

STATE OF MICHIGAN
BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

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In the matter of the application of)
DTE ELECTRIC COMPANY)
approval of Certificates of Necessity)
pursuant to MCL 460.6s, as amended,)
in connection with the addition of a)
natural gas combined cycle generating)
facility to its generation fleet and for)
related accounting and ratemaking)
authorizations._____)

Case No. U-18419

QUALIFICATIONS AND **CORRECTED** DIRECT TESTIMONY OF

NAOMI J. SIMPSON

MICHIGAN PUBLIC SERVICE COMMISSION

January 23, 2018

QUALIFICATIONS OF NAOMI J. SIMPSON
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PART I

1 Q. Please state your full name and business address for the record.

2 A. My name is Naomi J. Simpson. My business address is the Michigan Public
3 Service Commission's (Commission) work site at 7109 West Saginaw Highway,
4 Lansing, Michigan 48917.

5 Q. By whom are you employed and in what capacity?

6 A. I am employed in the Electric Reliability Division of the Michigan Public Service
7 Commission. I am a Public Utilities Engineer in the Generation and Certificate of
8 Need Section, which is responsible for assisting in the implementation of Public
9 Act 341 of 2016 and evaluating applications for transmission siting pursuant to
10 Public Act 30 of 1995.

11 Q. Would you please outline your educational background?

12 A. Yes. I earned a Bachelor of Science degree in Engineering from Michigan State
13 University in 1997 and a Master of Arts degree in Education from the University
14 of Phoenix in 2010. Since joining the Commission, I have also attended several
15 training programs sponsored by the National Association of Regulatory Utility
16 Commissioners and Michigan State University, including the Annual Regulatory
17 Studies Program (August 2011, 2012, 2013), the Advanced Regulatory Studies
18 Program (October 2011, 2012, 2013, 2014), and Introduction to Public Utility
19 Regulation and Ratemaking (May 2012). In addition, I have attended the
20 Distribution Efficiency Planning and Voltage Optimization conference sponsored
21 by Electric Utility Consultants, Inc. (June 2012), the annual Energy, Utility &
22 Environment Conference (January 2013), the National Energy Risk Lab (February
23 2014), multiple EGEAS modeling training sessions at various Midcontinent

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1 Independent System Operator (MISO) locations (2015, 2016) and the Peak Load
2 Management Alliance (2016).

3 Q. Would you please outline your professional experience?

4 A. In September 1994, I began working at General Motors Corporation as a student
5 engineer, where I worked with staff engineers to evaluate vehicle calibrations and
6 components related to meeting vehicle emissions standards and fuel efficiency.

7
8 In February 1998, I began working as a staff Design and Release Engineer with
9 responsibility for vehicle platform exhaust systems in Delphi Automotive
10 Systems, a subsidiary of General Motors, which later became a fully independent
11 corporation in 1999. My duties as a Design and Release Engineer included design
12 team management, durability test validation, production approval, and lean
13 manufacturing implementation. In August 2000, I became the Engineering
14 Change Management Coordinator for Delphi Lansing Cockpit Assembly Plant,
15 where I was responsible for model year program management, mid-cycle
16 engineering change management, and designated engineering liaison to General
17 Motors staff product engineers, manufacturing engineers and quality engineers
18 associated with cockpit production. In 2002, I became the on-site Systems,
19 Applications & Products in Data Processing project manager for the Delphi
20 Lansing Cockpit Assembly Plant in addition to my previous responsibilities. In
21 November 2004, I was assigned the duties of Quality Manager with responsibility
22 for plant-wide first-time quality goals, root cause analysis, supplier quality
23 standards, and statistical defect analysis.

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In 2007, I accepted a position at Barnard Manufacturing, Inc. as a commodity buyer of steel and aluminum raw material. My responsibilities included negotiation of commodity contracts to create the most efficient pricing structure while ensuring timely delivery, creating material quality specifications, initiating build schedules based on customer-desired completion dates, and maintaining a material pricing database for all manufactured components.

In March of 2011, I accepted a position as a Public Utilities Engineer in the Smart Grid Section of the Michigan Public Service Commission. I was a member of the Smart Grid Collaborative as the co-chair of the Customer Programs and Communication workgroup. I supported Staff witnesses with the analysis of Consumers Energy Company’s Advanced Metering Infrastructure / Smart Grid proposal and request for recovery in Case No. U-16794. I assisted with writing the Staff report to the Commission in Case No. U-17000. Upon transfer to the Generation and Certificate of Need Section in May of 2012, I began testifying as an expert witness in utility generation certificate of necessity application filings and utility transmission certificate of public convenience and necessity application filings. In 2015, the Commission established a Demand Response Programs Work Group. I am a founding member of that group, which has concluded.

