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

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December 15, 2020

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

RE: In the matter, on the Commission's own motion, regarding the regulatory reviews, revisions, determinations, and/or approvals necessary for **DTE Electric Company** to fully comply with Public Act 295 of 2008
MPSC Case No: U-20851

Dear Ms. Felice:

Attached for electronic filing in the above referenced matter is DTE Electric Company's Direct Testimony and Exhibits of David B. Harwood, Patrick D. Kauffman, Thomas W. Lacey, Marcus J. Rivard, and Sherri L. Wisniewski. Also attached is the Proof of Service.

Very truly yours,

Lauren D. Donofrio

Digitally signed by Lauren D. Donofrio
Date: 2020.12.15 19:14:24 -05'00'

Lauren D. Donofrio

LDD/erb
Enclosure

c: Service List

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of **DTE ELECTRIC COMPANY'S** application for the regulatory reviews, revisions, determinations, and/or approvals necessary for to fully comply with Public Act 295 of 2008	))))	Case No. U-20851

QUALIFICATIONS

AND

DIRECT TESTIMONY

OF

DAVID B. HARWOOD

DTE ELECTRIC COMPANY
QUALIFICATIONS OF DAVID B. HARWOOD

Line No.

Q1. Please state your full name, title, and business address.

A1. David B. Harwood, Director of Renewable Energy Strategy for DTE Electric. My business address is One Energy Plaza, Detroit, Michigan 48226.

Q2. On whose behalf are you testifying?

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

Q3. What is your educational background?

A3. I graduated from the University of Michigan in 1983 with a Bachelor of Science Degree in Chemical Engineering. In 2001, I received a Master of Business Administration Degree from Baker College.

Q4. Please describe your work experience.

A4. I began my career at DTE Energy in 1983 as a power plant engineer responsible for water chemistry and environmental processes. After approximately ten years of plant experience with increasing levels of leadership responsibility, I led Company asset acquisition teams responsible for power plant valuations and participation in numerous utility power plant auctions during an era of utility generation divestitures in the East and Midwest in the late 1990's.

I was appointed Director of Generation Optimization in 2000, a new organization within the Company responsible for generation reliability planning, generation capital budget and projects, long-term resource planning, and optimization of wholesale market participation before and during the implementation the Midcontinent Independent System Operator (MISO).

I subsequently held Director level positions in Planning and Strategy, Generation Engineering, Nuclear Development, and Major Enterprise Projects.

In 2013, I was appointed Director of Renewable Energy responsible for Renewable Portfolio Standard (RPS) compliance under 2008 PA 295 (as amended by 2016 PA 342), renewable project development, commercial contracts and regulatory filings, and day to day operation and maintenance of the Company's renewable energy fleet.

Q5. What is your current position and what are your current responsibilities?

A5. Currently, my role is focused on Renewable Energy strategy including RPS compliance, additional renewable supply planning, and contracting projects for RPS compliance, voluntary renewable programs and the Company's net zero carbon goals.

Q6. Have you previously sponsored testimony before the Michigan Public Service Commission?

A6. Yes. I sponsored testimony in the following cases:

U-15244	General Rate Case
U-17632	Renewable Energy Reconciliation Case
U-18232	2020 Amended REP Case

Line No.

Q7. What is the purpose of your testimony?

A7. The purpose of my direct testimony is to support incorporation of the projects that will supply MIGreenPower demand in the concurrently filed Voluntary Green Pricing (VGP) Program Case No. U-20713 and show the resulting changes to the Company's renewable energy plan (REP).

Q8. Are you sponsoring any exhibits?

A8. Yes. I am sponsoring the following exhibits:

Exhibit	Description
A-9	Affidavit of David B. Harwood in support of DTE Electric Company's Application for approval of the August 2020 Amended Renewable Energy Plan
A-10	Renewable Energy Plan Overview
A-11	Renewable Energy Plan Summary
A-12	DTE Electric Owned Renewable Energy Facilities Generation
A-13	RECs/ACECs from Renewable Energy & Associated Cost for Use in 2016 PA 342 Activities for the Period 2016-2029
A-14	Solar Assumptions for Future Builds
A-15	Affidavit of D. Dean Koujak in support of DTE Electric Company's Renewable Request for Proposals Process and Attachment A – Navigant Report

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

A9. Yes, they were.

Q10. When the Company filed this case, did you submit an affidavit in support?

A10. Yes, I did. My affidavit is now my Exhibit A-9, and the attachments to that affidavit are now Exhibits A-10 thru A-14.

Q11. Do the facts and opinions you set out in your Affidavit remain true today?

A11. Yes.

Q12. Are you sponsoring any other exhibits?

A12. Yes. When the Company filed the case it also submitted the Affidavit of D. Dean Koujak in support of DTE Electric Company's Renewable Request for Proposals Process. Mr. Koujal's affidavit and its attachment, Navigant's Report, are now my Exhibit A-15.

Q13. Does this conclude your direct testimony?

A13. Yes, it does.

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of **DTE ELECTRIC COMPANY'S** application for the regulatory reviews, revisions, determinations, and/or approvals necessary for to fully comply with Public Act 295 of 2008	))))	Case No. U-20851

EXHIBITS

OF

DAVID B. HARWOOD

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of **DTE ELECTRIC COMPANY'S** application for the regulatory reviews, revisions, determinations, and/or approvals necessary for to fully comply with Public Act 295 of 2008	))))	Case No. U-20851

AFFIDAVIT OF DAVID B. HARWOOD IN SUPPORT OF DTE ELECTRIC COMPANY'S APPLICATION FOR APPROVAL OF THE AUGUST 2020 AMENDED RENEWABLE ENERGY PLAN

STATE OF MICHIGAN)
)
COUNTY OF WAYNE)

David B. Harwood, being first duly sworn, deposes and says:

1. My title is Director of Renewable Energy Strategy for DTE Electric Company ("DTE Electric" or the "Company"). I graduated from the University of Michigan in 1983 with a Bachelor of Science Degree in Chemical Engineering. In 2001, I received a Master of Business Administration Degree from Baker College. I began my career at DTE Energy in 1983 as a power plant engineer responsible for water chemistry and environmental processes. After approximately ten years of plant experience with increasing levels of leadership responsibility, I led Company asset acquisition teams responsible for power plant valuations and participation in numerous utility power plant auctions during an era of utility generation divestitures in the East and Midwest in the late 1990's. I was appointed Director of Generation Optimization in 2000, a new organization

within the Company responsible for generation reliability planning, generation capital budget and projects, long-term resource planning, and optimization of wholesale market participation before and during the implementation the Midcontinent Independent System Operator (MISO). I subsequently held Director level positions in Planning and Strategy, Generation Engineering, Nuclear Development, and Major Enterprise Projects. In 2013, I was appointed Director of Renewable Energy responsible for Renewable Portfolio Standard (RPS) compliance under 2008 PA 295 (as amended by 2016 PA 342), renewable project development, commercial contracts, regulatory filings, and day to day operation and maintenance of the Company's renewable energy fleet. Currently, my role is focused on Renewable Energy strategy including RPS compliance, additional renewable supply planning, and contracting projects for RPS compliance, voluntary renewable programs and the Company's net zero carbon goals. I sponsored testimony before the Michigan Public Service Commission (MPSC or Commission) in General Rate Case No. U-15244 and Renewable Energy Reconciliation Case No. U-17632. I also sponsored testimony in the Company's 2020 Renewable Energy Plan (REP) Case No. U-18232, filed March 31, 2020.

2. I am sponsoring the following attachments, which were prepared by me or under my supervision:

Attachment	Description
1	Renewable Energy Plan Overview
2	Renewable Energy Plan Summary
3	DTE Electric Owned Renewable Energy Facilities Generation
4	RECs/ACECs from Renewable Energy & Associated Cost For Use in 2016 PA 342 Activities for the Period 2016-2029

5 Solar Assumptions for Future Builds

3. With this filing, DTE Electric is seeking ex parte approval of the 2020 August Amended Renewable Energy Plan (REP). The purpose of this amendment is to incorporate the projects that will supply MIGreenPower demand supported by Witness Calka in the concurrently-filed VGP Case No. U-20713 – and reflect the resulting changes to the REP plan. This 2020 August Amended REP includes the changes approved in the July 9, 2020 order in Case No. U-18232. This 2020 August Amended REP still shows that the Company expects to be in compliance with the Act's renewable energy credit (REC) standards through 2029 and, as shown in Attachment 2, it does not change or increase the Renewable Energy Plan Surcharge (REPS) or recovery mechanism.

4. The Company's August 2020 Amended REP proposal includes the portfolio of all approved assets in the previously approved plan. The Company also proposes two Company-owned solar parks totaling approximately 320MW, and one solar PPA of approximately 100 MW, all with 2022 Commercial Operation dates and based on actual bid pricing, as a result of the Company-issued 2019 requests for proposal (RFP). In addition to the 420 MW proposed for 2022, the Company proposes a 61.9 MW generic solar build for 2023, a 182.8 MW generic solar build for 2024 and a 131.7 MW generic solar build for 2025. The revised portfolio of assets provides for the forecasted voluntary green pricing programs demand as outlined in the concurrently-filed VGP Case No. U-20713.

5. This 2020 August Amended REP does not change any of the assets or forecast for compliance, thus it still shows that the Company expects to generate or purchase RECs to satisfy

the Act's REC standards through 2029.

6. The changes being incorporated into this August 2020 Amended REP impact the Plan's forecasted total revenue requirement, VGP subscribed generation and revenue, incremental cost of compliance, and regulatory liability ending balance as shown in Attachment 1 and 2. The total estimated revenue requirement including VGP projects for years 2020 through August 2029 is approximately $5,466 million, due to the additional VGP projects added. The VGP subscribed generation increased by the total generation of the new VGP projects added and as a result, the forecasted revenue from Voluntary Green Pricing Programs increased to approximately $1,060 million for years 2020 through August 2029. The total estimated incremental cost of compliance for years 2020 through August 2029 is approximately $34 million. The new estimated regulatory liability ending balance in August 2029 is approximately $27 million.

7. This Plan includes all previously approved VGP assets that supply the Company's voluntary green pricing program under Rider 17 and Rider 19 and includes the six VGP assets the Company proposes in this Plan. As per the build plan supported by Witness Calka in the concurrently-filed VGP Case No. U-20713 the Company will need 420 MW in 2022, 61.9 MW in 2023, 182.8 MW in 2024 and 131.7 MW in 2025 to support the forecasted demand for MIGreenPower. The Company has identified three projects from the Company-issued 2019 RFPs to supply the 2022 demand, while the 2023-2025 demand is modeled as generic solar builds.

8. Subscribed portions of the approved assets attributable to MIGreenPower have been subtracted from the REP and the revenue from those subscriptions is shown on line 34 of Attachment 2. Revenue from the subscribed assets is shown in the incremental cost of compliance as one of the costs recovered to offset the revenue requirement. These costs are calculated based

on the actual or projected subscription fee for the VGP program. No VGP assets will utilize the transfer price mechanism proposed and approved in the July 9, 2020 order in Case No 18232. Subscribed portions of the VGP programs are incremental to the REP and the associated RECs are retired on behalf of subscribers. Consistent with the July 2019 Order in Case No 18232, the Isabella I and II, Fairbanks and the three new proposed VGP project contracts are all modeled at the prevailing return on equity for the Company due to the assumption and forecast that these assets will be fully subscribed under MIGreenPower.

9. The Company's August 2020 Amended REP runs through August 2029 and is based on the Company's best estimates and forecasts regarding a wide range of factors. As shown in Attachment 5, this plan makes assumptions on future capacity factor and installed cost for the new VGP projects added. All new VGP projects and resources included in this 2020 Amended REP filing are new solar farms in the Plan. The plan proposes three solar farms in 2022 that are approximately 420 MW (two Company-owned and one PPA), one approximately 62 MW solar farm in 2023, one approximately 183 MW solar farm in 2024 and one approximately 132 MW solar farm in 2025. Of the two 2022 Company-owned assets, one is a 120 MW facility with an NCF of 23.5%, installed cost of approximately $1321/kW and an estimated levelized price between $51-$54/MWh. The other 2022 Company owned asset is a 200 MW facility with an NCF of 23.8%, installed cost of approximately $1,293/kW and an estimated levelized price between $48-$51/MWh. For the 2023, 2024, and 2025 generic solar builds, the Company assumed an NCF of 23.9% based on the average NCF of all 2021 and 2022 solar assets already approved or being proposed with this plan. The estimated installed costs for the 2023 generic solar build is approximately $1312/kW, based on applying the 2019 NREL ATB Solar Chicago (med) CAPEX

growth rate between 2022 and 2023, to the average installed cost for the two 2022 proposed solar assets ($1307/kW). This method was also used for the 2024 and 2025 generic solar assets, resulting in an approximately $1316/kW and $1320/kW installed cost accordingly. The Company has also assumed that the 2023 project will qualify for 30% ITC while all 2024 and later solar projects will qualify for 10% ITC which supports the higher estimated levelized price for the 2024 and 2025 generic solar projects. All other assumptions are consistent with the previously approved Plan.

10. For all Company-owned and PPA projects (wind and solar) that are operational or have been approved as of the time of the filing, the forward-looking capacity factor projections are consistent with the portions of the Plan that were approved in the MPSC's July 9, 2020 order in Case U-18232, which were based on historical performance of the existing farms and projected for approved but not yet operational projects.

11. The Company has modeled all future generic build for VGP as Company-owned, tax equity financed, assets in this plan. Additionally, based on the Company's forecasts described above, solar is the most cost effective way to supply the demand of the voluntary green pricing programs. Therefore, the Company has modeled primarily solar energy assets to meet this demand. Changes in these forecasts could impact which technology is the most prudent means to meet this demand. This was done for simplicity's sake only and does not necessarily reflect the actual ownership structure for any future project. All future projects will be determined via competitive bidding process. The Company will continue to competitively bid all major contracts for renewable energy assets, and the bid process will be audited by the Commission Staff for prudency.

12. Based on my experience and the above determinations, it is in DTE Electric's as

well as its customers' best interest for the Commission to approve the Company's August 2020 Amended Renewable Energy Plan and grant the Company's related requests.

Further, Affiant sayeth not.

David B. Harwood

Digitally signed by David B. Harwood
Date: 2020.08.31 14:45:18 -04'00'

David B. Harwood

Subscribed and sworn to before
me this 31st day of August 2020.

Estella R. Branson

Digitally signed by Estella R. Branson
Date: 2020.08.31 14:47:09 -04'00'

Estella R. Branson, Notary Public
Oakland County, Michigan
My Commission Expires: 10-26-2023
Acting in Wayne County

Michigan Public Service Commission
DTE Electric Company
2016 PA 342 Renewable Energy Plan - August 2020 Amended REP
Renewable Energy Plan Overview

Case No.: U-20851
Exhibit: A-10
Witness: D. B. Harwood

		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)
Line		2017		2018		2019		2020		2021		2022		2023	
No.		RECs	Percent	RECs	Percent	RECs	Percent	RECs	Percent	RECs	Percent	RECs	Percent	RECs	Percent
1	**Technology Mix (1)**														
2	**Wind**	**2,880,662**	**75.96%**	**2,777,840**	**72.15%**	**3,193,396**	**76.29%**	**3,711,891**	**79.59%**	**3,834,556**	**80.08%**	**4,378,656**	**77.21%**	**4,378,656**	**77.17%**
3	Owned	1,499,083	39.53%	1,459,134	37.90%	1,814,198	43.34%	2,284,746	48.99%	2,407,412	50.28%	2,951,511	52.05%	2,951,511	52.02%
4	Purchased	1,381,579	36.43%	1,318,706	34.25%	1,379,198	32.95%	1,427,145	30.60%	1,427,145	29.80%	1,427,145	25.17%	1,427,145	25.15%
5	**Solar**	**82,485**	**2.18%**	**93,711**	**2.43%**	**87,406**	**2.09%**	**68,412**	**1.47%**	**49,274**	**1.03%**	**225,540**	**3.98%**	**312,176**	**5.50%**
6	Owned	68,680	1.81%	80,055	2.08%	73,860	1.76%	54,973	1.18%	30,301	0.63%	37,477	0.66%	37,289	0.66%
7	Purchased	13,805	0.36%	13,656	0.35%	13,546	0.32%	13,438	0.29%	18,973	0.40%	188,063	3.32%	274,887	4.84%
8	**Biomass**	**113,187**	**2.98%**	**122,769**	**3.19%**	**122,768**	**2.93%**	**117,628**	**2.52%**	**117,306**	**2.45%**	**117,306**	**2.07%**	**117,306**	**2.07%**
9	Owned	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
10	Purchased	113,187	2.98%	122,769	3.19%	122,768	2.93%	117,628	2.52%	117,306	2.45%	117,306	2.07%	117,306	2.07%
11	**Steam**	**0**	**0.00%**	**0**	**0.00%**	**0**	**0.00%**	**0**	**0.00%**	**0**	**0.00%**	**0**	**0.00%**	**0**	**0.00%**
12	Owned	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
13	Purchased	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
14	**Geothermal**	**0**	**0.00%**	**0**	**0.00%**	**0**	**0.00%**	**0**	**0.00%**	**0**	**0.00%**	**0**	**0.00%**	**0**	**0.00%**
15	Owned	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
16	Purchased	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
17	**Municipal Solid Waste**	**181,880**	**4.80%**	**122,932**	**3.19%**	**22,386**	**0.53%**	**0**	**0.00%**	**0**	**0.00%**	**0**	**0.00%**	**0**	**0.00%**
18	Owned	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
19	Purchased	181,880	4.80%	122,932	3.19%	22,386	0.53%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
20	**Landfill Gas**	**300,471**	**7.92%**	**305,531**	**7.94%**	**318,458**	**7.61%**	**315,930**	**6.77%**	**315,787**	**6.59%**	**315,787**	**5.57%**	**315,787**	**5.57%**
21	Owned	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
22	Purchased	300,471	7.92%	305,531	7.94%	318,458	7.61%	315,930	6.77%	315,787	6.59%	315,787	5.57%	315,787	5.57%
23	**Hydroelectric**	**20,387**	**0.54%**	**14,668**	**0.38%**	**18,444**	**0.44%**	**18,913**	**0.41%**	**21,412**	**0.45%**	**21,412**	**0.38%**	**21,412**	**0.38%**
24	Owned	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
25	Purchased	20,387	0.54%	14,668	0.38%	18,444	0.44%	18,913	0.41%	21,412	0.45%	21,412	0.38%	21,412	0.38%
26	**Incentive**	**213,066**	**5.62%**	**412,534**	**10.72%**	**423,083**	**10.11%**	**430,842**	**9.24%**	**450,035**	**9.40%**	**612,115**	**10.79%**	**528,492**	**9.31%**
27	Owned	148,625	3.92%	358,332	9.31%	355,094	8.48%	364,052	7.81%	382,283	7.98%	520,691	9.18%	424,913	7.49%
28	Purchased	64,441	1.70%	54,202	1.41%	67,990	1.62%	66,790	1.43%	67,751	1.41%	91,424	1.61%	103,579	1.83%
29	**Other**	**0**	**0.00%**	**0**	**0.00%**	**0**	**0.00%**	**0**	**0.00%**	**0**	**0.00%**	**0**	**0.00%**	**0**	**0.00%**
30	Owned	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
31	Purchased	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
32	**Total**	**3,792,138**	**100.00%**	**3,849,984**	**100.00%**	**4,185,942**	**100.00%**	**4,663,615**	**100.00%**	**4,788,371**	**100.00%**	**5,670,816**	**100.00%**	**5,673,829**	**100.00%**
33															
34		2017		2018		2019		2020		2021		2022		2023	
35		RECs	Percent	RECs	Percent	RECs	Percent	RECs	Percent	RECs	Percent	RECs	Percent	RECs	Percent
36	**Program Type**														
37	PURPA	452,307	96%	389,904	94%	308,890	88%	282,770	63%	285,269	18%	285,269	17%	285,269	12%
38	Net Metering (used for compliance)	13,805	3%	13,656	3%	13,546	4%	13,438	3%	13,331	1%	13,224	1%	13,118	1%
39	Feed-in Tariffs	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
40	Community Solar	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
41	Other (VGPs)	5,352	1%	13,088	3%	27,158	8%	154,975	34%	1,311,753	81%	1,393,638	82%	2,009,741	87%
42	**Total**	**471,464**	**100%**	**416,648**	**100%**	**349,594**	**100%**	**451,183**	**100%**	**1,610,353**	**100%**	**1,692,131**	**100%**	**2,308,128**	**100%**

(1) Excludes Voluntary Pricing Programs

Michigan Public Service Commission
DTE Electric Company
2016 PA 342 Renewable Energy Plan - August 2020 Am
Renewable Energy Plan Overview

Case No.: U-20851
Exhibit: A-10
Witness: D. B. Harwood
Page: 2 of 2

		(o)	(p)	(q)	(r)	(s)	(t)	(u)	(v)	(w)	(x)	(y)	(z)
Line No.		2024		2025		2026		2027		2028		2029	
		RECs	Percent	RECs	Percent	RECs	Percent	RECs	Percent	RECs	Percent	RECs	Percent
1	**Technology Mix (1)**												
2	**Wind**	**4,390,858**	**78.51%**	**4,378,656**	**79.36%**	**4,378,656**	**79.39%**	**4,378,656**	**79.43%**	**4,390,858**	**79.49%**	**2,894,104**	**79.47%**
3	Owned	2,959,803	52.92%	2,951,511	53.49%	2,951,511	53.51%	2,951,511	53.54%	2,959,803	53.58%	1,942,674	53.35%
4	Purchased	1,431,055	25.59%	1,427,145	25.87%	1,427,145	25.87%	1,427,145	25.89%	1,431,055	25.91%	951,430	26.13%
5	**Solar**	**310,677**	**5.55%**	**308,984**	**5.60%**	**307,400**	**5.57%**	**305,825**	**5.55%**	**304,357**	**5.51%**	**202,618**	**5.56%**
6	Owned	37,204	0.67%	36,917	0.67%	36,733	0.67%	36,549	0.66%	36,466	0.66%	24,123	0.66%
7	Purchased	273,473	4.89%	272,066	4.93%	270,667	4.91%	269,276	4.88%	267,891	4.85%	178,495	4.90%
8	**Biomass**	**117,628**	**2.10%**	**117,306**	**2.13%**	**117,306**	**2.13%**	**117,306**	**2.13%**	**117,628**	**2.13%**	**78,204**	**2.15%**
9	Owned	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
10	Purchased	117,628	2.10%	117,306	2.13%	117,306	2.13%	117,306	2.13%	117,628	2.13%	78,204	2.15%
11	**Steam**	**0**	**0.00%**	**0**	**0.00%**	**0**	**0.00%**	**0**	**0.00%**	**0**	**0.00%**	**0**	**0.00%**
12	Owned	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
13	Purchased	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
14	**Geothermal**	**0**	**0.00%**	**0**	**0.00%**	**0**	**0.00%**	**0**	**0.00%**	**0**	**0.00%**	**0**	**0.00%**
15	Owned	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
16	Purchased	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
17	**Municipal Solid Waste**	**0**	**0.00%**	**0**	**0.00%**	**0**	**0.00%**	**0**	**0.00%**	**0**	**0.00%**	**0**	**0.00%**
18	Owned	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
19	Purchased	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
20	**Landfill Gas**	**281,555**	**5.03%**	**281,412**	**5.10%**	**281,412**	**5.10%**	**281,412**	**5.11%**	**281,555**	**5.10%**	**187,608**	**5.15%**
21	Owned	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
22	Purchased	281,555	5.03%	281,412	5.10%	281,412	5.10%	281,412	5.11%	281,555	5.10%	187,608	5.15%
23	**Hydroelectric**	**21,412**	**0.38%**	**21,412**	**0.39%**	**21,412**	**0.39%**	**21,412**	**0.39%**	**21,412**	**0.39%**	**8,527**	**0.23%**
24	Owned	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
25	Purchased	21,412	0.38%	21,412	0.39%	21,412	0.39%	21,412	0.39%	21,412	0.39%	8,527	0.23%
26	**Incentive**	**470,937**	**8.42%**	**409,598**	**7.42%**	**409,512**	**7.42%**	**407,811**	**7.40%**	**407,862**	**7.38%**	**270,493**	**7.43%**
27	Owned	373,754	6.68%	312,654	5.67%	312,764	5.67%	311,258	5.65%	311,461	5.64%	206,794	5.68%
28	Purchased	97,182	1.74%	96,944	1.76%	96,748	1.75%	96,553	1.75%	96,401	1.75%	63,699	1.75%
29	**Other**	**0**	**0.00%**	**0**	**0.00%**	**0**	**0.00%**	**0**	**0.00%**	**0**	**0.00%**	**0**	**0.00%**
30	Owned	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
31	Purchased	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
32	**Total**	**5,593,066**	**100.00%**	**5,517,368**	**100.00%**	**5,515,698**	**100.00%**	**5,512,422**	**100.00%**	**5,523,670**	**100.00%**	**3,641,555**	**100.00%**
33													
34		2024		2025		2026		2027		2028		2029	
35		RECs	Percent	RECs	Percent	RECs	Percent	RECs	Percent	RECs	Percent	RECs	Percent
36	**Program Type**												
37	PURPA	250,894	10%	250,894	9%	250,894	8%	250,894	8%	250,894	8%	161,515	8%
38	Net Metering (used for compliance)	13,013	1%	12,909	0%	12,806	0%	12,703	0%	12,602	0%	9,153	0%
39	Feed-in Tariffs	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
40	Community Solar	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
41	Other (VGPs)	2,161,873	89%	2,523,707	91%	2,768,845	91%	2,761,351	91%	2,761,233	91%	1,855,982	92%
42	**Total**	**2,425,780**	**100%**	**2,787,510**	**100%**	**3,032,545**	**100%**	**3,024,948**	**100%**	**3,024,728**	**100%**	**2,026,651**	**100%**

(1) Excludes Voluntary Pricing Programs

Michigan Public Service Commission
DTE Electric Company
2016 PA 342 Renewable Energy Plan - August 2020 Amended REP
Renewable Energy Plan Summary

Case No.: U-20851
Exhibit: A-11
Witness: D. B. Harwood
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Line No.	(a)		(b) 2016	(c) 2017	(d) 2018	(e) 2019	(f) 2020	(g) 2021	(h) 2022
1	**Sales and Requirement Calculation**	**Source**							
2	**Method: Weather Normalized or 3 Year Average**								
3	If Selected Weather Normalized:								
4	Prior Year Sales to Retail Customers	B-23 MBL Column (i)					42,397,343	41,482,439	40,755,451
5	Prior Year Weather Normalization Factor						0.98	1.00	1.00
6	Prior Year Weather Normalized Sales (Row Number 4 * 5)	B-23 MBL Column (i)					41,694,757	41,482,439	40,755,451
7	If Selected 3 Year Average:								
8	Current Retail Sales to Retail Customers								
9	3 Year Average of Retail Sales								
10	RPS Required Energy Credits (For 2017 and 2018 enter the same amount as 2015 requirement in MIRECS, for 2019 and 2020 enter 12.5% of row 6 or 9, for 2021 enter 15% of row 6 or 9)	Calculated		4,244,832	4,244,832	5,299,668	5,211,845	6,222,366	6,113,318
11	**Energy Credits**								
12	Energy Credit Beginning Balance	Row 21		7,708,845	7,805,244	7,778,349	6,673,607	6,125,377	4,691,382
13	Energy Credits Obtained through Generation/BOT	ATT-4 DBH +WP-4 DBH (IRECs)		1,968,951	1,994,765	2,246,023	2,703,772	2,819,996	3,509,679
14	Energy Credits Obtained through PPA	ATT-4 DBH+WP-4 DBH (IRECs)		2,061,709	1,937,638	1,929,244	1,946,404	1,955,044	2,147,913
15	Energy Credits Obtained through REC Purchases	ATT-4 DBH line 7		310,571	285,534	19,659	13,438	13,331	13,224
16	Plus: Energy Credit Obtained (Row 13 + 14 + 15)	Calculated		4,341,231	4,217,936	4,194,926	4,663,615	4,788,371	5,670,816
17	Less: Energy Credits Sold			0	0	0	0	0	0
18	Available Energy Credits (Row 12 + 16 + 17)	Calculated		12,050,076	12,023,181	11,973,275	11,337,221	10,913,747	10,362,197
19	Compliance Requirement (Row 10)	Calculated		4,244,832	4,244,832	5,299,668	5,211,845	6,222,366	6,113,318
20	Less: Energy Credit Expiration			0	0	0	0	0	0
21	Energy Credit Ending Balance (Row 18 - 19 - 20)	Calculated	7,708,845	7,805,244	7,778,349	6,673,607	6,125,377	4,691,382	4,248,880
22	**Revenue Requirement**								
23	Cost of Renewable Energy Generation/BOT	ATT-2 TWL line 22 - lines 14 & 15		$ 183,304,476	$ 169,154,803	$ 209,707,956	$ 262,019,400	$ 351,484,294	$ 410,412,838
24	Cost of Renewable Energy PPA	ATT-2 TWL line 14		$ 102,416,375	$ 100,528,754	$ 105,081,841	$ 107,922,326	$ 108,489,687	$ 115,950,748
25	Cost of Renewable Energy Credit Purchases	ATT-2 TWL line 15		$ 13,726,405	$ 9,735,674	$ 9,312,111	$ 6,264,285	$ 5,291,319	$ 3,199,482
26	Costs of Administration of Renewable Energy Plan	ATT-1 PDK line 2		$ 444,366	$ 455,475	$ 466,862	$ 478,534	$ 490,497	$ 502,759
27	Less: Revenue Obtained from Renewable Energy Sales (non-retail)								
28	Cost of Payments to Tax Equity Partnership(s)	ATT 1 TWL line 6							$ 2,890,364
29	Total Revenue Requirement for Renewable Energy Plan (Row 23 + 24 + 25 + 26 - 27)	Calculated		$ 299,891,622	$ 279,874,706	$ 324,568,770	$ 376,684,546	$ 465,755,797	$ 532,956,191
30	**Cost Recovery**								
31	Forecasted Transfer Price per MWh	ATT-9 MJR line 90/line 89		$ 66.19	$ 66.83	$ 65.96	$ 63.73	$ 70.44	$ 67.87
32	MWh of Renewable Energy	ATT-9 MJR line 89		3,112,959.69	3,033,890.68	3,440,422.00	3,936,564.61	4,039,736.53	4,760,208.09
33	Amount Recovered through the PSCR (Row 30 * 31)	Calculated		$ 206,053,741	$ 202,749,705	$ 226,939,671	$ 250,894,808	$ 284,539,461	$ 323,072,244
34	Federal Tax Impacts (including PTC/ITC/TCJA Remeasurement) (1)	ATT-1 TWL line 10, 11, and 22		$ 59,360,764	$ 47,693,339	$ 61,802,050	$ 84,714,578	$ 128,302,682	$ 135,194,353
35	Revenue from Voluntary Green Pricing Programs (2)	ATT-1 TWL line 14 and 17		$ 385,344	$ 942,330	$ 1,955,376	$ 9,104,185	$ 67,560,918	$ 72,211,038
36	Cash Distributions from Tax Equity Partnership(s)	ATT 1 TWL line 20							$ -
37	Incremental Cost of Compliance (Row 28 - 32)	Calculated		$ 34,091,772	$ 28,489,332	$ 33,871,673	$ 31,970,974	$ (14,647,264)	$ 2,478,557
38	**Non-Volumetric Surcharge Meter (or customer) Forecast**								
39	Residential	ATT-5 TWL Column (b)				2,003,509	2,012,612	2,021,345	2,030,479
40	Secondary	ATT-5 TWL Column (c)				201,654	203,144	204,230	205,067
41	Primary	ATT-5 TWL Column (d)				2,929	2,915	2,825	2,651
42	Total (Row 35 + 36 + 37)	Calculated				2,208,092	2,218,670	2,228,400	2,238,197
43	**Planned Surcharge Revenue**								
44	Residential					$ -	$ -	$ -	$ -
45	Secondary					$ -	$ -	$ -	$ -
46	Primary					$ -	$ -	$ -	$ -
47	Total (Row 40 + 41 + 42)					$ -	$ -	$ -	$ -
48	**Year-End Regulatory Liability Balance**								
49	Current Year Regulatory Liability Balance (Row 43 - 33)	Calculated		$ (34,091,772)	$ (28,489,332)	$ (33,871,673)	$ (31,970,974)	$ 14,647,264	$ (2,478,557)
50	Forecasted Ending Balance Prior to Current Year Interest (Row 48 for prior year + Row 45 of current year)	Calculated		$ 110,912,629	$ 83,912,793	$ 52,191,023	$ 21,920,049	$ 37,334,818	$ 35,464,284
51	Carrying Charges (short-term interest)	ATT-3 TWL line 7		$ 1,489,495	$ 2,149,903	$ 1,700,000	$ 767,505	$ 608,023	$ 743,223
52	Total Balance (Row 46 + 47) (2)	Calculated	$ 145,004,402	$ 112,402,125	$ 86,062,696	$ 53,891,023	$ 22,687,554	$ 37,942,841	$ 36,207,507
53	**Cumulative Megawatts by Year**								
54	DTE Owned Wind			451	451	612	1236	1461	1461
55	DTE Owned Solar			65	65	65	65	75	395

