



OLSON, BZDOK & HOWARD

www.envlaw.com

April 12, 2012

Ms. Mary Jo. Kunkle
Michigan Public Service Commission
6545 Mercantile Way
P. O. Box 30221
Lansing, MI 48909

RE: MPSC Case N^o. U-16892

Dear Ms. Kunkle:

The following is attached for paperless electronic filing:

**CORRECTED Testimony of George E. Sansoucy, P.E. on Behalf of
the Michigan Environmental Council and the Natural Resources
Defense Council (page 24, lines 13 and 16)**

CORRECTED Exhibit MEC-9 (missing attachment)

CORRECTED Exhibit MEC-14

E-Service List

Sincerely,

Christopher M. Bzdok
chris@envlaw.com

xc: Parties to Case No. U-16892
James Clift, MEC (james@environmentalcouncil.org)
Shannon Fisk, Jessie Rossman & Matthew Gerhart, NRDC
(sfisk@earthjustice.org, jrossman@nrdc.org and mgerhart@earthjustice.org)

1 **Qualifications**

2 Q. Please state your name, business address, and affiliation.

3 A. My name is George E. Sansoucy. My business address is 32 Nimble Hill
4 Road, Newington, New Hampshire 03801. I am the owner of George E. Sansoucy, P.E.,
5 LLC.

6 Q. What are your educational background and professional qualifications to
7 appear in this proceeding?

8 A. I have a Bachelors and a Masters of Science Degree in Civil Engineering and
9 am a Registered Professional Engineer in New Hampshire. My firm, George E. Sansoucy,
10 P.E., LLC, provides valuation, consulting and engineering services to clients throughout
11 the United States. The firm's two primary services are 1) the valuation of public utility
12 infrastructure, energy projects, and complex industrial properties, and 2) consultation
13 services on energy and regulatory matters involving the public and private utilities sector
14 in the United States. I have testified in legal and regulatory proceedings before state and
15 federal courts and administrative agencies, including the Federal Energy Regulatory
16 Commission and the Nuclear Regulatory Commission. I have testified before the Michigan
17 Public Service Commission in the following cases:

- 18 • Case U-14992 (Consumers Palisades Nuclear Power Plant sale);
- 19 • Case U-15805 (Consumers Renewable Energy Plan);
- 20 • Case U-15806 (Detroit Edison Renewable Energy Plan);
- 21 • Case U-16045 (Consumers 2010 Power Supply Cost Recovery Plan);

- 1 • Case U-15675-R (Consumers 2009 Power Supply Cost Recovery
2 Reconciliation);
- 3 • Case U-16191 (Consumers Rate Case);
- 4 • Case U-16300 (Consumers Renewable Energy Reconciliation);
- 5 • Case U-16472 (Detroit Edison Rate Case);
- 6 • Case U-16432 (Consumers 2011 Power Supply Cost Recovery Plan);
- 7 • Case U-16582 (Detroit Edison Renewable Energy Biennial Review);
- 8 • Case U-16794 (Consumers Energy General Rate Case); and
- 9 • Case U-16537 (Detroit Edison 2010 Renewable Energy Reconciliation).

11 **Purpose and Summary**

12 Q. What is the purpose of your testimony in this case?

13 A. I am testifying on behalf of the Michigan Environmental Council and the
14 Natural Resources Defense Council to address six areas of concern. They are:

15 (1) Detroit Edison has not supported its projected 9% increase in the unit cost
16 of coal for 2012, in a coal market where prices are decreasing in the short term.

17 (2) Detroit Edison's projection for natural gas costs in 2012 are severely inflated,
18 based on current information and even based on information available at or around the
19 time the company filed its plan last fall.

20 (3) Detroit Edison's 5-year PSCR forecast and related evidence show a lack of
21 planning to address the significantly changing circumstances affecting coal-fired generating
22 units.

1 (4) Detroit Edison's 5-year PSCR forecast and related evidence show a lack of
2 prudent planning for changing fuel prices.

3 (5) Detroit Edison's 5-year PSCR forecast and related evidence show a lack of
4 prudent planning for the future retirement of coal-fired generating units.

5 (6) The Reduced Emission Fuel project provides benefits to Detroit Edison
6 ratepayers that are insignificant in comparison to the benefits it provides to the Fuel
7 Companies and DTE Energy Services. Further, Detroit Edison has provided no evidence
8 that the REF project is cost effective for reducing NO_x and mercury emissions.

9 Q. What materials have you reviewed in preparation for your testimony?

10 A. I have reviewed Detroit Edison's filing and discovery responses, its filing in
11 Case U-16434-R, Consumers Energy's filings in Case U-16890, as well as other
12 documents described below in my testimony.

13
14 **Exhibits**

15 Q. Are you sponsoring any exhibits?

16 A. Yes. I am sponsoring 21 exhibits:

17 **MEC-1:** Exhibit A-3 in Case U-16434-R.

18 **MEC-2:** Article from Platts.

19 **MEC-3:** EIA NYMEX coal futures.

20 **MEC-4:** Discovery response MEC/DE-1.11.

21 **MEC-5:** Discovery response MEC/DE-1.4g.

22 **MEC-6:** Discovery response MEC/DE-1.4f.