Q. Have you previously presented testimony before the Commission?

A. Yes. I prepared and filed testimony for the following cases:

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- 1 1. Case No. U-16801, Indiana Michigan Power Company electric rate case.
- 2 2. Case No. U-17041, Michigan Electric Transmission Company, LLC
- 3 application for a certificate of public convenience and necessity for the
- 4 construction of a transmission line.
- 5 3. Case No. U-17272, ATC Management Inc. and American Transmission Co.,
- 6 LLC application for a certificate of public convenience and necessity for the
- 7 construction of a transmission line.
- 8 4. Case No. U-17429, Consumers Energy Company application for a certificate of
- 9 necessity for the Thetford Generating Plant.
- 10 5. Case No. U-17767, DTE Electric Company electric rate case.
- 11 6. Case No. U-18014, DTE Electric Company electric rate case.
- 12 7. Case No. U-18224, Upper Michigan Energy Resources Corporation application
- 13 for a certificate of necessity for two reciprocating internal combustion engine
- 14 electric generation facilities.
- 15 8. Case No. U-18322, Consumers Energy Company electric rate case.
- 16 9. Case No. U-18255, DTE Electric Company electric rate case.

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1 Q. What is the purpose of your testimony?

2 A. The purpose of my testimony is to present the Michigan Public Service
3 Commission Staff's (Staff) position in the matter of DTE Electric Company's
4 (DTE or Company) application for certificates of necessity pursuant to 2016
5 Public Act 341 (Act 341), MCL 460.6s for DTE's proposed addition of a natural
6 gas combined cycle generating facility to its generation fleet located at the
7 Company's Belle River Power Plant site.

8 Q. What specific guidance was available to Staff in its review of DTE's proposed
9 natural gas combined cycle generation facility (Proposed Project)?

10 A. Staff relied upon Act 341, specifically MCL 460.6s and the Commission's May
11 11, 2017 Order in Case No. U-15896 Filing Requirements and Instructions for
12 Certificate of Public Convenience and Necessity Application Instructions (Filing
13 Requirements), adopted for the purposes of implementing MCL 460.6s (10) and
14 (11).

15 Q. What specific elements of DTE's application will be covered by your testimony?

16 A. My testimony will cover the application filing requirements outlined in MCL
17 460.6s (11) subsections (a), (b), (e), (f), and (g), MCL 460.6s(4)(b), MCL
18 460.6s(6), MCL 460.6s(7), and MCL 460.6s(9).

19 Q. Are you sponsoring any exhibits?

20 A. Yes, I am sponsoring the following exhibits:

<u>Exhibit No.</u>	<u>Description</u>
21 Exhibit S-1.1	Make and Model of Advanced Class NGCC
22 Exhibit S-1.2	Environmental Permit Matrix
23	

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- 1 Exhibit S-1.3 Environmental Permit Descriptions
- 2 Exhibit S-1.4 Competitive Bid Process
- 3 Exhibit S-1.5 Transmission Cost Reimbursement
- 4 Exhibit S-1.6 Estimated Transmission Costs
- 5 Exhibit S-1.7 Estimated Contingency Costs
- 6 Exhibit S-1.8 Risk Register
- 7 Exhibit S-1.9 Annual Reporting
- 8 Exhibit S-1.10 Alternative Scenario
- 9 Exhibit S-1.11 DTE response related to Midland Cogeneration Venture

10 Q. Is the Company seeking multiple certificates of necessity in its application?

11 A. Yes. The Company is seeking three certificates applicable to the Exhibit A
12 requirements and instructions as identified in the Commission order issued on
13 May 11, 2017 in Case No. U-15896. Pursuant to Act 341, Section 6s (3), the
14 Company is seeking the following certificates of necessity (CON):¹

- 15 1. A certificate of necessity that the power to be supplied as a result of the
- 16 proposed construction, investment, or purchase is needed;
- 17 2. A certificate of necessity that the size, fuel type, and other design
- 18 characteristics of the existing or proposed electric generation facility or the terms
- 19 of the power purchase agreement represent the most reasonable and prudent
- 20 means of meeting that power need;

¹ Prefiled Direct Testimony and Exhibits of Irene M. Dimitry, pp 10-11.

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1 3. A certificate of necessity that the estimated capital costs of and the financing
2 plan for the proposed electric generation facility, including, but not limited to, the
3 costs of siting and licensing a new facility and the estimated cost of power from
4 the proposed electric generation facility, will be recoverable in rates from the
5 electric utility’s customers.

6 Q. Please provide a description of DTE’s Proposed Project.

7 A. The Company has described the Proposed Project to be “configured as a nominal
8 1,100 MW, multi-shaft 2x1 combustion turbine combined cycle power plant
9 burning natural gas fuel only.”² Company witness William H. Damon III testifies
10 that the Proposed Project expects to use an advanced class natural gas combustion
11 turbine technology that is the most efficient power generation technology in the
12 market today.³ Witness Damon goes on to describe the Proposed Project as being
13 configured with two combustion turbine generators, heat recovery steam
14 generators equipped with duct burners, and the best available control technology
15 for air emissions that includes selective catalytic reduction and oxidation
16 catalysts.

17 Q. Has the Company provided specific details about the advanced combustion
18 turbine combined cycle technology it intends to use, including make and model of
19 the Proposed Project?

20 A. Initially, ~~No.~~ The Company declined to answer Staff’s discovery asking for
21 additional information including the make, model, and examples of the same

² Prefiled Direct Testimony and Exhibits of William H. Damon III, p 14.

³ *Id.*

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1 advanced class technology the Company is proposing for this project, stating that
2 negotiations are still ongoing.⁴ Company witness Damon did provide a couple of
3 potentially similar examples of advanced combustion turbine technology that
4 have just begun commercial operation in 2017. ~~No other information about the~~
5 ~~advanced class technology has been provided.~~ On December 20, 2017 the
6 Company issued a supplemental confidential discovery response providing the
7 make and model of the Proposed Project along with two locations that recently
8 started commercial operation in 2016-2017 timeframe.

