

STATE OF MICHIGAN
BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the Commission's own motion)
ordering **THE DETROIT EDISON COMPANY**)
to show cause why its retail rates for the sale)
and distribution of electric energy should not)
be decreased.)

Case No. U-14838

QUALIFICATIONS
AND
DIRECT TESTIMONY
OF
WAYNE A. COLONNELLO

THE DETROIT EDISON COMPANY
QUALIFICATIONS OF WAYNE A. COLONNELLO

Line
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1 **Q. Please state your full name and business address?**

2 A. My name is Wayne A. Colonnello. My business address is The Detroit
3 Edison Company, 2000 Second Avenue, Detroit, Michigan 48226.

4

5 **Q. Please state your educational background?**

6 A. I received a Bachelor of Science degree in Mechanical Engineering from the
7 University of Michigan in 1982. Following completion of a two-year Detroit
8 Edison training program on nuclear reactor operations, I was awarded a
9 Shift Technical Advisor certification. In addition, I have completed a number
10 of courses on various aspects of nuclear plant operation.

11

12 **Q. Please describe your work experience.**

13 A. I have been employed by Detroit Edison since 1982. During my
14 employment at Detroit Edison, I have served in a variety of management
15 positions at Fermi 2, including Shift Technical Advisor, with responsibility for
16 providing technical assistance to the reactor operating shift, Director of
17 Safety Engineering, with responsibility for development of the Fermi 2
18 Corrective Action Program and the Independent Safety Engineering
19 Department, Supervisor of Emergency Planning, with responsibility for
20 preparing the Fermi 2 site's response to reactor emergencies, Project
21 Manager for the Maintenance Rule, with responsibility for ensuring
22 compliance with NRC regulations governing plant maintenance, Chairman
23 of the Onsite Review Committee, during which I chaired a management

1 team responsible for reviewing the operational and safety impact of design
2 changes to the plant, Work Week Manager, during which I was responsible
3 for coordinating all plant work activities during normal plant operation, and
4 Manager of Nuclear Strategic Planning, during which I was responsible for
5 developing the overall strategic plan and goals for the Nuclear Generation
6 organization. Included in the responsibilities of this position is the
7 administration and allocation of funds for capital and O&M projects.

8
9 **Q. What is your current position?**

10 A. In 2004, I was assigned to the role of Director Nuclear Support. In this
11 capacity I am responsible for all business support functions relative to the
12 operation of Fermi 2. I am also responsible for security of the entire plant
13 and plant site. Additionally, I am responsible for the decommissioning of
14 Fermi 1.

15
16 **Q. Are you a member of any professional organizations?**

17 A. I am a member of the Engineering Society of Detroit. Additionally,
18 throughout my career I have participated in a number of industry working
19 groups. These have included working groups at INPO focused on
20 establishing corrective action process standards for the industry as well as
21 working groups at the Nuclear Energy Institute (NEI) focused on
22 implementing maintenance regulations as specified in the Code of Federal
23 Regulations, 10 CFR 50.65.

THE DETROIT EDISON COMPANY
DIRECT TESTIMONY OF WAYNE A. COLONNELLO

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1 **Q. Have you previously testified before the Commission?**

2 A. Yes. I testified in support of nuclear fuel expenses, nuclear O&M expenses,
3 and nuclear capital expenses in Case No. U-13808, Detroit Edison's last
4 main electric rate case.

5

6 **Q. Please describe the purpose of your testimony?**

7 A. The purpose of my testimony is to describe the operation of the Fermi 2
8 Nuclear Power Plant and to support 2005 actual as well as projected
9 nuclear O&M and capital expenditures through 2011. I am also sponsoring
10 actual and forecasted expenditures for the same period regarding nuclear
11 fuel expenses.

12

13 **Q. Mr. Colonnello, which exhibits are you supporting?**

14 A. I am supporting all or part of the information on the following exhibits:

15 Exhibit DE-6

16 Schedule F1 Planned Long Range Generation Changes

17

18 Exhibit DE-16

19 Schedule F3 Detroit Edison Capital Expenditures for Years
20 2005 - 2011

21 Schedule F3-1 Capital Expenditures - Nuclear Generation for
22 Years 2005 - 2011

23 Schedule F3-1a Base Capital Expenditures - Nuclear
24 Generation for Year 2005

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1	Schedule F3-1b	Capital Expenditures - Nuclear Generation for
2		Years 2005 - 2011
3	Schedule F5-1.1	O&M Expenditures - Nuclear Generation for
4		Years 2005 - 2011
5	Schedule F5-1.1a	O&M Expenditures - Nuclear Generation for
6		Year 2005
7	Schedule F5-1.1b	O&M Staffing - Nuclear Generation for Years
8		2001 - 2011
9	Schedule F5-1.1c	O&M Expenditures - Nuclear Generation for
10		Year 2005
11	Schedule F5-1.1d	O&M Dues - Nuclear Generation for Year 2005
12	Schedule F5-1.2	Nuclear Generation - Outage Cost / Duration
13		for RF01 through RF14
14	Schedule F5-1.3	Nuclear Industry Unit Capacity Factor for Years
15		1980 - 2005
16	Schedule F5-1.4	Nuclear Generation - Annual Fuel Cost for
17		Years 2005 - 2011
18	Schedule F5-1.5	Annual Nuclear Generation and Capacity
19		Factor for Years 2005 - 2011
20	Schedule F8-1	Electric Generation and Fuel Expense by Plant
21		and Fuel Type Year 2005
22	Schedule F8-2	Electric Generation and Fuel Expense by Plant
23		and Fuel Type Year 2006
24	Schedule F8-3	Electric Generation and Fuel Expense by Plant

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1		and Fuel Type Year 2007
2	Schedule F8-4	Electric Generation and Fuel Expense by Plant
3		and Fuel Type Year 2008
4	Schedule F8-5	Electric Generation and Fuel Expense by Plant
5		and Fuel Type Year 2009
6	Schedule F8-6	Electric Generation and Fuel Expense by Plant
7		and Fuel Type Year 2010
8	Schedule F8-7	Electric Generation and Fuel Expense by Plant
9		and Fuel Type Year 2011
10	Schedule F9	Estimated Capacity Factors (%) Years 2005 -
11		2011
12	Schedule F10	Projected Fuel Price and Escalation Rates
13		(Electric) Years 2005 - 2011
14	Schedule F11-1	Projected Fuel and Net Purchased Power
15		Years 2005 - 2011

16

17 **Q. How do you plan to proceed with your testimony?**

18 A. I will first discuss the process used by Nuclear Generation in developing
19 proposed O&M and capital budgets. Following this discussion, I will present
20 actual and projected expenditures for O&M, fuel, and conclude my testimony
21 with capital expenditures.