- 1 **MEC-7:** Discovery response MEC/DE-1.2e.
- 2 **MEC-8:** Exhibit A-27 in Case U-16890.
- 3 **MEC-9:** Discovery response attachment MECDE-1.6b.
- 4 **MEC-10:** Henry Hub Natural Gas Futures Index.
- 5 **MEC-11:** Richard Blumenstock's supplemental pre-filed direct testimony in
6 Case U-16890.
- 7 **MEC-12:** Discovery response MEC/DE-2.3.
- 8 **MEC-13:** Discovery response MEC/DE 3.3.
- 9 **MEC-14:** Discovery response MEC/DE-3.2.
- 10 **MEC-15:** Discovery response MEC/DE-3.21 attachments 3.21(a)-(d).
- 11 **MEC-16:** Discovery response MEC/DE-3.1.
- 12 **MEC-17:** Discovery response MEC/DE-3.11.
- 13 **MEC-18:** DTE Credit Suisse Investor Presentation
- 14 **MEC-19:** Discovery response MEC/DE - 1.36c
- 15 **MEC-20:** Discovery response MEC/DE-1.36d
- 16 **MEC-21:** Discovery response MEC-DE - 2.12

17

18 **1. Coal Cost Projections for 2012**

19 Q. Describe Detroit Edison's projected coal cost for 2012 in comparison to 2011.

20 A. According to Exhibit A-3 in Case U-16434-R, which I am sponsoring in this
21 docket as Exhibit MEC-1, Detroit Edison's actual system-wide coal cost in 2011 was 241.3
22 cents per MMBtu. According to Exhibit A-2 in this docket, the company's projected system-

1 wide coal cost for 2012 is 262.7 cents per MMBtu. This is almost a 9% increase in coal
2 cost for 2012.

3 Q. Has Detroit Edison provided evidence to justify that level of increase?

4 A. No.

5 Q. Describe the present state of the coal market in the United States.

6 A. Both consumption and prices are declining in the short term. Exhibit MEC-2
7 is an article from Platts, an energy forecasting and information service consulted and relied
8 on by utilities, regulators, and investors. The article states that in 2011, the consumption
9 of coal in the United States fell 4%, and is expected to decline another 2% in 2012. Exhibit
10 MEC-3 is an Energy Information Administration chart showing NYMEX coal futures near-
11 month contract settlement prices for 2012. The EIA chart is also a type of document
12 consulted and relied on by utilities, regulators, and investors. The EIA chart shows that
13 prices decline across the board in 2012. The declines in consumption and price are due
14 to a number of circumstances, including economic conditions, energy optimization,
15 renewable energy development, coal plant closures, and increased natural gas generation.

16 Q. Has Detroit Edison provided evidence to justify a 9% increase in its coal costs
17 during a period when coal prices are declining?

18 A. No.

19 Q. Is it true that Detroit Edison purchases a good deal of its coal through multi-
20 year contracts?

21 A. Yes, that is true, but it does not justify such a large increase in cost. In his
22 pre-filed direct testimony at page 8, Mr. Good lists the company's multi-year coal supply

1 contracts. Four of those contracts, representing a total of 3,250,000 tons, have terms that
2 begin this year, and therefore were likely entered into last year while the market was
3 already in decline. Yet the prices of those contracts are the highest for their respective coal
4 type. Contract #'s 6, 7, and 8 have the highest prices for low sulfur western coal, and
5 Contract #9 has the highest price for mid sulfur eastern coal. Mr. Good also indicates the
6 company purchases a portion of its coal in the spot market, and the costs of those
7 purchases should be down this year.

8 Q. Were you able to evaluate the actual terms of the coal contracts?

9 A. No. As shown in Exhibit MEC-4, discovery response MEC/DE-1.11, Detroit
10 Edison refused to provide the coal contracts in discovery.

11 Q. Could the substantial cost increases be due to increases in transportation
12 costs?

13 A. According to Detroit Edison, that seems unlikely. In Exhibit MEC-5, discovery
14 response MEC/DE-1.4g, the company lists a number of ways in which it claims to mitigate
15 transportation costs, including ownership of its own rail cars to optimize transportation
16 savings, use of third party revenues from MERC to offset fuel expense, and aggressively
17 administering transportation agreements to mitigate costs.

18 Q. Were you able to evaluate the actual terms of the transportation agreements?

19 A. No. As shown in Exhibit MEC-6, discovery response MEC/DE-1.4f, Detroit
20 Edison refused to provide the transportation agreements in discovery.

21 Q. Are you suggesting that Detroit Edison's projected for 2012 coal costs should
22 match the declining costs in the market?

1 A. No. I am not suggesting that the company's coal costs should match the
2 declining costs in the market. However, a 9% increase in a declining market, when Detroit
3 Edison has options to mitigate its coal costs, is clearly unreasonable.

4 Q. Does Detroit Edison take relevant market conditions into account in preparing
5 its coal cost projections and coal purchasing strategy?

6 A. No. According to Exhibit MEC-7, which is discovery response MEC/DE-1.2e,
7 Detroit Edison does not project impacts on coal price, use, or demand due to economic
8 conditions, energy optimization, or renewable energy development.

9 Q. Quantify the financial impact of the 9% increase in coal costs from last year
10 to this year.

11 A. The amount can be calculated as follows. The projected cost for 2012 of
12 262.7 cents per MMBtu minus the actual cost in 2011 of 241.3 cents per MMBtu equals
13 21.4 cents per MMBtu, times the forecasted burn of 350,479 MMBtu, equals \$75,002,506.