(1) Tax Impacts added to accurately reflect Incremental Cost of Compliance calculation
(2) VGP revenue included in cost recovery per MCL 460.1047 Section 2(b)(vi)

Michigan Public Service Commission
DTE Electric Company
2016 PA 342 Renewable Energy Plan - August 2020 Amended REP
Renewable Energy Plan Summary

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Line No.	(a)	(i) 2023	(j) 2024	(k) 2025	(l) 2026	(m) 2027	(n) 2028	(o) 2029
1	**Sales and Requirement Calculation**							
2	**Method: Weather Normalized or 3 Year Average**							
3	If Selected Weather Normalized:							
4	Prior Year Sales to Retail Customers	40,290,180	40,050,007	39,800,188	39,575,013	39,331,636	39,177,944	26,021,099
5	Prior Year Weather Normalization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
6	Prior Year Weather Normalized Sales (Row Number 4 * 5)	40,290,180	40,050,007	39,800,188	39,575,013	39,331,636	39,177,944	26,021,099
7	If Selected 3 Year Average:							
8	Current Retail Sales to Retail Customers							
9	3 Year Average of Retail Sales							
10	RPS Required Energy Credits (For 2017 and 2018 enter the same amount as 2015 requirement in MIRECS, for 2019 and 2020 enter 12.5% of row 6 or 9, for 2021 enter 15% of row 6 or 9)	6,043,527	6,007,501	5,970,028	5,936,252	5,899,745	5,876,692	3,903,165
11	**Energy Credits**							
12	Energy Credit Beginning Balance	4,248,880	3,879,182	3,464,747	3,012,087	2,591,533	2,204,210	1,851,189
13	Energy Credits Obtained through Generation/BOT	3,413,713	3,370,762	3,301,083	3,301,008	3,299,319	3,307,730	2,173,591
14	Energy Credits Obtained through PPA	2,246,998	2,209,291	2,203,376	2,201,885	2,200,400	2,203,339	1,458,811
15	Energy Credits Obtained through REC Purchases	13,118	13,013	12,909	12,806	12,703	12,602	9,153
16	Plus: Energy Credit Obtained (Row 13 + 14 + 15)	5,673,829	5,593,066	5,517,368	5,515,698	5,512,422	5,523,670	3,641,555
17	Less: Energy Credits Sold	0	0	0	0	0	0	0
18	Available Energy Credits (Row 12 + 16 + 17)	9,922,709	9,472,248	8,982,115	8,527,785	8,103,955	7,727,880	5,492,744
19	Compliance Requirement (Row 10)	6,043,527	6,007,501	5,970,028	5,936,252	5,899,745	5,876,692	3,903,165
20	Less: Energy Credit Expiration	0	0	0	0	0	0	0
21	Energy Credit Ending Balance (Row 18 - 19 - 20)	3,879,182	3,464,747	3,012,087	2,591,533	2,204,210	1,851,189	1,589,579
22	**Revenue Requirement**							
23	Cost of Renewable Energy Generation/BOT	$ 424,342,059	$ 429,265,860	$ 435,996,575	$ 433,205,689	$ 422,807,810	$ 411,785,465	$ 267,040,410
24	Cost of Renewable Energy PPA	$ 121,268,669	$ 122,126,292	$ 121,982,546	$ 122,141,133	$ 122,302,223	$ 122,765,720	$ 81,746,290
25	Cost of Renewable Energy Credit Purchases	$ 1,912,628	$ 1,079,753	$ 797,956	$ 704,202	$ 654,844	$ 620,238	$ 386,272
26	Costs of Administration of Renewable Energy Plan	$ 515,328	$ 528,212	$ 541,417	$ 554,952	$ 568,826	$ 583,047	$ 398,415
27	Less: Revenue Obtained from Renewable Energy Sales (non-retail)							
28	Cost of Payments to Tax Equity Partnership(s)	$ 35,094,331	$ 43,399,512	$ 66,137,947	$ 81,520,250	$ 81,112,649	$ 80,928,201	$ 53,535,700
29	Total Revenue Requirement for Renewable Energy Plan (Row 23 + 24 + 25 + 26 - 27)	$ 583,133,014	$ 596,399,628	$ 625,456,440	$ 638,126,227	$ 627,446,352	$ 616,682,671	$ 403,107,087
30	**Cost Recovery**							
31	Forecasted Transfer Price per MWh	$ 68.73	$ 72.82	$ 70.46	$ 69.65	$ 68.41	$ 63.76	$ 64.24
32	MWh of Renewable Energy	4,846,949.99	4,858,221.81	4,843,966.89	4,842,486.52	4,841,013.55	4,852,313.03	3,200,393.11
33	Amount Recovered through the PSCR (Row 30 * 31)	$ 333,123,595	$ 353,783,625	$ 341,301,609	$ 337,287,701	$ 331,155,133	$ 309,398,049	$ 205,601,336
34	Federal Tax Impacts (including PTC/ITC/TCJA Remeasurement) (1)	$ 125,736,861	$ 109,259,595	$ 107,085,417	$ 107,158,776	$ 100,930,800	$ 104,747,891	$ 58,412,150
35	Revenue from Voluntary Green Pricing Programs (2)	$ 105,319,826	$ 113,420,096	$ 136,113,650	$ 151,661,668	$ 151,252,040	$ 151,242,939	$ 102,092,613
36	Cash Distributions from Tax Equity Partnership(s)	$ 16,500,966	$ 20,782,927	$ 34,872,822	$ 45,145,595	$ 45,874,160	$ 46,139,207	$ 30,720,536
37	Incremental Cost of Compliance (Row 28 - 32)	$ 2,451,765	$ (846,615)	$ 6,082,942	$ (3,127,513)	$ (1,765,782)	$ 5,154,585	$ 6,280,452
38	**Non-Volumetric Surcharge Meter (or customer) Forecast**							
39	Residential	2,037,730	2,043,846	2,049,738	2,056,636	2,064,257	2,070,865	2,076,021
40	Secondary	205,855	206,520	207,161	207,911	208,739	209,458	210,018
41	Primary	2,634	2,618	2,601	2,585	2,569	2,552	2,536
42	Total (Row 35 + 36 + 37)	2,246,219	2,252,985	2,259,501	2,267,132	2,275,565	2,282,875	2,288,575
43	**Planned Surcharge Revenue**							
44	Residential	$ -	$ -	$ -	$ -	$ -	$ -	$ -
45	Secondary	$ -	$ -	$ -	$ -	$ -	$ -	$ -
46	Primary	$ -	$ -	$ -	$ -	$ -	$ -	$ -
47	Total (Row 40 + 41 + 42)	$ -	$ -	$ -	$ -	$ -	$ -	$ -
48	**Year-End Regulatory Liability Balance**							
49	Current Year Regulatory Liability Balance (Row 43 - 33)	$ (2,451,765)	$ 846,615	$ (6,082,942)	$ 3,127,513	$ 1,765,782	$ (5,154,585)	$ (6,280,452)
50	Forecasted Ending Balance Prior to Current Year Interest (Row 48 for prior year + Row 45 of current year)	$ 33,755,742	$ 35,310,793	$ 29,934,385	$ 33,729,814	$ 36,147,151	$ 31,706,712	$ 26,120,603
51	Carrying Charges (short-term interest)	$ 708,436	$ 706,534	$ 667,915	$ 651,556	$ 714,146	$ 694,343	$ 393,917
52	Total Balance (Row 46 + 47) (2)	$ 34,464,178	$ 36,017,327	$ 30,602,301	$ 34,381,370	$ 36,861,297	$ 32,401,054	$ 26,514,519
53	**Cumulative Megawatts by Year**							
54	DTE Owned Wind	1461	1461	1461	1461	1461	1461	1461
55	DTE Owned Solar	457	640	772	772	772	772	772

(1) Tax Impacts added to accurately reflect Incremental Cost of Compliance c
(2) VGP revenue included in cost recovery per MCL 460.1047 Section 2(b)(vi)

Michigan Public Service Commission
DTE Electric Company
2016 PA 342 Renewable Energy Plan - August 2020 Amended REP
DTE Electric Owned Renewable Energy Facilities Generation

Case No.: U-20851
Exhibit: A-12
Witness: D. B. Harwood
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Line No.	(a)	(b)	(c)	(d) Actual 2016	(e) Actual 2017	(f) Actual 2018	(g) Preliminary 2019	(h) 2020	(i) 2021
1	**DTE Electric Owned**								
2	Gratiot County Wind	Installed Capacity	**MW**	102	102	102	102	102	102
3		Generation	**1,000 MWh**	254	261	240	253	257	256
4	Thumb Wind Parks	Installed Capacity	**MW**	110.4	110.4	110.4	110.4	110.4	110.4
5		Generation	**1,000 MWh**	406	418	410	415	413	412
6	Echo Wind Park	Installed Capacity	**MW**	112.0	112.0	112.0	112.0	112.0	112.0
7		Generation	**1,000 MWh**	387	395	392	391	393	392
8	Brookfield Wind Park	Installed Capacity	**MW**	74.8	74.8	74.8	74.8	74.8	74.8
9		Generation	**1,000 MWh**	261	258	251	255	259	258
10	Pinnebog Wind Build	Installed Capacity	**MW**	51.0	51.0	51.0	51.0	51.0	51.0
11		Generation	**1,000 MWh**	13	170	173	173	172	171
12	Pine River Wind Park	Installed Capacity	**MW**	-	-	-	161.3	161.3	161.3
13		Generation	**1,000 MWh**	-	-	-	341	425	424
14	Polaris Wind Park	Installed Capacity	**MW**	-	-	-	-	168.6	168.6
15		Generation	**1,000 MWh**	-	-	-	-	399	502
16	Fairbanks Wind Park - 2020	Installed Capacity	**MW**	-	-	-	-	72.5	72.5
17		Generation	**1,000 MWh**	-	-	-	-	52	248
18	Isabella I - 2020	Installed Capacity	**MW**	-	-	-	-	197.4	197.4
19		Generation	**1,000 MWh**	-	-	-	-	20	488
20	Isabella II - 2020	Installed Capacity	**MW**	-	-	-	-	186.1	186.1
21		Generation	**1,000 MWh**	-	-	-	-	19	460
22	Meridian Wind Park - 2021	Installed Capacity	**MW**	-	-	-	-	-	224.9
23		Generation	**1,000 MWh**	-	-	-	-	-	51
24	MIGreenPower Subscribed Wind	Subscribed Capacity	**MW**	-	(0.8)	(1.9)	(4.0)	(9.5)	(17.4)
25		Subscribed Generation	**1,000 MWh**	-	(3)	(7)	(14)	(32)	(58)
26	VGP Subscribed Wind	Subscribed Capacity	**MW**	-	-	-	-	(456.0)	(456.0)
27		Subscribed Generation	**1,000 MWh**	-	-	-	-	(91)	(1,195)
28	DTE Solar Currents	Installed Capacity	**MW**	13.1	13.1	13.1	13.1	13.1	13.1
29	(~13.75MW)	Generation	**1,000 MWh**	15	17	16	16	16	16
30	DTE Solar Currents	Installed Capacity	**MW**	1.2	1.2	1.2	1.2	1.2	1.2
31	(~1.25MW)	Generation	**1,000 MWh**	2	1	1	2	2	2
32	Demille/Turrill/O'Shea Utility-Scale Solar	Installed Capacity	**MW**	-	50.3	50.3	50.3	50.3	50.3
33		Generation	**1,000 MWh**	-	53	69	70	69	69
34	2020 Future Solar Pilot	Installed Capacity	**MW**	-	-	-	-	0.8	0.8
35		Generation	**1,000 MWh**	-	-	-	-	0	1
36	2021 Future Solar Pilot	Installed Capacity	**MW**	-	-	-	-	-	10.0
37		Generation	**1,000 MWh**	-	-	-	-	-	2
38	2022 Solar Build (1)	Installed Capacity	**MW**	-	-	-	-	-	-
39		Generation	**1,000 MWh**	-	-	-	-	-	-
40	2022 Solar Build (2)	Installed Capacity	**MW**	-	-	-	-	-	-
41		Generation	**1,000 MWh**	-	-	-	-	-	-
42	2023 Solar Build (1)	Installed Capacity	**MW**	-	-	-	-	-	-
43		Generation	**1,000 MWh**	-	-	-	-	-	-
44	2024 Solar Build (1)	Installed Capacity	**MW**	-	-	-	-	-	-
45		Generation	**1,000 MWh**	-	-	-	-	-	-
46	2025 Solar Build (1)	Installed Capacity	**MW**	-	-	-	-	-	-
47		Generation	**1,000 MWh**	-	-	-	-	-	-
48	2026 Solar Build (1)	Installed Capacity	**MW**	-	-	-	-	-	-
49		Generation	**1,000 MWh**	-	-	-	-	-	-
50	2027 Solar Build (1)	Installed Capacity	**MW**	-	-	-	-	-	-
51		Generation	**1,000 MWh**	-	-	-	-	-	-
52	2028 Solar Build (1)	Installed Capacity	**MW**	-	-	-	-	-	-
53		Generation	**1,000 MWh**	-	-	-	-	-	-
54	2029 Solar Build (1)	Installed Capacity	**MW**	-	-	-	-	-	-
55		Generation	**1,000 MWh**	-	-	-	-	-	-
48	MIGreenPower Subscribed Solar	Subscribed Capacity	**MW**	-	(2.5)	(4.8)	(9.8)	(23.1)	(42.8)
49		Subscribed Generation	**1,000 MWh**	-	(3)	(7)	(14)	(32)	(58)
50	VGP Subscribed Solar	Subscribed Capacity	**MW**	-	-	-	-	-	-
51		Subscribed Generation	**1,000 MWh**	-	-	-	-	-	-
52	Total Wind Generation (excluding VGPs)		**1,000 MWh**	1,321	1,499	1,459	1,814	2,285	2,407
53	Total Solar Generation (excluding VGPs)		**1,000 MWh**	16	69	80	74	55	30
54	Total Generation (excluding VGPs)		**1,000 MWh**	1,337	1,568	1,539	1,888	2,340	2,438

Michigan Public Service Commission
DTE Electric Company
2016 PA 342 Renewable Energy Plan - August 2020 Amended REP
DTE Electric Owned Renewable Energy Facilities Generation

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Line No.	(a)	(b)	(c)	(j) 2022	(k) 2023	(l) 2024	(m) 2025	(n) 2026	(o) 2027	(p) 2028	(q) 2029
1	**DTE Electric Owned**										
2	Gratiot County Wind	Installed Capacity	**MW**	102	102	102	102	102	102	102	102
3		Generation	**1,000 MWh**	256	256	257	256	256	256	257	171
4	Thumb Wind Parks	Installed Capacity	**MW**	110.4	110.4	110.4	110.4	110.4	110.4	110.4	110.4
5		Generation	**1,000 MWh**	412	412	413	412	412	412	413	275
6	Echo Wind Park	Installed Capacity	**MW**	112.0	112.0	112.0	112.0	112.0	112.0	112.0	112.0
7		Generation	**1,000 MWh**	392	392	393	392	392	392	393	261
8	Brookfield Wind Park	Installed Capacity	**MW**	74.8	74.8	74.8	74.8	74.8	74.8	74.8	74.8
9		Generation	**1,000 MWh**	258	258	259	258	258	258	259	172
10	Pinnebog Wind Build	Installed Capacity	**MW**	51.0	51.0	51.0	51.0	51.0	51.0	51.0	51.0
11		Generation	**1,000 MWh**	171	171	172	171	171	171	172	114
12	Pine River Wind Park	Installed Capacity	**MW**	161.3	161.3	161.3	161.3	161.3	161.3	161.3	161.3
13		Generation	**1,000 MWh**	424	424	425	424	424	424	425	283
14	Polaris Wind Park	Installed Capacity	**MW**	168.6	168.6	168.6	168.6	168.6	168.6	168.6	168.6
15		Generation	**1,000 MWh**	502	502	504	502	502	502	504	335
16	Fairbanks Wind Park - 2020	Installed Capacity	**MW**	72.5	72.5	72.5	72.5	72.5	72.5	72.5	72.5
17		Generation	**1,000 MWh**	248	248	248	248	248	248	248	165
18	Isabella I - 2020	Installed Capacity	**MW**	197.4	197.4	197.4	197.4	197.4	197.4	197.4	197.4
19		Generation	**1,000 MWh**	488	488	489	488	488	488	489	325
20	Isabella II - 2020	Installed Capacity	**MW**	186.1	186.1	186.1	186.1	186.1	186.1	186.1	186.1
21		Generation	**1,000 MWh**	460	460	461	460	460	460	461	306
22	Meridian Wind Park - 2021	Installed Capacity	**MW**	224.9	224.9	224.9	224.9	224.9	224.9	224.9	224.9
23		Generation	**1,000 MWh**	612	612	613	612	612	612	613	408
24	MIGreenPower Subscribed Wind	Subscribed Capacity	**MW**	(22.3)	(22.3)	(22.3)	(22.3)	(22.3)	(22.3)	(22.3)	(33.5)
25		Subscribed Generation	**1,000 MWh**	(75)	(75)	(75)	(75)	(75)	(75)	(75)	(75)
26	VGP Subscribed Wind	Subscribed Capacity	**MW**	(456.0)	(456.0)	(456.0)	(456.0)	(456.0)	(456.0)	(456.0)	(456.0)
27		Subscribed Generation	**1,000 MWh**	(1,195)	(1,195)	(1,198)	(1,195)	(1,195)	(1,195)	(1,198)	(797)
28	DTE Solar Currents	Installed Capacity	**MW**	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1
29	(~13.75MW)	Generation	**1,000 MWh**	16	16	16	15	15	15	15	10
30	DTE Solar Currents	Installed Capacity	**MW**	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
31	(~1.25MW)	Generation	**1,000 MWh**	2	2	2	2	1	1	1	1
32	Demille/Turrill/O'Shea Utility-Scale Solar	Installed Capacity	**MW**	50.3	50.3	50.3	50.3	50.3	50.3	50.3	50.3
33		Generation	**1,000 MWh**	68	68	68	67	67	67	67	44
34	2020 Future Solar Pilot	Installed Capacity	**MW**	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
35		Generation	**1,000 MWh**	1	1	1	1	1	1	1	1
36	2021 Future Solar Pilot	Installed Capacity	**MW**	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
37		Generation	**1,000 MWh**	19	19	19	19	19	19	19	12
38	2022 Solar Build (1)	Installed Capacity	**MW**	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
39		Generation	**1,000 MWh**	20.6	246.1	245.6	243.7	242.4	241.2	240.7	159.2
40	2022 Solar Build (2)	Installed Capacity	**MW**	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0
41		Generation	**1,000 MWh**	34.7	414.9	413.9	410.8	408.7	406.7	405.7	268.4
42	2023 Solar Build (1)	Installed Capacity	**MW**	-	61.9	61.9	61.9	61.9	61.9	61.9	61.9
43		Generation	**1,000 MWh**	-	10.8	129.3	128.3	127.7	127.1	126.8	83.9
44	2024 Solar Build (1)	Installed Capacity	**MW**	-	-	182.8	182.8	182.8	182.8	182.8	182.8
45		Generation	**1,000 MWh**	-	-	32.0	380.7	378.8	376.9	376.1	248.8
46	2025 Solar Build (1)	Installed Capacity	**MW**	-	-	-	131.7	131.7	131.7	131.7	131.7
47		Generation	**1,000 MWh**	-	-	-	23.0	274.3	272.9	272.3	180.1
48	2026 Solar Build (1)	Installed Capacity	**MW**	-	-	-	-	-	-	-	-
49		Generation	**1,000 MWh**	-	-	-	-	-	-	-	-
50	2027 Solar Build (1)	Installed Capacity	**MW**	-	-	-	-	-	-	-	-
51		Generation	**1,000 MWh**	-	-	-	-	-	-	-	-
52	2028 Solar Build (1)	Installed Capacity	**MW**	-	-	-	-	-	-	-	-
53		Generation	**1,000 MWh**	-	-	-	-	-	-	-	-
54	2029 Solar Build (1)	Installed Capacity	**MW**	-	-	-	-	-	-	-	-
55		Generation	**1,000 MWh**	-	-	-	-	-	-	-	-
48	MIGreenPower Subscribed Solar	Subscribed Capacity	**MW**	(50.3)	(50.3)	(50.3)	(50.3)	(50.3)	(50.3)	(50.3)	(50.3)
49		Subscribed Generation	**1,000 MWh**	(68)	(68)	(68)	(67)	(67)	(67)	(67)	(44)
50	VGP Subscribed Solar	Subscribed Capacity	**MW**	(320.0)	(381.9)	(564.7)	(696.4)	(696.4)	(696.4)	(696.4)	(696.4)
51		Subscribed Generation	**1,000 MWh**	(55)	(672)	(821)	(1,186)	(1,432)	(1,425)	(1,422)	(940)
52	Total Wind Generation (excluding VGPs)		**1,000 MWh**	2,952	2,952	2,960	2,952	2,952	2,952	2,960	1,943
53	Total Solar Generation (excluding VGPs)		**1,000 MWh**	37	37	37	37	37	37	36	24
54	Total Generation (excluding VGPs)		**1,000 MWh**	2,989	2,989	2,997	2,988	2,988	2,988	2,996	1,967

Michigan Public Service Commission
DTE Electric Company
2016 PA 342 Renewable Energy Plan - August 2020 Amended REP
RECs/ACECs from Renewable Energy & Advanced Cleaner Energy &
Associated Cost For Use in 2016 PA 342 Activities for the Period 2016-2029

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Line No.	(a)		(b) Actual 2016	(c) Actual 2017	(d) Actual 2018	(e) Preliminary 2019	(f) 2020	(g) 2021
1	Beginning Balance of RECs	**1,000 RECs**	7,877	7,709	7,805	7,733	6,628	6,080
2								
3	Beginning Balance of ACECs	**1,000 ACECs**	0	-	-	-	-	-
4								
5	PURPA RECs (less non-jurisdictional)	**1,000 RECs**	436	452	390	309	283	285
6								
7	Purchase of RECs (REC-only Contracts)	**1,000 RECs**	305	311	286	20	13	13
8								
9	Purchase of RECs (PPA Contracts)	**1,000 RECs**	1,530	1,545	1,494	1,552	1,597	1,602
10								
11	Generation of RECs	**1,000 RECs**	1,337	1,566	1,552	1,888	2,340	2,438
12								
13	Generation of ACECs	**1,000 ACECs**	-	-	-	-	-	-
14								
15	Michigan Incentive RECs	**1,000 RECs**	364	390	413	423	431	450
16								
17	Transferred GreenCurrents RECs	**1,000 RECs**	-	-	-	-	-	-
18								
19	Total Available RECs	**1,000 RECs**	11,849	11,972	11,939	11,925	11,292	10,868
20								
21	Total Available ACECs	**1,000 ACECs**	0	-	-	-	-	-
22								
23	Expected RECs to be Consumed	**1,000 RECs**	(4,140)	(4,167)	(4,206)	(5,297)	(5,212)	(6,222)
24								
25	Expected ACECs to be Consumed	**1,000 ACECs**	-	-	-	-	-	-
26								
27	Expired RECs	**1,000 RECs**	-	-	-	-	-	-
28								
29	Expired ACECs	**1,000 ACECs**	-	-	-	-	-	-
30								
31	Ending REC Balance	**1,000 RECs**	7,709	7,805	7,733	6,628	6,080	4,646
32								
33	Ending ACEC Balance	**1,000 ACECs**	0	-	-	-	-	-
34								
35	Beginning Balance of EOCs	**1,000 EOCs/RECs**	105	78	84	3	-	-
36								
37	Transferred Energy Optimization Credits	**1,000 EOCs/RECs**	78	186	3	-	-	-
38								
39	Expected EOCs to be Consumed	**1,000 EOCs/RECs**	(105)	(78)	(84)	(3)	-	-
40								
41	Excess EOCs	**1,000 EOCs/RECs**	-	-	-	-	-	-
42								
43	Ending Balance EOCs	**1,000 EOCs/RECs**	78	186	3	-	-	-

Michigan Public Service Commission
DTE Electric Company
2016 PA 342 Renewable Energy Plan - August 2020 Amended REP
RECs/ACECs from Renewable Energy & Advanced Cleaner Energ
Associated Cost For Use in 2016 PA 342 Activities for the Period

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Line No.	(a)		(h) 2022	(i) 2023	(j) 2024	(k) 2025	(l) 2026	(m) 2027	(n) 2028	(o) 2029
1	Beginning Balance of RECs	**1,000 RECs**	4,646	4,203	3,834	3,419	2,967	2,546	2,159	1,806
2										
3	Beginning Balance of ACECs	**1,000 ACECs**	-	-	-	-	-	-	-	-
4										
5	PURPA RECs (less non-jurisdictional)	**1,000 RECs**	285	285	251	251	251	251	251	162
6										
7	Purchase of RECs (REC-only Contracts)	**1,000 RECs**	13	13	13	13	13	13	13	9
8										
9	Purchase of RECs (PPA Contracts)	**1,000 RECs**	1,771	1,858	1,861	1,856	1,854	1,853	1,856	1,234
10										
11	Generation of RECs	**1,000 RECs**	2,989	2,989	2,997	2,988	2,988	2,988	2,996	1,967
12										
13	Generation of ACECs	**1,000 ACECs**	-	-	-	-	-	-	-	-
14										
15	Michigan Incentive RECs	**1,000 RECs**	612	528	471	410	410	408	408	270
16										
17	Transferred GreenCurrents RECs	**1,000 RECs**	-	-	-	-	-	-	-	-
18										
19	Total Available RECs	**1,000 RECs**	10,317	9,877	9,427	8,937	8,482	8,058	7,682	5,447
20										
21	Total Available ACECs	**1,000 ACECs**	-	-	-	-	-	-	-	-
22										
23	Expected RECs to be Consumed	**1,000 RECs**	(6,113)	(6,044)	(6,008)	(5,970)	(5,936)	(5,900)	(5,877)	(3,903)
24										
25	Expected ACECs to be Consumed	**1,000 ACECs**	-	-	-	-	-	-	-	-
26										
27	Expired RECs	**1,000 RECs**	-	-	-	-	-	-	-	-
28										
29	Expired ACECs	**1,000 ACECs**	-	-	-	-	-	-	-	-
30										
31	Ending REC Balance	**1,000 RECs**	4,203	3,834	3,419	2,967	2,546	2,159	1,806	1,544
32										
33	Ending ACEC Balance	**1,000 ACECs**	-	-	-	-	-	-	-	-
34				3,834	3,419	2,967	2,546	2,159	1,806	1,544
35	Beginning Balance of EOCs	**1,000 EOCs/RECs**	-	-	-	-	-	-	-	-
36										
37	Transferred Energy Optimization Credits	**1,000 EOCs/RECs**	-	-	-	-	-	-	-	-
38										
39	Expected EOCs to be Consumed	**1,000 EOCs/RECs**	-	-	-	-	-	-	-	-
40										
41	Excess EOCs	**1,000 EOCs/RECs**	-	-	-	-	-	-	-	-
42										
43	Ending Balance EOCs	**1,000 EOCs/RECs**	-	-	-	-	-	-	-	-

Michigan Public Service Commission
DTE Electric Company
2016 PA 342 Renewable Energy Plan - August 2020 Amended REP
RECs/ACECs from Renewable Energy & Advanced Cleaner Energy &
Associated Cost For Use in 2016 PA 342 Activities for the Period 2016-2029

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Line No.	(a)		(b) Actual 2016	(c) Actual 2017	(d) Actual 2018	(e) 2019	(f) 2020	(g) 2021
1	Beginning Balance of RECs	**$Mil**	$ 37.7	$ 29.4	$ 23.5	$ 20.6	$ 13.8	$ 9.8
2								
3	Beginning Balance of ACECs	**$Mil**	$ -	$ -	$ -	$ -	$ -	$ -
4								
5	PURPA RECs (less non-jurisdictional)	**$Mil**	$ -	$ -	$ -	$ -	$ -	$ -
6								
7	Purchase of RECs (REC-only Contracts)	**$Mil**	$ 4.1	$ 4.0	$ 3.8	$ 0.7	$ 0.7	$ 0.7
8								
9	Generation of RECs	**$Mil**	$ -	$ -	$ -	$ -	$ -	$ -
10								
11	Generation of ACECs	**$Mil**	$ -	$ -	$ -	$ -	$ -	$ -
12								
13	Michigan Incentive RECs	**$Mil**	$ -	$ -	$ -	$ -	$ -	$ -
14								
15	Transferred GreenCurrents RECs	**$Mil**	$ -	$ -	$ -	$ -	$ -	$ -
16								
17	Purchase of RECs (PPA Contracts)	**$Mil**	$ 4.5	$ 3.8	$ 3.1	$ 1.8	$ 1.6	$ 1.2
18								
19	Generation of RECs	**$Mil**	$ -	$ -	$ -	$ -	$ -	$ -
20								
21	Total Available RECs & ACECs	**$Mil**	$ 46.2	$ 37.2	$ 30.3	$ 23.1	$ 16.1	$ 11.7
22								
23	Expected RECs & ACECs to be Consumed	**$Mil**	$ (16.8)	$ (13.7)	$ (9.7)	$ (9.3)	$ (6.3)	$ (5.3)
24								
25	Ending Balance	**$Mil**	$ 29.4	$ 23.5	$ 20.6	$ 13.8	$ 9.8	$ 6.4
26								
27	Total Average Cost of Available RECs & ACECs	**$/REC**	$ 3.82	$ 3.01	$ 2.67	$ 2.08	$ 1.62	$ 1.38

Michigan Public Service Commission
DTE Electric Company
2016 PA 342 Renewable Energy Plan - August 2020 Amended REP
RECs/ACECs from Renewable Energy & Advanced Cleaner Energ
Associated Cost For Use in 2016 PA 342 Activities for the Period

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	(a)		(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)
Line No.			**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**
1	Beginning Balance of RECs	**$Mil**	$ 6.4	$ 4.7	$ 3.9	$ 3.5	$ 3.4	$ 3.3	$ 3.3	$ 3.3
2										
3	Beginning Balance of ACECs	**$Mil**	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
4										
5	PURPA RECs (less non-jurisdictional)	**$Mil**	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
6										
7	Purchase of RECs (REC-only Contracts)	**$Mil**	$ 0.7	$ 0.7	$ 0.7	$ 0.7	$ 0.7	$ 0.7	$ 0.7	$ 0.5
8										
9	Generation of RECs	**$Mil**	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
10										
11	Generation of ACECs	**$Mil**	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
12										
13	Michigan Incentive RECs	**$Mil**	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
14										
15	Transferred GreenCurrents RECs	**$Mil**	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
16										
17	Purchase of RECs (PPA Contracts)	**$Mil**	$ 0.8	$ 0.4	$ -	$ -	$ -	$ -	$ -	$ -
18										
19	Generation of RECs	**$Mil**	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
20										
21	Total Available RECs & ACECs	**$Mil**	$ 7.9	$ 5.8	$ 4.6	$ 4.2	$ 4.0	$ 4.0	$ 4.0	$ 3.8
22										
23	Expected RECs & ACECs to be Consumed	**$Mil**	$ (3.2)	$ (1.9)	$ (1.1)	$ (0.8)	$ (0.7)	$ (0.7)	$ (0.6)	$ (0.4)
24										
25	Ending Balance	**$Mil**	$ 4.7	$ 3.9	$ 3.5	$ 3.4	$ 3.3	$ 3.3	$ 3.3	$ 3.4
26										
27	Total Average Cost of Available RECs & ACECs	**$/REC**	$ 1.12	$ 1.02	$ 1.02	$ 1.13	$ 1.30	$ 1.53	$ 1.85	$ 2.22

Michigan Public Service Commission
DTE Electric Company
2016 PA 342 Renewable Energy Plan - August 2020 Amended REP
Solar Assumptions for Future Builds

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Line No.	(a) Online Year	(b) 2022	(c) 2023	(d) 2024	(e) 2025
1	Installed Cost ($/kW)	$ 1,307	$ 1,312	$ 1,316	$ 1,320
2	Capacity Factor (%)	23.9%	23.9%	23.9%	23.9%

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter, on the Commission's own motion, regarding the regulatory reviews, revisions, determinations, and or approvals necessary for DTE ELECTRIC COMPANY to fully comply with Public Act 295 of 2008	)	Case No. U-20851 (Paperless e-file)

AFFIDAVIT OF D. DEAN KOUJAK IN SUPPORT OF DTE ELECTRIC COMPANY'S RENEWABLE REQUEST FOR PROPOSALS PROCESS

STATE OF NEW YORK)

COUNTY OF WESTCHESTER)

D. Dean Koujak, being first duly sworn, deposes and says:

1. My name is D. Dean Koujak, and I am a Director at Guidehouse, Inc., formerly known as Navigant Consulting, Inc ("Navigant"). I hold a Bachelor of Science in Engineering Management from New York Institute of Technology, a Master of Business Administration from the State University of New York at Stony Brook, and a Juris Doctor from Hofstra University. I joined Navigant in late 2003 supporting competitive generation resource procurements. Since this time, I have supported and been engaged on competitive power procurements in multiple jurisdictions, including New York, New Jersey, Texas, Hawaii, California, Ohio, Massachusetts, Ontario, Saskatchewan, Alberta, and North Carolina. I have supported, developed, administered and observed several renewable resource procurements to achieve renewable energy policy targets

on behalf of both Utilities and Public Utility Commissions. I have served in many capacities with respect to renewable resource procurement, including as a procurement advisor, independent evaluator, independent observer, and independent monitor.