22

23 **Q. Mr. Colonnello, how are the O&M and capital budgets at Fermi 2**
24 **created?**

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1 A. The Fermi 2 Strategic Plan, which is published annually by the Assistant
2 Vice President, Nuclear Generation, provides the Nuclear Generation
3 Organization with the direction to achieve our long-range vision. The
4 Strategic Plan provides the plant with the overall strategy to run the plant in
5 the most safe, reliable and cost-effective manner. It is a goal-setting tool
6 used to drive continuous improvement at the plant and provides preliminary
7 O&M, capital and fuel budget targets as well as conceptual plant
8 modifications needed to ensure regulatory compliance as well as safe,
9 reliable and cost-effective plant operation.

10

11 **Q. How are the Strategic Plan O&M projections derived?**

12 A. The Strategic Plan O&M projections are derived from what we refer to as
13 our “steady-state budget” which is comprised of the workforce and material
14 which, based on our historical workload, is needed to run the plant in a safe,
15 reliable and regulatory compliant manner. Items included in the steady-
16 state budget include plant surveillances, corrective and preventative
17 maintenance work orders, and required support functions needed for
18 operation and maintenance of the plant.

19

20 **Q. What role do the individual Department Managers have in the**
21 **development of the steady-state budget?**

22 A. As each budgetary year approaches, every Department Manager is given
23 goals by the Assistant Vice President, Nuclear Generation which are
24 intended to align his/her Department’s share of the steady-state budget

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1 consistent with the safe, reliable and cost-effective operation of the plant.
2 By utilizing this process, we believe Fermi 2 can be operated on a day-to-
3 day basis as cost-effectively as possible without jeopardizing public safety
4 or plant reliability. This manner of budgeting also helps us defray some of
5 the increased expenses created by nuclear regulatory requirements and/or
6 equipment performance.

7

8 **Q. Can you provide some examples of steady-state budget reductions at**
9 **the Department Manager level?**

10 A. There are a number of simultaneous efforts in place to reduce either the
11 size of the steady-state work scope or to perform that scope in a more
12 efficient manner. For example, each Department continuously reviews its
13 steady-state work scope to identify items that can be removed from that
14 scope due to improved equipment performance following corrective
15 maintenance or modification, as well as to identify those work activities that
16 can be performed more efficiently and more cost-effectively using
17 improvements in preventative and predictive maintenance. In addition, our
18 Licensing and Technical Departments work with both the NRC and other
19 utilities to identify improvements in the Technical Specifications that would
20 safely allow maintenance events to be performed less frequently or
21 simultaneously, thus reducing plant downtime. Finally, each Department
22 creates staffing plans in which they attempt to reduce their complement
23 through personnel attrition as well as through combining job functions.

24

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1 **O&M AND CAPITAL EXPENDITURE BUDGETING PROCESS**

2

3 **Q. Turning now to O&M and capital modifications, how are these budgets**
4 **developed?**

5 A. Each proposed modification to the plant is reviewed and prioritized by our
6 Project Review Group (PRG), which is composed of various Department
7 Managers.

8

9 **Q. What is the role of the PRG?**

10 A. In essence, the PRG creates a modification portfolio for Fermi 2 that is later
11 evaluated during the final budget development period for Detroit Edison.
12 This is accomplished through three functions. First, the PRG decides
13 whether or not the proposed modification is warranted for the safe, reliable
14 and cost-effective operation of the plant. Second, if it is believed that the
15 modification is warranted, the PRG proposes a budget for further design
16 and development of the modification so that a firm cost estimate for final
17 design and installation can be created. Finally, if plant operation requires an
18 additional modification subsequent to final approval of an annual
19 modification budget, the PRG makes the recommendation as to what other
20 modification can be safely scaled back or postponed to provide the
21 resources for the new modification.

22

23 **Q. You stated that the PRG approves a budget for further design and**
24 **development of modifications it believes are warranted for the**

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1 **continued safe, reliable and cost-effective operation of the plant. Why**
2 **is this step required?**

3 A. In the early to mid 1990's, the costs of necessary modifications sometimes
4 escalated during the design and/or implementation phase, requiring a last
5 minute adjustment in the overall Nuclear Generation capital budget. The
6 setting by PRG of a developmental budget for modifications ensures that
7 plans for a design do not inadvertently lead to cost increases during
8 installation.

9

10 **Q. How is the budget for an individual modification finalized?**

11 A. Once the engineer in charge of the design of the modification has
12 developed a firm engineering and installation estimate, the modification is
13 brought before the Project Engineering Review Committee (PERC), which is
14 chaired by the Director, Nuclear Support and is composed of the Senior
15 Plant Management.

16

17 **Q. What is the role of the PERC?**

18 A. First and foremost, the PERC gives final approval to add modifications to
19 the various plant schedules. Second, the PERC determines the
20 “placeholder” budget associated with the modification, that is, the requested
21 cost of the modification that will be used in the Fermi 2 Strategic Plan as
22 well as in development of future budgets. Finally, the PERC sets a
23 schedule for additional progress reviews of the modification. These
24 reviews, which are scheduled at various milestones in the development

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1 and/or installation of the modification, ensure that the modification cost is
2 not so far outside the “placeholder” budget as to negatively impact the
3 overall plant budgets.

4

5 **Q. What actions are taken if it is discovered that a PERC-approved**
6 **modification is going to exceed its “placeholder” budget?**

7 A. The PERC can either approve additional funds if they are available and
8 justified, instruct the PRG to remove other scheduled modifications to make
9 up for the cost overrun or defer work on the modification to another budget
10 cycle.

11

12 **Q. What happens if further reductions in either the O&M or capital budget**
13 **are required?**

14 A. The requested reduction is communicated down to the Department
15 Manager level for expected reduction of the O&M and/or capital budgets in
16 areas in which plant safety and reliability are not affected.

17

18 **Q. Mr. Colonnello, you have provided a great deal of testimony on how**
19 **the Fermi budgets are created. Why have you done so?**

20 A. I believe that Fermi 2 has made great strides toward improving productivity
21 and cost-effectiveness since the above-described processes were
22 implemented approximately nine years ago. Consistently, over the past
23 eight years favorable trends in both plant performance and plant economics
24 have been demonstrated. These processes have created an awareness

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1 and accountability for fiscal responsibilities well within the Nuclear
2 Generation organization. It is this foundation, that I believe will continue to
3 ensure Fermi 2 future expenses are prudent and reasonable.
4

5 **O&M EXPENDITURES**
6

7 **Q. How do you plan to proceed with your testimony on Nuclear**
8 **Generation O&M expenses?**

9 A. I will support the reasonableness and prudence of 2005 actual and
10 projected Fermi 2 O&M expenses for the period of 2006 through 2011 and
11 discuss the basis used in calculating the projected figures.
12

13 **Q. Mr. Colonnello, can you please explain the 2005 actual and 2006**
14 **through 2011 O&M forecast at Fermi 2?**

15 A. Exhibit DE-16, Schedule F5-1.1 depicts the 2005 actual and 2006 through
16 2011 forecasted O&M expenses. Line Item 22 provides the actual O&M
17 expenses in total for year 2005. As stated on this exhibit, 2005 actual
18 expenses were \$120,557,000. 2005 actual expenses were used as a basis
19 to derive forecasted totals for 2006 through 2011 as noted by Line Item 35.
20 Specifically, adjustments to the 2005 total base as provided by Line Items
21 24 through 32 were used to develop the forecasted years.
22

23 **Q. Mr. Colonnello, please review those adjustments captured on Line**
24 **Items 24 through 32 on Exhibit DE-16, Schedule F5-1.1.**

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1 A. Line Item 24 reflects an adjustment for economic inflation. Line Item 40
2 provides the yearly inflation adjustment factor used to support Line Item 24.
3 The inflation adjustment factor was taken from Exhibit DE-16, Schedule F1-
4 1, supported by Mr. Colandrea.