9 Q. Does the Company provide a description of the water, gas and transmission
10 infrastructure needed for operation of the Proposed Project?

11 A. Witness Damon describes the Proposed Project's water, gas and transmission
12 infrastructure. The Proposed Project will include water treatment facilities, a
13 warehouse, an auxiliary boiler, feedwater pumps, administrative buildings, a
14 natural gas fuel system, gas heating and filtering sub-systems, wet mechanical
15 cooling towers and closed loop cooling water heat exchangers.⁵ It will connect to
16 the electric transmission system at 345 kV transmission lines adjacent the
17 Proposed Project site. Natural gas will be supplied by a new pipeline extension
18 from the main gas transmission line located along Puttygut Road.⁶

19
20 **MCL 460.6s(4)(b)**

⁴ Exhibit S-2.1

⁵ Prefiled Direct Testimony and Exhibits of William H Damon III, p 15.

⁶ *Id.*

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1 Q. How does the filing requirement in Section VII, Part A, subpart 8 address
2 construction and operation permitting.⁷

3 A. The filing requirement in Section VII, Part A, subpart 8 requires that an
4 application seeking to construct a new electric generation facility include, “[a]
5 description of all major state, federal, and local permits required to construct and
6 operate the proposed generation facility or the proposed facility upgrades in
7 compliance with state and federal environmental standards, laws, and rules.”

8 Q. What information has the Company supplied in effort to comply with the Filing
9 Requirements as stated in Section VII, Part A, subpart 8?

10 A. Company witness Damon has provided a general permit list.⁸ In addition, as a
11 response to Staff’s discovery, the Company provided a description of each of the
12 permits listed in Mr. Damon’s testimony and an all-inclusive permitting matrix.⁹
13 The matrix provides detailed information identifying which permits are applicable
14 to the Proposed Project and the responsible stakeholder for the acquisition of each
15 permit.

16 Q. How does the filing requirement in Section VII, Part A, subpart 12 address water
17 and sewer infrastructure required for construction and operation of the Proposed
18 Project?¹⁰

⁷ Filing requirements in Case No. U-15896, May 11, 2017 order.

⁸ Prefiled Direct Testimony and Exhibits of William H. Damon III, pp 13-14.

⁹ Exhibit S-2.2 and Exhibit S-2.3

¹⁰ Filing requirements in Case No. U-15896. *In re, on the Commission’s own motion, to implement the provisions of MCL 460.6s(10) and (11), 5/11/2017 Order, MPSC Case No. U-15896, Attachment A, Filing Requirements and Instructions for Certificate of Public Convenience and Necessity Application Instructions.* .

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1 A. The filing requirement in Section VII, Part A, subpart 12 requires an application
2 seeking a certificate of necessity to construct a new electric generation facility
3 that includes, “[i]f applicable, water and sewer infrastructure required for
4 construction and operation not located on the proposed site but required for plant
5 construction and operation.”

6 Q. What information has the Company supplied in effort to comply with the filing
7 requirements as stated in Section VII, Part A, subpart 12?

8 A. The Company has not identified the need for any new infrastructure outside the
9 project site boundary.¹¹ The Company plans to draw water supply from the
10 existing river water intake structure at the St. Clair River. The estimated usage of
11 water is within the water rights the Company has associated with the Belle River
12 Power Plant.¹² Any waste water discharged from the Proposed Project would be
13 delivered to the Belle River seal well and discharged into the St. Clair River.¹³

14 Q. Does the information supplied in the Company’s application indicate that the
15 proposed electric generation facility will comply with all applicable state and
16 federal environmental standards, laws, and rules?

17 A. Yes, based upon the information provided in the Company’s pre-filed direct
18 testimony and in response to Staff’s discovery, the Company has indicated that
19 the Proposed Project will comply with all applicable state and federal
20 environmental standards, laws and rules.

¹¹ Prefiled Direct Testimony and Exhibits of William H. Damon III, p 19.

¹²*Id.*, at, p 11.

¹³*Id.*, at, p 18.

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1 Q. Does Staff have any recommendations regarding environmental or construction
2 permits for this project?

3 A. Yes, Staff recommends that the Company submit a list of all final environmental
4 and/or construction permits that are obtained for the construction and operation of
5 the Proposed Project accompanied by an affidavit stating that all necessary
6 permits have been acquired.

7 **MCL 460.6s(6) and 6s(9)**

8 Q. What steps has DTE taken to ensure that the Proposed Project costs are
9 reasonable?

10 A. The Company has initiated a competitive bid process that is currently in progress
11 and is seeking bids for both a Balance of Plant (BOP) Engineer, Procurement, and
12 Construction (EPC) contracting strategy and a full wrap EPC strategy.¹⁴ The
13 Company provided additional detail about the competitive bid process in response
14 to Staff's discovery.¹⁵ The Company also reviewed the bids with Staff in a
15 confidential meeting held on December 18, 2017 as directed by the ALJ in this
16 case. (4TR 149-151).

