										
28	Mercury Vapor										
29	100 W	0	Lamps	18.13	3.96	0.00	0	17.52	4.48	0.00	0
30	175 W	0	Lamps	20.76	3.96	0.00	0	20.20	4.48	0.00	0
31	250 W	0	Lamps	23.21	3.96	0.00	0	23.92	4.48	0.00	0
32	400 W	0	Lamps	27.95	3.96	0.00	0	30.30	4.48	0.00	0
33 34	1,000 W	0	Lamps	44.34	3.90	0.00	0	56.59	4.40	0.00	0
35	LED										
36	60 - 69 W	27	Lamps	14.45	3.96	0.00	5	13.20	4.48	0.00	5
37											
38	High Pressure Sodium Vapor			10.00				11.00	4.40		
39	70 W	0	Lamps	16.26	3.96	0.00	0	14.66	4.48	0.00	0
40	150 W	2	Lamps	18.00	3.90	0.00	0	17.78	4.40	0.00	0
42	250 W	17	Lamps	21.77	3.96	0.00	4	21.33	4.48	0.00	4
43	360 W	0	Lamps	26.05	3.96	0.00	0	25.15	4.48	0.00	0
44	400 W	0	Lamps	26.31	3.96	0.00	0	26.55	4.48	0.00	0
45	1,000 W	0	Lamps	38.46	3.96	0.00	0	49.15	4.48	0.00	0
46	Duck Midnight										
47 48	Mercury Vapor										
49	100 W	0	Lamps	27.50	3.96	0.00	0	26.26	4.48	0.00	0
50	175 W	0	Lamps	29.84	3.96	0.00	0	28.52	4.48	0.00	0
51	250 W	0	Lamps	31.88	3.96	0.00	0	32.51	4.48	0.00	0
52	400 W	0	Lamps	36.11	3.96	0.00	0	39.20	4.48	0.00	0
53	1,000 W	0	Lamps	48.61	3.96	0.00	0	67.10	4.48	0.00	0
54											
55 56	70 W	0	Lamos	25.04	3 96	0.00	0	22.20	4 4 8	0.00	0
57	100 W	0	Lamps	25.16	3.96	0.00	ő	23.24	4.48	0.00	0
58	150 W	0	Lamps	26.37	3.96	0.00	0	24.91	4.48	0.00	0
59	250 W	0	Lamps	29.06	3.96	0.00	0	28.12	4.48	0.00	0
60	360 W	0	Lamps	33.81	3.96	0.00	0	31.55	4.48	0.00	0
61	400 W	0	Lamps	33.17	3.96	0.00	0	32.72	4.48	0.00	0
62	1,000 W	0	Lamps	38.26	3.96	0.00	0	54.06	4.48	0.00	0

## Michigan Public Service Commission DTE Electric Company Staff's Present and Proposed Revenue Calculations Municipal Street Lighting - E1 Option I - Company Owned Ornamental (Cont'd)