14 Q. Has Detroit Edison justified this level of increase?

15 A. No.

16 Q. What is your recommendation?

17 A. The maximum PSCR factor for 2012 should be reduced consistent with the
18 calculation above to exclude the 9% increase in coal costs. If Detroit Edison underrecovers
19 some portion of its total coal expense due to increases in its coal cost despite the declining
20 market, the company can attempt to demonstrate in the reconciliation that the extra costs
21 resulted from reasonable and prudent management actions.

1 **2. Natural Gas Cost Projections for 2012**

2 Q. How does Detroit Edison project natural gas costs in its PSCR plan?

3 A. According to James Good's pre-filed direct testimony at page 6, Detroit
4 Edison uses New York Mercantile Exchange (NYMEX) prices adjusted for basis and local
5 distribution company charges.

6 Q. Describe Detroit Edison's projected natural gas cost for 2012 in comparison
7 to 2011.

8 A. According to Exhibit MEC-1, Detroit Edison's actual system-wide natural gas
9 cost in 2011 was 519.3 cents per MMBtu. According to Exhibit A-2 in this docket, Detroit
10 Edison projects a total cost for natural gas in 2012 of 550.7 cents per MMBtu. This is a little
11 more than a 6% increase in natural gas cost for 2012.

12 Q. Have natural gas commodity prices been increasing?

13 A. No. They have been declining rapidly. Exhibit MEC-1 indicates that Detroit
14 Edison's 2011 plan projection for natural gas cost was a \$5.797 per MMBtu, so the actual
15 cost was a 10.4% decrease from plan. Exhibit MEC-8, which is Exhibit A-27 in Case U-
16 16890, shows graphically the rapid decline in NYMEX Henry Hub prices over the last six
17 months of 2011.

18 Q. How do current natural gas prices compare to Detroit Edison's projection for
19 2012?

20 A. The July 30, 2011 NYMEX futures index relied on by Detroit Edison, which
21 was provided as discovery response attachment MECDE-1.6b and which I am sponsoring
22 as Exhibit MEC-9, shows a price for May 2012 of \$4.490 per MMBtu and a price for

1 December 2012 of \$5.026 per MMBtu. Exhibit MEC-10 is a recent Henry Hub Natural Gas
2 Futures Index provided by CME Group. The exhibit shows a price for May 2012 of \$2.18
3 per MMBtu, and a price for December 2012 of \$3.26 per MMBtu.

4 Q. How did futures index prices at or around the time Detroit Edison filed its
5 PSCR plan compare with the prices the company used for its projection?

6 A. Detroit Edison filed its 2012 PSCR plan on September 30, 2011. According
7 to Exhibit MEC-11, which is Richard Blumenstock's supplemental pre-filed direct testimony
8 in Case U-16890, at page 3, the NYMEX futures for natural gas used in Consumers
9 Energy's 2012 PSCR Plan filed the same day were effective as of August 29, 2011, and
10 showed an average natural gas price for 2012 of \$4.39 per MMBtu. The NYMEX futures
11 for natural gas used in Consumers Energy's supplemental filing in that case were effective
12 as of December 28, 2011, and showed an average natural gas price for 2012 of \$3.35 per
13 MMBtu. Exhibit MEC-8 also shows NYMEX Henry Hub prices dropping each and every
14 month from late July through the end of December 2011.

15 Q. Has Detroit Edison taken any steps to address - in its PSCR plan or
16 requested maximum factor - the decline in natural gas prices since the July 30, 2011
17 NYMEX price strip that the company relied on?

18 A. No. In Exhibit MEC-12, which is discovery response MEC/DE-2.3, we asked
19 whether the decline in natural gas prices during the last half of 2011 changed any of Detroit
20 Edison's assumptions or conclusions regarding a number of issues in its 2012 PSCR plan.
21 Included among those issues, in sub-part (e), was fuel cost. Detroit Edison responded that
22 the decline in natural gas prices "may, or may not, result in different projections" for the

1 various items we asked about, but the company had not performed any revised PSCR plan
2 projections to determine the answer.

3 Q. What is the amount of the adjustment for basis and local distribution
4 company charges in the 2012 PSCR plan?

5 A. Detroit Edison has not supplied that information. A conservative estimate for
6 basis and local distribution company charges is 90 cents per MMBtu.

7 Q. What is the basis for that estimate?

8 A. A rough estimate for the difference between the projected natural gas cost
9 in Exhibit A-2 and the projected Henry Hub prices in Exhibit MEC-9 is almost 90 cents per
10 MMBtu. This is quite conservative. By comparison, Consumers Energy's actual total
11 adjustment to the Henry Hub price for natural gas delivered to the Zeeland generating plant
12 was 56 cents per MMBtu in 2010, which represented index adders, a gas management and
13 transportation fee, and a fee for delivery through a lateral pipeline running from the ANR
14 system to the plant. I know this amount because I submitted direct testimony on the issue
15 in Case U-16045-R, among other cases.

16 Q. Estimate the difference between Detroit Edison's 2012 projected cost for
17 natural gas based on the July 30, 2011 NYMEX futures strip and the projected cost based
18 on futures prices from later in 2011.

19 A. Using the \$4.39 per MMBtu average price for 2012 as of August 29, 2011,
20 and adding 90 cents for the estimated basis and local distribution company charges, and
21 subtracting that sum from Detroit Edison's projection of \$5.50 per MMBtu, leaves a

1 difference of 21 cents per MMBtu. Multiplying that figure times the projected burn in Exhibit
2 A-2 of 5,454,000 MMBtu equals \$1,199,880.

