

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the Matter of the Application of)
CONSUMERS ENERGY COMPANY)
for Adjustment of its Surcharges for)
Nuclear Power Plant Decommissioning)
for the Palisades Nuclear Plant)
_____)

Case No. U-14150

SETTLEMENT AGREEMENT

On June 18, 2004 Consumers Energy Company ("Consumers Energy") filed an application with the Michigan Public Service Commission ("Commission" or "MPSC") seeking approval for adjustment of surcharges for nuclear power plant decommissioning for the Palisades Nuclear Plant. Consumers Energy filed testimony and exhibits in support of its position.

The initial prehearing conference was held September 14, 2004 before Administrative Law Judge James N. Rigas. Parties to the case are Consumers Energy, the Commission Staff, Attorney General Michael A. Cox, the Association of Businesses Advocating Tariff Equity ("ABATE") and the Michigan Environmental Council/Public Interest Research Group in Michigan ("MEC/PIRGIM"). ABATE and MEC/PIRGIM interventions were granted on October 12, 2004.

For purposes of settling the issues in Case No. U-14150, pursuant to Rule 333(3) of the Commission's Rules of Practice and Procedure, and subject to the acceptance and approval of the Commission, the undersigned parties agree and stipulate as follows:

1. Consumers Energy funds external nuclear decommissioning trust funds established for decommissioning of the Palisades Nuclear Plant by charging, in its rates, surcharges for nuclear power plant decommissioning. Consumers Energy's rates currently

include nuclear decommissioning surcharges for the Palisades Plant approved by the MPSC in its December 16, 1999 Order in Case No. U-11662. In that case, the MPSC approved surcharges designed to recover approximately \$5,500,000 annually for Palisades Plant decommissioning through December 31, 2007, the year of the then-current expiration date of the facility operating license issued by the Nuclear Regulatory Commission ("NRC"). Subsequent to Case No. U-11662, the NRC approved a request by Consumers Energy to extend the license termination date from March 14, 2007 to March 24, 2011. The extension "recaptured" the approximately four-year construction period of the facility.

2. In its June 18, 2004 filing for this case Consumers Energy requested the MPSC (i) to increase the Palisades Plant nuclear decommissioning surcharges to levels designed to yield an annual recovery of \$25,141,740 based on projected 2006 sales levels, effective for electric service rendered on and after January 1, 2006, and (ii) to extend the surcharge collection period through December 31, 2011. Consumers Energy stated in its 2004 Report on the Adequacy of the Existing Provision for Nuclear Plant Decommissioning for the Palisades Plant that, based on sales projections, existing surcharges were estimated to generate \$6,121,900 of revenue in 2005.

3. In September 2004 Consumers Energy announced that it had decided to seek a 20-year license renewal from the NRC for the Palisades Plant. The outcome of that request, which Consumers Energy has indicated it expects to file in the first quarter of 2005, will likely not be known for some time.

4. Given the uncertainties that currently exist, the undersigned parties stipulate and agree:

(i) The currently effective Palisades nuclear decommissioning surcharges (which are set forth in Attachment A) should continue to be charged

to customers pursuant to the MPSC December 16, 1999 Order in Case No. U-11662;

(ii) Not later than March 31, 2007 Consumers Energy shall file a report on the adequacy of the Palisades decommissioning trusts to provide funds for decommissioning of the Palisades Nuclear Plant pursuant to the Decommissioning Funding Practices. If the Nuclear Regulatory Commission has not acted on Consumers' Palisades license renewal request by the time the report is filed, the report should evaluate funding requirements under two assumptions: no license extension and a license extension for an additional 20 years;

(iii) The surcharge collection period, which currently ends December 31, 2007, shall be extended through December 31, 2011 pending the Commission's review of item (ii) above;

(iv) If the report to be filed by Consumers Energy by March 31, 2007 concludes that recovery beyond 2011 is necessary for adequate funding of decommissioning, parties to this Settlement Agreement agree to evaluate extending collection of decommissioning surcharges for a reasonable period beyond 2011. The parties will not assert or rely upon any future denial of a license renewal by the NRC as a reason not to allow collection beyond 2011 even though they will retain their rights to dispute extending surcharges for any other reasons.

5. Section 468A of the Internal Revenue Code allows a tax deduction for payments made to a Section 468A trust, provided the taxpayer requests and secures a "Schedule of Ruling Amounts" from the Internal Revenue Service ("IRS"). The information which is needed to prepare a request for a revised Schedule of Ruling Amounts for the Palisades Plant subsequent to the issuance of an order approving this Settlement Agreement should remain the same as approved by the Commission in its December 16, 1999 order in Case No. U-11662 except that (i) the estimated date on which the plant will no longer be included in the cost of service should be revised to March 24, 2011, (ii) the estimated year in which substantial decommissioning costs will be first incurred should be revised to 2011, and (iii) the estimated costs of decommissioning should, accordingly, be assumed to be shifted four years in the future (e.g., the 2007 costs will apply in 2011, etc.).

6. This Settlement Agreement is entered into for the sole and express purpose of reaching a compromise among positions of parties. All offers of settlement and discussions relating to this settlement are, and shall be considered, privileged under MRE 408. If the Commission approves this Settlement Agreement without modification, neither the parties to this Settlement Agreement nor the Commission shall make any reference to, or use, this Settlement Agreement or the order approving it, as a reason, authority, rationale or example for taking any action or position or making any subsequent decision in any other case or proceeding; provided, however, such references may be made to enforce or implement the provisions of this Settlement Agreement and the order approving it.

7. This Settlement Agreement is based on the facts and circumstances of this case and is intended for final disposition of Case No. U-14150. So long as the Commission approves this Settlement Agreement without any modification, the undersigned parties agree not to appeal, challenge, or otherwise contest the Commission order approving this Settlement Agreement. Except as otherwise set forth herein, the undersigned parties agree and understand that this Settlement Agreement does not limit any party's right to take new and/or different positions on similar issues in other administrative proceedings, or appeals related thereto.



8. This Settlement Agreement is not severable. Each provision of this Settlement Agreement is dependent upon all other provisions of this Settlement Agreement. Failure to comply with any provision of this Settlement Agreement constitutes failure to comply with the entire Settlement Agreement. If the Commission rejects or modifies this Settlement Agreement or any provision of this Settlement Agreement, this Settlement Agreement shall be deemed to be withdrawn, shall not constitute any part of the record in this proceeding or be used

for any other purpose, and shall be without prejudice to the pre-negotiation positions of the parties.

9. The undersigned parties agree to waive Section 81 of the Administrative Procedures Act of 1969 (MCL 24.281), as it applies to the issues in this proceeding, if the Commission approves this Settlement Agreement without modification.



WHEREFORE, the parties hereto respectfully request the Commission approve
this Settlement Agreement and make it effective in accordance with its terms by final order.

MICHIGAN PUBLIC SERVICE
COMMISSION STAFF

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Date: January 3, 2005

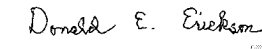
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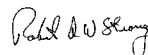
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Date: January __, 2005

Case No.: U-14150
Exhibit: A-1 (TLS-5)
Witness: TLSimonsen
Date: February, 2005
Page: 7 of 8

ATTACHMENT A

SURCHARGES**Rate Schedule**

Nuclear
Decommissioning
Surcharge
(Case No. U-14150)
Palisades
Effective

through
12/31/2011

Residential Rates \$.000158/kWh

| | |
|-----------|---------|
| Rate B | .000185 |
| Rate B-1 | .000134 |
| Rate C | .000160 |
| Rate D | .000143 |
| Rate F | .000143 |
| Rate GH | .000189 |
| Rate H | .000160 |
| Rate I | .000143 |
| Rate J | .000176 |
| Rate J-1 | .000176 |
| Rate CG | .000143 |
| Rate L-1 | .000124 |
| Rate L-2 | .000124 |
| Rate L-3 | .000124 |
| Rate L-4 | .000124 |
| Rate PA | NA |
| Rate PS-1 | .000138 |
| Rate PS-2 | .000100 |
| Rate PS-3 | .000138 |
| Rate R-1 | .000185 |
| Rate R-2 | .000160 |
| Rate R-3 | .000143 |
| Rate UR | .000117 |

Rates ROA-R, ROA-S, ROA-P

Surcharges are included in the applicable rate schedule

Case No.: U-14150
Exhibit: A-2 (TLS-2)
Witness: TLSimonsen
Date: February, 2005
Page: 1 of 73

CONSUMERS ENERGY COMPANY

**2004 Report on the Adequacy of
the Existing Provision for
Nuclear Plant Decommissioning**

Palisades Nuclear Plant

CONSUMERS ENERGY COMPANY

**2004 Report on the Adequacy of
the Existing Provision for
Nuclear Plant Decommissioning**

Palisades Nuclear Plant

**Prepared by
Thomas L Simonsen
Corporate Tax Manager
Consumers Energy Company**

March 2004

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- D. Administrative and Incidental Expenses.

1. FUND ADEQUACY

Revisions to the Decommissioning Funding Practices approved by the Michigan Public Service Commission (MPSC), in its April 10, 1996 order in Case No. U-10800 (Case U-10800) require Consumers Energy Company (Consumers or Company) to file with the MPSC a report on the adequacy of the existing annual decommissioning provision for Palisades Nuclear Plant (Palisades) by March 31, 1998 and at three-year intervals thereafter. This report is submitted in response to that provision of the MPSC's Decommissioning Funding Practices.

TLG Services, Inc. (TLG) prepared a site-specific cost study to determine the estimated cost to decommission Palisades. The estimated cost to decommission Palisades in 2003 dollars is \$868,014,000, excluding incremental spent nuclear fuel (SNF) costs. The decommissioning cost estimate for Palisades was estimated using the deferred decommissioning alternative (SAFSTOR), with a safe store period of approximately 14 years.

For purposes of evaluating fund adequacy, the Company has excluded, as it did in the 2001 report on fund adequacy, preliminary estimates of incremental SNF costs. The Company is attempting to recover costs for storing spent nuclear fuel through litigation in the United States Court of Claims.

The calculation of the adequacy of the Palisades annual decommissioning provision to provide funds for the decommissioning of Palisades is attached as Appendix A. This calculation takes into consideration the updated cost estimate, fund balances, projections of after-tax earning rates and inflation rates and the estimated 2004 decommissioning surcharge revenues. The assumptions used in evaluating fund adequacy are set forth in this report. Surcharges approved by the MPSC in Case No. U-11662 were calculated to initially yield \$5,500,000 annually based on estimated 1998 sales. Based on sales projections, the existing decommissioning surcharges are estimated to generate

\$5,983,231 of revenue in 2004 and \$6,121,900 of revenue in 2005 for funding nuclear decommissioning. These amounts were used in evaluating fund adequacy. On the basis of this calculation, Consumers has concluded that the existing surcharges approved by the MPSC's Order in Case U-11662 on December 16, 1999 need to be increased so as to recover approximately \$25 million annually.¹ Consumers Energy plans to file an application with the MPSC in the near future seeking an increase in surcharges for Palisades nuclear power plant decommissioning. The primary cause of this increase is lower than expected historical retruns.

¹ This assumes the increase is effective January 1, 2006 and continues through December 31, 2011

2. DECOMMISSIONING STUDY

TLG was requested in 2003 to prepare a site-specific decommissioning study for Palisades. The study was completed in March 2004. In March 2001 when the prior study was completed, the SAFSTOR alternative was chosen for Palisades. At that time there was uncertainty as to whether a low level radioactive waste (LLRW) facility will be available when Palisades undergoes its final shutdown and decommissioning operations begin. The Nuclear Regulatory Commission (NRC) in its Final Rule on the General Requirements for Decommissioning Nuclear Facilities as published in the June 27, 1988 Federal Register (53 FR 24018), defines SAFSTOR as follows:

SAFSTOR is the “alternative in which the nuclear facility is placed and maintained in a condition that allows the nuclear facility to be safely stored and subsequently decontaminated (deferred decontamination) to levels that permit release for unrestricted use.”

On December 14, 2000, the Company received approval from the NRC to continue to operate Palisades until March 2011 (see Section 5). The 7-years of expected operations remaining before the commencement of decommissioning continues to make it difficult and uncertain to predict the availability of LLRW facilities. As a result the SAFSTOR alternative has again been chosen by the Company for Palisades.

The estimated cost to decommission Palisades using SAFSTOR, excluding incremental SNF costs, in constant 2003 dollars is \$868,014,000. Appendix B contains the Executive Summary from TLG’s updated site-specific decommissioning cost estimate for Palisades and Table 3, which shows the annual expenditures.

3. INFLATION RATES

In the 2001 fund adequacy study, Consumers Energy assumed for purposes of calculating the Company's annual decommissioning provision that decommissioning costs would escalate for inflation at a weighted average inflation rate of 4.59% per year for Palisades. The Company has concluded that the escalation rates shown on Table 3.1 should be used in reviewing the adequacy of the annual decommissioning provision for purposes of this report. For the 2003 decommissioning cost estimate, TLG categorized decommissioning costs by Labor, Equipment & Material, Energy, Burial and Other. Individual annual rates of change were developed for each of these categories and are shown on the Decommissioning Funding Assumptions page of Appendix A.

The Company has projected the inflation factors shown in Table 3.1 for Employment Cost, the U.S. – CPI, Urban, Energy, Other Cost and Burial Cost.

TABLE 3.1 Projected annual rates of change:

| | |
|-------------------------------|-------|
| Employment Cost | 4.10% |
| U.S. – CPI, Urban | 3.05% |
| Energy | 2.77% |
| Other Cost | 3.58% |
| Burial Cost (B _x) | 7.18% |

Global Insight's "The U.S. Economy. The 25-Year Focus for the Summer of 2003" was used to develop the annual rates of change for Employment Cost, U.S. – CPI, Urban and Energy. The projected annual rate of change for Other Cost was developed by weighting the Employment Cost and U.S. – CPI, Urban by 50% and summing the results. The NRC's "Report on Waste Burial Charges", NUREG-1307 Revision 10 was used in developing the annual rate of change for Burial Cost.

The Company anticipates that labor costs will escalate at the same rate as Employment Cost, that equipment and materials will escalate at the same rate as the U.S. – CPI, Urban, that energy costs will escalate at the same rate as Energy and that others costs will escalate at the same rate as a combined Employment Cost and U.S. – CPI, Urban index. The Company anticipates that burial costs will increase at a rate similar to the average historical rate of change shown in the NRC's Report on Waste Burial Charges. These five major cost categories recognized in TLG's study were individually escalated to determine the future cost of decommissioning in year of expenditure dollars.

4. FUND EARNINGS RATES

Two separate external trusts were originally established for purposes of funding the decommissioning of Consumers Energy's Palisades nuclear power plant. One fund was a qualified Nuclear Decommissioning Reserve Fund, as defined in Section 468A of the Internal Revenue Code of 1954, as amended. The second was a Non-Section 468A Trust Fund.² The Company has reviewed projected fund earnings rates for each trust fund, recognizing investment risks and the continued use of the SAFSTOR alternative for Palisades and timing of decommissioning expenditures.

The projected rates of return for each trust fund for Palisades, as a result of this review are shown in Table 4.1. The rates of return for Palisades' Trust Funds reflects a target allocation of 45% equity and 55% fixed income until decommissioning starts and a 30% equity and 70% fixed income allocation until five years before the end spent fuel storage.

Table 4.1 Projected rates of return:

| | Earnings Rate |
|--|--------------------------|
| Section 468A Trust Funds (Equity): | 9.80% (before tax) |
| Section 468A Trust Funds (Fixed Income): | 5.60% (before tax) |
| Non-Section 468A Trust Funds | 4.85% (after tax) |

Table 4.3 shows the actual rates of return for the Palisades trust funds since their inception.

² A second Non-Section 468A Trust was established in 1997 for the Palisades plant to receive moneys related to Federal Energy Regulatory Commission decommissioning collection.

Table 4.3 Historical rates of return for the Palisades trust funds.

| <u>Year</u> | <u>Section 468A</u> | <u>Non-Section 468A</u> |
|-------------|---------------------|-------------------------|
| 1987 | 2.5% | (0.3)% |
| 1988 | 5.5% | 5.9% |
| 1989 | 8.4% | 8.3% |
| 1990 | 7.4% | 7.2% |
| 1991 | 10.0% | 9.9% |
| 1992 | 6.7% | 6.7% |
| 1993 | 7.1% | 7.1% |
| 1994 | (1.0)% | (1.6)% |
| 1995 | 23.7% | 16.7% |
| 1996 | 15.2% | 4.4% |
| 1997 | 24.0% | 6.6% |
| 1998 | 20.8% | 5.7% |
| 1999 | 13.0% | 0.6% |
| 2000 | (1.2)% | 8.4% |
| 2001 | (4.0)% | 5.4% |
| 2002 | (8.3)% | 9.5% |
| 2003 | 19.1% | 4.5% |

5. REMAINING LIFE OF NUCLEAR GENERATING UNIT

At the time of Case U-11662, the Company anticipated operating Palisades until its license expired on March 14, 2007. Subsequently, the Company applied for an extension of the expiration date to recapture the four-year construction period of the facility. The NRC granted approval on December 14, 2000.

The Commission approved, in Case U-11662, the continued collection of the annual decommissioning provision for Palisades until December 31, 2007 of the year of the then current expiration date of the NRC operating license. For Palisades, the new license expiration date is March 24, 2011.

Calculations in this report assume the continued funding of the Palisades decommissioning fund through December 31, 2011. Consumers Energy is planning to seek a revision to the tariff sheets to reflect an extension of the surcharge collection period through this date in the near future.³

³ The MPSC tariff sheets currently show the surcharge expiration date as December 31, 2007.

6. REQUIREMENTS OF OTHER TAXING AND/OR REGULATORY BODIES

In addition to the MPSC, four other regulatory or taxing bodies are involved in the regulation or taxing of the funds collected by the Company for the future decommissioning of Palisades:

- a. Federal Energy Regulatory Commission (FERC).
- b. Internal Revenue Service (IRS).
- c. Michigan Department of Treasury (MDT).
- d. Nuclear Regulatory Commission (NRC).

(a) Federal Energy Regulatory Commission

Prior to November 1997, amounts collected under the FERC jurisdiction for Palisades were placed in an internal depreciation reserve. In November 1997 Consumers set up an external decommissioning trust fund for the collection of the FERC jurisdictional portion of Palisades' decommissioning cost and transferred the balance of its internal depreciation reserve to the trust fund. Amounts collected under the FERC jurisdiction for Palisades are not part of this report. Since 1998, the Company has filed with FERC annual trustee reports on this trust fund, pursuant to 18 CFR §35.33. The FERC issued its final rule on Nuclear Plant Decommissioning Trust Fund Guidelines on June 16, 1995, in Docket No. RM94-14-000 and Order No. 580. This Order issued regulations allowing the "reasonable person" investment standard, but with specific FERC imposed restrictions on investments and asset allocation.

(b) Internal Revenue Service

Tax law generally prohibits an accrual basis taxpayer such as the Company from claiming a deduction for an anticipated expense until all events giving rise to the liability have taken place and the amount of the liability can be determined with reasonable accuracy. Thus, prior to passage of the

Tax Reform Act of 1984 (1984 P. L. 98-369), the Company could not take a current year tax deduction for the annual decommissioning provision.