Case No.: U-20162 Exhibit: S-6 Schedule: M. J. Pung Witness: F3 Page: 48 of 52

$ \begin base in the interval of the interval i$	Line <u>No.</u>	(a) Description	(b) Billing Determ	ninants	(c) Present	(d)	(e)	(f)	(g) Proposed	(h)	(i)	(j)
Barting         Units         Units         Lemma         (eAVM)         (eAVM) <th></th> <th></th> <th></th> <th></th> <th>Rate (\$//uminaire/</th> <th>Non-Capacity Energy</th> <th>Capacity Energy</th> <th><u>Revenue</u></th> <th><u>Rate</u> (\$/luminaire/</th> <th><u>Non-</u> Capacity Energy</th> <th>Capacity Energy</th> <th><u>Revenue</u></th>					Rate (\$//uminaire/	Non-Capacity Energy	Capacity Energy	<u>Revenue</u>	<u>Rate</u> (\$/luminaire/	<u>Non-</u> Capacity Energy	Capacity Energy	<u>Revenue</u>
or         0 - SuW         0 - Lamps         22.39         3.66         0.00         0         18.88         4.48         0.00         1           66         40 - 49 W         25         Lamps         22.79         3.66         0.00         7         19.90         4.48         0.00         6           66         69 - 59 W         65         19.90         4.48         0.00         19.30         4.48         0.00         6           70         60 - 69 W         5.522         Lamps         23.19         3.56         0.00         24.48         3.60         0.00         12         24.48         0.00         6           70         60 - 69 W         4.23         Lamps         24.56         3.56         0.00         12         24.64         3.66         0.00         11           71         100 - 109 W         41         Lamps         24.56         3.56         0.00         15         24.54         4.48         0.00         17           71         100 - 169 W         3.1         Lamps         24.57         3.56         0.00         15         24.54         4.48         0.00         16           71         100 - 169 W         3.1 </td <td>63</td> <td>IFD</td> <td>Quantity</td> <td><u>Units</u></td> <td><u>(withinaire)</u> <u>mth)</u></td> <td><u>(¢/kWh)</u></td> <td><u>(¢/kWh)</u></td> <td><u>(\$000)</u></td> <td><u>mth</u></td> <td><u>(¢/kWh)</u></td> <td><u>(¢/kWh)</u></td> <td><u>(\$000)</u></td>	63	IFD	Quantity	<u>Units</u>	<u>(withinaire)</u> <u>mth)</u>	<u>(¢/kWh)</u>	<u>(¢/kWh)</u>	<u>(\$000)</u>	<u>mth</u>	<u>(¢/kWh)</u>	<u>(¢/kWh)</u>	<u>(\$000)</u>
65         0.39 W         58         Lamps         22.59         3.86         0.00         16         19.30         4.48         0.00         16           67         50 -59 W         69         Lamps         22.98         3.86         0.00         20         2.04.3         4.48         0.00         16           67         50 -59 W         69         0.00         2.46         3.86         0.00         2.06         2.038         4.48         0.00         16           68         0.77 W         2.339         3.86         0.00         7.48         2.02.87         4.48         0.00         16           71         100 -109 W         421         Lamps         2.341         3.86         0.00         11         2.237         4.48         0.00         16           71         100 -109 W         421         Lamps         2.443         3.56         0.00         7.57         2.544         4.48         0.00         3.733           76         100 -198 W         3.24mps         2.551         3.56         0.00         7.57         2.844         4.48         0.00         7.6           71         100 -198 W         3.24mps         2.550         <	64	20 - 29 W	0	Lamps	22.39	3.96	0.00	0	18.88	4.48	0.00	0
66         40 - 49 W         25         Lamps         22.79         3.96         0.00         7         19.90         4.48         0.00         15           65         50 - 59 W         60         0.00         2.0.3         3.86         0.00         2.0.44         0.00         62           70         80 - 89 W         1.2.37         Lamps         22.38         3.86         0.00         3.86         0.00         2.4.54         4.48         0.00         68           90 - 69 W         3.7         Lamps         22.40         3.86         0.00         18         2.2.57         4.48         0.00         61           100 - 100 W         436         Lamps         2.4.43         3.86         0.00         16         2.2.57         4.48         0.00         7         7         4.44         0.00         76         17         17         10         150         150         1.52         1.52         1.55         0.00         16         2.2.57         4.44         0.00         76         77         74         4.40         0.00         76           100 - 169 W         3.9         Lamps         2.5.57         3.56         0.00         0         2.7.7	65	30 - 39 W	58	Lamps	22.59	3.96	0.00	16	19.39	4.48	0.00	14
67         80 - 59 W         69         Lamps         22.98         3.06         0.00         2.04         4.48         0.00         12           68         00 - 69 W         2.33         3.06         0.00         7.48         2.018         4.48         0.00         6.244           60 - 69 W         1.237         Lamps         2.38         3.06         0.00         7.48         2.207         4.48         0.00         6.94           7         60 -69 W         3.27         Lamps         2.247         4.36         0.00         7.1         2.257         4.48         0.00         1.0           100 -19 W         42         Lamps         2.426         3.06         0.00         1.7         2.356         4.48         0.00         7.5           100 -19 W         3.1 Lamps         2.423         3.96         0.00         7.5         2.57.4         4.48         0.00         7.5           100 -17 W         549         Lamps         2.5.1         3.96         0.00         7.5         2.5.4         4.48         0.00         1.8           100 -17 W         549         Lamps         2.5.1         3.96         0.00         1.8         2.2.7.7 <t< td=""><td>66</td><td>40 - 49 W</td><td>25</td><td>Lamps</td><td>22.79</td><td>3.96</td><td>0.00</td><td>7</td><td>19.90</td><td>4.48</td><td>0.00</td><td>6</td></t<>	66	40 - 49 W	25	Lamps	22.79	3.96	0.00	7	19.90	4.48	0.00	6
66       60-69 W       6.502       Lamps       22.19       3.36       0.00       2.448       0.00       62.448       0.00       63.46         70       60-99 W       1.217       Lamps       22.39       3.36       0.00       366       0.00       366       22.99       4.48       0.00       448         100-190 W       487       Lamps       22.81       3.36       0.00       11       22.52       4.48       0.00       141         110-1151 W       42       Lamps       24.28       3.36       0.00       123.28       4.48       0.00       3.703         110-1151 W       140       Lamps       24.74       3.96       0.00       2.852       4.48       0.00       3.703         140-149 W       1.53       Lamps       2.513       3.96       0.00       1.8       2.772       4.48       0.00       1.8         150-159 W       2.147       S.365       0.00       1.8       2.772       4.48       0.00       1.8         180-159 W       3.9       Lamps       2.570       3.96       0.00       1.8       2.772       4.48       0.00       1.8         200-290 W       9       Lamps	67	50 - 59 W	69	Lamps	22.98	3.96	0.00	20	20.43	4.48	0.00	18
66       70.79 W       253       Lamps       23.39       3.96       0.00       74       21.52       4.48       0.00       69         71       9099 W       37       Lamps       22.80       3.96       0.00       716       22.57       4.48       0.00       11         71       100.19 W       498       Lamps       22.81       3.96       0.00       72       22.56       4.48       0.00       14         73       100.19 W       41       Lamps       24.28       3.96       0.00       72       22.54       4.48       0.00       66         73       130.19 W       14       Lamps       24.74       3.96       0.00       73       25.54       4.48       0.00       25.74       4.48       0.00       76         170.19 W       69       Jamps       25.51       3.96       0.00       154       22.77       4.48       0.00       168         200.20 W       0       Lamps       25.50       3.96       0.00       10       22.85       4.48       0.00       10         200.20 W       0       Lamps       25.71       3.96       0.00       0       3.96       4.48       0	68	60 - 69 W	8,502	Lamps	23.19	3.96	0.00	2,458	20.98	4.48	0.00	2,244
70         8090 W         1,27         Lamps         22.80         3.96         0.00         368         22.09         4.48         0.00         14           71         100-105 W         488         Lamps         24.03         3.96         0.00         11         22.32         4.48         0.00         11           71         100-105 W         448         Lamps         24.83         3.96         0.00         7         23.20         4.48         0.00         16           71         130-125 W         448         0.00         14         25.76         4.48         0.00         15           71         130-159 W         418         Lamps         24.83         3.96         0.00         1.8         25.76         4.48         0.00         28           71         160-159 W         63         Lamps         25.13         3.96         0.00         164         27.77         4.48         0.00         18           71         101-159 W         63         Lamps         25.70         3.96         0.00         164         20.02         0.00         14         0.00         14           72.107 W         0         Lamps         25.70	69	70 - 79 W	253	Lamps	23.39	3.96	0.00	74	21.52	4.48	0.00	69
12       10 <th< td=""><td>70</td><td>80 - 89 W</td><td>1,237</td><td>Lamps</td><td>23.60</td><td>3.96</td><td>0.00</td><td>368</td><td>22.09</td><td>4.48</td><td>0.00</td><td>348</td></th<>	70	80 - 89 W	1,237	Lamps	23.60	3.96	0.00	368	22.09	4.48	0.00	348
73         10 - 119 W         21         Larges         24.28         3.86         0.00         T         23.30         4.48         0.00         16           75         130 - 133 W         11,555         Larges         2.449         3.86         0.00         3.689         25.54         4.48         0.00         3.71           77         150 - 163 W         2.33         3.86         0.00         25         2.62.4         4.48         0.00         28           77         150 - 164 W         2.33         3.86         0.00         16         2.77         3.46         0.00         18           79         770 - 179 W         549         Larges         2.57         3.86         0.00         14         2.777         4.44         0.00         18           180 - 169 W         3.93         Larges         2.570         3.86         0.00         0         2.332.2         4.48         0.00         74           2.00 - 209 W         19         Larges         2.610         3.86         0.00         0         2.32.2         4.48         0.00         0           2.00 - 209 W         0         Larges         2.613         3.66         0.00         0	72	90 - 99 W 100 - 109 W	37 498	Lamps	23.81	3.96	0.00	11 152	22.67	4.48 4.48	0.00	11 149
74       120 - 129 W       4       Lamps       24.49       3.66       0.00       1       24.68       4.48       0.00       1         76       140 - 144 W       3       Lamps       24.74       3.36       0.00       1       25.74       4.48       0.00       3.793         76       140 - 144 W       3       Lamps       25.12       3.36       0.00       15       25.74       4.48       0.00       289         78       160 - 169 W       23       Lamps       25.13       3.36       0.00       13       27.77       4.44       0.00       198         80       189 - 169 W       0       Lamps       25.50       3.36       0.00       13       27.77       4.44       0.00       10         81       190 - 169 W       0       Lamps       25.00       3.36       0.00       0       23.24       4.44       0.00       10         82       20 - 209 W       0       Lamps       26.31       3.36       0.00       0       3.44       0.00       0         82       20 - 239 W       0       Lamps       27.75       3.86       0.00       0       31.10       4.44       0.00	73	110 - 119 W	21	Lamps	24.26	3.96	0.00	7	23.90	4.48	0.00	6
75       30. 139 W       11.533       Lamps       24.74       3.86       0.00       2.89       25.24       4.48       0.00       3.76         76       140. 149 W       3.87       24.93       3.86       0.00       1.80       125.74       4.48       0.00       13         77       150. 150 W       23       Lamps       25.13       3.86       0.00       184       22.77       4.48       0.00       184         70       170. 179 W       549       Lamps       25.00       3.86       0.00       184       22.77.9       4.48       0.00       184         180. 199 W       0       Lamps       25.00       3.86       0.00       66       28.85       4.48       0.00       0         200.209 W       19       Lamps       26.13       3.86       0.00       0       28.85       4.48       0.00       0         202.209 W       0       Lamps       26.93       3.86       0.00       0       3.1.0       4.48       0.00       0         220.239 W       0       Lamps       27.15       3.86       0.00       0       3.1.0       4.48       0.00       0       3.1.0       4.48	74	120 - 129 W	4	Lamps	24.49	3.96	0.00	1	24.56	4.48	0.00	1
76       140-149 W       3       Lamps       24.93       3.96       0.00       1       25.74       4.48       0.00       1         76       160-169 W       23       Lamps       25.12       3.96       0.00       275       52.44       4.48       0.00       283         76       160-169 W       23       Lamps       25.50       3.96       0.00       184       27.27       4.48       0.00       188         80       180-189 W       30       Lamps       25.50       3.96       0.00       13       27.77       4.48       0.00       10         82       200-209 W       191       Lamps       25.61       3.96       0.00       0       28.32       4.48       0.00       0         82       201-29 W       0       Lamps       26.51       3.96       0.00       0       29.42       4.48       0.00       0       0         84       200-209 W       0       Lamps       27.57       3.96       0.00       0       31.67       4.48       0.00       0       0         85       201-289 W       0       Lamps       27.57       3.96       0.00       0       31.67	75	130 - 139 W	11,553	Lamps	24.74	3.96	0.00	3,689	25.24	4.48	0.00	3,793
77       150-159 W       889       Lamps       25.12       3.66       0.00       275       28.24       4.48       0.00       88         79       170-179 W       549       Lamps       25.31       3.66       0.00       184       22.77       4.48       0.00       185         180-169 W       39       Lamps       25.70       3.66       0.00       134       27.79       4.48       0.00       184         200-209 W       191       Lamps       25.70       3.66       0.00       66       28.85       4.48       0.00       74         200-209 W       0       Lamps       26.13       3.66       0.00       0       28.85       4.48       0.00       0         66       240-244 W       0       Lamps       27.15       3.66       0.00       0       31.10       4.48       0.00       0       0         67       250-259 W       0       Lamps       27.15       3.66       0.00       0       33.10       4.48       0.00       0       0       28.94       4.48       0.00       0       0       28.94       4.48       0.00       0       0       33.10       4.48       0.00	76	140 - 149 W	3	Lamps	24.93	3.96	0.00	1	25.74	4.48	0.00	1
78       160 - 160 W       223       Lamps       25.31       3.36       0.00       8       27.75       4.48       0.00       18         80       180 - 180 W       39       Lamps       25.70       3.36       0.00       10       27.79       4.48       0.00       14         190 - 199 W       0       Lamps       25.70       3.36       0.00       0       28.32       4.48       0.00       74         200 - 200 W       191       Lamps       25.0       3.36       0.00       0       28.43       4.48       0.00       70         220 - 220 W       0       Lamps       25.23       3.36       0.00       0       31.10       4.48       0.00       0         84       220 - 220 W       0       Lamps       27.15       3.36       0.00       0       31.67       4.48       0.00       0         86       260 - 260 W       1.013       Lamps       27.77       3.36       0.00       0       32.83       4.48       0.00       0         92       200 - 200 W       0       Lamps       27.77       3.36       0.00       0       33.42       4.48       0.00       0	77	150 - 159 W	839	Lamps	25.12	3.96	0.00	275	26.24	4.48	0.00	289
79       170-179 W       549       Lamps       25.50       3.36       0.00       184       27.72       4.48       0.00       198         81       190-199 W       0       Lamps       25.50       3.36       0.00       184       27.73       4.48       0.00       10         82       200-209 W       191       Lamps       25.50       3.36       0.00       66       28.85       4.48       0.00       70         83       210-219 W       0       Lamps       28.31       3.36       0.00       0       28.85       4.48       0.00       70         84       200-290 W       0       Lamps       28.73       3.36       0.00       0       29.84       4.48       0.00       0         85       220-259 W       0       Lamps       22.77       3.36       0.00       0       31.16       4.48       0.00       0         89       270-757 W       0       Lamps       27.57       3.36       0.00       0       33.44       4.48       0.00       0         92       300-309 W       224       Lamps       28.23       3.96       0.00       0       35.28       4.48       0.00 <td>78</td> <td>160 - 169 W</td> <td>23</td> <td>Lamps</td> <td>25.31</td> <td>3.96</td> <td>0.00</td> <td>8</td> <td>26.75</td> <td>4.48</td> <td>0.00</td> <td>8</td>	78	160 - 169 W	23	Lamps	25.31	3.96	0.00	8	26.75	4.48	0.00	8
80       180       0.00       17       28.52       3.3.66       0.00       0       30.64       4.48       0.00       10       180       180       180       180       180       100       0       180       180       180       180       180       180       00       0       180	79	170 - 179 W	549	Lamps	25.50	3.96	0.00	184	27.27	4.48	0.00	198
a)       190 - 199 W       0       Lamps       2390       3.36       0.00       60       22.8.2       4.4.8       0.00       74         83       210 - 219 W       0       Lamps       26.31       3.36       0.00       60       22.8.2       4.4.8       0.00       74         84       220 - 229 W       0       Lamps       26.7.3       3.96       0.00       0       30.54       4.4.8       0.00       0         85       220 - 259 W       0       Lamps       22.7.57       3.96       0.00       0       31.67       4.4.8       0.00       0         86       220 - 259 W       0       Lamps       27.75       3.96       0.00       0       33.42       4.4.8       0.00       0         90       280 - 289 W       1.013       Lamps       27.75       3.96       0.00       0       33.42       4.4.8       0.00       0         91       290 - 290 W       0       Lamps       27.75       3.96       0.00       0       33.42       4.4.8       0.00       0         920 - 290 W       0       Lamps       28.45       3.96       0.00       0       35.65       4.4.8       0.00<	80	180 - 189 W	39	Lamps	25.70	3.96	0.00	13	27.79	4.48	0.00	14
a2       20.10       0.10       1.03       20.10       0.00       120.30       1.43       0.00       10         82       210.218 W       0       Lamps       26.52       3.96       0.00       0       29.98       4.48       0.00       0         84       220.229 W       0       Lamps       26.52       3.96       0.00       0       30.54       4.48       0.00       0         84       220.229 W       0       Lamps       26.54       3.96       0.00       0       31.10       4.48       0.00       0         84       20.289 W       0       Lamps       27.36       3.96       0.00       0       33.42       4.48       0.00       8         820       289 W       1.013       Lamps       27.77       3.96       0.00       0       33.42       4.48       0.00       0         91       290.289 W       0       Lamps       28.45       3.96       0.00       0       35.88       4.48       0.00       0         92       300-309 W       22.34       Lamps       28.45       3.96       0.00       0       35.88       4.48       0.00       0	81	190 - 199 W	101	Lamps	25.90	3.96	0.00	0	28.32	4.48	0.00	74
as         as<	02 83	200 - 209 W	191	Lamps	26.10	3.90	0.00	00	20.05	4.40	0.00	/4
385       230 - 239 W       0       Lamps       26,73       3,96       0,00       0       30,54       4,48       0,00       0         86       240 - 249 W       0       Lamps       26,73       3,96       0,00       0       31,10       4,48       0,00       0         87       250 - 259 W       18       Lamps       27,75       3,96       0,00       7       32,23       4,48       0,00       0         87       270 - 279 W       0       Lamps       27,77       3,96       0,00       0       33,42       4,48       0,00       0         90       280 - 289 W       1,013       Lamps       28,21       3,96       0,00       0       34,46       4,48       0,00       0         91       280 - 289 W       0       Lamps       28,23       3,96       0,00       0       35,28       4,48       0,00       0         93       310 - 319 W       0       Lamps       28,45       3,96       0,00       0       36,51       4,48       0,00       0         93       30 - 339 W       0       Lamps       29,56       3,96       0,00       0       37,74       4,48       0,	84	220 - 229 W	0	Lamps	26.52	3.96	0.00	0	29.98	4 48	0.00	0
86       240 - 249 W       0       Lamps       26.94       3.96       0.00       0       31.67       4.48       0.00       0         87       250 - 259 W       18       Lamps       27.75       3.96       0.00       0       31.67       4.48       0.00       0         89       270 - 279 W       0       Lamps       27.77       3.96       0.00       0       32.23       4.48       0.00       4.80         91       220 - 299 W       0       Lamps       28.01       3.96       0.00       0       33.42       4.48       0.00       4.80       0       0         92       300 - 309 W       234       Lamps       28.45       3.96       0.00       0       35.89       4.48       0.00       0       0       35.81       4.48       0.00       0       0       35.51       4.48       0.00       0       0       35.51       4.48       0.00       0       0       0       37.74       4.48       0.00       0       0       37.74       4.48       0.00       0       0       0       0       0       37.74       4.48       0.00       0       0       0       0       0	85	230 - 239 W	0	Lamps	26.73	3.96	0.00	0	30.54	4.48	0.00	0
87       250 - 259 W       0       Lamps       27.15       3.96       0.00       0       31.67       4.48       0.00       0         88       260 - 269 W       18       Lamps       27.75       3.96       0.00       7       32.23       4.48       0.00       8         90       280 - 289 W       1.013       Lamps       27.77       3.96       0.00       36       33.42       4.48       0.00       4.40       0.00       0         91       290 - 299 W       0       Lamps       27.83       3.96       0.00       90       34.04       4.48       0.00       0       0         92       300 - 309 W       234       Lamps       28.33       3.96       0.00       0       35.28       4.48       0.00       0         93       310 - 319 W       0       Lamps       28.45       3.96       0.00       0       35.28       4.48       0.00       0         93       301 - 319 W       0       Lamps       28.90       3.96       0.00       0       35.28       4.48       0.00       0       0       35.36       4.48       0.00       0       0       37.74       4.48       0.00	86	240 - 249 W	0	Lamps	26.94	3.96	0.00	0	31.10	4.48	0.00	0
88       220 - 259 W       16       Lamps       27.36       3.96       0.00       7       32.23       4.48       0.00       8         99       270 - 279 W       0       Lamps       27.75       3.96       0.00       30       33.42       4.48       0.00       461         91       290 - 299 W       0       Lamps       22.778       3.96       0.00       30       33.44       4.48       0.00       461         92       300 - 309 W       234       Lamps       28.01       3.96       0.00       0       33.44       4.48       0.00       111         93       310 - 319 W       0       Lamps       28.45       3.96       0.00       0       35.28       4.48       0.00       0         94       320 - 329 W       0       Lamps       28.46       3.96       0.00       0       35.58       4.48       0.00       0         95       330 - 339 W       0       Lamps       29.34       3.96       0.00       0       37.74       4.48       0.00       0         98       30 - 389 W       0       Lamps       29.79       3.96       0.00       0       38.96       4.48	87	250 - 259 W	0	Lamps	27.15	3.96	0.00	0	31.67	4.48	0.00	0