3 Using the \$3.35 per MMBtu average price for 2012 as of December 28, 2011, and
4 adding 90 cents for the estimated basis and local distribution company charges, and
5 subtracting that sum from Detroit Edison's projection of \$5.50 per MMBtu, leaves a
6 difference of \$1.25 per MMBtu. Multiplying that figure times the projected burn in Exhibit
7 A-2 of 5,454,000 MMBtu equals \$6,817,500.

8 Q. Do you intend for these to be exact figures?

9 A. No. They are an illustration of the substantial amount by which Detroit
10 Edison's projected natural gas costs inflate the requested maximum PSCR factor beyond
11 the amount that the company will actually need. Based on current prices, instead of those
12 from last fall, the amount is greater than my estimates. Clearly, Detroit Edison's prediction
13 for the PSCR is in an opposite direction from what is occurring in the market place, thereby
14 managing expectations for over recovery by the company.

15 Q. What is your recommendation?

16 A. The maximum PSCR factor for 2012 should be reduced by at least
17 \$6,817,500 consistent with the calculation above representing the use of the December
18 2011 projection. If Detroit Edison underrecovers some portion of its total natural gas
19 expense despite the declining market, the company can attempt to demonstrate in the
20 reconciliation that the extra costs resulted from reasonable and prudent management
21 actions. The gap between Detroit Edison's plan projection and current projections is likely

1 to grow, and the Commission should roll back the projection now and reduce the maximum
2 PSCR factor so as not to authorize increasing over-recovery.

3
4 **3. Significantly Changing Circumstances Facing Detroit Edison's**
5 **Generation Fleet**

6 Q. Are utilities such as Detroit Edison facing significantly changing
7 circumstances regarding the economics of continuing to operate their coal-fired electric
8 generating units?

9 A. Yes. At least four major developments are occurring that suggest that, in
10 many circumstances, it would be economically beneficial to retire, mothball, or reduce
11 operation of existing coal-fired units.¹ These developments include:

12 • New environmental regulations, including the Cross State Air Pollution Rule,
13 Mercury and Air Toxics Standard, Michigan Mercury Rule, and others, which will increase
14 costs relating to emissions controls and emissions allowances, along with the significant
15 capital investments and increased operating costs, facing coal-fired units.

16 • The aging of the nation's coal-fired generating fleet, with many units entering
17 their fourth, fifth, or sixth decades of operation.

18 • A substantial decline in the current and projected cost of natural gas,
19 combined with projected long term increases in the price of coal.

¹See for example, Tierney, Why Coal Plants Retire: Power Market Fundamentals as of 2012, Analysis Group, Inc. (February 16, 2012), found at: http://www.analysisgroup.com/uploadedFiles/News_and_Events/News/2012_Tierney_WhyCoalPlantsRetire.pdf, last checked April 5, 2012.

1 • The increasing prevalence of demand side management programs that help
2 to reduce the amount of energy production and capacity that is needed.

3 Q. How are other utilities responding to these changing circumstances?

4 A. Many utilities have been announcing retirements of significant numbers of
5 coal-fired electric generating units. For example, the PJM regional transmission
6 organization reports that utilities have filed deactivation notices with PJM for more than
7 15,000MW of capacity, almost all of its coal-fired generation for which notices have been
8 filed in the last few months of 2011 or in 2012.² In Ohio, utilities have announced their
9 intent to retire virtually every coal unit that lacks flue gas desulfurization pollution controls,
10 including First Energy's Bayshore, Lakeshore, Ashtabula, and Eastlake units, all six units
11 of Duke Energy Ohio's W.C. Beckjord plant, American Electric Power's Conesville 3,
12 Muskingum River 1-4, and Picway 5 units, and GenOn's Avon Lake plant.

13 Q. Will Detroit Edison be impacted by the significantly changing circumstances
14 you discuss above?

15 A. Yes. A number of Detroit Edison's coal-fired units are aging and lack the
16 pollution controls needed to comply with CSAPR, MATS, the Michigan Mercury Rule, and
17 other environmental standards. The Harbor Beach, Trenton Channel, St. Clair, and River
18 Rouge units all began operation between 1949 and 1969, making them between 43 and
19 63 years old. None of the units at those plants have flue gas desulfurization, selective
20 catalytic reduction, or fabric filters that will likely be needed to achieve compliance with

²PJM, Future Deactivations (as of April 3, 2012), found at:
<http://pjm.com/planning/generation-retirements/~media/planning/gen-retire/pending-deactivation-requests.ashx>, last checked April 5, 2012.

1 environmental regulations over the next few years. And, of course, Detroit Edison is
2 impacted by the same trends in lower natural gas prices, higher long term coal prices, and
3 increased demand side management that are being seen nationwide.

4 Q. Has the company set forth a plan for addressing these significantly changing
5 circumstances?

6 A. No. As I will discuss below, the company has failed to respond to changing
7 fuel prices and has offered conflicting accounts of its plans for its coal-fired generating units.

8
9 **4. Failure to Respond to Changing Fuel Prices**

10 Q. Has Detroit Edison projected an increase in future coal costs?

11 A. Yes. Exhibit A-2 predicts the delivered cost of coal for the power plants of
12 Detroit Edison will be \$2.63 per MMBtu in 2012, rising to \$3.49 per MMBtu in 2016. This
13 is a 33% rise in the price of coal.