To encourage utilities to set up reserve funds for the eventual decommissioning of nuclear plants, Congress, in the Tax Reform Act of 1984, added Section 468A to the Internal Revenue Code (IRC). Section 468A allows a tax deduction to be taken at the time contributions are made to a qualifying decommissioning fund. On February 29, 1988, the IRS promulgated final regulations interpreting Section 468A of the IRC (26 CFR 1.468A). Section 468A of the IRC and the corresponding regulations require a taxpayer to obtain a schedule of ruling amounts from the IRS before the taxpayer is allowed to take a tax deduction for those decommissioning funds placed in an external fund. The schedule of ruling amounts sets forth the annual amount of payments to a decommissioning trust for which the IRS will allow the taxpayer to take a current tax deduction (IRC 468A(d)(1)). The amount of the current year's tax deduction, as shown in the schedule of ruling amounts, is equal to the annual payments necessary to fund that portion of the taxpayer's nuclear decommissioning costs which bears the same ratio to the total decommissioning cost as the period for which the trust fund is in effect bears to the plant's estimated useful life (IRC 468A(d)(2)).

The Section 468A nuclear decommissioning trust fund is treated as a separate taxable entity under the IRC. Prior to 1994, the fund's gross income was taxed at the maximum corporate income tax rate (IRC 468A(e)(2)). The Energy Policy Act of 1992, which was signed into law on October 24, 1992, eliminated the "black lung" restrictions on the investment of qualified nuclear decommissioning trust assets effective for tax years beginning after December 31, 1992. Prior to this change in the law, qualified nuclear decommissioning trust assets could be invested in (1) public debt securities of the United States, (2) obligations of a state or local government which were not in default as to principal or interest, or (3) time or demand deposits in a bank or an insured credit union located in the United States. The Act also lowered the tax rate on qualified nuclear decommissioning trust income from 34% to 22% for tax years beginning in 1994 and 1995 and to 20% for tax years beginning after 1995.

After receiving the MPSC's Order, dated December 2, 1986, in Case No. U-8536, the Company established two decommissioning trust funds for Palisades. The first trust fund was a qualified trust fund, called the Section 468A Trust Fund, to receive those amounts approved by the IRS in its schedule of ruling amounts. The second trust fund was a non-qualified trust fund, called the Non-Section 468A Trust Fund, to receive all additional amounts collected for nuclear decommissioning. After setting up these trust funds, the Company applied for its initial schedule of ruling amounts from the IRS under IRC Section 468A. On August 26, 1988, the IRS issued its private-letter ruling for Palisades. This was subsequently revised after receiving the Commission's Orders in Cases U-9668 and U-10800.

The current revised schedule of ruling amounts was received after receiving the MPSC's Order in Case U-11662. On November 6, 2000 the IRS issued its private-letter rulings for Palisades (see Appendix C of this report), indicating the schedule of ruling amounts of \$1,929,002 annually. Table 7.1 shows a comparison of the annual decommissioning provision approved by the Commission and the IRS ruling amount.

Table 6.1 Comparison of the current annual decommissioning provision and ruling amount.

| <u>Plant</u> | <u>Annual Provision</u> | <u>Ruling Amount</u> |
|--------------|-------------------------|----------------------|
| Palisades | \$5,500,000 | \$1,929,002 |

Consumers Energy is required to file for a mandatory revision to the schedule of annual ruling amounts when the collection period is increased for ratemaking purposes (26 CFR 1.468A-3(h)(3)(iii)).

Section 468A(e)(2)(D) of the IRC requires a qualified decommissioning trust fund to be treated as if

it were a corporation. Therefore, the Company treats the Section 468A Trust Fund as a separate taxable corporation for federal income tax purposes that files its own federal income tax return.

The Non-Section 468A Trust Fund has been established and maintained as a grantor trust. A grantor trust's income, deductions, and credits are taken into account in computing taxable income of the grantor -- which in this case is the Company -- and, therefore, the grantor trust's income is included in the Company's federal income tax return.

(c) Michigan Department of Treasury

The Michigan Single Business Tax (SBT) applies to persons engaging in business activities in the state of Michigan (MCL 208.31). Michigan law provides that "person" means an individual, firm, bank, financial institution, limited partnership, copartnership, partnership, joint venture, association, corporation, receiver, estate, trust, or any other group or combination acting as a unit (MCL 208.6(1)).

Because the qualified trust is treated as a corporation for federal income tax purposes, the Company treats the Section 468A Trust Fund as a corporation for state tax purposes and files separate SBU return for the Section 468A Trust Fund.

Because the Non-Section 468A Trust Fund has been established and maintained as a grantor trust, its income, deductions, and credits are taken into account in computing taxable income of the grantor and, therefore, is included in the Company's SBT return.

(d) Nuclear Regulatory Commission

The NRC controls nuclear materials in this country. The established NRC regulations can be found in CFR Title 10, Chapter 1, which govern the use of nuclear materials. They include rules for licensing and monitoring the operation and decommissioning of nuclear power plants. The NRC requires numerous reports and filings from each licensee, while also monitoring the actions and procedures of each licensee. Following is a very broad overview of CFR Title 10, Chapter 1. Various Parts relate to certain types of nuclear material and the decommissioning of specific types of facilities.

Part 20 sets forth “Standards for Protection Against Radiation.” Included are some requirements for terminating licenses for various types of nuclear facilities. (See Subpart E of Part 20).

Part 30 governs the licensing of byproduct material. This part regulates some of the records that need to be filed with the NRC regarding the decommissioning process. It specifies how decommissioning should be handled and procedures required for obtaining the appropriate licenses for the decommissioning.

Part 40 governs the domestic licensing of source material. This part also regulates some of the records that need to be maintained and filed with the NRC regarding the decommissioning process. Similar to Part 30, this outlines the “financial assurance and record keeping for decommissioning.”

Part 50 is titled “Domestic Licensing of Production and Utilization Facilities.” It also regulates the reports and filings that must be maintained regarding decommissioning and the processes of such. Part 50 describes the way in which the licensee must fund its decommissioning plan. Part 50 regulates the decommissioning trust provisions.

Part 51, "Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions" does exactly that – it regulates and protects the environment. This part includes rules for protecting the environment when dealing with nuclear material.

"Domestic Licensing of Special Nuclear Material" is the title of Part 70. This Part also governs the funding and record keeping for decommissioning of certain types of licenses.

Part 72, "Licensing Requirements for the Independent Storage of Spent Nuclear Fuel, High-Level Radioactive Waste, and Reactor-Related Greater than Class C Waste" governs the licenses to "receive, transfer, and possess power reactor spent fuel, power reactor-related Greater than Class C (GTCC) waste, and other radioactive materials associated with spent fuel storage in an independent spent fuel storage installation."

In October 2003, the NRC's guide on "Assuring the Availability of Funds for Decommissioning Nuclear Reactors" was revised. The revision reflects changes in the NRC's regulations since the 1996 guide was originally issued. This revision, drafted by the NRC "provides guidance to licensees and applicants of nuclear power, research, and test reactors concerning methods acceptable to the NRC staff for complying with requirements in the rules regarding the amount of funds for decommissioning. It also provides guidance on the content and form of the financial assurance mechanisms in those rule amendments." This guide provides methods and procedures (that are acceptable to the NRC) for licensees to adhere to. It also provides overviews of information and data needed by the NRC to review licenses and permits.

7. ADMINISTRATIVE AND INCIDENTAL EXPENSES

The Master Trust Agreement, dated as of January 1, 1987, between Consumers and NBD Bank stated as follows in Article 6:

"All taxes of any kind that may be assessed or levied against or in respect of each Trust, including income taxes borne by the Company, if any, associated with income and transactions of each Trust, and all brokerage commissions incurred by each Trust shall be paid from the Assets of such Trust. All other reasonable expenses of administration, such as (but not limited to) the expenses incurred by the Trustee in connection with the administration of the Trusts, including fees and expenses of agents or attorneys employed by the Trustee (whether or not arising out of a judicial or administrative proceeding and whether or not incurred while it is acting as Trustee), such compensation to the Trustee as may be agreed upon from time to time between the Trustee and the Company on a basis no less favorable to the Company than that which the Trustee generally affords to like customers for like services, and all other proper charges and disbursements of the Trustee, shall be paid from the Assets."

During the first quarter of 1997, all nuclear decommissioning trust funds were transferred from National Bank of Detroit to State Street Bank and Trust Company (State Street). As of March 1, 1997 Consumers entered into a new Trust Agreement with State Street that states in Article 7:

"All taxes of any kind that may be assessed or levied against or in respect of each Trust, including income taxes borne by the Company, if any, associated with income and transactions of each Trust, and all brokerage commissions incurred by each Trust shall be paid from the Assets of such Trust. The Trustee shall cause appropriate federal and state tax returns with respect to each Section 468A Trust to be prepared and filed and shall cause to be prepared and filed such other federal and state tax returns as may be required with respect to income earned by or the assets of the Trusts hereunder. On direction of the Company, Trustee may pay taxes out of the Non-Section 468A Trusts or reimburse the Company for payment thereof. All other reasonable expenses of administration, such as (but not limited to) the expenses incurred by the Trustee in connection with the administration of the Trusts, including fees and expenses of agents or attorneys employed by the Trustee (whether or not arising out of a judicial or administrative proceeding and whether or not incurred while it is acting as Trustee), such compensation to the Trustee as may be agreed upon from time to time between the Trustee and the Company, and all other proper charges and disbursements of the Trustee, shall be paid from the Assets."

Appendix D summarizes the annual trustee fees and taxes paid by each trust since the 1998 Report. Interest income from trust fund assets invested in municipal bonds is not subject to Federal income

tax. However, the out-of-state interest income of the trust funds is subject to the Michigan SBT. Also, any gains or losses on the sale of municipal bonds are subject to both Federal income tax and the Michigan SBT. Dividend income and gains or losses on the sale of equity investments in the Palisades trusts are subject to both Federal income tax and the Michigan SBT. Investment Management fees were calculated based on the market value of the assets at the end of each quarter.

8. CONTROL OF DECOMMISSIONING COSTS

Consumers at present plans to be the “Decommissioning Operations Contractor” (DOC) during the decommissioning process from the planning stages, through execution to the final site restoration. As the DOC, Consumers will exercise control over all contractors and sub-contractors engaged in decommissioning activities at Palisades consistent with current and future Company policy and procedures and management direction on competitive bidding and contract administration.

Current Company policies require competitive bidding for purchases of materials and/or services over \$10,000, except for emergencies or where only one vendor can supply the goods or service. If competitive bids are not sought, the Company will document the reason why the competitive bidding procedure was not used. During the competitive bidding process, the qualifications of each contractor and sub-contractor will be reviewed to determine if they have the resources and expertise to complete the task or tasks on which they are bidding.

Consumers will utilize proven project management and controls techniques and state-of-the-art systems to control decommissioning costs including detailed, resource loaded schedules integrated with budget and cost control systems. The company will utilize the cost control system developed for the Big Rock Point Restoration Project or equivalent which will be based on the Work Breakdown Structure developed from the Project Estimate to track job cost and schedule performance against established budgets. Periodic management reviews of cost, schedule, and trend analyses will provide early identification of any potential problem areas enabling initiation of timely corrective measures.

There is uncertainty as to when the United States Department of Energy (DOE) will take possession of spent fuel. Consistent with the nuclear industry, Consumers is experiencing incremental dry fuel storage costs related to DOE’s failure to take possession of spent nuclear fuel as obligated to by

contract. A number of utilities have initiated litigation in the United States Court of Claims; Consumers Energy filed a complaint in 2002. If Consumers Energy's litigation against the DOE is successful, the Company anticipates future recoveries from the DOE. The recoveries will be used to pay the cost of SNF storage until the DOE takes possession as required by law. Consumers Energy can make no assurance that the litigation against the DOE will be successful.

The Decommissioning Cost Study includes a preliminary estimate of incremental SNF costs for information purposes. However, in light of the aforementioned, the incremental costs are not directly considered in the analysis of funding adequacy.⁴

For planning purposes, the Company has assumed that DOE will accept spent fuel from Palisades beginning in 2013. There are a number of uncertainties that could affect both the incremental and non-incremental dry fuel storage costs. These include the following:

1. Although the estimated costs included in the study are the most current available, they continue to be extremely volatile, due in part to a very limited number of qualified fabrication facilities in the industry and the technical and quality related manufacturing complexities associated with the fabrication of components. The probability of actual equipment costs being higher than estimated is far greater than being lower.
2. The study assumes fuel storage casks will be transferred from Palisades to DOE between 2013 and 2048. The actual rate at which DOE transfers fuel from site could potentially be longer.

⁴ The Company may include these costs in future analyses if deemed appropriate.

3. The most current DOE published information indicates the earliest a spent fuel storage repository will be available is 2010. Until such time as the facility is operational, risk exists that fuel may have to be stored at Palisades beyond the study basis.
4. Consumers is pursuing recovery of the dry fuel storage costs from DOE. However, there is no certainty the Company will be fully successful. Risk remains that at least a portion of the costs may not be recovered from DOE.

The company has taken these risks into consideration in developing the contingency.

Under decommissioning funding procedures established by the MPSC, reports on the fund adequacy will be filed at three-year intervals until the decommissioning process is completed. These spent fuel assumptions will be re-evaluated in light of any subsequent developments when the Company files its next report on the adequacy of the decommissioning trusts to provide funds for decommissioning its Palisades nuclear plant.

Appendix A
Annual Decommissioning Provision Calculation

CONSUMERS ENERGY COMPANY
Palisades Nuclear Plant
Decommissioning Funding Forecast Estimate
SAFSTOR - Plant Retirement in Year 2011