5

6 **Q. Mr. Colonnello, how do you attempt to offset economic escalation?**

7 A. Historically, efforts to minimize escalation have been relatively successful.
8 This has been primarily accomplished by managing to a smaller workforce
9 and reducing expenses as much as practicable. Line Item 28 -
10 Performance Excellence Process (PEP) Savings of Exhibit DE-16, Schedule
11 F5-1.1 reflects a commitment to continue with similar savings as economic
12 inflation pressures continue. Since 1998, concerted efforts have been
13 implemented to absorb staffing reductions with productivity improvements.
14 By doing so, economic escalation in wage rates was offset by an overall
15 reduction in staffing. I would like to note that this overall staffing reduction
16 was accomplished despite an increase in Security staffing following the
17 World Trade Center (WTC) event. I have prepared Exhibit DE-16, Schedule
18 F5-1.1b to provide a history and forecast of total staffing in support of Fermi
19 2 operation. I believe this exhibit demonstrates our continuing commitment
20 to minimize our labor expenses.

21

22 **Q. Please explain Line Item 28 - PEP Savings on Exhibit DE-16, Schedule**
23 **F5-1.1.**

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1 A. Line Item 28 represents our continued effort to make efficiency
2 improvements that are anticipated to result in the projected savings as
3 noted by this exhibit. A majority of these savings are a result of planned
4 staffing reductions in 2006 and 2008.

5

6 **Q. Mr. Colonnello, why are the staffing reductions spread over years 2006**
7 **and 2008?**

8 A. Our approach is focused on improving plant performance concurrent with
9 efficiency improvements. To accomplish the entire planned staffing
10 reduction in 2006 would challenge plant performance. Instead, we chose to
11 pursue the portion of the planned reductions in 2006 that would not require
12 significant process or technology improvements. Making the balance of the
13 planned reductions in 2008 will allow us time to implement the process and
14 procedure improvements over the remainder of 2006 and 2007 that are
15 necessary in order to operate safely and reliably with a smaller workforce.

16

17 **Q. Mr. Colonnello, will you please explain the initiative to reduce overall**
18 **staffing?**

19 A. Productivity improvements resulting in staffing reductions provide an
20 opportunity to help offset the previously mentioned economic escalations.
21 Such reductions provide the most substantial cost saving opportunity since
22 a majority of Fermi's operating and maintenance expenses are labor.
23 These reductions may be realized at the Department level through the
24 combining of job functions, improvements in technology, and development

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1 of synergies. These reductions will have to be accomplished in a manner
2 that optimizes plant efficiency without compromising the safe operation of
3 the facility. However, our ability to meet staffing reduction goals will be
4 continuously challenged by increasing regulatory requirements, especially in
5 the area of security.

6

7 **Q. Mr. Colonnello, could you then explain the plateau in Fermi staffing in**
8 **years 2008 through 2011?**

9 A. In 2008, it is anticipated that our staff would be approximately 821 in total.
10 We believe this is the optimal level in staffing required to operate the plant in
11 a safe and reliable manner. I would like to emphasize that utilizing a
12 graduated and controlled approach to achieve this optimal staffing level is
13 believed to be the right approach especially considering the consequences
14 of improperly managing this planned reduction. Specifically, this approach
15 will ensure that our work processes, procedures and knowledge transfer
16 have been re-designed to accommodate a smaller workforce. Allowing
17 economic pressures to unnecessarily expedite this process could result in a
18 weak and under-staffed organization working within processes and
19 procedures designed around a much larger workforce. The subsequent
20 effect would be a troubled plant causing considerable financial burden to the
21 Company and its customers. These "lessons learned" have been factored
22 into the basis for our projected staffing and expenses.

23

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1 **Q. Line Item 31 - Refuel Outages, will you please describe this adjustment**
2 **on Exhibit DE-16, Schedule F5-1.1?**

3 A. These adjustments reflect changes in accruals for planned refueling
4 outages in the forecasted years. These changes support holding refueling
5 outage incremental expenses flat throughout the period noted on this
6 exhibit. Refuel outage expenses will be covered in detail later in my
7 testimony.

8

9 **Q. Mr. Colonnello, will you please describe Line Item 32 - Security**
10 **Response Expense on Exhibit DE-16, Schedule F5-1.1?**

11 A. Under Public Act 609 of 2002, incremental electric generating facility
12 security-related expenses post-WTC through December 31, 2005 are, by
13 statute, deemed recoverable. Line Item 32 identifies the portion of Fermi 2
14 security-related expenses incurred on and after January 1, 2006 which are
15 also reasonable and prudent and should be recovered by the Company in
16 rates.

17

18 **Q. Mr. Colonnello, does Line Item 32 - Security Response Expense reflect**
19 **the total incremental security expenses resulting from the WTC event?**

20 A. No, total security expenses resulting from changes in regulation attributed to
21 the WTC event, including capital improvements, will be discussed later in
22 my testimony.

23

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1 **Q. Mr. Colonnello, will you please state the required O&M that you feel is**
2 **prudent and reasonable for the test year of 2007.**

3 A. Line Item 35 - Total Annual O&M shows that \$124,776,000 will be required
4 to support the safe and reliable operation in 2007.

5

6 **Q. Mr. Colonnello, your methodology to utilize 2005 as the base year to**
7 **make projections assumes that those expenses incurred in 2005 were**
8 **prudent and reasonable. Could you please describe those expenses**
9 **in more detail?**

10 A. Exhibit DE-16, Schedule F5-1.1a depicts the 2005 actual O&M expenses in
11 more detail. In reviewing this exhibit, I would like to focus on the
12 development of the highlighted totals, specifically Line Item 3 - Nuclear
13 Organization - Base, Line Item 9 - Total Security Response, Line Item 15 -
14 Total Refueling Outage, and Line Item 22 - Total Accounting Adjustments.

15

16 **Q. Mr. Colonnello, will you please describe the expenses associated with**
17 **Line Item 3 - Nuclear Organization - base as shown on Exhibit DE-16,**
18 **Schedule F5-1.1a?**

19 A. Nuclear Organization - base consists of two components; Line Item 1 -
20 Nuclear Organization and, Line Item 2 - Regulatory Assessments. Line Item
21 1 is primarily labor and materials expenses required for the day-to-day
22 operation of Fermi 2.