89       270 - 279 W       0       Lamps       27.57       3.96       0.00       00       32.83       4.48       0.00       0         90       280 - 289 W       0       Lamps       27.78       3.96       0.00       366       33.42       4.48       0.00       0         91       290 - 289 W       0       Lamps       28.01       3.96       0.00       0       34.06       4.48       0.00       0         92       300 - 309 W       0       Lamps       28.43       3.96       0.00       0       35.28       4.48       0.00       0         94       320 - 329 W       0       Lamps       28.467       3.96       0.00       0       35.58       4.48       0.00       0         95       330 - 339 W       0       Lamps       29.12       3.96       0.00       0       37.74       4.48       0.00       0       0         96       360 - 369 W       0       Lamps       29.12       3.96       0.00       0       38.86       4.48       0.00       0       0       38.6       4.48       0.00       0       0       39.9       39.0       0       0       38.9       4.	88	260 - 269 W	18	Lamps	27.36	3.96	0.00	7	32.23	4.48	0.00	8
90       280 - 289 W       1,013       Lamps       27.78       3.96       0.00       386       33.42       4.48       0.00       461         12       200 - 299 W       0       Lamps       28.01       3.96       0.00       91       34.66       4.48       0.00       0         91       300 - 309 W       234       Lamps       28.23       3.96       0.00       0       35.28       4.48       0.00       0         92       300 - 339 W       0       Lamps       28.67       3.96       0.00       0       35.59       4.48       0.00       0         96       340 - 349 W       0       Lamps       29.12       3.96       0.00       0       37.13       4.48       0.00       0         97       300 - 359 W       0       Lamps       29.56       3.96       0.00       0       38.36       4.48       0.00       0         930 - 370 W       0       Lamps       29.79       3.96       0.00       0       39.88       4.48       0.00       0         390 - 399 W       0       Lamps       30.01       3.96       0.00       0       40.21       4.48       0.00       0	89	270 - 279 W	0	Lamps	27.57	3.96	0.00	0	32.83	4.48	0.00	0
91       290 - 299 W       0       Lamps       28.01       3.96       0.00       0       34.04       4.48       0.00       0         93       300 - 309 W       234       Lamps       28.23       3.96       0.00       91       34.66       4.48       0.00       011         93       310 - 319 W       0       Lamps       28.45       3.96       0.00       0       35.28       4.48       0.00       0         94       320 - 229 W       0       Lamps       28.46       3.96       0.00       0       35.28       4.48       0.00       0         95       330 - 339 W       0       Lamps       29.34       3.96       0.00       0       37.74       4.48       0.00       0         98       306 - 369 W       0       Lamps       29.79       3.96       0.00       0       38.88       4.48       0.00       0         100       380 - 389 W       0       Lamps       30.01       3.96       0.00       0       39.59       4.48       0.00       0         130 - 399 W       0       Lamps       30.21       3.96       0.00       0       39.59       4.48       0.00 <td< td=""><td>90</td><td>280 - 289 W</td><td>1,013</td><td>Lamps</td><td>27.78</td><td>3.96</td><td>0.00</td><td>386</td><td>33.42</td><td>4.48</td><td>0.00</td><td>461</td></td<>	90	280 - 289 W	1,013	Lamps	27.78	3.96	0.00	386	33.42	4.48	0.00	461
32       300 - 309 W       234       Lamps       28.23       3.96       0.00       91       34.66       4.48       0.00       111         33       310 - 319 W       0       Lamps       28.45       3.96       0.00       0       35.89       4.48       0.00       0         94       320 - 329 W       0       Lamps       28.67       3.96       0.00       0       35.89       4.48       0.00       0         95       330 - 339 W       0       Lamps       29.90       3.96       0.00       0       36.51       4.48       0.00       0         96       340 - 349 W       0       Lamps       29.94       3.96       0.00       0       38.58       4.48       0.00       0         98       360 - 369 W       0       Lamps       29.96       3.96       0.00       0       38.38       4.48       0.00       0         100       380 - 389 W       0       Lamps       30.23       3.96       0.00       0       40.21       4.48       0.00       0         101       390 - 399 W       0       Lamps       30.23       3.96       0.00       0       40.21       4.48	91	290 - 299 W	0	Lamps	28.01	3.96	0.00	0	34.04	4.48	0.00	0
33       310 - 319 W       0       Lamps       22.8.5       3.96       0.00       0       33.28       4.48       0.00       0       0         94       320 - 239 W       0       Lamps       28.97       3.96       0.00       0       35.89       4.48       0.00       0       0       36.93.94       0       0       0       36.93.94       0       0       0       36.93.94       0       0       0       37.13       4.48       0.00       0       0       0       37.13       4.48       0.00       0       0       37.13       4.48       0.00       0       0       0       37.13       4.48       0.00       0       0       37.13       4.48       0.00       0       0       0       0       33.6       4.48       0.00       0       0       33.6       4.48       0.00       0       0       0       33.6       4.48       0.00       0       0       33.6       4.48       0.00       0       0       33.6       4.48       0.00       0       0       0       0       0       0       35.9       4.48       0.00       0       0       0       0       0       0 <t< td=""><td>92</td><td>300 - 309 W</td><td>234</td><td>Lamps</td><td>28.23</td><td>3.96</td><td>0.00</td><td>91</td><td>34.66</td><td>4.48</td><td>0.00</td><td>111</td></t<>	92	300 - 309 W	234	Lamps	28.23	3.96	0.00	91	34.66	4.48	0.00	111
34       320 329 W       0       Lamps       220,07       33,00       0 <td>93</td> <td>310 - 319 W</td> <td>0</td> <td>Lamps</td> <td>28.45</td> <td>3.96</td> <td>0.00</td> <td>0</td> <td>35.28</td> <td>4.48</td> <td>0.00</td> <td>0</td>	93	310 - 319 W	0	Lamps	28.45	3.96	0.00	0	35.28	4.48	0.00	0
333       333       334       439       0       Lamps       212       3.96       0.00       0       37.1       4.44       0.00       0         97       350       359       0       0       Lamps       29.12       3.96       0.00       0       37.11       4.44       0.00       0         97       350       359       0       0       0       37.4       4.48       0.00       0         98       360       369       0       0       Lamps       29.34       3.96       0.00       0       38.36       4.48       0.00       0         99       370       399       0       Lamps       30.01       3.96       0.00       0       39.59       4.48       0.00       0         101       390       399       0       Lamps       30.23       3.96       0.00       0       39.59       4.48       0.00       0         102       Subtotal       68,897       Lamps       30.23       3.96       0.00       0       \$7.9.80       7         104       PSCR       52,355       MWh       0       0       \$7.9.80       7       \$24.48       1.212	94	320 - 329 W	0	Lamps	28.07	3.90	0.00	0	36.51	4.40	0.00	0
350 - 359 W       0       Lamps       29.34       3.96       0.00       0       37.74       4.48       0.00       0         98       360 - 369 W       0       Lamps       29.79       3.96       0.00       0       38.38       4.48       0.00       0         99       370 - 379 W       0       Lamps       29.79       3.96       0.00       0       38.98       4.48       0.00       0         100       380 - 389 W       0       Lamps       30.01       3.96       0.00       0       38.98       4.48       0.00       0         101       390 - 399 W       0       Lamps       30.23       3.96       0.00       0       40.21       4.48       0.00       0         102       Subtotal       68,897       Lamps       0.00       0       \$       -       0       0       0       0       0       0       0       0       0       0       0       165       5       0.00       0       \$       -       0       0       0       165       1212       \$       \$       -       0       0       165       \$       1212       \$       \$       17       \$	96	340 - 349 W	0	Lamps	29.12	3.96	0.00	0	37.13	4.48	0.00	0
98       360 - 369 W       0       Lamps       29.56       3.96       0.00       0       38.36       4.48       0.00       0         99       370 - 379 W       0       Lamps       29.79       3.96       0.00       0       38.88       4.48       0.00       0         103       380 - 389 W       0       Lamps       30.01       3.96       0.00       0       39.59       4.48       0.00       0         103       9.39 W       0       Lamps       30.23       3.96       0.00       0       4.021       4.48       0.00       0         104       PSCR       52,355       MWh       0       0       59.744       24,943       \$79.80       7         105       Post Charge       85       0.00       0       \$79.80       7       \$24.48       1,212       \$24.48       1,212       \$24.48       1,212       \$24.48       1,212       \$24.48       1,212       \$24.48       1,212       \$39.9       4.48       0.00       \$35.9       4.48       0.00       \$35.9       4.48       1,212       \$30.5       \$30.5       \$30.5       \$30.5       \$30.5       \$30.5       \$30.5       \$30.5       \$30.5 <td< td=""><td>97</td><td>350 - 359 W</td><td>0</td><td>Lamps</td><td>29.34</td><td>3.96</td><td>0.00</td><td>0</td><td>37.74</td><td>4.48</td><td>0.00</td><td>0</td></td<>	97	350 - 359 W	0	Lamps	29.34	3.96	0.00	0	37.74	4.48	0.00	0
99       370 - 379 W       0       Lamps       29.79       3.96       0.00       0       38.98       4.48       0.00       0         100       380 - 389 W       0       Lamps       30.01       3.96       0.00       0       39.59       4.48       0.00       0         101       390 - 399 W       0       Lamps       30.23       3.96       0.00       0       40.21       4.48       0.00       0         102       Subtoal       68.897       Lamps       30.23       3.96       0.00       0       40.21       4.48       0.00       0         104       PSCR       52,355       MWh       0       0       \$79.80       7       \$79.80       7       \$24.48       1,212       \$24.48       1,212       \$24.48       1,212       \$24.48       1,212       \$24.48       1,212       \$59.80       7       \$24.48       1,212       \$59.80       7       \$25.750       \$50.00 <td>98</td> <td>360 - 369 W</td> <td>0</td> <td>Lamps</td> <td>29.56</td> <td>3.96</td> <td>0.00</td> <td>0</td> <td>38.36</td> <td>4.48</td> <td>0.00</td> <td>0</td>	98	360 - 369 W	0	Lamps	29.56	3.96	0.00	0	38.36	4.48	0.00	0
100       380 - 389 W       0       Lamps       30.01       3.96       0.00       0       4.48       0.00       0         101       390 - 399 W       0       Lamps       30.23       3.96       0.00       0       40.21       4.48       0.00       0         102       Subtotal       68.897       Lamps       24,943       697.44       24,246         103       PSCR       52,355       MWh       0       0       \$79.80       7         106       Post Charge       85       0.00       0       \$79.80       7         107       Long Span Charge       49,529       \$24.48       1,212       \$24.48       1,212         108       Multiple Lamp Discount       1,564       (\$97.92)       (153)       \$122.40)       \$24.48       1,212         109       Multiple Lamp Discount - Long Span       2,051       (\$51.20)       (7)       \$151.20)       (\$122.40)       (251)         118       Subtotal       68.897       Lamps       25,730       \$14.51       \$4       \$4.51       \$4         119       Subtotal       68.897       Lamps       25,730       0.000765       40       0.000765       40       0.000765<	99	370 - 379 W	0	Lamps	29.79	3.96	0.00	0	38.98	4.48	0.00	0
101       390 - 399 W       0       Lamps       30.23       3.96       0.00       0       40.21       4.48       0.00       0         102       Subtotal       66,897       Lamps       24,943       697.44       24,246         103       PSCR       52,355       MWh       0       0       \$       -       0         104       PSCR       52,355       MWh       0       0       \$       -       0         105       Post Charge       85       0.00       0       \$       \$       -       0         105       Post Charge       49,529       \$24.48       1,212       \$       \$       -       0       -       7       \$       \$       1,513       \$       \$       1,513       \$       \$       1,212       \$       \$       1,513       \$       \$       1,212       \$       \$       1,513       \$       \$       1,513       \$       \$       1,513       \$       \$       1,513       \$       \$       1,513       \$       \$       1,513       \$       \$       1,513       \$       \$       1,414       \$       1,513       \$       \$       1,513       \$	100	380 - 389 W	0	Lamps	30.01	3.96	0.00	0	39.59	4.48	0.00	0
102       Subtotal       68,897       Lamps       24,943       697.44       24,246         103       PSCR       52,355       MWh       0       0       \$ -       0         104       PSCR       52,355       MWh       0       0       \$ -       0         105       Post Charge       85       0.00       0       \$ \$79.80       7         105       Long Span Charge       49,529       \$24.48       1,212       \$\$24.48       1,212         106       Multiple Lamp Discount       1,564       (\$97.92)       (153)       (\$122.40)       (\$251)         107       Two Municipality Discount - Long Span       2.051       (\$122.40)       (\$251)       (\$51.20)       (7)         108       Multiple Lamp Discount - Semi-Orn.       9       \$25.66)       (1)       (\$76.56)       (1)         113       Subtotal       68,897       Lamps       25,730       25,040         114       Subtotal       68,897       Lamps       25,770       25,040         115       Nuclear Decomm.       52,355       MWh       0.000765       40       0.000765       40         116       Subtotal       68,897       Lamps       \$ 14.51	101	390 - 399 W	0	Lamps	30.23	3.96	0.00	0	40.21	4.48	0.00	0
103 104 105 105 106 106 106 106 106 106 106 106 107 107 108 108 108 109 108 109 109 109 100 109 100 100 100 100 100	102	Subtotal	68,897	Lamps				24,943			697.44	24,246
104     FSCR     52,353     WWI     0     0     \$     -     0       105     Post Charge     85     0.00     0     \$79.80     7       107     Long Span Charge     49,529     \$24.48     1,212     \$24.48     1,212       108     Multiple Lamp Discount - Long Span     2,051     \$12.240     (\$122.40)     (\$251)       109     Multiple Lamp Discount - Long Span     1,33     (\$51.20)     (7)     \$51.20)     (7)       110     Two Municipality Discount - Long Span     1,33     (\$51.20)     (7)     \$51.20)     (7)       111     Semi-Ornamental Discount - Semi-Orn.     9     (\$76.56)     (1)     (\$76.56)     (1)       113     Subtotal     68,897     Lamps     25,730     25,040       114     Subtotal     68,897     Lamps     25,770     25,080       115     Nuclear Decomm.     52,355     MWh     0.000765     40     0.000765     40       116     Subtotal     68,897     Lamps     \$14.51     54     \$14.51     54       119     Total E1 - Option 1     52,355     MWh     25,824     \$25,824     25,133       120     Total E1 - Option 1     52,355     MWh     25,824	103	DECR	50.055	A4\4/b	0			0	¢			0
100       Post Charge       85       0.00       0       \$79.80       7         107       Long Span Charge       49,529       \$24.48       1,212       \$24.48       1,212         108       Multiple Lamp Discount       1,564       (\$97.92)       (153)       (\$97.92)       (153)         109       Multiple Lamp Discount - Long Span       2,051       (\$122.40)       (251)       (\$122.40)       (251)         107       Wo Municipality Discount - Long Span       133       (\$51.20)       (7)       (\$51.20)       (7)         110       Semi-Ornamental Discount       645       (\$21.48)       (14)       (\$21.48)       (14)         112       Multiple Lamp Discount - Semi-Orn.       9       (\$76.56)       (1)       (\$76.56)       (1)         113       Subtotal       68,897       Lamps       25,730       0.000765       40         114       Subtotal       68,897       Lamps       25,040       0.000765       40       0.000765       40         116       Subtotal       68,897       Lamps       \$14.51       54       \$14.51       54         119       Total E1 - Option 1       52,355       MWh       0.000765       40       \$25,080	104	POCK	52,555	IVIVII	U			0	ъ -			0
100       Long Span Charge       49,529       \$24.48       1,212         100       Multiple Lamp Discount       1,564       (\$97.92)       (153)         100       Multiple Lamp Discount - Long Span       2,051       (\$122.40)       (251)         110       Two Municipality Discount - Long Span       2,051       (\$122.40)       (251)         111       Semi-Ornamental Discount       645       (\$21.48)       (14)         112       Multiple Lamp Discount - Semi-Orn.       9       (\$76.56)       (1)         113       Subtotal       68,897       Lamps       25,730         114       Nuclear Decomm.       52,355       MWh       0.000765       40         112       Total E1 - Option 1       52,355       MWh       25,770       25,080         112       Total E1 - Option 1       52,355       MWh       25,824       \$14.51       54         114       Increase/Decrease (\$)       14.51       54       \$25,824       \$25,824       25,133	105	Post Charge	85		0.00			0	\$79.80			7
108       Multiple Lamp Discount       1,564       (\$97.92)       (153)         109       Multiple Lamp Discount - Long Span       2,051       (\$122.40)       (251)         110       Two Municipality Discount - Long Span       133       (\$122.40)       (251)         111       Semi-Ornamental Discount       645       (\$12.48)       (14)         120       Multiple Lamp Discount - Semi-Orn.       9       (\$76.56)       (1)         113       Subtotal       68,897       Lamps       25,730         114       Nuclear Decomm.       52,355       MWh       0.000765       40         115       Nuclear Decomm.       309       Meters       \$ 14.51       54         112       Total E1 - Option 1       52,355       MWh       25,730       25,040         114       Forepase/Decrease (\$)       14.51       54       14.51       54	107	Long Span Charge	49,529		\$24.48			1,212	\$24.48			1,212
109       Multiple Lamp Discount - Long Span       2,051       (\$122.40)       (251)       (\$122.40)       (251)         110       Two Municipality Discount - Long Span       133       (\$51.20)       (7)       (\$51.20)       (7)         111       Semi-Ornamental Discount - G45       (\$21.48)       (14)       (\$21.48)       (14)         120       Multiple Lamp Discount - Semi-Orn.       9       (\$76.56)       (1)       (\$76.56)       (1)         113       Subtotal       68,897       Lamps       25,730       25,040       (\$76.56)       0.000765       40       14.51       54       54       54       54       54       54       54 <td>108</td> <td>Multiple Lamp Discount</td> <td>1,564</td> <td></td> <td>(\$97.92)</td> <td></td> <td></td> <td>(153)</td> <td>(\$97.92)</td> <td></td> <td></td> <td>(153)</td>	108	Multiple Lamp Discount	1,564		(\$97.92)			(153)	(\$97.92)			(153)
110       Two Municipality Discount - Long Span       133       (\$51.20)       (7)         111       Semi-Ornamental Discount       645       (\$51.20)       (7)         111       Semi-Ornamental Discount - Semi-Orn.       9       (\$51.20)       (7)         112       Multiple Lamp Discount - Semi-Orn.       9       (\$76.56)       (1)         113       Subtotal       68.897       Lamps       25,730       0.000765       40         114       Nuclear Decomm.       52,355       MWh       0.000765       40       0.000765       40         116       Subtotal       68,897       Lamps       25,770       25,080         117       Tamp       309       Meters       \$ 14.51       54       \$ 14.51       54         119       Total E1 - Option 1       52,355       MWh       25,824       25,133       (6qu)	109	Multiple Lamp Discount - Long Span	2,051		(\$122.40)			(251)	(\$122.40)			(251)
111     Semi-Ornamental Discount     645     (\$21.48)     (14)     (\$21.48)     (14)       112     Multiple Lamp Discount - Semi-Orn.     9     (\$76.56)     (1)     (\$76.56)     (1)       113     Subtotal     68,897     Lamps     25,730     (\$76.56)     (1)       114     Nuclear Decomm.     52,355     MWh     0.000765     40     0.000765     40       116     Subtotal     68,897     Lamps     25,770     25,080       117     117     14.51     54     14.51     54       119     Total E1 - Option 1     52,355     MWh     25,824     25,133       120     Total E1 - Option 1     52,355     MWh     25,824     25,133	110	Two Municipality Discount - Long Span	133		(\$51.20)			(7)	(\$51.20)			(7)
112       Multiple Lamp Discount - Semi-Orn.       9       (\$76.56)       (1)       (\$76.56)       (1)         113       Subtotal       68,897       Lamps       25,730       25,040         114       Nuclear Decomm.       52,355       MWh       0.000765       40       0.000765       40         116       Subtotal       68,897       Lamps       25,770       25,080         117       Energy Optimization       309       Meters       \$ 14.51       54         119       Total E1 - Option 1       52,355       MWh       25,824       25,824         120       Total E1 - Option 1       52,355       WWh       25,824       (6q.1)	111	Semi-Ornamental Discount	645		(\$21.48)			(14)	(\$21.48)			(14)
113     Subtrain     06,697     Lamps     20,730     20,730       114     115     Nuclear Decomm.     52,355     MWh     0.000765     40       116     Subtrain     68,897     Lamps     25,070     25,080       117     Its     Energy Optimization     309     Meters     \$ 14.51     54       119     Total E1 - Option 1     52,355     MWh     25,080     25,080       121     Lorerase/Decrease (\$)     (6q41)     26,081	112	Subtotal	69 907	Lampa	(\$76.56)			(1)	(\$76.56)			25.040
115     Nuclear Decomm.     52,355     MWh     0.000765     40       116     Subtotal     68,897     Lamps     25,770     25,080       117     Image: Subtotal     309     Meters     \$ 14.51     54       119     Image: Subtotal     52,355     MWh     25,824     25,824	114	Gubtolai	00,097	Lamps				20,700	1			20,040
Subtotal         68,897         Lamps         25,770         25,080           117         Energy Optimization         309         Meters         \$ 14.51         54           119         Total E1 - Option 1         52,355         MWh         25,824         25,824           120         Total E1 - Option 1         52,355         MWh         25,824         26,001	115	Nuclear Decomm.	<u>5</u> 2,355	MWh	0.000765			40	0.000765			40
117     Image: Second system     309     Meters     \$ 14.51     54       119     Image: Second system     \$ 14.51     54       120     Total E1 - Option 1     52,355     MWh     25,824       121     Increase (S)     (601)	116	Subtotal	68,897	Lamps				25,770				25,080
118     Energy Optimization     309     Meters     \$ 14.51     54       119     110     Total E1 - Option 1     52,355     MWh     25,824     25,133       120     Total E1 - Option 1     52,355     MWh     26,824     26,133	117								1			
119         20         Total E1 - Option 1         52,355         MWh         25,824         25,133         (601)           121         Increase (S)         (601)	118	Energy Optimization	309	Meters	\$ 14.51			54	\$ 14.51			54
120         Interaction         52,555         MWII         25,624         25,133           121         Interactionaction         (extr1)         (extr1)         (extr1)	119	Total E1 Option 1	50 DEE	MINA/I-				25 924				25 422
indite in the second	120		52,355	IVIVI				20,824				23,133 (601)