17 Q. Did the Company investigate other resource options such as plant acquisitions or
18 power purchase agreements?

19 A. Yes. The Company solicited bids for both existing plant acquisitions and power
20 purchase agreements. According to the Company, "[t]he RFP issued on March 1,
21 2017 served two purposes: to identify alternative resources to address the ~ 1,100

¹⁴ Prefiled Direct Testimony and Exhibits of Dan O Fahrer, p 7.

¹⁵ Exhibit S-2.4

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1 MW of capacity need as determined via the IRP analysis and also to identify
2 resources that could potentially address short-term capacity needs.”¹⁶ Three bids
3 were received from two suppliers. One bid was for the acquisition of an 1,100
4 MW plant. The Company’s analysis indicated a significant net present value
5 revenue requirement benefit to the Proposed Project as compared to the
6 acquisition of the existing facility.¹⁷ Due to their size, 70 MW and 225 MW, the
7 other two bids were not considered to be alternatives to the Company’s proposed
8 project.

9 Q. Did the Company receive any other responses to its Request for Proposal (RFP)?

10 A. Yes. The Company indicated, in response to Staff’s discovery, that Midland
11 Cogeneration Venture (MCV) provided a letter to the Company indicating that the
12 7-year PPA term restriction was unfairly restrictive and prohibited MCV from
13 submitting a bid.¹⁸

14 Q. Does Staff have any comments related to the 7-year restriction on PPA bids
15 imposed by the Company?

16 A. Yes. Staff understands both the Company’s concerns with the risk of long-term
17 PPAs and MCV’s concerns with the short-term PPA limitation that creates a
18 limiting timeframe to recover investment. Although long-term PPA’s can present
19 risks to the Company, ratepayers, and in this case MCV, Staff believes that those
20 risks could be addressed through a well-written contract. The limited term
21 requirement imposed by the Company restricted PPA bids unnecessarily. The

¹⁶ Prefiled Direct Testimony and Exhibits of Irene M. Dimitry, pp 30-31.

¹⁷ Prefiled Direct Testimony and Exhibits of Irene M. Dimitry, p 30 and Exhibit A-2.

¹⁸ Exhibit S-2.11.

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1 Company is proposing to construct an 1,100 MW baseload generating facility that
2 would likely have a useful operating life of at least 30 years. Ratepayers are
3 taking on significant financial risk with the Company's proposal and the
4 Company should fully consider all available options to serve its electric load.
5 However, it is important to point out that MCV could have submitted an
6 alternative proposal to the Commission as indicated in MCL 460.6s, subsection
7 13.

8 Q. Did the Company indicate that it may update its costs in its filing?

9 A. Yes. Company witnesses Irene M. Dimitry, Kevin J. Chreston and Dan O. Fahrer
10 have all indicated that the Company planned to provide a cost update within the
11 150-day post filing timeframe as allowed by PA 341.¹⁹ As indicated by the
12 schedule in this case, the Company agreed to provide any updated costs for the
13 Proposed Project by December 19, 2017.

14 Q. Did the Company provide a cost update as indicated in its testimony?

15 A. No.

16 Q. Has the Company provided a schedule for the Proposed Project?

17 A. Yes. Company witness Fahrer addresses overall project timing in Company
18 Exhibit A-42. This exhibit illustrates the expected timing for all aspects of the
19 Proposed Project inclusive of DTE Board of Directors approval, CON process
20 schedule, Proposed Project scope development, environmental permitting, MISO

¹⁹ Prefiled Direct Testimony and Exhibits of Irene M. Dimitry, p 34.
Prefiled Direct Testimony and Exhibits of Kevin J. Chreston, p 63.
Prefiled Direct Testimony and Exhibits of Dan O. Fahrer, p 10.

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1 interconnection, contract execution, engineering and construction, and
2 performance testing.

3 Q. Has DTE indicated the estimated cost for the construction of the proposed
4 Project?

5 A. Company witness Fahrer has indicated that the expected cost of the Proposed
6 Project is \$989 million in nominal 2022 dollars.²⁰ The Company has indicated
7 that \$879 million represents the expected total cost of the EPC costs and the PIE
8 costs combined. The remaining \$110 million includes \$55 million in owner costs
9 and \$55 million in contingency.²¹ The estimated \$989 million capital cost for the
10 Proposed Project is not inclusive of Allowance for Funds Used during
11 Construction (AFUDC).²² Staff witness Robert Nichols will discuss the financing
12 cost impact and related Staff recommendations for the Proposed Project.

13 Q. Does the estimated \$989 million capital cost for the Proposed Project include the
14 estimated \$29.3 million needed for transmission network upgrades?

15 A. No, it does not. In response to Staff's discovery, the Company has indicated that
16 it anticipates fully recovering the \$29.3 million of estimated transmission network
17 upgrade costs once the Proposed Project begins commercial operation.²³

18 Q. Did the Company consult with the transmission owner, International
19 Transmission Company (ITC), to confirm that the DNV GL Power Solutions
20 estimates for transmission network costs were accurate?

²⁰ Prefiled Direct Testimony and Exhibits of Dan O. Fahrer, p 7.

²¹ *Id.* at Exhibit A-43.

²² *Id.* at p 8.