23

24 **Q. Can you provide additional detail concerning Line Item 1 - Nuclear**

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1 **Organization on Exhibit DE-16, Schedule F5-1.1a?**

2 A. Nuclear Organization contains those expenses associated with labor and
3 materials required for the day-to-day operation of Fermi 2. Exhibit DE-16,
4 Schedule F5-1.1c, has been prepared to provide a more discrete view of
5 those labor and material requirements. Specifically, Line Items 1 through 5
6 of Exhibit DE-16, Schedule F5-1.1c, are the labor requirements of the Fermi
7 2 operating expenses. These labor expenses include both Detroit Edison
8 employees as well as contractor personnel and are illustrated by Line Items
9 9 through 15. Line Item 6 of this same exhibit captures the material
10 requirements needed for day to day operation. These materials are
11 primarily consumables that include resins, plant chemicals, fuel oil and
12 hydrogen. Lastly, miscellaneous expenses such as phones, travel and
13 other business expenses have been captured on Line Item 7.

14

15 **Q. Mr. Colonnello, referring to Line Item 2 on Exhibit DE-16, Schedule F5-**
16 **1.1c, please explain the overtime component of your budget?**

17 A. The overtime budget consists almost entirely of shift turnover time, overtime
18 in anticipation of emergent work, and holiday coverage including shift
19 premiums. The basis for the overtime budget is historical data from
20 previous years.

21

22 **Q. Mr. Colonnello, what is the necessity for shift turnover time?**

23 A. Certain safety-sensitive staff positions require face-to-face conversations to
24 properly communicate the status of plant safety-related equipment and to

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1 prevent misunderstandings and/or omissions that might affect the safe
2 operation of the plant. Thus, there is a short period of time during shift
3 change when maintaining plant safety requires an overlap of time for
4 departing and incoming shift personnel. This practice is consistent with that
5 used at most other commercial nuclear reactors in the United States.

6

7 **Q. Mr. Colonnello, why does Fermi 2 pay shift premiums?**

8 A. Represented Detroit Edison employees are required to be paid shift
9 premiums by their union contract. Such premiums paid to union employees
10 are standard throughout the power industry. Non-represented Detroit
11 Edison employees are paid shift premiums per Company policy. The shift
12 premium recognizes the relative inconveniences of working the various
13 shifts. Contract employees are not paid shift premiums.

14

15 **Q. Moving on to Line Item 4 on Exhibit DE-16, Schedule F5-1.1c, what are**
16 **DECO Labor Bonus / Incentives?**

17 A. Line Item 4 is primarily composed of licensed operator bonus expenses.

18

19 **Q. Mr. Colonnello, what is the purpose for the licensed operator bonus as**
20 **captured on Line Item 4 on Exhibit DE-16, Schedule F5-1.1c?**

21 A. The licensed operator bonus is an industry practice used to provide
22 retention incentives for those licensed reactor operators in whom the
23 company has invested numerous hours of training, and as an incentive to
24 maintain their license qualifications, which requires that each licensee

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1 attend one week of re-qualification training every five weeks. This
2 represents approximately \$1,000,000 of the expenses contained in Line
3 Item 4.

4

5 **Q. Mr. Colonnello, can you further describe those expenses associated**
6 **with Line Item 5 - Contract Labor / Services of Exhibit DE-16, Schedule**
7 **F5-1.1c?**

8 A. In reference to Line Item 5 of Exhibit DE-16, Schedule F5-1.1c, contract
9 labor / services is comprised of steady-state and non steady-state
10 contractors. Steady-state contractors are those individuals provided by
11 vendors that are required to support the day-to-day operation and
12 maintenance of the facility. Normally, these individuals are required to be
13 employed for greater than six months. Examples of steady-state
14 contractors include plant cleaners, radwaste laborers, certain security
15 officers and certain administrative staff. Fermi 2 chooses to employ certain
16 steady-state contractors because the overall cost of hiring such contractors
17 is lower than employing additional utility employees to fill these positions,
18 thus keeping labor expenses as low as reasonably possible. Non steady-
19 state contractors are those individuals provided by vendors that are used to
20 support a specific task or project over a limited period of time, and as such
21 are not required to support the day-to-day operation and maintenance of the
22 facility. Normally these individuals are required for specialized expertise not
23 normally retained by the permanent plant staff or are needed to
24 accommodate any temporary peaks in workloads.

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2 **Q. Mr. Colonnello, earlier you indicated that regulatory dues as**
3 **referenced on Exhibit DE-16, Schedule F5-1.1a, Line Item 2 would be**
4 **addressed. Could you explain the need for and bases for these**
5 **expenses?**

6 A. Yes. Please refer to Exhibit DE-16, Schedule F5-1.1d. A majority of these
7 dues are regulatory driven, such as those dues and fees required by the
8 Nuclear Regulatory Commission (NRC) to cover oversight of the plant. In
9 addition, dues are paid to various industry groups such as the Institute of
10 Nuclear Power Operations, which assists utilities in operating nuclear plants
11 more safely, the Electric Power Research Institute and General Electric
12 Boiling Water Reactor Owners' Group, which both sponsor research used
13 by nuclear plants to operate more safely and economically.

14

15 **Q. Mr. Colonnello, which dues listed on Exhibit DE-16, Schedule F5-1.1d**
16 **are non-discretionary?**

17 A. Nuclear Regulatory Commission, INPO and Emergency Response
18 Organization dues would be considered non-discretionary. Since
19 Emergency Response Organization dues may not be as recognizable as
20 NRC and INPO, additional clarification is warranted. Emergency Response
21 Organization dues fund state and local county emergency facilities in
22 support of the Fermi 2 Emergency Plan. The Fermi 2 Emergency Plan is a
23 license requirement necessary to ensure the health and safety of the public
24 during emergency response events.

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2 **Q. Mr. Colonnello, what value do the discretionary dues provide?**

3 A. Although not specifically mandated, voluntary support to organizations such
4 as those listed on Exhibit DE-16, Schedule F5-1.1d, are critical within the
5 nuclear organization. In particular, those organizations that support
6 research and development including sharing of “lessons learned” ensures
7 nuclear asset owners benefit as a whole from products and services which
8 otherwise would be unaffordable without group participation and funding.
9 The nuclear industry clearly recognizes that any one plant can abruptly
10 upset the entire industry due to performance issues. As a result, this
11 industry believes in significant group participation to help preclude such an
12 event.

13

14 **Q. Utility Service Alliance (USA) and the Nuclear Energy Institute (NEI)**
15 **are not involved in product development or “lessons learned”**
16 **activities. What are the benefits of paying dues to these**
17 **organizations?**

18 A. USA is an alliance of seven nuclear plants, which includes Fermi 2. I
19 consider these dues reasonable and prudent since supply chain expenses
20 of approximately \$1,000,000 per year have been avoided by leveraging the
21 alliance while negotiating service and material contracts. Although other
22 benefits are realized through USA, the supply chain savings alone support
23 the prudent nature of the \$120,000 annual dues. The role provided by the
24 NEI is also valuable to plant owners and operators in helping to shape

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1 important industry policy and regulation through a coordinated and solidified
2 approach.