## Michigan Public Service Commission DTE Electric Company Staff's Present and Proposed Revenue Calculations Municipal Street Lighting - E1 Option II - Municipally Owned

Case No.: U-20162 Exhibit: S-6 Schedule: M. J. Pung Witness: F3 Page: 49 of 52

Bar Compare         Description         Description <thdescription< th=""> <thdescription< th=""></thdescription<></thdescription<>	Line	(a) Description	(b) Billing Determ	inante	(c)	(d) Preser	(e)	(f)	(g)	(h) Propo	(i)	(j)
Non-GaseD:         Team         Non-GaseD:         CaseD:         CaseD: <thcased:< th=""> <thcased:< th=""> <thcase< td=""><td>INU.</td><td>Description</td><td>Billing Determ</td><td>inants</td><td></td><td>Flese</td><td>11</td><td></td><td></td><td>Non-</td><td>seu</td><td></td></thcase<></thcased:<></thcased:<>	INU.	Description	Billing Determ	inants		Flese	11			Non-	seu	
Juncically Coread         Lamps         Lamps         CAU         CAU <thcau< th="">         CAU         CAU</thcau<>					Rate	Non-Capacity Energy	Capacity Energy	Revenue	Rate	Capacity Energy	Capacity Energy	Revenue
Metroy Voron         Image         Solution         Image         Solution         Image         Image <td></td> <td></td> <td>Quantity</td> <td>Units</td> <td>(\$/luminaire/ mth)</td> <td>(¢/kWh)</td> <td>(¢/kWh)</td> <td>(\$000)</td> <td>(\$/luminaire/ mth)</td> <td>(¢/kWh)</td> <td>(¢/kWh)</td> <td>(\$000)</td>			Quantity	Units	(\$/luminaire/ mth)	(¢/kWh)	(¢/kWh)	(\$000)	(\$/luminaire/ mth)	(¢/kWh)	(¢/kWh)	(\$000)
Image         Total         Total <th< td=""><td></td><td>Municipally Owned</td><td>Quantity</td><td>Onito</td><td><u></u></td><td><u>(\$7,67,11)</u></td><td>(p/((vii))</td><td>(0000)</td><td><u></u></td><td>(p/RWII)</td><td>(\$7,0001)</td><td><u>(\$0007</u></td></th<>		Municipally Owned	Quantity	Onito	<u></u>	<u>(\$7,67,11)</u>	(p/((vii))	(0000)	<u></u>	(p/RWII)	(\$7,0001)	<u>(\$0007</u>
2       175 W       0       Lamps       5.23       3.36       0.00       0       7.84       4.48       0.00       0         4       400 W       0       Lamps       0.24       3.36       0.00       0       1.24       4.48       0.00       10         7       High Pressure Scitum Vapor       0       Lamps       3.37       3.36       0.00       0       1.23.74       4.48       0.00       0         7       High Pressure Scitum Vapor	1	Mercury Vapor										
3       250 W       0       Lamps       6.77       3.96       0.00       0       13.14       4.48       0.00       10         400.0V       0       Lamps       22.13       3.96       0.00       0       13.14       4.48       0.00       10         400.Prove       10       Lamps       1.47       3.96       0.00       0       1.47       4.48       0.00       0       1.14       4.48       0.00       10         10       250 W       100 Lamps       1.37       3.96       0.00       2       1.47       3.46       0.00       1.48       0.00       1.14       0.00       1.14       0.00	2	175 W	1	Lamps	5.23	3.96	0.00	0	6.84	4.48	0.00	0
4         400 W         400 Lamps         9.84 996 0.00         8         1.11 4         4.48 0.00         10           1.000 W         0         Lamps         2.213 3.96 0.00         0         2.279 4.48 0.00         0           71W         0         Lamps         3.87 3.96 0.00         1         4.47 4.48 0.00         0           9         100W         11         Lamps         1.387 3.96 0.00         2         9.33 4.48 0.00         0           12 400 W         0         Lamps         1.242 3.96 0.00         0         1.354 4.48 0.00         0           13         1.000 W         0         Lamps         3.36 0.00         0         0.00 <td>3</td> <td>250 W</td> <td>0</td> <td>Lamps</td> <td>6.77</td> <td>3.96</td> <td>0.00</td> <td>0</td> <td>7.88</td> <td>4.48</td> <td>0.00</td> <td>0</td>	3	250 W	0	Lamps	6.77	3.96	0.00	0	7.88	4.48	0.00	0
0         1,00 /v         0         Lamps         22.13         3.95         L.00         0         2.97         4.80         0.00         0           8         100         10         200 /v         10         Lamps         3.97         3.96         0.00         1         4.47         4.48         0.00         10           10         250 W         100         Lamps         3.37         3.96         0.00         2         2.33         4.48         0.00         3.03           11         500 W         0         Lamps         3.35         3.96         0.00         6         3.328         4.48         0.00         0           1         0.00 W         0         Lamps         13.54         3.96         0.00         0         0.00         0	4	400 W	40	Lamps	9.84	3.96	0.00	8	13.14	4.48	0.00	10
7         By Pressue Sodium Vapor	5	1,000 VV	0	Lamps	22.13	3.96	0.00	0	28.79	4.48	0.00	0
n         ToW         0         Lamps         3.97         3.96         0.00         0         4.48         0.00         0           10         250 W         110         Lamps         9.33         3.66         0.00         1         4.48         0.00         3           11         360 W         0         Lamps         1.3.54         3.96         0.00         5         3.3.5         4.48         0.00         0           12         400 W         0         Lamps         9.14         3.96         0.00         5         3.3.5         4.48         0.00         0         0.00         1.1.4.4         3.3.5         3.96         0.00	6 7	High Pressure Sodium Vapor										
9         100 W         11         Lamps         4.67         3.66         0.00         1           260 W         100         Lamps         12.42         3.96         0.00         20           11         360 W         20         Lamps         12.42         3.96         0.00         0           12         400 W         20         Lamps         30.36         3.96         0.00         0           13         1.00 W         0         Lamps         9.33         3.96         0.00         0         13.84         4.48         0.00         5           14         -	8	70 W	0	Lamps	3.97	3.96	0.00	0	3.97	4.48	0.00	0
10         250 W         150 Lamps         9.33         3.96         0.00         29         1         3.34         4.48         0.00         30           12         400 W         20         Lamps         13.54         3.96         0.00         5           13         1.00 W         0         Lamps         13.54         3.96         0.00         5           14         1.10 W         0         Lamps         9.33         3.96         0.00         5           16         70 W         0         Lamps         9.33         3.96         0.00	9	100 W	11	Lamps	4.87	3.96	0.00	1	4.87	4.48	0.00	1
11       380 W       0       Lamps       12.42       3.96       0.00       0       12.42       4.48       0.00       0         13       10.00 W       0       Lamps       30.36       0.00       5       30.36       4.48       0.00       0         15       Media	10	250 W	180	Lamps	9.33	3.96	0.00	29	9.33	4.48	0.00	30
12       400 W       20       Lamps       13.54       3.36       0.00       6         1       1.000 W       0       Lamps       3.36       0.00       0       0.00<	11	360 W	0	Lamps	12.42	3.96	0.00	0	12.42	4.48	0.00	0
13       1.00 W       0       Lamps       30.36       3.96       0.00       0       30.36       4.48       0.00       0         15       Metal Halde       -       -       -       0.00 </td <td>12</td> <td>400 W</td> <td>20</td> <td>Lamps</td> <td>13.54</td> <td>3.96</td> <td>0.00</td> <td>5</td> <td>13.54</td> <td>4.48</td> <td>0.00</td> <td>5</td>	12	400 W	20	Lamps	13.54	3.96	0.00	5	13.54	4.48	0.00	5
Heta Halide         Meta Halide         Normal         Norma         Normal         Normal <t< td=""><td>13</td><td>1,000 W</td><td>0</td><td>Lamps</td><td>30.36</td><td>3.96</td><td>0.00</td><td>0</td><td>30.36</td><td>4.48</td><td>0.00</td><td>0</td></t<>	13	1,000 W	0	Lamps	30.36	3.96	0.00	0	30.36	4.48	0.00	0
10         Reset         0         Lamps         9.14         3.96         0.00         0.	14	Matal Halida										
170         100 W         0         Lamps         9.36         3.36         0.00         0	16	70 W	0	Lamps	9 14	3.96	0.00	0	0.00	0.00	0.00	0.00
11       175 W       0       Lamps       11.14       3.36       0.00       0       0.00	17	100 W	0	Lamps	9.36	3.96	0.00	0	0.00	0.00	0.00	0.00
19       250 W       0       Lamps       11.39       3.36       0.00       <	18	175 W	0	Lamps	11.41	3.96	0.00	0	0.00	0.00	0.00	0.00
20       400 W       0       Lamps       16.16       3.96       0.00       0       0.00	19	250 W	0	Lamps	11.39	3.96	0.00	0	0.00	0.00	0.00	0.00
1       1.00 W       0       Lamps       2.318       3.96       0.00       0.00       0.00       0.00       0.00       0.00         2       DecEmergized	20	400 W	0	Lamps	16.16	3.96	0.00	0	0.00	0.00	0.00	0.00
22       De-Energized	21	1,000 W	0	Lamps	23.18	3.96	0.00	0	0.00	0.00	0.00	0.00
23       De-Energized         Mercury Vapor         25       175 W       0       Lamps       6.55       3.96       0.00       0       7.25       4.48       0.00       0.00         27       400 W       0       Lamps       9.65       3.96       0.00       0       7.25       4.48       0.00       0.00         21       100 W       0       Lamps       9.65       3.96       0.00       0       7.25       4.48       0.00       0.00         21       100 W       0       Lamps       2.67       3.96       0.00       0       4.19       4.48       0.00       0.00         21       100 W       0       Lamps       9.06       3.36       0.00       0       8.47       4.48       0.00       0.00         32       50 W       0       Lamps       9.06       3.36       0.00       0       11.38       4.48       0.00       0.00         34       300 W       0       Lamps       9.25       3.96       0.00       0       12.50       4.48       0.00       0.00         34       400 W       0       Lamps       5.50       3.36       0.00	22											
A         Method value         A <t< td=""><td>23</td><td>De-Energized</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	23	De-Energized										
250 W         0         Lamps         6,55         3,96         0,00         7,55         4,48         0,00         0,00           27         400 W         0         Lamps         9,65         3,36         0,00         0         1,21         4,48         0,00         0,00           21         1,00 W         0         Lamps         2,20         3,36         0,00         0         1,21         4,48         0,00         0,00           21         100 W         0         Lamps         3,40         3,96         0,00         0         4,37         4,48         0,00         0,00           31         70 W         0         Lamps         3,40         3,96         0,00         0         4,48         0,00         0,00           33         250 W         0         Lamps         2,259         3,96         0,00         0         11,38         4,48         0,00         0,00           34         0.00 W         0         Lamps         3,32         3,96         0,00         0         1,259         4,48         0,00         0,00           35         400 W         0         Lamps         3,32         3,96         0,00	24 25	175 W	0	Lamos	4 89	3.96	0.00	0	6.08	4 48	0.00	0.00
27       400 W       0       Lamps       9.65       3.96       0.00       0       12.12       4.48       0.00       0.00         21       1.00 W       0       Lamps       22.09       3.36       0.00       0       27.25       4.48       0.00       0.00         31       10 W       0       Lamps       2.67       3.96       0.00       0       4.19       4.48       0.00       0.00         32       50 W       0       Lamps       3.40       3.96       0.00       0       4.19       4.48       0.00       0.00         36 W       0       Lamps       9.94       3.96       0.00       0       11.38       4.48       0.00       0.00         36 WO       0       Lamps       9.94       3.96       0.00       0       12.50       4.48       0.00       0.00         3       100W       0       Lamps       3.36       0.00       0       12.50       4.48       0.00       0.00         3       100W       0       Lamps       3.36       0.00       0       5.23       4.48       0.00       0.00         4       175 W       0       Lamps	26	250 W	0	Lamps	6.55	3.96	0.00	0	7.55	4.48	0.00	0.00
23       1,000 W       0       Lamps       22.09       3.96       0.00       0       27.25       4.48       0.00       0.00         9       High Pressure Sodium Vapor       2.67       3.96       0.00       0       3.28       4.48       0.00       0.00         31       70 W       0       Lamps       2.67       3.96       0.00       0       8.47       4.48       0.00       0.00         32       250 W       0       Lamps       6.77       3.96       0.00       0       8.47       4.48       0.00       0.00         36       400 W       0       Lamps       9.94       3.96       0.00       0       11.38       4.48       0.00       0.00         36       100 W       0       Lamps       5.60       3.96       0.00       0       5.23       4.48       0.00       0.00         31       100 W       0       Lamps       5.60       3.96       0.00       0       5.23       4.48       0.00       0.00       0       18.19       4.48       0.00       0.00       0       18.19       4.48       0.00       0.00       0       18.19       4.48       0.00       0.0	27	400 W	0	Lamps	9.65	3.96	0.00	0	12.12	4.48	0.00	0.00
Page         High Pressure Sodium Vapor         Image         2.67         3.96         0.00         0         3.28         4.48         0.00         0.00           100 W         0         Lamps         6.77         3.96         0.00         0         4.19         4.48         0.00         0.00           31 360 W         0         Lamps         9.06         3.96         0.00         0         11.38         4.48         0.00         0.00           36 0W         0         Lamps         9.06         3.96         0.00         0         11.38         4.48         0.00         0.00           36 0W         0         Lamps         22.59         3.96         0.00         0         12.50         4.48         0.00         0.00           36 0W         0         Lamps         5.60         3.96         0.00         0         5.23         4.48         0.00         0.00           41         175 W         0         Lamps         5.60         3.96         0.00         0         8.90         4.48         0.00         0.00           41         100 W         0         Lamps         2.40         3.96         0.00         0         8.9	28	1,000 W	0	Lamps	22.09	3.96	0.00	0	27.25	4.48	0.00	0.00
30       High Pressure Sodium Vapor       0       Lamps       2.67       3.96       0.00       0       4.48       0.00       0.00         32       100 W       0       Lamps       3.40       3.96       0.00       0       4.48       0.00       0.00         33       250 W       0       Lamps       9.06       3.96       0.00       0       4.48       0.00       0.00         34       400 W       0       Lamps       9.94       3.96       0.00       0       11.38       4.48       0.00       0.00         35       400 W       0       Lamps       9.94       3.96       0.00       0       12.50       4.48       0.00       0.00         36       1000 W       0       Lamps       3.38       3.96       0.00       0       5.23       4.48       0.00       0.00         37       Mercury Vapor       -	29											
1       70 W       0       Lamps       2.67       3.96       0.00       0       3.28       4.48       0.00       0.00         33       250 W       0       Lamps       3.40       3.96       0.00       0       1.138       4.48       0.00       0.00         34       360 W       0       Lamps       9.06       3.96       0.00       0       1.138       4.48       0.00       0.00         34       00W       0       Lamps       9.94       3.96       0.00       0       11.53       4.48       0.00       0.00         36       100W       0       Lamps       22.59       3.96       0.00       0       12.50       4.48       0.00       0.00         37       396       0.00       0       4.98       4.48       0.00       0.00         41       250 W       0       Lamps       5.60       3.96       0.00       0       8.80       4.48       0.00       0.00         41       100 W       0       Lamps       5.60       3.96       0.00       0       8.80       4.48       0.00       0.00         41       100 W       0       Lamps	30	High Pressure Sodium Vapor										
32       100 W       0       Lamps       3.40       3.96       0.00       0       4.19       4.48       0.00       0.00         32       250 W       0       Lamps       9.06       3.96       0.00       0       8.47       4.48       0.00       0.00         360 W       0       Lamps       9.06       3.96       0.00       0       1.138       4.48       0.00       0.00         100 W       0       Lamps       9.94       3.96       0.00       0       12.50       4.48       0.00       0.00         100 W       0       Lamps       3.96       0.00       0       12.57       4.48       0.00       0.00         175 W       0       Lamps       3.38       3.96       0.00       0       5.23       4.48       0.00       0.00         100 W       0       Lamps       5.60       3.96       0.00       0       18.19       4.48       0.00       0.00         100 W       0       Lamps       2.40       3.96       0.00       0       3.81       4.48       0.00       0.00         100 W       0       Lamps       5.49       3.96       0.00	31	70 W	0	Lamps	2.67	3.96	0.00	0	3.28	4.48	0.00	0.00