14 Q. Earlier you testified that the company's 9% coal cost increase for 2012 was
15 unreasonable given declining coal costs. Do you believe that it is reasonable for the
16 company to project an increase in the price of coal by 2016?

17 A. Yes. There are two sets of trends here that are impacting the price of coal.
18 In the short term, economic conditions, energy optimization, renewable energy
19 development, coal plant closures, and increased natural gas generation are all placing
20 downward pressure on the price of coal. In the longer term, however, projected increases
21 in the exporting of coal to markets in Asia and Europe are likely to exert upward pressure

1 on the price of coal. It is likely that the net result of these countervailing pressures would
2 be a short term decline and longer term increase in the price of coal.

3 Q. Does the company's filing reflect the decline in natural gas prices?

4 A. No. As explained above, the company's use of a NYMEX natural gas futures
5 price projection from July 30, 2011, rather than the projection immediately preceding
6 Detroit Edison's filing or the even lower December 28, 2011 projection, leads to a
7 significant over-projection of natural gas costs for 2012. Similar results can be seen with
8 regards to the company's five-year projections in this filing. Mr. Good's projected price for
9 natural gas is \$6.66 per MMBtu in 2016. Exhibit MEC-10, from April 3rd of this year,
10 projects 2016 between \$4.40 and \$4.82 per MMBtu in 2016.

11 Q. How do these trends in coal and natural gas prices impact the dispatch costs
12 of coal versus natural gas generation?

13 A. These price trends mean that it would now often be less costly for Detroit
14 Edison to dispatch natural gas than coal-fired generation. The \$2.63 per MMBtu price for
15 coal today equates to an all-in fuel price of approximately 3 cents per kWh with variables.
16 That estimate is based on adding 5% to the fuel-only cost to represent an all-in heat rate
17 of 10,500 Btu/kWh and adding another 5% for consumables. By contrast, using the \$3.35
18 per MMBtu average price for natural gas in 2012 as of December 28, 2011, plus 90 cents
19 for basis and LDC charges, times 70% for the heat rate of a new natural gas plant of 7,000
20 Btu per kWh, equals 2.98 cents per kWh.

21 Natural gas is also competitive with coal at the end of the 5-year PSCR forecast
22 period. Using the same estimating method for coal used above, Mr. Good's projected 2016

1 coal price of \$3.49 per MMBtu equates to approximately 4 cents per kWh. By comparison,
2 the \$4.82 cents per MMBtu forecast for natural gas in December 2016 found in Exhibit
3 MEC-10 plus 90 cents for basis and LDC charges, times 70% for the heat rate of a new
4 natural gas plant of 7,000 Btu per kWh, also equates to approximately 4 cents per kWh.

5 Q. Are there other factors relevant to the comparison of the dispatch cost of coal
6 versus natural gas generation?

7 A. Yes. Coal generation faces greater risk of higher costs due to the much
8 greater need for pollution controls for coal generation. For example, the control of mercury
9 from coal generation units requires the use of sorbents, such as activated carbon injection,
10 the cost of which could escalate in the future. Similarly, methods for controlling nitrogen
11 oxides, sulfur dioxide, and various hazardous air pollutants can require chemical additives
12 or catalysts that could escalate in cost. And possible future greenhouse gas regulations
13 could establish a cost on carbon dioxide emissions from generation sources that would be
14 larger for coal units than natural gas units.

15 Q. What is a prudent utility response to these coal and natural gas price trends?

16 A. The utility should work to reduce its fuel use, shield itself from fuel price
17 volatility, and diversify its energy mix. The most prudent way to do so is to carry out a
18 side-by-side evaluation of the total life-cycle costs of owning and operating each coal-fired
19 unit versus pursuit of a full range of energy resources for replacing the coal unit. I would
20 expect such an analysis to conclude that Detroit Edison should maximize its demand side
21 management ("DSM") efforts in order to significantly reduce fuel and power generation
22 needs, increase its pursuit of renewable generation resources, such as wind power, which

1 have no fuel costs, and, to the extent additional generation is needed after maximizing
2 DSM and renewables, pursue existing, and in the last resort, new, natural gas combined
3 cycle ("NGCC") generation.

4 Q. Has Detroit Edison engaged in such prudent planning?

5 A. No. The record reveals no analysis of the full cost of continued operation of
6 each of the company's coal units. The company has not evaluated or proposed any
7 increased DSM or renewable energy use in this docket. Nor has the company attempted
8 to acquire additional natural gas assets, either through power contracts with current natural
9 gas facilities in the region or the outright purchase of natural gas assets to enhance the
10 company's fuel diversity. It is well known, however, that the Zeeland Plant owned by
11 Consumers Energy is under-utilized at this time, and that excess, un-contracted forward
12 capacity has in the past existed at the Midland Cogeneration Plant in Midland.

13 Q. What are your thoughts regarding the company's proposed NGCC facility in
14 2016?

15 A. The company projects adding a single NGCC plant to its capacity mix by
16 2016. No evaluation, however, has been provided to show that such proposal is the most
17 prudent approach to meeting future capacity and energy needs. In addition, the proposed
18 online date of January 1, 2016 for that NGCC is only 45 months away and is ultimately a
19 short period of time to finance, build, debug, and electrically interconnect the gas plant.
20 With the significant level of closures announced by a number of utilities of coal-fired units
21 and the need to replace much of this capacity, it is more likely than not that construction,
22 engineering, project management, equipment, and transmission interconnection studies

1 will begin to bottleneck in the development of new capacity such as the company's NGCC
2 facility. As such, now is the time to evaluate whether additional NGCC capacity is the best
3 approach to addressing future capacity needs and, if so, to begin the process of pursuing
4 such facility so that Detroit Edison can ramp down its use of higher cost, higher risk coal
5 as soon as practicable.