3

4 **Q. Mr. Colonnello, could you explain the NRC dues that again appear on**
5 **Line Item 12 of Exhibit DE-16, Schedule F5-1.1d?**

6 A. Part of the increase in NRC dues mandated to all operating U.S. reactors
7 was in support of Homeland Security activities which previous to 2003 were
8 funded from the U.S. General Treasury.

9

10 **Q. Mr. Colonnello, could you please explain Line Item 9 - Total Security**
11 **Response on Exhibit DE-16, Schedule F5-1.1a?**

12 A. These expenses are incremental security expenses that have been
13 necessitated by the WTC Event. I would like to focus on Line Items 6 and 7
14 of this Exhibit. Line Item 6 - Base are those incremental labor expenses
15 needed to comply with additional security requirements imposed by NRC
16 Security Orders. Specifically, more stringent work hour limitations and
17 training requirements have been mandated to all U.S. operating reactors.
18 Additionally, as mentioned above, the NRC has assessed dues specifically
19 in support of Homeland Security activities. Those incremental dues
20 commenced in 2003 and are captured on Line Item 7 of Exhibit DE-16,
21 Schedule F5-1.1a as well as on Exhibit DE-16, Schedule F5-1.1d, Line Item
22 12.

23

24 **Q. Will you please explain Line Item 8 - Security Rate Relief on Exhibit**

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1 **DE-16, Schedule F5-1.1a?**

2 A. Line Item 8 - Security Rate Relief represents recovery of those expenses
3 noted on Line Item 6 and Line Item 7. It should be clarified that Line Item 6
4 - Base, excludes employee benefits and other indirect labor expenses. Line
5 Item 8 however does include indirect labor expenses and therefore explains
6 the difference as noted by Line Item 9 - Total Security Response.

7

8 **Q. Mr. Colonnello, why did you specifically segregate Security Response**
9 **Expenses?**

10 A. I did so for two reasons. First, these expenses are significant and have
11 contributed to an overall increase in forecasted O&M expenses. Second, I
12 feel these expenses are primarily regulatory driven with little or no Company
13 discretion. External events such as the WTC Event are beyond our control
14 yet these types of events can and will result in additional security
15 requirements and associated expenses.

16

17 **Q. Mr. Colonnello, explain Line Item 15 of Exhibit DE-16, Schedule F5-1.1a**
18 **- Total Refueling Outage?**

19 A. Line Item 15 represents the net incremental O&M expenses needed to
20 support scheduled refueling outages. Line Items 11 through 14 represent
21 an accounting practice of levelizing these incremental expenses.

22

23 **Q. Mr. Colonnello, why does Fermi 2 levelize its incremental refueling**
24 **outage expenses?**

Line
No.

1 A. Fermi 2 levelizes its incremental refueling outage expenses so that the
2 difference in budgets between outage and non-outage years does not
3 create financial swings for the Company or burden Detroit Edison customers
4 with large rate swings. For example, if we base our rate request on the
5 budget for an outage year, and all the expenses of that outage appear in
6 that year's budget, then we would be presenting an unnecessarily high cost
7 of providing Fermi 2 generation over the time the rates are likely to be in
8 effect. The inverse would be true if we used a non-outage year budget for
9 the same purpose. In prior cases, the Commission has levelized refueling
10 outage expenses in setting rates. Levelizing these expenses on the
11 Company's books and budgets simply aligns expenses with revenues.

12

13 **Q. What is the basis for the refuel outage accrual at approximately**
14 **\$22,000,000?**

15 A. This level of accrual supports incremental refueling outage expenses of
16 \$33,000,000. In 2004, incremental expenses for RF10 were approximately
17 \$33,000,000. This last actual expense level was held flat and used to
18 establish the noted level of accrual for 2005.

19

20 **Q. Mr. Colonnello, how does Fermi 2 plan to manage incremental**
21 **refueling outage expenses?**

22 A. We expect to effectively manage these incremental expenses by
23 implementing work scope control techniques, such as on-line maintenance,
24 increased emphasis on predictive maintenance, which allows us to inspect

Line

No.

1 equipment online and thus measure equipment life without disassembly,
2 improved preventive maintenance, which extends equipment life and
3 therefore reduces outage scope for that equipment that can only be repaired
4 and/or replaced during an outage and synergies with outside entities
5 including General Electric and the Utilities Service Alliance. Lastly, we are
6 evaluating implementation of capital modifications aimed at reducing outage
7 durations.

8

9 **Q. Mr. Colonnello, what are your thoughts regarding your forecasted**
10 **refueling expenses?**

11 A. I believe the refueling expenses that I have forecasted are reasonable and
12 prudent. Historically, we have made considerable improvements to ensure
13 that we have minimized the incremental expenses and overall duration of
14 refueling outages. Exhibit DE-16, Schedule F5-1.2, has been prepared to
15 provide our historical and forecasted performance for refueling outages.
16 Duration of refueling outages is important since incremental expenses are
17 directly linked with the length of an outage. Additionally, conducting shorter
18 refueling outages, consistent with proper maintenance, helps preserve
19 higher capacity factors. This minimizes the risk of being exposed to higher
20 cost spot market purchases of power. In turn, fuel supply costs are
21 minimized and thus the customers' exposures to these instances are also
22 minimized under the PSCR mechanism.

23

24 **Q. Mr. Colonnello, what duration have you assumed for future refueling**

Line
No.

1 **outages?**

2 A. Expenses forecasted for RF12 through RF14 assume outage durations
3 ranging from 30 to 35 days. I would consider these durations and
4 associated incremental expenses consistent with industry median
5 performance for comparable facilities.

6

7 **Q. Mr. Colonnello, can you explain Line Item 22 of Exhibit DE-16,**
8 **Schedule F5-1.1a - Total Accounting Adjustments?**

9 A. As depicted by Exhibit DE-16, Schedule F5-1.1a, Line Item 22 is the
10 summation of Line Items 19 through 21. Line Item 19 - Rebuildable
11 Inventory, is Detroit Edison inventory that is returned to stock after being
12 sent to a vendor for repair / rebuild. Line Item 20 - Obsolete Material, is
13 associated with obsolete material that has been removed from inventory.
14 Line Item 21 represents the Rewarding Employee Plan (REP) expenses.

15

16 **Q. Mr. Colonnello, could you further explain REP expenses associated**
17 **with Line Item 21 of Exhibit DE-16, Schedule F5-1.1a?**

18 A. Yes, as previously stated, these expenses are incentive rewards for meeting
19 established performance goals under the Rewarding Employee Plan (REP).
20 For Fermi 2, performance goals are primarily centered on safety, reliability
21 and efficiency of operation.