²³ Exhibit S-2.5

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1 A. No. In response to Staff discovery, the Company indicates that a definitive
2 network upgrade cost will be developed by ITC through the MISO Generator
3 Interconnection Application (GIA) process.²⁴

4 Q. Please further explain the contingency costs included in the Company’s capital
5 cost estimate.

6 A. The Company has included a contingency cost estimate of 6% of the project
7 capital cost, an estimated \$55 million.²⁵ According to the Company’s response to
8 Staff discovery, the contingency cost estimate is based upon a Risk Register.²⁶
9 The Risk Register includes 29 risk event descriptions that are evaluated for
10 probability and potential cost impact.²⁷

11 Q. Does Staff have any concerns regarding the Company’s Risk Register included in
12 Staff testimony as Exhibit S-2.8?

13 A. Yes. Staff would like to highlight three-line items on the Risk Register. The first
14 item is line 1, “Final PIE/EPC pricing varies from CON filing due to unresolved
15 scope issues at the time of price true up”. Line 1 accounts for \$11.2 million of the
16 total contingency cost included in the application. This line item lists a
17 contingency plan of action of updating the capital cost at or before the 150-day
18 cost update provided in MCL 460.6s.(4)(c). Staff proposes to remove this line
19 item because there appears to be no real basis for risk since the Company could
20 have provided an updated cost.

²⁴ Exhibit S-2.6

²⁵ Prefiled Direct Testimony and Exhibits of Dan O. Fahrner, p 10 and Exhibit A-43.

²⁶ Exhibit S-2.7

²⁷ Exhibit S-2.8

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1 The second item is line 2, “DTE scope pricing varies from CON filing”. Line 2
2 accounts for \$14 million of the total contingency cost included in the application.
3 This line item includes two possible action plans if it were to occur. The first is to
4 provide any cost impact as part of its 150-day cost update and the second is to
5 update the scope, competitive bid or Change Review Board (CRB) process. Staff
6 proposes to remove this line item because Staff expects that the Company would
7 first have to fully define its scope to allow for a robust competitive bid process to
8 take place and if there is a resulting change in price, the possibility of a 150-day
9 cost update allowed for the Company to adjust for any changes in costs associated
10 with a slight scope adjustment, which it elected not to file.

11 The third item on the Risk Register is line 19, “Owner requires equipment
12 substitutions or scope changes after negotiation[s] are completed”. Line item 19
13 accounts for \$12 million of the total contingency cost included in this application.
14 Given that the scope is fully defined at the beginning of the project, this item
15 should not put the Proposed Project cost at risk. Additionally, this item has a
16 probability of 1.0 on the Risk Register. This seems to illustrate that the Company,
17 for all intents and purposes, expects that this risk will occur. If the Company truly
18 expects that such a risk will occur, there should be a procedure, process, or
19 analysis put in place to mitigate that likelihood much earlier in the process. The
20 Company’s lack of adequate planning should not result in potential added expense
21 to the ratepayer. Without a clear understanding about why the Company would
22 require an equipment substitution and a demonstration showing that the resulting

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1 event is not a result of project mismanagement, it is impossible to know whether
2 such a contingency is reasonable or prudent.

3 Q. Based upon Staff's discussion of the three Risk Register line items, does Staff
4 recommend any adjustments to the Company's planning contingency?

5 A. Yes. Staff recommends reducing the Company's estimated contingency costs by
6 \$37.2 million which would allow the Company \$17.8 million in contingency.
7 Staff believes this should be sufficient due to the Company's decision to utilize
8 either a BOP EPC approach or a full wrap EPC option, and fully recognizes that
9 "the EPC will add contingency to cover the OEM (Original Equipment
10 Manufacturer) performance risks as well as schedule and cash flow
11 considerations."²⁸ As discussed by Company witness Fahrer, both contracting
12 approaches would result in a fixed price contract. Therefore, a large portion of
13 the Company's inherent risk is being deferred to the EPC supplier.²⁹ It would
14 stand to reason that with the fixed price contract approach, real cost risk to the
15 Company lies only within the "Owner's Cost".³⁰ The Owners Cost includes the
16 cost of owner supplied equipment and services, consumables, during start-up and
17 testing of the Proposed Project, management, owner's engineer, and
18 contingency.³¹

19 Q. Has Staff recommended contingency in other CON cases?

²⁸ Prefiled Direct Testimony and Exhibits of Dan O. Fahrer p 5.

²⁹ *Id.*, at pp 6-7.

³⁰ *Id.*, at Exhibit A-43.

³¹ *Id.*, at p 7.

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1 A. Yes, Staff recommended planning contingency in Case No. U-18224, Upper
2 Michigan Energy Resources Corporation’s application. Staff believes that
3 *reasonable* contingency can be included for planning purposes since CON cases
4 are not ratemaking proceedings and the Company will only collect the actual
5 amount spent when the Proposed Project is placed into service. Therefore,
6 planning contingency in this case is only placed into rate base if the contingency
7 dollars are actually spent on this Proposed Project.

8 Q. Does Staff recommend any adjustments to the Company’s total estimated cost of
9 contingency for the Proposed Project?

10 A. Yes. Staff recommends the Commission reduce the Company’s estimated cost of
11 contingency downward from \$55 million to \$17.8 million. The resulting
12 Proposed Project amount after the \$37.2 million reduction is \$951.8 million.