6 Q. What is your recommendation?

7 A. Detroit Edison should be assessing the full life-cycle costs of its coal use at
8 each generating unit, and identifying the most cost effective way to reduce those costs
9 through minimizing coal use, increasing DSM and renewables, and, if needed, purchasing
10 or constructing NGCC capacity. The Commission should carefully consider Detroit Edison's
11 lack of cost-effective strategies for reducing fuel costs over the long-term when the
12 Commission evaluates the decisions underlying the 5-year PSCR forecast, and should
13 indicate that on the basis of present evidence it is unlikely to authorize recovery in full of
14 Detroit Edison's projected coal costs in later years of the forecast.

15
16 **5. Lack of Planning for Retirement of Coal Generating Units**

17 Q. Has the company stated its plans regarding the retirement versus continued
18 operation of its coal-fired generating units?

19 A. Not definitively. Angela Wojtowicz testifies that the company has assumed
20 a capacity decrease in 2015 "associated with possible retirement of Harbor Beach, River

1 Rouge Units 2 and 3, St. Clair Unit 7, and Trenton Channel 7, 8, and 9.”³ The company
2 also made clear, however, that “such assumed retirements should not be construed as
3 certain.”⁴ In a February 7, 2012 Business Update to investors, which I have attached as
4 Exhibit MEC-18, the company identifies only 4% of its generation capacity as definitely
5 retiring, with the disposition of an additional 35% of the fleet uncertain.⁵

6 Q. Has the company produced an evaluation of the retirement of any of its coal
7 generating units?

8 A. No. The company refused to produce any such evaluation in response to
9 discovery response MEC/DE-1.36c, which I am sponsoring as Exhibit MEC-19.

10 Q. Has the company produced an evaluation of the continued economic viability
11 of Belle River or St. Clair Units 1, 2, 3, 4, and 6?

12 A. No. The company refused to produce any such evaluation in response to
13 discovery response MEC/DE-1.36d, which I am sponsoring as Exhibit MEC-20.

14 Q. Has the company offered an explanation for why it has not decided on the
15 disposition of a number of its coal generating units?

16 A. Yes. The company states that it is evaluating the performance of controlling
17 acid gas emissions, as required by the recently finalized MATS rule, through dry sorbent
18 injection (“DSI”). Because DSI is less expensive than the primary other control for acid gas

³Wojtowicz Direct at p 13, lines 14-17.

⁴*Id* at p 27, line 7.

⁵Exhibit MEC-18, DTE Energy, 2012 Business Update (Feb. 7, 2012), at 14.

1 emission, flue gas desulfurization (“FGD”), the company contends that it may be able to
2 keep some units that would be uneconomic with an FGD operating with the use of DSI.

3 Q. Has the company demonstrated that DSI is, or is part of, a least cost strategy
4 for bringing any of its coal generating units into compliance with the MATS rule?

5 A. No, not on this record. In discovery response MEC/DE-2.12, which I am
6 sponsoring as Exhibit MEC-21, the company stated that “economic analysis of the
7 technology, along with other alternatives, is ongoing to determine if it is economically
8 feasible for various units in the portfolio.”

9 Q. Would the continued operation of the company’s coal generating units require
10 expenditures on sorbents, chemical additives, catalysts, or other substances the costs of
11 which a utility would normally seek to recover through the PSCR process?

12 A. Yes. For units that the company plans to operate past the compliance
13 deadlines for the MATS, CSAPR, Michigan Mercury Rule, and other environmental
14 standards, continued operation will require the use of sorbents, chemical additives,
15 catalysts, or other substances. For example, mercury is typically controlled by activated
16 carbon injection. Also, the primary control for nitrogen oxides, selective catalytic reduction,
17 requires the purchase of a catalyst for the control. And the company is in the process of
18 testing DSI as potentially bringing some units into compliance with the acid gas limits in the
19 MATS rule.

20 Q. What is your recommendation?

21 A. I recommend that the Commission make clear to the company that it will only
22 authorize recovery for the cost of pollution control substances such as DSI and ACI if the

1 use of those substances is part of a least cost plan for achieving compliance with
2 regulatory standards in light of the full life-cycle cost of each coal unit the substances are
3 to be used on and the comparative cost of replacing such unit with other energy resources.
4

5 **6. The REF Project**

6 Q. Describe the Reduced Emission Fuel project.

7 A. The REF project involves Detroit Edison selling a portion of its coal inventory
8 to three subsidiaries of DTE Energy Services, who apply chemical additives to the coal and
9 then sell it back to Detroit Edison. The additives reduce SO₂ emissions, may reduce NO_x
10 emissions, and may lower the cost of reducing mercury emissions. The three plants where
11 the REF project is underway are Belle River, Monroe, and St. Clair. DTE Energy Services
12 created three Fuels Companies, one for each plant: Belle River Fuel Company (BRFC),
13 Monroe Fuel Company (MFC), and St. Clair Fuel Company (SCFC). Under Section
14 45(e)(8) of the Internal Revenue Code, the Fuel Companies are eligible for tax credits
15 when they sell the refined coal back to Detroit Edison. Detroit Edison receives any benefits
16 from the reduced emissions, potentially including lower control costs and revenues from
17 the sale of emissions allowances.