22

23 **Q. Mr. Colonnello, what are your thoughts concerning these incentive**
24 **awards?**

Line
No.

1 A. I believe that the incentive awards are reasonable and prudent and have
2 consistently provided incentive for employees to make vast improvement in
3 Fermi 2's performance, as demonstrated by my exhibits. These incentive
4 awards help maintain focus on critical areas at Fermi and generally help
5 focus efforts on providing better value to Detroit Edison and its customers.
6

7 **NUCLEAR FUEL EXPENSES**
8

9 **Q. Mr. Colonnello, will you explain nuclear fuel expenses as shown on**
10 **Line Item 6 of Exhibit DE-16, Schedule F8-1 through F8-7?**

11 A. Yes, these are fuel expenses directly tied to projected generation from
12 Fermi 2. I have prepared Exhibit DE-16, Schedule F5-1.4, to graphically
13 present these fuel expenses on a per unit basis. Annual fuel expenses are
14 a function of the total unamortized cost of the fuel in the core and the
15 expected lifetime energy production of the fuel. In outage years, the annual
16 fuel expenses are proportionally lower than non-outage years. Years 2005,
17 2008 and 2011 are non-outage years. Over the next fuel cycles, annual fuel
18 expenses are rising due to increases in the cost of uranium ore, fabrication
19 services, and enrichment services. As lower cost fuel is replaced, the total
20 unamortized value of the core will increase with each fuel cycle.
21

22 **Q. Mr. Colonnello, could you please discuss the basis for developing**
23 **generation targets as depicted on Exhibit DE-16, Schedules F8-2**
24 **through F8-7?**

Line
No.

1 A. Yes, Fermi 2 fuel expenses are directly dependent upon expected
2 generation targets. Target generation, per unit fuel expense, and total fuel
3 expense through 2011 are depicted on Exhibit DE-16, Schedules F8-2
4 through F8-7 Line Item 6. The basis and methodology for determining these
5 figures are the same for Schedules F8-1 through F8-7. The generation
6 targets as depicted by column "c" of these Schedules account for planned
7 and unplanned losses in generation. The planned losses in generation
8 include refueling outages as well as scheduled power downs in support of
9 surveillances and core management activities. Additionally, unplanned
10 losses in generation are included based on historical data. The combination
11 of unplanned and planned losses in generation is discounted from our
12 expected demonstrated capability. It is these generation targets that are
13 used to anticipate the fuel expenses as depicted by Line Item 6, columns "d"
14 through "f" on Schedules F8-2 through F8-7 of Exhibit DE-16. Based on a
15 three year rolling average, the corresponding capacity factors associated
16 with these generation targets represent industry median performance or
17 better. Annual capacity factor is provided on Exhibit DE-16, Schedules F9
18 and F5-1.5.

19

20 **Q. Mr. Colonnello, could you further explain how these fuel expenses are**
21 **derived?**

22 A. The generation targets previously discussed are used to determine the
23 expected energy requirement for the fuel cycle. The purchase, enrichment
24 and fabrication for the fuel necessary to support the energy requirement is

Line
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1 then amortized over a specified number of fuel cycles. This component
2 represents approximately 75% of the noted fuel expenses. The remaining
3 25% of fuel expense include disposal fees paid to the Department of Energy
4 (DOE) in support of Yucca Mountain and the annual fee paid to the DOE for
5 decontamination and decommissioning of their closed processing facility.
6 Columns "d" and "e" of Exhibit DE-16, Schedules F8-1 through F8-7
7 represent these expenses on a per unit basis. Total fuel expenses in
8 millions as depicted by column "f" is simply the product of columns "c" and
9 "e".

10

11 **Q. Mr. Colonnello, do you support a portion of Exhibit DE-16, Schedule**
12 **F10?**

13 A. Yes, I support Line Item 23 which is a carryover of the fuel expenses
14 depicted on Exhibit DE-16, Schedules F8-1 through F8-7 as previously
15 discussed.

16

17 **Q. Mr. Colonnello, what are your thoughts concerning the level of fuel**
18 **expenses you have projected?**

19 A. I believe these fuel expenses will be equal to or better than industry median
20 performance. Historically, Fermi has been extremely successful in
21 managing its fuel expenses. Since 1999, we have reduced our fuel
22 expense from \$6.56/MWh to the projected 2006 expense of \$4.11/MWh.
23 This represents approximately a 37% reduction. I am confident we can
24 continue to manage these expenses effectively going forward and therefore,

Line

No.

1 I believe the projected fuel expenses for Fermi are reasonable and prudent.

2

3 **Q. Mr. Colonnello, this is a significant reduction, could you further clarify**
4 **how this was accomplished?**

5 A. A number of concerted efforts contributed to this success. First, contracts
6 associated with fuel assembly fabrication as well as contracts to supply
7 uranium ore and provide enrichment services were re-negotiated. Prior to
8 1999, contractual agreements precluded Detroit Edison the ability to re-
9 negotiate these services. Consequently, when the opportunity became
10 available to negotiate more favorable pricing, Detroit Edison acted in an
11 appropriate and timely fashion. Also contributing to this reduction in fuel
12 expenses as reported by Fermi 2, was the termination of a contractual
13 agreement with Renaissance Energy Corporation. Renaissance provided
14 leasing services associated with the nuclear fuel. In 2001, the remaining
15 principal on the lease with Renaissance was paid. As a result, interest on
16 principal for fuel previously leased under Renaissance is now included in
17 Detroit Edison's total interest expense. This is primarily a shifting of this
18 expense as opposed to elimination. Lastly, improved core design by the
19 Fermi 2 staff working with GE has resulted in fewer fuel bundles required
20 during core reloads. I would like to stress that a majority of the reduction
21 was made possible by the initiative of the Fermi 2 staff to actively pursue
22 and obtain more favorable fuel pricing. Again, based on the past successes
23 and initiative of the Fermi 2 staff, I am confident we can continue to
24 effectively manage future fuel expenses.

Line

No.

1

2 **Q. Mr. Colonnello, what are your thoughts, overall, with regard to the**
3 **O&M / fuel expense levels set forth in your testimony and exhibits?**

4 A. I consider these expenses to be prudent and reasonable. I believe, based
5 on historical performance that the assumptions relative to plant performance
6 used in my projections are reasonable. Specifically, since 1998, the plant
7 has demonstrated significant improvements in capacity factor and in
8 reducing overall expenses. As a result, direct O&M expenses have been
9 reduced by 3% since 1998 while absorbing economic escalations. I believe
10 Fermi 2 has demonstrated significant performance improvements by
11 utilizing resources prudently and effectively.

12

13 **CAPITAL EXPENDITURES**

14

15 **Q. Mr. Colonnello, would you now proceed to describe Fermi 2 capital**
16 **expenditures?**

17 A. Yes, Exhibit DE-16, Schedule F3-1, depicts the 2005 actual and 2006
18 through 2011 forecasted capital requirements. Line Item 8 provides the
19 actual total capital expenditures in year 2005. As shown on this exhibit,
20 2005 expenditures were \$71,854,000.