2. Navigant was retained by DTE Electric in September-2019 to help assist, provide guidance and oversee DTE Electric in its Renewable Energy Request for Proposals ("RFP") process, leveraging prior experience with Utilities across the United States with similar procurements for Wind and Solar procurement.

3. Attached to this Affidavit as Attachment A is Navigant's Report, which sets out in detail my and my team's involvement in the Renewable RFP process, methods employed, observations and conclusions regarding DTE Electric's All-Source RFPs for Solar and Wind Energy Resources.

4. In our review of the RFP documents and evaluation process, we find that the goals of the RFP were achieved given the number of responses that were received and evaluated. The qualification evaluations were performed on a fair and consistent basis with the process noted in the RFP. The evaluation stage, including the economic and non-economic evaluations, was performed on a fair and consistent basis with the process published in the RFP.

5. In overseeing the competitive solicitation process, we also conclude that the advancement of projects selected for inclusion in the August 2020 Amended REP, which include the Freshwater Solar Build-Transfer Agreement, White Tail Solar Build-Transfer Agreement, and Calhoun County Solar Purchase Power Agreement in relation to the projects received and evaluated in the All-Source RFP, are reasonable and prudent.

Further, Affiant sayeth not.

D. Dean Koujak

Subscribed and sworn to before
me this 20th day of November 2020.

JOSEPH ARCHINA
Notary Public, State of New York
No. 01AR6034577
Qualified in Westchester County
Exp. Date: 12/13/21

NAVIGANT
A Guidehouse Company

DTE Energy Request for Proposals for Renewable Generation

Report from Navigant Consulting, Inc., n/k/a Guidehouse Inc.

Prepared for:

Submitted by:
Navigant, a Guidehouse Company
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March 23, 2020

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Executive Summary

Background

This report summarizes Navigant Consulting, Inc., n/k/a Guidehouse Inc. (Navigant),[1] assessment methods and findings as an independent procurement advisor and evaluator for the Renewable Energy All-Source Requests for Proposals (RFPs) issued by DTE Electric Company (DTE or the Company). Under the RFPs, DTE solicited wind resources between 100 MW and 200 MW and solar resources between 25 MW and 200 MW. Proposers were requested to bid under a build transfer agreement (BTA) on either 3rd party developed or select DTE owned sites. The RFPs also allowed traditional power purchase agreement (PPA) bids.

The RFPs were issued pursuant to the DTE's Renewable Energy Plan as further set forth under its Amended 2018 Renewable Energy Plan, under the Michigan Public Service Commission Case No. U-18232. The RFPs are intended to help DTE comply with its Renewable Energy Plan requirements and fulfill large customer demand for voluntary green pricing programs.

DTE Electric retained Navigant to assist, guide, and oversee DTE in its RFP process, using prior experience with utilities across the US with similar procurements for wind and solar resources.

Summary and Recommendations

We have completed our assessment with respect to the DTE RFP and find the following:

- Our overall assessment is that the goals of the RFP were achieved given the number of responses that were received and evaluated.
- The qualification evaluations were performed on a fair and consistent basis with the process noted in the RFP. Respondents were given an opportunity to cure noted deficiencies within a reasonable period of time, which helped maintain the range of proposals evaluated and the competition between them.
- The evaluation stage, including the economic and noneconomic evaluations, was performed on a fair and consistent basis with the process published in the RFP. Use of levelized cost of energy (LCOE) as the basis for scoring on economic grounds is reasonable and typical, as were the adjustments ascribed to the proposal types to effectively compare the proposals on an equivalent ratepayer impact basis across a 35-year time horizon. Use of a scoring sheet/matrix is also reasonable and typical. The range of scoring guidelines is reasonable and consistent with similar criteria we have developed or observed. DTE subject matter experts that performed the review and scoring were consistent in their approach. The combined scoring and ranking using a weighting between pricing and noneconomic criteria was reasonable.

[1] On October 11, 2019, Guidehouse LLP completed its previously announced acquisition of Navigant Consulting, Inc. We are working to integrate the Guidehouse and Navigant businesses. In furtherance of that effort, we recently renamed Navigant Consulting, Inc. as Guidehouse Inc.

- The advancement of approximately 10 proposals to the short list was reasonable and demonstrated an effort on the part of DTE to ensure a competitive solicitation.
- Selection of finalists was also performed on a fair and consistent basis with the process published in the RFP.
- There is no evidence that the evaluation and selection process caused any unfair advantage or disadvantage to any interested party or respondent.

This report summarizes our review and findings as of the date of this report. In performing our work, we have relied on documents, direct observations, correspondence, analyses, and other information provided to us by DTE. While we believe this information to be reliable, it has not been independently verified for either accuracy or validity, and no assurances are offered with respect thereto. We make no representations, warranties, or opinions concerning the enforceability or legality of the laws, regulations, rules, agreements, or other similar documents reviewed as part of our work. Navigant and its employees are independent contractors providing professional services to DTE and are not officers, employees, or agents of DTE.

1. RFP Design and Issuance

This section summarizes the design of the requests for proposals (RFPs) and the issuance of the solicitations. DTE released two RFPs in tandem to solicit solar resources and wind resources. Each RFP allowed for proposals to submit:

- Build transfer agreements (BTAs) on 3rd party developed or select DTE sites
- BTAs with a power purchase agreement (PPA) option

For both the wind resource and solar resource solicitations, we reviewed five types of documents covering these RFP options:

- RFP overview document
- BTA documentation
- PPA documentation
- Exhibit A – pro forma contracts
- Exhibit B – technical specifications

Navigant reviewed the RFP overview document to ensure it is clear and transparent. As part of this review, the Navigant team reviewed the document to ensure that requested submittal items were aligned substantially with the internal scoring criteria and all items necessary for evaluation were requested in the RFP. The team also reviewed the RFP document to ensure sufficient information about the scoring criteria is included to ensure bidders are apprised of the key areas they will be evaluated against, so they may prepare their bids accordingly. Navigant's comments were adopted by DTE in its final issued RFP.

Proposals were evaluated using the evaluation and selection process described in Section 6 of the RFP (the Evaluation Process). For a proposal to advance to the evaluation process, it had to pass through a screening process to ensure that the proposals provided are complete with respect to content and conform to the bid requirements stated in the RFP. In some cases, proposals were evaluated and scored while those bidders were given a reasonable opportunity to clarify statements or provide missing information related to the threshold screening criteria. The bid requirements addressed specific concerns regarding the quality and attributes of the proposal, including:

- **Wind resource RFP qualification criteria:**
    - Conforming bid to RFP requirements:
        - BTA, BTA & PPA, or BTA on DTE site
        - Project is not less than 100 MW and not greater than 200 MW
        - For BTA projects only: does the project qualify for the production tax credit (PTC)?
        - Is the project going to achieve a commercial operation date (COD) by December 2023?

  - Threshold experience requirements:
    - Lead developer for a minimum of at least five (5) commercially operating wind projects:
      - Each of the five (5) must be greater than or equal to 50 MW each
      - One of the five (5) must be greater than or equal to 100 MW
    - Number of years of lead developer experience is greater than or equal to five (5) years

- **Solar resource RFP qualification criteria:**
  - Conforming bid to RFP requirements:
    - BTA, BTA & PPA, or BTA on DTE site
    - Project is not less than 25 MW and not greater than 200 MW
    - For BTA projects only: does the project qualify for the 30% investment tax credit (ITC)?
    - Is the project going to achieve COD by December 2023?
    - Proposed technology meets DTE requirements (see Section 3.8, BTA)?
  - Threshold experience requirements:
    - Lead developer for a minimum of at least three commercially operating solar projects:
      - Each of the three referenced projects must be greater than or equal to 1 MW each
      - One of the three must be greater than or equal to 25 MW

After the proposals were screened, bids were then evaluated against economic evaluation criteria and noneconomic evaluation criteria. For the purposes of the economic evaluation criteria, DTE proposed capturing the overall cost of the proposed projects on a unitized and levelized per megawatt-hour (MWh) basis to facilitate a cross-proposal comparison. The industry standard is to adopt an **impact on revenue requirements** perspective to more accurately assess and determine the relative value of customers across the range of options presented. DTE's economic evaluation in this procurement process met this industry standard.

DTE's noneconomic evaluation criteria (as stated in RFP) included the following pertinent areas:

- **Project feasibility:** This area assesses the likelihood of the project achieving the stated COD, which includes an evaluation of the status of key areas on the critical path to achieving COD or may otherwise interfere with COD achievement, including:
  - Interconnection planning status, land acquisition, and turbine procurement
  - Community acceptance and support
  - Environmental impacts

  - Permitting status and land rights
- **Exceptions to the DTE pro forma agreements:** This area evaluates the number and nature of the exceptions taken to the pro forma agreements to identify the following:
  - Evaluate the ability of the two parties to potentially execute an acceptable definitive agreement
  - The extent to which the exceptions shift risk to DTE.
- **Technical, operations, and maintenance:** Under this criterion, DTE would assess the following:
  - Technology reliability of the proposed wind turbines, solar panels, and inverters as well as the commercial terms of the panel/turbine supply agreement and warranty arrangements (as applicable)
  - Experience of the respondent and the respondent's advisors involved in generating energy projections and the quality and quantity of onsite solar/wind data, availability data, and guaranteed capacity factor
  - Capacity factor based on a PV forecasting model analysis (for solar) or the analysis of turbine locations, wind resource, and other key factors
  - Setback requirements are followed on the project layout
  - Status and schedule for completing the necessary interconnection arrangements to provide the delivery of energy at the proposal-specified point of interconnection
  - Proper metering and supervisory control and data acquisition (SCADA) systems have been proposed
  - Operations and maintenance plan
  - Whether similar projects can be visited by DTE
- **Experience and project management:** The pertinent experience of the respondent in developing, financing, constructing, operating, and maintaining solar or wind energy facilities, as applicable. Included in this assessment is the bidder's safety record.
- **Financial strength and creditworthiness:** Evaluates the ability of the developer to obtain credit support in the future from credit support providers (banks, parent companies, financial institutions).

The areas noted above are in-line with typical utility practice, which seeks to distill the relative state of readiness of the projects proposed and the risks/impediments that each face toward COD. With the looming ITC deadlines, it is imperative for utilities across the US to get it right for the tax credits to be fully monetized. In addition, DTE must meet its 15% renewable portfolio standard (RPS) requirement by 2021. Should the deal fail at a late stage, the utility may not be left with sufficient time to re-procure a resource that can provide ratepayers with the benefits of the tax credits, in addition to the overall system benefits provided by the resources themselves.

The technical, operations, and maintenance criteria reviewed the project from an ownership and operational standpoint to ensure quality, production certainty, interoperability, and ease of

operations. This criteria also ensure that the project development team has considered the technical factors necessary to deliver a project that reliably delivers power and conforms to both industry and Midcontinent Independent System Operator (MISO) standards for interconnection purposes. Prior experience in developing solar and wind facilities is a typical area reviewed by utilities to ensure that the developer is fully familiar with the requisite steps needed to take a project from the development stage through COD. Incidentally, those that provide financing judge renewable energy developers similarly—on their track record and history. Obtaining financing during project construction is on the critical path toward meeting the COD.

As part of our RFP review, the team developed several recommendations for the RFP overview document, the BTA documentation appendix for each resource type, the PPA documentation appendix for each resource type, and the evaluation protocol based on the team's experience with other similar solicitations, chiefly around aligning the RFP overview, the BTA and PPA documentation, and the score sheet. DTE addressed our concerns in the final versions of these documents. We were satisfied with these changes because DTE was responsive to the team's concerns. DTE issued the RFP on September 16, 2019.

2. Score Sheet Development

2.1 Economic Criteria

Pursuant to the RFP, a comprehensive levelized cost of energy (LCOE) model was developed by DTE to compare all proposals on an equivalent basis prior to proposal receipt. The basic premise of an LCOE model is to create a unitized, discounted comparative figure to compare proposals on an equivalent cost basis. The generally accepted lens in the industry to facilitate comparisons between ownership and non-ownership options is from an **impact to utility revenue requirements** basis. Accordingly, all costs expected to impact the utility's revenue requirements are captured by year and discounted to year 0. In addition, the expected energy production, on a MWh basis, is equivalently discounted back to year 0. With the costs being the numerator and the energy being the denominator, the quotient is a levelized $/MWh comparator.

To compare on an **impact to revenue requirements** basis, certain adjustments were included as part of the economic evaluation to achieve equivalency across the contract structures. For PPAs, a financial compensation mechanism ("FCM") was originally included in the economic evaluation, but later removed from the analysis as further discussed below. This type of adjustment mechanism is typical and appropriate and captures two concepts.

- **Imputed debt adjustment:** Captures the credit quality impact of executing PPAs on utilities. PPAs are converted to a debt equivalent by major credit rating agencies. For utilities to continue executing PPAs without deleterious ripple effects on credit and, in turn, debt rates of the organization, a fixed recovery to counterbalance debt equivalence is included in revenue recovery. S&P has published a guide that utilities have cited in support of calculating this recovery. Specific examples include:
    - **California:** The California Public Utilities Commission (CPUC) has published a report[2] on the inclusion of debt equivalency (imputed debt) adjustments in the context of PPAs. The report notes: "In 2004 LTPP [long-term procurement planning] decision, D.04-12-048, the Commission recognized that Debt Equivalence is a real economic cost borne by an IOU [investor-owned utility] when it enters into a PPA, and can have an impact on a utility's credit rating. In D.04-12-048 the Commission ruled that Debt Equivalence has to be considered by IOUs and/or independent evaluator in the contract selection and approval process." In California, adjustments for imputed debt have been incorporated into procurement processes.

[2] CPUC, *An Introduction to Debt Equivalency*, August 4, 2017. https://www.cpuc.ca.gov/uploadedFiles/CPUC_Public_Website/Content/About_Us/Organization/Divisions/Policy_and_Planning/PPD_Work/PPD_Work_Products_(2014_forward)/PPD%20-%20Intro%20to%20Debt%20Equivalency(1).pdf

  - **Washington:** Puget Sound Energy (PSE)[3] conducted an all-source bid in 2018. Material presented to bidders at the pre-bid conference indicated that PSE assumes an imputed debt adder following the S&P methodology. The rational for this practice is: "[t]o make a fair comparison between utilities that buy power and those that own resources."
  - **Oregon:** Oregon's Competitive Bidding Guidelines, Order 06-446, state: "Consideration of ratings agency debt imputation should be reserved for the selection of the final bids from the initial short list of bids. The utility should obtain an advisory opinion from a ratings agency to substantiate its analysis and final decision, if requested by the Commission."[4]
  - **Florida:** Florida Power & Light's solicitation of renewable resources in 2017, *Florida Power & Light Company's Petition for Determination of Need for Okeechobee Clean Energy Center Unit 1* includes an illustration of the "equity required to rebalance due to the additional imputed debt[; it] is calculated by multiplying the debt equivalence by the target equity ratio."[5]

- **Financial incentive:** The formula initially adopted during bid review contemplated an additional financial incentive roughly equal to imputed debt amount. This compensation adjustment for the execution of cost-effective PPAs is appropriate for the same reasons noted above.

While the FCM was originally included in the economic evaluation, the final bid scores reflect the results with this adjustment removed to address the concern that this adjustment may influence the final result. Removal of the FCM adjustment from the economic evaluation did not affect the results under the RFP process.

For PPA and BTA agreements, a project terminal value is factored into the analysis. Pricing achieved in a PPA solicitation reflects, effectively from a developer's perspective, assumptions on a project's value over its entire life, including its fair market value for when the developer expects to divest it to other investors. If divestiture occurs, it typically occurs post-ITC or PTC credit expiration (6 years for solar, 10 years for wind). This fair market value, when represented to the new investors, includes the merchant tail post-PPA expiration; in year 10 this would include the remaining life of the unit from years 11 through 35 (25 years remaining) that contributes to lowering offered PPA prices.

To effectively compare the BTA proposals against PPAs in-line with the methodology adopted by many independent power producers (IPPs), the full value of the plant throughout its expected useful life is included in the BTA modeling. DTE's approach includes projected operations and maintenance costs for the expected useful life. In comparison, under a PPA arrangement, after

[3] PSE, "2018 All Resources and Demand Response RFP Bidder Conference," presented July 9, 2018. https://www.pse.com/-/media/PDFs/001-Energy-Supply/003-Acquiring-Energy/18RFP_Bidder_Conference_Final.pdf?la=en&revision=6153762a-ebd2-4902-baec-41e77df259fe&hash=B40AE867D974F088AF0433EAC7B982ED7169ACC2

[4] Included as Attachment C in PacifiCorp's *Application for Approval of 2017R Request for Proposals* in https://edocs.puc.state.or.us/efdocs/HAA/haa14285.pdf.

[5] Florida Power and Light, *Florida Power & Light Company's Petition for Determination of Need for Okeechobee Clean Energy Center Unit 1*, September 3, 2015. http://www.floridapsc.com/library/filings/2015/05542-2015/05542-2015.pdf

the agreement expires, IPPs would sell their power through the market and utility market purchases would include the cost of such power, which is then passed through the supply charge to ratepayers. To make the LCOE equivalent, the utility included the continued purchase of equivalent energy at market prices that would otherwise occur under the PPA arrangement. In capturing both the costs and benefits during the same time period of the two arrangements, the resulting LCOEs of the BTA and the PPA are more comparative and equivalent.

An alternative approach would be to develop a fair market value or salvage value to include as a positive value in year 20 of the BTA analysis, which considers the differential between forward market power costs and ongoing operations and maintenance discounted back at a market rate of return. This alternative approach is effectively the same as the approach adopted by DTE.

The Navigant and DTE Electric teams reviewed the mechanics of the spreadsheet and all assumptions related to the analysis prior to the proposal receipt for completeness and accuracy. Upon review, for a study period of 35 years, the teams found that the analysis accurately captures the revenue requirements across the two contract structures presented. The components included are reasonable and are in-line with similar practices when comparing utility-owned resources against PPA structures.

2.2 Noneconomic Criteria

From the criteria noted in the RFP, DTE Electric prepared an evaluation score sheet to facilitate the evaluation. Pursuant to feedback provided by Navigant, DTE added detailed scoring criteria based on a rating scale of 1 (lowest score), 3, and 5 (highest score) for each evaluated criteria; these criteria specify what standard is required to be met by the proposers to achieve the stated score. Establishing these criteria prior to proposal receipt greatly enhances the overall transparency and fairness of the solicitation. In addition to specifying the scoring criteria, Navigant and DTE held a series of sessions to test the scoring criteria to ensure sufficient differentiation between the scores, with corrective action taken where the scoring criteria was not clearly differentiated.

As part of the development of the evaluation process, the DTE team established the relative weighting of the solicitation across the overall economic and noneconomic criteria as well as the subcomponent weighting of the areas evaluated under the noneconomic criteria. Under the bid rules, the combined scoring between the economic and noneconomic criteria establishes the rank-order list for final selection.

3. Proposal Receipt and Proposer Qualification

3.1 Prior to Proposal Receipt

Through a press release, DTE directed interested bidders to register on the PowerAdvocate platform for access to RFP events. DTE made all documentation and information related to the RFP available on the PowerAdvocate site.

Throughout the solicitation process, DTE used the messaging portion of PowerAdvocate to receive comments and questions from the interested parties and respondents and to post answers.

3.2 Proposal Receipt

On the proposal due date of November 5, 2019, the following submissions were received:

Table 1. Received Proposal Submissions

Proposal Type	Number of Unique Bidders	Number of Projects Proposed	Number of Options Proposed
Wind Resources	5	7	16
Solar Resources	17	50	169
Total	**22**	**57**	**185**

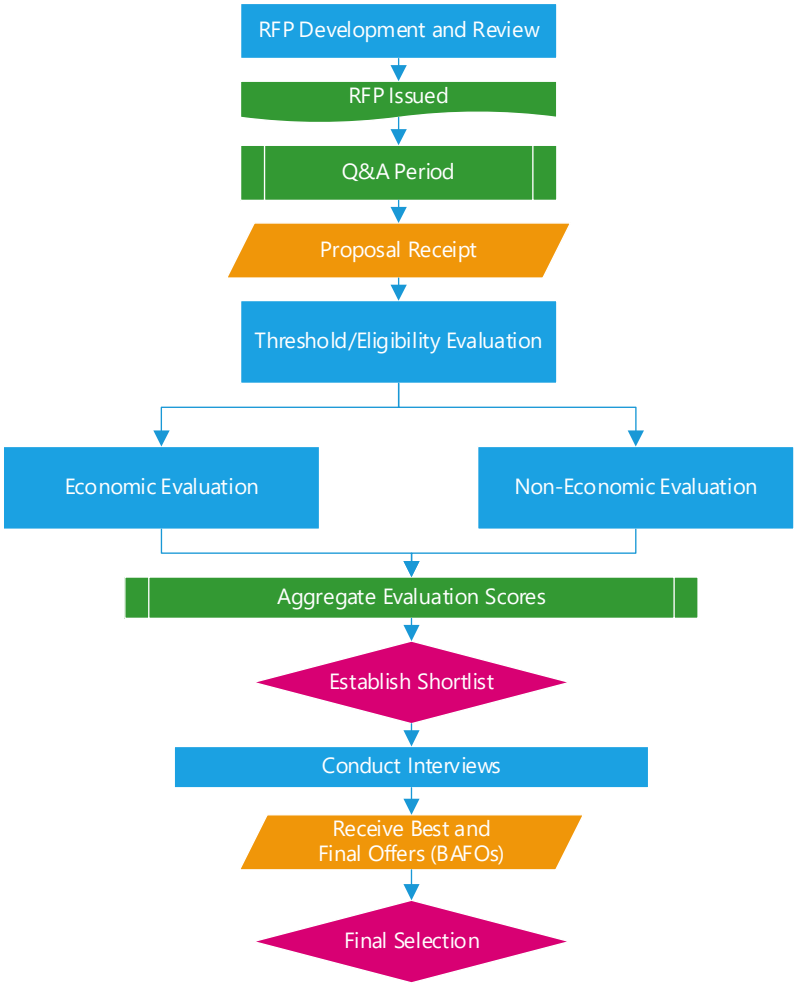
Source: Navigant

The information made available by the respondents via the PowerAdvocate platform was downloaded and provided to the DTE and Navigant team.

3.3 Proposal Threshold Screening

Pursuant to the RFP, the evaluation process was a multistage process including an eligibility/threshold screening stage and a detailed economic and noneconomic evaluation stage. Figure 1 illustrates the flow of work through the evaluation process.

Figure 1. Flowchart of the Evaluation Process



Source: Navigant

Under the threshold/eligibility evaluation stage, proposals were assessed for compliance with the initial qualifying eligibility and threshold criteria established under the RFP. As noted above, evaluation of all proposals proceeded while bidders were given a reasonable opportunity to clarify statements or provide missing information related to the threshold screening criteria. This modification of the review process was not a factor in the results of the bid review. Ultimately, 49 solar and 10 wind options did not conform to the bid rules.

4. Initial Shortlist Development

4.1 Economic and Noneconomic Evaluation

Proposals that successfully passed the eligibility and threshold stage were advanced to the initial evaluation stage.

DTE organized the evaluation among the scored criteria. Subject matter experts from DTE convened to review each of the following areas:

- **General experience and qualification criteria:** Members consisted of the core renewable procurement team, which scored proposals in the qualification, experience, and bonus criteria.
- **Renewable energy development criteria:** Members of this team oversee renewable energy development on behalf of DTE and are familiar with land, ordinance/permitting/community development, interconnection, and environmental/wildlife impacts.
- **Technology, operations, and management criteria:** This team consisted of DTE's subject matter experts in the areas of solar, wind technology, compliance and control, and balance of plant.
- **Economic evaluation and pricing criteria:** This team consisted of DTE's subject matter experts experienced in financial modeling and those who prepared the financial models for proposal cost inputs.
- **Contract terms and conditions criteria:** This team consisted of the individuals at DTE who are responsible for contract negotiations.
- **Project management and safety criteria:** This team consisted of those that manage and oversee the construction and development of renewable energy projects at DTE.
- **Financial strength and creditworthiness:** Navigant team members provided an initial review of the financial strength, which was subsequently reviewed by DTE's credit and finance department for the shortlisted entities.

An initial detailed evaluation was conducted at an offsite location with the above subject matter experts from DTE. An orientation was held to ensure that the teams were aligned with the scoring criteria and understood the standards that should be applied to ensure fairness and consistency across the evaluation. This process was observed and overseen by members of the Navigant team. During the initial evaluation, questions were sent to bidders for clarification. Most responses were received and considered during the 3-day event. By the last day, initial scoring results were available for the pricing and noneconomic criteria, which consisted of the bulk of the evaluation tasks. As minor questions remained, the teams followed up with the respondent over a few weeks to obtain remaining clarifications to update the scoring accordingly.

Proposals were ranked according to their combined score reflective of the economic and noneconomic evaluation. The top-ranking proposals were considered for shortlisting. DTE

proceeded down the list in order of ranking until a sufficient and reasonable number of proposals that would satisfy procurement objectives were selected to advance to the final selection stage.

4.2 Meridian Project

The Meridian Project is a wind project just under 225 MW under development by DTE. While the development of this project was on a separate track from the RFPs, DTE compared the under development project against offers received under the RFPs to determine whether the DTE project should proceed independently. DTE's reviewers reviewed the project in-line with the other wind projects. Navigant reviewed the scoring methodology across all wind projects, including Meridian, to ensure equivalency in the approach taken by DTE's reviewers and also held a live question and answer session on the scoring of the proposals and the methodology taken. Given that the information for DTE's project was widely available and understood in the organization, the Navigant team sought to ensure that any ambiguity in developers' proposals under the current RFPs was addressed via additional clarifying questions sent to the proposers.

With respect to DTE's typical and anticipated renewable development practices and approach, the Navigant team sought to ensure that such commitments were firm to warrant the scoring applied. In certain criteria, DTE was not able to receive a full score because of the nature of the transaction (self-build, rate base), their equivalent development/financing experience, and the status of the project. DTE, for example, used a third party to provide a cost estimate for an EPC, but it was subject to further negotiation and adjustment and was scored accordingly. After a line-by-line review of the scoring across the noneconomic criteria evaluation completed by the DTE team, the Navigant team was satisfied that the Meridian evaluation was conducted on a consistent basis with other proposed wind projects. Additionally, the Meridian project was evaluated in the same manner as the BTA projects using consistent methodology for the economic evaluation. The main difference is the source of the development cost information for DTE's Meridian project, which is based on the third-party cost estimates for EPC services. Pursuant to these assumptions, the Navigant team was satisfied that the results of the economic evaluation were on par with the analysis conducted on the BTA and PPA projects received.

4.3 Results

Results of the economic and noneconomic criteria were tabulated pursuant to the process established prior to proposal receipt. Out of the 185 proposals received from 22 respondents:

- Approximately 10 proposals from 5 respondents advanced to the short list for further evaluation. Additional proposals may be shortlisted according to DTE needs. At this time, the top-ranking proposals were shortlisted based on current expectations of need, which may change.
- 59 proposals from 13 respondents were deemed nonconforming.

- The remaining proposals did not advance to the short list at this time but may be considered in the event more supply is needed for voluntary green pricing programs under this solicitation.

This completed the detailed evaluation stage of the RFP process. DTE offered shortlisted respondents the opportunity to submit a best and final offer (BAFO) for each of their proposal(s). DTE would use the BAFO in the final selection stage after considering the proposals' updated combined scoring reflecting the BAFO pricing.

5. Final Award Group Development

5.1 Final Selection

In the final selection stage, further economic evaluation was performed on each shortlisted proposal based on its BAFO. At this stage, the bids were considered equal in merit, and DTE focused on the overall ability of the developers to commit to their stated bids. Accordingly, DTE held interviews with the final shortlist vendors to discuss:

- Their relative confidence in their projects and state of development.
- Their ability to commit to the PPA prices without conditions or, if any conditions exist, to state specifically what those conditions are for consideration.
- Discuss the relative differences between the range of options proposed, including those for the BTA versus the PPA.
- Other relevant points specifically related to the areas that DTE found were of concern in each of the final group's proposals.
- Considerations in the context of negotiations, where PPA prices are more prone to price adjustment due to the long-term nature of the contract when risk is negotiated back onto the developer. In the context of BTA negotiations, the risk exposure is limited due to the short-term nature of the agreement. Consequently, negotiations do not result in significant price increases but rather pass-throughs of additional cost or specs requested by the utility.

5.2 Results

From the final selection group, DTE selected the following projects, which represent the least risk and relative cost to the company:

- **The DTE Meridian Project (wind):** This project received the highest evaluation score among the all projects, which indicates that the project was assessed to have a relatively competitive price and low overall development risk.
- **A combination of PPA and BTA projects** have been selected to proceed to final negotiations. These projects received high evaluation scores given their respective ratings in the noneconomic and noneconomic criteria, indicating that the selected projects have low development risk and are competitively priced.

5.3 Negotiations

As of the date of this report, negotiations with developers on the short list are proceeding. DTE reports that PPA developers made commercial assumptions that were inconsistent with the RFP pro forma and, in some cases, were unacceptable to DTE. As a result, PPA prices increased during negotiations as DTE's position on these items was clarified. Based on our experience, adjustments made during negotiations are not uncommon and typical in the industry.

6. Recommendations

We monitored and made recommendations to DTE during the solicitation based on its observation of and experience with similar solicitations. DTE adopted the Navigant team's recommendations to its satisfaction during the pendency of the process. Therefore, Navigant has no additional recommendations at this time.