13 **MCL 460.6s(7)**

14 Q. How has DTE proposed to satisfy the requirement set forth in MCL 460.6s(7)
15 requiring the Company to file reports with the Commission regarding the status of
16 the project for which the certificates of necessity are being requested?

17 A. The Company has proposed to file a narrative report to the Commission on an
18 annual basis. The report would highlight the status of the project and include cost
19 and schedule updates.³²

20 Q. Does Staff have any recommendations regarding the Proposed Project status
21 reports that are to be filed with the Commission pursuant to MCL 460.6s(7)?

³² Exhibit S-2.9

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1 A. Due to the scale and capital investment of the Proposed Project, Staff
2 recommends biannual review filings be posted to the docket for this case. Staff
3 also recommends that the filings, at a minimum, include the status of the
4 Proposed Project with any cost and schedule updates including any deviations
5 from the originally estimated cost and schedule. Staff expects that the Company
6 will provide sufficient detail regarding the status and any changes to scope, timing
7 or expected cost. Staff's goal is to maintain an open and transparent dialog with
8 DTE through the duration of the project until the completion of all construction
9 and the commencement of full commercial operation.

10
11 Staff also recommends the Company provide immediate communication to Staff
12 if there is a significant change to the expected cost or timing that will have a large
13 impact on the overall cost of the Proposed Project or the timing to completion.

14 Q. What is Staff's position on DTE's proposal to satisfy the requirement set forth in
15 MCL 460.6s (7)?

16 A. It is Staff's opinion that the Company is able to comply with the reporting
17 requirement set forth in MCL 460.6s (7) as well as Staff's reporting
18 recommendations.

19 **MCL 460.6s (11) (b)**

20 Q. Did DTE's Integrated Resource Plan (IRP) contain an analysis of the type of
21 generation technology proposed for the generation facility and the proposed
22 capacity of the generation facility, including projected fuel and regulatory costs
23 under various reasonable scenarios?

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1 A. As previously stated, the Company provided a high-level description of the type
2 of generation technology it is proposing. Through its IRP using the Strategist®
3 model, the Company analyzed generation expansion plans optimized for reference
4 case, high gas, low gas, emerging technology and aggressive CO₂ scenarios
5 applying various sensitivities as shown in witness Chreston's Exhibit A-4, section
6 11.6. The model consistently selected a 2x1 H class in the optimized generation
7 expansion plans for many of the various scenarios.

8 Q. Does Staff have additional comments about the scenarios and sensitivities the
9 Company developed for its 2017 IRP?

10 A. In general, the Company explored many scenarios that provide insight into the
11 resource requirements for a variety of future conditions. The inclusion of both
12 high and low natural gas price analysis is critical when considering the historic
13 volatility of natural gas prices. Staff witness Olumide Makinde will discuss the
14 Company's natural gas price forecast further. The Emerging Technology scenario
15 is beneficial to address unexpected advancements in renewable technology and
16 the market impact such advancements may have. The aggressive CO₂ scenario is
17 an indicator of the impact that increased CO₂ reduction would have on the
18 generation fleet.

19
20 The Company also applied a number of sensitivities to the various scenarios
21 including variable load growth, higher levels of renewable energy, increased

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1 energy efficiency³³, capital cost and size variations, and the return of electric
2 choice customers. These sensitivities provide further information about how the
3 Company's Proposed Project performs, within the model, under different future
4 conditions.

5 Q. Does Staff have any concerns about the Company's modeling strategy used in its
6 IRP?

7 A. Staff does have concerns about the Company's approach in modeling demand
8 side resources. Witness Chreston states that energy efficiency and demand
9 response were modeled on an "equal footing" to other supply side alternatives.³⁴
10 Staff's analysis indicates that this is not the case. Energy efficiency measures
11 appear to be forced into the model as a demand modifier and are not modeled
12 with incremental increases up to the cost-effective amount as indicated by the
13 Michigan Lower Peninsula Electric Energy Efficiency Potential Study³⁵ for all
14 scenarios. Staff's position regarding energy efficiency is addressed further by
15 Staff witness Karen M. Gould. Demand response appears to be limited to existing
16 programs within the model and is not allowed to increase through further
17 participation in current programs or the implementation of new ones. Staff's
18 position regarding demand response is addressed further by Staff witness Katie J.
19 Smith.

20

³³ Energy Efficiency is synonymous with energy waste reduction throughout testimony.

³⁴ Prefiled Direct Testimony and Exhibits of Kevin J. Chreston, pp 17-18.

³⁵http://www.michigan.gov/documents/mpsc/MI_Lower_Peninsula_EE_Potential_Study_Final_Report_08.11.17_598053_7.pdf, August 11, 2017.