21

22 **Q. Mr. Colonnello, could you please provide more detail regarding the**
23 **capital expenditures for 2005?**

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No.

1 A. Total capital expenditures in 2005 are composed of Line Item 2 - Base
2 Capital, Line Item 4 - Extraordinary Capital and Line Item 6 - Nuclear Fuel.
3 Base Capital as noted by Line Item 2 is primarily the capital expenditures
4 associated with maintaining the overall asset of Fermi 2. I have prepared
5 Exhibit DE-16, Schedule F3-1a to provide a complete listing of the projects
6 that support Line Item 2. These projects in total equate to \$27,801,000.

7

8 **Q. Mr. Colonnello, in reviewing Exhibit DE-16, Schedule F3-1, Line Item 2 -**
9 **Base Capital, could you explain the increase between 2005 and 2007**
10 **as shown on Line Item 19?**

11 A. Over the next two operating cycles, increases in Base Capital are
12 anticipated to further improve plant and equipment reliability. These
13 increases gradually diminish over the forecast period as plant reliability
14 improvements materialize.

15

16 **Q. Would you now describe Line Item 4 - Extraordinary Capital and Line**
17 **Item 6 - Nuclear Fuel?**

18 A. Line Item 4 - Extraordinary Capital is associated with capital projects that I
19 would consider above and beyond normal asset management.
20 Extraordinary capital in 2005 was \$23,830,000 as noted on Exhibit DE-16,
21 Schedule F3-1. The most significant portion of these expenditures was
22 associated with a project referred to as Power Uprate / Moisture Separator
23 Heater. This project contributed \$19,386,000 to the extraordinary capital in

Line

No.

1 2005. This project will continue into the forecasted years and as such, will
2 be discussed in more detail later in my testimony.

3

4 **Q. Mr. Colonnello, how did you derive the capital requirements for the**
5 **forecasted years of 2006 through 2011 as noted on Line Item 22 - Total**
6 **Annual Capital Expenditures of Schedule F3-1?**

7 A. Actual capital expenditures in 2005 were used as a basis to derive
8 forecasted totals for years 2006 through 2011 as noted by Line Item 22.
9 Specifically, adjustments to the 2005 total as provided by Line Items 10
10 through 19 were used to develop the forecasted years.

11

12 **Q. Mr. Colonnello, will you please review those adjustments captured on**
13 **Line Items 10 through 19 on Exhibit DE-16, Schedule F3-1?**

14 A. Line Item 10 reflects an adjustment for economic inflation. The inflation
15 adjustment factor that was used is noted on Line Item 24. These are the
16 same inflation adjustment factors as previously discussed in my testimony.

17

18 **Q. Would you now explain the remaining adjustments captured on Line**
19 **Item 17 - Nuclear Fuel?**

20 A. Yes, DE-16, Schedule F3-1b, has been prepared to support discussion on
21 capital expenditures for nuclear fuel. Line Item 7 through 11 of this exhibit
22 provides the capital expenditures for the various components of nuclear fuel
23 by year through 2011.

24

Line
No.

1 **Q. Mr. Colonnello, Line Item 12 of Exhibit DE-16, Schedule F3-1b,**
2 **contains an item called Total Nuclear Fuel. Can you explain this?**

3 A. Yes I can. Line Item 12 of Exhibit DE-16, Schedule F3-1b, identifies the
4 annual capital expenditures associated with the purchase of nuclear fuel.
5 The expenditures cover the purchase of the uranium, the enrichment of the
6 fuel, the fabrication of the fuel and the conversion of the fuel. The amount
7 of fuel purchased is determined by the design of the fuel and by the
8 expected generation during the life of the fuel consistent with my nuclear
9 fuel expense projection discussed earlier. Nuclear fuel capital expenditures
10 are developed on a fuel cycle basis which is nominally 18 months. Years
11 2005, 2008 and 2011 are non-refueling years. The variable annual
12 expenses are due to new fuel delivery dates which are based on the
13 refueling outage dates. On a per fuel cycle basis, fuel expenditures are
14 rising due to escalation clauses in fuel contracts and the rise in uranium ore
15 and enrichment services which are market based commodity prices. Also,
16 for the same reasons as discussed earlier in connection with fuel expense, I
17 believe nuclear fuel capital to be prudent and reasonable. The total for
18 nuclear fuel capital is carried over to Exhibit DE-16, Schedule F3, Line Item
19 5.

20
21 **Q. What is the current status of Detroit Edison's uranium contracts?**

22 A. Detroit Edison has variable commitments which cover 100% of our uranium
23 ore and conversion requirements for Cycles 8 through 12 and options to
24 extend our current contracts to cover subsequent cycles.

Line
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1

2 **Q. What is the current status of the fabrication contract?**

3 A. The original nuclear fuel contract with General Electric was negotiated in
4 1971 and included the fabrication of the first core of 764 bundles (Cycle 1)
5 and the fabrication of the first reload of 220 fuel bundles (Cycle 2). The
6 current fabrication contract with General Electric was negotiated in 1989,
7 was amended in 1991 and again in 1997 to extend the commitment through
8 Cycle 11. It was amended again in 2003, and is currently extended through
9 Cycle 13 with an option to extend the contract.

10

11 **Q. What is the status of Detroit Edison's enrichment contract?**

12 A. Detroit Edison has variable commitments, which cover 100% of our
13 enrichment requirements for Cycles 8 through 13 and options to extend our
14 current contracts to cover subsequent cycles.

15

16 **Q. Mr. Colonnello, can you explain why the capital expenditures for
17 nuclear fuel increase so dramatically from 2005?**

18 A. The expenditures on Line Item 12 of Exhibit DE-16, Schedule F3-1b,
19 represent the payment made during each of the years for the purchase,
20 enrichment, conversion and fabrication of the fuel. The capital expenditures
21 for Cycle 11 fuel and previous fuel cycles were made prior to 2005. Since
22 2005 was a non-refuel outage year, some payments for Cycle 12 fuel were
23 made in 2005 with the remainder in 2006. The combined influence of
24 purchasing Cycle 12 fuel in 2005 and not refueling the plant until 2006
25 resulted in reduced expenditures for fuel in 2005 and 2006. Fuel expenses

Line
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1 for Cycle 13 will occur in 2007. As previously stated, fuel commodity prices
2 are rising so Cycle 13 expenses and beyond will be significantly higher than
3 Cycle 12 and prior cycle fuel expenditures.

4

5 **Q. Mr. Colonnello, in reviewing Exhibit DE-16, Schedule F3-1b, Line Item 6**
6 **- Total Extraordinary Capital, could you explain the overall trend**
7 **resulting in an increase of Capital between 2006 and 2009?**

8 A. This overall trend is primarily driven by three large projects. Those projects
9 are Power Uprate / Moisture Separator Heater, Security System Upgrade,
10 and expansion of onsite spent fuel storage.