7. Findings

The following is Navigant's independent assessment of whether the goals of the RFP were achieved and assessment of the RFP process conducted by DTE:

- Our overall assessment is that the goals of the RFP were achieved—22 respondents that submitted 185 total proposals.
- The qualification evaluation was performed on a fair and consistent basis using the process noted in the RFP. Initially excluded respondents were given an opportunity to cure their deficiencies within a short but reasonable period of time, which helped maintain the range of proposals evaluated and the competition between them.
- The evaluation stage, including the pricing and noneconomic evaluations, was performed on a fair and consistent basis with the process noted in the RFP. Use of LCOE as the basis for scoring on price is reasonable and typical, as is the methodology used to equate, from a revenue requirements standpoint, proposal options (BTA) that result in DTE ownership of the facilities against PPA options.
- Using a score sheet and scoring guide for the noneconomic criteria scoring is also reasonable and typical. The final range of rating guidelines is reasonable and consistent with similar criteria we have developed or observed. The Navigant team had an opportunity to review and comment on the scoring criteria, and DTE adopted the recommendations we proposed to our satisfaction. DTE subject matter experts that performed the evaluation and scoring, overseen by Navigant during the company's offsite event, were consistent in their approach. The combined scoring and ranking using a weighting between pricing/noneconomic criteria is reasonable.
- The advancement of a significant number wind and solar resources, as applicable, to the short list was reasonable and demonstrated an effort on the part of DTE to ensure a competitive solicitation.
- Selection of finalists was also performed on a fair and consistent basis with the process published in the RFP.
- Based on our review and observations, there is no evidence that the evaluation and selection process caused any unfair advantage or disadvantage to any interested party or respondent.

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of **DTE ELECTRIC COMPANY'S** application for the regulatory reviews, revisions, determinations, and/or approvals necessary to fully comply with Public Act 295 OF 2008	))))	Case No. U-20851

QUALIFICATIONS

AND

DIRECT TESTIMONY

OF

PATRICK. D. KAUFFMAN

DTE ELECTRIC COMPANY
QUALIFICATIONS OF PATRICK D. KAUFFMAN

Line No.

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

A1. My name is Patrick Kauffman. My business address is: One Energy Plaza, Detroit, MI 48226. I am employed by DTE Energy Corporate Services, LLC within the Controller's department as a Principal Supervisor – Renewable Energy Program.

Q2. On whose behalf are you testifying?

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

Q3. What is your educational background?

A3. In 1989, I received a Bachelor of Arts degree in Economics from The University of Notre Dame. In 1991, I received a Master of Business Administration degree in Finance from Michigan State University.

Q4. What is your work experience?

A4. After obtaining my Master's degree from Michigan State University in the spring of 1991, I was employed by General Motors Corporation and held several positions there until 1999. My responsibilities included financial analysis and reporting, budgeting and forecasting, business case development and cost accounting.

I started my employment with Detroit Edison in November 1999, as Supervisor of Forecasting, Budgeting and Corporate Reporting in the Controller's Organization. I held several positions of increasing responsibilities within the Controller's Organization including Gross Margin Analysis, Detroit Edison Financial Planning and Analysis, Budgeting, Forecasting and Reporting and

Corporate Support. In 2008, I transferred to Regulatory Affairs and was a Case Manager for Gas Cost Recovery and Power Supply Cost Recovery cases. In 2010, I transferred back to the Controller's Organization and was responsible for benefits forecasting and reporting. In 2013, I obtained the position of Principal Financial Analyst responsible for forecasting and reporting for the Nuclear Generation organization. In August 2016, I was appointed to my current position.

Q5. What are your current job responsibilities?

A5. My current position is Principal Supervisor for the Renewable Energy group, which includes the 2008 PA 295 and 2016 PA 342 Renewable Energy activities of the Company. My group is responsible for providing budgeting, forecasting, planning, regulatory case support, and reporting expenses and capitalized cost for the Renewable Energy group.

Q6. Have you previously sponsored testimony before the Michigan Public Service Commission?

A6. Yes, I have. I have sponsored testimony in the following cases:

U-15417-R	2008 Power Supply Cost Recovery Reconciliation
U-18242	Reconciliation of the DTE Electric 2016 REP Program
U-18232	2020 Amended REP
U-18232 (A)	2020 Amended REP
U-20172	Reconciliation of the DTE Electric 2017 REP Program
U-20484	Reconciliation of the DTE Electric 2018 REP Program
U-20713	2020 Amended REP

Line No.

Q7. What is the purpose of your testimony in this proceeding?

A7. The purpose of my testimony and supporting exhibits in this August 2020 Amended REP filing is to explain the Company's projected Renewable Energy capital, O&M and other expenses associated with implementing the Company's Commission-approved 2008 PA 295 and 2016 PA 342 Renewable Energy Plan (REP) and to outline key accounting practices related to DTE Electric's August 2020 Amended REP.

Q8. Are you sponsoring any exhibits?

A8. Yes. I am sponsoring the following exhibits:

Exhibit	Description
A-17	Kauffman Affidavit
A-18	Expense Elements of Incremental Cost of Compliance
A-19	Rate Base Financial Data
A-20	Production Tax Credits
A-21	Return On Equity

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

A9. Yes, they were.

Q10. When the Company filed this case, did you submit an affidavit in support?

A10. Yes, I did. My affidavit is now my Exhibit A-17, and the attachments to that affidavit are now Exhibits A-18 thru A-21.

Q11. Do the facts and opinions you set out in your Affidavit remain true today?

Line
No.

A11. Yes.

Q12. Does this complete your direct testimony?

A12. Yes, it does.

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of **DTE ELECTRIC COMPANY'S** application for the regulatory reviews, revisions, determinations, and/or approvals necessary to fully comply with Public Act 295 OF 2008	))))	Case No. U-20851

EXHIBITS

OF

PATRICK. D. KAUFFMAN

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of **DTE ELECTRIC COMPANY'S** application for the regulatory reviews, revisions, determinations, and/or approvals necessary for to fully comply with Public Act 295 of 2008	))))	Case No. U-20851

AFFIDAVIT OF PATRICK D. KAUFFMAN IN SUPPORT OF DTE ELECTRIC COMPANY'S APPLICATION FOR APPROVAL OF THE AUGUST 2020 AMENDED RENEWABLE ENERGY PLAN

STATE OF MICHIGAN)
)
COUNTY OF WAYNE)

Patrick D. Kauffman, being first duly sworn, deposes and says:

1. My title is Principal Supervisor for the Renewable Energy group, which includes the 2008 PA 295 and 2016 PA 342 Renewable Energy activities of DTE Electric Company ("DTE Electric" or the "Company"). I graduated from The University of Notre Dame in 1989 with a Bachelor of Arts Degree in Economics. In 1991, I received a Master of Business Administration degree in Finance from Michigan State University. After obtaining my Master's degree from Michigan State University in the spring of 1991, I was employed by General Motors Corporation and held several positions there until 1999. My responsibilities included financial analysis and reporting, budgeting and forecasting, business case development, and accounting.

2. I began my career at DTE Energy in 1999, as Supervisor of Forecasting, Budgeting and Corporate Reporting in the Controller's Organization. I held several positions of increasing

responsibilities within the Controller's Organization including Gross Margin Analysis, Detroit Edison Financial Planning and Analysis, Budgeting, Forecasting and Reporting, and Corporate Support. In 2008, I transferred to Regulatory Affairs and was a Case Manager for Gas Cost Recovery and Power Supply Cost Recovery cases. In 2010, I transferred back to the Controller's Organization and was responsible for benefits forecasting and reporting. In 2013, I obtained the position of Principal Financial Analyst responsible for forecasting and reporting for the Nuclear Generation organization. In August 2016, I was appointed to my current position. I have sponsored testimony in the following cases:

U-15417-R	2008 Power Supply Cost Recovery Reconciliation
U-18242	Reconciliation of the DTE Electric 2016 REP Program
U-18232	2018 Amended REP
U-20172	Reconciliation of the DTE Electric 2017 REP Program
U-20484	Reconciliation of the DTE Electric 2018 REP Program
U-20723	Reconciliation of the DTE Electric 2019 REP Program
U-18232	2020 Amended REP Plan

3. The purpose of my affidavit and supporting attachments in this August 2020 Amended REP filing is to incorporate the impact of including the Company's voluntary green pricing (VGP) projects in DTE Electric's REP plan. In so doing I explain the Company's resulting projected Renewable Energy capital, O&M, and other expenses associated with implementing the Company's Commission-approved 2008 PA 295 and 2016 PA 342 Renewable Energy Plan (REP) and to outline key accounting practices related to DTE Electric's August 2020 Amended REP.

4. I am sponsoring the following attachments, which were prepared by me or under my supervision:

Attachment	Description
1	Expense Elements of Incremental Cost of Compliance
2	Rate Base Financial Data
3	Production Tax Credits
4	Return On Equity

5. The line items shown on Attachment 1, Expense Elements of Incremental Cost of Compliance include the following:

a. Line 1 - Total Royalty and Easement Payments are the ongoing contractual payments to land grantors in areas where wind parks have been completed.

b. Line 2 - Administrative Expense is the ongoing incremental program administrative expenses associated with the Renewable Energy Plan primarily related to commercial and regulatory activities related to administering the Plan.

c. Line 3 - O&M Expense (MPSC Accounts 920, 921, 923, and 553) are the ongoing incremental program administrative expenses associated with the Renewable Energy Plan and related expenses associated with the cost of maintaining solar and wind assets. Included in this total are the MIREC fees paid for tracking of the Renewable Energy Credits (REC) in the database.

d. Line 4 - Insurance Expense is the calculated payments for protection of property for wind and solar programs. The REP assumes that annual insurance costs represent approximately 0.075% of the capital equipment costs, which is consistent with the Company's experience related to other utility capital investment.

e. Line 5 - Property Tax Expense is discussed in Company Affiant Ms.

Wisniewski's testimony.

f. Line 6 - Miscellaneous Other Power is the Coke Oven Gas Expense recorded related to the purchase of Coke Oven Gas used to create Advanced Cleaner Energy Credits (ACECs). The company stopped purchasing Coke oven gas in 2013.

g. Line 7 - Book Depreciation represents the depreciation recorded on the Company's books associated with Plant in Service assets for the Renewable Energy Plan based on balances as of the commercial operation date of these assets. The September 26, 2014 order in Case No. U-16991 revised depreciation rates for the wind and solar REP plant, effective upon issuance of a final Commission order in the next REP Plan case. The next case (U-17793) was filed June 2, 2015. The U-17793 plan was approved by a Commission order dated November 5, 2015. In that order the Commission made the U-16991 depreciation rates effective December 1, 2015. As a result, the Company was using the interim rates of 4.24% for wind and 5.26% for solar until December 1, 2015. Starting in December of 2015, the revised rates of 3.71% for wind and 4.93% for solar were applied. The next case (U-18150) was approved by a Commission order dated December 6, 2018. Starting in June of 2019, the revised rates of 3.71% for wind and 4.80% for solar are applied.

h. Line 8 - Interest Received from ITC Holdings Corp represents interest received on sums advanced to ITC for construction of interconnection facilities and/or network upgrades to the transmission system owned by ITC (which sums will be reimbursed to DTE Electric upon its generation facilities being interconnected to the ITC facilities). The interest received is credited to the incremental cost of compliance to offset the working capital costs associated with carrying a balance receivable from ITC.

6. The line items shown on Attachment 2, Rate Base Financial Data include the

following:

a. Plant in Service, shown on lines 1 through 5, is comprised of the cost of completed solar and wind projects that have been placed in service.

b. Depreciation Reserve, shown on lines 7 through 10, is the accumulated book depreciation associated with the depreciation of the Company's 2008 PA 295 and 2016 PA 342 Renewable Energy program plant in service.

c. Construction Work in Progress (CWIP), shown on lines 12 through 17, represents the costs related to erecting wind and solar assets. As they are completed, project costs are moved from CWIP to plant in service.

d. The REC Inventory Balance, shown on lines 19 through 22, contains the dollar value of renewable energy credits that are part of the Company's 2008 PA 295 as amended by 2016 PA 342 Renewable Energy program.

7. The production tax credit is calculated by multiplying the eligible in-service megawatt hours by the tax credit rate to get the production tax credit amounts. The production tax credit rate is the product of the IRS 2019 PTC rate of 2.5 cents per kilowatt hour and an assumed 2% inflation factor in 2020 through 2029. The IRS has not updated the PTC rate every year but has updated periodically to approximate a 2% increase. This same periodic increase is utilized in Attachment 3. The calculated tax credit amount is then grossed up for taxes. Since tax credits are post tax adjustments, in order to include them in the pre-tax incremental cost of compliance, they must be grossed up (increased) for taxes. This gross up decreases the revenue requirement included in the REP Surcharge and ensures DTE Electric doesn't earn above its authorized return for this item when the credits are applied to net income. Production tax credits are used to reduce the incremental cost of compliance on Affiant Lacey's Attachment 1, line 10. The tax credits

reduce the REP cost of compliance effective upon the in-service date of the eligible assets.

8. The line items shown on Attachment 4, Return on Equity (ROE) Calculation include the following:

a. Line 1 – This is the authorized 11.0% ROE for assets required for compliance for the 2008 PA 295 as amended by 2016 PA 342 Renewable Energy program.

b. Line 2 – In the order dated July 18, 2019 in Case No. U-18232, the Commission noted that the company shall use the Commission-approved ROE, rather than the REP-approved ROE for any portions of the Fairbanks, Isabella I, or Isabella II projects that are used to supply the Large Customer-Voluntary Green Program (LC-VGP) instead of RPS needs. This is the 9.9% ROE for LC-VGP assets per the Commission order.

c. Line 3 – This is the weighted average ROE for REP compliance assets and LC-VGP rate assets. The weighted average ROE is calculated by weighting the REP compliance simplified rate base (Line 12) and the LC-VGP simplified rate base (Line 21) with their respective ROEs. The weighted average ROE is utilized by Witness Lacey in his Attachment 3 (pg. 1) to calculate the Pre-Tax Rate of Return.

d. Lines 12 and 21 – These lines represent the compliance simplified rate base (Line 12) and the LC-VGP simplified rate base (Line 21) which are calculated by subtracting the deferred federal taxes related to plant depreciation (Lines 11 and 20) from net plant (Lines 10 and 19).

9. I have provided Affiant Lacey with Line 6 of his Attachment 1 Incremental Cost of Compliance, Total Payment to Tax Equity Partnership(s), which represents the payments for the purchase of the electricity, capacity and RECs generated by the project owned by the Tax Equity Partnership. I have also provided witness Lacey with Line 20 of his Attachment 1 Incremental

Cost of Compliance, Total Cash Distribution from Tax Equity Partnership(s), which represents the cash distributions (operating profits of the project) allocated to DTE Electric by the Tax Equity Partnership.

10. DTE Electric is currently using the accounting practices outlined in Case No. U-18232 for its approved, amended REP program.

11. Based upon my knowledge and experience, the Company's projected Renewable Energy capital, O&M, other expenses, and accounting practices associated with implementing the Company's August 2020 Amended REP incorporating DTE Electric's VGP build plan are reasonable and prudent and I recommend the Commission approve DTE Electric's August 2020 Amended Renewable Energy Plan.

Further, Affiant sayeth not.

Patrick D. Kauffman

Digitally signed by Patrick D. Kauffman
Date: 2020.08.31 14:48:45 -04'00'

Patrick D. Kauffman

Subscribed and sworn to before
me this 31st day of August 2020.

Estella R. Branson

Digitally signed by Estella R. Branson
Date: 2020.08.31 14:57:39 -04'00'

Estella R. Branson, Notary Public
Oakland County, Michigan
My Commission Expires: 10-26-2023
Acting in Wayne County

Michigan Public Service Commission
DTE Electric Company
2016 PA 342 Renewable Energy Plan - August 2020 Amended REP
Expense Elements of Incremental Cost of Compliance

Case No.: U-20851
Exhibit: A-18
Witness: P. D. Kauffman
Page: 1 of 1

Line No.	(a)	(b) Units	(c) 2016	(d) 2017	(e) 2018	(f) 2019	(g) 2020	(h) 2021	(i) 2022
1	Total Royalty and Easement Payments	$Mil	3.9	4.1	2.7	7.9	7.8	11.0	12.7
2	Administrative Expense	$Mil	0.4	0.4	0.5	0.5	0.5	0.5	0.5
3	O&M-MPSC Accts. 553, 920, 921, 923	$Mil	20.1	22.1	22.3	27.9	35.7	42.7	48.5
4	Insurance Expense	$Mil	0.7	0.7	0.8	0.8	1.1	1.5	1.7
5	Property Tax	$Mil	9.3	9.4	6.8	11.4	10.1	12.5	17.7
6	Miscellaneous Other Power: Coke Oven Gas Expense	$Mil	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	Book Depreciation	$Mil	40.0	44.1	46.4	52.1	75.3	101.6	115.3
8	Interest Received from ITC Holdings Corp.	$Mil	0.0	0.0	0.0	0.0	0.0	0.0	0.0

		Units	2023	2024	2025	2026	2027	2028	2029
9	Total Royalty and Easement Payments	$Mil	13.0	13.3	13.7	14.0	14.4	14.7	10.1
10	Administrative Expense	$Mil	0.5	0.5	0.5	0.6	0.6	0.6	0.4
11	O&M-MPSC Accts. 553, 920, 921, 923	$Mil	49.8	51.0	52.2	53.5	54.9	56.3	38.4
12	Insurance Expense	$Mil	1.8	1.9	2.0	2.0	2.0	2.0	1.4
13	Property Tax	$Mil	17.9	16.8	15.7	14.7	13.6	12.6	7.7
14	Miscellaneous Other Power: Coke Oven Gas Expense	$Mil	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	Book Depreciation	$Mil	123.2	128.6	135.4	138.7	139.6	140.6	94.3
16	Interest Received from ITC Holdings Corp.	$Mil	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Michigan Public Service Commission
DTE Electric Company
2016 PA 342 Renewable Energy Plan - August 2020 Amended REP
Rate Base Financial Data
($ Millions)

Case No.: U-20851
Exhibit: A-19
Witness: P. D. Kauffman
Page: 1 of 2

Line No.	(a) Description	(b) Actual 2016	(c) Actual 2017	(d) Actual 2018	(e) Preliminary 2019	(f) 2020	(g) 2021	(h) 2022
1	**Plant in Service**							
2	Beginning Balance	956.9	1,086.3	1,188.9	1,190.2	1,460.4	2,471.7	2,868.4
3	In Service Amounts	129.4	113.6	8.2	272.7	1,011.3	396.7	267.4
4	Ending Balance	1,086.3	1,188.9	1,190.2	1,460.4	2,471.7	2,868.4	3,135.8
5	Average Balance	968.0	1,123.6	1,190.5	1,398.4	1,966.1	2,670.1	3,002.1
6								
7	**Depreciation Reserve**							
8	Beginning Balance	106.9	145.7	178.3	217.9	265.4	340.7	442.3
9	Ending Balance	145.7	178.3	217.9	265.4	340.7	442.3	557.6
10	Average Balance	125.8	162.8	197.5	242.0	303.1	391.5	500.0
11								
12	**Construction Work in Progress**							
13	Beginning Balance	84.3	94.8	34.0	281.8	88.4	150.0	(0.0)
14	Transfer to Plant In Service	(129.4)	(113.6)	(8.2)	(272.7)	(1,011.3)	(396.7)	(267.4)
15	Plus: Additions	139.9	52.8	256.0	79.3	1,072.9	246.7	267.4
16	Ending Balance	94.8	34.0	281.8	88.4	150.0	(0.0)	(0.0)
17	Average Balance	129.5	74.0	73.1	119.4	119.2	75.0	(0.0)
18								
19	**REC/ACEC Inventory (1)**							
20	Net RECs/ACECs Transferred to Inventory	(10.6)	(5.9)	(2.9)	(6.8)	(4.0)	(3.4)	(1.7)
21	Ending Balance	29.4	23.5	20.6	13.8	9.8	6.4	4.7
22	Average Balance	39.6	30.9	24.8	19.8	11.8	8.1	5.6
23								
24	**ITC Holdings Corp. A/R / (Apex Account Payable)**							
25	Beginning Balance	4.6	4.6	(0.0)	5.5	2.4	(427.3)	(0.0)
26	Additions	-	(4.6)	5.5	(3.1)	(429.7)	427.3	-
27	Ending Balance	4.6	(0.0)	5.5	2.4	(427.3)	(0.0)	(0.0)
28	Average Balance	4.6	0.4	0.8	3.6	(212.5)	(213.7)	(0.0)

(1) Provided by witness Harwood on Exhibit A-4

Large Customer Voluntary Green Program

Line No.	Description	2016	2017	2018	2019	2020	2021	2022
1	**Plant in Service**							
2	Beginning Balance	-	-	-	-	-	728.1	729.1
3	In Service Amounts	-	-	-	-	728.1	1.0	248.9
4	Ending Balance	-	-	-	-	728.1	729.1	978.0
5	Average Balance	-	-	-	-	364.1	728.6	853.6
6								
7	**Depreciation Reserve**							
8	Beginning Balance	-	-	-	-	-	13.5	40.5
9	Ending Balance	-	-	-	-	13.5	40.5	72.2
10	Average Balance	-	-	-	-	6.8	27.0	56.4
11								
12	**Construction Work in Progress**							
13	Beginning Balance	-	-	-	-	40.3	-	-
14	Transfer to Plant In Service	-	-	-	-	(40.3)	(1.0)	(248.9)
15	Plus: Additions	-	-	-	40.3	-	1.0	248.9
16	Ending Balance	-	-	-	40.3	-	-	-
17	Average Balance	-	-	-	20.2	20.2	-	-

Compliance

Line No.	Description	2016	2017	2018	2019	2020	2021	2022
1	**Plant in Service**							
2	Beginning Balance	956.9	1,086.3	1,188.9	1,190.2	1,460.4	1,743.6	2,139.3
3	In Service Amounts	129.4	113.6	8.2	272.7	283.2	395.7	18.5
4	Ending Balance	1,086.3	1,188.9	1,190.2	1,460.4	1,743.6	2,139.3	2,157.8
5	Average Balance	968.0	1,123.6	1,190.5	1,398.4	1,602.0	1,941.5	2,148.5
6								
7	**Depreciation Reserve**							
8	Beginning Balance	106.9	145.7	178.3	217.9	265.4	327.2	401.8
9	Ending Balance	145.7	178.3	217.9	265.4	327.2	401.8	485.4
10	Average Balance	125.8	162.8	197.5	242.0	296.3	364.5	443.6
11								
12	**Construction Work in Progress**							
13	Beginning Balance	84.3	94.8	34.0	281.8	48.1	150.0	(0.0)
14	Transfer to Plant In Service	(129.4)	(113.6)	(8.2)	(272.7)	(971.0)	(395.7)	(18.5)
15	Plus: Additions	139.9	52.8	256.0	39.0	1,072.9	245.7	18.5
16	Ending Balance	94.8	34.0	281.8	48.1	150.0	(0.0)	(0.0)
17	Average Balance	129.5	74.0	73.1	99.3	99.0	75.0	(0.0)

Michigan Public Service Commission
DTE Electric Company
2016 PA 342 Renewable Energy Plan - August 2020 Amended RE
Rate Base Financial Data
($ Millions)

Case No.: U-20851
Exhibit: A-19
Witness: P. D. Kauffman
Page: 2 of 2

Line No.	(a) Description	(i) 2023	(j) 2024	(k) 2025	(l) 2026	(m) 2027	(n) 2028	(o) 2029
1	**Plant in Service**							
2	Beginning Balance	3,135.8	3,204.8	3,370.3	3,496.3	3,521.1	3,546.0	3,570.8
3	In Service Amounts	68.9	165.5	126.0	24.8	24.9	24.8	26.1
4	Ending Balance	3,204.8	3,370.3	3,496.3	3,521.1	3,546.0	3,570.8	3,597.0
5	Average Balance	3,170.3	3,287.5	3,433.3	3,508.7	3,533.6	3,558.4	3,583.9
6								
7	**Depreciation Reserve**							
8	Beginning Balance	557.6	680.8	809.4	944.8	1,083.5	1,223.1	1,363.7
9	Ending Balance	680.8	809.4	944.8	1,083.5	1,223.1	1,363.7	1,458.0
10	Average Balance	619.2	745.1	877.1	1,014.1	1,153.3	1,293.4	1,410.9
11								
12	**Construction Work in Progress**							
13	Beginning Balance	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
14	Transfer to Plant In Service	(68.9)	(165.5)	(126.0)	(24.8)	(24.9)	(24.8)	(26.1)
15	Plus: Additions	68.9	165.5	126.0	24.8	24.9	24.8	26.1
16	Ending Balance	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
17	Average Balance	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
18								
19	**REC/ACEC Inventory (1)**							
20	Net RECs/ACECs Transferred to Inventory	(0.8)	(0.4)	(0.1)	(0.0)	0.0	0.0	0.1
21	Ending Balance	3.9	3.5	3.4	3.3	3.3	3.3	3.4
22	Average Balance	4.3	3.7	3.4	3.3	3.3	3.3	3.4
23								
24	**ITC Holdings Corp. A/R / (Apex Account Payable)**							
25	Beginning Balance	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
26	Additions	-	-	-	-	-	-	-
27	Ending Balance	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
28	Average Balance	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)

(1) Provided by witness Harwood on Exhibit A-4

Large Customer Voluntary Green Program

Line No.	Description	2023	2024	2025	2026	2027	2028	2029
1	**Plant in Service**							
2	Beginning Balance	978.0	1,027.5	1,171.8	1,276.1	1,276.7	1,276.7	1,276.7
3	In Service Amounts	49.4	144.4	104.3	0.6	-	-	-
4	Ending Balance	1,027.5	1,171.8	1,276.1	1,276.7	1,276.7	1,276.7	1,276.7
5	Average Balance	1,002.8	1,099.7	1,224.0	1,276.4	1,276.7	1,276.7	1,276.7
6								
7	**Depreciation Reserve**							
8	Beginning Balance	72.2	109.7	151.8	199.9	250.5	301.1	351.7
9	Ending Balance	109.7	151.8	199.9	250.5	301.1	351.7	385.5
10	Average Balance	90.9	130.7	175.8	225.2	275.8	326.4	368.6
11								
12	**Construction Work in Progress**							
13	Beginning Balance	-	-	-	-	-	-	-
14	Transfer to Plant In Service	(49.4)	(144.4)	(104.3)	(0.6)	-	-	-
15	Plus: Additions	49.4	144.4	104.3	0.6	-	-	-
16	Ending Balance	-	-	-	-	-	-	-
17	Average Balance	-	-	-	-	-	-	-

Compliance

Line No.	Description	2023	2024	2025	2026	2027	2028	2029
1	**Plant in Service**							
2	Beginning Balance	2,157.8	2,177.3	2,198.4	2,220.2	2,244.4	2,269.3	2,294.1
3	In Service Amounts	19.5	21.2	21.8	24.2	24.9	24.8	26.1
4	Ending Balance	2,177.3	2,198.4	2,220.2	2,244.4	2,269.3	2,294.1	2,320.2
5	Average Balance	2,167.5	2,187.9	2,209.3	2,232.3	2,256.8	2,281.7	2,307.2
6								
7	**Depreciation Reserve**							
8	Beginning Balance	485.4	571.1	657.6	744.9	833.0	922.0	1,011.9
9	Ending Balance	571.1	657.6	744.9	833.0	922.0	1,011.9	1,072.5
10	Average Balance	528.3	614.4	701.2	788.9	877.5	967.0	1,042.2
11								
12	**Construction Work in Progress**							
13	Beginning Balance	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
14	Transfer to Plant In Service	(19.5)	(21.2)	(21.8)	(24.2)	(24.9)	(24.8)	(26.1)
15	Plus: Additions	19.5	21.2	21.8	24.2	24.9	24.8	26.1
16	Ending Balance	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
17	Average Balance	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)

Michigan Public Service Commission
DTE Electric Company
2016 PA 342 Renewable Energy Plan - August 2020 Amended REP
Production Tax Credits
($ Millions, except where noted)

Case No.: U-20851
Exhibit: A-20
Witness: P. D. Kauffman
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Line No.	(a) Description	(b) 2016	(c) 2017	(d) 2018	(e) 2019	(f) 2020	(g) 2021	(h) 2022	(i) 2023	(j) 2024	(k) 2025	(l) 2026	(m) 2027	(n) 2028	(o) 2029
1	**Production Tax Credits**														
2	Qualifying Generation (MWh)	1,320,520	1,501,749	1,465,678	1,827,777	2,407,878	3,647,552	3,828,086	3,428,586	2,957,906	2,781,543	2,781,543	2,610,249	2,617,400	1,457,568
3	PTC Rate ($/MWh)	23.00	24.00	24.00	25.00	25.00	25.00	25.00	26.00	26.00	27.00	27.00	27.00	28.00	28.00
4	Wind Production Tax Credits Net	30.4	36.0	35.2	45.7	60.2	91.2	95.7	89.1	76.9	75.1	75.1	70.5	73.3	40.8
5	Reduction to Incremental Cost Of Compliance Grossed Up	49.8	59.1	47.5	60.8	81.2	123.1	129.2	120.3	103.8	101.4	101.4	95.1	98.9	55.1

Michigan Public Service Commission
DTE Electric Company
2016 PA 342 Renewable Energy Plan - August 2020 Amended REP
Return on Equity Calculation
($ Millions, except where noted)

Case No.: U-20851
Exhibit: A-21
Witness: P.D. Kauffman
Page: 1 of 1

Line No.	(a) Description	(b) 2019	(c) 2020	(d) 2021	(e) 2022	(f) 2023	(g) 2024	(h) 2025	(i) 2026	(j) 2027	(k) 2028	(l) 2029
1	REP Compliance Return	11.00%	11.00%	11.00%	11.00%	11.00%	11.00%	11.00%	11.00%	11.00%	11.00%	11.00%
2	Authorized Voluntary Return	10.00%	9.93%	9.90%	9.90%	9.90%	9.90%	9.90%	9.90%	9.90%	9.90%	9.90%
3	Weighted Average Return on Equity	10.98%	10.76%	10.67%	10.67%	10.63%	10.61%	10.58%	10.57%	10.58%	10.58%	10.57%
4												
5	Compliance											
6	Plant in Service	1,398.4	1,602.0	1,941.5	2,148.5	2,167.5	2,187.9	2,209.3	2,232.3	2,256.8	2,281.7	2,307.2
7	CWIP	99.3	99.0	75.0	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
8	Gross Plant	1,497.7	1,701.1	2,016.5	2,148.5	2,167.5	2,187.8	2,209.3	2,232.3	2,256.8	2,281.7	2,307.1
9	Accumulated Depreciation	(242.0)	(296.3)	(364.5)	(443.6)	(528.3)	(614.4)	(701.2)	(788.9)	(877.5)	(967.0)	(1,042.2)
10	Net Plant	1,255.7	1,404.7	1,652.0	1,704.9	1,639.2	1,573.5	1,508.1	1,443.4	1,379.3	1,314.7	1,264.9
11	Deferred Federal Tax	(140.7)	(140.6)	(112.1)	(83.7)	(56.3)	(33.8)	(33.0)	(34.0)	(44.5)	(63.6)	(110.4)
12	Simplified Rate Base	1,114.9	1,264.1	1,539.8	1,621.2	1,582.9	1,539.7	1,475.0	1,409.4	1,334.8	1,251.1	1,154.5
13												
14	Authorized Large Customer Voluntary											
15	Plant in Service	-	364.1	728.6	853.6	1,002.8	1,099.7	1,224.0	1,276.4	1,276.7	1,276.7	1,276.7
16	CWIP	20.2	20.2	-	-	-	-	-	-	-	-	-
17	Gross Plant	20.2	384.2	728.6	853.6	1,002.8	1,099.7	1,224.0	1,276.4	1,276.7	1,276.7	1,276.7
18	Accumulated Depreciation	-	(6.8)	(27.0)	(56.4)	(90.9)	(130.7)	(175.8)	(225.2)	(275.8)	(326.4)	(368.6)
19	Net Plant	20.2	377.4	701.6	797.2	911.8	968.9	1,048.1	1,051.2	1,000.9	950.3	908.1
20	Deferred Federal Tax	-	(14.8)	(52.8)	(88.3)	(111.6)	(132.7)	(149.2)	(159.4)	(166.3)	(170.6)	(172.5)
21	Simplified Rate Base	20.2	362.6	648.7	708.9	800.2	836.2	898.9	891.8	834.6	779.7	735.6
22												
23	Deferred Federal Tax Calculation	(140.7)	(155.4)	(165.0)	(172.0)	(167.9)	(166.5)	(182.3)	(193.4)	(210.8)	(234.2)	(282.9)
24	B-27 SLW Deferred Tax	(140.8)	(155.4)	(164.9)	(172.0)	(167.9)	(166.5)	(182.2)	(193.4)	(210.8)	(234.2)	(282.9)
25		0.0	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of **DTE ELECTRIC COMPANY'S** application for the regulatory reviews, revisions, determinations, and/or approvals necessary to fully comply with Public Act 295 OF 2008	))))	Case No. U-20851

QUALIFICATIONS

AND

DIRECT TESTIMONY

OF

THOMAS W. LACEY

DTE ELECTRIC COMPANY
QUALIFICATIONS OF THOMAS W. LACEY

Line No.