33       250 W       0       Lamps       0.7       3.96       0.00       0       14.48       0.00       0.00         34       360 W       0       Lamps       9.06       3.96       0.00       0       11.58       4.48       0.00       0.00         35       400 W       0       Lamps       9.94       3.96       0.00       0       12.50       4.48       0.00       0.00         36       1,000 W       0       Lamps       22.59       3.96       0.00       0       28.57       4.48       0.00       0.00         37       Desk-Midnight	32	100 W	0	Lamps	3.40	3.96	0.00	0	4.19	4.48	0.00	0.00
36       300 W       0       Lamps       9.94       3.96       0.00       0       11.35       4.48       0.00       0.00         36       1000 W       0       Lamps       9.94       3.96       0.00       0       1250       4.48       0.00       0.00         37       Dusk-Midnight       22.59       3.96       0.00       0       4.98       4.48       0.00       0.00         40       175 W       0       Lamps       4.12       3.96       0.00       0       4.98       4.48       0.00       0.00         41       250 W       0       Lamps       5.60       3.96       0.00       0       8.90       4.48       0.00       0.00         42       400 W       0       Lamps       5.60       3.96       0.00       0       8.90       4.48       0.00       0.00         43       1,000 W       0       Lamps       2.73       3.96       0.00       0       3.81       4.48       0.00       0.00         44       3.96       0.00       0       3.81       4.48       0.00       0.00       3.81       4.48       0.00       0.00       0       3.81       <	24	260 W	0	Lamps	0.77	3.90	0.00	0	0.47	4.40	0.00	0.00
000 W       0 Lamps       0.00 V	35	400 W	0	Lamps	9.00	3.90	0.00	0	12.50	4.40	0.00	0.00
7       Just-Midnight       Just-Midnight       Just-Midnight         98       Dust-Midnight       Mercury Vapor       Just-Midnight       Just-Midnight         40       175 W       0       Lamps       3.38       3.96       0.00       0         42       400 W       0       Lamps       4.12       3.96       0.00       0       5.23       4.48       0.00       0.00         43       J,000 W       0       Lamps       4.12       3.96       0.00       0       5.00       0.00       8.90       4.48       0.00       0.00         44	36	1.000 W	0	Lamps	22.59	3.96	0.00	0	28.57	4.48	0.00	0.00
38       Dusk-Midnight       Mercury Vapor         39       Mercury Vapor         41       250 W       0       Lamps       3.38       3.96       0.00       0         41       250 W       0       Lamps       4.12       3.96       0.00       0         42       400 W       0       Lamps       5.60       3.96       0.00       0       8.90       4.48       0.00       0.00         44       High Pressure Sodium Vapor       - <td>37</td> <td>,</td> <td></td>	37	,										
39       Mercury Vapor         40       175 W       0       Lamps       3.38       3.96       0.00       0       4.98       4.48       0.00       0.00         42       400 W       0       Lamps       5.60       3.96       0.00       0       8.90       4.48       0.00       0.00         41       1,000 W       0       Lamps       5.60       3.96       0.00       0       8.90       4.48       0.00       0.00         43       1,000 W       0       Lamps       2.40       3.96       0.00       0       3.81       4.48       0.00       0.00         44       TO W       0       Lamps       2.40       3.96       0.00       0       3.81       4.48       0.00       0.00         48       250 W       0       Lamps       2.40       3.96       0.00       0       3.81       4.48       0.00       0.00         48       250 W       0       Lamps       5.49       3.96       0.00       0       8.60       4.48       0.00       0.00         5       Subtotal       252       Lamps       5.49       3.96       0.00       11.82       3.96	38	Dusk-Midnight										
40       175 W       0       Lamps       3.38       3.96       0.00       0       4.48       0.00       0.00         41       250 W       0       Lamps       5.60       3.96       0.00       0       5.23       4.48       0.00       0.00         42       400 W       0       Lamps       5.60       3.96       0.00       0       5.23       4.48       0.00       0.00         43       1,000 W       0       Lamps       5.60       3.96       0.00       0       18.19       4.48       0.00       0.00         44	39	Mercury Vapor										
41       250 W       0       Lamps       4.12       3.96       0.00       0       5.23       4.48       0.00       0.00         42       400 W       0       Lamps       5.60       3.96       0.00       0       8.90       4.48       0.00       0.00         41       1,00 W       0       Lamps       1.153       3.96       0.00       0       8.90       4.48       0.00       0.00         44       High Pressure Sodium Vapor       1       1.53       3.96       0.00       0       3.23       4.48       0.00       0.00         44       High Pressure Sodium Vapor       0       Lamps       2.40       3.96       0.00       0       3.23       4.48       0.00       0.00         48       250 W       0       Lamps       5.49       3.96       0.00       0       8.60       4.48       0.00       0.00         49       360 W       0       Lamps       5.49       3.96       0.00       0       9.30       4.48       0.00       0.00         50       400 W       0       Lamps       1.82       3.96       0.00       0       1.976       4.48       0.00       0.00 </td <td>40</td> <td>175 W</td> <td>0</td> <td>Lamps</td> <td>3.38</td> <td>3.96</td> <td>0.00</td> <td>0</td> <td>4.98</td> <td>4.48</td> <td>0.00</td> <td>0.00</td>	40	175 W	0	Lamps	3.38	3.96	0.00	0	4.98	4.48	0.00	0.00
42       400 W       0       Lamps       5.60       3.96       0.00       0       0       0.00       0 <td>41</td> <td>250 W</td> <td>0</td> <td>Lamps</td> <td>4.12</td> <td>3.96</td> <td>0.00</td> <td>0</td> <td>5.23</td> <td>4.48</td> <td>0.00</td> <td>0.00</td>	41	250 W	0	Lamps	4.12	3.96	0.00	0	5.23	4.48	0.00	0.00
1,000 W       0       Lamps       11.00       3.30       0.00       0       10.113       4.40       0.00       0.00         44       High Pressure Sodium Vapor       70 W       0       Lamps       2.40       3.96       0.00       0       3.23       4.48       0.00       0.00         46       70 W       0       Lamps       2.73       3.96       0.00       0       3.81       4.48       0.00       0.00         48       250 W       0       Lamps       5.49       3.96       0.00       0       8.60       4.48       0.00       0.00         50 W       0       Lamps       5.49       3.96       0.00       0       8.60       4.48       0.00       0.00         51 1,000 W       0       Lamps       5.89       3.96       0.00       0       19.76       4.48       0.00       0.00         52 Subtotal       252 Lamps       42.79       42.79       42.79       46.23       46.50         56       Nuclear Decommissioning       352       MWh       0       0.000765       0.27       43.05       46.50         59       Energy Optimization       24       Meters       \$ 8.11	4Z 13	400 W	0	Lamps	5.60	3.96	0.00	0	8.90	4.48	0.00	0.00
High Pressure Sodium Vapor	44	1,000 W	0	Lamps	11.55	5.50	0.00	0	10.13	4.40	0.00	0.00
46       70 W       0       Lamps       2.40       3.96       0.00       0       3.23       4.48       0.00       0.00         47       100 W       0       Lamps       2.73       3.96       0.00       0       3.81       4.48       0.00       0.00         48       250 W       0       Lamps       4.41       3.96       0.00       0       6.68       4.48       0.00       0.00         54       9       3.66       0.00       0       8.60       4.48       0.00       0.00         51       1.000 W       0       Lamps       5.89       3.96       0.00       0       19.76       4.48       0.00       0.00         52       Subtotal       252       Lamps       11.82       3.96       0.00       0       19.76       4.48       0.00       0.00         53       Subtotal       252       Lamps       42.79       42.79       42.79       42.79       44.8       0.00       0.00         54       PSCR       352       MWh       0       0.000765       0.27       0.000765       0.27       0.000765       0.27       0.000765       0.27       46.50       46.50	45	High Pressure Sodium Vapor										
47       100 W       0       Lamps       2.73       3.96       0.00       0       3.81       4.48       0.00       0.00         48       250 W       0       Lamps       4.41       3.96       0.00       0       6.68       4.48       0.00       0.00         49       360 W       0       Lamps       5.49       3.96       0.00       0       8.60       4.48       0.00       0.00         51       1.000 W       0       Lamps       5.89       3.96       0.00       0       19.76       4.48       0.00       0.00         52       Subtotal       252       Lamps       11.82       3.96       0.00       0       19.76       4.48       0.00       0.00         52       Subtotal       252       Lamps       42.79       42.79       44.8       0.00       0.00         55       Subtotal       252       Lamps       0       0.000765       0.27       0.000765       0.27       46.50         56       Nuclear Decommissioning       352       MWh       0       0.00765       0.27       0.000765       0.27       0.000765       0.27       46.50       5       46.50       5	46	70 W	0	Lamps	2.40	3.96	0.00	0	3.23	4.48	0.00	0.00
48       250 W       0       Lamps       4.41       3.96       0.00       0       8.60       4.48       0.00       0.00         49       360 W       0       Lamps       5.49       3.96       0.00       0       8.60       4.48       0.00       0.00         50       400 W       0       Lamps       5.49       3.96       0.00       0       8.60       4.48       0.00       0.00         51       1,000 W       0       Lamps       5.89       3.96       0.00       0       19.76       4.48       0.00       0.00         52       Subtotal       252       Lamps       42.79       42.79       19.76       4.48       0.00       0.00         53       Subtotal       252       Lamps       42.79       19.76       4.48       0.00       0.00         54       PSCR       352       MWh       0       0.00765       0.27       0.000765       0.27       0.000765       0.27       46.50       10.00765       0.27       0.000765       0.27       46.50       10.00765       0.27       10.000765       0.27       0.000765       0.27       46.50       10.23       10.23       10.23       10	47	100 W	0	Lamps	2.73	3.96	0.00	0	3.81	4.48	0.00	0.00
49       360 W       0       Lamps       5.49       3.96       0.00       0       8.60       4.48       0.00       0.00         50       400 W       0       Lamps       5.89       3.96       0.00       0       9.30       4.48       0.00       0.00         51       1,000 W       0       Lamps       5.89       3.96       0.00       0       19.76       4.48       0.00       0.00         52       Subtotal       252       Lamps       42.79       44.8       0.00       0.00         53       Subtotal       252       Lamps       42.79       44.8       0.00       0.00         55       Subtotal       252       Lamps       -       40.00       0.00       19.76       4.48       0.00       0.00         55       Subtotal       252       Lamps       -       -       0       19.76       4.48       0.00       0.00       0       19.76       4.48       0.00       0.00       0       19.76       -       46.23       10       10.77       10.000765       0.27       0.000765       0.27       0.000765       0.27       10.000765       0.27       10.000765       2.3	48	250 W	0	Lamps	4.41	3.96	0.00	0	6.68	4.48	0.00	0.00
50       400 W       0       Lamps       5.89       3.96       0.00       0       19.30       4.48       0.00       0.00         51       1,000 W       0       Lamps       11.82       3.96       0.00       0       19.76       4.48       0.00       0.00         52       Subtotal       252       Lamps       42.79       46.23       46.23         54       PSCR       352       MWh       0       0       0       19.76       4.48       0.00       0.00         55       Subtotal       252       Lamps       40.00       0       19.76       4.48       0.00       0.00         56       Subtotal       252       Lamps       0       0       0       19.76       4.48       0.00       0.00         57       Nuclear Decommissioning       352       MWh       0       0       0.00765       0.27       0.000765       0.27       46.50         58       Subtotal       252       Lamps       \$ 8.11       2.34       \$ 8.11       2.34       \$ 8.11       2.34       \$ 8.11       2.34       \$ 45.50       \$ 8.11       2.34       \$ 10.23       \$ 10.23       \$ 10.23       \$ 10.23       <	49	360 W	0	Lamps	5.49	3.96	0.00	0	8.60	4.48	0.00	0.00
51       1,000 W       0       Lamps       11.82       3.96       0.00       0       19.76       4.48       0.00       0.00         52       Subtotal       252       Lamps       42.79       46.23         54       PSCR       352       MWh       0       0       \$       -       0         55       Subtotal       252       Lamps       0.000765       0.27       0.000765       0.27         56       Subtotal       252       Lamps       43.05       43.05       46.50         57       Nuclear Decommissioning       352       MWh       0       0.000765       0.27         58       Subtotal       252       Lamps       43.05       43.05       46.50         59       Energy Optimization       24       Meters       \$ 8.11       2.34       \$ 8.11       2.34         61       Increase/Decrease (\$)       352       MWh       3       3       3	50	400 W	0	Lamps	5.89	3.96	0.00	0	9.30	4.48	0.00	0.00
32       Subblai       2.52       Lamps       42.79       42.79       46.25         53       PSCR       352       MWh       0       0       \$       -       0         54       PSCR       352       MWh       0       0       \$       -       0         55       Subtotal       252       Lamps       0.000765       0.27       0.000765       0.27         58       Subtotal       252       Lamps       43.05       46.50       46.50         59       Energy Optimization       24       Meters       \$       8.11       2.34       \$       8.11       2.34         61       Increase/Decrease (\$)       352       MWh       0       45       45       46.50	51	1,000 W	0	Lamps	11.82	3.96	0.00	10 70	19.76	4.48	0.00	0.00
PSCR     352     MWh     0     0     \$     .     0       55     Subtotal     252     Lamps     . <t< td=""><td>52 53</td><td>Subiotal</td><td>252</td><td>Lamps</td><td></td><td></td><td></td><td>42.79</td><td></td><td></td><td></td><td>40.23</td></t<>	52 53	Subiotal	252	Lamps				42.79				40.23
55       Subtotal       252       Lamps       46         56       0.000765       0.27       0.000765       0.27         57       Nuclear Decommissioning       352       MWh       0.000765       0.27         58       Subtotal       252       Lamps       43.05       46.50         59       Energy Optimization       24       Meters       \$ 8.11       2.34         61       Increase/Decrease (\$)       352       MWh       45       45	54	PSCR	352	MWh	0			0	\$-			0
56     Nuclear Decommissioning     352     MWh     0.000765     0.27       57     Nuclear Decommissioning     352     MWh     0.000765     0.27       58     Subtotal     252     Lamps     43.05       59     Energy Optimization     24     Meters     \$ 8.11     2.34       61     Total E1 - Option II     352     MWh     45       63     Increase/Decrease (\$)     3	55	Subtotal	252	Lamps								46
57       Nuclear Decommissioning       352       MWh       0.000765       0.27         58       Subtotal       252       Lamps       43.05       43.05       43.05       44.50         59       Energy Optimization       24       Meters       \$ 8.11       2.34       \$ 8.11       2.34         62       Total E1 - Option II       352       MWh       45       45       43.05         63       Increase/Decrease (\$)       50       50       3       3	56				1				1			
58       Subtotal       252       Lamps       43.05       43.05       46.50         59       Energy Optimization       24       Meters       \$ 8.11       2.34       \$ 8.11       2.34         60       Energy Optimization       24       Meters       \$ 8.11       2.34       \$ 8.11       2.34         61       Total E1 - Option II       352       MWh       45       46.50         63       Increase/Decrease (\$)       3       3       3	57	Nuclear Decommissioning	352	MWh	0.000765			0.27	0.000765			0.27
39 60 61       Energy Optimization       24       Meters       \$ 8.11       2.34       \$ 8.11       2.34         61 62       Total E1 - Option II       352       MWh       45       49         63       Increase/Decrease (\$)       3       3	58	Subtotal	252	Lamps	1			43.05	1			46.50
a. and group and a construction     2.4 models     9 cm     2.64     9 cm     2.64       61     1     1     352 MWh     45     49       63     Increase/Decrease (\$)     3	59 60	Energy Optimization	24	Meters	\$ 8.11			2 34	\$ 8.11			2 34
62         Total E1 - Option II         352         MWh         45         49           63         Increase/Decrease (\$)        3        3	61		27	Motora	φ 0.11			2.04	φ 0.11			2.04
63 Increase/Decrease (\$) 3	62	Total E1 - Option II	352	MWh				45				49
	63	Increase/Decrease (\$)	-		-							3