| (a) Year | (b) Decom. Expense | (c) Decommissioning Expenditures | | (d) Present Value Incremental SNF | (e) MPSC Amount | (f) Future Value Yr of Expend | (g) Annual Provision | (h) Section 468A Trust Fund | | | | (i) Calculation of Annual Funding | | | | (m) Non-Section 468A Trust Fund Earnings | (n) Decom Expenses | (o) Fund Bal @ End of Year | (p) Total Fund Balance | (q) Percent Equity |
|-------------|-----------------------|-------------------------------------|------------|--------------------------------------|--------------------|----------------------------------|-------------------------|--------------------------------|--------------|----------------|------------------------|--------------------------------------|---------------|----------------|-------------|---|-----------------------|-------------------------------|---------------------------|-----------------------|
| | | Decom. Amt Excludg Inhom'tal SNF | SNF | | | | | Fund Earnings | Tax Payments | Decom Expenses | Fund Bal @ End of Year | Annual Provision | Fund Earnings | Decom Expenses | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| 2003 | | | | | | | 1,929,002 | 26,590,939 | (1,996,464) | 0 | 314,068,235 | 4,054,229 | 7,995,976 | 0 | 162,838,376 | 476,906,611 | 45% | | | |
| 2004 | | | | | | | 1,929,002 | 28,901,531 | (2,103,765) | 0 | 360,218,480 | 4,192,868 | 8,583,774 | 0 | 174,888,581 | 515,480,293 | 45% | | | |
| 2005 | | | | | | | 25,141,740 | 31,782,160 | (1,899,118) | 0 | 424,243,262 | 0 | 9,101,765 | 0 | 187,665,253 | 556,863,733 | 45% | | | |
| 2006 | | | | | | | 25,141,740 | 36,077,763 | (2,549,074) | 0 | 482,913,691 | 0 | 9,543,200 | 0 | 196,767,018 | 621,010,280 | 45% | | | |
| 2007 | | | | | | | 25,141,740 | 40,584,572 | (2,595,351) | 0 | 546,044,652 | 0 | 9,939,919 | 0 | 206,310,218 | 689,223,909 | 45% | | | |
| 2008 | 8,697,500 | 2,334,500 | 6,363,000 | 2,287,103 | 0 | 2,726,875 | 25,141,740 | 45,586,873 | (4,000,200) | 0 | 612,773,065 | 0 | 10,355,878 | 0 | 213,523,262 | 759,567,914 | 45% | | | |
| 2009 | 0 | 0 | 0 | 0 | 0 | 0 | 25,141,740 | 50,576,421 | (3,439,618) | 0 | 685,051,608 | 0 | 10,858,138 | 0 | 223,879,140 | 836,652,205 | 45% | | | |
| 2010 | 0 | 0 | 0 | 0 | 0 | 0 | 25,141,740 | 56,360,218 | (9,427,317) | 0 | 757,126,249 | 0 | 9,694,778 | 0 | 234,737,278 | 919,788,886 | 45% | | | |
| 2011 | 52,735,916 | 52,172,393 | 563,523 | 51,113,137 | 69,689,884 | 69,689,884 | 25,141,740 | 59,697,768 | (10,590,187) | 0 | 806,473,630 | 0 | 6,773,668 | 0 | 174,742,172 | 931,868,421 | 45% | | | |
| 2012 | 52,051,326 | 50,907,703 | 1,443,623 | 49,960,214 | 70,157,635 | 70,157,635 | 25,141,740 | 62,446,216 | (9,289,457) | 0 | 859,630,589 | 0 | 4,580,248 | 0 | 111,368,005 | 917,631,856 | 45% | | | |
| 2013 | 28,085,587 | 23,754,874 | 4,330,713 | 23,272,579 | 33,839,814 | 33,839,814 | 25,141,740 | 65,836,391 | (10,719,623) | 0 | 915,287,357 | 0 | 3,129,802 | 0 | 82,098,439 | 941,729,028 | 45% | | | |
| 2014 | 28,085,587 | 23,754,874 | 4,330,713 | 23,272,579 | 35,132,871 | 35,132,871 | 25,141,740 | 69,330,003 | (9,663,042) | 0 | 974,954,318 | 0 | 1,545,088 | 0 | 50,095,370 | 965,362,727 | 45% | | | |
| 2015 | 28,085,587 | 23,754,874 | 4,330,713 | 23,272,579 | 36,475,758 | 36,475,758 | 25,141,740 | 72,798,414 | (11,931,507) | (22,809,466) | 1,013,012,759 | 0 | 0 | 0 | 15,164,700 | 990,119,018 | 45% | | | |
| 2016 | 28,162,534 | 23,819,956 | 4,342,578 | 23,336,339 | 37,974,166 | 37,974,166 | 25,141,740 | 74,780,667 | (11,949,170) | (22,809,466) | 1,036,525,412 | 0 | 0 | 0 | 0 | 1,013,012,759 | 45% | | | |
| 2017 | 28,085,587 | 23,754,874 | 4,330,713 | 23,272,579 | 39,318,944 | 39,318,944 | 25,141,740 | 76,499,296 | (12,352,463) | (98,316,844) | 1,036,525,412 | 0 | 0 | 0 | 0 | 1,036,525,412 | 45% | | | |
| 2018 | 28,085,587 | 23,754,874 | 4,330,713 | 23,272,579 | 40,823,148 | 40,823,148 | 25,141,740 | 78,860,418 | (11,151,100) | (108,658,565) | 1,059,849,097 | 0 | 0 | 0 | 0 | 1,059,849,097 | 45% | | | |
| 2019 | 14,852,291 | 10,521,578 | 4,330,713 | 10,307,958 | 18,999,880 | 18,999,880 | 25,141,740 | 82,751,598 | (11,665,183) | (118,658,850) | 1,108,668,565 | 0 | 0 | 0 | 0 | 1,108,668,565 | 45% | | | |
| 2020 | 7,285,968 | 5,734,445 | 1,551,423 | 5,618,019 | 10,423,046 | 10,423,046 | 25,141,740 | 87,329,910 | (11,665,183) | (10,423,046) | 1,169,926,767 | 0 | 0 | 0 | 0 | 1,169,926,767 | 45% | | | |
| 2021 | 7,265,962 | 5,718,778 | 1,547,184 | 5,602,669 | 10,780,806 | 10,780,806 | 25,141,740 | 92,176,511 | (12,370,458) | (10,780,806) | 1,234,780,688 | 0 | 0 | 0 | 0 | 1,234,780,688 | 45% | | | |
| 2022 | 7,265,962 | 5,718,778 | 1,547,184 | 5,602,668 | 11,181,581 | 11,181,581 | 25,141,740 | 97,305,126 | (13,082,512) | (11,181,581) | 1,303,405,160 | 0 | 0 | 0 | 0 | 1,303,405,160 | 45% | | | |
| 2023 | 7,285,968 | 5,734,445 | 1,551,423 | 5,618,019 | 11,597,443 | 11,597,443 | 25,141,740 | 102,732,043 | (13,836,011) | (11,597,443) | 1,376,030,331 | 0 | 0 | 0 | 0 | 1,376,030,331 | 45% | | | |
| 2024 | 42,839,714 | 41,292,937 | 1,546,777 | 40,454,565 | 95,832,311 | 95,832,311 | 25,141,740 | 106,157,502 | (57,277,718) | (12,061,931) | 1,452,864,432 | 0 | 0 | 0 | 0 | 1,452,864,432 | 45% | | | |
| 2025 | 99,118,939 | 97,571,873 | 1,547,066 | 95,590,871 | 258,501,135 | 258,501,135 | 25,141,740 | 89,288,563 | (27,115,357) | (95,266,646) | 1,406,477,570 | 0 | 0 | 0 | 0 | 1,406,477,570 | 30% | | | |
| 2026 | 101,383,522 | 99,835,649 | 1,547,873 | 97,808,684 | 310,875,977 | 310,875,977 | 25,141,740 | 74,326,265 | (27,446,112) | (258,501,135) | 1,210,149,641 | 0 | 0 | 0 | 0 | 1,210,149,641 | 30% | | | |
| 2027 | 77,949,997 | 76,399,084 | 1,550,913 | 74,847,954 | 258,695,546 | 258,695,546 | 25,141,740 | 57,679,307 | (22,307,911) | (310,875,977) | 946,153,817 | 0 | 0 | 0 | 0 | 946,153,817 | 30% | | | |
| 2028 | 77,949,997 | 76,399,084 | 1,550,913 | 74,847,954 | 271,907,749 | 271,907,749 | 25,141,740 | 41,986,949 | (20,606,319) | (258,695,546) | 722,835,667 | 0 | 0 | 0 | 0 | 722,835,667 | 30% | | | |
| 2029 | 35,511,662 | 33,899,484 | 1,612,178 | 33,211,223 | 95,832,311 | 95,832,311 | 25,141,740 | 29,731,208 | (9,602,479) | (271,907,749) | 472,308,548 | 0 | 0 | 0 | 0 | 472,308,548 | 30% | | | |
| 2030 | 48,335,780 | 46,470,323 | 1,865,457 | 45,526,836 | 128,052,986 | 128,052,986 | 25,141,740 | 23,622,923 | (10,374,080) | (95,832,311) | 396,544,966 | 0 | 0 | 0 | 0 | 396,544,966 | 30% | | | |
| 2031 | 23,976,796 | 22,036,092 | 1,940,704 | 21,968,693 | 62,690,622 | 62,690,622 | 25,141,740 | 17,576,913 | (6,052,879) | (128,052,986) | 281,740,823 | 0 | 0 | 0 | 0 | 281,740,823 | 30% | | | |
| 2032 | 5,969,121 | 3,982,337 | 1,986,784 | 3,901,484 | 11,207,456 | 11,207,456 | 25,141,740 | 15,507,269 | (3,031,191) | (62,690,225) | 230,576,632 | 0 | 0 | 0 | 0 | 230,576,632 | 30% | | | |
| 2033 | 5,969,121 | 3,982,337 | 1,986,784 | 3,901,484 | 11,500,983 | 11,500,983 | 25,141,740 | 15,590,496 | (3,031,191) | (11,207,456) | 231,845,254 | 0 | 0 | 0 | 0 | 231,845,254 | 30% | | | |
| 2034 | 5,969,121 | 3,982,337 | 1,986,784 | 3,901,484 | 12,024,273 | 12,024,273 | 25,141,740 | 15,631,642 | (3,090,229) | (11,500,983) | 232,760,238 | 0 | 0 | 0 | 0 | 232,760,238 | 30% | | | |
| 2035 | 5,969,121 | 3,982,337 | 1,986,784 | 3,901,484 | 12,488,865 | 12,488,865 | 25,141,740 | 15,654,134 | (3,121,511) | (11,606,683) | 233,277,378 | 0 | 0 | 0 | 0 | 233,277,378 | 30% | | | |
| 2036 | 5,965,475 | 3,983,248 | 1,982,227 | 3,912,173 | 12,900,622 | 12,900,622 | 25,141,740 | 15,645,626 | (3,145,166) | (12,488,865) | 233,321,036 | 0 | 0 | 0 | 0 | 233,321,036 | 30% | | | |
| 2037 | 5,969,121 | 3,982,337 | 1,986,784 | 3,901,484 | 13,362,464 | 13,362,464 | 25,141,740 | 15,695,265 | (3,166,255) | (12,900,622) | 232,920,854 | 0 | 0 | 0 | 0 | 232,920,854 | 30% | | | |
| 2038 | 5,969,121 | 3,982,337 | 1,986,784 | 3,901,484 | 13,840,841 | 13,840,841 | 25,141,740 | 15,728,546 | (3,182,353) | (13,362,464) | 231,997,400 | 0 | 0 | 0 | 0 | 231,997,400 | 30% | | | |
| 2039 | 5,965,475 | 3,983,248 | 1,982,227 | 3,912,173 | 14,375,620 | 14,375,620 | 25,141,740 | 15,741,063 | (3,194,945) | (11,606,683) | 230,502,742 | 0 | 0 | 0 | 0 | 230,502,742 | 30% | | | |
| 2040 | 5,965,475 | 3,983,248 | 1,982,227 | 3,912,173 | 14,848,584 | 14,848,584 | 25,141,740 | 15,749,676 | (3,197,262) | (14,375,620) | 228,343,240 | 0 | 0 | 0 | 0 | 228,343,240 | 30% | | | |
| 2041 | 5,969,121 | 3,982,337 | 1,986,784 | 3,901,484 | 15,311,199 | 15,311,199 | 25,141,740 | 15,749,676 | (3,197,262) | (14,848,584) | 225,546,070 | 0 | 0 | 0 | 0 | 225,546,070 | 30% | | | |
| 2042 | 5,969,121 | 3,982,337 | 1,986,784 | 3,901,484 | 15,831,846 | 15,831,846 | 25,141,740 | 15,042,926 | (3,195,361) | (15,381,199) | 222,012,406 | 0 | 0 | 0 | 0 | 222,012,406 | 30% | | | |
| 2043 | 5,969,121 | 3,982,337 | 1,986,784 | 3,901,484 | 16,347,418 | 16,347,418 | 25,141,740 | 14,785,122 | (3,186,407) | (15,931,846) | 217,679,275 | 0 | 0 | 0 | 0 | 217,679,275 | 30% | | | |
| 2044 | 5,965,475 | 3,983,248 | 1,982,227 | 3,912,173 | 16,847,418 | 16,847,418 | 25,141,740 | 14,470,656 | (3,171,888) | (16,547,418) | 212,430,625 | 0 | 0 | 0 | 0 | 212,430,625 | 30% | | | |
| 2045 | 5,969,121 | 3,982,337 | 1,986,784 | 3,901,484 | 17,092,985 | 17,092,985 | 25,141,740 | 14,095,347 | (3,190,118) | (16,547,418) | 195,626,869 | 0 | 0 | 0 | 0 | 195,626,869 | 0% | | | |
| 2046 | 5,969,121 | 3,982,337 | 1,986,784 | 3,901,484 | 17,704,914 | 17,704,914 | 25,141,740 | 10,459,367 | (2,250,856) | (17,704,914) | 186,130,466 | 0 | 0 | 0 | 0 | 186,130,466 | 0% | | | |
| 2047 | 5,969,121 | 3,982,337 | 1,986,784 | 3,901,484 | 18,338,750 | 18,338,750 | 25,141,740 | 9,909,821 | (2,132,593) | (17,704,914) | 175,568,944 | 0 | 0 | 0 | 0 | 175,568,944 | 0% | | | |
| 2048 | 22,433,547 | 20,441,484 | 1,992,063 | 20,026,461 | 85,753,990 | 85,753,990 | 25,141,740 | 7,110,258 | (97,200,114) | (18,338,750) | 83,946,960 | 0 | 0 | 0 | 0 | 83,946,960 | 0% | | | |
| 2049 | 6,155,314 | 7,253,096 | 902,218 | 7,105,836 | 902,218 | 902,218 | 25,141,740 | 2,300,030 | (494,966) | (85,753,990) | 34 | 0 | 0 | 0 | 34 | 34 | 0% | | | |
| | 960,325,290 | 868,013,877 | 92,311,413 | 850,39 | | | | | | | | | | | | | | | | |

CONSUMERS ENERGY COMPANY

| | | |
|-------------|---------------|---------------|
| Grand Total | 2,007,464,710 | (415,913,041) |
|-------------|---------------|---------------|

| | | |
|-------------|---------------|---------------|
| Grand Total | 2,007,464,710 | (415,913,041) |
|-------------|---------------|---------------|

CONSUMERS ENERGY COMPANY
Palladas Nuclear Plant
Section 468A Transfer from Equity to Fixed Income
SAFSTOR - Plant Retirement in Year 2011

| (a) Year | (b) | | | | (c) | | | | (d) | | (e) | | (f) | | (g) | | (h) | | (i) | | (j) | | (k) Tax on Realized Market Value | (l) After Transfer Unrealized Market Value |
|-------------|---------------------|----------------------|---------------------|-------------------|----------------------|---------------------|-------------------|----------------------------|-----------------------|----------------------------|--------------|----------------------------|-----------------------|----------------------------|------------|----------------------------|-----------------------|----------------------------|------------|----------------------------|-----------------------|----------------------------|---|---|
| | Fixed Fund Value | Equity Fund Value | Total Fund Value | Equity Percent | Equity Fund Value | Total Fund Value | Equity Percent | Unrealized Market Value | Transfer Amount BT | Unrealized Market Value | Transfered | Unrealized Market Value | Transfer Amount BT | Unrealized Market Value | Transfered | Unrealized Market Value | Transfer Amount BT | Unrealized Market Value | Transfered | Unrealized Market Value | Transfer Amount BT | Unrealized Market Value | | |
| 2003 | | | | 45% | | | | | | | | | | | | | | | | | | | | 93,589,390 |
| 2004 | 104,090,360 | 237,044,124 | 341,134,484 | 45% | 68% | 341,134,484 | 69.49% | 110,395,209 | (5,415,690) | (2,522,173) | (542,772) | 107,873,036 | | | | | | | | | | | | |
| 2005 | 113,752,084 | 255,984,628 | 369,736,712 | 45% | 68% | 369,736,712 | 69.23% | 126,032,706 | (4,891,171) | (2,408,143) | (518,232) | 123,624,563 | | | | | | | | | | | | |
| 2006 | 143,755,964 | 280,547,070 | 424,303,034 | 45% | 66% | 424,303,034 | 66.12% | 143,310,290 | (543,731) | (277,751) | (59,772) | 143,032,539 | | | | | | | | | | | | |
| 2007 | 171,018,583 | 312,256,122 | 483,274,705 | 45% | 64% | 483,274,705 | 64.61% | 164,994,801 | (3,175,041) | (1,677,576) | (361,014) | 163,307,225 | | | | | | | | | | | | |
| 2008 | 201,911,832 | 344,149,288 | 546,061,120 | 45% | 63% | 546,061,120 | 63.02% | 187,539,182 | (140,424) | (76,522) | (16,468) | 187,462,660 | | | | | | | | | | | | |
| 2009 | 231,354,506 | 382,458,919 | 613,813,425 | 45% | 61% | 613,813,425 | 62.31% | 214,432,955 | (8,622,525) | (4,834,385) | (1,040,360) | 209,596,570 | | | | | | | | | | | | |
| 2010 | 269,877,139 | 415,174,469 | 685,051,608 | 45% | 61% | 685,051,608 | 60.60% | 238,907,344 | 0 | 0 | 0 | 238,907,344 | | | | | | | | | | | | |
| 2011 | 302,177,404 | 450,515,062 | 752,692,466 | 45% | 55% | 752,692,466 | 60.38% | 271,457,022 | (43,879,391) | (25,965,319) | (5,566,217) | 245,591,703 | | | | | | | | | | | | |
| 2012 | 355,454,730 | 456,976,003 | 812,430,733 | 45% | 51% | 812,430,733 | 56.25% | 278,255,940 | (45,459,768) | (27,680,776) | (5,956,903) | 250,575,164 | | | | | | | | | | | | |
| 2013 | 412,315,507 | 451,360,883 | 863,676,390 | 45% | 49% | 863,676,390 | 52.26% | 282,838,037 | (30,001,870) | (18,800,189) | (4,045,801) | 264,037,848 | | | | | | | | | | | | |
| 2014 | 457,533,086 | 462,156,678 | 919,689,764 | 45% | 47% | 919,689,764 | 50.25% | 297,072,394 | (31,825,473) | (20,457,282) | (4,402,407) | 276,615,112 | | | | | | | | | | | | |
| 2015 | 506,269,393 | 471,997,594 | 978,266,987 | 45% | 46% | 978,266,987 | 48.25% | 310,353,078 | (23,410,977) | (15,393,445) | (3,312,669) | 294,959,633 | | | | | | | | | | | | |
| 2016 | 526,190,239 | 492,020,367 | 1,018,210,606 | 45% | 45% | 1,018,210,606 | 48.32% | 330,128,823 | (35,999,609) | (24,154,495) | (5,198,047) | 305,974,328 | | | | | | | | | | | | |
| 2017 | 541,288,070 | 500,174,731 | 1,041,462,801 | 45% | 45% | 1,041,462,801 | 48.03% | 341,726,371 | (33,581,364) | (22,943,258) | (4,937,389) | 318,783,113 | | | | | | | | | | | | |
| 2018 | 553,259,662 | 511,770,803 | 1,065,030,465 | 45% | 45% | 1,065,030,465 | 48.05% | 355,364,033 | (34,874,023) | (24,076,990) | (5,181,368) | 331,287,043 | | | | | | | | | | | | |
| 2019 | 589,048,419 | 523,281,198 | 1,112,329,617 | 45% | 45% | 1,112,329,617 | 47.04% | 368,691,430 | (24,277,844) | (17,105,262) | (3,681,052) | 351,586,168 | | | | | | | | | | | | |
| 2020 | 625,786,301 | 547,329,823 | 1,173,116,124 | 45% | 45% | 1,173,116,124 | 46.66% | 390,708,815 | (20,761,406) | (14,820,432) | (3,189,357) | 375,888,383 | | | | | | | | | | | | |
| 2021 | 660,615,470 | 577,552,878 | 1,238,168,348 | 45% | 45% | 1,238,168,348 | 46.65% | 417,171,347 | (21,793,894) | (15,741,915) | (3,387,660) | 401,429,432 | | | | | | | | | | | | |
| 2022 | 697,436,603 | 609,569,791 | 1,307,006,394 | 45% | 45% | 1,307,006,394 | 46.64% | 445,000,596 | (22,923,006) | (16,734,358) | (3,601,234) | 428,266,578 | | | | | | | | | | | | |
| 2023 | 736,406,756 | 643,448,273 | 1,379,855,029 | 45% | 45% | 1,379,855,029 | 46.63% | 474,259,686 | (24,113,058) | (17,772,759) | (3,824,698) | 456,496,927 | | | | | | | | | | | | |
| 2024 | 777,623,973 | 679,301,728 | 1,456,925,701 | 45% | 45% | 1,456,925,701 | 46.63% | 505,042,808 | (25,383,649) | (18,872,069) | (4,061,269) | 486,170,739 | | | | | | | | | | | | |
| 2025 | 762,572,125 | 717,233,043 | 1,453,932,056 | 30% | 30% | 1,453,932,056 | 49.33% | 537,437,917 | (294,284,231) | (220,513,410) | (47,454,486) | 316,924,507 | | | | | | | | | | | | |
| 2026 | 562,572,125 | 463,900,408 | 1,026,472,533 | 30% | 30% | 1,026,472,533 | 37.82% | 350,083,694 | (100,509,640) | (75,849,871) | (16,322,892) | 274,233,823 | | | | | | | | | | | | |
| 2027 | 566,265,620 | 398,575,715 | 964,841,335 | 30% | 30% | 964,841,335 | 41.31% | 302,723,659 | (114,333,589) | (66,837,911) | (18,687,518) | 215,885,748 | | | | | | | | | | | | |
| 2028 | 426,621,690 | 311,763,585 | 738,385,275 | 30% | 30% | 738,385,275 | 42.22% | 238,170,330 | (94,583,395) | (72,256,541) | (15,549,608) | 165,913,789 | | | | | | | | | | | | |
| 2029 | 249,995,870 | 238,208,445 | 488,204,315 | 30% | 30% | 488,204,315 | 48.79% | 182,940,716 | (96,179,060) | (73,864,158) | (15,895,567) | 109,076,558 | | | | | | | | | | | | |
| 2030 | 246,856,367 | 155,781,238 | 402,637,605 | 30% | 30% | 402,637,605 | 38.69% | 120,211,662 | (36,688,648) | (28,311,518) | (6,092,639) | 91,900,144 | | | | | | | | | | | | |
| 2031 | 158,779,201 | 130,623,611 | 289,402,812 | 30% | 30% | 289,402,812 | 45.14% | 101,237,003 | (45,939,010) | (35,604,036) | (7,661,989) | 65,632,967 | | | | | | | | | | | | |
| 2032 | 141,648,801 | 92,884,103 | 234,532,904 | 30% | 30% | 234,532,904 | 39.60% | 72,272,240 | (23,627,282) | (18,384,164) | (3,956,272) | 53,888,076 | | | | | | | | | | | | |
| 2033 | 156,955,890 | 75,962,543 | 232,918,433 | 30% | 30% | 232,918,433 | 32.61% | 59,317,810 | (6,386,227) | (4,986,892) | (1,073,179) | 54,330,918 | | | | | | | | | | | | |
| 2034 | 157,536,686 | 76,312,973 | 233,849,659 | 30% | 30% | 233,849,659 | 32.63% | 59,785,701 | (6,461,817) | (5,062,367) | (1,089,421) | 54,723,334 | | | | | | | | | | | | |
| 2035 | 157,780,242 | 76,614,424 | 234,394,666 | 30% | 30% | 234,394,666 | 32.69% | 60,199,664 | (6,607,536) | (5,191,861) | (1,117,288) | 55,007,803 | | | | | | | | | | | | |
| 2036 | 157,862,732 | 76,785,235 | 234,647,967 | 30% | 30% | 234,647,967 | 32.75% | 60,496,343 | (6,764,821) | (5,329,803) | (1,146,931) | 55,166,740 | | | | | | | | | | | | |
| 2037 | 157,293,174 | 76,800,290 | 234,093,464 | 30% | 30% | 234,093,464 | 32.81% | 60,656,356 | (6,889,187) | (5,448,932) | (1,172,610) | 55,207,424 | | | | | | | | | | | | |
| 2038 | 156,528,177 | 76,669,207 | 233,197,384 | 30% | 30% | 233,197,384 | 32.86% | 60,687,670 | (7,044,560) | (5,576,136) | (1,199,984) | 55,111,534 | | | | | | | | | | | | |
| 2039 | 155,363,856 | 76,365,983 | 231,729,839 | 30% | 30% | 231,729,839 | 32.96% | 60,570,106 | (7,189,159) | (5,702,122) | (1,227,097) | 54,867,984 | | | | | | | | | | | | |
| 2040 | 153,724,483 | 75,874,801 | 229,599,284 | 30% | 30% | 229,599,284 | 33.05% | 60,291,447 | (7,345,214) | (5,836,636) | (1,256,044) | 54,454,811 | | | | | | | | | | | | |
| 2041 | 151,661,376 | 75,164,896 | 226,826,272 | 30% | 30% | 226,826,272 | 33.14% | 59,827,531 | (7,473,948) | (5,948,892) | (1,280,202) | 53,878,639 | | | | | | | | | | | | |
| 2042 | 149,073,473 | 74,245,056 | 223,318,529 | 30% | 30% | 223,318,529 | 33.25% | 59,185,609 | (7,613,658) | (6,069,347) | (1,306,123) | 53,116,262 | | | | | | | | | | | | |
| 2043 | 145,927,878 | 73,082,916 | 219,010,794 | 30% | 30% | 219,010,794 | 33.37% | 58,340,164 | (7,750,919) | (6,187,354) | (1,331,519) | 52,152,810 | | | | | | | | | | | | |
| 2044 | 142,131,721 | 71,657,703 | 213,789,424 | 30% | 30% | 213,789,424 | 33.52% | 57,274,839 | (7,899,723) | (6,314,120) | (1,358,798) | 50,960,719 | | | | | | | | | | | | |
| 2045 | 137,738,037 | 69,531,283 | 207,269,320 | 0% | 0% | 207,269,320 | 33.67% | 55,959,345 | (69,531,283) | (55,959,345) | (12,042,451) | 0 | | | | | | | | | | | | |
| 2046 | 186,130,466 | 0 | 186,130,466 | 0% | 0% | 186,130,466 | 0.00% | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | | | |
| 2047 | 175,568,944 | 0 | 175,568,944 | 0% | 0% | 175,568,944 | 0.00% | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | | | |
| 2048 | 83,948,960 | 0 | 83,948,960 | 0% | 0% | 83,948,960 | 0.00% | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | | | |
| 2049 | 34 | 0 | 34 | 0% | 0% | 34 | 0.00% | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | | | |

CONSUMERS ENERGY COMPANY
Palisades Nuclear Plant
Decommissioning Expenditure Forecast
SAFSTOR - Plant Retirement in Year 2011

| (a) | (b) | Total Decommissioning Cost | | | | | (g) | Preliminary Incremental Spent Nuclear Fuel | | | | | (m) | | | | | | |
|------|-------------|----------------------------|------------|------------|-------------|-------------|-------------|--|-----|-------------|-------|-----|-----|-----|------------|------------|--------|--------|-------|
| | | Equipment & | | (c) | (d) | (e) | | (f) | (h) | Equipment & | | (j) | | (k) | (l) | | | | |
| | | Labor | Material | | | | | | | Material | Labor | | | | | Material | Energy | Burial | Other |
| Year | | | | | | | | | | | | | | | | | | | |
| 2008 | 0 | 0 | 0 | 0 | 0 | 8,697,500 | 8,697,500 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6,363,000 | 6,363,000 | 0 | 0 | 0 |
| 2009 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2010 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2011 | 31,769,717 | 4,089,444 | 950,560 | 1,395,089 | 14,531,106 | 52,735,916 | 52,735,916 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 563,523 | 563,523 | 0 | 0 | 0 |
| 2012 | 31,336,761 | 5,504,363 | 1,103,368 | 1,252,606 | 12,854,228 | 52,051,326 | 52,051,326 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,443,623 | 1,443,623 | 0 | 0 | 0 |
| 2013 | 11,754,172 | 67,192 | 905,347 | 28,507 | 15,330,369 | 28,085,587 | 28,085,587 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4,330,713 | 4,330,713 | 0 | 0 | 0 |
| 2014 | 11,754,172 | 67,192 | 905,347 | 28,507 | 15,330,369 | 28,085,587 | 28,085,587 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4,330,713 | 4,330,713 | 0 | 0 | 0 |
| 2015 | 11,754,172 | 67,192 | 905,347 | 28,507 | 15,330,369 | 28,085,587 | 28,085,587 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4,330,713 | 4,330,713 | 0 | 0 | 0 |
| 2016 | 11,766,376 | 67,376 | 907,827 | 28,585 | 15,372,370 | 28,162,534 | 28,162,534 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4,342,578 | 4,342,578 | 0 | 0 | 0 |
| 2017 | 11,754,172 | 67,192 | 905,347 | 28,507 | 15,330,369 | 28,085,587 | 28,085,587 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4,330,713 | 4,330,713 | 0 | 0 | 0 |
| 2018 | 11,754,172 | 67,192 | 905,347 | 28,507 | 15,330,369 | 28,085,587 | 28,085,587 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4,330,713 | 4,330,713 | 0 | 0 | 0 |
| 2019 | 6,037,258 | 67,192 | 438,881 | 28,507 | 8,280,453 | 14,852,291 | 14,852,291 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4,330,713 | 4,330,713 | 0 | 0 | 0 |
| 2020 | 2,767,451 | 67,376 | 171,937 | 28,585 | 4,250,519 | 7,285,868 | 7,285,868 | 1,491,280 | 0 | 60,143 | 0 | 0 | 0 | 0 | 1,551,423 | 1,551,423 | 0 | 0 | 0 |
| 2021 | 2,759,889 | 67,192 | 171,468 | 28,507 | 4,238,906 | 7,265,962 | 7,265,962 | 1,487,205 | 0 | 59,979 | 0 | 0 | 0 | 0 | 1,547,184 | 1,547,184 | 0 | 0 | 0 |
| 2022 | 2,759,889 | 67,192 | 171,468 | 28,507 | 4,238,906 | 7,265,962 | 7,265,962 | 1,487,205 | 0 | 59,979 | 0 | 0 | 0 | 0 | 1,547,184 | 1,547,184 | 0 | 0 | 0 |
| 2023 | 2,759,889 | 67,192 | 171,468 | 28,507 | 4,238,906 | 7,265,962 | 7,265,962 | 1,487,205 | 0 | 59,979 | 0 | 0 | 0 | 0 | 1,547,184 | 1,547,184 | 0 | 0 | 0 |
| 2024 | 2,767,451 | 67,376 | 171,937 | 28,585 | 4,250,519 | 7,285,868 | 7,285,868 | 1,491,280 | 0 | 60,143 | 0 | 0 | 0 | 0 | 1,551,423 | 1,551,423 | 0 | 0 | 0 |
| 2025 | 33,132,066 | 460,269 | 751,376 | 28,507 | 8,467,496 | 42,839,714 | 42,839,714 | 1,486,814 | 0 | 59,963 | 0 | 0 | 0 | 0 | 1,546,777 | 1,546,777 | 0 | 0 | 0 |
| 2026 | 47,846,007 | 19,174,952 | 896,367 | 13,848,674 | 17,352,939 | 99,118,939 | 99,118,939 | 1,487,092 | 0 | 59,974 | 0 | 0 | 0 | 0 | 1,547,066 | 1,547,066 | 0 | 0 | 0 |
| 2027 | 48,137,059 | 18,245,949 | 873,178 | 25,880,104 | 8,247,232 | 101,383,522 | 101,383,522 | 1,487,868 | 0 | 60,005 | 0 | 0 | 0 | 0 | 1,547,873 | 1,547,873 | 0 | 0 | 0 |
| 2028 | 45,222,081 | 4,710,360 | 684,466 | 20,783,752 | 6,547,462 | 77,949,997 | 77,949,997 | 1,490,790 | 0 | 60,123 | 0 | 0 | 0 | 0 | 1,550,913 | 1,550,913 | 0 | 0 | 0 |
| 2029 | 45,098,523 | 4,697,490 | 684,466 | 20,726,966 | 6,529,573 | 77,737,018 | 77,737,018 | 1,486,716 | 0 | 59,959 | 0 | 0 | 0 | 0 | 1,546,875 | 1,546,875 | 0 | 0 | 0 |
| 2030 | 18,915,437 | 2,255,433 | 282,080 | 1,156,811 | 12,901,901 | 35,511,962 | 35,511,962 | 1,486,716 | 0 | 59,959 | 0 | 0 | 0 | 0 | 1,612,178 | 1,612,178 | 0 | 0 | 0 |
| 2031 | 23,615,721 | 7,190,322 | 171,478 | 0 | 17,358,259 | 48,335,780 | 48,335,780 | 1,486,716 | 0 | 59,959 | 0 | 0 | 0 | 0 | 1,865,457 | 1,865,457 | 0 | 0 | 0 |
| 2032 | 10,958,175 | 3,053,424 | 107,481 | 0 | 9,857,716 | 23,976,796 | 23,976,796 | 1,560,926 | 0 | 60,123 | 0 | 0 | 0 | 0 | 1,940,704 | 1,940,704 | 0 | 0 | 0 |
| 2033 | 1,608,043 | 0 | 59,959 | 0 | 4,301,119 | 5,969,121 | 5,969,121 | 1,608,043 | 0 | 59,959 | 0 | 0 | 0 | 0 | 1,986,784 | 1,986,784 | 0 | 0 | 0 |
| 2034 | 1,608,043 | 0 | 59,959 | 0 | 4,301,119 | 5,969,121 | 5,969,121 | 1,608,043 | 0 | 59,959 | 0 | 0 | 0 | 0 | 1,986,784 | 1,986,784 | 0 | 0 | 0 |
| 2035 | 1,608,043 | 0 | 59,959 | 0 | 4,301,119 | 5,969,121 | 5,969,121 | 1,608,043 | 0 | 59,959 | 0 | 0 | 0 | 0 | 1,986,784 | 1,986,784 | 0 | 0 | 0 |
| 2036 | 1,612,449 | 0 | 60,123 | 0 | 4,312,903 | 5,985,475 | 5,985,475 | 1,612,449 | 0 | 60,123 | 0 | 0 | 0 | 0 | 1,992,227 | 1,992,227 | 0 | 0 | 0 |
| 2037 | 1,608,043 | 0 | 59,959 | 0 | 4,301,119 | 5,969,121 | 5,969,121 | 1,608,043 | 0 | 59,959 | 0 | 0 | 0 | 0 | 1,986,784 | 1,986,784 | 0 | 0 | 0 |
| 2038 | 1,608,043 | 0 | 59,959 | 0 | 4,301,119 | 5,969,121 | 5,969,121 | 1,608,043 | 0 | 59,959 | 0 | 0 | 0 | 0 | 1,986,784 | 1,986,784 | 0 | 0 | 0 |
| 2039 | 1,608,043 | 0 | 59,959 | 0 | 4,301,119 | 5,969,121 | 5,969,121 | 1,608,043 | 0 | 59,959 | 0 | 0 | 0 | 0 | 1,986,784 | 1,986,784 | 0 | 0 | 0 |
| 2040 | 1,612,449 | 0 | 60,123 | 0 | 4,312,903 | 5,985,475 | 5,985,475 | 1,612,449 | 0 | 60,123 | 0 | 0 | 0 | 0 | 1,992,227 | 1,992,227 | 0 | 0 | 0 |
| 2041 | 1,608,043 | 0 | 59,959 | 0 | 4,301,119 | 5,969,121 | 5,969,121 | 1,608,043 | 0 | 59,959 | 0 | 0 | 0 | 0 | 1,986,784 | 1,986,784 | 0 | 0 | 0 |
| 2042 | 1,608,043 | 0 | 59,959 | 0 | 4,301,119 | 5,969,121 | 5,969,121 | 1,608,043 | 0 | 59,959 | 0 | 0 | 0 | 0 | 1,986,784 | 1,986,784 | 0 | 0 | 0 |
| 2043 | 1,608,043 | 0 | 59,959 | 0 | 4,301,119 | 5,969,121 | 5,969,121 | 1,608,043 | 0 | 59,959 | 0 | 0 | 0 | 0 | 1,986,784 | 1,986,784 | 0 | 0 | 0 |
| 2044 | 1,612,449 | 0 | 60,123 | 0 | 4,312,903 | 5,985,475 | 5,985,475 | 1,612,449 | 0 | 60,123 | 0 | 0 | 0 | 0 | 1,992,227 | 1,992,227 | 0 | 0 | 0 |
| 2045 | 1,608,043 | 0 | 59,959 | 0 | 4,301,119 | 5,969,121 | 5,969,121 | 1,608,043 | 0 | 59,959 | 0 | 0 | 0 | 0 | 1,986,784 | 1,986,784 | 0 | 0 | 0 |
| 2046 | 1,608,043 | 0 | 59,959 | 0 | 4,301,119 | 5,969,121 | 5,969,121 | 1,608,043 | 0 | 59,959 | 0 | 0 | 0 | 0 | 1,986,784 | 1,986,784 | 0 | 0 | 0 |
| 2047 | 1,608,043 | 0 | 59,959 | 0 | 4,301,119 | 5,969,121 | 5,969,121 | 1,608,043 | 0 | 59,959 | 0 | 0 | 0 | 0 | 1,986,784 | 1,986,784 | 0 | 0 | 0 |
| 2048 | 1,623,702 | 704,819 | 59,959 | 21,587 | 20,023,480 | 22,433,547 | 22,433,547 | 1,612,449 | 0 | 59,959 | 0 | 0 | 0 | 0 | 1,992,063 | 1,992,063 | 0 | 0 | 0 |
| 2049 | 2,490,148 | 1,026,741 | 0 | 2,590,476 | 2,047,948 | 8,155,314 | 8,155,314 | 797,413 | 0 | 0 | 0 | 0 | 0 | 0 | 104,805 | 104,805 | 0 | 0 | 0 |
| | 454,688,323 | 71,920,422 | 14,198,253 | 88,026,890 | 331,491,402 | 960,325,290 | 960,325,290 | 45,961,538 | 0 | 1,740,124 | 0 | 0 | 0 | 0 | 44,609,751 | 44,609,751 | 0 | 0 | 0 |

CONSUMERS ENERGY COMPANY
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Decommissioning Expenditure Forecast
SAFSTOR - Plant Retirement in Year 2011

| (a) | (b) | (c) | MPSC Jurisdictional Cost | | | | (g) | (h) | Calculation of MPSC Future Value | | | | (m) |
|------|-------------|------------|--------------------------|------------|------------|-------------|-------------|-------------|----------------------------------|------------|-------------|-------------|---------------|
| | | | Equipment & Material | Energy | Burial | Other | Total | Labor | Equipment & Material | Energy | Burial | Other | Total |
| Year | | | | | | | | | | | | | |
| 2008 | 0 | 0 | 0 | 0 | 0 | 2,287,103 | 2,287,103 | 0 | 0 | 0 | 0 | 2,726,875 | 2,726,875 |
| 2009 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2010 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2011 | 31,124,696 | 4,006,416 | 931,261 | 1,366,765 | 1,227,174 | 13,683,999 | 51,113,137 | 42,925,024 | 5,094,951 | 1,158,783 | 2,380,147 | 18,130,939 | 68,689,884 |
| 2012 | 30,700,531 | 5,392,608 | 1,080,966 | 1,227,174 | 1,227,174 | 11,178,935 | 49,580,214 | 44,076,028 | 7,066,930 | 1,382,322 | 2,290,498 | 15,342,057 | 70,157,835 |
| 2013 | 11,515,527 | 65,828 | 886,966 | 27,928 | 27,928 | 10,776,330 | 23,272,579 | 17,210,406 | 88,898 | 1,165,656 | 55,870 | 15,318,984 | 33,639,814 |
| 2014 | 11,515,527 | 65,828 | 886,966 | 27,928 | 27,928 | 10,776,330 | 23,272,579 | 17,916,033 | 91,609 | 1,197,945 | 59,881 | 15,867,403 | 35,132,871 |
| 2015 | 11,515,527 | 65,828 | 886,966 | 27,928 | 27,928 | 10,776,330 | 23,272,579 | 18,650,590 | 94,403 | 1,231,128 | 64,181 | 16,435,456 | 36,475,758 |
| 2016 | 11,547,077 | 66,008 | 888,395 | 28,005 | 28,005 | 10,805,854 | 23,336,339 | 19,468,458 | 97,548 | 1,268,695 | 68,979 | 17,070,486 | 37,974,766 |
| 2017 | 11,515,527 | 65,828 | 886,966 | 27,928 | 27,928 | 10,776,330 | 23,272,579 | 20,211,290 | 100,250 | 1,300,277 | 73,728 | 17,533,299 | 39,318,844 |
| 2018 | 11,515,527 | 65,828 | 886,966 | 27,928 | 27,928 | 10,776,330 | 23,272,579 | 21,038,953 | 103,307 | 1,336,295 | 79,022 | 18,264,571 | 40,823,148 |
| 2019 | 5,914,684 | 65,828 | 429,970 | 27,928 | 27,928 | 3,869,548 | 10,307,958 | 11,249,759 | 106,458 | 665,733 | 84,695 | 6,793,205 | 18,899,850 |
| 2020 | 1,250,261 | 66,008 | 109,524 | 28,005 | 28,005 | 4,164,221 | 5,618,019 | 2,475,501 | 110,005 | 174,276 | 91,027 | 7,572,237 | 10,423,046 |
| 2021 | 1,246,845 | 65,828 | 109,225 | 27,928 | 27,928 | 4,152,843 | 5,602,669 | 2,569,955 | 113,051 | 178,614 | 97,294 | 7,821,892 | 10,780,806 |
| 2022 | 1,246,845 | 65,828 | 109,225 | 27,928 | 27,928 | 4,152,843 | 5,602,669 | 2,675,324 | 116,499 | 183,562 | 104,280 | 8,101,916 | 11,181,581 |
| 2023 | 1,246,845 | 65,828 | 109,225 | 27,928 | 27,928 | 4,152,843 | 5,602,669 | 2,785,012 | 120,052 | 188,647 | 111,767 | 8,391,965 | 11,597,443 |
| 2024 | 1,250,261 | 66,008 | 109,524 | 28,005 | 28,005 | 4,164,221 | 5,618,019 | 2,907,140 | 124,052 | 194,403 | 120,123 | 8,716,213 | 12,061,931 |
| 2025 | 31,002,758 | 450,924 | 677,375 | 27,928 | 27,928 | 8,295,590 | 40,454,565 | 75,044,070 | 873,292 | 1,235,632 | 128,393 | 17,985,259 | 95,266,646 |
| 2026 | 45,417,690 | 18,785,643 | 819,412 | 13,567,504 | 17,000,622 | 17,000,622 | 95,590,871 | 114,443,682 | 37,491,255 | 1,538,132 | 66,852,287 | 38,177,779 | 258,501,135 |
| 2027 | 45,702,072 | 17,875,501 | 796,663 | 25,354,660 | 25,354,660 | 8,079,788 | 97,808,684 | 119,881,840 | 36,762,931 | 1,534,854 | 133,902,244 | 18,794,108 | 310,875,977 |
| 2028 | 42,843,415 | 4,614,726 | 613,505 | 20,361,779 | 20,361,779 | 6,414,529 | 74,847,954 | 116,980,964 | 9,780,157 | 1,214,722 | 115,254,937 | 15,454,766 | 258,695,546 |
| 2029 | 42,726,356 | 4,602,117 | 611,828 | 20,306,146 | 20,306,146 | 6,397,003 | 74,643,450 | 121,454,839 | 10,050,914 | 1,244,958 | 123,192,729 | 15,964,309 | 271,907,749 |
| 2030 | 17,074,866 | 2,209,641 | 217,611 | 1,133,324 | 1,133,324 | 12,575,781 | 33,211,223 | 50,527,406 | 4,972,990 | 455,064 | 7,368,286 | 32,507,565 | 95,832,311 |
| 2031 | 21,679,720 | 7,044,337 | 109,255 | 0 | 0 | 16,693,524 | 45,526,836 | 66,784,256 | 16,337,440 | 234,801 | 0 | 44,696,489 | 128,052,986 |
| 2032 | 9,206,457 | 2,991,430 | 46,396 | 0 | 0 | 8,344,410 | 21,588,693 | 29,523,217 | 7,149,419 | 102,472 | 0 | 25,915,117 | 62,690,225 |
| 2033 | 0 | 0 | 0 | 0 | 0 | 3,901,484 | 3,901,484 | 0 | 0 | 0 | 0 | 11,207,456 | 11,207,456 |
| 2034 | 0 | 0 | 0 | 0 | 0 | 3,901,484 | 3,901,484 | 0 | 0 | 0 | 0 | 11,608,683 | 11,608,683 |
| 2035 | 0 | 0 | 0 | 0 | 0 | 3,901,484 | 3,901,484 | 0 | 0 | 0 | 0 | 12,024,273 | 12,024,273 |
| 2036 | 0 | 0 | 0 | 0 | 0 | 3,912,173 | 3,912,173 | 0 | 0 | 0 | 0 | 12,488,865 | 12,488,865 |
| 2037 | 0 | 0 | 0 | 0 | 0 | 3,901,484 | 3,901,484 | 0 | 0 | 0 | 0 | 12,900,622 | 12,900,622 |
| 2038 | 0 | 0 | 0 | 0 | 0 | 3,901,484 | 3,901,484 | 0 | 0 | 0 | 0 | 13,362,464 | 13,362,464 |
| 2039 | 0 | 0 | 0 | 0 | 0 | 3,901,484 | 3,901,484 | 0 | 0 | 0 | 0 | 13,840,841 | 13,840,841 |
| 2040 | 0 | 0 | 0 | 0 | 0 | 3,912,173 | 3,912,173 | 0 | 0 | 0 | 0 | 14,375,620 | 14,375,620 |
| 2041 | 0 | 0 | 0 | 0 | 0 | 3,901,484 | 3,901,484 | 0 | 0 | 0 | 0 | 14,849,584 | 14,849,584 |
| 2042 | 0 | 0 | 0 | 0 | 0 | 3,901,484 | 3,901,484 | 0 | 0 | 0 | 0 | 15,381,199 | 15,381,199 |
| 2043 | 0 | 0 | 0 | 0 | 0 | 3,901,484 | 3,901,484 | 0 | 0 | 0 | 0 | 15,931,846 | 15,931,846 |
| 2044 | 0 | 0 | 0 | 0 | 0 | 3,912,173 | 3,912,173 | 0 | 0 | 0 | 0 | 16,547,418 | 16,547,418 |
| 2045 | 0 | 0 | 0 | 0 | 0 | 3,901,484 | 3,901,484 | 0 | 0 | 0 | 0 | 17,092,985 | 17,092,985 |
| 2046 | 0 | 0 | 0 | 0 | 0 | 3,901,484 | 3,901,484 | 0 | 0 | 0 | 0 | 17,704,914 | 17,704,914 |
| 2047 | 0 | 0 | 0 | 0 | 0 | 3,901,484 | 3,901,484 | 0 | 0 | 0 | 0 | 18,338,750 | 18,338,750 |
| 2048 | 11,025 | 690,509 | 0 | 21,149 | 21,149 | 19,303,778 | 20,026,461 | 67,245 | 2,668,881 | 0 | 479,081 | 93,984,907 | 97,200,114 |
| 2049 | 1,658,367 | 1,005,895 | 0 | 2,537,882 | 2,537,882 | 1,903,692 | 7,105,836 | 10,529,657 | 4,006,457 | 0 | 61,617,497 | 9,600,379 | 85,753,990 |
| | 400,428,406 | 70,460,223 | 12,205,190 | 86,239,678 | 86,239,678 | 281,057,094 | 850,390,591 | 931,407,689 | 143,521,749 | 19,184,971 | 514,477,946 | 714,923,696 | 2,323,516,051 |