18 Q. Has Detroit Edison provided evidence that the REF project is cost effective
19 for reducing NO_x and mercury emissions?

20 A. No. In Exhibit MEC-13, which is discovery response MEC/DE 3.3d, the
21 company stated that it does not calculate the amount of NO_x and mercury emissions

1 reductions attributable to the REF project, and therefore does not calculate the REF
2 project's cost-effectiveness for reducing NO_x and mercury emissions.

3 Q. Describe the tax credits for the Fuel Companies.

4 A. According to Exhibit A-21, page 2, the available tax credit for 2011 is \$6.33
5 per ton of refined coal. The tax credit is indexed with the Consumer Price Index, and so
6 can be expected to increase each year going forward in the program. According to Exhibit
7 MEC-14, which is discovery response MEC/DE-3.2, Detroit Edison projects to buy a total
8 of 9,681,000 tons of refined coal from the Fuel Companies in 2012. That amount ramps
9 up to 14,299,000 tons of refined coal in 2016. If the tax credit remained at the 2011 level
10 in 2012, the total amount of the annual benefit at \$6.33 per ton would be \$61,280,730. If
11 the tax credit remained at the 2011 level in 2016, the total amount of the annual benefit at
12 \$6.33 per ton would be \$90,512,670. These estimates are most likely low, because I used
13 the 2011 tax credit. It can be reasonably stated that the gross benefit to the Fuel
14 Companies of the tax credits is \$90 million per year. Over a period of ten years this would
15 amount to approximately \$750 million to \$1 billion, depending on the tonnages sold and
16 the index price of the actual tax credit.

17 Q. What is the PSCR savings to Detroit Edison's customers of the REF Project?

18 A. According to Exhibit A-2, line 5, the REF Fuel Discount ranges from about
19 \$5.1 million in 2012 to about \$5.9 million in 2016.

20 Q. What do you conclude from these figures?

1 A. While the structure of the REF transaction passes through a relatively small
2 benefit to the customers of Detroit Edison, the Fuel Companies reap a significantly greater
3 benefit from the tax credits.

4 Q. Describe the relationship between DTE Energy Services and the Fuels
5 Companies.

6 A. According to the direct testimony of Gary Lapplander, DTE Energy Services
7 is the parent company of the Fuels Companies. According to Exhibit MEC-15, discovery
8 response MEC/DE-3.21 attachments 3.21(a)-(d), the directors and officers of DTE Energy
9 Services are - with a few exceptions - identical to the directors and officers of the Fuel
10 Companies.

11 Mr. Lapplander states in his direct testimony that in 2011, DTE Energy Services sold
12 a membership interest in the SCFC and a membership interest in the MFC. However, as
13 stated in Exhibit MEC-16, discovery response MEC/DE-3.1, Detroit Edison will not say to
14 whom it has been selling these interests.

15 Q. Describe the nature of the REF project negotiations.

16 A. Mr. Lapplander testifies that Detroit Edison negotiated at arms length with
17 DTE Energy Services and the Fuels Companies in structuring the REF project transactions.
18 However, when asked, the only evidence Mr. Lapplander could offer to support the arms-
19 length nature of the negotiation was his own statement that he acted in the best interest
20 of Detroit Edison during the negotiations. His explanation is found in discovery response
21 MEC/DE-3.11, which I am sponsoring as Exhibit MEC-17.

22 Q. What is your opinion of the REF project transactions?

1 A. While these may be separate entities on paper, without Detroit Edison's
2 ability to sell electricity to its captive customers, the monetary benefits of the REF project
3 could not be realized by the Fuel Companies and DTE Energy Services. Yet it appears that
4 Detroit Edison, in these allegedly arms-length negotiations, made no attempt to structure
5 the use of REF in a manner that provides benefits to Detroit Edison customers that are
6 even remotely proportional to the benefits flowing to the Fuel Companies and DTE Energy
7 Services.

8 Mr. Lapplander also describes the risk that Detroit Edison ratepayers did not have
9 to bear since DTE Energy Services took on the REF project. However, according to Exhibit
10 A-22, the actual construction costs and revenue requirement for an REF facility is
11 approximately \$11 million. By contrast, according to its FERC Form 1 for the fourth quarter
12 of 2010, Detroit Edison's coal fleet had an original cost of \$6,405,685,629 as of the end
13 of 2010. The REF facility revenue requirements represents ~~.0017%~~ 0.17% of the cost of
14 the coal fleet. According to the same FERC Form 1, Detroit Edison just one year had a net
15 capital increase to the coal fleet of \$126,031,696. The REF facility revenue requirement
16 represents ~~.087%~~ 8.72% of the capital improvements. Considering in context, the risk
17 associated with the REF project is insignificant.

18 Q. What is your recommendation?

19 A. The Commission should not approve or endorse the current structure of the
20 REF project transactions, should modify the PSCR plan to exclude approval of the REF
21 project, and should indicate that on the basis of present evidence it is unlikely to permit
22 recovery of costs related to the REF project in rates, rate schedules, or PSCR factors

1 established in the future, due to the questionable nature of the transactions and the lack
2 of benefit to Detroit Edison ratepayers that is proportional to the benefit to the Fuel
3 Companies and DTE Energy Services. The Commission should further indicate that it is
4 unlikely to allow recovery of the costs of the REF project unless the company can
5 demonstrate that the REF project is part of a least cost strategy for achieving compliance
6 with regulatory standards in light of the full life-cycle cost of each coal unit the substances
7 are to be used on, and the comparative cost of replacing such unit with other energy
8 resources.