## Michigan Public Service Commission DTE Electric Company Staff's Present and Proposed Revenue Calculations Municipal Street Lighting - E1 Option III - Energy Only

Line	(a)	(b)		(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
No.	Description	Billing Deter	minants		Prese	nt			Propo	sed	
									Non-		
					Non-Capacity	Capacity			Capacity	Capacity	
			Load	Dist Energy	Energy	Energy	Revenue	Dist Energy	Energy	Energy	Revenue
	Energy Only Service	Quantity	<u>(kW)</u>	<u>(¢/kWh)</u>	(¢/kWh)	(¢/kWh)	<u>(\$000)</u>	(¢/kWh)	(¢/kWh)	(¢/kWh)	<u>(\$000)</u>
1	Mercury Vapor										
2	100 Watt	15	2	5.49	3.96	0.00	1	6.65	4.48	0.00	1
3	175 Watt	169	30	5 49	3.96	0.00	14	6.65	4 48	0.00	17
1	250 Watt	27	7	5.49	3.96	0.00	3	6.65	1.18	0.00	
-	400 Wott	27	102	5.40	3.30	0.00	46	0.05	4.40	0.00	
5	400 Wall	257	103	5.49	3.96	0.00	40	0.05	4.40	0.00	54
6	1,000 Watt	0	0	5.49	3.96	0.00	0	6.65	4.48	0.00	0
7											
8	High Pressure Sodium Vapor										
9	70 Watt	357	25	5.49	3.96	0.00	13	6.65	4.48	0.00	16
10	100 Watt	8,093	809	5.49	3.96	0.00	433	6.65	4.48	0.00	511
11	150 Watt	1,837	276	5.49	3.96	0.00	146	6.65	4.48	0.00	172
12	250 Watt	1,153	288	5.49	3.96	0.00	140	6.65	4.48	0.00	164
13	310 Watt	28	9	5.49	3.96	0.00	4	6.65	4 48	0.00	5
14	360 Watt	20	0	5.49	3.96	0.00	- -	6.65	4.48	0.00	0
15	400 Wett	616	246	5.40	3.30	0.00	114	0.05	4.40	0.00	124
15		010	240	5.49	3.90	0.00	114	6.05	4.40	0.00	134
16	1,000 Watt	0	0	5.49	3.96	0.00	0	6.65	4.48	0.00	0
17											
18	Metal Halide	0									
19	70 Watt	0	0	5.49	3.96	0.00	0	6.65	4.48	0.00	0
20	100 Watt	79	8	5.49	3.96	0.00	4	6.65	4.48	0.00	4
21	150 Watt	0	0	5.49	3.96	0.00	0	6.65	4.48	0.00	0
22	175 Watt	135	24	5.49	3.96	0.00	11	6.65	4.48	0.00	13
23	250 Watt	55	14	5.49	3.96	0.00	7	6.65	4 48	0.00	.0
24	220 Watt	00	14	5.40	2.06	0.00	,	0.00	4.49	0.00	0
24	320 Wall	0	0	5.49	3.90	0.00	0	0.05	4.40	0.00	0
25	400 watt	2	1	5.49	3.96	0.00	0	6.65	4.48	0.00	0
26	1,000 Watt	0	0	5.49	3.96	0.00	0	6.65	4.48	0.00	0
27	Energy Subtotal	12,823	1,842				936				1,103
28											
29	LED										
30	20 - 29 W	0	0	5.49	3.96	0.00	0	6.65	4.48	0.00	0
31	30 - 39 W	5.327	186	5.49	3.96	0.00	74	6.65	4.48	0.00	87
32	40 - 49 W	155	7	5.49	3.96	0.00	3	6.65	1.18	0.00	3
22	50 50 W	1 252	60	5.40	2.06	0.00	27	6.65	4.40	0.00	22
33	50 - 59 W	1,255	69	5.49	3.96	0.00	27	0.05	4.40	0.00	32
34	60 - 69 W	710	46	5.49	3.96	0.00	18	6.65	4.48	0.00	22
35	70 - 79 W	201	15	5.49	3.96	0.00	6	6.65	4.48	0.00	7
36	80 - 89 W	14,305	1,216	5.49	3.96	0.00	482	6.65	4.48	0.00	568
37	90 - 99 W	27	3	5.49	3.96	0.00	1	6.65	4.48	0.00	1
38	100 - 109 W	14,801	1,554	5.49	3.96	0.00	616	6.65	4.48	0.00	727
39	110 - 119 W	14,780	1.700	5.49	3.96	0.00	674	6.65	4.48	0.00	795
40	120 - 129 W	607	76	5.49	3.96	0.00	30	6.65	4 48	0.00	35
40	120 120 W	8 000	1 091	5.40	2.06	0.00	420	6.65	4.49	0.00	505
41	130 - 139 W	0,009	1,001	5.49	3.96	0.00	429	0.05	4.40	0.00	505
42	140 - 149 W	4	1	5.49	3.96	0.00	0	6.65	4.48	0.00	0
43	150 - 159 W	1,457	226	5.49	3.96	0.00	90	6.65	4.48	0.00	106
44	160 - 169 W	464	77	5.49	3.96	0.00	30	6.65	4.48	0.00	36
45	170 - 179 W	28	5	5.49	3.96	0.00	2	6.65	4.48	0.00	2
46	180 - 189 W	64	12	5.49	3.96	0.00	5	6.65	4.48	0.00	6
47	190 - 199 W	0	0	5.49	3.96	0.00	0	6.65	4.48	0.00	0
48	200 - 209 W	218	45	5 49	3.96	0.00	18	6.65	4 48	0.00	21
40	210 - 219 W	210	662	5.40	3.00	0.00	262	6.65	1 10	0.00	210
49	210-219 W	3,084	003	5.49	3.90	0.00	203	0.05	4.48	0.00	310
50	220 - 229 W	269	61	5.49	3.96	0.00	24	6.65	4.48	0.00	28
51	230 - 239 W	0	0	5.49	3.96	0.00	0	6.65	4.48	0.00	0
52	240 - 249 W	8	2	5.49	3.96	0.00	1	6.65	4.48	0.00	1
53	250 - 259 W	177	45	5.49	3.96	0.00	18	6.65	4.48	0.00	21
54	260 - 269 W	4,438	1,176	5.49	3.96	0.00	467	6.65	4.48	0.00	550
55	270 - 279 W	262	72	5.49	3.96	0.00	29	6.65	4.48	0.00	34
	-						-		-		

## Michigan Public Service Commission DTE Electric Company Staff's Present and Proposed Revenue Calculations Municipal Street Lighting - E1 Option III - Energy Only (Cont'd)

Case No.: U-20162 Exhibit: S-6 Schedule: M. J. Pung Witness: F3 Page: 51 of 52

Line	(a)	(b)		(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
No.	Description	Billing Determ	inants		Prese	nt			Propo	sed	
	Energy Only Service	Quantity	Load	Dist Energy	Non-Capacity Energy	Capacity Energy (¢/kW/b)	Revenue (\$000)	Dist Energy	<u>Non-</u> Capacity Energy (¢/kWb)	Capacity Energy (¢/kWb)	Revenue (\$000)
56	LED	Quantity	<u>((())</u>	<u>(p/((vii)</u>	(0/((11))	(w/ktvii)	(0000)	(\$7,((1)))	(WINTIN	<u>(\$7,00011)</u>	<u>(\$000)</u>
57	280 - 289 W	56	16	5 49	3.96	0.00	6	6 65	1 18	0.00	7
58	200 - 200 W	0	0	5.49	3.96	0.00	0	6.65	1 48	0.00	, 0
59	300 - 309 W	5	2	5.49	3.96	0.00	1	6.65	4.40	0.00	1
60	310 - 319 W	0	0	5.49	3.96	0.00		6.65	4.48	0.00	0
61	320 - 329 W	0	0	5.49	3.96	0.00	0	6.65	4 48	0.00	0
62	330 - 339 W	0	0	5.49	3.96	0.00	0	6.65	4.48	0.00	0
63	340 - 349 W	0	0	5.49	3.96	0.00	0	6.65	4.48	0.00	0
64	350 - 359 W	0	0	5.49	3.96	0.00	0	6.65	4.48	0.00	0
65	360 - 369 W	0	0	5.49	3.96	0.00	0	6.65	4.48	0.00	0
66	370 - 379 W	0	0	5.49	3.96	0.00	0	6.65	4.48	0.00	0
67	380 - 389 W	0	0	5.49	3.96	0.00	0	6.65	4.48	0.00	0
68	390 - 399 W	0	0	5.49	3.96	0.00	0	6.65	4.48	0.00	0
69	LED Subtotal	83,532	8,356				3,314				3,905
70											
71	PSCR	44,993	MWh	0			0	\$ -			0
72	Subtotal	83,532					4,250				5,008
73											
74	Nuclear Decommissioning	44,993	MWh	0.000765			34	0.000765			34
75	Subtotal	44,993	MWh				4,284				5,042
76											
77	Energy Optimization	36	Meters	\$ 14.51			6.27	\$ 14.51			6.27
78		44.000	MAA/I-				4 000				5.040
79		44,993	IVIVVN				4,290				<b>5,049</b>
00	increase/Decrease (\$)							L			758
	Total E1 - Options I, II and III	150,090	MWh				47,916				50,834

# Michigan Public Service Commission DTE Electric Company Staff's Present and Proposed Revenue Calculations Traffic & Signal Lights - E2

Case No.: U-20162 Exhibit: S-6 Schedule: M. J. Pung Witness: F3 Page: 52 of 52

Line	(a)	(b)			(c)	(d)	(e)		(f)		(g)	(h)	(i)	(j)
No.	Description	Billing Determinants			Present					_	Proposed			
		Load <u>kW</u>		Dis ((	t Energy t/kWh)	<u>Non-Capacity</u> <u>Energy</u> <u>(¢/kWh)</u>	<u>Capacity</u> <u>Energy</u> (¢/kWh)	<u>R</u> (	<u>evenue</u> \$000)		<u>Dist Energy</u> (¢/kWh)	<u>Non-</u> Capacity Energy (¢/kWh)	Capacity Energy (¢/kWh)	<u>Revenue</u> (\$000)
1	Connected Load	76,744												
2	Energy Charge	56,023	MWh		0.93	5.08	1.69	\$	4,315		1.79	4.41	1.70	4,429
3	Nuclear Decommissioning	56,023	MWh	(	0.000765				43		0.000765			43
4	Subtotal	56,023	MWh						4,358					4,472
5														
6	PSCR	56,023	MWh	\$	-				0		\$-			0
7	Energy Optimization	144	Meters	\$	14.51				25		\$ 14.51			25
8									0					0
9	Total E2	56,023	MWh						4,383					4,497
10	Increase/Decrease (\$)			-										114

	(g)	1 of 1 (h)
	(g)	(h)
(a) (b) (c) (d) (e) (f)		
Exh A-16, Sch F-1.2 (a) + (b) (c) - (d) - (e) Line 28		(f) ÷ (g)
Present Proposed		Primary
Base Target Service Target	Distribution	Voltage
Line Derivery Revenue Base Charge Substation Distribution No Revenue Def(/Suf) Revenue Revenue Credit Demand Rev	Distribution	Charge
(\$000) (\$000) (\$000) (\$000) (\$000)	kW	\$/kW
1 Primary Voltage		
2 Rate		
3 D11 92,918	22,432,248	
4 D6.2 10,761	2,647,327	
5 D8 6,927	1,692,377	
6 D10 831	134,131	
7 R1.1/R1.2 4,173	1,089,391	
8 R3 516	124,062	
9 <u>R10 1,902</u>	489,900	
10         Primary Voltage Total         118,028         (7,579)         110,450         10,366         0         100,084	28,609,435	3.50
		0
12 Present 12 Boo Torget Service Torget		Subtransmission
13 Date Talget Service Talget I alget	Distribution	Distribution
15 Revenue Def//Stift Revenue Revenue Credit Demand Rev	Demand	Charge
16 (\$000) (\$000) (\$000) (\$000)	kW	
17 Subtransmission Voltage		•
18 Rate		
19 D11 8,363	5,671,366	
20 D6.2 1,033	719,317	
21 D8 307	193,807	
22 R1.1/R1.2 262	182,286	
23 R3 1,426	970,981	
24 R10 692	459,955	
25 Subtransmission Voitage Total 12,083 370 12,454 503 (393) 12,343	8,197,713	1.51
20 27 Brocont		Transmission
2/ rissin 28 Base Tarnet Service Tarnet		Voltane
20 Delivery Revenue Rase Charge Substation Distribution	Distribution	Distribution
30 Revenue Def//Suf) Revenue Revenue Credit Demand Rev	Demand	Charge
31 (\$000) (\$000) (\$000) (\$000) (\$000) (\$000)	kW	\$/kW
32 Transmission Voltage		*
33 Rate		
34 D11 5,667	9,249,422	
35 D6.2 0	0	
36 D8 119	268,487	
37 K1.1/K1.2 37	33,577	
30 K3 170 39 R10 3.053	204,741 5 230 573	

(782)

9,055

8,273

(2,415)

10,204

15,036,800

485

Transmission Voltage Total

40

0.68
Michigan Public Service Commission	Case No.:	U-20162
DTE Electric Company	Exhibit:	S-6
Staff's Calculation of Nuclear Surcharge	Schedule:	F6
	Witness:	M. J. Pung
	Page:	1 of 1

	(a)	(b)	(c)
Line		Amount	
No.	Description	 (\$000)	Source
1	Proposed Nuclear Surcharge Revenue:		
2	Site Security & Radiation Protection	\$ 29,418	Exh A-20, Sch J1, L2
3	Nuclear Decommissioning Funding	2,867	Exh A-20, Sch J1, L3
4	Low Level Radioactive Waste Disposal Funding	4,000	Exh A-20, Sch J1, L4
5	Additional LLRW Disposal Funding Request	2,000	Exh A-20, Sch J1, L5
6	Total Proposed Nuclear Surcharge Revenue	\$ 38,285	Exh A-20, Sch J1, L6
7			
			Exh A-14, Sch F2,
8	Forecast Jurisdictional Sales (MWh)	46,320,426	Page 4, L44, col(b)
9	Proposed Nuclear Surcharge	0.000827 \$/kWh	L5 ÷ L7

MPSC Case No.:	<u>U-20162</u>
Requestor:	N. Revere
<b>Question No.:</b>	NMR-1.1a
<b>Respondent:</b>	P. W. Dennis/J. R. Boladian
· Page:	<u>1 of 3</u>

- **Question:** Please provide any updates or revisions to the Company's transition plan for implementing its proposed summer on-peak rate.
  - a. Please include updated or revised timelines for the implementation of the proposed summer on-peak rate.
- **Answer:** As discussed by Company Witnesses, Stanczak, Dennis, Johnson, Clinton and Griffin, defaulting all residential customers to a summer on-peak rate is a large undertaking that includes many unknowns. To better understand these unknowns, following the July 6 filing, DTE Electric conducted a series of interviews and preliminary research with industry partners to inform the Company's updated transition plan.

The Company's updated transition plan considered timing and cost associated with the following: 1) Designing, testing and implementing major changes to customer service channels, billing systems, AMI metering, and infrastructure related to Information Technology (IT); 2) Research, development of communication materials and campaigns, and customer engagement related to Corporate Communications, and 3) Contact center and customer experience impacts related to Customer Service.

With the advent of these large-scale changes, the Company recommends a phased pilot approach that will provide the ability to learn and make changes to various business units such as IT, Corporate Communications, and Customer Service, prior to a full implementation. In addition, the Company considers a phased pilot approach as critical to ensuring billing and meter infrastructure is operating appropriately within the summer on-peak rate parameters, minimizing billing exceptions for full implementation, and reducing adverse customer satisfaction impacts.

The Company is proposing timelines for both a "Recommended Plan" and an "Alternative Plan" to consider for transitioning residential customers to a summer on-peak rate. Both updated plans are described below:

## **Recommended Plan**

The Recommended Plan allows for piloting multiple rates so that the Company may have an opportunity to do a more comprehensive assessment of rate designs that make sense for our customers over the long-term and in

MPSC Case No.:	<u>U-20162</u>
Requestor:	N. Revere
Question No.:	<u>NMR-1.1a</u>
<b>Respondent:</b>	P. W. Dennis/J. R. Boladian
Page:	2 of 3

the face of the significant market and technological changes occurring in the electric utility industry. Given the extensive change and effort involved in this rate transition, it is appropriate to assess and anticipate what other changes the Company may need to implement to better serve customers and offer options in addition to the proposed summer on-peak rate. In addition, the Recommended Plan allows for testing multiple messages among different customer groups and researching effective marketing and education.

In this case, planning for phase one would begin in December 2018, and would require 21 months to develop requirements, deploy the potential solutions, and allow for testing. Phase one of the Recommended Plan includes piloting up to 5,000 targeted customers per rate tested. Participants for the pilot will be targeted using the Company's customer segmentation research to ensure wide and varied participation. The pilot implementation would begin in June of 2020 and run through September 2020, after which it would be assessed and findings from the pilot will be implemented into the process for full implementation. Planning for phase two, full implementation, would begin in September 2020. This phase would require 21 months to gather requirements, develop and integrate with the billing system, and test the solutions. Residential customers who do not choose other rate options would be transferred to a new summer on-peak rate on May 30, 2022 on a bill cycle basis.

## **Alternative Plan**

The Company also considered an Alternative Plan that has a shorter timeline but only allows for the testing of one rate structure. As in the Recommended Plan, the Company is proposing to implement a phased approach to test system design changes and study customer behavior. Phase one of the Alternative Plan will include an operational pilot with approximately 100,000 customers. Participants for the initial phase will be targeted using the Company's customer segmentation research to ensure wide and varied participation.

For the Alternative Plan, phase one would begin in October 2018 and requires 22 months to gather requirements, develop and implement the solution in the billing system, and test the billing system. After this preparation period, the pilot implementation would begin in August of 2020. The operational pilot would run through September 2020, after which it would be assessed and findings from the pilot will be implemented into the process for full

MPSC Case No.:	<u>U-20162</u>
<b>Requestor:</b>	N. Revere
<b>Question No.:</b>	NMR-1.1a
<b>Respondent:</b>	P. W. Dennis/J. R. Boladian
Page:	<u>3 of 3</u>

implementation. Assuming a successful initial phase, the remaining residential AMI customers would be transferred to the new summer on-peak rate on June 1, 2021 on a bill cycle basis.