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1 Staff also has concerns with the modeled sizes of the generic resources. Although
2 Staff does not have expertise in the Strategist[®] model, in some instances resource
3 expansion models can be influenced by the specified size of the new resources
4 available for the model to select. For instance, smaller resources are less
5 expensive but if there are not enough of them to fill the entire need, the model
6 will select the larger, more expensive resource instead. Models do not typically
7 overbuild unless they are forced to do so by the user. In this instance, the model
8 may select the single large option that fills the entire need because the user did not
9 offer enough smaller options to allow the model to diversify. If the model cannot
10 solve the expansion plan using the limited number of smaller options, then it is
11 forced to select the larger resource option as being the most economical. The
12 model will not overbuild, therefore by selecting one large resource that fills the
13 entire resource need, economical smaller resources would not be selected because
14 they are no longer needed. One way to avoid such a situation is to model a
15 generic combined cycle and a generic combustion turbine as smaller increments
16 but allow the model to build multiple units in one year. This method allows for
17 clear visibility around the actual amount of energy and capacity needed from
18 larger generation options while still including any of the less expensive but
19 smaller demand side options and additional renewable energy options that may be
20 cost effective. In short, this method allows new resources to be selected on an
21 equitable basis. With this approach, the number of generic, small combustion
22 turbines or combined cycles built in a one or two-year period by the model can be
23 totaled to determine the actual amount of large generation needed and the most

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1 appropriate design to serve the system need. The Company has not yet
2 demonstrated or explained that it crafted its model to select resources on an
3 equitable basis.

4 Q. With the implementation of PA 341, has the Commission provided guidance
5 about IRP modeling?

6 A. Yes. The Commission order issued on November 21, 2017 in Case No. U-18418
7 provided modeling guidance for IRP modeling that included energy efficiency,
8 demand response, and renewable energy. However, this order was not available
9 to the Company when it conducted its IRP analysis prior to filing its application.

10 Q. Would Staff's modeling method lead a model to select a more cost-effective
11 generation expansion plan?

12 A. It is true that the Company's proposed larger single natural gas generation
13 resource would have an advantage of economies of scale resulting in a lower per
14 megawatt cost as compared to the same technology in a smaller size. However,
15 without running a scenario with the energy efficiency, demand response, and
16 renewable energy resources as Staff has indicated and utilizing the generic
17 resource method discussed above, the total cost of all resources combined is
18 unknown. Some of the other resources likely have significantly less capital and
19 operation and maintenance costs, but Staff acknowledges that these other options
20 will not replace the 1100+ MW electric generating facility build requested in this
21 filing. However, even nominal increases of energy efficiency, demand response,
22 and renewable energy provide security and stability for the Company in meeting
23 the energy needs of their customers. Implementing these resources now will

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1 delay, mitigate, or reduce future costs encumbered by the Company's customers
2 and the need for future CON cases like this one. Additionally, such an approach
3 diversifies a utility portfolio and reduces ratepayer exposure risk.

4 Q. Has the Company included a risk assessment that would consider the cost risk of
5 the Proposed Project under various reasonable scenarios?

6 A. DTE has provided an analytic hierarchy process (AHP) and stochastic risk
7 assessment to assess four significantly different plans³⁶. The AHP "is a process
8 that decomposes complex problems into a hierarchy of criteria and alternatives."³⁷
9 The stochastic analysis "uses probability distributions of key drivers to evaluate
10 portfolios."³⁸

11 Q. Did the Company use input from outside stakeholders regarding risk tolerance or
12 key stakeholder concerns?

13 A. The Company has not indicated that it used stakeholder input in determining risk
14 tolerance or directly integrated stakeholder concerns into its risk analysis. The
15 Company's AHP analysis criteria was ranked by DTE internal experts while the
16 stochastic analysis was performed by DTE's consultant PACE Global.

17 Q. Did the Company perform a risk analysis on optimized build plans that resulted
18 from its modeled scenarios?

19 A. The Company selected four significantly different build plans that included the
20 Proposed Project and three other alternatives. The three other alternatives all
21 included a 950 MW combustion turbine plus a renewable or demand response

³⁶ Prefiled Direct Testimony and Exhibits of Kevin J. Chreston, Exhibit A-4, Section 12.

³⁷ *Id.*, at Section 12.1.1.

³⁸ *Id.*, at Section 12.1.2.

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1 resource.³⁹ These plans were not optimized generation plans or even near
2 optimized expansion plans for any scenario in the Company's IRP. It is not clear
3 exactly what the Company expected to determine from such a risk assessment.
4 Staff views the purpose of a risk assessment as being two-fold. First, a risk
5 assessment can be used to determine a build plan's sensitivity to specific future
6 circumstances. Second a risk assessment can provide relative information about
7 the potential cost of a future outcome being very different than expected.
8 Specifically, the risk assessment can test the cost risk associated with one optimal
9 build plan being placed in a drastically different future for the time-period in
10 which a decision cannot be reversed. For some resources, this time-period is
11 reasonably short, and it is likely the risk cost would be low. Other decisions are
12 nearly irreversible once made and may impose significant cost if an alternative
13 future becomes reality. Understanding cost risk in this way helps to determine if
14 the least cost plan is truly the best plan when coupled with the understanding that
15 the future is unknown. Specifically, it creates an understanding of the types of
16 investments that may insulate the ratepayer from exposure to risk and the related
17 costs.

18 Q. Did the Company include any build plan that included a combination of increased
19 demand response, energy efficiency and renewable resources in its risk
20 assessment?

³⁹ *Id.*, at Table 12.1.2-2.

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1 A. No. The Company did not include a build plan that contained high renewable
2 resources, increased energy efficiency and demand response resources
3 simultaneously. Such a build plan may result in a lower cost and lower economic
4 risk as compared to the build plans the Company analyzed because the
5 combustion turbine size would decrease due to the increase in other resources.
6 Without running the scenario, the exact amount is unknown.