| (a) | (b) | (c) | (d) | (e) | (f) | (g) |
|-----------------------------------|---------------------------------|----------------------|-------------------|--------------------|--------------------|----------------------|
| Calculation of MPSC Value at 2011 | | | | | | |
| Year | Labor | Equipment & Material | Energy | Burial | Other | Total |
| 2008 | 0 | 0 | 0 | 0 | 2,796,014 | 2,796,014 |
| 2009 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2010 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2011 | 42,925,064 | 5,525,377 | 1,284,332 | 1,884,949 | 18,872,041 | 70,491,763 |
| 2012 | 42,340,085 | 7,437,118 | 1,490,795 | 1,692,435 | 15,417,227 | 68,377,660 |
| 2013 | 15,881,432 | 90,786 | 1,223,243 | 38,516 | 14,861,982 | 32,095,959 |
| 2014 | 15,881,432 | 90,786 | 1,223,243 | 38,516 | 14,861,982 | 32,095,959 |
| 2015 | 15,881,432 | 90,786 | 1,223,243 | 38,516 | 14,861,982 | 32,095,959 |
| 2016 | 15,924,943 | 91,034 | 1,226,593 | 38,623 | 14,902,699 | 32,183,892 |
| 2017 | 15,881,432 | 90,786 | 1,223,243 | 38,516 | 14,861,982 | 32,095,959 |
| 2018 | 15,881,432 | 90,786 | 1,223,243 | 38,516 | 14,861,982 | 32,095,959 |
| 2019 | 8,157,130 | 90,786 | 592,985 | 38,516 | 5,336,617 | 14,216,034 |
| 2020 | 1,724,275 | 91,034 | 151,048 | 38,623 | 5,743,010 | 7,747,990 |
| 2021 | 1,719,564 | 90,786 | 150,636 | 38,516 | 5,727,319 | 7,726,821 |
| 2022 | 1,719,564 | 90,786 | 150,636 | 38,516 | 5,727,319 | 7,726,821 |
| 2023 | 1,719,564 | 90,786 | 150,636 | 38,516 | 5,727,319 | 7,726,821 |
| 2024 | 1,724,275 | 91,034 | 151,048 | 38,623 | 5,743,010 | 7,747,990 |
| 2025 | 42,756,896 | 621,884 | 934,190 | 38,516 | 11,440,700 | 55,792,186 |
| 2026 | 62,636,990 | 25,907,881 | 1,130,077 | 18,711,379 | 23,446,102 | 131,832,429 |
| 2027 | 63,029,190 | 24,652,675 | 1,098,703 | 34,967,423 | 11,143,094 | 134,891,085 |
| 2028 | 59,086,725 | 6,364,316 | 846,104 | 28,081,581 | 8,846,482 | 103,225,208 |
| 2029 | 58,925,285 | 6,346,927 | 843,792 | 28,004,856 | 8,822,312 | 102,943,172 |
| 2030 | 23,548,494 | 3,047,387 | 300,114 | 1,563,003 | 17,343,662 | 45,802,660 |
| 2031 | 29,899,196 | 9,715,071 | 150,677 | 0 | 23,022,573 | 62,787,517 |
| 2032 | 12,696,919 | 4,125,577 | 63,986 | 0 | 12,887,175 | 29,773,657 |
| 2033 | 0 | 0 | 0 | 0 | 5,380,661 | 5,380,661 |
| 2034 | 0 | 0 | 0 | 0 | 5,380,661 | 5,380,661 |
| 2035 | 0 | 0 | 0 | 0 | 5,380,661 | 5,380,661 |
| 2036 | 0 | 0 | 0 | 0 | 5,395,403 | 5,395,403 |
| 2037 | 0 | 0 | 0 | 0 | 5,380,661 | 5,380,661 |
| 2038 | 0 | 0 | 0 | 0 | 5,380,661 | 5,380,661 |
| 2039 | 0 | 0 | 0 | 0 | 5,380,661 | 5,380,661 |
| 2040 | 0 | 0 | 0 | 0 | 5,395,403 | 5,395,403 |
| 2041 | 0 | 0 | 0 | 0 | 5,380,661 | 5,380,661 |
| 2042 | 0 | 0 | 0 | 0 | 5,380,661 | 5,380,661 |
| 2043 | 0 | 0 | 0 | 0 | 5,380,661 | 5,380,661 |
| 2044 | 0 | 0 | 0 | 0 | 5,395,403 | 5,395,403 |
| 2045 | 0 | 0 | 0 | 0 | 5,380,661 | 5,380,661 |
| 2046 | 0 | 0 | 0 | 0 | 5,380,661 | 5,380,661 |
| 2047 | 0 | 0 | 0 | 0 | 5,380,661 | 5,380,661 |
| 2048 | 15,205 | 952,303 | 0 | 29,167 | 26,622,458 | 27,619,133 |
| 2049 | 2,287,107 | 1,387,262 | 0 | 3,500,074 | 2,625,443 | 9,799,886 |
| | <u>552,243,631</u> | <u>97,173,954</u> | <u>16,832,567</u> | <u>118,935,896</u> | <u>387,256,627</u> | <u>1,172,442,675</u> |
| | Qualifying Percentage | | | | | <u>66.6667%</u> |
| | Allocable Decommissioning Costs | | | | | 781,628,841 |

CONSUMERS ENERGY COMPANY
Palisades Nuclear Plant
Decommissioning Funding Assumptions

ASSUMPTIONS:

1. The existing annual decommissioning surcharge will continue through 2005 based on sales projections.
2. Base year of cost estimate 2003
Year of plant retirement 2011
3. Inflation Rates:

| Items | Decommissioning Amount | Inflation Rate | Index |
|------------------|---------------------------|-------------------|------------------------|
| Labor | 403,775,022 | 4.10% | Wages & Salaries |
| Equip & Material | 71,267,765 | 3.05% | CPI - Urban |
| Energy | 12,304,256 | 2.77% | Energy |
| Burial Cost | 80,004,097 | 7.18% | Burial Cost Escalation |
| Other | 284,231,683 | 3.58% | 50% W&S & 50% CPI |

3. Earnings Rates:

| | Rate |
|---|--------|
| Equity | 9.80% |
| Equity capital appreciation | 80.00% |
| Dividend income | 20.00% |
| Taxable Bonds - Pre Withdrawals | 5.60% |
| Taxable Bonds - During Withdrawals (Section 468A) | 5.60% |
| Municipal Bonds - Pre Withdrawals | 4.85% |
| Municipal Bonds - During Withdrawals (Section 468A) | 4.85% |

Earning Assumptions:

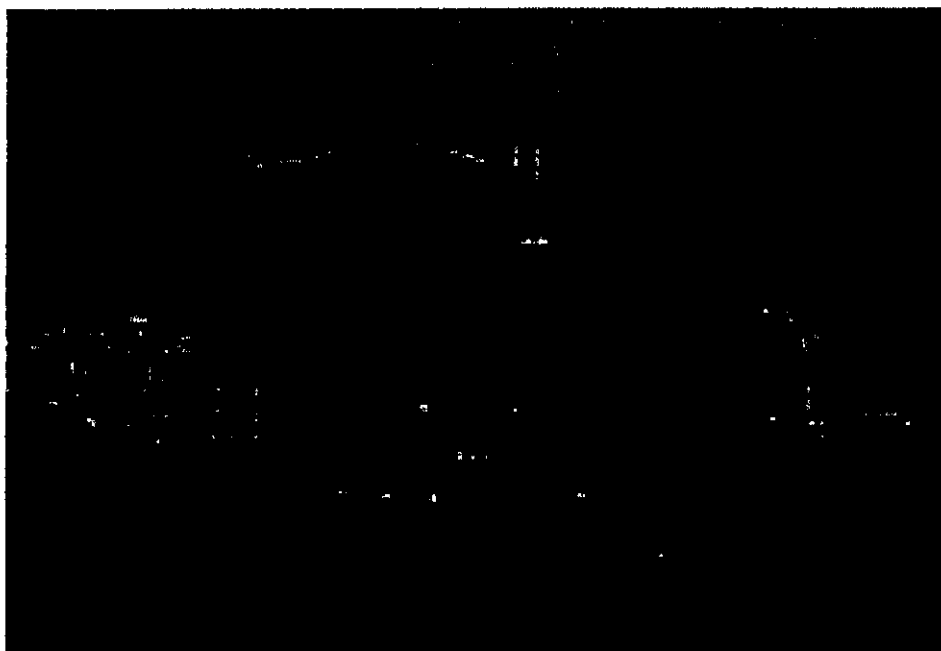
- a. The Non-Section 468A Trust funds are invested in municipal bonds.
- b. Section 468A Trust funds are invested in equities and fixed income investments.
- c. Equity capital appreciation equals 80% of equity earnings and taxed on sale of equity.
- d. Dividend income is subject to 70% dividend exclusion.
- e. Section 468A trust uses taxable bonds for fixed income investments.

4. MPSC Jurisdictional Amount: 97.9697%

Appendix B

**TLG's Site-Specific Decommissioning Cost Study
Executive Summary
And Table 3**

DECOMMISSIONING COST STUDY
for the
PALISADES NUCLEAR PLANT



prepared for

Consumers Energy

prepared by

TLG Services, Inc.
Bridgewater, Connecticut

March 2004

APPROVALS

| | | |
|---|---|------------------------|
| President/ Quality Assurance Manager | <u>Thomas S. LaGuardia</u> Thomas S. LaGuardia | <u>3/17/04</u> Date |
| Project Manager | <u>Geoffrey M. Griffiths</u> Geoffrey M. Griffiths | <u>3.17.04</u> Date |
| Project Engineer | <u>Benjamin J. Stochmal</u> Benjamin J. Stochmal | <u>3/17/04</u> Date |
| Technical Manager | <u>Francis W. Seymore</u> Francis W. Seymore | <u>3/17/04</u> Date |

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REVISION LOG

| No. | CRA No. | Date | Item Revised | Reason for Revision |
|-----|---------|----------|--------------|---------------------|
| 0 | | 03-17-04 | | Original Issue |

EXECUTIVE SUMMARY

This report presents an estimate of the cost to decommission the Palisades Nuclear Plant (Palisades) for the selected decommissioning scenario following the scheduled cessation of plant operations. The projected cost to decommission the nuclear unit for the deferred dismantling alternative (SAFSTOR), in year 2003 dollars, is estimated at approximately \$960.3 million, including contingency. The analysis relies upon site-specific, technical information, originally developed in an evaluation prepared in 1997-98,^[1] revised in 2000-01,^[2] and updated to reflect current assumptions pertaining to the disposition of the nuclear unit and relevant industry experience in undertaking such projects. The updated estimate is designed to provide Consumers Energy with sufficient information to assess their financial obligations, as they pertain to the eventual decommissioning of the nuclear unit.

The primary goal of the decommissioning is the removal and disposal of the contaminated systems and structures so that the plant's operating license can be terminated. The analysis recognizes that spent fuel will be stored at the site in the plant's storage pool and/or in an independent spent fuel storage installation (ISFSI) until such time that it can be transferred to a U.S. Department of Energy (DOE) facility. Consequently, the estimate also includes those costs to manage and subsequently decommission these storage facilities.

The estimate is based on numerous fundamental assumptions, including regulatory requirements, project contingencies, low-level radioactive waste disposal practices, high-level radioactive waste management options, and site restoration requirements. The estimate incorporates a minimum cooling period of approximately eight years for the spent fuel that resides in the storage pool when operations cease. The estimate also includes the dismantling of non-essential structures and limited restoration of the site.

Alternatives and Regulations

The Nuclear Regulatory Commission (NRC or Commission) provided initial decommissioning requirements in its rule adopted on June 27, 1988.^[3] In this rule, the NRC set forth financial criteria for decommissioning licensed nuclear power

¹ "Decommissioning Cost Study for the Palisades Nuclear Plant," Document No. C07-1267-003, TLG Services, Inc., March 1998.

² "Decommissioning Cost Study for the Palisades Nuclear Plant," Document No. C07-1388-002, TLG Services, Inc., March 2001.

³ U.S. Code of Federal Regulations, Title 10, Parts 30, 40, 50, 51, 70 and 72 "General Requirements for Decommissioning Nuclear Facilities," Nuclear Regulatory Commission, Federal Register Volume 53, Number 123 (p 24018 et seq.), June 27, 1988.

facilities. The regulations addressed planning needs, timing, funding methods, and environmental review requirements for decommissioning. The rule also defined three decommissioning alternatives as being acceptable to the NRC: DECON, SAFSTOR, and ENTOMB. The NRC also recognizes that some combination of the first two alternatives would be acceptable in some cases.

DECON is defined as "the alternative in which the equipment, structures, and portions of a facility and site containing radioactive contaminants are removed or decontaminated to a level that permits the property to be released for unrestricted use shortly after cessation of operations."^[4]

SAFSTOR is defined as "the alternative in which the nuclear facility is placed and maintained in a condition that allows the nuclear facility to be safely stored and subsequently decontaminated (deferred decontamination) to levels that permit release for unrestricted use."^[5] Decommissioning is to be completed within 60 years, although longer time periods will be considered when necessary to protect public health and safety.

ENTOMB is defined as "the alternative in which radioactive contaminants are encased in a structurally long-lived material, such as concrete; the entombed structure is appropriately maintained and continued surveillance is carried out until the radioactive material decays to a level permitting unrestricted release of the property."^[6] As with the SAFSTOR alternative, decommissioning is currently required to be completed within 60 years.

The 60-year restriction has limited the practicality of the ENTOMB alternative at commercial reactors that generate significant amounts of long-lived radioactive material. In 1997, the Commission directed its staff to re-evaluate this alternative and identify the technical requirements and regulatory actions that would be necessary for entombment to become a viable option. The resulting evaluation provided several recommendations, however, rulemaking has been deferred pending the completion of additional research studies, e.g., on engineered barriers.

In 1996, the NRC published revisions to the general requirements for decommissioning nuclear power plants to clarify ambiguities and codify procedures and terminology as a means of enhancing efficiency and uniformity in the

⁴ Ibid. Page FR24022, Column 3.

⁵ Ibid.

⁶ Ibid. Page FR24023, Column 2.

decommissioning process.^[7] The amendments allow for greater public participation and better define the transition process from operations to decommissioning. Regulatory Guide 1.184, issued in July 2000, further described the methods and procedures acceptable to the NRC staff for implementing the requirements of the 1996 revised rule relating to the initial activities and major phases of the decommissioning process. The costs and schedule presented in this analysis follow the general guidance and processes described in the amended regulations.

Methodology

The methodology used to develop the estimate described within this document follows the basic approach originally presented in the cost estimating guidelines^[8] developed by the Atomic Industrial Forum (now Nuclear Energy Institute). This reference describes a unit factor method for determining decommissioning activity costs. The unit factors used in this analysis incorporate site-specific costs and the latest available information on worker productivity in decommissioning.

An activity duration critical path is used to determine the total decommissioning program schedule. The schedule is relied upon in calculating the carrying costs, which include program management, administration, field engineering, equipment rental, and support services such as quality control and security. This systematic approach for assembling decommissioning estimates ensures a high degree of confidence in the reliability of the resulting cost estimate.