The Alternative Plan only allows for the piloting of a single rate in phase one, whereas, the Recommended Plan allows for piloting multiple rates. Piloting only a single rate results in projected go-live date of June 2021 compared to May 2022 for the Recommended Plan. The Alternative Plan allows for less time and information to study customer behavior due to summer on-peak rate changes and develop solutions to issues identified during the pilot phase.

As proposed in U-20162, the summer on-peak non-capacity rate for both plans would be in affect during the summer months of June through September from 4:00 p.m. through 9:00 p.m., Monday through Friday. The off-peak rate would apply to all other usage.

To adhere to the above proposed timelines, project preparation and requirements gathering will begin prior to receiving a Commission order in this case. Any deviation in the Company's plans may result in a change to the proposed timeline.

MPSC Case No.:	<u>U-20162</u>
Requestor:	N. Revere
<b>Question No.:</b>	NMR-1.1b
Respondent:	J. R. Boladian
	E. W. Clinton
	T. D. Johnson
Page.	D. J. Griffin
raye.	1 of 2

- **Question:** Please provide any updates or revisions to the Company's transition plan for implementing its proposed summer on-peak rate.
  - b. Please include updates or revisions to the costs associated with the implementation of the proposed summer on-peak rate.
- Answer: The Recommended Plan includes a forecasted budget of \$53.6M and the Alternative Plan includes a forecasted budget \$44.7M. The higher costs for the Recommended Plan is primarily due to an extended project timeline duration and multiple pilot scenarios. The Company's approach to develop estimated expenses related to IT, Corporate Communications and Customer Service is summarized below:

**Information Technology:** Estimates for IT related expenses were informed by conversations and competitive benchmarking with Accenture and Consumers Energy regarding the multi-year development of TOU implementation plans. Estimates were also informed using the Company's internal expertise and experience with previous rate change impacts on IT, wherever it was available.

**Corporate Communications:** Estimates for Corporate Communication related expenses were informed by conversations with PG&E and marketing consultants regarding the multi-year development of California's TOU implementation plans. The scale of expenditure is driven in large part by the need for one-on-one communications, particularly with low-income and at-risk populations that are difficult to reach.

**Customer Service:** Estimates for Customer Service related expenses involved a bottom-up approach for the specific areas that require investment within the organization. Estimates for each of the specific areas were informed using the Company's internal expertise and experience, wherever it was available.

A breakdown of the estimated project costs for both plans is shown in the following table.

MPSC Case No.: U-20162 Requestor: N. Revere Question No.: NMR-1.1b Respondent: J. R. Boladian <u>E. W. Clinton</u> <u>T. D. Johnson</u> D. J. Griffin Page: 2 of 2

	Recommended Plan Estimated Costs	Alternative Plan Estimated Costs
INFORMATION TECHNOLOGY		
AMI IT	\$10,500,000	\$7,636,364
AMI Metering	\$1,250,000	\$1,250,000
CR&B	\$17,000,000	\$12,295,455
IT Infrastructure	\$4,500,000	\$3,250,000
Information Technology Capital Expenses	\$33,250,000	\$24,431,819
O&M	\$500,000	\$500,000
Information Technology O&M Expenses	\$500,000	\$500,000
CORPORATE COMMUNICATIONS		
Research	\$210,000	\$210,000
Paid Media	\$2,885,000	\$2,885,000
Production	\$4,540,000	\$4,540,000
Community Engagement	\$527,000	\$527,000
Employee Training & Activation	\$120,000	\$120,000
Corporate Communications O&M Expenses	\$8,282,000	\$8,282,000
CUSTOMER SERVICE		
Contact Center Training	\$650,000	\$650,000
Contact Center Call Volume	\$5,280,000	\$5,280,000
Billing	\$4,000,000	\$4,000,000
Customer Experience	\$1,600,000	\$1,600,000
Customer Service O&M Expenses	\$11,530,000	\$11,530,000
Total O&M	\$20,312,000	\$20,312,000
Total Capital	\$33,250,000	\$24,431,819
Total Estimated Cost	\$53,562,000	\$44,743,819

<u>U-20162</u>
N. Revere
NMR-1.1c
J. R. Boladian
<u>1 of 2</u>

- **Question:** Please provide any updates or revisions to the Company's transition plan for implementing its proposed summer on-peak rate.
  - c. Please include any research or workpapers upon which the updates or revisions relied.
- **Answer:** Please see the attached document(s) used in updating the Company's transition plan for implementing its proposed summer on-peak rate.

Please refer to the attachment titled "*U-20162 NMR-1.1c-01 – TOU Research* and Benchmarking" for highlights and data points gathered from the Company's phone interviews and preliminary research with industry partners. Based on the Company's research, all other states and/or utilities have utilized pilots in their transition to what are commonly referred to as time of use (TOU) rates. If Michigan were to move forward with a single-phased, mandatory transition to summer on-peak rates for all residential customers currently on D1 rates, this may be the first and only jurisdiction in the country to do so.

The Company also relied upon research conducted by Pacific Gas & Electric (PG&E) in the California TOU Working Group. In summary, the research stated a transition to TOU rates feels very risky to customers, even those who may benefit. Of those customers included in PG&E's initial wave of communications regarding the transition, 40% needed more information to address concerns and 27% were firmly against the transition. Therefore, it is important for a utility to first test and then incorporate lessons learned from its initial pilot research to increase customer understanding and acceptance.

In addition, California IOUs completed an economic and health hardship study after implementing a pilot TOU program to understand the impacts to customers. The study showed that multiple vulnerable customer groups reported greater economic hardship because of the piloted TOU rates. These results lead to the CPUC ruling that IOUs exclude economic vulnerable customers in hot climate regions from being defaulted onto TOU rates in the future. This study demonstrates it is important to get the right customer segments on the right rates and meet other customer needs through potential opt-in rate alternatives. Therefore, it is important the Company analyze and understand impacts to customers for whom a summer on-peak rate is not

MPSC Case No.: U-20162 Requestor: N. Revere Question No.: NMR-1.1b Respondent: J. R. Boladian Page: 2 of 2

feasible: customers who cannot shift load without significant adverse impacts, customers who should not shift load due to unique health reasons, and customers who should be aware of other rate options.

Please refer to the attached documents detailing the Company's Recommended and Alternative project plans and timelines for implementing a proposed summer on-peak rate.

#### **Attachments:**

U-20162 NMR-1.1c-01– TOU Research and Benchmarking U-20162 NMR-1.1c-02 Project Timeline and Costs – Recommended Plan U-20162 NMR-1.1c-03 Project Timeline and Costs – Alternative Plan

## Precedent TOU rate transitions

The following are some highlights and data points based on initial phone calls and preliminary research with industry partners.

Company	Mandated vs. Optional	Working Group vs. Case Settlement <sup>1</sup>	Pilot (y/n)	Timeline	Go-Live Date
APS Electric <sup>2</sup>	APS proposed in 2016	Working Group	Numerous	5 years	May 2018
California IOUs	Mandated in 2015	Working Group	Numerous	5+ years	2020
Maryland IOUs	Mandated pilots 2017	Working Group	Numerous	3+ years	2019 pilot
SMUD	Optional	Unknown	Numerous	8+ years	End of 2019
Xcel Energy	Optional pilot	Working Group	Yes	5+ years	2020 pilot
DTE Energy	Mandated in 2018	Case Settlement	No	1 year	April 2019

Arizona Public Service (APS) Electric Company: 2013-2018 [1]

- Started in 2013 to address rate design issues as result of increased rooftop solar
- Spent 3 years making proposals, seeking input and approval, doing some pilots
- 2016 APS asked to transition all residential customers to TOU + demand rates
- Approximately 50% of APS customers were already on a TOU rate prior to 2018 transition
- 2018 APS transitioned all residential customers to new rate structure
  - Currently 25% of customers remain on a traditional-style rate based on expected big impacts
  - APS programmed IT infrastructure prior to system conversion
  - Meter configuration: Processing is critical path for success (risk of impacting batch process)

## California Investor Owned Utilities (PG&E, SDG&E, SCE): 2015-2020

- Investor Owned Utilities have been transitioning since 2015 mandate and will continue to transition until 2020
- Goals: load shift, energy conservation, energy security, grid stability
- Numerous pilot programs have been run, starting with "opt-in" and moving to "default"
- Statewide collaboration through a working group
- Assigned Commissioner Ruling mandated working group use consultant to develop integrated marketing action plan to coordinate and align efforts statewide

## Maryland Investor Owned Utilities (Pepco, BGE and Delmarva Power): 2017-2022

- 2017 the Commission established PC44 which established the Rate Design workgroup who were directed to "develop proposed pilot program(s) for time-varying rates for distribution service for Commission consideration, and also develop a plan for ensuring customer options for time varying rates for generation service." [3]
- Mandated two-year pilot; dates not finalized although tentative April 2019-April 2021, with evaluation through April 2022 [2]
  - Primary goal Determine if TOU rates can help lower customer bills by educating customers on how to control their energy usage by sending appropriate price signals to

2. APS defaults all "new" customers to TOU. Approximately 25% of existing customers remain on "traditional" volume-based rate

<sup>1.</sup> Working Group: Utility(s) work together to propose path forward; Case Settlement: Path forward ordered by regulators

all market participants; evaluate the impact of TOU rates on low to moderate income customers [2]

• Secondary goal - Test whether TOU rates have the potential to reduce peak demand [2]

#### Sacramento Municipal Utility District (SMUD): 2011-2019

- Sacramento Municipal Utility District (SMUD) has also been working on transitioning all residential customers to TOU since 2011 [6]
- Goal to save energy during peak times [4]
- Offered numerous pilots to include TOU rates, Critical Peak Pricing (CPP), TOU with no CPP [4]
- Started with "opt-in" programs with customers that had solar panels [4]
- Seeking to make TOU rate standard for ALL residential customers by end of 2019 [5]

#### Xcel Energy: 2015-2020

- Xcel Energy filed TOU pilot in 2015 [9]
- TOU pilot approved in May 2018 rate order [7]
- Pilot will roll out in 2020 to ~10,000 customers to assess implementation and education of needs/strategies for TOU rates, analyze customer impacts (particularly low-income), and determine how TOU rates could be applicable to entire Xcel residential class in future [7]
- Goal Assess implementation and education needs/strategies for TOU rates, analyze impacts to customers (particularly low-income), determine ability of TOU rates to reduce peak demand, inform how TOU rates could be applicable to entire Xcel residential class in future [8]

#### Why more time is needed to prepare

- Rate Analysis
  - Undertake billing analysis to determine winners and losers from TOU rate
  - Determine appropriate target peak/off-peak pricing ratio
  - Establish rate structure that appropriately charges customers without negatively affecting customer affordability and experience
- Pilot Programs
  - Validate marketing and education
  - Ensure customers understand how to balance their time of usage with their bill
  - Test out IT infrastructure to include billing
- IT Development and Meter Testing
  - Develop IT software for recording and billing TOU rates
  - o Determine meter configuration and data warehouse
  - Pilot and test newly developed software
- Marketing, Education, and Internal Training
  - Educate customers to improve engagement and adoption of behavioral modification
  - Educate customers on TOU rate structure (i.e., peak times, pricing ratio)
  - o Encourage load shift to maintain customer affordability
  - Research effectiveness of marketing and education
  - Prepare customer service for launch

October22, 2018

## **Reference Documents**

## Arizona Public Service (APS) Electric Company

[1]

DTE phone interview with Barbara Lockwood of APS on July 24, 2018

## Maryland Investor Owned Utilities

[2]

https://webapp.psc.state.md.us/newIntranet/Casenum/NewIndex3\_VOpenFile.cfm?filepath=C:\Admin Docket\PublicConferences\PC44\130\\PC44TOUPilotMarketingandOutreachPlan\_F.pdf

[3]

https://webapp.psc.state.md.us/newIntranet/AdminDocket/NewIndex3\_VOpenFile.cfm?ServerFilePath =C%3A%5CAdminDocket%5CPublicConferences%5CPC44%5C66%2Epdf

## Sacramento Municipal Utility District (SMUD)

[4]

https://www.utilitydive.com/news/smud-time-of-use-is-the-future-of-rate-design/397098/

[5]

https://www.sacbee.com/news/business/article192076699.html

[6]

https://www.bloomberg.com/news/articles/2017-10-17/sacramento-nudges-people-to-use-lesselectricity-at-peak-hours

## Xcel Energy

[7]

http://www.startribune.com/xcel-wins-approval-for-pilot-program-for-rates-varying-by-time-ofday/484219561/

## [8]

https://www.utilitydive.com/news/has-xcel-minnesota-designed-the-ideal-residential-time-of-userate/513235/

[9]

https://energynews.us/2018/02/06/midwest/will-customers-delay-laundry-to-save-money-xcel-energywants-to-find-out/

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# Michigan Public Service Commission

**DTE Electric Company** Staff LMP Differential Calculation Case No.: U-20162 Exhibit: S-16.2 Witness: Nicholas M. Revere Page: 1 of 1

Summer On Peak Average Price	\$ 41.27
All Other Hours Average Price	\$ 28.70
Differential per MWh	\$ 12.57
% Differential	43.78%

Michigan Public Service Commission DTE Electric Company **Staff's Present and Proposed Revenue Calculations** Residential Service Rate - D1 Non-Capacity Summer on Peak Case No.: U-20162 Exhibit: S-6 Schedule: F3 Witness: N. M. Revere Page: 3 of 52

Line <u>No.</u>	(a) Description	(b) Billing Deter	rminants	(c) Pres	(d) sent	(e) Propo	(f) osed
	Full Service Power Supply	Quantity	Units	Rate	Revenue	Rate	Revenue
					(\$000)		(\$000)
1	Power Supply Charges						
2	Non-Capacity Charges						
3	Non-Capacity Charge	13,527,987	MWh	\$0.04744	641,768	\$0.00000	0
4	Summer On Peak	1,082,239	MWh	\$0.00000	0	\$0.06526	70,625
5	Off Peak	12,445,748	MWh	\$0.00000	0	\$0.04539	564,869
6	Capacity Charges:						
7	Off Peak	12,445,748	MWh	\$0.03310	304,374	\$0.03820	475,380
8	Summer On Peak	1,082,239	MWh	\$0.04878	211,335	\$0.05492	59,437
9	Power Supply Subtotal	13,527,987	MWh	8.56¢	1,157,476		1,170,311
10							
11	PSCR	13,527,987	MWh	\$0.00000	0	\$0.00000	0
12	REPS	1,912,171	Meters	\$0.00000	0	\$0.00000	0
13	Total Full Service Power Supply	13,527,987	MWh	8.56¢	1,157,476	8.65¢	1,170,311
14							
15	Full Service Distribution	<u>Quantity</u>	<u>Units</u>				
16							
17	Service Charge	1,912,171	Cust.	\$7.50	172,095	\$7.50	172,095
18	Income Assistance	70,000	Cust.	(\$7.50)	(6,300)	(\$7.50)	(6,300)
19	Senior Citizen Provision	99,712	Cust.	(\$3.75)	(4,487)	(\$3.75)	(4,487)
20							
21	Former D1.3 Custs. Distribution Charg	441,428	MWh	\$0.05666	25,011	\$0.05996	26,467
22	Distribution Charge	13,086,559	MWh	\$0.05699	745,803	\$0.05996	784,637
23	Distribution System	13,527,987	MWh	6.89¢	932,123	7.19¢	972,412
24							
25	Nuclear Decomm.	13,527,987	MWh	\$0.000765	10,349	\$0.000765	10,349
26	Energy Waste Reduction	13,527,987	MWh	\$0.004322	58,468	\$0.004322	58,468
27	LIEAF	1,912,171	Cust.	\$0.93	21,340	\$0.93	21,340
28	Distribution Surcharges	13,527,987	MWh	0.67¢	90,157	0.67¢	90,157
29							
30	Total Full Service Distribution			7.56¢	1,022,279	7.85¢	1,062,569
31	Total Full Service D1	13,527,987	MWh	16.11¢	2,179,756	16.51¢	2,232,880
32	E	, ,					
33	Choice	Quantity	Units	Rate	Revenue	Rate	Revenue
34					(\$000)		(\$000)
35	Capacity Charges:				(*****)		(+)
36	First 17 KWH/Day	0	MWh	\$0.03310	0	\$0.03820	0
37	Excess	0	MWh	\$0.04878	0	\$0.05492	0
38	Capacity Total	0	MWh		0		0
30	Capacity Ford	0					-
40	Distribution Charges						
41	Service Charge	0	Cust	\$7.50	0	\$7.50	0
42	Income Assistance	0	Cust	(\$7.50)	0	(\$7.50)	0
43	Senior Citizen Provision	0	Cust	(\$3.75)	0	(\$3.75)	0
40		0	0031.	(\$0.75)	0	(\$0.75)	0
45	Distribution Charge	0	MWh	\$0.05699	0	\$0.05996	0
16	Distribution System	0	MWb	<b>\$0.00000</b>	ů	<i>\\</i> 0.00000	ů
40	Distribution System	0			U		v
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51	Distribution Surcharges	U	IVIVI		U		U
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53	Total Choice D1	0	MWh		0		0
54				,			
55	Total D1	13,527,987	MWh	16.11¢	2,179,756	16.51¢	2,232,880
56	Increase/Decrease (\$)						53,124