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

A1. My name is Thomas W. Lacey. My business address is One Energy Plaza, Detroit, Michigan, 48226. I am employed by DTE Energy Corporate Services, LLC (DTE Energy or DTE) as a Principal Financial Analyst in the Revenue Requirements Department of the Regulatory Affairs Organization.

Q2. On whose behalf are you testifying?

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

Q3. What is your educational background and business experience?

A3. I received a Bachelor of Science Degree in Accounting from Michigan State University in 1981 and a Masters in Business Administration from Wayne State University in 1992. From 1982 until 2001, I was employed by ANR Pipeline Company (ANR) in the Rates and Regulatory Affairs department. I had several positions of increasing responsibilities within the Rates area, ultimately rising to the position of Senior Rates Analyst. During my nineteen years with ANR, I worked on numerous rate proceedings and filings before the Federal Energy Regulatory Commission (FERC) including rate cases (FERC Docket Nos. RP82-80, RP83-79, RP86-169, RP89-161, RS92-1 and RP94-43). My work was primarily in the areas of cost-of-service and rate design. In 2002, I joined DTE as a Financial Analyst in the Load Research department of Regulatory Affairs. I worked in Load Research until December 2005. My responsibilities within Load Research included extensive work on the 2003 Michigan Consolidated Gas Company (MichCon) rate case (U-13898) and The Detroit Edison Company (Detroit Edison) rate filings. In December 2005, I accepted my current position.

Q4. What are your responsibilities as a Principal Financial Analyst for both DTE Electric and DTE Gas?

A4. As a Principal Financial Analyst, my responsibilities include the preparation of revenue requirements, cost of service and rate design, testimony, exhibits and workpapers, in cases for both DTE Gas and DTE Electric. I am also responsible for managing certain MPSC filings such as DTE Electric's Renewable Energy Plan (REP) Plan case: U-17793 and DTE Electric's most recent depreciation case U-18150.

Q5. Have you previously sponsored testimony in cases before the Michigan Public Service Commission (MPSC or Commission)?

A5. Yes, I have. I have sponsored testimony in the following cases:

U-13898	MichCon's 2006 Uncollectible Expense True-up Mechanism and Safety and Training Related Expenditure Report
U-15985	MichCon's 2009 General Rate Case Proceeding
U-16290	Reconciliation of MichCon's 2010 Energy Optimization (EO) Program
U-16730	MichCon's 2011 Updated Energy Optimization Plan
U-16730	MichCon 2011 Updated Energy Optimization Plan
U-16751	Reconciliation of the MichCon 2011 EO Program
U-16999	MichCon 2011 General Rate Case Proceeding
U-17288	Reconciliation of the DTE Gas 2012 EO Program
U-17602	Reconciliation of the DTE Electric 2013 EO Program
U-17608	Reconciliation of the DTE Gas 2013 EO Program

Line No.		
1	U-17632	Reconciliation of the DTE Electric 2013 REP Program
2	U-17762	DTE Electric 2016/2017 Energy Optimization Plan
3	U-17763	DTE Gas 2016/2017 Energy Optimization Plan
4	U-17804	Reconciliation of the DTE Electric 2014 REP Program
5	U-17832	Reconciliation of the DTE Electric 2014 EO Program
6	U-17841	Reconciliation of the DTE Gas 2014 EO Program
7	U-18014	DTE Electric General Rate Case Proceeding
8	U-18111	DTE Electric REP Plan Proceeding
9	U-18232	Amended REP
10	U-18232 (A)	2020 Amended REP
11	U-18248	DTE Electric Capacity Charge
12	U-18255	DTE Electric General Rate Case Proceeding
13	U-20029	Reconciliation of the DTE Electric 2017 EWR Program
14	U-20035	Reconciliation of the DTE Gas 2017 EWR Program
15	U-20105	DTE Electric Tax Credit A Proceeding
16	U-20162	DTE Electric General Rate Case Proceeding
17	U-20172	Reconciliation of the DTE Electric 2017 REP Program
18	U-20366	Reconciliation of the DTE Electric 2018 EWR Program
19	U-20369	Reconciliation of the DTE Gas 2018 EWR Program
20	U-20561	DTE Electric General Rate Case Proceeding

21

22 **Q6. Have you previously testified or submitted testimony in any other regulatory**
23 **proceedings?**

24 A6. Yes. I sponsored testimony in ANR's general rate case in FERC Docket No. RP94-
25 43. I testified at a hearing before the FERC in Docket No. RP94-43.

Line No.

Q7. What is the purpose of your testimony?

A7. The purpose of my testimony is to present the incremental cost of compliance calculation based on the information, costs and Renewable Energy Plan (REP) surcharge revenues associated with DTE Electric's August 2020 Amended REP that were supplied to me and are supported in this application by DTE Electric Witnesses Mr. Harwood, Mr. Kauffman, Mr. Rivard, and Ms. Wisniewski. I am also supporting the pre-tax cost of capital that I use to calculate the return on rate base, and the calculation of interest on regulatory liabilities.

Q8. Are you sponsoring any exhibits?

A8. Yes, I am sponsoring the following exhibits:

Exhibit	Description
A-32	Lacey Affidavit
A-33	Incremental Cost of Compliance Summary
A-34	Revenue Requirement
A-35	Interest on Regulatory Liability
A-36	Pre-Tax Rate of Return and Revenue Conversion Factors
A-37	Actual and Forecast Meter Counts by Class

Q9. Were these exhibits prepared by you or under your supervision?

A9. Yes, they were.

Q10. When the Company filed this case, did you submit an affidavit in support?

A10. Yes, I did. My affidavit is now my Exhibit A-32, and the attachments to that affidavit are now Exhibits A-33 thru A-37.

Line
No.

Q11. Do the facts and opinions you set out in your Affidavit remain true today?

A11. Yes.

Q12. Does this conclude your direct testimony?

A12. Yes, it does.

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of **DTE ELECTRIC COMPANY'S** application for the regulatory reviews, revisions, determinations, and/or approvals necessary to fully comply with Public Act 295 OF 2008	))))	Case No. U-20851

EXHIBITS

OF

THOMAS W. LACEY

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of **DTE ELECTRIC COMPANY'S** application for the regulatory reviews, revisions, determinations, and/or approvals necessary for to fully comply with Public Act 295 of 2008	))))	Case No. U-20851

AFFIDAVIT OF THOMAS W. LACEY IN SUPPORT OF DTE ELECTRIC COMPANY'S APPLICATION FOR APPROVAL OF THE AUGUST 2020 AMENDED RENEWABLE ENERGY PLAN

STATE OF MICHIGAN)

COUNTY OF WAYNE)

Thomas W. Lacey, being first duly sworn, deposes and says:

1. My title is Principal Financial Analyst in the Revenue Requirements Department of the Regulatory Affairs Organization. I received a Bachelor of Science Degree in Accounting from Michigan State University in 1981 and a Masters in Business Administration from Wayne State University in 1992. From 1982 to 2001, I was employed by ANR Pipeline Company (ANR) in the Rates and Regulatory Affairs department. I had several positions of increasing responsibilities within the Rates area, ultimately rising to the position of Senior Rates Analyst. During my nineteen years with ANR, I worked on numerous rate proceedings and filings before the Federal Energy Regulatory Commission (FERC) including rate cases (FERC Docket Nos. RP82-80, RP83-79, RP86-169, RP89-161, RS92-1, and RP94-43). My work was primarily in the

areas of cost-of-service and rate design. In 2002, I joined DTE as a Financial Analyst in the Load Research department of Regulatory Affairs. I worked in Load Research until December 2005. My responsibilities within Load Research included extensive work on the 2003 Michigan Consolidated Gas Company (MichCon) rate case (U-13898) and The Detroit Edison Company (Detroit Edison) rate filings. In December 2005, I accepted my current position. As a Principal Financial Analyst, my responsibilities include the preparation of revenue requirements, cost of service and rate design, testimony, exhibits and workpapers, in cases for both DTE Electric and DTE Gas. I am also responsible for managing certain MPSC filings such as DTE Electric's Renewable Energy Plan (REP) case (U-17993) and DTE Electric's most recent depreciation case (U-18150).

2. I have sponsored testimony in numerous cases before the Michigan Public Service Commission (MPSC or Commission). In addition, I sponsored testimony before FERC, in ANR's general rate case in FERC Docket No. RP94-43.3.

3. The purpose of my affidavit is to present the incremental cost of compliance calculation resulting from incorporating the Company's voluntary green pricing (VGP) program build plan into DTE Electric's Commission-approved Renewable Energy Plan (REP) based on the information, costs, and REP surcharge revenues associated with DTE Electric's August 2020 Amended REP that were supplied to me and are supported in this application by DTE Electric Affiants Mr. Harwood, Mr. Kauffman, Mr. Rivard, and Ms. Wisniewski. I am also supporting the pre-tax cost of capital that I use to calculate the return on rate base, and the calculation of interest on regulatory liabilities.

4. I am sponsoring the following attachments, which were prepared by me or under my supervision:

Attachment	Description
1	Incremental Cost of Compliance Summary
2	Revenue Requirement
3	Interest on Regulatory Liability
4	Pre-Tax Rate of Return and Revenue Conversion Factors
5	Actual and Forecast Meter Counts by Class – 2016 through 2029

5. The calculation of incremental cost of compliance that I support in this proceeding is performed in the same manner as it was in the Company's Commission-approved REP plan filed March 31, 2020 (Case No. U-18232), and approved in the Commission's July 9, 2020 order.

6. Attachment 1 displays the incremental cost of compliance calculation. The attachment is arranged in three sections to match the language contained in MCL 460.1047 that describes the components of the incremental cost of compliance. Attachment 1 displays the gross sum of the costs described in MCL 460.1047(2)(a), the revenues/credits to be subtracted described in MCL 460.1047(2)(b) and carrying costs on regulatory assets described in MCL 460.1047(3). It should be noted that several of these lines or subcomponents described within a line have zero values but are included on the attachment for completeness and possible future use.

7. Attachment 1, line 2 addresses subparts (i, ii, iii, and iv) of MCL 460.1047(2)(a) and consists of Capital, Operating and Maintenance (O&M), Return on Equity (ROE), Financing, Interconnect, and Ancillary service costs. Line 3 addresses subpart (v)(A) and consists of costs of renewable energy credits (RECs) or advanced cleaner energy credits (ACECs) purchases. Line 4 addresses subpart (v)(B) and consists of costs of contracts described under former MCL 460.1033(1) (i.e., estimated third party purchase power agreements (PPAs) charges). Line 5 addresses subpart (vi) and consists of state and federal government actions related to renewable

energy (presently zero). Line 6 addresses total payments to Tax Equity Partners, as further explained in the affidavit of Affiant Kauffman. Line 7 shows the sum of lines 1 through 6, DTE Electric's 2008 PA 295, as amended by 2016 PA 342, REP Gross Revenue Requirement. Line 9 addresses subpart (i) of MCL 460.1047(2)(b) and consists of revenue from the sale of environmental attributes (i.e., REC sales) (presently zero). Lines 10 and 11 address subpart (iii) and consist of tax credits to promote renewable energy (e.g., production tax credits (PTC), tax benefits of solar grants and solar investment tax credits (ITC)). Line 12 addresses subpart (iv) and consists of costs subject to recovery through the Power Supply Cost Recovery (PSCR). Affiant Rivard supplies these costs. Line 13 addresses subpart (v) and consists of revenue from wholesale renewable energy sales (presently zero). Lines 14-19 addresses subpart (vi) consists of additional revenue as determined by the Commission, which consists of MIGreenPower and the planned VGP subscription revenue, credit and PSCR reimbursement of the credit, which Affiants Rivard and Harwood address. Line 20 addresses total cash distributions from Tax Equity Partnership, as further explained in the affidavit of Affiant Kauffman. Line 21 addresses subpart (vii) and consists of revenue recovered in rates for renewable energy costs included in MCL 460.1047(2)(a) (presently proposed to be zero). Line 22 is for the amortization of the Regulatory Liability associated with the TCJA supported by Affiant Wisniewski. Line 24 is a subtotal of all subtractions (lines 8 through 22). Line 25 is the net of lines 7 and 24 and is the incremental cost of compliance prior to adding interest.

8. Line 26 is the interest on regulatory liabilities that I calculate on Attachment 3 pursuant to MCL 460.1047(2)(a)(ii) and the applicable interest rate [the average short-term borrowing rate available to the electric provider (in this instance DTE Electric) during the appropriate period] is specified in MCL 460.1047(3). Line 27 contains the carrying charges for

regulatory assets that is described in MCL 460.1047(3) and is presently zero. Line 29 shows the total incremental cost of compliance for the years 2016 through 2029.

9. MCL 460.1049 requires annual REP reconciliation proceedings. Years for which the Commission has issued a final order in a REP reconciliation filing approving the actual REP costs (i.e., reconciled years) will typically not be included in any amended plans subsequently filed by the Company. The August 2020 Amended REP will carry forward the approved balances and start with the year 2016. The most recent approved REP reconciliation case was filed on June 25, 2019 in Case No. U-20484 for the plan year 2018. An order was issued in that case on February 6, 2020.

10. Attachment 2 titled "Revenue Requirement" includes the calculation of average net rate base and gross revenue requirements. Line 10, average net rate base, is comprised of the following components: Plant in Service, Construction Work in Progress (CWIP), Accumulated Depreciation Reserve, REC/ACEC inventory, International Transmission Company (ITC) Accounts Receivable, and Accumulated Deferred Income Taxes. Line 22, gross revenue requirement, is comprised of the following cost components: Pre-Tax Return on Net Rate Base, PPA Purchased Power, RECs and ACECs consumed, O&M, Royalty Payments, Depreciation, Property Taxes, Insurance, and Interest Received from ITC Holdings Corp.

11. In addition to the pre-tax cost of capital that I calculated on Attachment 4, I relied upon information supplied by Affiants Kauffman, Rivard, Wisniewski and Harwood. Specifically, Affiant Kauffman provided the Blended ROE, O&M, Royalty Payments, Depreciation, Property Taxes, Insurance, Interest Received from ITC Holdings Corp., the average Plant-In-Service, CWIP, Depreciation Reserve, and ITC Holdings Corp. Accounts Receivable. Affiant Wisniewski provided deferred taxes. Affiant Harwood supplied the RECs/ACECs consumed. He also

provided renewable power expense and REC/ACEC purchases and consumption expense to Affiant Kauffman who in turn supplied me with the average REC/ACEC inventory balances. Affiant Rivard supplied the PPA Purchased Power.

12. Traditionally in Michigan, rate base is comprised of Plant-In-Service less Depreciation Reserve plus CWIP, Working Capital, and Future Use. REP rate base in this case follows the traditional definition used in general rate cases but is adjusted to reflect the impacts of accumulated deferred income taxes and prepaid taxes.

13. Consistent with the treatment of accumulated pre-paid and deferred income taxes used in DTE Electric's original Commission-approved 2008 PA 295 REP, accumulated pre-paid and deferred income taxes are included as part of rate base determination because, unlike in general rate cases, they have not been included in the development of the 2008 PA 295, as amended by 2016 PA 342, REP's Pre-tax Rate of Return. Therefore, these income taxes must be considered as part of rate base in order to accurately determine the REP's required pre-tax return. This REP rate base treatment for taxes is required to match the pre-tax weighted average cost of permanent capital that is used to calculate the return on rate base. Absent this tax adjustment to each year's REP rate base, it would be necessary to calculate a rate of return for each year to reflect the effects of changes in zero cost capital that result from pre-paid and deferred income taxes.

14. The June 2, 2009 Order in MPSC Case No. U-15806 indicated uncollectible expenses reflected in the original proposed 2008 PA 295 REP would be addressed in the Company's next general rate case. Therefore, uncollectible expenses are excluded from this August 2020 Amended REP. The Commission in its June 2, 2009 Commission Order in Case No. U-15806, page 22 indicated that Net Equity Costs Due to Imputed Debt would be considered at

the time of PPA approval. In subsequent Commission Orders[1] approving PPAs the Commission indicated that requests for imputed debt-related cost recovery would be handled in general rate cases. Therefore, Net Equity Costs Due to Imputed Debt are also excluded from this August 2020 Amended REP.

15. Attachment 3 titled "Interest on Regulatory Liability" shows the calculation of the average regulatory liability balance and the interest on that balance. Line 1 of Attachment 3 contains the REP Surcharge (a/k/a Revenue Recovery Mechanism surcharge) revenue, which is zero given the surcharge is currently, and is proposed to remain, at zero. Line 2 contains the incremental cost of compliance from Attachment 1, line 29. Line 3 contains the regulatory liability increase or (decrease) for each year and is the result of subtracting the incremental cost of compliance in line 2 from the REP surcharge revenues in line 1. Line 4 is the regulatory liability ending balance for each year and is the sum of the prior year ending balance and the current year change from line 3. Line 5 is the average regulatory liability that is used to calculate line 6, the interest on the average liability balance. I use average short-term interest rates that I confirmed with DTE Energy's Treasury department to calculate the interest on the average regulatory liability. The short-term interest rates are as follows: 0.85% for 2016 1.16% for 2017, 2.17% for 2018, 2.39% for 2019, 2.0% for 2020 through 2029. In accordance with MCL 460.1047(2)(a)(ii), the interest on the regulatory liability is subtracted from the cost of compliance and the result is displayed on Attachment 1, line 29.

16. In Attachment A to the December 4, 2008 Temporary Order in Case No. U-15800, the Commission stated "Recovery to include the authorized rate of return on equity, which will remain fixed at the rate of return and debt to equity ratio that was in effect in base rates when the

[1] September 14, 2010 Commission Order in Case No. U-15806, page 6 and October 31, 2012 Commission Order in Case No. U-16582, page 7.

renewable plan was approved (MCL 460.1047 (1))." In Exhibit A to the August 23, 2017 Order in Case No. U-18409, the Commission includes the same directive. However, as required by the Commission in its July 18, 2019, Order, the Company's current approved (U-20561) return on equity (ROE) is utilized for certain assets, which results in "blended ROE," as more fully explained by Affiant Kauffman.

17. For the years 2016-2018, I used the annual pre-tax rate of return approved in annual REP reconciliation filings approved by the MPSC filed in cases U-18242 (2016), U-20172 (2017) and U-20484 (2018).

18. For the years 2019-2029, I used the pre-tax rate of return shown on Line 10 of Attachment 4 titled "Pre-Tax Rate of Return," page 1 of 3. This pre-tax rate of return includes the blended rate of return on equity calculated by Affiant Kauffman on his Attachment 4, and the debt to equity ratio that was authorized at the time DTE Electric's Original REP was approved and is based on the December 23, 2008 order in Case No. U-15244.[2] The long-term debt component of the rate of return is calculated using the actual cost of debt for 2019 that was supplied to me by the DTE Treasury department For the years 2020-2029 I used the debt approved in DTE Electric's most recent general rate case, Case U-20561. The revenue conversion factors are calculated in columns (a) and (b), Attachment 4, page 3 of 3, and reflect Michigan Corporate Income tax[3] and Federal Income tax rates. The Michigan Corporate Income tax used in this case is 5.88% because DTE Electric applies an apportionment factor to account for business conducted outside of the State of Michigan. The long-term debt component of the rate of return, for the years 2020-2029

[2] The December 23, 2008 Order in MPSC Case No. U-15244 at page 15 approves a long-term debt rate of 5.76% and at page 21 approves a rate of return on equity of 11.0%.
[3] On May 25, 2011, Governor Rick Snyder signed into law 2011 Public Act 38, that replaces the MBT and Gross Receipts tax with a flat 6% Michigan Corporate Income Tax, effective January 1, 2012.

is calculated using the 4.22% cost of debt that was approved in the May 8, 2020 Order in Case No. U-20561.[4]

19. There are two different equity revenue multipliers derived within the pages of Attachment 4. The need for multiple equity revenue multipliers is driven by the different tax rates in effect for different periods within the plan. Generally, the overall revenue multiplier derived on Attachment 3 is a multiplication factor that I use to convert the after-tax return on equity component to its pre-tax equivalent. Revenue collected to cover a Utility's equity return is subject to Michigan income tax, municipal taxes, and federal income tax.

20. I have not included an Allowance for Funds Used During Construction (AFUDC) offset in the REP revenue requirement calculation. As supported by Affiant Kauffman, I have included average CWIP in rate base thus allowing for immediate recognition of financing costs in the incremental cost of compliance and eliminating the need for an AFUDC accrual.

21. Most likely there will be ongoing costs of compliance after the 20-year REP period ends. As shown on Attachment 2 the Company projects that it will continue to have an ongoing revenue requirement associated with its REP at the end of the 20-year REP period. Unless these costs are completely offset by the subtractions described in MCL 460.1047(2)(b), there will be ongoing costs of compliance after the 20-year REP period ends.

22. Attachment 5 provides the Company's actual (2016-2018) and forecast (2019 – 2029) retail customer meter counts by class, which are required pursuant to the Commission's filing requirements established in the August 23, 2017 Order issued in Case No. U-18409 (see Exhibit A pages 2 and 8 attached to Order).

23. The starting point for determining the number of meters was a current forecast of

[4] The May 8, 2020 Order in MPSC Case No. U-20561 at page 171 approves a long-term debt rate of 4.22%.

the number of bundled customers provided on Exhibit B-26 of the Amended REP Plan filed March 31, 2020 (Case No. U-18232), sponsored by Company Witness Mr. Leuker. To translate the bundled customer counts to meter counts, I multiplied the customer counts by the average number of meters per customer for each class. The Company performed an analysis to determine the relationship between customer counts and customer meters by class (Commercial Secondary, Commercial / Industrial Primary), using historical billing data. The customer to meter ratio (as shown below) is the same as used in DTE Electric's Energy Waste Reduction Plan Filing (U-20373), which was approved by the Commission on March 5, 2020. Since Witness Leuker shows street lighting customers on a separate line on his Exhibit B-23 of the Amended REP Plan filed March 31, 2020 (Case No. U-18232), I have added these customer counts to the bundled commercial secondary customer counts in order to determine the total bundled commercial secondary customer count. In addition, the bundled commercial secondary customer counts from Witness Leuker's March 2020 Case No. U-18232 testimony and exhibits do not include the Company's pumping customers, as these customers are excluded from paying the REPS surcharge pursuant to PA342, Section 3(g). The Company determined the following meter to customer ratios:

Residential = 1.0 meter per customer

Commercial Secondary = 1.0 meters per customer

Commercial & Industrial Primary = 1.20 meters per customer.

24. Based upon my knowledge and experience, the Company's incremental cost of compliance calculation resulting from incorporating the Company's voluntary green pricing (VGP) program build plan into DTE Electric's Commission-approved Renewable Energy Plan (REP) based on the information, costs, and REP surcharge revenues associated with DTE

Electric's August 2020 Amended REP is reasonable and prudent and I recommend that the Commission approve DTE Electric's August 2020 Amended Renewable Energy Plan.

Further, Affiant sayeth not.

Thomas W. Lacey

Digitally signed by Thomas W. Lacey
Date: 2020.08.31 14:59:28 -04'00'

Thomas W. Lacey

Subscribed and sworn to before me this 31st day of August 2020.

Estella R. Branson

Digitally signed by Estella R. Branson
Date: 2020.08.31 15:01:08 -04'00'

Estella R. Branson, Notary Public
Oakland County, Michigan
My Commission Expires: 10-26-2023
Acting in Wayne County

Michigan Public Service Commission
DTE Electric Company
2016 PA 342 Renewable Energy Plan - August 2020 Amended REP
Incremental Cost of Compliance Summary
for the Period 2016 to 2029
($ Millions)

Case No.: U-20851
Exhibit: A-33
Witness: T. W. Lacey
Page: 1 of 2

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
Line No.	**MCL 460.1047**	**Description**	**As Filed 2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
1	(2)(a)	**Sum of Costs:**							
2	(i,ii,iii,iv)	Capital, O&M, ROE, Financing, Interconnect & Ancillary	174.9	184.3	169.0	210.2	262.5	352.0	410.9
3	(v)(A)	Expected RECs & ACECs to be Consumed	16.8	13.7	9.7	9.3	6.3	5.3	3.2
4	(v)(B)	Costs of Contracts under Sec 33(1) - Estimated PPA Charges	100.0	102.4	100.5	105.1	107.9	108.5	116.0
5	(vi)	State & Federal Government Actions Related to Renewable Energy	-	-	-	-	-	-	-
6		Total Payment to Tax Equity Partnership(s)	-	-	-	-	-	-	2.9
7		**Subtotal of Costs (Gross Revenue Requirement)**	291.7	300.4	279.3	324.6	376.7	465.8	533.0
8	(2)(b)	**Subtractions from the Sum of Costs:**							
9	(i)	Revenue from the Sale of Environmental Attributes - REC Sales	-	-	-	-	-	-	-
10	(iii)	Tax Credits to Promote Renewable Energy - PTC	49.8	59.1	47.5	60.8	81.2	123.1	129.2
11	(iii)	Tax Benefit of Solar Grants / Investment Tax Credit	0.3	0.3	0.2	0.5	0.7	2.2	2.2
12	(iv)	Cost Recovered under the PSCR (Transfer Expense)	188.9	206.0	202.8	226.9	250.9	284.5	323.1
13	(v)	Revenue From Wholesale Renewable Energy Sales	-	-	-	-	-	-	-
14	(vi)	VGP Subscription Revenue	-	-	-	-	4.5	59.1	61.9
15	(vi)	VGP Subscription Credit	-	-	-	-	(2.8)	(38.1)	(43.7)
16	(vi)	VGP Subscription Credit (PSCR reimbursement)	-	-	-	-	2.8	38.1	43.7
17	(vi)	MiGreenPower Subscription Revenue	-	0.4	0.9	2.0	4.6	8.4	10.3
18	(vi)	MiGreenPower Subscription Credit	-	(0.2)	(0.5)	(1.1)	(2.5)	(4.7)	(5.7)
19	(vi)	MiGreenPower Subscription Credit (PSCR reimbursement)	-	0.2	0.5	1.1	2.5	4.7	5.7
20		Total Cash Distribution from Tax Equity Partnership(s)	-	-	-	-	-	-	-
21	(vii)	Revenues Recovered in Rates for Renewable Energy Costs Included in 2(a)	-	-	-	-	-	-	-
22		Tax Cuts and Jobs Act of 2017 - Regulatory Liability Amortization	-	-	-	0.5	2.7	3.0	3.8
23									
24		**Subtotal of Subtractions**	239.0	265.8	251.4	290.7	344.7	480.4	530.5
25		**Subtotal - Prior to Interest on Regulatory Liabilities**	52.7	34.6	27.9	33.9	32.0	(14.6)	2.5
26	(2)(a)(ii)	Interest on Regulatory Liabilities @ Short Term Interest Rate	1.1	1.5	2.1	1.7	0.8	0.6	0.7
27	(3)	Carrying Charges for Regulatory Assets @ Pre-tax Cost of Capital	-	-	-	-	-	-	-
28									
29		**Total Incremental Cost of Compliance**	51.6	33.1	25.7	32.2	31.2	(15.3)	1.7

Michigan Public Service Commission
DTE Electric Company
2016 PA 342 Renewable Energy Plan - August 2020 Amended REP
Incremental Cost of Compliance Summary
for the Period 2016 to 2029
($ Millions)

Case No.: U-20851
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Witness: T. W. Lacey
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(a)	(b)		(j)	(k)	(l)	(m)	(n)	(o)	(p)
Line No.	**MCL 460.1047**	**Description**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**
1	(2)(a)	**Sum of Costs:**							
2	(i,ii,iii,iv)	Capital, O&M, ROE, Financing, Interconnect & Ancillary	424.9	429.8	436.5	433.8	423.4	412.4	267.4
3	(v)(A)	Expected RECs & ACECs to be Consumed	1.9	1.1	0.8	0.7	0.7	0.6	0.4
4	(v)(B)	Costs of Contracts under Sec 33(1) - Estimated PPA Charges	121.3	122.1	122.0	122.1	122.3	122.8	81.7
5	(vi)	State & Federal Government Actions Related to Renewable Energy	-	-	-	-	-	-	-
6		Total Payment to Tax Equity Partnership(s)	35.1	43.4	66.1	81.5	81.1	80.9	53.5
7		**Subtotal of Costs (Gross Revenue Requirement)**	583.1	596.4	625.5	638.1	627.4	616.7	403.1
8	(2)(b)	**Subtractions from the Sum of Costs:**							
9	(i)	Revenue from the Sale of Environmental Attributes - REC Sales	-	-	-	-	-	-	-
10	(iii)	Tax Credits to Promote Renewable Energy - PTC	120.3	103.8	101.4	101.4	95.1	98.9	55.1
11	(iii)	Tax Benefit of Solar Grants / Investment Tax Credit	2.2	2.2	2.5	2.6	2.6	2.6	1.7
12	(iv)	Cost Recovered under the PSCR (Transfer Expense)	333.1	353.8	341.3	337.3	331.2	309.4	205.6
13	(v)	Revenue From Wholesale Renewable Energy Sales	-	-	-	-	-	-	-
14	(vi)	VGP Subscription Revenue	95.0	103.1	125.9	141.4	141.0	141.1	93.5
15	(vi)	VGP Subscription Credit	(52.3)	(45.8)	(49.0)	(48.9)	(47.7)	(47.1)	(31.5)
16	(vi)	VGP Subscription Credit (PSCR reimbursement)	52.3	45.8	49.0	48.9	47.7	47.1	31.5
17	(vi)	MiGreenPower Subscription Revenue	10.3	10.3	10.3	10.2	10.2	10.2	8.6
18	(vi)	MiGreenPower Subscription Credit	(5.7)	(5.7)	(5.7)	(5.7)	(5.7)	(5.7)	(4.8)
19	(vi)	MiGreenPower Subscription Credit (PSCR reimbursement)	5.7	5.7	5.7	5.7	5.7	5.7	4.8
20		Total Cash Distribution from Tax Equity Partnership(s)	16.5	20.8	34.9	45.1	45.9	46.1	30.7
21	(vii)	Revenues Recovered in Rates for Renewable Energy Costs Included in 2(a)	-	-	-	-	-	-	-
22		Tax Cuts and Jobs Act of 2017 - Regulatory Liability Amortization	3.2	3.2	3.2	3.2	3.2	3.2	1.6
23									
24		**Subtotal of Subtractions**	580.7	597.2	619.4	641.3	629.2	611.5	396.8
25		**Subtotal - Prior to Interest on Regulatory Liabilities**	2.5	(0.8)	6.1	(3.1)	(1.8)	5.2	6.3
26	(2)(a)(ii)	Interest on Regulatory Liabilities @ Short Term Interest Rate	0.7	0.7	0.7	0.7	0.7	0.7	0.4
27	(3)	Carrying Charges for Regulatory Assets @ Pre-tax Cost of Capital	-	-	-	-	-	-	-
28									
29		**Total Incremental Cost of Compliance**	1.7	(1.6)	5.4	(3.8)	(2.5)	4.5	5.9

Michigan Public Service Commission
DTE Electric Company
2016 PA 342 Renewable Energy Plan - August 2020 Amended REP
Revenue Requirement
for the Period 2016 to 2029
($Millions)