7 **MCL 460.6s (11) (f)**

8 Q. Has the Company included an analysis of any available electric resources,
9 including additional renewable energy, energy efficiency programs, load
10 management, and demand response that could defer, displace or partially displace
11 the proposed Project beyond the amounts discussed in MCL 460.6s (11) (c) and
12 (e)?

13 A. The Company has provided an analysis of energy efficiency as a demand resource
14 at various levels in many of the scenarios and as a sensitivity. The Company also
15 provided an analysis withnd some increases in demand response through
16 upgrading existing A/C switch infrastructure and minimal increases in other
17 demand response programs. The Company has not modeled energy efficiency
18 and demand response to the achievable and cost-effective amounts reported in the
19 potential studies⁴⁰⁴¹ directed by Act 342. In addition, the Company did not model

⁴⁰ State of Michigan Demand Response Potential Study,
http://www.michigan.gov/documents/mpsc/State_of_Michigan_-_Demand_Response_Potential_Report_-_Final_29sep2017_602435_7.pdf, September 29, 2017.

⁴¹ Michigan Lower Peninsula Electric Energy Efficiency Potential Study,
http://www.michigan.gov/documents/mpsc/MI_Lower_Peninsula_EE_Potential_Study_Final_Report_08.11.17_598053_7.pdf, August 11, 2017.

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1 these resource options simultaneously, at the amounts that Staff believes to be
2 achievable and cost-effective, therefore Staff has no way of knowing if this type
3 of multi- resource approach would be more cost-effective for the rate-payer than
4 the Company's Proposed Project. Such an approach would allow for increased
5 diversity of DTE's resource portfolio and help to minimize the risk associated
6 with potentially volatile natural gas prices in the future.

7 Q. Has Staff asked the Company to run a scenario that included increased demand
8 response, energy efficiency and renewable resources simultaneously?

9 A. Yes. Staff did ask the Company if it would be willing to run an alternative
10 scenario that would increase demand response, energy efficiency, and renewable
11 resources. The Company refused Staff's request. The Company's responses are
12 included in Exhibit S-2.10.

13 Q. Did the Company offer a response as to why it did not run a scenario as Staff
14 describes?

15 A. Yes. The Company has indicated that its low load sensitivity is an adequate proxy
16 for the scenario Staff has described.⁴²

17 Q. Does Staff agree with the Company's assertion?

18 A. It is not clear that the low load sensitivity is an adequate proxy for the scenario
19 Staff describes. It is true that increased energy efficiency and demand response
20 increases would reduce the Company's peak demand. However, having not
21 actually modeled such a scenario, and with the concerns about generic resource

⁴² Exhibit S-2.10

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1 sizes, it is impossible to know the entire optimized resource expansion plan that
2 would result. However, if the Company is correct in its assumption that the
3 increased energy efficiency and demand response would be comparable to the low
4 load demand results then, based upon the Company's own analysis, the Proposed
5 Project would be postponed by one year, have virtually no reliance on market
6 purchases, and eliminate the need for additional large generation throughout the
7 rest of the study period.⁴³

8 **MCL 460.6s (11) (g)**

9 Q. Has the Company included an analysis of available transmission options in its
10 IRP?

11 A. The Company has indicated an analysis of available transmission alternatives.⁴⁴

12 The analysis considered the current ITC transmission grid and import limit, the
13 ability to deliver firm transmission supply to meet demand, existing
14 interconnecting tie lines, the effects of DTE coal-fired retirements, and near and
15 long-term transmission expansion plans as indicated through the MISO
16 Transmission Expansion Planning (MTEP) process. The MTEP process is a
17 process to ensure the reliable operation of the transmission system that would not
18 necessarily indicate market or economic related options that might enable
19 resources from outside MISO Local Resource Zone 7 to serve load within Local
20 Resource Zone 7. However, if ITC did not reveal any such alternatives through

⁴³ Prefiled Direct Testimony and Exhibits of Kevin J. Chreston, Exhibit A-4, Table 11.6.1-2

⁴⁴ Prefiled Direct Testimony and Exhibits of William H. Damon III, Exhibit A-38, Section 6.3.

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1 | discussion with the Company, then there is likely no known viable transmission

2 | alternative at this time.

3 | Q. Does that conclude your testimony?

4 | A. Yes, it does.

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application of
DTE ELECTRIC COMPANY for approval of
Certificates of Necessity pursuant to
MCL 460.6s, as amended, in connection
with the addition of a natural gas combined
cycle generating facility to its generation
fleet and for related accounting and
ratemaking authorizations.

Case No. **U-18419**
(e-file paperless)

_____/

PROOF OF SERVICE

STATE OF MICHIGAN)
) ss
COUNTY OF EATON)

CORINNA C. SWAFFORD, being first duly sworn, deposes and says that on **January 23, 2018**, she served a true copy of the **Michigan Public Service Commission Staff's CORRECTED Testimony of Naomi Simpson** upon the following parties **via e-mail only**:

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CORINNA C. SWAFFORD

Subscribed and sworn to before me
this **23rd** day of **January, 2018**.

Tina L. Bibbs, Notary Public
State of Michigan, County of Clinton
Acting in the County of Eaton
My Commission Expires: 11-13-2021