**Michigan Public Service Commission** DTE Electric Company Staff's Present and Proposed Revenue Calculations Residential Service Special Low Income Pilot Rate - D1.6 Non-Capacity Summer On Peak Case No.: U-20162 Exhibit: S-6 Schedule: F3 Witness: N. M. Revere Page: 7 of 52

Line	(a)	(b)		(c)	(d)	(e)	(f)
<u>No.</u>	Description	ling Determinar	nts	Pres	ent	Propo	sed
	Full Service Power Supply	<u>Quantity</u>	<u>Units</u>	Rate	<u>Revenue</u>	<u>Rate</u>	<u>Revenue</u>
					(\$000)		(\$000)
1	Power Supply Charges						
2	Non-Capacity Charges						
3	Non-Capacity Charge	237,341	MWh	\$0.04744	11,259	\$0.00000	0
4	Summer On Peak	16,614	MWh	\$0.00000	0	\$0.06526	1,084
5	Off Peak	220,728	MWh	\$0.00000	0	\$0.04539	10,018
6	Capacity Charges						
7	First 17 KWH/Day	163,719	MWh	\$0.03310	5,419	\$0.03820	6,253
8	Excess	73,623	MWh	\$0.04878	3,591	\$0.05492	4,043
9	Power Supply Subtotal	237,341	MWh	8.54¢	20,270	9.02¢	21,399
10							
11	PSCR	237,341	MWh	\$0.00000	0	\$0.00000	0
12	REPS	32,000	Meters	\$0.00000	0	\$0.00000	0
13	Total Full Service Power Supply	237,341	MWh	8.54¢	20,270	9.02¢	21,399
14							
15	Full Service Distribution	Quantity	<u>Units</u>				
16							
17	Service Charge	32,000	Cust.	\$7.50	2,880	\$7.50	2,880
18	Income Assistance	32,000	Cust.	(\$40.00)	(15,360)	(\$40.00)	(15,360)
19							
20	Distribution Charge	237,341	MWh	\$0.05699	13,526	\$0.05996	14,230
21	Distribution System	237,341	MWh	0.44¢	1,046	0.74¢	1,750
22							
23	Nuclear Decomm.	237,341	MWh	\$0.000765	182	\$0.000765	182
24	Energy Waste Reduction	237,341	MWh	\$0.004322	1,026	\$0.004322	1,026
25	LIEAF	32,000	Cust.	\$0.93	357	\$0.93	357
26	Distribution Subtotal	237.341	MWh	0.66¢	1.564	0.66¢	1.564
27		,					
28	Total Full Service Distribution			1.10¢	2,611	1.40¢	3,315
29	Total Full Service D1.6	237.341	MWh	9.64¢	22.880	10.41¢	24,714
30							
31	Choice	Quantity	Units	Rate	Revenue	Rate	Revenue
32			<u></u>		(\$000)	<u></u>	(\$000)
33	Capacity Charges				(\$000)		(4000)
34	First 17 KWH/Day	0	MWh	\$0.03310	0	\$0.03820	0
35	Excess	0	MW/b	\$0.04878	0	\$0.05492	0
36	Total Capacity	0		\$0.04070	Ű	ψ0.00 <del>1</del> 02	0
30	Total Capacity	0			0		U
31	Samiaa Charge	0	Cust	¢7.50	0	¢7.50	0
30		0	Cust.	۵۲.50 (۴40.00)	0	۵۲.50 (۴.40.00)	0
39	Income Assistance	0	Cusi.	(\$40.00)	0	(\$40.00)	0
40	Distribution Charge	0		¢0.05600	0	¢0.05006	0
41	Distribution Charge	0	IVIVVN	\$0.05699	0	\$0.05996	0
42	Distribution System	0	MWh		0		0
43							
44	Nuclear Decomm.	0	MWh	\$0.000765	0	\$0.000765	0
45	Energy Waste Reduction	0	MWh	\$0.004322	0	\$0.004322	0
46	LIEAF	0	Cust.	\$0.93	0	\$0.93	0
47	Distribution Subtotal	0	MWh		0		0
48							
49	Total Choice D1.6	0	MWh		0		0
50							
51	Total D1.6	237,341	MWh	9.64¢	22,880	<b>10.41</b> ¢	24,714
52	Increase/Decrease (\$)						1,833

52 Increase/Decrease (\$)

#### **Power Supply Revenues**

	(a)	<sup>(b)</sup> Power Supply	(c) Transmission Revenue	<sup>(d)</sup> Transmission	(e) Non-Capacity	<sup>(f)</sup> Non-Capacity Non-Trans
Line No.	Residential	Sales (MWH)	Requirement (\$000's)	Rate (\$000's)	Rate (\$000's)	Rate (\$000's)
1	D1/D1.6 Residential	13,765,328	\$132,147	\$0.00915	\$0.04697	\$0.03782
2	D1.1 Int. Air	321,293		\$0.00915	\$0.03721	\$0.02806
3	D1.2 TOD	161,650	\$1,273	\$0.00787	\$0.0457	\$0.03779
4	D1.7 TOD	107,048		\$0.00915	\$0.0276	\$0.01843
5	D1.8 Dynamic	123,219		\$0.00915	\$0.0393	\$0.03016
6	D1.9 Elec. Vehicle	3,625		\$0.00915		
	On-Peak				\$0.0891	\$0.08000
	Off-Peak				\$0.0223	\$0.01314
7	D2 Elec. Space Heat	294,420	\$2,297	\$0.00780	\$0.0458	\$0.03798
8	D5 Res. Water Ht.	125,084		\$0.00915	\$0.0252	\$0.01603
9	Total Residential		\$135,716			
10						
11	Secondary					
12	D1.1 Int. Air	6,171		\$0.00787	\$0.04004	\$0.03217
13	D1.7 TOD	9,266		\$0.00787	\$0.02660	\$0.01873
14	D1.8 Dynamic	278		\$0.00787	\$0.04382	\$0.03595
15	D1.9 Elec. Vehicle	0		\$0.00787		
	On-Peak				\$0.08915	\$0.08128
	Off-Peak				\$0.02228	\$0.01442
16	D3 Gen. Serv.	7,181,124	\$58,694	\$0.00787	\$0.04649	\$0.03862
17	D3.1 Unmetered	76,768		\$0.00787	\$0.07604	\$0.06817
18	D3.2 Sec. Educ.	197,953	\$1,304	\$0.00659	\$0.04569	\$0.03910
19	D3.3 Interruptible	94,451		\$0.00787	\$0.03884	\$0.03097
20	D4 Lg. Gen. Serv.	2,173,074	\$15,819			
	Demand	5,160		\$3.07	\$3.07	\$0.00
	First 200				\$0.04386	\$0.04386
	Excess				\$0.03386	\$0.03386
21	D5 Com. Wat. Ht.	4,844		\$0.00787	\$0.02737	\$0.01950
22	E1.1 Eng. St. Ltg.	9,804		\$0.00787	\$0.03214	\$0.02428
23	R7 Greenhs. Ltg.	2,686		\$0.00787	\$0.02656	\$0.01869
24	R8 Space Cond.	73,929		\$0.00787	\$0.04075	\$0.03288
25	Total Secondary		\$75,816			

MPSC Case No.:	<u>U-20162</u>
<b>Requestor:</b>	Staff
Question No.:	STDE-11.1
Respondent:	R. D. Feldmann
Page:	1 of 1

- **Question:** Please refer to pages 2-3 of Company witness Robert D. Feldmann's rebuttal testimony. Please confirm that while seeking competitive solicitations for the construction of the Combined Heat and Power plant (CHP) is not possible as construction has already begun, the Company could seek out requests for information to benchmark construction of a CHP with specifications, location and necessary gas and infrastructure access that match the one currently under construction, from companies with expertise in construction and operation of CHP units.
- **Answer:** Yes, The Company could seek out requests for information to benchmark construction of a CHP with specifications, location and necessary gas and infrastructure access that match the one currently under construction, from companies with expertise in construction and operation of CHP units. However, DTEE's position is that it undertook this proposed benchmarking when it retained HDR to develop a cost estimate for this project.

Attachments: N/A

DTE Electric Company Case No. U-20162 Auditor: Request No: Respondent: Page: C. S. Matthews CSM-8.5 J. L. Robinson 1 of 1

## **Request:**

5. Please provide a further breakdown of the costs included in the \$34 million (2018-2020) to replace the 3300 cell relays.

## Response:

There are external contracts to provide network engineering design, project management, and overhead line installation of approximately \$3.5 million, and DTE labor of approximately \$5 million. The material for the project is the largest contributor of almost \$26 million.

DTE Electric Company Case No. U-20162 Auditor: Request No: Respondent: Page: C. S. Matthews CSM-8.7 J. L. Robinson 1 of 1

# **Request:**

7. What is the actual cost of a 4G cell relay?

# **Response:**

We are still in the final stages of development and negotiation with the vendor. The approximate cost will be \$6,000. This does not include installation hardware and labor.

Michigan Public Service Commission Energy Operations Division DTE Electric Company Case No: U-20162 Electric Rate Case Auditor:CodyAudit Request No:CSMDate of Request:12-12Person Responding:I. M.Date of Response:12-12Page:1 of 2

Cody S. Matthews CSM-10 12-17-2018 I. M. Dimitry 12-18-2018 1 of 2

1. Please break out all costs included in Company Exhibit A-12, Schedule B5.6, page 1, Line

2 by line item.

Response:

The break out of all costs, both historical and projected, associated with the Programmable Communicating Thermostat (PCT) program included in Witness Dimitry's direct testimony, Exhibit A-12, Schedule B5.6, page 1, line 2 is as follows:

	Historical	Projected Bridge Period			Projected Test Year
	12 mos. Ended 12/31/2017	12 mos. Ending 12/31/2018	4 mos. Ending 4/30/2019	16 mos. Ending 4/30/2019	12 mos. Ending 4/30/2020
Materials	12	2,377	890	3,267	1,468
Contractor/Outside Services	1,849	1,830	-	1,830	-
Labor & Overheads	213	393	677	1,069	1,958
Total	2,074	4,600	1,567	6,167	3,426

The *Materials* line includes mostly the cost of purchasing and shipping the equipment (i.e., thermostats), and necessary installation when the customer requests installation assistance from the Company. The *Contractor/Outside Services* line include mainly the investment in the Distributed Energy Resource Management System (DERMS), an essential software capability, widely used in the industry to adequately execute IT integration and program implementation. The Company partnered with Omnetric as the main outside contractor for the implementation of DERMS as a result of a request for proposal. The *Labor & Overheads* line include internal work and associated external support from ICF International to plan and execute the marketing campaigns and outreach efforts to fulfill the customer enrollment and program engagement projections.

As indicated in lines 1 through 14 and Figure 3 in page IMD-12 of Witness Dimitry's direct testimony, the Company forecasted to complete the enrollment of 10,000 customers by the summer of 2019, more specifically by April 30, 2019. Although the Company has revised its interim enrollment forecast as indicated in lines 12 through 24 in page IMD Rebuttal-14 of Witness Dimitry's rebuttal testimony, the Company maintained the projected invested capital expenditures as described in Witness Dimitry's direct testimony. Therefore, the associated

Michigan Public Service Commission **Energy Operations Division** DTE Electric Company Case No: U-20162 Electric Rate Case Auditor: Cody S. Matthews Audit Request No: Date of Request: Person Responding: I. M. Dimitry Date of Response: Page:

CSM-10 12-17-2018 12-18-2018 2 of 2

projected investment to fulfill the initial 10,000-customer enrollment goal was estimated to be \$8.2 Million in total, and is detailed as follows:

	Historical	Projected Bridge Period	Total
	12 mos. Ended 12/31/2017	16 mos. Ending 4/30/2019	1/1/2017 – 4/30/2019
Materials	12	3,267	3,279
Contractor/Outside Services	1,849	1,830	3,679
Labor & Overheads	213	1,069	1,282
Total	2,074	6,167	8,240

As the Commission in Order in Case No. U-18014 already approved \$2.8 Million in capital expenditures for the development of the PCT pilot program, the remaining capital expenditures needed to fulfill the initial 10,000-customer enrollment is estimated to be \$5.4 Million (\$8.2 Million minus \$2.8 Million).

MPSC Case No.:	DTE Electric
Requestor:	<u>M. Edelyn</u>
Question No.:	MLE-11.1a
Respondent:	T. M. Uzenski
Page:	<u>1 of 1</u>

- **Question:** If the Commission is to issue an order in the Company's depreciation case U-18150 before the order in this instant rate case U-20162, please provide the following:
  - a. Please provide what the total projected test year depreciation expense in the instant case would be using the depreciation rates approved in U-18150. The Company should also include workpapers which validate those authorized depreciation rates were used to formulate the depreciation expense.
- **Answer:** The total projected test year depreciation expense would be \$883,748,000 using the depreciation rates recently approved in U-18150.

Attachments: U-20162 MLE-11.1 Depreciation U-18150 Rates.xls

MPSC Case No.:	DTE Electric
Requestor:	M. Edelyn
Question No.:	MLE-11.1b
Respondent:	T. M. Uzenski
Page:	<u>1 of 1</u>

- Question: If the Commission is to issue an order in the Company's depreciation case U-18150 before the order in this instant rate case U-20162, please provide the following:
  - b. Provide what the difference is between the above answer and the answer provided in Audit Request No. MLE-6.1a.
- **Answer:** As shown in the table below, the resulting depreciation expense is \$110,557,000 higher than depreciation at U-16117 current rates provided in MLE-6.1 and \$65,238,000 lower than the Company's original filing.

<u>Amounts in \$000</u>	De E	preciation Expense	Change	Ra I ( a	ate Base mpact simple verage)
Company Filing (U-18150 Filed Rates)	\$	948,986			
MLE-6.1 (U-16117 Current Rates	\$	773,191	\$ (175,795)	\$	87,897
MLE-11 (U-18150 Ordered Rates)	\$	883,748	<u>\$ 110,557</u>	\$	(55,278)
Total Change from Filed Position			\$ (65,238)	\$	32,619

Attachments: n/a

MPSC Case No.:	DTE Electric
<b>Requestor:</b>	<u>M. Edelyn</u>
Question No.:	MLE-11.1c
Respondent:	T. M. Uzenski
Page:	<u>1 of 1</u>
0	

- Question: If the Commission is to issue an order in the Company's depreciation case U-18150 before the order in this instant rate case U-20162, please provide the following:
  - c. Provide the corresponding impact on rate base for the projected test year.
- Answer: As shown in the table in MLE-11.1b, the corresponding impact on rate base for the projected test year is the simple average of the change in depreciation expense, i.e. \$55,278,000 lower than MLE-6.1 and \$32,619,000 higher than the Company's original filing.

Attachments: n/a

## STATE OF MICHIGAN

#### BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of **DTE ELECTRIC COMPANY** for authority to increase its rates, amend its rate schedules and rules governing the distribution and supply of electric energy, and for miscellaneous accounting authority.

Case No. U-20162 (e-file paperless)

#### **PROOF OF SERVICE**

STATE OF MICHIGAN ) ) ss COUNTY OF EATON )

CHERIE A. RICHIE, being first duly sworn, deposes and says that on December 21, 2018, she served a true copy of Michigan Public Service Commission Staff's Official Exhibits upon the following parties via e-mail only:

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Hon. Sally Wallace Administrative Law Judge Michigan Public Service Comm. 7109 W. Saginaw Hwy., 3<sup>rd</sup> Floor Lansing, MI 48917 <u>wallaces2@michigan.gov</u>

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Cherie A. Richie

Subscribed and sworn to before me this 21<sup>st</sup> day of **December**, 2018.

Emily A. Jefferson, Notary Public State of Michigan, County of Ingham Acting in the County of Eaton My Commission Expires: 1-11-2023