9

10 **7. Conclusion**

11 Q. Does that conclude your testimony?

12 A. Yes.

Case No. U-16892
Attachment MECDE-1.6b
Page 1 of 1
Witness: J Good

2012 PSCR Plan Case
NYMEX Future Natural Gas Prices
7/30/2011

	January	February	March	April	May	June	July	August	September	October	November	December
2012	4.564	4.565	4.533	4.468	4.490	4.523	4.564	4.594	4.603	4.641	4.796	5.026
2013	5.151	5.127	5.056	4.873	4.887	4.923	4.959	4.987	4.994	5.037	5.170	5.395
2014	5.512	5.480	5.398	5.151	5.164	5.197	5.235	5.265	5.276	5.318	5.453	5.673
2015	5.797	5.765	5.683	5.423	5.436	5.469	5.505	5.535	5.546	5.588	5.723	5.957
2016	6.085	6.053	5.971	5.666	5.678	5.710	5.748	5.780	5.795	5.845	5.987	6.224

MPSC Case No.: U-16892
Respondent: (a)-(b) J.D Good
Requestor: MEC-3
Question No.: MEC/DE-3.2
Page: 1 of 3

Question: For each of the BRFC, MFC, and SCFC, identify:

- a. The amount of Refined Coal, in tons, that Detroit Edison expects to purchase in each of 2012, 2013, 2014, 2015, and 2016.
- b. The per ton and total amount that Detroit Edison expects to pay for such Refined Coal purchases.

Answer: a. The amounts of Refined Coal, in tons, included in Detroit Edison's forecast in 2012 through 2016 are:

BRFC:

2012 – 0

2013 – 0

2014 – 0

2015 – 3,558,000

2016 – 3,500,000

MFC:

2012 – 7,506,000

2013 – 7,637,000

2014 – 7,780,000

2015 – 8,032,000

2016 – 8,192,000

SCFC:

2012 – 2,175,000

2013 – 2,080,000

2014 – 2,254,000

2015 – 2,311,000

2016 – 2,607,000

MPSC Case No.: U-16892
Respondent: (a)-(b) J.D Good
Requestor: MEC-3
Question No.: MEC/DE-3.2
Page: 2 of 3

- b. The costs per ton for the Refined Coal purchases included in Detroit Edison's forecast in 2012 through 2016 as listed in 3.2.a. are:

BRFC:

2012 – No purchase forecast
2013 – No purchase forecast
2014 – No purchase forecast
2015 – \$57.43
2016 – \$55.85

MFC:

2012 – \$56.61
2013 – \$65.24
2014 – \$68.68
2015 – \$72.86
2016 – \$74.39

SCFC:

2012 – \$37.62
2013 – \$38.78
2014 – \$50.37
2015 – \$57.91
2016 – \$59.89

The total amounts included in Detroit Edison's forecast in 2012 through 2016 to pay for the Refined Coal purchases listed in 3.2.a. are:

BRFC:

2012 – No purchase forecast
2013 – No purchase forecast
2014 – No purchase forecast
2015 – \$204,327,000
2016 – \$195,448,000

MPSC Case No.: U-16892
Respondent: (a)-(b) J.D Good
Requestor: MEC-3
Question No.: MEC/DE-3.2
Page: 3 of 3

MFC:
2012 – \$424,950,000
2013 – \$498,216,000
2014 – \$534,314,000
2015 – \$585,188,000
2016 – \$609,398,000

SCFC:
2012 – \$81,813,000
2013 – \$80,665,000
2014 – \$113,549,000
2015 – \$133,804,000
2016 – \$156,154,000

STATE OF MICHIGAN

MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the Application of THE
DETROIT EDISON COMPANY for
Authority to Implement a Power Supply
Cost Recovery Plan in its Rate Schedules
For 2012 Metered Jurisdictional Sales
Of Electricity.

Case N^o: U-16892

ALJ Mark D. Eyster

ELECTRONIC SERVICE LIST

On the date below, an electronic copy of **CORRECTED Direct Testimony of George E. Sansoucy, P.E. on Behalf of MEC and NRDC, along with CORRECTED Exhibits MEC-9 and MEC-14** was served on the following:

Name/Party	E-mail Address
Counsel for Detroit Edison Co. Jon P. Christinidis David S. Maquera Bruce R. Maters	mpscfilings@dteenergy.com christinidisj@dteenergy.com maquerad@dteenergy.com matersb@dteenergy.com
Counsel for MPSC Staff Anne M. Uitvlugt	uitvlugta@michigan.gov
Counsel for Attorney General Donald E. Erickson	ericksond@michigan.gov
Counsel for ABATE Robert A. W. Strong	rstrong@clarkhill.com
Counsel for MCAAA Don L. Keskey	donkeskey@publiclawresourcecenter.com
Counsel for NRDC Jessie Rossman	jrossman@nrdc.org

The statements above are true to the best of my knowledge, information and belief.

OLSON, BZDOK & HOWARD, P.C.
Counsel for MEC & NRDC

Date: April 12, 2012

By: _____
Ruth Ann Liebzeit, Legal Assistant
Kimberly Flynn, Legal Assistant
420 E. Front St.
Traverse City, MI 49686
Phone: 231/946-0044
Email: ruthann@envlaw.com and
kimberly@envlaw.com