Contingency

Consistent with cost estimating practice, contingencies are applied to the decontamination and dismantling costs developed as "specific provision for unforeseeable elements of cost within the defined project scope, particularly important where previous experience relating estimates and actual costs has shown that unforeseeable events which will increase costs are likely to occur."^[9] The cost elements in the estimates are based on ideal conditions; therefore, the types of unforeseeable events that are almost certain to occur in decommissioning, based on industry experience, are addressed through a percentage contingency applied on a line-item basis. This contingency factor is a nearly universal element in all large-scale construction and demolition projects. It should be noted that contingency, as used in

⁷ U.S. Code of Federal Regulations, Title 10, Parts 2, 50, and 51, "Decommissioning of Nuclear Power Reactors," Nuclear Regulatory Commission, Federal Register Volume 61, (p 39278 et seq.), July 29, 1996.

⁸ T.S. LaGuardia et al., "Guidelines for Producing Commercial Nuclear Power Plant Decommissioning Cost Estimates," AIF/NESP-036, May 1986.

⁹ Project and Cost Engineers' Handbook, Second Edition, American Association of Cost Engineers, Marcel Dekker, Inc., New York, New York, p. 239.

this analysis, does not account for price escalation and inflation in the cost of decommissioning over the remaining operating life of the station.

The use and role of contingency within decommissioning estimates is not a safety factor issue. Safety factors provide additional security and address situations that may never occur. Contingency funds, by contrast, are expected to be fully expended throughout the program. Inclusion of contingency is necessary to provide assurance that sufficient funding will be available to accomplish the intended tasks.

Low-Level Radioactive Waste Disposal

The contaminated and activated material generated in the decontamination and dismantling of a commercial nuclear reactor is classified as low-level (radioactive) waste, although not all of the material is suitable for "shallow-land" disposal. With the passage of the "Low-Level Radioactive Waste Policy Act" in 1980,^[10] and its Amendments of 1985,^[11] the states became ultimately responsible for the disposition of low-level radioactive waste generated within their own borders.

Palisades is currently able to access the disposal facility in Barnwell, South Carolina. However, in June 2000, South Carolina formally joined with Connecticut and New Jersey to form the Atlantic Compact. The legislation allows South Carolina to gradually limit access to the Barnwell facility, with only Atlantic Compact members having access to the facility after mid-year 2008. It is reasonable to assume that additional disposal capacity will be available to support reactor decommissioning, particularly for the isolation of the more highly radioactive material that is not suitable for disposal elsewhere. However, for estimating purposes, and as a proxy for future disposal facilities, waste disposal costs are generated using available pricing schedules for the currently operating facilities, i.e., at Barnwell and the Envirocare facility in Utah.

High-Level Radioactive Waste Management

Congress passed the "Nuclear Waste Policy Act"^[12] (NWP) in 1982, assigning the responsibility for disposal of the spent nuclear fuel created by the commercial nuclear generating plants to the DOE. Two permanent disposal facilities were envisioned, as well as an interim storage facility. To recover the cost, the legislation created a Nuclear Waste Fund through which money is collected from the sale of electricity generated by the power plants. The NWP, along with the individual disposal

¹⁰ "Low-Level Radioactive Waste Policy Act," Public Law 96-573, 1980.

¹¹ "Low-Level Radioactive Waste Policy Amendments Act of 1985," Public Law 99-240, 1986.

¹² "Nuclear Waste Policy Act of 1982 and Amendments," U.S. Department of Energy's Office of Civilian Radioactive Management, 1982.

contracts with the utilities, specified that the DOE was to begin accepting spent fuel by January 31, 1998.

Since the original legislation, the DOE has announced several delays in the program schedule. By January 1998, the DOE had failed to initiate the disposal of spent nuclear fuel and high level waste, as required by the NWPAA and the utility contracts. As a result, utilities have initiated legal action against the DOE. While legal actions continue, the DOE has no plans to receive spent fuel prior to completing the construction of its geologic repository.

Despite unfavorable rulings in the courts, the DOE has continued to link initial acceptance of commercial spent fuel to the schedule for a geologic repository, which it currently projects to begin operating in 2010 at the earliest. However, the DOE has failed to communicate to utilities a revised schedule for acceptance of spent fuel. Thus, spent fuel logistics supporting this cost update are based on available information and projections related to the DOE's initial performance, acceptance rates and use of spent fuel acceptance allocations assigned to Consumers Energy. These projections indicate that fuel from Palisades will not begin to be accepted by the DOE until 2013.

The NRC requires that licensees establish a program to manage and provide funding for the caretaking of all irradiated fuel at the reactor site until title of the fuel is transferred to the DOE.^[13] Interim storage of the fuel, until the DOE has completed the transfer, will be in the storage pool and/or an ISFSI located on the Palisades site. The ISFSI, which is independently licensed and operated, will accommodate the inventory of spent fuel residing in the plant's storage pool at the conclusion of the required cooling period. Once emptied, the auxiliary building can be prepared for long-term storage.

The DOE's generator allocation/receipt schedules are based upon the oldest fuel receiving the highest priority. Given this scenario and an anticipated rate of transfer, spent fuel is projected to remain at the site for approximately 37 years after the cessation of operations. Consequently, costs are included within the estimate for the long-term caretaking of the spent fuel at the Palisades site until the year 2048.

Site Restoration

The efficient removal of the contaminated materials at the site may result in damage to many of the site structures. Blasting, coring, drilling, and the other decontamination activities will substantially damage power block structures,

¹³ "Domestic Licensing of Production and Utilization Facilities," U.S. Code of Federal Regulations, Title 10, Part 50.54 (bb).

potentially weakening the footings and structural supports. Prompt demolition once the license is terminated is clearly the most appropriate and cost-effective option. It is unreasonable to anticipate that these structures would be repaired and preserved after the radiological contamination is removed. The cost to dismantle site structures with a work force already mobilized is more efficient and less costly than if the process were deferred. Experience at shutdown generating stations has shown that plant facilities quickly degrade without maintenance, adding additional expense and creating potential hazards to the public and the demolition work force. Consequently, this analysis assumes that non-essential site structures within the restricted access area are removed to a nominal depth of three feet below the local grade level wherever possible. The site is then backfilled, graded and stabilized.

Financial Risk

It has been TLG's experience that the results of a risk analysis, when compared with the base case estimate for decommissioning, indicate that the chances of the base decommissioning estimate's being too high is a low probability, and the chances that the estimate is too low is a higher probability. This is mostly due to the pricing uncertainty for low-level radioactive waste burial, and to a lesser extent due to schedule increases from changes in plant conditions and to pricing variations in the cost of labor (both craft and staff). TLG did not perform a risk analysis for this study and therefore the estimates in this report do not include any additional costs to address the perceived financial risk.

Summary

The cost to decommission Palisades is evaluated for the SAFSTOR decommissioning alternative. The estimate assumes the eventual removal of all the contaminated and activated plant components and structural materials, such that the facility operator may then have unrestricted use of the site with no further requirement for an operating license. Delayed decommissioning is accomplished within the 60-year period required by current NRC regulations. In the interim, the spent fuel remains in storage at the site until such time that the transfer to a DOE facility can be completed. Once the transfer is complete, the storage facilities are also decommissioned.

The scenario analyzed for the purpose of generating the estimate is described in Section 2. The assumptions are presented in Section 3, along with schedules of annual expenditures. The major cost contributors are identified in Section 6, with detailed activity costs, waste volumes, and associated manpower requirements delineated in Appendix C. A cost summary is provided at the end of this section for the major cost components.

COST AND SCHEDULE ESTIMATE SUMMARY

| | Costs 2003\$ (thousands) | Schedule (months) |
|--|-----------------------------|----------------------|
| SAFSTOR Preparations (includes pre-shutdown costs) | 105,021 | 18.0 |
| 12.5 year Dormancy Maintenance | 229,730 | 150.0 |
| Decommissioning Preparations | 110,217 | 18.1 |
| Delayed Decommissioning | 312,938 | 49.0 |
| Site Restoration | 78,794 | 19.5 |
| Post Decommissioning ISFSI Operations | 115,413 | 198.9 |
| ISFSI Decontamination and Decommissioning | 8,212 | 6.0 |
| Total ^[1] | 960,325 | 459.6 |

^[1] Columns may not add due to rounding

SUMMARY OF DECOMMISSIONING COST ELEMENTS
(Thousands of 2003 Dollars)

| Activity | Total |
|--|----------------|
| Decontamination | 10,605 |
| Removal | 99,525 |
| Packaging | 12,377 |
| Shipping | 4,424 |
| Low-Level Radioactive Waste Disposal | 61,281 |
| Staffing | 280,309 |
| Taxes | 65,011 |
| Engineering | 16,569 |
| Energy | 11,857 |
| Waste Recycling | 64,480 |
| Insurance | 21,211 |
| ISFSI Expenditures | 194,931 |
| Spent Fuel Pool Isolation | 9,607 |
| NRC and EP Fees | 12,273 |
| Site Characterization | 1,707 |
| License Termination Survey | 5,540 |
| Miscellaneous Support Equipment & Supplies | 23,167 |
| Separation Program | 9,141 |
| Fixed Indirect Overhead | 36,848 |
| Site Security | 10,284 |
| Spent Fuel Pool O&M | 9,177 |
| Total ⁽¹⁾ | 960,325 |
| NRC License Termination | 584,064 |
| Spent Fuel Management | 297,948 |
| Site Restoration | 78,313 |

⁽¹⁾ Columns may not add due to rounding

**TABLE 3.1
SCHEDULE OF ANNUAL EXPENDITURES
TOTAL DECOMMISSIONING COST
(thousands, 2003 dollars)**

| Year | Labor | Equipment & Materials | Energy | Burial | Other | Total |
|------|---------|--------------------------|--------|--------|---------|---------|
| 2008 | 0 | 0 | 0 | 0 | 8,698 | 8,698 |
| 2009 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2010 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2011 | 31,770 | 4,089 | 951 | 1,395 | 14,531 | 52,736 |
| 2012 | 31,337 | 5,504 | 1,103 | 1,253 | 12,854 | 52,051 |
| 2013 | 11,754 | 67 | 905 | 29 | 15,330 | 28,086 |
| 2014 | 11,754 | 67 | 905 | 29 | 15,330 | 28,086 |
| 2015 | 11,754 | 67 | 905 | 29 | 15,330 | 28,086 |
| 2016 | 11,786 | 67 | 908 | 29 | 15,372 | 28,163 |
| 2017 | 11,754 | 67 | 905 | 29 | 15,330 | 28,086 |
| 2018 | 11,754 | 67 | 905 | 29 | 15,330 | 28,086 |
| 2019 | 6,037 | 67 | 439 | 29 | 8,280 | 14,852 |
| 2020 | 2,767 | 67 | 172 | 29 | 4,251 | 7,286 |
| 2021 | 2,760 | 67 | 171 | 29 | 4,239 | 7,266 |
| 2022 | 2,760 | 67 | 171 | 29 | 4,239 | 7,266 |
| 2023 | 2,760 | 67 | 171 | 29 | 4,239 | 7,266 |
| 2024 | 2,767 | 67 | 172 | 29 | 4,251 | 7,286 |
| 2025 | 33,132 | 460 | 751 | 29 | 8,467 | 42,840 |
| 2026 | 47,846 | 19,175 | 896 | 13,849 | 17,353 | 99,119 |
| 2027 | 48,137 | 18,246 | 873 | 25,880 | 8,247 | 101,384 |
| 2028 | 45,222 | 4,710 | 686 | 20,784 | 6,547 | 77,950 |
| 2029 | 45,099 | 4,697 | 684 | 20,727 | 6,530 | 77,737 |
| 2030 | 18,915 | 2,255 | 282 | 1,157 | 12,902 | 35,512 |
| 2031 | 23,616 | 7,190 | 171 | 0 | 17,358 | 48,336 |
| 2032 | 10,958 | 3,053 | 107 | 0 | 9,858 | 23,977 |
| 2033 | 1,608 | 0 | 60 | 0 | 4,301 | 5,969 |
| 2034 | 1,608 | 0 | 60 | 0 | 4,301 | 5,969 |
| 2035 | 1,608 | 0 | 60 | 0 | 4,301 | 5,969 |
| 2036 | 1,612 | 0 | 60 | 0 | 4,313 | 5,985 |
| 2037 | 1,608 | 0 | 60 | 0 | 4,301 | 5,969 |
| 2038 | 1,608 | 0 | 60 | 0 | 4,301 | 5,969 |
| 2039 | 1,608 | 0 | 60 | 0 | 4,301 | 5,969 |
| 2040 | 1,612 | 0 | 60 | 0 | 4,313 | 5,985 |
| 2041 | 1,608 | 0 | 60 | 0 | 4,301 | 5,969 |
| 2042 | 1,608 | 0 | 60 | 0 | 4,301 | 5,969 |
| 2043 | 1,608 | 0 | 60 | 0 | 4,301 | 5,969 |
| 2044 | 1,612 | 0 | 60 | 0 | 4,313 | 5,985 |
| 2045 | 1,608 | 0 | 60 | 0 | 4,301 | 5,969 |
| 2046 | 1,608 | 0 | 60 | 0 | 4,301 | 5,969 |
| 2047 | 1,608 | 0 | 60 | 0 | 4,301 | 5,969 |
| 2048 | 1,624 | 705 | 60 | 22 | 20,023 | 22,434 |
| 2049 | 2,490 | 1,027 | 0 | 2,590 | 2,048 | 8,155 |
| | 454,688 | 71,920 | 14,198 | 88,027 | 331,491 | 960,325 |

**TABLE 3.2
SCHEDULE OF ANNUAL EXPENDITURES
LICENSE TERMINATION
(thousands, 2003 dollars)**

| Year | Labor | Equipment & Materials | Energy | Burial | Other | Total |
|------|---------|--------------------------|--------|--------|---------|---------|
| 2008 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2009 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2010 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2011 | 30,397 | 4,089 | 895 | 1,395 | 13,541 | 50,318 |
| 2012 | 26,975 | 3,185 | 816 | 1,245 | 8,802 | 41,022 |
| 2013 | 1,261 | 7 | 112 | 3 | 4,755 | 6,138 |
| 2014 | 1,261 | 7 | 112 | 3 | 4,755 | 6,138 |
| 2015 | 1,261 | 7 | 112 | 3 | 4,755 | 6,138 |
| 2016 | 1,265 | 7 | 112 | 3 | 4,768 | 6,155 |
| 2017 | 1,261 | 7 | 112 | 3 | 4,755 | 6,138 |
| 2018 | 1,261 | 7 | 112 | 3 | 4,755 | 6,138 |
| 2019 | 1,269 | 45 | 112 | 19 | 3,882 | 5,327 |
| 2020 | 1,277 | 67 | 112 | 29 | 3,391 | 4,875 |
| 2021 | 1,273 | 67 | 112 | 29 | 3,381 | 4,862 |
| 2022 | 1,273 | 67 | 112 | 29 | 3,381 | 4,862 |
| 2023 | 1,273 | 67 | 112 | 29 | 3,381 | 4,862 |
| 2024 | 1,277 | 67 | 112 | 29 | 3,391 | 4,875 |
| 2025 | 31,308 | 460 | 691 | 29 | 8,013 | 40,502 |
| 2026 | 45,249 | 19,168 | 836 | 13,849 | 16,812 | 95,914 |
| 2027 | 45,067 | 18,223 | 813 | 25,880 | 7,672 | 97,655 |
| 2028 | 42,514 | 4,700 | 626 | 20,784 | 6,100 | 74,723 |
| 2029 | 42,398 | 4,687 | 625 | 20,727 | 6,083 | 74,519 |
| 2030 | 13,101 | 829 | 199 | 1,157 | 8,744 | 24,030 |
| 2031 | 1,391 | 252 | 0 | 0 | 0 | 1,643 |
| 2032 | 591 | 107 | 0 | 0 | 0 | 698 |
| 2033 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2034 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2035 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2036 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2037 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2038 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2039 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2040 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2041 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2042 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2043 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2044 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2045 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2046 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2047 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2048 | 0 | 701 | 0 | 0 | 15,831 | 16,531 |
| 2049 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 294,204 | 56,826 | 6,841 | 85,246 | 140,948 | 584,064 |

**TABLE 3.3
SCHEDULE OF ANNUAL EXPENDITURES
SPENT FUEL MANAGEMENT
(thousands, 2003 dollars)**

| Year | Labor | Equipment & Materials | Energy | Burial | Other | Total |
|------|---------|--------------------------|--------|--------|---------|---------|
| 2008 | 0 | 0 | 0 | 0 | 8,698 | 8,698 |
| 2009 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2010 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2011 | 1,372 | 0 | 55 | 0 | 991 | 2,418 |
| 2012 | 4,361 | 2,320 | 288 | 8 | 4,053 | 11,029 |
| 2013 | 10,493 | 60 | 794 | 25 | 10,575 | 21,947 |
| 2014 | 10,493 | 60 | 794 | 25 | 10,575 | 21,947 |
| 2015 | 10,493 | 60 | 794 | 25 | 10,575 | 21,947 |
| 2016 | 10,522 | 60 | 796 | 25 | 10,604 | 22,008 |
| 2017 | 10,493 | 60 | 794 | 25 | 10,575 | 21,947 |
| 2018 | 10,493 | 60 | 794 | 25 | 10,575 | 21,947 |
| 2019 | 4,768 | 22 | 327 | 9 | 4,399 | 9,525 |
| 2020 | 1,491 | 0 | 60 | 0 | 860 | 2,411 |
| 2021 | 1,486 | 0 | 60 | 0 | 858 | 2,404 |
| 2022 | 1,486 | 0 | 60 | 0 | 858 | 2,404 |
| 2023 | 1,486 | 0 | 60 | 0 | 858 | 2,404 |
| 2024 | 1,491 | 0 | 60 | 0 | 860 | 2,411 |
| 2025 | 1,487 | 0 | 60 | 0 | 454 | 2,001 |
| 2026 | 1,487 | 0 | 60 | 0 | 461 | 2,008 |
| 2027 | 1,488 | 0 | 60 | 0 | 331 | 1,878 |
| 2028 | 1,491 | 0 | 60 | 0 | 448 | 1,999 |
| 2029 | 1,487 | 0 | 60 | 0 | 446 | 1,993 |
| 2030 | 1,487 | 0 | 60 | 0 | 741 | 2,287 |
| 2031 | 1,487 | 0 | 60 | 0 | 727 | 2,274 |
| 2032 | 1,561 | 0 | 60 | 0 | 2,795 | 4,416 |
| 2033 | 1,608 | 0 | 60 | 0 | 4,301 | 5,969 |
| 2034 | 1,608 | 0 | 60 | 0 | 4,301 | 5,969 |
| 2035 | 1,608 | 0 | 60 | 0 | 4,301 | 5,969 |
| 2036 | 1,612 | 0 | 60 | 0 | 4,313 | 5,985 |
| 2037 | 1,608 | 0 | 60 | 0 | 4,301 | 5,969 |
| 2038 | 1,608 | 0 | 60 | 0 | 4,301 | 5,969 |
| 2039 | 1,608 | 0 | 60 | 0 | 4,301 | 5,969 |
| 2040 | 1,612 | 0 | 60 | 0 | 4,313 | 5,985 |
| 2041 | 1,608 | 0 | 60 | 0 | 4,301 | 5,969 |
| 2042 | 1,608 | 0 | 60 | 0 | 4,301 | 5,969 |
| 2043 | 1,608 | 0 | 60 | 0 | 4,301 | 5,969 |
| 2044 | 1,612 | 0 | 60 | 0 | 4,313 | 5,985 |
| 2045 | 1,608 | 0 | 60 | 0 | 4,301 | 5,969 |
| 2046 | 1,608 | 0 | 60 | 0 | 4,301 | 5,969 |
| 2047 | 1,608 | 0 | 60 | 0 | 4,301 | 5,969 |
| 2048 | 1,624 | 4 | 60 | 22 | 4,193 | 5,902 |
| 2049 | 2,490 | 1,027 | 0 | 2,590 | 2,048 | 8,155 |
| | 121,151 | 3,732 | 7,175 | 2,781 | 163,108 | 297,948 |