Case No.: U-20851
Exhibit: A-34
Witness: T. W. Lacey
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	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
Line No.	**Description**	**Source**	**As Filed 2016**	**2017**	**2018**	**2019**	**2020**	**2021**
1	**Revenue Requirement Development**							
2	**Average Rate Base**							
3	Plant In-Service	Kauffman Att. 2 ln 5	968.0	1,123.6	1,190.5	1,398.4	1,966.1	2,670.1
4	Construction Work in Progress	Kauffman Att. 2 ln 17	129.5	74.0	73.1	119.4	119.2	75.0
5	Accumulated Depreciation Reserve	Kauffman Att. 2 ln 10	125.8	162.8	197.5	242.0	303.1	391.5
6	Net Plant	line 3 + line 4 - line 5	971.6	1,034.8	1,066.1	1,275.8	1,782.2	2,353.5
7	REC/ACEC Inventory	Kauffman Att. 2 ln 22	39.6	30.9	24.8	19.8	11.8	8.1
8	ITC Holdings Corp. A/R / Vendor (A/P)	Kauffman Att. 2 ln 28	4.6	0.4	0.8	3.6	(212.5)	(213.7)
9	Accumulated Deferred Income Taxes	Wisniewski Att. 1 ln 37	(111.4)	(140.4)	(140.1)	(139.2)	(155.4)	(164.9)
10	Net Rate Base (Average)	Sum lines 6 thru 9	904.4	925.6	951.6	1,160.0	1,426.1	1,983.0
11	Pre-Tax Rate of Return	Lacey Att. 4	11.12%	11.12%	9.47%	9.45%	9.25%	9.19%
12	**Revenue Requirements**							
13	Pre-Tax Return on Net Rate Base	(line 10 X 11)	100.5	102.9	90.1	109.6	131.9	182.2
14	PPA Purchased Power	Rivard Att. 9 ln 20	100.0	102.4	100.5	105.1	107.9	108.5
15	RECs/ACECs Consumed	Harwood Att. 4 ln 23	16.8	13.7	9.7	9.3	6.3	5.3
16	Operation & Maintenance	Kauffman Att. 1 ln 2, 3 &6, 10, 11 &14	20.5	22.5	22.8	28.4	36.2	43.2
17	Royalty Payments	Kauffman Att. 1 ln 1 & 9	3.9	4.1	2.7	7.9	7.8	11.0
18	Depreciation	Kauffman Att. 1 ln 7 & 15	40.0	44.1	46.4	52.1	75.3	101.6
19	Property Taxes	Kauffman Att. 1 ln 5 & 13	9.3	9.4	6.8	11.4	10.1	12.5
20	Insurance	Kauffman Att. 1 ln 4 & 12	0.7	0.7	0.8	0.8	1.1	1.5
21	Interest Received from ITC Holdings Corp.	Kauffman Att. 1, ln 8 & 16	-	-	-	-	-	-
22	Gross Revenue Requirements	(Lines 13 thru 21)	291.7	299.9	279.9	324.6	376.7	465.8

Michigan Public Service Commission
DTE Electric Company
2016 PA 342 Renewable Energy Plan - August 2020 Amended REP
Revenue Requirement
for the Period 2016 to 2029
($Millions)

Case No.: U-20851
Exhibit: A-34
Witness: T. W. Lacey
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	(a)	(b)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)
Line No.	**Description**	**Source**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**
1	**Revenue Requirement Development**									
2	**Average Rate Base**									
3	Plant In-Service	Kauffman Att. 2 ln 5	3,002.1	3,170.3	3,287.5	3,433.3	3,508.7	3,533.6	3,558.4	3,583.9
4	Construction Work in Progress	Kauffman Att. 2 ln 17	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
5	Accumulated Depreciation Reserve	Kauffman Att. 2 ln 10	500.0	619.2	745.1	877.1	1,014.1	1,153.3	1,293.4	1,410.9
6	Net Plant	line 3 + line 4 - line 5	2,502.1	2,551.1	2,542.4	2,556.2	2,494.6	2,380.2	2,265.0	2,173.0
7	REC/ACEC Inventory	Kauffman Att. 2 ln 22	5.6	4.3	3.7	3.4	3.3	3.3	3.3	3.4
8	ITC Holdings Corp. A/R / Vendor (A/P)	Kauffman Att. 2 ln 28	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
9	Accumulated Deferred Income Taxes	Wisniewski Att. 1 ln 37	(172.0)	(167.9)	(166.5)	(182.2)	(193.4)	(210.8)	(234.2)	(282.9)
10	Net Rate Base (Average)	Sum lines 6 thru 9	2,335.6	2,387.4	2,379.5	2,377.3	2,304.5	2,172.7	2,034.1	1,893.5
11	Pre-Tax Rate of Return	Lacey Att. 4	9.18%	9.16%	9.15%	9.13%	9.12%	9.13%	9.13%	9.12%
12	**Revenue Requirements**									
13	Pre-Tax Return on Net Rate Base	(line 10 X 11)	214.5	218.7	217.7	217.0	210.2	198.3	185.6	115.1
14	PPA Purchased Power	Rivard Att. 9 ln 20	116.0	121.3	122.1	122.0	122.1	122.3	122.8	81.7
15	RECs/ACECs Consumed	Harwood Att. 4 ln 23	3.2	1.9	1.1	0.8	0.7	0.7	0.6	0.4
16	Operation & Maintenance	Kauffman Att. 1 ln 2, 3 &6, 10, 11 &14	49.0	50.3	51.5	52.8	54.1	55.4	56.8	38.8
17	Royalty Payments	Kauffman Att. 1 ln 1 & 9	12.7	13.0	13.3	13.7	14.0	14.4	14.7	10.1
18	Depreciation	Kauffman Att. 1 ln 7 & 15	115.3	123.2	128.6	135.4	138.7	139.6	140.6	94.3
19	Property Taxes	Kauffman Att. 1 ln 5 & 13	17.7	17.9	16.8	15.7	14.7	13.6	12.6	7.7
20	Insurance	Kauffman Att. 1 ln 4 & 12	1.7	1.8	1.9	2.0	2.0	2.0	2.0	1.4
21	Interest Received from ITC Holdings Corp.	Kauffman Att. 1, ln 8 & 16	-	-	-	-	-	-	-	-
22	Gross Revenue Requirements	(Lines 13 thru 21)	530.1	548.0	553.0	559.3	556.6	546.3	535.8	349.6

Michigan Public Service Commission
DTE Electric Company
2016 PA 342 Renewable Energy Plan - August 2020 Amended REP
Interest On Regulatory Liability
for the Period 2016 to 2029
($Millions)

Case No.: U-20851
Exhibit: A-35
Witness: T. W. Lacey
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Line No.	Description	Source	As Filed 2016	2017	2018	2019	2020	2021	2022
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
1	Surcharge Revenue	N/A	0.0	-	-	-	-	-	-
2	Incremental Cost of Compliance	Lacey Att. 1 ln 29	51.6	33.1	25.7	32.2	31.2	(15.3)	1.7
3	Regulatory Liability - Increase / (Decrease)	line 1 - line 2	(51.6)	(33.1)	(25.7)	(32.2)	(31.2)	15.3	(1.7)
4	Regulatory Liability Ending Balance	Prior Yr End + Cur. Yr Change	145.0	111.9	86.1	54.0	22.8	38.0	36.3
5	Average Regulatory Liability	[Prior Yr End + Cur. Yr End]/2	170.8	128.4	99.0	70.1	38.4	30.4	37.2
6	Short Term Interest Rate	Treasury	0.85%	1.16%	2.17%	2.39%	2.00%	2.00%	2.00%
7	Interest on Avg Reg Liability	line 5 x line 6	1.1	1.5	2.1	1.7	0.8	0.6	0.7

Line No.	Description	Source	2023	2024	2025	2026	2027	2028	2029
1	Surcharge Revenue	N/A	-	-	-	-	-	-	-
2	Incremental Cost of Compliance	Lacey Att. 1 ln 29	1.7	(1.6)	5.4	(3.8)	(2.5)	4.5	5.9
3	Regulatory Liability - Increase / (Decrease)	line 1 - line 2	(1.7)	1.6	(5.4)	3.8	2.5	(4.5)	(5.9)
4	Regulatory Liability Ending Balance	Prior Yr End + Cur. Yr Change	34.6	36.1	30.7	34.5	36.9	32.5	26.6
5	Average Regulatory Liability	[Prior Yr End + Cur. Yr End]/2	35.4	35.3	33.4	32.6	35.7	34.7	29.5
6	Short Term Interest Rate	Treasury	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
7	Interest on Avg Reg Liability	line 5 x line 6	0.7	0.7	0.7	0.7	0.7	0.7	0.4

Michigan Public Service Commission
DTE Electric Company
2016 PA 342 Renewable Energy Plan - August 2020 Amended REP
Pre-tax Rate of Return
Based on ROE and Debt to Equity ratios
Authorized in Case No. U-15244
Debt Cost Per U-20561/ ROE Weighted

Case No.: U-20851
Exhibit: A-36 (p. 1)
Witness: T. W. Lacey
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		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)
Line No.	**Description**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**		
1	Debt Ratio	51.22%	51.22%	51.22%	51.22%	51.22%	51.22%	51.22%	51.22%	51.22%	51.22%	51.22%		
2	Debt Cost	4.33%	4.22%	4.22%	4.22%	4.22%	4.22%	4.22%	4.22%	4.22%	4.22%	4.22%		
3	Revenue Conversion	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000		
4	Debt Component	2.22%	2.16%	2.16%	2.16%	2.16%	2.16%	2.16%	2.16%	2.16%	2.16%	2.16%		
5	Equity Ratio	48.78%	48.78%	48.78%	48.78%	48.78%	48.78%	48.78%	48.78%	48.78%	48.78%	48.78%		
6	Equity Cost 1/	10.98%	10.76%	10.67%	10.67%	10.63%	10.61%	10.58%	10.57%	10.58%	10.58%	10.57%		
7	Revenue Conversion	1.34973	1.34973	1.34973	1.34973	1.34973	1.34973	1.34973	1.34973	1.34973	1.34973	1.34973		
8	Equity Component	7.23%	7.09%	7.03%	7.02%	7.00%	6.99%	6.97%	6.96%	6.96%	6.96%	6.96%		
9	Pre-Tax Cost of Capital	9.45%	9.25%	9.19%	9.18%	9.16%	9.15%	9.13%	9.12%	9.13%	9.13%	9.12%		
10	Pre-Tax Cost of Capital/12	0.79%	0.77%	0.77%	0.77%	0.76%	0.76%	0.76%	0.76%	0.76%	0.76%	0.76%		8.43%

1/ Per Kaufman Att. 4

Michigan Public Service Commission
DTE Electric Company
2016 PA 342 Renewable Energy Plan - August 2020 Amended REP
Revenue Conversion Factors & Effective Tax Rate

Case No.: U-20851
Exhibit: A-36 (p. 2)
Witness: T. W. Lacey
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Revenue Conversion Factors

Line No.	Revenue Conversion Factor	(a) 2018-2029 Debt Conversion Percent	(b) 2018-2029 Equity Conversion Percent	(c) 2017 Debt Conversion Percent	(d) 2017 Equity Conversion Percent
1	Base	100.00%	100.00%	100.00%	100.00%
2	MCIT Income Tax 1/		5.88%		5.82%
3	Municipal Tax Base (L1 - L2)	100.00%	94.12%	100.00%	94.18%
4	Municipal Tax Rate 1/		0.34%		0.33%
5	FIT Base (L4 - L5)	100.00%	93.78%	100.00%	93.85%
6	FIT Rate 1/		21.00%		35.00%
7	FIT Tax (L5 x L6)	0.00%	19.69%	0.00%	32.85%
8	Income (L5 - L7)	100.00%	74.09%	100.00%	61.00%
9	Revenue Multiplier (L1 / L8)	1.0000	1.3497	1.0000	1.6393
10	Cumulative Effective Tax Rate (1 - line 8, col b)		25.91%		39.00%

1/ Provided by DTE Tax Department

Michigan Public Service Commission
DTE Electric Company
2016 PA 342 Renewable Energy Plan - August 2020 Amended REP
Pre-Tax Rate of Return and Revenue Conversion Factors
Based on Authorized ROE and Debt to Equity ratios
Authorized in Case No. U-15244 and U-20561, Debt Cost from U-20561

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Exhibit: A-36 (p. 3)
Witness: T. W. Lacey
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Pre-Tax Rate of Return and Revenue Conversion Factors

Line No.		(a) Ratio	(b) Cost	(c) Regulated RoR	(d) Revenue Conversion	(e) Pre Tax RoR	(f) Ratio	(g) Cost	(h) Regulated RoR	(i) Revenue Conversion	(j) Pre Tax RoR
1	Debt	51.22%	4.22%	2.161%	1.0000	2.161%	51.22%	4.22%	2.161%	1.0000	2.161%
2	Equity	48.78%	11.00% 1/	5.366%	1.3497	7.242%	48.78%	9.90% 2/	4.829%	1.3497	6.518%
3		100.00%		**7.53%**		**9.40%**	100.00%		**6.99%**		**8.68%**

1/ ROE of 11.00% authorized in U-15244

2/ ROE of 9.90% authorized in U-20561

		2018-2029		2016-2017	
	Revenue Conversion Factor	**Debt Conversion Percent**	**Equity Conversion Percent**	**Debt Conversion Percent**	**Equity Conversion Percent**
4	Base	100.00%	100.00%	100.00%	100.00%
5	MCIT Income Tax		5.88%		5.82%
6	Municipal Tax Base (L4 - L5)	100.00%	94.12%	100.00%	94.18%
7	Municipal Tax Rate		0.34%		0.33%
8	FIT Base (L6 - L7)	100.00%	93.78%	100.00%	93.85%
9	FIT Rate		21.00%		35.00%
10	FIT Tax (L8 x L9)	0.00%	19.69%	0.00%	32.85%
11	Income (L8 - L10)	100.00%	74.09%	100.00%	61.00%
12	Revenue Multiplier (L4 / L11)	1.0000	1.3497	1.0000	1.6393
13	Effective Tax Rate (L4 - L11)		25.91%		39.00%

Michigan Public Service Commission
DTE Electric Company
2016 PA 342 Renewable Energy Plan - August 2020 Amended REP
Actual and Forecast Meter Counts by Class

Case No.: U-20851
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Witness: T. W. Lacey
Page: 1 of 1

	(a)	(b)	(c)	(d)
		BUNDLED CUSTOMER METERS BY CLASS		
LINE NO.	YEAR	RESIDENTIAL	COMMERCIAL SECONDARY	COMMERCIAL / INDUSTRIAL PRIMARY
1	2016	1,966,635	198,890	2,970
2	2017	1,978,200	199,953	2,937
3	2018	1,991,840	200,766	2,940
4	2019	2,003,509	201,654	2,929
5	2020	2,012,612	203,144	2,915
6	2021	2,021,345	204,230	2,825
7	2022	2,030,479	205,067	2,651
8	2023	2,037,730	205,855	2,634
9	2024	2,043,846	206,520	2,618
10	2025	2,049,738	207,161	2,601
11	2026	2,056,636	207,911	2,585
12	2027	2,064,257	208,739	2,569
13	2028	2,070,865	209,458	2,552
14	2029	2,076,021	210,018	2,536

Ratio of meters per customer class:

Residential	1.0
Commercial Secondary	1.0
Commercial & Industrial Primary	1.2

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of **DTE ELECTRIC COMPANY'S** application for the regulatory reviews, revisions, determinations, and/or approvals necessary to fully comply with Public Act 295 OF 2008	))))	Case No. U-20851

QUALIFICATIONS

AND

DIRECT TESTIMONY

OF

MARCUS J. RIVARD

DTE ELECTRIC COMPANY
DIRECT TESTIMONY OF MARCUS J. RIVARD

Line No.

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

A1. My name is Marcus J. Rivard. My business address is 414 S. Main Street, Suite 300, Ann Arbor, Michigan 48104. I am employed by DTE Electric Company (hereafter DTE Electric or Company).

Q2. What is your current position with the Company?

A2. I am currently a Principal Market Engineer in the Power Supply Systems & Modeling team within the Generation Optimization department.

Q3. What is your educational background?

A3. I received a Bachelor of Science Degree in Nuclear Engineering from the University of Michigan in 2010. I received a Master of Business Administration Degree from the University of Toledo in 2015.

Q4. Do you hold any certifications?

A4. Yes. I have attended Utility Rate School hosted by the National Association of Regulatory Utility Commissioners (NARUC) and The Institute of Public Utilities at Michigan State University.

Q5. What is your work experience?

A5. In 2010, I was hired by DTE Energy as an Associate Engineer at Fermi II nuclear generating station and worked in the System Engineering department. In that role, I supported the safe and economical operation of the nuclear plant by tracking, trending, and troubleshooting plant system operations as the primary subject matter expert on several plant safety systems. I also ensured plant processes and procedures

for maintenance and operational activities remained in compliance with Code of Federal Regulation standards in positions of increasing responsibility within System Engineering.

In 2015, I transferred to my current position in the Generation Optimization department as a Principal Market Engineer.

Q6. What are your duties and responsibilities in your current position?

A6. My current responsibilities include developing forecasts of Company generation asset performance, including renewable energy facilities, to support internal Company budget forecasts as well as Power Supply Cost Recovery (PSCR) case proceedings before the Michigan Public Service Commission (hereafter Commission or MPSC).

I also perform analysis and develop strategies to optimize Company generation assets within the wholesale power market. This includes the planning and procurement of capacity resources to meet reliability requirements for DTE Electric customers. My role also includes advocacy with MISO and MISO stakeholders to ensure fair and favorable outcomes for DTE Electric customer affordability and reliability.

Q7. Have you previously provided testimony before the MPSC?

A7. Yes. I sponsored testimony in the following MPSC cases:

U-18232 Amended REP

U-18232 (A) 2020 Amended REP

Line No.		
1	U-18242	DTE Electric's 2016 Renewable Energy Plan Reconciliation
2	U-20172	DTE Electric's 2017 Renewable Energy Plan Reconciliation
3	U-20484	DTE Electric's 2018 Renewable Energy Plan Reconciliation
4	U-20527	DTE Electric's 2020 Power Supply Cost Recovery Plan
5	U-20723	DTE Electric's 2019 Renewable Energy Plan Reconciliation
6	U-20826	DTE Electric's 2021 Power Supply Cost Recovery Plan

Q8. What is the purpose of your testimony?

A8. The purpose of my testimony is to:

1) Present the Company's transfer prices for the Company's 2008 PA 295, as amended by 2016 PA 342, Renewable Energy Contracts and Company-owned Renewable Energy Systems.

2) Present the projected renewable energy generation expense for the Company for years 2019 through 2029, which will be transferred for recovery through the Company's PSCR mechanism.

Q9. Are you sponsoring any exhibits in this proceeding?

A9. Yes. I am supporting the following exhibits:

Exhibit	Description
A-22	Rivard Affidavit
A-23	U-15806 Transfer Prices
A-24	2012 MPSC Staff Transfer Prices
A-25	2014 MPSC Staff Transfer Prices
A-26	2015 MPSC Staff Transfer Prices
A-27	2016 MPSC Staff Transfer Prices

Line No.		
1	A-28	2018 MPSC Staff Transfer Prices
2	A-29	2019 MPSC Staff Transfer Prices
3	A-30	Forecasted Transfer Price
4	A-31	PSCR Transfer Expense

5

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

7 A10. Yes, they were.

8

9 **Q11. When the Company filed this case, did you submit an affidavit in support?**

10 A11. Yes, I did. My affidavit is now my Exhibit A-22, and the attachments to that affidavit

11 are now Exhibits A-23 thru A-31.

12

13 **Q12. Do the facts and opinions you set out in your Affidavit remain true today?**

14 A12. Yes.

15

16 **Q13. Does this complete your direct testimony?**

17 A13. Yes, it does.

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of **DTE ELECTRIC COMPANY'S** application for the regulatory reviews, revisions, determinations, and/or approvals necessary to fully comply with Public Act 295 OF 2008	))))	Case No. U-20851

EXHIBITS

OF

MARCUS J. RIVARD

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of **DTE ELECTRIC COMPANY'S** application for the regulatory reviews, revisions, determinations, and/or approvals necessary for to fully comply with Public Act 295 of 2008	))))	Case No. U-20851

AFFIDAVIT OF MARCUS J. RIVARD IN SUPPORT OF DTE ELECTRIC COMPANY'S APPLICATION FOR APPROVAL OF THE AUGUST 2020 AMENDED RENEWABLE ENERGY PLAN

STATE OF MICHIGAN)
)
COUNTY OF WAYNE)

Marcus J. Rivard, being first duly sworn, deposes and says:

1. My title is Principal Market Engineer in the Power Supply Systems & Modeling team within the Generation Optimization department. I received a Bachelor of Science Degree in Nuclear Engineering from the University of Michigan in 2010. In 2015, I received a Master of Business Administration Degree from the University of Toledo. Additionally, I have attended Utility Rate School hosted by the National Association of Regulatory Utility Commissioners (NARUC) and the Institute of Public Utilities at Michigan State University. In 2010, I was hired by DTE Energy as an Associate Engineer at Fermi II nuclear generating station and worked in the System Engineering department. In that role, I supported the safe and economical operation of the nuclear plant by tracking, trending, and troubleshooting plant system operations as the primary subject matter expert on several plant safety systems. I also ensured plant processes and

procedures for maintenance and operational activities remained in compliance with Code of Federal Regulation standards in positions of increasing responsibility within System Engineering. In 2015, I transferred to my current position in the Generation Optimization department as a Principal Market Engineer. My current responsibilities include developing forecasts of Company generation asset performance, including renewable energy facilities, to support internal Company budget forecasts as well as Power Supply Cost Recovery (PSCR) cases proceedings before the Michigan Public Commission (hereafter Commission or MPSC). I also perform analysis and develop strategies to optimize Company generation assets within the wholesale power market. This includes the planning and procurement of capacity resources to meet reliability requirements for DTE Electric customers. My role also includes advocacy with MISO and MISO stakeholders to ensure fair and favorable outcomes for DTE Electric customer affordability and reliability. I sponsored testimony in the following MPSC cases:

U-18232 DTE Electric's Amended Renewable Energy Plan

U-18242 DTE Electric's 2016 Renewable Energy Plan Reconciliation

U-20172 DTE Electric's 2017 Renewable Energy Plan Reconciliation

U-20484 DTE Electric's 2018 Renewable Energy Plan Reconciliation

U-20527 DTE Electric's 2020 Power Supply Cost Recovery Plan

U-20723 DTE Electric's 2019 Renewable Energy Plan Reconciliation

2. With this filing, I present the Company's transfer prices for the Company's 2008 PA 295, as amended by 2016 PA 342, Renewable Energy Contracts and Company-owned Renewable Energy Systems as well as the projected renewable energy generation expense for the Company for years 2019 through 2029, which will be transferred for recovery through the Company's PSCR mechanism that results from incorporating DTE Electric's Voluntary Green

Pricing (VGP) program build plan into its existing Commission-approved Renewable Energy Plan (REP).

3. I am sponsoring the following attachments, which were prepared by me or under my supervision:

Attachment	Description
1	U-15806 Transfer Prices
2	2012 MPSC Staff Transfer Prices
3	2014 MPSC Staff Transfer Prices
4	2015 MPSC Staff Transfer Prices
5	2016 MPSC Staff Transfer Prices
6	2018 MPSC Staff Transfer Prices
7	2019 MPSC Staff Transfer Prices
8	2020 Proposed 2020 MPSC Staff Transfer Prices (Schedules A1, A2, A3)
9	PSCR Transfer Expense

Attachments 1, 2, 3, 4, 5, 6, and 7 present the Company's Commission-approved transfer prices for the Company's 2008 PA 295 Renewable Energy Contracts and Company-owned Renewable Energy Systems. Attachment 8 presents the Company's proposed 2020 Transfer Prices. Attachment 9 identifies each Renewable Energy Contract and Company-owned Renewable Energy System with their associated transfer prices, as well as the forecasted volume and expense of VGP programs, to provide a projection of the renewable energy expense that will be recovered through the PSCR mechanism.

4. The Company's proposed 2020 Transfer Prices as presented in Attachment 8, Schedule A1, are based on a projection of the total cost of a natural gas combined cycle gas turbine

(CCGT) unit which was developed by the MPSC Staff and filed in Case No. U-15800 on March 11, 2020. The basis for these transfer prices is the levelized cost of energy (LCOE) of a CCGT for the base year 2022, shown on Attachment 8, Schedule A2, with a levelized natural gas price calculated from the U.S. Energy Information Administration's projection of natural gas prices at the Henry Hub, shown on Attachment 8, Schedule A3.

5. The CCGT plant assumptions used by the MPSC Staff in Case No. U-15800 differ in operating characteristics and projection of natural gas prices from the Blue Water Energy Center (BWEC) plant that was approved in the Company's Certificate of Necessity application (MPSC Case No. U-18419). Consequently, the MPSC Staff's CCGT LCOE calculation assumptions differ from the Company's projected LCOE of the BWEC plant and therefore would not be representative of the Company's avoided cost of capacity and energy. However, the assumptions and calculations used by Staff to develop the LCOE of a generic CCGT plant and the associated transfer price schedule are comparable to those used in previous renewable energy case proceedings that have been approved by the Commission. The Company has reviewed the MPSC Staff's transfer price methodology, including the levelized cost calculation variables, and finds it to be reasonable for the purpose of determining the transfer price schedule.

6. Historically, the Renewable Energy generated by Company-owned Renewable Energy Systems has been recovered through the PSCR process at the lesser of the approved transfer price or LCOE projected for the specific Company-owned Renewable Energy System at the time the construction contracts were approved by the Commission. The transfer prices the Commission approves for each 2008 PA 295 and 2016 PA 342 Renewable Energy Contract and Company-owned Renewable Energy System are established for the life of the contract or project. Doing so ensures that the economic viability of projects that have been committed to will not be

jeopardized by transfer prices that change in future years.

7. In the July 9, 2020 Order in DTE Electric's Amended REP Plan Case No. U-18232, the Commission authorized the Company to transfer to the PSCR up to the approved Transfer Price, not limited by LCOE, for Company-owned Renewable Energy Systems in order to maintain a sufficient regulatory liability account balance. In this August 2020 Amended REP Plan, the Company has utilized this same PSCR transfer price mechanism for certain Company-owned wind assets to maintain a projected regulatory liability balance of at least $20 million for each forecast year 2021 through 2029.

8. As discussed, Attachment 9 provides a projection of the renewable energy expense that will be recovered through the PSCR mechanism. The forecasted volume and expense of VGP programs, referred to in Attachment 9 as MIGreenPower Subscribed Wind/Solar and VGP Subscribed Wind/Solar, are carved out of the total Generation and PSCR Transfer Expense as these expenses are borne by VGP customers rather than the Company's PSCR customers. The projected Company-owned generation volumes from Witness Harwood's Attachment 3 are used along with projected power purchase agreement (PPA) volumes and each project's associated transfer prices to determine the projected PSCR expense in each year.

10. Based upon my knowledge and experience, the Company's transfer prices for the Company's 2008 PA 295, as amended by 2016 PA 342, Renewable Energy Contracts and Company-owned Renewable Energy Systems as well as the projected renewable energy generation expense for the Company for years 2019 through 2029, which will be transferred for recovery through the Company's PSCR mechanism that results from incorporating DTE Electric's VGP program build plan into its existing Commission-approved REP is reasonable and prudent. I recommend that the Commission approve DTE Electric's August 2020 Amended Renewable

Energy Plan.

Further, Affiant sayeth not.

Marcus J. Rivard
Digitally signed by Marcus J. Rivard
Date: 2020.08.31 15:09:42 -04'00'

Marcus J. Rivard

Subscribed and sworn to before
me this 31st day of August 2020.

Estella R. Branson
Digitally signed by Estella R. Branson
Date: 2020.08.31 15:11:55 -04'00'

Estella R. Branson, Notary Public
Oakland County, Michigan
My Commission Expires: 10-26-2023
Acting in Wayne County

Michigan Public Service Commission
DTE Electric Company
2016 PA 342 Renewable Energy Plan - August 2020 Amended REP
U-15806 Transfer Prices

Case No.: U-20851
Exhibit: A-23
Witness: M. J. Rivard
Page: 1 of 1

	(a)	(b)	(c)	(d)	(e)	(f) {(b) + (e)}	(g)	(h) {(b) + (g)}	(i)	(j) {(b) + (i)}	(k)	(l) {(b) + (k)}
					Landfill Gas/Biomass		Anaerobic/Cellulosic Digester		Solar		Wind	
Line No.	Year	Annual Average Locational Marginal Cost ($/MWh)	Final Capacity Cost ($/MW-yr.)	Final Capacity Cost @ 100% Capacity Factor ($/MWh)	Adjusted Capacity Payment ($/MWh)	Total Transfer Price ($/MWh)	Adjusted Capacity Payment ($/MWh)	Total Transfer Price ($/MWh)	Adjusted Capacity Payment ($/MWh)	Total Transfer Price ($/MWh)	Adjusted Capacity Payment ($/MWh)	Total Transfer Price ($/MWh)
1	2009	48.52	24,700	2.82	3.13	51.66	3.52	52.05	21.69	70.21	1.14	49.66
2	2010	54.39	30,000	3.42	3.81	58.20	4.28	58.67	26.34	80.73	1.38	55.77
3	2011	56.32	40,000	4.57	5.07	61.40	5.71	62.03	35.12	91.45	1.84	58.16
4	2012	71.73	60,000	6.83	7.59	79.32	8.54	80.27	52.54	124.27	2.75	74.49
5	2013	72.32	90,000	10.27	11.42	83.74	12.84	85.17	79.03	151.35	4.14	76.47
6	2014	73.05	125,000	14.27	15.85	88.90	17.84	90.88	109.76	182.81	5.75	78.80
7	2015	76.01	156,154	17.83	19.81	95.82	22.28	98.29	137.12	213.13	7.19	83.20
8	2016	78.06	162,831	18.54	20.60	98.65	23.17	101.23	142.59	220.65	7.47	85.53
9	2017	79.12	169,393	19.34	21.49	100.60	24.17	103.29	148.75	227.87	7.80	86.92
10	2018	81.20	176,047	20.10	22.33	103.53	25.12	106.32	154.59	235.79	8.10	89.30
11	2019	84.75	182,846	20.87	23.19	107.95	26.09	110.85	160.56	245.31	8.42	93.17
12	2020	88.04	189,960	21.63	24.03	112.07	27.03	115.07	166.35	254.39	8.72	96.76
13	2021	92.34	197,423	22.54	25.04	117.38	28.17	120.51	173.36	265.70	9.09	101.43
14	2022	96.36	205,164	23.42	26.02	122.38	29.28	125.63	180.16	276.51	9.44	105.80
15	2023	101.25	213,210	24.34	27.04	128.29	30.42	131.67	187.22	288.47	9.81	111.06
16	2024	106.78	221,470	25.21	28.01	134.80	31.52	138.30	193.95	300.73	10.17	116.95
17	2025	107.68	230,268	26.29	29.21	136.89	32.86	140.54	202.20	309.88	10.60	118.28
18	2026	111.74	239,304	27.32	30.35	142.09	34.15	145.89	210.14	321.88	11.02	122.76
19	2027	116.34	248,730	28.39	31.55	147.89	35.49	151.83	218.41	334.75	11.45	127.79
20	2028	124.68	258,620	29.44	32.71	157.39	36.80	161.48	226.48	351.16	11.87	136.55
21	2029	129.94	268,341	30.63	34.04	163.98	38.29	168.23	235.64	365.58	12.35	142.29

	Technology	Capacity Factor %	On-Peak Capacity Credit %
22			
23	Landfill Gas/Biomass	90%	100.0%
24	Anaerobic/Cellulosic Digester	80%	100.0%
25	Solar	13%	100.0%
26	Wind	31%	12.5%

Michigan Public Service Commission
DTE Electric Company
2016 PA 342 Renewable Energy Plan - August 2020 Amended
2012 MPSC Staff Transfer Prices

Case No.: U-20851
Exhibit: A-24
Witness: M. J. Rivard
Page: 1 of 1

Line No.	(a) Year	(b) MPSC Staff 2012 Transfer Price - Fixed Cost ($/MWh)	(c) MPSC Staff 2012 Transfer Price - Variable Cost ($/MWh)	(d) 2012 MPSC Staff Transfer Price ($/MWh)
1	2013	29.13	35.49	64.62
2	2014	29.65	38.22	67.87
3	2015	30.16	40.99	71.16
4	2016	30.34	41.68	72.02
5	2017	30.31	40.89	71.20
6	2018	30.29	41.81	72.09
7	2019	30.29	43.17	73.46
8	2020	30.30	44.05	74.34
9	2021	30.49	45.25	75.75
10	2022	30.70	46.56	77.26
11	2023	30.88	47.93	78.81
12	2024	31.12	49.44	80.56
13	2025	31.35	50.96	82.31
14	2026	31.58	52.11	83.69
15	2027	31.78	52.77	84.56
16	2028	32.01	54.05	86.06
17	2029	32.21	55.45	87.66