11

12 **Q. Mr. Colonnello, the Power Uprate project as supported by Exhibit DE-**
13 **16, Schedule F3-1b, and Exhibit DE-6, Schedule F1, has significant**
14 **total project expenditures, could you describe this project and its**
15 **costs and benefits in further detail?**

16 A. Yes, Exhibit DE-16, Schedule F3-1b, Line Item 1 represents the capital
17 expenditures associated with the Power Uprate project. This project will
18 increase the licensed thermal power limit for Fermi 2 to 110% of the original
19 license. This project is expected to be implemented using a phased
20 approach during refueling outages 11 through 14, to be completed in 2011.
21 This approach is preferred since certain plant equipment will be modified or
22 replaced in support of this project. In addition, a new license submittal must
23 be prepared and approved by the NRC. To accomplish this effort within a
24 single refueling outage would result in an outage of excessive duration. We

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1 believe that by implementing this project over three fuel cycles, the needed
2 modifications can be absorbed within acceptable outage duration goals.
3 These modifications include replacement of the Moisture Separator
4 Reheater (MSR) system, numbers 4 and 5 feed water heaters, the high
5 pressure turbine and modifications to the low pressure turbines. It should
6 be noted that portions of these modifications are required regardless of the
7 decision to implement the Power Uprate project. At its completion, the
8 Power Uprate project is expected to result in 70 MW of additional generation
9 while avoiding significant emissions. Exhibit DE-6, Schedule F1 Line Items
10 1 and 13, identifies 4 MW of additional generation expected in 2006 with the
11 balance of 66 MW to occur in 2011.

12

13 **Q. Mr. Colonnello, are there any other benefits associated with the Power**
14 **Uprate project?**

15 A. Yes, most significant is that this project offers additional base capacity while
16 further increasing the fuel diversity of the existing generation portfolio. In
17 essence, diversification of fuel sources helps protect customers and Detroit
18 Edison from potentially unfavorable market conditions involving a single fuel
19 source.

20

21 **Q. Mr. Colonnello, could you now explain Line Item 3 - Security System**
22 **Upgrade as noted on Exhibit DE-16, Schedule F3-1b?**

23 A. Yes, the security system needed to support the Fermi 2 Security Plan
24 requires replacement. This project will focus on replacing out dated

Line
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1 technology with more modern reliable technology available in today's
2 market. The project involves replacing instrumentation and control systems
3 that have reliability and maintainability challenges. Maintainability of these
4 systems is dependent upon spare parts and in certain instances, industry
5 personnel who have expertise on this vintage of technology. Both of these
6 resources are quickly becoming non-existent. Therefore, it becomes
7 necessary to proactively change out these systems to ensure continued
8 security system reliability.

9

10 **Q. What has been the result of the reliability challenges experienced with**
11 **the existing security system?**

12 A. Compensatory actions are implemented when these reliability issues
13 surface. Allocating security personnel to implement compensatory actions
14 that otherwise would be avoided with a new system is considered an
15 unacceptable distraction in today's security sensitive environment. The
16 main focus of this project will be a change out of the security computer
17 system, protected area access equipment, and perimeter detection
18 equipment. This project will also consolidate security facilities.

19

20 **Q. Mr. Colonnello, is the Security System Upgrade project mandated by**
21 **the recently issued NRC Security Order?**

22 A. While the necessity of this project is not the direct result of the recently
23 issued NRC Security Order it does have a close nexus.

24

Line
No.

1 **Q. Mr. Colonnello, could you then explain Line Item 2 - Design Basis**
2 **Threat project?**

3 A. These are capital expenses that are specifically mandated by NRC Security
4 Orders. In 2004, we implemented \$12,155,000 of related expenditures.
5 Actual expenditures in 2005 and forecasted expenditures in 2006 are a
6 continuation of the 2004 effort. It is further anticipated that additional
7 modifications will be required for 2007 and possibly 2008. I would like to
8 emphasize that the need for additional modifications is pending further
9 analysis of the new threat criteria established by the NRC against existing
10 security barriers at Fermi 2. The results of that analysis should be
11 completed in 2006 and may result in additional expenses. Additionally,
12 Congress may impose further modifications under the Homeland Security
13 efforts. This represents additional cost risk. However, at this time, sufficient
14 information is not available to project the impact to Fermi 2.

15

16 **Q. Mr. Colonnello, the combination of expenses associated with Line Item**
17 **4 - Dry Cask Storage and Line Item 5 - Spent Fuel Pool of Exhibit DE-**
18 **16, Schedule F3-1b, represents a large portion of your capital portfolio.**
19 **Could you please explain these projects?**

20 A. As a result of the DOE delay in providing a spent fuel repository for
21 commercial nuclear reactors, on-site fuel storage in Fermi's spent fuel pool
22 is nearing capacity. Capital projects aimed at increasing the capacity of the
23 existing spent fuel pool are being implemented. In addition, a dry cask
24 storage system for spent nuclear fuel will be required before the end of this

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1 decade. Implementation of dry cask storage will entail a large capital
2 expense and will be required until shipping of Fermi 2 spent fuel to the DOE
3 repository commences. Even if shipments of spent fuel were to be
4 accepted at a national repository in the near future, because of Fermi 2's
5 place in the queue, the anticipated initial shipment date for Fermi 2's spent
6 fuel is currently in the year 2023. We believe that all costs associated with
7 on site spent fuel storage are necessary, reasonable and prudent because
8 lack of such storage would force premature shutdown of the plant. The
9 expenditures associated with on site spent fuel storage would be much less
10 than the cost of replacing this lost generation. The Company continues to
11 pursue both political and legal initiatives aimed at accelerating the DOE's
12 acceptance of Fermi 2's spent nuclear fuel.

13

14 **Q. Mr. Colonnello, what are your thoughts regarding the forecast of**
15 **capital expenditures for Fermi 2?**

16 A. I believe that the forecast of capital expenditures for Fermi 2 is reasonable
17 and prudent. I have previously covered forecasted expenses for nuclear
18 fuel and those associated with the extraordinary and base capital
19 expenditures and explained why they are reasonable and prudent. I believe
20 the forecast as depicted by Line Item 22 of Exhibit DE-16, Schedule F3-1,
21 accurately represents what I believe to be typical capital expenses that can
22 reasonably be expected in order to continue operation of any plant of similar
23 age and vintage. The summation of projects and related expenses inputting
24 to Line Item 22 reflects Detroit Edison's commitment to excellence in the

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1 safe and reliable operation of Fermi 2. Historically, sound capital
2 investments in Fermi 2 have contributed greatly to the significant
3 performance improvements achieved by the plant. This performance as
4 reflected on Exhibit DE-16, Schedule F5-1.3, could not have been achieved
5 without those past commitments. As I have mentioned previously, the
6 balance of the line items are prudent and reasonable considering the
7 regulations, goals and circumstances under which Fermi 2 operates.

8

9 **Q. Does this complete your testimony?**

10 A. Yes, it does.