TABLE 3.4
SCHEDULE OF ANNUAL EXPENDITURES
SITE RESTORATION
(thousands, 2003 dollars)

| Year | Labor | Equipment & Materials | Energy | Burial | Other | Total |
|------|--------|--------------------------|--------|--------|--------|--------|
| 2008 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2009 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2010 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2011 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2012 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2013 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2014 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2015 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2016 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2017 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2018 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2019 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2020 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2021 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2022 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2023 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2024 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2025 | 337 | 0 | 0 | 0 | 0 | 337 |
| 2026 | 1,110 | 7 | 0 | 0 | 80 | 1,197 |
| 2027 | 1,583 | 23 | 0 | 0 | 245 | 1,850 |
| 2028 | 1,217 | 11 | 0 | 0 | 0 | 1,228 |
| 2029 | 1,214 | 11 | 0 | 0 | 0 | 1,225 |
| 2030 | 4,328 | 1,426 | 23 | 0 | 3,417 | 9,194 |
| 2031 | 20,738 | 6,938 | 112 | 0 | 16,631 | 44,419 |
| 2032 | 8,807 | 2,946 | 47 | 0 | 7,063 | 18,863 |
| 2033 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2034 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2035 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2036 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2037 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2038 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2039 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2040 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2041 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2042 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2043 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2044 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2045 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2046 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2047 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2048 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2049 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 39,333 | 11,363 | 182 | 0 | 27,436 | 78,313 |

**TABLE 3.5
SCHEDULE OF ANNUAL EXPENDITURES
PRELIMINARY INCREMENTAL SNF COST**
(thousands, 2003 dollars)

| Year | Labor | Equipment & Materials | Energy | Burial | Other | Total |
|------|--------|--------------------------|--------|--------|--------|--------|
| 2008 | 0 | 0 | 0 | 0 | 6,363 | 6,363 |
| 2009 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2010 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2011 | 0 | 0 | 0 | 0 | 564 | 564 |
| 2012 | 0 | 0 | 0 | 0 | 1,444 | 1,444 |
| 2013 | 0 | 0 | 0 | 0 | 4,331 | 4,331 |
| 2014 | 0 | 0 | 0 | 0 | 4,331 | 4,331 |
| 2015 | 0 | 0 | 0 | 0 | 4,331 | 4,331 |
| 2016 | 0 | 0 | 0 | 0 | 4,343 | 4,343 |
| 2017 | 0 | 0 | 0 | 0 | 4,331 | 4,331 |
| 2018 | 0 | 0 | 0 | 0 | 4,331 | 4,331 |
| 2019 | 0 | 0 | 0 | 0 | 4,331 | 4,331 |
| 2020 | 1,491 | 0 | 60 | 0 | 0 | 1,551 |
| 2021 | 1,487 | 0 | 60 | 0 | 0 | 1,547 |
| 2022 | 1,487 | 0 | 60 | 0 | 0 | 1,547 |
| 2023 | 1,487 | 0 | 60 | 0 | 0 | 1,547 |
| 2024 | 1,491 | 0 | 60 | 0 | 0 | 1,551 |
| 2025 | 1,487 | 0 | 60 | 0 | 0 | 1,547 |
| 2026 | 1,487 | 0 | 60 | 0 | 0 | 1,547 |
| 2027 | 1,488 | 0 | 60 | 0 | 0 | 1,548 |
| 2028 | 1,491 | 0 | 60 | 0 | 0 | 1,551 |
| 2029 | 1,487 | 0 | 60 | 0 | 0 | 1,547 |
| 2030 | 1,487 | 0 | 60 | 0 | 66 | 1,612 |
| 2031 | 1,487 | 0 | 60 | 0 | 319 | 1,865 |
| 2032 | 1,561 | 0 | 60 | 0 | 320 | 1,941 |
| 2033 | 1,608 | 0 | 60 | 0 | 319 | 1,987 |
| 2034 | 1,608 | 0 | 60 | 0 | 319 | 1,987 |
| 2035 | 1,608 | 0 | 60 | 0 | 319 | 1,987 |
| 2036 | 1,612 | 0 | 60 | 0 | 320 | 1,992 |
| 2037 | 1,608 | 0 | 60 | 0 | 319 | 1,987 |
| 2038 | 1,608 | 0 | 60 | 0 | 319 | 1,987 |
| 2039 | 1,608 | 0 | 60 | 0 | 319 | 1,987 |
| 2040 | 1,612 | 0 | 60 | 0 | 320 | 1,992 |
| 2041 | 1,608 | 0 | 60 | 0 | 319 | 1,987 |
| 2042 | 1,608 | 0 | 60 | 0 | 319 | 1,987 |
| 2043 | 1,608 | 0 | 60 | 0 | 319 | 1,987 |
| 2044 | 1,612 | 0 | 60 | 0 | 320 | 1,992 |
| 2045 | 1,608 | 0 | 60 | 0 | 319 | 1,987 |
| 2046 | 1,608 | 0 | 60 | 0 | 319 | 1,987 |
| 2047 | 1,608 | 0 | 60 | 0 | 319 | 1,987 |
| 2048 | 1,612 | 0 | 60 | 0 | 320 | 1,992 |
| 2049 | 797 | 0 | 0 | 0 | 105 | 902 |
| | 45,962 | 0 | 1,740 | 0 | 44,610 | 92,311 |

Appendix C

IRS Schedule of Ruling Amounts

Internal Revenue Service

Department of the Treasury

Washington, DC 20224

Virginia P. Allen
Consumers Energy Company
212 West Michigan Avenue
Jackson, MI 49201

Contact Person:
Bernard P. Harvey ID# 50-03134
Telephone Number:
(202) 622-3110
In Reference to:

CC:PSI:6 -- PLR-106036-00
Date:

OCT 29 2000

Dear Ms. Allen:

The enclosed original letter is sent to you under the provisions of a power of attorney, authorization and declaration, or other proper authorization currently on file with the Internal Revenue Service.

Sincerely yours,



PETER C. FRIEDMAN
Assistant to the Branch Chief, Branch 6
Office of the Associate Chief Counsel
(Passthroughs and Special Industries)

Enclosure:
Copy of letter

RECEIVED
NOV -6 2000
CORPORATE TAX

Internal Revenue Service

Department of the Treasury

Index Number: 468A.04-02

Washington, DC 20224

Preston D. Hopper
Senior Vice President of
Corporate Performance and C.A.O.
CMS Energy Corporation
212 West Michigan Avenue
Jackson, MI 49201

Contact Person:
Bernard P. Harvey ID# 50-03134

Telephone Number:
(202) 622-3110

In Reference to:
CC:PSI:6 -- PLR-106036-00

Date: OCT 20 2000

In re: Revised Schedule of Ruling Amounts for
Palisades Nuclear Power Plant

Legend:

| | | |
|--------------|---|--|
| Parent | = | CMS Energy Corporation E.I.N.: 38-2726431 |
| Taxpayer | = | Consumers Energy Company Formerly Consumers Power Company E.I.N.: 38-0442310 |
| Plant | = | Palisades Nuclear Power Plant |
| Location | = | 27780 Blue Star Memorial Highway Covert, Michigan 49043 |
| Commission A | = | Michigan Public Service Commission |
| Commission B | = | Federal Energy Regulatory Commission |
| Firm | = | TLG Services, Inc. Bridgewater, Connecticut |
| State X | = | Michigan |
| Area | = | lower peninsula |
| District | = | Michigan District |

PLR-106036-00

Dear Mr. Hopper:

This letter responds to your request dated March 14, 2000, and additional submissions that were submitted on behalf of Parent and the Taxpayer. The request is for a revised schedule of ruling amounts in accordance with section 1.468A-3(i) of the Income Tax Regulations for the Taxpayer's nuclear decommissioning fund (the "Fund") under the jurisdiction of Commission A. The required information for the schedule of ruling amounts was submitted by Parent and the Taxpayer pursuant to section 1.468A-3(h)(2).

Parent and the Taxpayer have represented the following facts and information:

The Taxpayer is a corporation organized under the laws of State X and is public utility engaged in the purchase, production, transmission, distribution and sale of electricity and natural gas in the Area of State X. The Taxpayer is under the audit jurisdiction of the District Director for the District.

The Taxpayer is the sole owner and operator of the Plant, which is situated at Location. The Plant began commercial operations on November 24, 1972. The operating license for the Plant that was issued by the Nuclear Regulatory Commission expires at midnight on March 14, 2007. The Taxpayer's electric energy generated from the Plant is subject to the jurisdiction of Commission A, which represents 97.373 percent of total electric sales, and Commission B, which represents the remaining 2.627 percent of total electric sales.

On June 30, 1987, the Taxpayer filed a request for an initial schedule of ruling amounts for the Fund relating to the Plant covering the Taxpayer's 1987 through 2007 taxable years. The initial schedule of ruling amounts was approved by the Service on August 26, 1988. On March 9, 1993, and on March 13, 1997, the Taxpayer filed requests for revised schedules of ruling amounts for the Fund, which were approved by the Service on May 28, 1993, and June 10, 1997, respectively. On March 31, 1998, the Taxpayer filed an application with Commission A to adjust nuclear plant decommissioning surcharges based on a new decommissioning study completed by the Firm in 1998. On March 22, 1999, Commission A issued an Opinion and Order in Case No. U-11662 that authorized the Taxpayer to decrease its surcharges for Plant but that contemplated later adjustments following reopened proceedings. On

PLR-106036-00

December 16, 1999, Commission A issued an Opinion and Order in Case No. U-11662 (the "Order") approving a settlement agreement and authorizing amounts for inclusion in cost of service for nuclear decommissioning of Plant. The Taxpayer represents that there currently are no pending proceedings before Commission A that may result in an increase or decrease in the amount of decommissioning costs included in the Taxpayer's cost of service. The amount of decommissioning costs included in the Taxpayer's cost of service for the Plant under the Order is \$14,458,350 for 1999 and \$5,500,000 for each of the taxable years in the period beginning on January 1, 2000, and ending on December 31, 2007.

The proposed method of decommissioning the Plant is the SAFSTOR method, delayed removal/dismantling. As estimated by the Firm and approved by Commission A, the total estimated cost of decommissioning the Plant is \$517,837,000 (in 1997 dollars) of which \$504,233,657 (approximately 97.373 percent) is within Commission A's jurisdiction. Escalating these amounts by 4.4 percent results in future decommissioning costs of \$1,895,668,625 (future dollars in the year of expenditure) of which \$1,845,869,406 (approximately 97.373 percent) is within Commission A's jurisdiction. The assumed after-tax rate of return on amounts collected for decommissioning is 7.18 percent. As of January 1, 1999, the asset balance of the Fund was \$268,130,063.

The Order demonstrates that Commission A took into account the amendments made by section 1917 of the Energy Policy Act of 1992 to section 468A of the Code when it determined the amount of decommissioning costs included in the Taxpayer's cost of service. The amendments repealed the investment restrictions contained in former section 468A(e)(4)(C), for taxable years beginning after December 31, 1992, and lowered the tax rate applicable to a nuclear decommissioning fund in section 468A(e)(2), for taxable years beginning after December 31, 1993.

The estimated date in which the Plant will no longer be included in the Taxpayer's rate base for ratemaking purposes, as determined under the ratemaking assumptions that were used to determine the last rates that were established or approved by Commission A, is March 13, 2007. However, the estimated date in which the Plant will no longer be included in the Taxpayer's rate base for ratemaking purposes, as determined under the ratemaking assumptions that were used by Commission A in establishing or approving rates during the first ratemaking proceeding in which the Plant was included in the Taxpayer's rate base, was December 31, 2005.

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The funding period and funding limitation period extend from January 1, 1987 through December 31, 2007. Pursuant to the Taxpayer's previous election under section 1.468A-8(b)(7)(i) of the regulations, the estimated period for which the Fund is to be in effect is 24 years (1984 through 2007) and the estimated useful life of the Plant is 36 years (1972 through 2007). Thus, the Taxpayer has calculated the qualifying percentage to be 66.6667 percent.

This request for a revised schedule of ruling amounts is limited to the amounts within Commission A's jurisdiction. Commission B has not determined the amount of decommissioning costs to be included in the Taxpayer's cost of service for ratemaking purposes within the meaning of section 1.468A-2(b)(2)(ii) of the regulations. Also, there currently are no pending proceedings before Commission B that may result in an increase or decrease in the amount of decommissioning costs included in the Taxpayer's cost of service.

Section 468A of the Code provides that a taxpayer may elect to deduct the amount of payments made to a qualified nuclear decommissioning fund. However, section 468A(b) limits the amount paid into the fund for any taxable year to the lesser of the amount of nuclear decommissioning costs allocable to the fund that is included in the taxpayer's cost of service for ratemaking purposes for the taxable year or the ruling amount applicable to that year.

Section 468A(d)(1) of the Code provides that no deduction shall be allowed for any payment to the nuclear decommissioning fund unless the taxpayer requests and receives from the Secretary a schedule of ruling amounts. The "ruling amount" for any taxable year is defined under section 468A(d)(2) as the amount which the Secretary determines to be necessary to fund that portion of nuclear decommissioning costs which bears the same ratio to the nuclear power plant as the period for which the fund is in effect bears to the estimated useful life of the plant. This term is further defined to include the amount necessary to prevent excessive funding of nuclear decommissioning costs or funding of these costs at a rate more rapid than level funding, taking into account such discount rates as the Secretary deems appropriate.

Section 468A(g) of the Code provides that a taxpayer shall be deemed to have made a payment to the nuclear decommissioning fund on the last day of the taxable year if the payment is made

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on account of the taxable year within 2½ months after the close of the taxable year.

Section 1.468A-1(a) of the regulations provides, in part, that an eligible taxpayer may elect to deduct nuclear decommissioning costs under section 468A of the Code. An "eligible taxpayer," as defined under section 1.468A-1(b)(1), is a taxpayer that has a qualifying interest in a nuclear power plant. As defined under section 1.468A-1(b)(2), a "qualifying interest" is, among other things, a direct ownership interest, including an interest held as a tenant in common or joint tenant.

Section 1.468A-2(b)(1) of the regulations provides, in part, that the maximum amount of cash payments made (or deemed made) to a nuclear decommissioning fund during any taxable year shall not exceed the lesser of (i) the cost of service amount applicable to the nuclear decommissioning fund for such taxable year; (ii) or the ruling amount applicable to the nuclear decommissioning fund for such taxable year.

Section 1.468A-3(a)(1) of the regulations generally provides, in part, that a schedule of ruling amounts for a nuclear decommissioning fund is a ruling specifying annual payments that, over the taxable years remaining in the "funding period" as of the date the schedule first applies, will result in a projected balance of the nuclear decommissioning fund as of the last day of the funding period equal to (and in no event more than) the "amount of decommissioning costs allocable to the fund."

Section 1.468A-3(a)(2) of the regulations provides that, to the extent consistent with the principles and provisions of section 1.468A-3, each schedule of ruling amounts shall be based on the reasonable assumptions and determinations used by the applicable public utility commission(s) in establishing or approving the amount of decommissioning costs to be included in the cost of service for ratemaking purposes, taking into account amounts that are otherwise required to be included in the taxpayer's income under section 88 of the Code and the regulations thereunder. Thus, for example, each schedule of ruling amounts shall be based on the public utility commission's reasonable assumptions concerning (i) the after-tax rate of return to be earned by the amounts collected for decommissioning; (ii) the total estimated cost of decommissioning the nuclear power plant; and (iii) the frequency of contributions to the nuclear decommissioning fund for a taxable year.

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Under section 1.468A-3(a)(3) of the regulations, the Internal Revenue Service shall provide a schedule of ruling amounts that is identical to the schedule proposed by the taxpayer, but no such schedule shall be provided unless the taxpayer's proposed schedule is consistent with the principles and provisions of section 1.468A-3.

Section 1.468A-3(b)(1) of the regulations provides that the ruling amount, specified in a schedule of ruling amounts, for any taxable year in the level funding limitation period shall not be less than the ruling amount specified in such schedule for any earlier taxable year. Under section 1.468A-3(b)(2)(i) and (ii), the level funding limitation period begins on the first day of the first taxable year for which a deductible payment is made to the nuclear decommissioning fund and ends on the last day of the taxable year that includes the estimated date on which the nuclear power plant will no longer be included in the taxpayer's rate base for ratemaking purposes.

Section 1.468A-3(c)(1)(i) and (ii) of the regulations provides that the funding period for a nuclear decommissioning fund is the period that begins on the first day of the first taxable year for which a deductible payment is made (or deemed to be made) to such nuclear decommissioning fund and ends the later of the last day of the taxable year that includes the estimated date on which decommissioning costs of the nuclear power plant to which the nuclear decommissioning fund relates will no longer be included in the taxpayer's cost of service for ratemaking purposes; or the last day of the taxable year that includes the estimated date on which the nuclear power plant to which the nuclear decommissioning fund relates will no longer be included in the taxpayer's rate base for ratemaking purposes.

Section 1.468A-3(d)(1) of the regulations provides that the amount of decommissioning costs allocable to a nuclear decommissioning fund is the taxpayer's share of the total estimated cost of decommissioning the nuclear power plant multiplied by the qualifying percentage.

Section 1.468A-3(d)(2)(i) of the regulations provides, in part, that the total estimated cost of decommissioning a nuclear power plant is the reasonably estimated cost of decommissioning used by the applicable public utility commission in establishing or approving the amount of these costs, to be included in cost of service for ratemaking purposes.

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Section 1.468A-3(d)(3) of the regulations provides that a taxpayer's share of the total estimated cost of decommissioning a nuclear power plant equals the total estimated cost of decommissioning the plant multiplied by the taxpayer's qualifying interest in the plant.

Section 1.468A-3(d)(4)(i) of the regulations provides that the qualifying percentage for any nuclear decommissioning fund is equal to the fraction, the numerator of which is the number of taxable years in the estimated period for which the nuclear decommissioning fund is to be in effect and the denominator of which is the number of taxable years in the estimated useful life of the applicable nuclear power plant.

Under the elective special transition rule of section 1.468A-8(b)(7)(i) of the regulations, for purposes of section 1.468A-3(d)(4)(ii), the estimated period for which a nuclear decommissioning fund is to be in effect begins on the later of the first day of the taxable year that includes the date that the nuclear power plant began commercial operations; or the first day of the taxable year that includes July 18, 1984. Under the elective special transition rule of section 1.468A-8(b)(7)(ii), for purposes of section 1.468A-3(d)(4)(ii) and (iii), the estimated period for which the nuclear decommissioning fund is to be in effect and the estimated useful life of the nuclear power plant end on the earlier of the last date of the taxable year in which it is estimated that decommissioning will begin; or the last day of the taxable year that includes the expiration date of the Nuclear Regulatory Commission operating license as in effect on July 18, 1984, without regard to any extensions or amendments. Under section 1.468A-3(d)(4)(iii)(A), the estimated useful life of a nuclear power plant begins on the first day of the taxable year that includes the date that the plant begins commercial operations.

Section 1.468A-3(g) of the regulations provides that the Service shall not provide a taxpayer with a schedule of ruling amounts for any nuclear decommissioning fund unless the public utility commission that establishes or approves the rates for electric energy generated by the plant to which the nuclear decommissioning fund relates has (1) determined the amount of decommissioning costs to be included in the taxpayer's cost of service for ratemaking purposes; and (2) has disclosed the after-tax rate of return and any other assumptions and determinations used in establishing or approving the amount.