Michigan Public Service Commission
DTE Electric Company
2016 PA 342 Renewable Energy Plan - August 2020 Amended
2014 MPSC Staff Transfer Prices

Case No.: U-20851
Exhibit: A-25
Witness: M. J. Rivard
Page: 1 of 1

Line No.	(a) Year	(b) MPSC Staff 2014 Transfer Price - Fixed Cost ($/MWh)	(c) MPSC Staff 2014 Transfer Price - Variable Cost ($/MWh)	(d) 2014 MPSC Staff Transfer Price ($/MWh)
1	2014	31.19	38.93	70.12
2	2015	31.59	38.50	70.09
3	2016	32.03	38.37	70.40
4	2017	32.44	39.56	71.99
5	2018	32.74	41.16	73.89
6	2019	33.03	41.05	74.08
7	2020	33.37	40.64	74.01
8	2021	33.81	42.85	76.66
9	2022	34.30	44.19	78.49
10	2023	34.81	45.13	79.94
11	2024	35.29	45.62	80.91
12	2025	35.80	47.00	82.80
13	2026	36.33	49.00	85.33
14	2027	36.84	50.14	86.98
15	2028	37.33	51.36	88.69
16	2029	37.81	52.61	90.41

Michigan Public Service Commission
DTE Electric Company
2016 PA 342 Renewable Energy Plan - August 2020 Amended
2015 MPSC Staff Transfer Prices

Case No.: U-20851
Exhibit: A-26
Witness: M. J. Rivard
Page: 1 of 1

Line No.	(a) Year	(b) MPSC Staff 2015 Transfer Price - Fixed Cost ($/MWh)	(c) MPSC Staff 2015 Transfer Price - Variable Cost ($/MWh)	(d) 2015 MPSC Staff Transfer Price ($/MWh)
1	2015	32.06	36.21	68.27
2	2016	32.61	36.79	69.40
3	2017	33.61	38.91	72.52
4	2018	34.52	40.55	75.07
5	2019	35.27	42.17	77.44
6	2020	36.04	43.33	79.37
7	2021	36.75	43.75	80.50
8	2022	37.33	44.31	81.64
9	2023	37.91	45.59	83.50
10	2024	38.43	46.28	84.72
11	2025	39.01	47.70	86.71
12	2026	39.56	48.72	88.28
13	2027	40.18	49.85	90.02
14	2028	40.81	51.87	92.68
15	2029	41.38	53.17	94.55

Michigan Public Service Commission
DTE Electric Company
2016 PA 342 Renewable Energy Plan - August 2020 Amended
2016 MPSC Staff Transfer Prices

Case No.: U-20851
Exhibit: A-27
Witness: M. J. Rivard

Line No.	(a) Year	(b) MPSC Staff 2016 Transfer Price - Fixed Cost ($/MWh)	(c) MPSC Staff 2016 Transfer Price - Variable Cost ($/MWh)	(d) 2016 MPSC Staff Transfer Price ($/MWh)
1	2016	33.21	38.58	71.80
2	2017	34.01	40.61	74.62
3	2018	35.19	42.77	77.96
4	2019	36.15	44.49	80.64
5	2020	37.01	45.94	82.95
6	2021	37.77	47.97	85.75
7	2022	38.49	50.26	88.75
8	2023	39.07	50.87	89.94
9	2024	39.59	52.04	91.63
10	2025	40.07	53.41	93.48
11	2026	40.48	54.07	94.56
12	2027	40.92	55.63	96.55
13	2028	41.34	56.82	98.16
14	2029	41.77	58.11	99.88

Michigan Public Service Commission
DTE Electric Company
2016 PA 342 Renewable Energy Plan - August 2020 Amended
2018 MPSC Staff Transfer Prices

Case No.: U-20851
Exhibit: A-28
Witness: M. J. Rivard
Page: 1 of 1

Line No.	(a) Year	(b) MPSC Staff 2018 Transfer Price - Fixed Cost ($/MWh)	(c) MPSC Staff 2018 Transfer Price - Variable Cost ($/MWh)	(d) 2018 MPSC Staff Transfer Price ($/MWh)
1	2018	31.36	33.70	65.06
2	2019	31.81	34.35	66.16
3	2020	32.22	35.15	67.37
4	2021	32.57	36.62	69.19
5	2022	33.01	38.40	71.42
6	2023	33.51	40.04	73.54
7	2024	34.03	42.30	76.33
8	2025	34.45	43.55	78.00
9	2026	34.81	44.34	79.14
10	2027	35.17	45.52	80.69
11	2028	35.52	47.00	82.52
12	2029	35.90	48.59	84.49

Michigan Public Service Commission
DTE Electric Company
2016 PA 342 Renewable Energy Plan - August 2020 Amended
2019 MPSC Staff Transfer Prices

Case No.: U-20851
Exhibit: A-29
Witness: M. J. Rivard
Page: 1 of 1

Line No.	(a) Year	(b) MPSC Staff 2019 Transfer Price - Fixed Cost ($/MWh)	(c) MPSC Staff 2019 Transfer Price - Variable Cost ($/MWh)	(d) 2019 MPSC Staff Transfer Price ($/MWh)
1	2019	31.99	30.25	62.23
2	2020	32.39	30.77	63.16
3	2021	32.71	31.87	64.58
4	2022	33.10	33.34	66.44
5	2023	33.62	35.20	68.82
6	2024	34.20	37.50	71.70
7	2025	34.73	38.78	73.52
8	2026	35.32	39.82	75.14
9	2027	35.94	41.37	77.31
10	2028	36.62	43.34	79.96
11	2029	37.35	46.17	83.52

Michigan Public Service Commission
DTE Electric Company
2016 PA 342 Renewable Energy Plan - August 2020 Amended REP
2020 MPSC Staff Transfer Prices

Case No.: U-20851
Exhibit: A-30 (Sch. A1)
Schedule: A1
Witness: M.J. Rivard

Line No.	(a) Year	(b) MPSC Staff 2020 Transfer Price - Fixed Cost ($/MWh)	(c) MPSC Staff 2020 Transfer Price - Variable Cost ($/MWh)	(d) DTE Electric Proposed / 2020 MPSC Staff Transfer Price ($/MWh)
1	2020	32.28	23.99	56.27
2	2021	32.55	25.22	57.77
3	2022	33.04	26.16	59.21
4	2023	33.59	27.27	60.86
5	2024	34.24	29.40	63.64
6	2025	34.95	30.76	65.71
7	2026	35.72	31.90	67.61
8	2027	36.48	33.45	69.94
9	2028	37.24	35.36	72.60
10	2029	37.97	37.49	75.45

Michigan Public Service Commission
DTE Electric Company
2016 PA 342 Renewable Energy Plan - August 2020 Amended REP
2020 MPSC Staff Combined Cycle Levelized Cost

Case No.: U-20851
Exhibit: A-30 (Sch. A2)
Schedule: A2
Witness: M.J. Rivard

Line No.	(a)	(b)	(c)	(d)	(e)	(f)
1	Levelized Cost Calculation					
2						
3		NGCC	*notes*			
4	Capacity MW	400	MW			
5	Loading Factor	71.00%	The % of time the unit would be dispatched if available			
			The % of time the unit would be available for dispatch.			
6	Equivalent Avail.	87.00%	A combination of FOR and planned outages			
7	Capacity Factor	61.77%	(Loading Factor)(Equivalent Availability)			
8	Heat Rate Btu/kWh	6719	BTU/kWh			
9	Fuel Cost $/MBtu	$3.91	$ per thousand BTU			
10	Total Cost MM no AFUDC	$518.108	MM			
11	AFUDC	$70.84	MM			
12	Total Cost MM	$588.952	MM			
13	Fixed Charge Rate	11.59%	% used to calculate fixed cost recovery component			
14	Fixed O&M $/kW	$14.62	$/kW			
15	Annual Lev. Fixed Cost MM	$68.26	MM			
16	Total Annual Lev. Fixed Cost MM	$74.11	MM			
17	Fixed Cost $/kWh	0.0342	$/kWh			
18	Fuel Cost $/kWh	0.0263	$/kWh			
19	Var. O&M $/kWh	0.0031	$/kWh			
20	Total Var. Cost	0.0294	$/kWh			
21	Total Cost $/kWh	0.06364	$/kWh			
22						
23						
24						

25	**AFUDC**		**Total Overnight Cost (MM) in 2020 $**	**Inflation Rate**	**Cumulative**	**Finance Rate**
26	Year	GCC	$489.117	2%		6.56%
27	1	5%	24	24.94	24.94	1.64
28	2	30%	147	152.66	177.61	11.65
29	3	35%	171	181.67	359.28	23.57
30	4	30%	147	158.83	518.11	33.99
31		1	489	518.108		70.84
32						

Michigan Public Service Commission
DTE Electric Company
2016 PA 342 Renewable Energy Plan - August 2020 Amended REP
2020 MPSC Staff Combined Cycle Levelized Fuel Price

Case No.: U-20851
Exhibit: A-30 (Sch. A3)
Schedule: A3
Witness: M.J. Rivard

Line No.	(a)	(b)	(c)
1	**Source: EIA Annual Energy Outlook 2020**		
2	http://www.eia.gov/		
3			Henry Hub 2020 Annual Energy Outlook
4		Period (Used for Levelized Calculation)	(Nominal)
5			
6	2022	1	$2.68
7	2023	2	$2.78
8	2024	3	$2.95
9	2025	4	$3.27
10	2026	5	$3.64
11	2027	6	$3.90
12	2028	7	$4.11
13	2029	8	$4.22
14	2030	9	$4.26
15	2031	10	$4.30
16	2032	11	$4.41
17	2033	12	$4.60
18	2034	13	$4.77
19	2035	14	$4.86
20	2036	15	$4.96
21	2037	16	$5.14
22	2038	17	$5.30
23	2039	18	$5.43
24	2040	19	$5.56
25	2041	20	$5.68
26			
27			
28	**Discount Rate**		**8.98%**
29	**Net Present Value Fuel**		**$35.77**
30	**Levelized Fuel Price**		**$3.91**

Michigan Public Service Commission
DTE Electric Company
2016 PA 342 Renewable Energy Plan - August 2020 Amended REP
PSCR Transfer Expense

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Line No.	(a)	(b)	(c)	Actual 2009	Actual 2010	Actual 2011	Actual 2012	Actual 2013	Actual 2014	Actual 2015	(d) Actual 2016	(e) Actual 2017	(f) Actual 2018	(g) Preliminary 2019	(h) 2020	(i) 2021	(j) 2022
	PPAs																
1	L'Anse Warden	Generation	**1,000 MWh**	-	44.4	112.1	124.8	118.1	118.3	118.2	95.4	113.2	122.8	122.8	117.6	117.3	117.3
2	U-15806 Transfer Price	Transfer Amount to PSCR	**$Mil**	$ -	$ 2.6	$ 6.9	$ 9.9	$ 9.9	$ 10.5	$ 11.3	$ 9.4	$ 11.4	$ 12.5	$ 12.5	$ 12.0	$ 12.0	$ 12.0
3	Blue Water	Generation	**1,000 MWh**	-	-	3.9	27.3	26.4	24.7	22.6	24.4	24.4	28.0	25.6	25.6	25.5	25.5
4	U-15806 Transfer Price	Transfer Amount to PSCR	**$Mil**	$ -	$ -	$ 0.2	$ 2.2	$ 2.2	$ 2.2	$ 2.2	$ 2.4	$ 2.4	$ 2.8	$ 2.5	$ 2.5	$ 2.5	$ 2.5
5	WM Renewable	Generation	**1,000 MWh**	-	-	8.9	26.1	26.5	26.9	24.3	26.0	26.1	25.2	24.8	26.5	26.4	26.4
6	U-15806 Transfer Price	Transfer Amount to PSCR	**$Mil**	$ -	$ -	$ 0.5	$ 2.1	$ 2.2	$ 2.3	$ 2.1	$ 2.2	$ 2.2	$ 2.1	$ 2.1	$ 2.3	$ 2.2	$ 2.2
7	Stoney Corners	Generation	**1,000 MWh**	1.7	39.2	80.0	74.0	81.2	84.6	85.4	80.9	78.4	76.7	77.5	81.8	81.8	81.8
8	U-15806 Transfer Price	Transfer Amount to PSCR	**$Mil**	$ 0.1	$ 2.2	4.7	5.5	6.2	6.7	$ 7.1	$ 6.9	$ 6.8	$ 6.9	$ 7.2	$ 7.9	$ 8.3	$ 8.7
9	Gratiot	Generation	**1,000 MWh**	-	-	-	226.2	287.5	295.9	304.5	284.1	291.5	268.7	282.6	293.0	293.0	293.0
10	U-15806 Transfer Price	Transfer Amount to PSCR	**$Mil**	$ -	$ -	$ -	$ 16.8	$ 22.0	$ 23.3	$ 25.3	$ 24.3	$ 25.3	$ 24.0	$ 25.8	$ 26.8	$ 26.8	$ 26.8
11	Tuscola Bay Wind	Generation	**1,000 MWh**	-	-	-	42.1	364.3	371.0	377.8	362.4	355.0	345.8	377.6	368.9	368.9	368.9
12	U-15806 Transfer Price	Transfer Amount to PSCR	**$Mil**	$ -	$ -	$ -	$ 2.0	$ 22.2	$ 22.6	$ 23.0	$ 22.1	$ 21.6	$ 21.1	$ 23.0	$ 22.5	$ 22.5	$ 22.5
13	Tuscola Wind II	Generation	**1,000 MWh**	-	-	-	-	45.2	316.4	322.8	312.7	312.7	292.6	315.7	325.2	325.2	325.2
14	2012 MPSC Staff Transfer Prices	Transfer Amount to PSCR	**$Mil**	$ -	$ -	$ -	$ -	$ 1.4	$ 15.0	$ 15.9	$ 15.4	$ 15.4	$ 14.4	$ 15.5	$ 16.0	$ 16.0	$ 16.0
15	Pheasant Run	Generation	**1,000 MWh**	-	-	-	-	25.0	344.8	266.8	264.6	266.0	259.7	254.8	275.8	275.8	275.8
16	2012 MPSC Staff Transfer Prices	Transfer Amount to PSCR	**$Mil**	$ -	$ -	$ -	$ -	$ 0.8	$ 15.9	$ 13.1	$ 13.0	$ 13.1	$ 12.8	$ 12.5	$ 13.6	$ 13.6	$ 13.6
17	Big Turtle	Generation	**1,000 MWh**	-	-	-	-	-	3.2	77.0	79.4	78.0	75.1	70.9	82.4	82.4	82.4
18	2012 MPSC Staff Transfer Prices	Transfer Amount to PSCR	**$Mil**	$ -	$ -	$ -	$ -	$ -	$ 0.2	$ 4.1	$ 4.2	$ 4.1	$ 4.0	$ 3.8	$ 4.4	$ 4.4	$ 4.4
19	Assembly	Generation	**1,000 MWh**	-	-	-	-	-	-	-	-	-	-	-	-	5.6	162.3
20	2019 MPSC Staff Transfer Prices	Transfer Amount to PSCR	**$Mil**	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 0.2	$ 6.7
21	Riverfork	Generation	**1,000 MWh**	-	-	-	-	-	-	-	-	-	-	-	-	-	12.5
22	2019 MPSC Staff Transfer Prices	Transfer Amount to PSCR	**$Mil**	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 0.5
23	2022 Solar PPA	Generation	**1,000 MWh**	-	-	-	-	-	-	-	-	-	-	-	-	-	34.2
24	2019 MPSC Staff Transfer Prices	Transfer Amount to PSCR	**$Mil**	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 1.8
25	VGP Subscribed Solar	Generation	**1,000 MWh**	-	-	-	-	-	-	-	-	-	-	-	-	-	(34.2)
26	2019 MPSC Staff Transfer Prices	Transfer Amount to PSCR	**$Mil**	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (1.6)
27		**Generation - PPA**	**1,000 MWh**	**1.7**	**83.6**	**204.8**	**520.4**	**974.2**	**1,585.9**	**1,599.4**	**1,529.8**	**1,545.2**	**1,494.7**	**1,552.4**	**1,596.8**	**1,602.0**	**1,771.2**
28		**PSCR Transfer Expense - PPA**	**$Mil**	**$ 0.1**	**$ 4.8**	**$ 12.3**	**$ 38.5**	**$ 66.9**	**$ 98.6**	**$ 104.1**	**$ 99.9**	**$ 102.4**	**$ 100.5**	**$ 105.1**	**$ 107.9**	**$ 108.5**	**$ 116.0**

Michigan Public Service Commission
DTE Electric Company
2016 PA 342 Renewable Energy Plan - August 2020 Amended REP
PSCR Transfer Expense

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Line No.	(a)	(b)	(c)	(k) 2023	(l) 2024	(m) 2025	(n) 2026	(o) 2027	(p) 2028	(q) 2029
	PPAs									
1	L'Anse Warden	Generation	**1,000 MWh**	117.3	117.6	117.3	117.3	117.3	117.6	78.2
2	U-15806 Transfer Price	Transfer Amount to PSCR	**$Mil**	$ 12.0	$ 12.0	$ 12.0	$ 12.0	$ 12.0	$ 12.0	$ 8.0
3	Blue Water	Generation	**1,000 MWh**	25.5	25.6	25.5	25.5	25.5	25.6	17.0
4	U-15806 Transfer Price	Transfer Amount to PSCR	**$Mil**	$ 2.5	$ 2.5	$ 2.5	$ 2.5	$ 2.5	$ 2.5	$ 1.7
5	WM Renewable	Generation	**1,000 MWh**	26.4	26.5	26.4	26.4	26.4	26.5	17.6
6	U-15806 Transfer Price	Transfer Amount to PSCR	**$Mil**	$ 2.2	$ 2.3	$ 2.2	$ 2.2	$ 2.2	$ 2.3	$ 1.5
7	Stoney Corners	Generation	**1,000 MWh**	81.8	82.1	81.8	81.8	81.8	82.1	54.6
8	U-15806 Transfer Price	Transfer Amount to PSCR	**$Mil**	$ 9.1	$ 9.5	$ 9.5	$ 9.5	$ 9.5	$ 9.5	$ 6.3
9	Gratiot	Generation	**1,000 MWh**	293.0	293.8	293.0	293.0	293.0	293.8	195.3
10	U-15806 Transfer Price	Transfer Amount to PSCR	**$Mil**	$ 26.8	$ 26.9	$ 26.8	$ 26.8	$ 26.8	$ 26.9	$ 17.9
11	Tuscola Bay Wind	Generation	**1,000 MWh**	368.9	369.9	368.9	368.9	368.9	369.9	245.9
12	U-15806 Transfer Price	Transfer Amount to PSCR	**$Mil**	$ 22.5	$ 22.5	$ 22.5	$ 22.5	$ 22.5	$ 22.5	$ 15.0
13	Tuscola Wind II	Generation	**1,000 MWh**	325.2	326.1	325.2	325.2	325.2	326.1	216.8
14	2012 MPSC Staff Transfer Prices	Transfer Amount to PSCR	**$Mil**	$ 16.0	$ 16.1	$ 16.0	$ 16.0	$ 16.0	$ 16.1	$ 10.7
15	Pheasant Run	Generation	**1,000 MWh**	275.8	276.6	275.8	275.8	275.8	276.6	183.9
16	2012 MPSC Staff Transfer Prices	Transfer Amount to PSCR	**$Mil**	$ 13.6	$ 13.6	$ 13.6	$ 13.6	$ 13.6	$ 13.6	$ 9.1
17	Big Turtle	Generation	**1,000 MWh**	82.4	82.7	82.4	82.4	82.4	82.7	55.0
18	2012 MPSC Staff Transfer Prices	Transfer Amount to PSCR	**$Mil**	$ 4.4	$ 4.4	$ 4.4	$ 4.4	$ 4.4	$ 4.4	$ 2.9
19	Assembly	Generation	**1,000 MWh**	161.5	160.7	159.9	159.1	158.3	157.5	104.5
20	2019 MPSC Staff Transfer Prices	Transfer Amount to PSCR	**$Mil**	$ 6.7	$ 6.8	$ 6.9	$ 7.0	$ 7.1	$ 7.2	$ 4.9
21	Riverfork	Generation	**1,000 MWh**	100.3	99.8	99.3	98.8	98.3	97.8	64.9
22	2019 MPSC Staff Transfer Prices	Transfer Amount to PSCR	**$Mil**	$ 4.3	$ 4.4	$ 4.4	$ 4.5	$ 4.6	$ 4.6	$ 3.1
23	2022 Solar PPA	Generation	**1,000 MWh**	273.5	272.1	270.7	269.4	268.0	266.7	176.9
24	2019 MPSC Staff Transfer Prices	Transfer Amount to PSCR	**$Mil**	$ 14.3	$ 14.3	$ 14.2	$ 14.1	$ 14.1	$ 14.0	$ 9.3
25	VGP Subscribed Solar	Generation	**1,000 MWh**	(273.5)	(272.1)	(270.7)	(269.4)	(268.0)	(266.7)	(176.9)
26	2019 MPSC Staff Transfer Prices	Transfer Amount to PSCR	**$Mil**	$ (13.2)	$ (13.1)	$ (13.0)	$ (13.0)	$ (12.9)	$ (12.9)	$ (8.5)
27		**Generation - PPA**	**1,000 MWh**	**1,858.1**	**1,861.2**	**1,855.5**	**1,854.2**	**1,853.0**	**1,856.0**	**1,233.6**
28		**PSCR Transfer Expense - PPA**	**$Mil**	**$ 121.3**	**$ 122.1**	**$ 122.0**	**$ 122.1**	**$ 122.3**	**$ 122.8**	**$ 81.7**

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Line No.	(a)	(b)	(c)	Actual 2009	Actual 2010	Actual 2011	Actual 2012	Actual 2013	Actual 2014	Actual 2015	(d) Actual 2016	(e) Actual 2017	(f) Actual 2018	(g) Preliminary 2019	(h) 2020	(i) 2021	(j) 2022
	DTE Electric Owned																
29	Gratiot County Wind	Generation	**1,000 MWh**	-	-	3.0	236.0	254.8	264.2	272.6	253.7	260.8	239.9	252.8	256.5	255.8	255.8
30	U-15806 Transfer Price	Transfer Amount to PSCR	**$Mil**	-	-	$ 0.2	$ 17.6	$ 19.5	$ 20.8	$ 22.7	$ 21.7	$ 22.7	$ 21.4	$ 23.6	$ 24.1	$ 25.9	$ 27.1
31	Thumb Wind Parks	Generation	**1,000 MWh**	-	-	-	15.1	388.1	400.4	412.3	406.3	418.1	410.1	414.5	413.2	412.0	412.0
32	U-15806 Transfer Price	Transfer Amount to PSCR	**$Mil**	-	-	-	$ 1.1	$ 24.9	$ 25.6	$ 26.4	$ 27.0	$ 27.8	$ 27.3	$ 27.6	$ 27.5	$ 41.8	$ 43.6
33	Echo Wind Park	Generation	**1,000 MWh**	-	-	-	-	2.6	192.9	394.3	386.8	394.8	391.7	391.4	392.7	391.6	391.6
34	2012 MPSC Staff Transfer Prices	Transfer Amount to PSCR	**$Mil**	-	-	-	-	$ 0.1	$ 10.8	$ 22.1	$ 22.6	$ 23.1	$ 22.9	$ 22.9	$ 23.0	$ 29.7	$ 30.3
35	Brookfield Wind Park	Generation	**1,000 MWh**	-	-	-	-	-	90.0	265.9	260.6	258.2	251.1	255.2	258.8	258.1	258.1
36	2012 MPSC Staff Transfer Prices	Transfer Amount to PSCR	**$Mil**	-	-	-	-	-	$ 4.4	$ 13.1	$ 13.5	$ 13.4	$ 13.0	$ 13.2	$ 13.4	$ 19.5	$ 19.9
37	Pinnebog Wind Park	Generation	**1,000 MWh**	-	-	-	-	-	-	-	13.1	169.9	172.8	172.7	171.8	171.3	171.3
38	2014 MPSC Staff Transfer Prices	Transfer Amount to PSCR	**$Mil**	-	-	-	-	-	-	-	$ 0.7	$ 9.3	$ 9.5	$ 9.5	$ 9.4	$ 9.4	$ 9.4
39	Pine River Wind Park	Generation	**1,000 MWh**	-	-	-	-	-	-	-	-	-	-	341.1	425.1	423.9	423.9
40	2015 MPSC Staff Transfer Prices	Transfer Amount to PSCR	**$Mil**	-	-	-	-	-	-	-	-	-	-	$ 17.7	$ 22.1	$ 22.0	$ 22.0
41	Polaris Wind Park	Generation	**1,000 MWh**	-	-	-	-	-	-	-	-	-	-	-	399	502	502
42	2016 MPSC Staff Transfer Prices	Transfer Amount to PSCR	**$Mil**	-	-	-	-	-	-	-	-	-	-	-	$ 18.3	$ 23.1	$ 23.1
43	Fairbanks Wind Park	Generation	**1,000 MWh**	-	-	-	-	-	-	-	-	-	-	-	52	248	248
44	2018 MPSC Staff Transfer Prices	Transfer Amount to PSCR	**$Mil**	-	-	-	-	-	-	-	-	-	-	-	$ 2.3	$ 11.2	$ 11.2
45	Isabella Wind Park I	Generation	**1,000 MWh**	-	-	-	-	-	-	-	-	-	-	-	20	488	488
46	2018 MPSC Staff Transfer Prices	Transfer Amount to PSCR	**$Mil**	-	-	-	-	-	-	-	-	-	-	-	$ 1.0	$ 24.7	$ 24.7
47	Isabella Wind Park II	Generation	**1,000 MWh**	-	-	-	-	-	-	-	-	-	-	-	19	460	460
48	2018 MPSC Staff Transfer Prices	Transfer Amount to PSCR	**$Mil**	-	-	-	-	-	-	-	-	-	-	-	$ 1.0	$ 23.3	$ 23.3
49	Meridian Wind Park	Generation	**1,000 MWh**	-	-	-	-	-	-	-	-	-	-	-	-	51	612
50	2019 MPSC Staff Transfer Prices	Transfer Amount to PSCR	**$Mil**	-	-	-	-	-	-	-	-	-	-	-	-	$ 2.5	$ 30.0
51	MIGreenPower Subscribed Wind	Subscribed Generation	**1,000 MWh**	-	-	-	-	-	-	-	-	(3)	(7)	(14)	(31.8)	(58)	(75)
52	2014 MPSC Staff Transfer Prices	Transfer Amount to PSCR	**$Mil**	-	-	-	-	-	-	-	-	$ (0.1)	$ (0.4)	$ (0.7)	$ (1.7)	$ (3.2)	$ (4.1)
53	VGP Subscribed Wind	Subscribed Generation	**1,000 MWh**	-	-	-	-	-	-	-	-	-	-	-	(91.3)	(1,194.9)	(1,194.9)
54		Transfer Amount to PSCR	**$Mil**	-	-	-	-	-	-	-	-	-	-	-	$ (4.3)	$ (59.1)	$ (59.1)
55	DTE SolarCurrents (~13.75MW)	Generation	**1,000 MWh**	-	-	1.5	3.1	5.4	8.6	11.2	14.8	16.8	16.0	15.8	15.9	15.8	15.7
56	U-15806 Transfer Price	Transfer Amount to PSCR	**$Mil**	-	-	$ 0.1	$ 0.4	$ 0.8	$ 1.6	$ 2.4	$ 3.3	$ 3.8	$ 3.8	$ 3.9	$ 4.0	$ 4.2	$ 4.3
57	DTE SolarCurrents (~1.25MW)	Generation	**1,000 MWh**	-	-	-	-	-	-	0.6	1.5	1.5	1.4	1.9	1.5	1.5	1.5
58	2012 MPSC Staff Transfer Price	Transfer Amount to PSCR	**$Mil**	-	-	-	-	-	-	$ 0.0	$ 0.1	$ 0.1	$ 0.1	$ 0.1	$ 0.1	$ 0.1	$ 0.1
59	Demille/Turrill/O'Shea Utility-Scale Solar	Generation	**1,000 MWh**	-	-	-	-	-	-	-	-	53.1	69.1	69.7	69.3	68.7	68.4
60	2014 MPSC Staff Transfer Prices	Transfer Amount to PSCR	**$Mil**	-	-	-	-	-	-	-	-	$ 3.8	$ 5.1	$ 5.2	$ 5.1	$ 5.3	$ 5.4
61	2020 Future Solar Pilot	Generation	**1,000 MWh**	-	-	-	-	-	-	-	-	-	-	-	0.1	1.1	1.1
62	2019 MPSC Staff Transfer Prices	Transfer Amount to PSCR	**$Mil**	-	-	-	-	-	-	-	-	-	-	-	$ 0.0	$ 0.1	$ 0.1
63	2021 Future Solar Pilot	Generation	**1,000 MWh**	-	-	-	-	-	-	-	-	-	-	-	-	1.6	19.2
64	2019 MPSC Staff Transfer Prices	Transfer Amount to PSCR	**$Mil**	-	-	-	-	-	-	-	-	-	-	-	-	$ 0.1	$ 1.3
65	2022 Solar Build (1)	Generation	**1,000 MWh**	-	-	-	-	-	-	-	-	-	-	-	-	-	20.6
66	2019 MPSC Staff Transfer Prices	Transfer Amount to PSCR	**$Mil**	-	-	-	-	-	-	-	-	-	-	-	-	-	$ 1.1
67	2022 Solar Build (2)	Generation	**1,000 MWh**	-	-	-	-	-	-	-	-	-	-	-	-	-	34.7
68	2019 MPSC Staff Transfer Prices	Transfer Amount to PSCR	**$Mil**	-	-	-	-	-	-	-	-	-	-	-	-	-	$ 1.8
69	2023 Solar Build (1)	Generation	**1,000 MWh**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
70	2019 MPSC Staff Transfer Prices	Transfer Amount to PSCR	**$Mil**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
71	2024 Solar Build (1)	Generation	**1,000 MWh**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
72	2019 MPSC Staff Transfer Prices	Transfer Amount to PSCR	**$Mil**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
73	2025 Solar Build (1)	Generation	**1,000 MWh**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
74	2019 MPSC Staff Transfer Prices	Transfer Amount to PSCR	**$Mil**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
75	2026 Solar Build (1)	Generation	**1,000 MWh**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
76	2019 MPSC Staff Transfer Prices	Transfer Amount to PSCR	**$Mil**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
77	2027 Solar Build (1)	Generation	**1,000 MWh**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
78	2019 MPSC Staff Transfer Prices	Transfer Amount to PSCR	**$Mil**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
79	2028 Solar Build (1)	Generation	**1,000 MWh**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
80	2019 MPSC Staff Transfer Prices	Transfer Amount to PSCR	**$Mil**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
81	2029 Solar Build (1)	Generation	**1,000 MWh**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
82	2019 MPSC Staff Transfer Prices	Transfer Amount to PSCR	**$Mil**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
83	MIGreenPower Subscribed Solar	Subscribed Generation	**1,000 MWh**	-	-	-	-	-	-	-	-	(2.7)	(6.5)	(13.6)	(31.8)	(58.4)	(68.4)
84	2014 MPSC Staff Transfer Prices	Transfer Amount to PSCR	**$Mil**	-	-	-	-	-	-	-	-	$ (0.2)	$ (0.5)	$ (1.0)	$ (2.4)	$ (4.5)	$ (5.4)
85	VGP Subscribed Solar	Subscribed Generation	**1,000 MWh**	-	-	-	-	-	-	-	-	-	-	-	-	-	(55.4)
86		Transfer Amount to PSCR	**$Mil**	-	-	-	-	-	-	-	-	-	-	-	-	-	$ (2.9)
87		**Generation - Owned (excluding VGPs)**	**1,000 MWh**	**-**	**-**	**4.4**	**254.3**	**651.0**	**956.1**	**1,356.9**	**1,336.8**	**1,567.8**	**1,539.2**	**1,888.1**	**2,339.7**	**2,437.7**	**2,989.0**
88		**PSCR Transfer Expense - Owned**	**$Mil**	**$ -**	**$ -**	**$ 0.3**	**$ 19.1**	**$ 45.3**	**$ 63.2**	**$ 86.7**	**$ 88.9**	**$ 103.6**	**$ 102.2**	**$ 121.9**	**$ 143.0**	**$ 176.0**	**$ 207.1**
89		**Total Generation (excluding VGPs)**	**1,000 MWh**	**1.7**	**83.6**	**209.3**	**774.7**	**1,625.2**	**2,542.0**	**2,956.2**	**2,866.7**	**3,113.0**	**3,033.9**	**3,440.4**	**3,936.6**	**4,039.7**	**4,760.2**
90		**Total PSCR Transfer Expense**	**$Mil**	**$ 0.1**	**$ 4.8**	**$ 12.6**	**$ 57.6**	**$ 112.3**	**$ 161.9**	**$ 190.8**	**$ 188.9**	**$ 206.1**	**$ 202.7**	**$ 226.9**	**$ 250.9**	**$ 284.5**	**$ 323.1**

Michigan Public Service Commission
DTE Electric Company
2016 PA 342 Renewable Energy Plan - August 2020 Amended REP
PSCR Transfer Expense

Case No.: U-20851
Exhibit: A-31
Witness: M. J. Rivard
Page: 4 of 4

Line No.	(a)	(b)	(c)	(k) 2023	(l) 2024	(m) 2025	(n) 2026	(o) 2027	(p) 2028	(q) 2029
	DTE Electric Owned									
29	Gratiot County Wind	Generation	**1,000 MWh**	255.8	256.5	255.8	255.8	255.8	256.5	170.6
30	U-15806 Transfer Price	Transfer Amount to PSCR	**$Mil**	$ 28.4	$ 30.0	$ 30.3	$ 31.4	$ 32.7	$ 35.0	$ 24.3
31	Thumb Wind Parks	Generation	**1,000 MWh**	412.0	413.2	412.0	412.0	412.0	413.2	274.7
32	U-15806 Transfer Price	Transfer Amount to PSCR	**$Mil**	$ 45.8	$ 48.3	$ 48.7	$ 50.6	$ 52.7	$ 27.5	$ 18.3
33	Echo Wind Park	Generation	**1,000 MWh**	391.6	392.7	391.6	391.6	391.6	392.7	261.1
34	2012 MPSC Staff Transfer Prices	Transfer Amount to PSCR	**$Mil**	$ 30.9	$ 31.6	$ 32.2	$ 32.8	$ 22.9	$ 23.0	$ 15.3
35	Brookfield Wind Park	Generation	**1,000 MWh**	258.1	258.8	258.1	258.1	258.1	258.8	172.0
36	2012 MPSC Staff Transfer Prices	Transfer Amount to PSCR	**$Mil**	$ 20.3	$ 20.8	$ 21.2	$ 13.4	$ 13.4	$ 13.4	$ 8.9
37	Pinnebog Wind Park	Generation	**1,000 MWh**	171.3	171.8	171.3	171.3	171.3	171.8	114.2
38	2014 MPSC Staff Transfer Prices	Transfer Amount to PSCR	**$Mil**	$ 9.4	$ 9.4	$ 9.4	$ 9.4	$ 9.4	$ 9.4	$ 6.3
39	Pine River Wind Park	Generation	**1,000 MWh**	423.9	425.1	423.9	423.9	423.9	425.1	282.6
40	2015 MPSC Staff Transfer Prices	Transfer Amount to PSCR	**$Mil**	$ 22.0	$ 36.0	$ 22.0	$ 22.0	$ 22.0	$ 22.1	$ 14.7
41	Polaris Wind Park	Generation	**1,000 MWh**	502	504	502	502	502	504	335
42	2016 MPSC Staff Transfer Prices	Transfer Amount to PSCR	**$Mil**	$ 23.1	$ 23.2	$ 23.1	$ 23.1	$ 23.1	$ 23.2	$ 15.4
43	Fairbanks Wind Park	Generation	**1,000 MWh**	248	248	248	248	248	248	165
44	2018 MPSC Staff Transfer Prices	Transfer Amount to PSCR	**$Mil**	$ 11.2	$ 11.2	$ 11.2	$ 11.2	$ 11.2	$ 11.2	$ 7.5
45	Isabella Wind Park I	Generation	**1,000 MWh**	488	489	488	488	488	489	325
46	2018 MPSC Staff Transfer Prices	Transfer Amount to PSCR	**$Mil**	$ 24.7	$ 24.7	$ 24.7	$ 24.7	$ 24.7	$ 24.7	$ 16.5
47	Isabella Wind Park II	Generation	**1,000 MWh**	460	461	460	460	460	461	306
48	2018 MPSC Staff Transfer Prices	Transfer Amount to PSCR	**$Mil**	$ 23.3	$ 23.3	$ 23.3	$ 23.3	$ 23.3	$ 23.3	$ 15.5
49	Meridian Wind Park	Generation	**1,000 MWh**	612	613	612	612	612	613	408
50	2019 MPSC Staff Transfer Prices	Transfer Amount to PSCR	**$Mil**	$ 30.0	$ 30.1	$ 30.0	$ 30.0	$ 30.0	$ 30.1	$ 20.0
51	MIGreenPower Subscribed Wind	Subscribed Generation	**1,000 MWh**	(75)	(75)	(75)	(75)	(75)	(75)	(75)
52	2014 MPSC Staff Transfer Prices	Transfer Amount to PSCR	**$Mil**	$ (4.1)	$ (4.1)	$ (4.1)	$ (4.1)	$ (4.1)	$ (4.1)	$ (4.1)
53	VGP Subscribed Wind	Subscribed Generation	**1,000 MWh**	(1,194.9)	(1,198.2)	(1,194.9)	(1,194.9)	(1,194.9)	(1,198.2)	(796.6)
54		Transfer Amount to PSCR	**$Mil**	$ (59.1)	$ (59.3)	$ (59.1)	$ (59.1)	$ (59.1)	$ (59.3)	$ (39.4)
55	DTE SolarCurrents (~13.75MW)	Generation	**1,000 MWh**	15.6	15.6	15.5	15.4	15.3	15.3	10.1
56	U-15806 Transfer Price	Transfer Amount to PSCR	**$Mil**	$ 4.5	$ 4.7	$ 4.8	$ 5.0	$ 5.1	$ 5.4	$ 3.7
57	DTE SolarCurrents (~1.25MW)	Generation	**1,000 MWh**	1.5	1.5	1.5	1.5	1.5	1.5	1.0
58	2012 MPSC Staff Transfer Price	Transfer Amount to PSCR	**$Mil**	$ 0.1	$ 0.1	$ 0.1	$ 0.1	$ 0.1	$ 0.1	$ 0.1
59	Demille/Turrill/O'Shea Utility-Scale Solar	Generation	**1,000 MWh**	68.1	67.9	67.4	67.0	66.7	66.5	44.0
60	2014 MPSC Staff Transfer Prices	Transfer Amount to PSCR	**$Mil**	$ 5.4	$ 5.5	$ 5.6	$ 5.7	$ 5.8	$ 5.9	$ 4.0
61	2020 Future Solar Pilot	Generation	**1,000 MWh**	1.1	1.1	1.1	1.0	1.0	1.0	0.7
62	2019 MPSC Staff Transfer Prices	Transfer Amount to PSCR	**$Mil**	$ 0.1	$ 0.1	$ 0.1	$ 0.1	$ 0.1	$ 0.1	$ 0.1
63	2021 Future Solar Pilot	Generation	**1,000 MWh**	19.1	19.0	18.9	18.8	18.7	18.7	12.3
64	2019 MPSC Staff Transfer Prices	Transfer Amount to PSCR	**$Mil**	$ 1.3	$ 1.4	$ 1.4	$ 1.4	$ 1.4	$ 1.5	$ 1.0
65	2022 Solar Build (1)	Generation	**1,000 MWh**	246.1	245.6	243.7	242.4	241.2	240.7	159.2
66	2019 MPSC Staff Transfer Prices	Transfer Amount to PSCR	**$Mil**	$ 13.3	$ 13.3	$ 13.2	$ 13.1	$ 13.0	$ 13.0	$ 8.6
67	2022 Solar Build (2)	Generation	**1,000 MWh**	414.9	413.9	410.8	408.7	406.7	405.7	268.4
68	2019 MPSC Staff Transfer Prices	Transfer Amount to PSCR	**$Mil**	$ 21.1	$ 21.0	$ 20.9	$ 20.8	$ 20.7	$ 20.6	$ 13.6
69	2023 Solar Build (1)	Generation	**1,000 MWh**	10.8	129.3	128.3	127.7	127.1	126.8	83.9
70	2019 MPSC Staff Transfer Prices	Transfer Amount to PSCR	**$Mil**	$ 0.6	$ 6.9	$ 6.9	$ 6.8	$ 6.8	$ 6.8	$ 4.5
71	2024 Solar Build (1)	Generation	**1,000 MWh**	-	32.0	380.7	378.8	376.9	376.1	248.8
72	2019 MPSC Staff Transfer Prices	Transfer Amount to PSCR	**$Mil**	-	$ 2.0	$ 23.6	$ 23.5	$ 23.4	$ 23.3	$ 15.4
73	2025 Solar Build (1)	Generation	**1,000 MWh**	-	-	23.0	274.3	272.9	272.3	180.1
74	2019 MPSC Staff Transfer Prices	Transfer Amount to PSCR	**$Mil**	-	-	$ 1.4	$ 17.1	$ 17.0	$ 17.0	$ 11.2
75	2026 Solar Build (1)	Generation	**1,000 MWh**	-	-	-	-	-	-	-
76	2019 MPSC Staff Transfer Prices	Transfer Amount to PSCR	**$Mil**	-	-	-	$ -	$ -	$ -	$ -
77	2027 Solar Build (1)	Generation	**1,000 MWh**	-	-	-	-	-	-	-
78	2019 MPSC Staff Transfer Prices	Transfer Amount to PSCR	**$Mil**	-	-	-	-	$ -	$ -	$ -
79	2028 Solar Build (1)	Generation	**1,000 MWh**	-	-	-	-	-	-	-
80	2019 MPSC Staff Transfer Prices	Transfer Amount to PSCR	**$Mil**	-	-	-	-	-	$ -	$ -
81	2029 Solar Build (1)	Generation	**1,000 MWh**	-	-	-	-	-	-	-
82	2019 MPSC Staff Transfer Prices	Transfer Amount to PSCR	**$Mil**	-	-	-	-	-	-	$ -
83	MIGreenPower Subscribed Solar	Subscribed Generation	**1,000 MWh**	(68.1)	(67.9)	(67.4)	(67.0)	(66.7)	(66.5)	(44.0)
84	2014 MPSC Staff Transfer Prices	Transfer Amount to PSCR	**$Mil**	$ (5.4)	$ (5.5)	$ (5.6)	$ (5.7)	$ (5.8)	$ (5.9)	$ (4.0)
85	VGP Subscribed Solar	Subscribed Generation	**1,000 MWh**	(671.8)	(820.8)	(1,186.4)	(1,431.9)	(1,424.8)	(1,421.5)	(940.4)
86		Transfer Amount to PSCR	**$Mil**	$ (35.0)	$ (43.2)	$ (66.0)	$ (81.3)	$ (80.9)	$ (80.7)	$ (53.4)
87		**Generation - Owned (excluding VGPs)**	**1,000 MWh**	**2,988.8**	**2,997.0**	**2,988.4**	**2,988.2**	**2,988.1**	**2,996.3**	**1,966.8**
88		**PSCR Transfer Expense - Owned**	**$Mil**	**$ 211.9**	**$ 231.7**	**$ 219.3**	**$ 215.1**	**$ 208.9**	**$ 186.6**	**$ 123.9**
89		**Total Generation (excluding VGPs)**	**1,000 MWh**	**4,846.9**	**4,858.2**	**4,844.0**	**4,842.5**	**4,841.0**	**4,852.3**	**3,200.4**
90		**Total PSCR Transfer Expense**	**$Mil**	**$ 333.1**	**$ 353.8**	**$ 341.3**	**$ 337.3**	**$ 331.2**	**$ 309.4**	**$ 205.6**

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of **DTE ELECTRIC COMPANY'S** application for the regulatory reviews, revisions, determinations, and/or approvals necessary to fully comply with Public Act 295 OF 2008	))))	Case No. U-20851

QUALIFICATIONS

AND

DIRECT TESTIMONY

OF

SHERRI L. WISNIEWSKI

DTE ELECTRIC COMPANY
DIRECT TESTIMONY OF SHERRI L. WISNIEWSKI

Line No.

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

A1. My name is Sherri L. Wisniewski. My business address is DTE Energy, One Energy Plaza, Detroit, Michigan 48226. I am employed by DTE Energy Corporate Services, LLC.

Q2. On whose behalf are you testifying?

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

Q3. What is your educational background?

A3. I earned a Bachelor of Business Administration from Western Michigan University in 1993 and a Master of Business Administration from The University of Michigan in 1998.

Q4. What work experience do you have?

A4. I have been with DTE Energy Company in the Tax Department since 1996. I became Director of Tax Operations in July 2016 and am currently responsible for tax accounting, tax forecasting, and regulatory tax.

Q5. Have you previously sponsored testimony before the Michigan Public Service Commission?

A5. Yes, I have sponsored testimony in the following cases:

U-18255	DTE Electric General Rate Case
U-18232	Amended REP
U-18232 (A)	2020 Amended REP

Line No.		
1	U-18999	DTE Gas General Rate Case
2	U-20029	DTE Electric EWR 2017 Reconciliation
3	U-20051	DTE Electric TRM 2017 Reconciliation
4	U-20105	DTE Electric Credit A Rate Case
5	U-20106	DTE Gas Credit A Rate Case
6	U-20162	DTE Electric Rate Case
7	U-20172	DTE Electric REP 2017 Reconciliation
8	U-20298	DTE Gas Calculation C Rate Case
9	U-20484	DTE Electric REP 2018 Reconciliation
10	U-20561	DTE Electric Rate Case
11	U-20642	DTE Gas Rate Case

12

13 **Q6. What is the purpose of your testimony in this proceeding?**

14 A6. The purpose of my testimony in this August 2020 Amended REP filing is to discuss
15 and support the reasonableness of deferred taxes, investment tax credits and property
16 tax expense in DTE Electric's Renewable Energy Plan (REP).

17

18 **Q7. Are you sponsoring any exhibits?**

19 A7. I am sponsoring the following exhibits:

	Exhibit	Description
20	A-38	Wisniewski Affidavit
21	A-39	Deferred Income Taxes

22

23

24 **Q8. Were these exhibits prepared by you or under your direction?**

25 A8. Yes, they were.

Line
No.

Q9. When the Company filed this case, did you submit an affidavit in support?

A9. Yes, I did. My affidavit is now my Exhibit A-38, and the attachment to that affidavit is now Exhibit A-39.

Q10. Do the facts and opinions you set out in your Affidavit remain true today?

A10. Yes.

Q11. Does this complete your direct testimony?

A11. Yes, it does.

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of **DTE ELECTRIC COMPANY'S** application for the regulatory reviews, revisions, determinations, and/or approvals necessary to fully comply with Public Act 295 OF 2008	))))	Case No. U-20851

EXHIBITS

OF

SHERRI L. WISNIEWSKI

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of **DTE ELECTRIC COMPANY'S** application for the regulatory reviews, revisions, determinations, and/or approvals necessary for to fully comply with Public Act 295 of 2008	))))	Case No. U-20851

AFFIDAVIT OF SHERRI L. WISNIEWSKI IN SUPPORT OF DTE ELECTRIC COMPANY'S APPLICATION FOR APPROVAL OF THE AUGUST 2020 AMENDED RENEWABLE ENERGY PLAN

STATE OF MICHIGAN)
)
COUNTY OF WAYNE)

Sherri L. Wisniewski, being first duly sworn, deposes and says:

1. My title is Director of Tax Operations. I received a Bachelor of Business Administration Degree from Western Michigan University in 1993 and a Master of Business Administration from the University of Michigan in 1998. I have been with DTE Energy Company in the Tax Department since 1996. As the Director of Tax Operations, I am responsible for tax accounting, tax forecasting, and regulatory tax.

2. I have sponsored testimony in numerous cases before the Michigan Public Service Commission (MPSC or Commission).

3. The purpose of my affidavit is to incorporate the impacts to deferred taxes, investment tax credits, and property taxes resulting from including the tax equity structure related to the Company-owned Volunteer Green Program ("VGP") assets set forth in Mr. Harwood's

affidavit, and as explained more fully in the concurrently-filed VGP Biennial Review, Case No. U-20713, into the REP approved in U-18232.

4. I am sponsoring Attachment 1, Deferred Income Taxes, and it was prepared under my direction.

5. Deferred tax liabilities are reflected as a reduction in rate base in Affiant Kauffman's Attachment 4, line 11 for Compliance assets and line 20 for Authorized Large Customer Voluntary. Deferred taxes represent financial statement items that are treated differently for book purposes than they are for tax purposes. There are four items that drive deferred taxes within the Company's Renewable Energy Plan as shown on Attachment 1:

- Fixed asset differences (Attachment 1, line 8)
- Regulatory Liability (Attachment 1, line 14)
- Production Tax Credits (Attachment 1, line 1)
- Renewable Energy Credits (Attachment 1, line 20)

Deferred taxes are calculated by multiplying the book to tax differences by a composite rate of 25.9%, which represents federal, state, and local income taxes for DTE Electric.

6. The TCJA regulatory liability on Attachment 1, line 26 reflects the remeasurement of deferred taxes at 12/31/2017 from the 2017 Tax Cuts and Job Act (TCJA) enacted by Congress on December 22, 2017, which reduced the federal corporate income tax rate from 35% to 21% effective January 1, 2018. In accordance with the Commission Order in Case No. U-18494 dated December 27, 2017, the excess deferred taxes resulting from this remeasurement were offset by the TCJA regulatory liability. The TJCA regulatory liability represents the excess deferred income taxes that flow back to the customer as the regulatory liability is amortized. The amortization of the TCJA regulatory liability is being reflected as a reduction to the incremental cost of compliance on Affiant Lacey's Attachment 1, line 22 starting in May 2019 and follows the same overall

methodology approved in the Commission's May 2, 2019 order in Case No. U-20162. Since the amortization of the TCJA regulatory liability is post tax adjustments, in order to include it in the pre-tax incremental cost of compliance, it must be grossed up (increased) for taxes. This gross up decreases the revenue requirement included in the Renewable Energy Plan Surcharge and ensures DTE Electric does not earn above its authorized return for this amortization.

7. Based on current law, DTE Electric can earn an Investment Tax Credit (ITC) for a portion of the expenditures made in placing solar energy property in service. The ITC for solar energy property is determined by multiplying the applicable solar tax credit percentage by the ITC-eligible basis of the solar energy property placed in service during that year. The ITC is recorded in an accumulated deferred investment tax credit account and amortized as a reduction to expense over the book life of the assets under the normalization rules issued by the Internal Revenue Service. The accumulated deferred investment tax credit account will be reflected as a source of financing in the REP capital structure, and the cost of capital assigned to the accumulated deferred investment tax credit will be equal to the weighted cost of capital excluding the ITC. This ensures there is no impact to the program's rate of return or total capital structure. ITCs reduce the incremental cost of compliance as they are amortized over the book life of the assets. The amortization of ITC begins the year in which DTE Electric can utilize the ITC to reduce income taxes payable on a tax return. The reduction to the incremental cost of compliance for ITCs is shown on Company Affiant Mr. Lacey's Attachment 1 line 11. The ITC amount on Mr. Lacey's Attachment 1, line 11, is calculated by taking the amortization of the ITC and grossing it up. Since the amortization of the ITC is post tax adjustments, in order to include them in the pre-tax incremental cost of compliance, they must be grossed up (increased) for taxes. This gross up decreases the revenue requirement included in the Renewable Energy Plan Surcharge and ensures DTE Electric does not earn above its authorized return for this item when the credits are applied to net income.

11. Property tax liability represents the amount of property taxes payable to local governments, whereas property tax expense refers to the amount of property taxes deducted for book purposes. Property tax liability is calculated by multiplying the forecasted taxable value of the ending plant in service and CWIP by the historical composite millage rate. The property tax liability is expensed over a two-year period, with the liability of each year being expensed 39% the current year and 61% the subsequent year. The property tax expense is shown on Affiant Kauffman's Attachment 1, line 5 which is carried to Affiant Lacey's Attachment 2, line 19.

12. Based upon my knowledge and experience, the impacts to deferred taxes, investment tax credits, and property taxes resulting from including the tax equity structure related to Company-owned VGP solar assets into the REP approved in U-18232 are reasonable and prudent and I recommend that the Commission approve the Company's August 2020 Amended Renewable Energy Plan reflecting these impacts.

Further, Affiant sayeth not.

Sherri L. Wisniewski

Digitally signed by Sherri L. Wisniewski
Date: 2020.08.31 15:13:54 -04'00'

Sherri L. Wisniewski

Subscribed and sworn to before
me this 31st day of August 2020.

Estella R. Branson

Digitally signed by Estella R. Branson
Date: 2020.08.31 15:15:19 -04'00'

Estella R. Branson, Notary Public
Oakland County, Michigan
My Commission Expires: 10-26-2023
Acting in Wayne County

Michigan Public Service Commission Case No.: U-20851
DTE Electric Company Exhibit: A-39
2016 PA 342 Renewable Energy Plan - August 2020 Amended REP Witness: S. L. Wisniewski
Tax Credits & Deferred Income Taxes Page: 1 of 2
($ Millions, except where noted)

Line No.	(a) Description	(b) As Filed 2016	(c) As Filed 2017	(d) As Filed 2018	(e) As Filed 2019	(f) 2020	(g) 2021
1	**Deferred Tax Asset - PTC**						
2	Beginning Balance	30.9	61.3	97.3	132.5	146.7	187.9
3	Generated	30.4	36.0	35.2	45.7	60.2	91.2
4	Utilized	-	-	-	(31.5)	(19.0)	(12.0)
5	Ending Balance	61.3	97.3	132.5	146.7	187.9	267.1
6	Average Balance	46.1	79.3	114.9	139.6	167.3	227.5
7							
8	**Deferred Tax Liability - Plant**						
9	Beginning Balance	(206.4)	(244.3)	(193.7)	(207.2)	(222.5)	(277.6)
10	Book / Tax Timing Difference (Note 1)	(37.9)	(46.2)	(13.5)	(15.4)	(55.0)	(84.5)
11	Re-measurement Adjustment		96.8	-			
12	Ending Balance	(244.3)	(193.7)	(207.2)	(222.5)	(277.6)	(362.1)
13	Average Balance	(225.4)	(219.0)	(200.4)	(214.9)	(250.1)	(319.8)
14	**Deferred Tax Asset - Reg. Liability**						
15	Beginning Balance	76.7	57.1	29.5	22.9	14.6	7.4
16	Reg Liability Activity	(19.6)	(12.9)	(6.6)	(8.2)	(8.1)	4.0
17	Re-measurement Adjustment		(14.7)			0.9	
18	Ending Balance	57.1	29.5	22.9	14.6	7.4	11.4
19	Average Balance	66.9	43.3	26.2	18.8	11.0	9.4
20	**Deferred Tax Asset - Renewable Energy Credits**						
21	Beginning Balance	(6.1)	(4.7)	(0.8)	(1.7)	(2.1)	(2.1)
22	Renewable Energy Credit Activity	1.4	3.4	(0.9)	(0.4)		
23	Re-measurement Adjustment		0.4				
24	Ending Balance	(4.7)	(0.8)	(1.7)	(2.1)	(2.1)	(2.1)
25	Average Balance	(5.4)	(2.8)	(1.3)	(1.9)	(2.1)	(2.1)
26	**TCJA Tax Regulatory Liability**						
27	Beginning Balance	-		(82.5)	(82.5)	(82.2)	(81.0)
28	Amortization	-			0.4	2.0	2.2
29	Re-measurement Adjustment	-	(82.5)	-	-	(0.9)	
30	Ending Balance	-	(82.5)	(82.5)	(82.2)	(81.0)	(78.8)
31	Average Balance	-	(41.3)	(82.5)	(82.4)	(81.6)	(79.9)
32	**Total Deferred Taxes - Ending Balance**	(130.6)	(150.3)	(136.1)	(145.5)	(165.4)	(164.5)
33	**Total Average Deferred Taxes - Rate Base**	(117.8)	(140.4)	(143.2)	(140.8)	(155.4)	(164.9)
34	**Note 1**						
35	Tax Depreciation - Compliance	131.5	122.0	103.7	110.6	159.6	219.5
36	Tax Depreciation - Authorized Voluntary	-	-	-	-	127.9	206.1
37	Book Depreciation	40.0	44.1	46.4	52.1	75.3	101.6
38	Difference	(91.5)	(77.9)	(57.3)	(58.5)	(212.2)	(324.0)
39	Effective Tax Rate	39.0%	39.0%	25.9%	25.9%	25.9%	25.9%
40	Deferred Tax (Expense) / Income	(35.7)	(30.4)	(14.8)	(15.2)	(55.0)	(84.0)
41	Deferred Taxes - Other Adjustments	(2.2)	(15.8)	1.3	(0.2)	(0.1)	(0.5)
42	Deferred Tax Activity - Plant	(37.9)	(46.2)	(13.5)	(15.4)	(55.0)	(84.5)

1/ Deferred Tax Asset & Liability balances at 12/31/2017 was re-measured to reflect the impact of the 2017 Tax Cut and Job Act

Deferred Tax Liability	Before Tax Reform	After Tax Reform				
Deferred Tax Liability	(150.3)	(67.7)				
Tax Reform Regulatory Liability	-	(82.5)				
Total Deferred Tax Liability	(150.3)	(150.3)	-			
Composite Tax Rate	39.0%	39.0%	25.9%	25.9%	25.9%	25.9%

Michigan Public Service Commission Case No.: U-20851
DTE Electric Company Exhibit: A-39
2016 PA 342 Renewable Energy Plan - August 2020 Amended REP Witness: S. L. Wisniewski
Tax Credits & Deferred Income Taxes Page: 2 of 2
($ Millions, except where noted)

Line No.	(a) Description	(h) 2022	(i) 2023	(j) 2024	(k) 2025	(l) 2026	(m) 2027	(n) 2028	(o) 2029
1	**Deferred Tax Asset - PTC**								
2	Beginning Balance	267.1	305.5	363.4	365.3	364.2	347.1	311.8	274.9
3	Generated	95.7	89.1	76.9	75.1	75.1	70.5	73.3	40.8
4	Utilized	(57.2)	(31.3)	(75.1)	(76.2)	(92.2)	(105.8)	(110.2)	(120.7)
5	Ending Balance	305.5	363.4	365.3	364.2	347.1	311.8	274.9	195.0
6	Average Balance	286.3	334.5	364.3	364.7	355.6	329.4	293.3	234.9
7									
8	**Deferred Tax Liability - Plant**								
9	Beginning Balance	(362.1)	(418.0)	(454.5)	(479.6)	(490.6)	(488.0)	(479.5)	(466.9)
10	Book / Tax Timing Difference (Note 1)	(55.9)	(36.6)	(25.1)	(11.0)	2.6	8.6	12.6	5.5
11	Re-measurement Adjustment								
12	Ending Balance	(418.0)	(454.5)	(479.6)	(490.6)	(488.0)	(479.5)	(466.9)	(461.4)
13	Average Balance	(390.0)	(436.3)	(467.1)	(485.1)	(489.3)	(483.8)	(473.2)	(464.1)
14	**Deferred Tax Asset - Reg. Liability**								
15	Beginning Balance	11.4	10.9	10.5	10.9	9.5	10.5	11.1	10.0
16	Reg Liability Activity	(0.4)	(0.5)	0.4	(1.4)	1.0	0.6	(1.2)	(1.5)
17	Re-measurement Adjustment								
18	Ending Balance	10.9	10.5	10.9	9.5	10.5	11.1	10.0	8.4
19	Average Balance	11.2	10.7	10.7	10.2	10.0	10.8	10.5	9.2
20	**Deferred Tax Asset - Renewable Energy Credits**								
21	Beginning Balance	(2.1)	(2.1)	(2.1)	(2.1)	(2.1)	(2.1)	(2.1)	(2.1)
22	Renewable Energy Credit Activity								
23	Re-measurement Adjustment								
24	Ending Balance	(2.1)	(2.1)	(2.1)	(2.1)	(2.1)	(2.1)	(2.1)	(2.1)
25	Average Balance	(2.1)	(2.1)	(2.1)	(2.1)	(2.1)	(2.1)	(2.1)	(2.1)
26	**TCJA Tax Regulatory Liability**								
27	Beginning Balance	(78.8)	(75.9)	(73.6)	(71.2)	(68.8)	(66.4)	(64.0)	(61.6)
28	Amortization	2.8	2.4	2.4	2.4	2.4	2.4	2.4	1.6
29	Re-measurement Adjustment								
30	Ending Balance	(75.9)	(73.6)	(71.2)	(68.8)	(66.4)	(64.0)	(61.6)	(60.0)
31	Average Balance	(77.4)	(74.8)	(72.4)	(70.0)	(67.6)	(65.2)	(62.8)	(60.8)
32	**Total Deferred Taxes - Ending Balance**	(179.5)	(156.3)	(176.7)	(187.8)	(198.9)	(222.6)	(245.7)	(320.0)
33	**Total Average Deferred Taxes - Rate Base**	(172.0)	(167.9)	(166.5)	(182.2)	(193.4)	(210.8)	(234.2)	(282.9)
34	**Note 1**								
35	Tax Depreciation - Compliance	203.9	141.7	105.2	80.1	49.2	31.7	32.5	33.4
36	Tax Depreciation - Authorized Voluntary	126.5	122.5	120.0	97.7	79.4	74.9	59.5	39.7
37	Book Depreciation	115.3	123.2	128.6	135.4	138.7	139.6	140.6	94.3
38	Difference	(215.1)	(141.0)	(96.6)	(42.5)	10.1	33.0	48.5	21.3
39	Effective Tax Rate	25.9%	25.9%	25.9%	25.9%	25.9%	25.9%	25.9%	25.9%
40	Deferred Tax (Expense) / Income	(55.7)	(36.5)	(25.0)	(11.0)	2.6	8.6	12.6	5.5
41	Deferred Taxes - Other Adjustments	(0.2)	(0.0)	(0.0)	(0.0)	-	-	-	-
42	Deferred Tax Activity - Plant	(55.9)	(36.6)	(25.1)	(11.0)	2.6	8.6	12.6	5.5

1/ Deferred Tax Asset & Liability balances at 12/31/2017 was re-measured to reflect the impact of the 2017 Tax Cut and Job Act

Deferred Tax Liability
Deferred Tax Liability
Tax Reform Regulatory Liability
Total Deferred Tax Liability

Composite Tax Rate	25.9%	25.9%	25.9%	25.9%	25.9%	25.9%	25.9%	25.9%

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of **DTE ELECTRIC COMPANY'S** application for the regulatory reviews, revisions, determinations, and/or approvals necessary for to fully comply with Public Act 295 of 2008	))))	Case No. U-20851

PROOF OF SERVICE

STATE OF MICHIGAN)
) ss.
COUNTY OF WAYNE)

ESTELLA R. BRANSON, being duly sworn, deposes and says that on the 15th day of December, 2020, she served a copy of the DTE Electric Company's Direct Testimony and Exhibits of David B. Harwood, Patrick D. Kauffman, Thomas W. Lacey, Marcus J. Rivard, and Sherri L. Wisniewski., via electronic mail upon the persons referred to in the attached service list.

Estella R. Branson Digitally signed by Estella R. Branson Date: 2020.12.15 19:16:01 -05'00'

ESTELLA R. BRANSON

Subscribed and sworn to before
me this 15th day of December, 2020

Karyn B. Kazyaka Digitally signed by Karyn B. Kazyaka Date: 2020.12.15 19:16:32 -05'00'

Karyn B. Kazyaka, Notary Public
Macomb County, Michigan
My Commission Expires: 7-21-2023
Acting in Wayne County

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