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Section 1.468A-3(h)(2) of the regulations enumerates the information required to be submitted by a taxpayer in order to receive a ruling amount for any taxable year.

Section 1.468A-3(i)(1)(iii) of the regulations provides that a taxpayer is required to request a revised schedule of ruling amounts for a nuclear decommissioning fund if (A) any public utility commission that establishes or approves rates for the furnishing or sale of electric energy generated by a nuclear power plant to which the nuclear decommissioning fund relates (1) increases the proposed period over which decommissioning costs of the nuclear power plant will be included in cost of service for ratemaking purposes; (2) adjusts the estimated date on which the nuclear power plant will no longer be included in the taxpayer's rate base for ratemaking purposes; or (3) reduces the amount of decommissioning costs to be included in cost of service for any taxable year; and (B) the taxpayer's most recent request for a schedule of ruling amounts did not provide notice to the Service of the action by the public utility commission.

Section 1.468A-3(i)(2) of the regulations provides that any taxpayer that has obtained a schedule of ruling amounts pursuant to section 1.468A-3(h) can request a revised schedule of ruling amounts. Such a request must be made in accordance with the rules of section 1.468A-3(h); thus, the Service shall not provide a revised ruling amount applicable to a taxable year in response to a request for a schedule of ruling amounts that is filed after the deemed payment deadline date for such taxable year.

Section 1.468A-7(a) of the regulations provides, in general, that an eligible taxpayer is allowed a deduction for the taxable year in which the taxpayer makes a cash payment (or is deemed to make a cash payment) to a nuclear decommissioning fund only if the taxpayer elects the application of section 468A of the Code. A separate election is required for each nuclear decommissioning fund and for each taxable year with respect to which payments are to be deducted under section 468A. In the case of an affiliated group of corporations that join in filing a consolidated return for a taxable year, the common parent must make a separate election on behalf of each member whose payments to a nuclear decommissioning fund during such taxable year are to be deducted under section 468A. The election under section 468A for any taxable year is irrevocable and must be made by attaching a statement ("Election Statement") and a copy of the schedule of ruling amounts provided pursuant to the rules of section 1.468A-3 to the taxpayer's federal income tax return (or, in the case of an affiliated group of corporations that join in filing a

PLR-106036-00

consolidated return, the consolidated return) for such taxable year. The return to which the Election Statement and a copy of the schedule of ruling amounts is attached must be filed on or before the time prescribed by law (including extensions) for filing the return for the taxable year with respect to which payments are to be deducted under section 468A.

We have examined the representations and information submitted by the Taxpayer in relation to the requirements set forth in the section 468A of the Code and the regulations thereunder. Based solely on these representations, we reach the following conclusions:

1. The Taxpayer has a qualifying interest in the Plant and is, therefore, an eligible taxpayer under section 1.468A-1(b)(1) and (2) of the regulations.
2. Commission A has authorized decommissioning costs to be included in the Taxpayer's cost of service for ratemaking purposes as required by section 1.468A-3(g) of the regulations.
3. The Taxpayer has proposed a schedule of ruling amounts which meets the requirements of sections 1.468A-3(a)(1) and (2) of the regulations. The annual payments specified in the proposed schedule of ruling amounts are based on the reasonable assumptions and determinations used by Commission A and will result in a projected fund balance at the end of the funding period equal to or less than the amount of decommissioning costs allocable to the Fund.
4. The maximum amount of cash payments made (or deemed made) to the Fund during any tax year is restricted to the lesser amount of the decommissioning cost applicable to the Fund or the ruling amount applicable to the Fund, as set forth under section 1.468A-2(b)(1) of the regulations.
5. The Taxpayer was eligible for and properly elected the special transition rule of section 1.468A-8(b)(7)(i) of the regulations.

PLR-106036-00

The Taxpayer's qualifying percentage under section 1.468A-3(d)(4) is 66.6667 percent.

Based on the above determinations, we conclude that the Taxpayer's proposed schedule of ruling amounts satisfies the requirements of section 468A of the Code.

APPROVED REVISED SCHEDULE OF RULING AMOUNTS
TAXABLE YEARS 1996 THROUGH 2007
FOR COMMISSION A

EACH YEAR
1999
THROUGH
2007 \$1,929,002

Approval of the schedule of ruling amounts is contingent on there being no change in the facts and circumstances, known or assumed, at the time this ruling is issued. If any of the events described in section 1.468A-3(i)(1)(iii) of the regulations occur in future years, the Taxpayer must request a review and revision of the schedule of ruling amounts. Under section 1.468A-3(i)(1)(iv), the Taxpayer is required to file such a request on or before the deemed payment deadline date for the first taxable year in which the rates reflecting such action became effective.

The approved schedule of ruling amounts is relevant only to those payments made to the Fund. Payments allocable to any funds other than the Fund cannot qualify for purposes of the deduction under the provisions of section 468A of the Code. As stated above, payments made to the Fund can qualify only to the extent that they do not exceed the lesser of the cost of service amount applicable to the Fund or the ruling amounts applicable to the Fund in the taxable year.

Except as specifically set forth above, no opinion is expressed concerning the federal income tax consequences of the above described facts under any other provision of the Code or regulations. This letter ruling is directed only to the taxpayer who requested it. Section 6110(k)(3) of the Code provides that this ruling may not be used or cited as precedent.

PLR-106036-00

Pursuant to section 1.468A-7(a) of the regulations, a copy of this letter must be attached (with the required Election Statement) to the Taxpayer's federal income tax return for each taxable year in which the Taxpayer claims a deduction for payments made to the Fund.

Sincerely yours,

A handwritten signature in cursive script, reading "Peter C. Friedman".

PETER C. FRIEDMAN

Assistant to the Branch Chief, Branch 6
Office of the Associate Chief Counsel
(Passthroughs and Special Industries)

Enclosure:
6110 copy

Appendix D
Administrative and Incidental Expenses

CONSUMERS ENERGY COMPANY
State Street Bank and Trust Company
Administrative and Incidental Expense
2001 Through 2003

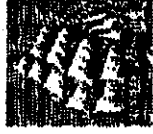
| Description | 2001 | 2002 | 2003 |
|---|--------------|--------------|--------------|
| Palisades Section 468A Trust: | | | |
| <u>Section 468A - Fixed Income (ZG3D):</u> | | | |
| State Taxes | 82,000.00 | 149,000.00 | 158,081.18 |
| Investment Manager Fees | 53,589.86 | 58,255.83 | 54,244.83 |
| Trustee Fee | 11,601.55 | 9,754.80 | 16,386.05 |
| Federal Taxes | 1,625,000.00 | 1,365,000.00 | 1,288,000.00 |
| Subtotal | 1,772,191.41 | 1,582,010.63 | 1,516,712.06 |
| <u>Section 468A - Equity (ZG3E):</u> | | | |
| State Taxes | - | - | - |
| Investment Manager Fees | 72,327.69 | 61,581.27 | 62,578.66 |
| Trustee Fee | 17,960.29 | 13,239.19 | 31,617.32 |
| Federal Taxes | - | - | - |
| Subtotal | 90,287.98 | 74,820.46 | 94,195.98 |
| Total | 1,862,479.39 | 1,656,831.09 | 1,610,908.04 |
| <u>Palisades Non-Section 468A Trust (ZG4B):</u> | | | |
| Investment Manager Fees | 64,529.28 | 70,730.40 | 77,652.03 |
| Trustee Fee | 13,503.02 | 11,031.85 | 18,049.22 |
| Total | 78,032.30 | 81,762.25 | 95,701.25 |

ZG3D ANNUAL
US DOLLAR
ACCOUNT: 12000/000

CONSUMERS ENERGY - ZG3D
SSGA - PALISADES
CASH TRANSACTION SUMMARY STATEMENT REPORT
JANUARY 1, 2002 TO DECEMBER 31, 2002

PAGE: 1

| DESCRIPTION | RECEIVED (+) | DISBURSED (-) |
|------------------------------------|---------------------|------------------|
| — BEGINNING BALANCE — | 3,997,500.00 *** | 106,882,325.98 |
| SECURITIES PURCHASED | | |
| CASH EQUIVALENT - PRIN | 50,872,293.74 { - } | |
| LONG TERM - PRINCIPAL | 55,546,176.62 { - } | |
| LONG TERM - INTEREST | 463,855.62 { - } | |
| SECURITIES SOLD | | |
| CASH EQUIVALENT - PRIN | 42,033,863.54 { + } | |
| LONG TERM - PRINCIPAL | 42,830,146.97 { + } | |
| LONG TERM - INTEREST | 276,760.56 { + } | |
| MATURITY | 0.00 | |
| DIVIDENDS RECEIVED | 7,030.87 | |
| INTEREST RECEIVED | | |
| INTEREST RECD - CASH EQUIV | 5,684,288.03 | |
| INTEREST RECD - LONG TERM | 73,649.20 { + } | |
| | 5,610,638.83 { + } | |
| PAYDOWN RECEIVED | | |
| LONG TERM - PRINCIPAL | 11,574,722.12 | |
| LONG TERM - INTEREST | | |
| PAYUP RECEIVED | 0.00 | |
| DIVIDEND TAX RECLAIM RECEIVED | 0.00 | |
| INTEREST TAX RECLAIM RECEIVED | 0.00 | |
| FEDERAL TAXES | 132,980.18 | 1,365,000.00 |
| STATE TAXES | | 149,000.00 |
| CONTRIBUTIONS | | |
| INVESTMENT MANAGER FEE | 1,929,002.00 | 58,255.83 |
| TRUSTEE FEE | | 9,754.80 |
| TRANSFERS IN | | 1,957.66 |
| 12/26/02 — LEDGER ENDING BALANCE — | 0.00 *** | |



STATE STREET

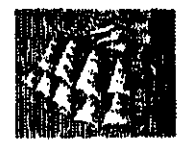
RUN DATE = 16JAN03

ZG3E ANNUAL
US DOLLAR
ACCOUNT: 12000/000

CONSUMERS ENERGY - ZG3E

SSGA - PALISADES
CASH TRANSACTION SUMMARY STATEMENT REPORT
JANUARY 1, 2002 TO DECEMBER 31, 2002

| DESCRIPTION | RECEIVED (+) | DISBURSED (-) |
|--|--|------------------|
| — BEGINNING BALANCE — | 0.00 *** | 9,410,012.97 |
| SECURITIES PURCHASED CASH EQUIVALENT - PRIN EQUITY - PRINCIPAL | 2,622,502.99 (-) 6,787,509.98 (-) | |
| SECURITIES SOLD CASH EQUIVALENT - PRIN EQUITY - PRINCIPAL | 7,043,521.65 2,967,923.51 (+) 4,075,598.14 (+) | |
| MATURITY | 0.00 | |
| FX CONTRACTS PURCHASED | 0.00 | |
| FX CONTRACTS SOLD | 0.00 | |
| DIVIDENDS RECEIVED | 2,418,005.04 | |
| INTEREST RECEIVED INTEREST RECD - CASH EQUIV | 12,496.47 | |
| PAYDOWN RECEIVED | 0.00 | |
| PAYUP RECEIVED | 0.00 | |
| DIVIDEND TAX RECLAIM RECEIVED | 3,235.68 | |
| INTEREST TAX RECLAIM RECEIVED | 0.00 | |
| INVESTMENT MANAGER FEE | | 61,581.27 |
| TRUSTEE FEE | | 13,239.19 |
| OTHER INCOME | 7,574.59 | |
| 12/31/02 — LEDGER ENDING BALANCE — | 0.00 *** | |



STATE STREET

ZG48 12/31/02 ANNUAL
US DOLLAR
ACCOUNT: 12000/000

CONSUMERS ENERGY - ZG48
SSGA-PALISADES
CASH TRANSACTION SUMMARY STATEMENT REPORT
JANUARY 1, 2002 TO DECEMBER 31, 2002

PAGE: 1

| DESCRIPTION | RECEIVED (+) | DISBURSED (-) |
|------------------------------------|-------------------|------------------|
| — BEGINNING BALANCE — | 0.00 *** | 71,926,306.52 |
| SECURITIES PURCHASED | | |
| CASH EQUIVALENT - PRIN | 29,301,147.35 (-) | |
| LONG TERM - PRINCIPAL | 42,409,916.20 (-) | |
| LONG TERM - INTEREST | 215,242.97 (-) | |
| SECURITIES SOLD | 61,359,801.13 | |
| CASH EQUIVALENT - PRIN | 32,903,418.41 (+) | |
| LONG TERM - PRINCIPAL | 28,146,086.55 (+) | |
| LONG TERM - INTEREST | 310,296.17 (+) | |
| MATURITY | 0.00 | |
| DIVIDENDS RECEIVED | 11,440.36 | |
| INTEREST RECEIVED | | |
| INTEREST RECD - CASH EQUIV | 26,848.67 (+) | |
| INTEREST RECD - LONG TERM | 6,811,197.82 (+) | |
| PAYDOWN RECEIVED | 0.00 | |
| PAYUP RECEIVED | 0.00 | |
| DIVIDEND TAX RECLAIM RECEIVED | 0.00 | |
| INTEREST TAX RECLAIM RECEIVED | 0.00 | |
| CONTRIBUTIONS | 0.00 | |
| INVESTMENT MANAGER FEE | 3,798,528.35 | |
| TRUSTEE FEE | | 70,730.40 |
| OTHER INCOME | 252.44 | 11,031.85 |
| 12/30/02 — LEDGER ENDING BALANCE — | 0.00 *** | |



RUN DATE - 16 JAN 03

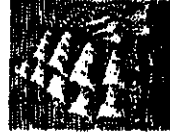
STATE STREET

ZG3D ANNUAL
US DOLLAR
ACCOUNT: 12000/000

CONSUMERS ENERGY - ZG3D
SSGA - PALISADES
CASH TRANSACTION SUMMARY STATEMENT REPORT
JANUARY 1, 2003 TO DECEMBER 31, 2003

PAGE: 1

| DESCRIPTION | RECEIVED (+) | DISBURSED (-) |
|--|-----------------|------------------|
| --- BEGINNING BALANCE --- | 0.00 *** | |
| SECURITIES PURCHASED | | 83,954,187.47 |
| CASH EQUIVALENT - PRIN | | |
| LONG TERM - PRINCIPAL | | |
| LONG TERM - INTEREST | | |
| SECURITIES SOLD | 98,975,300.15 | |
| CASH EQUIVALENT - PRIN | | |
| LONG TERM - PRINCIPAL | | |
| LONG TERM - INTEREST | | |
| MATURITY | 0.00 | |
| DIVIDENDS RECEIVED | 0.00 | |
| INTEREST RECEIVED | | |
| INTEREST RECD - CASH EQUIV | | |
| INTEREST RECD - LONG TERM | | |
| PAYDOWN RECEIVED | | |
| LONG TERM - PRINCIPAL | | |
| LONG TERM - INTEREST | | |
| PAYUP RECEIVED | | |
| DIVIDEND TAX RECLAIM RECEIVED | | |
| INTEREST TAX RECLAIM RECEIVED | | |
| STATE TAXES | | |
| CONTRIBUTIONS | | |
| INVESTMENT MANAGER FEE | | |
| TRUSTEE FEE | | |
| TRANSFERS OUT | | |
| FEDERAL TAXES | | |
| 12/26/03 --- LEDGER ENDING BALANCE --- | 0.00 *** | |



RUN DATE = 27JAN04

STATE STREET,

ZG3E ANNUAL
US DOLLAR
ACCOUNT: 12000/000

CONSUMERS ENERGY - ZG3E
SSGA - PALISADES
CASH TRANSACTION SUMMARY STATEMENT REPORT
JANUARY 1, 2003 TO DECEMBER 31, 2003

PAGE: 1

| DESCRIPTION | RECEIVED (+) | DISBURSED (-) |
|--|--|------------------|
| --- BEGINNING BALANCE --- | 0.00 *** | |
| SECURITIES PURCHASED CASH EQUIVALENT - PRIN EQUITY - PRINCIPAL | 38,934,586.75 (-) 39,336,671.78 (-) | 78,271,258.53 |
| SECURITIES SOLD CASH EQUIVALENT - PRIN EQUITY - PRINCIPAL | 38,970,929.39 (+) 1,595,873.03 (+) | |
| NATURITY | 0.00 | |
| FX CONTRACTS PURCHASED | 0.00 | |
| FX CONTRACTS SOLD | 0.00 | |
| DIVIDENDS RECEIVED | 3,062,785.12 | |
| INTEREST RECEIVED INTEREST RECD - CASH EQUIV | 9,217.41 | |
| PAYDOWN RECEIVED | 0.00 | |
| PAYUP RECEIVED | 0.00 | |
| DIVIDEND TAX RECLAIM RECEIVED | 107.02 | |
| INTEREST TAX RECLAIM RECEIVED | 0.00 | |
| INVESTMENT MANAGER FEE | | 62,578.66 |
| TRUSTEE FEE | | 31,617.32 |
| TRANSFERS IN | 34,675,000.00 | |
| OTHER INCOME | 51,542.54 | |
| 12/31/03 --- LEDGER ENDING BALANCE --- | 0.00 *** | |



RUN DATE = 27JAN04

STATE STREET

ZG4B ANNUAL
US DOLLAR
ACCOUNT: 12000/000

CONSUMERS ENERGY - ZG4B

CASH TRANSACTION SUMMARY STATEMENT REPORT
JANUARY 1, 2003 TO DECEMBER 31, 2003

PAGE: 1

| DESCRIPTION | RECEIVED (+) | DISBURSED (-) |
|--|-------------------|------------------|
| --- BEGINNING BALANCE --- | 0.00 *** | |
| SECURITIES PURCHASED | | 47,293,807.07 |
| CASH EQUIVALENT - PRIN | 23,037,290.37 (-) | |
| LONG TERM - PRINCIPAL | 24,120,655.45 (-) | |
| LONG TERM - INTEREST | 135,861.25 (-) | |
| SECURITIES SOLD | 36,275,179.31 | |
| CASH EQUIVALENT - PRIN | 21,521,395.74 (+) | |
| LONG TERM - PRINCIPAL | 14,728,755.75 (+) | |
| LONG TERM - INTEREST | 25,027.82 (+) | |
| MATURITY | 0.00 | |
| DIVIDENDS RECEIVED | 0.00 | |
| INTEREST RECEIVED | 7,540,467.94 | |
| INTEREST RECD - CASH EQUIV | 21,817.17 (+) | |
| INTEREST RECD - LONG TERM | 7,518,650.77 (+) | |
| PAYDOWN RECEIVED | 0.00 | |
| PAYUP RECEIVED | 0.00 | |
| DIVIDEND TAX RECLAIM RECEIVED | 0.00 | |
| INTEREST TAX RECLAIM RECEIVED | 0.00 | |
| CONTRIBUTIONS | 3,573,861.07 | |
| INVESTMENT MANAGER FEE | | 77,652.03 |
| TRUSTEE FEE | | 18,049.22 |
| 12/29/03 --- LEDGER ENDING BALANCE --- | 0.00 *** | |



STATE STREET

RUN DATE - 27JAN04

ZG3D ANNUAL
US DOLLAR
ACCOUNT: 12000/000

CONSUMERS ENERGY - ZG3D
SSGA - PALISADES
CASH TRANSACTION SUMMARY STATEMENT REPORT
JANUARY 1, 2001 TO DECEMBER 31, 2001

PAGE: 1

| DESCRIPTION | RECEIVED (+) | DISBURSED (-) |
|--|------------------|---------------------|
| --- BEGINNING BALANCE --- | 0.00 *** | 74,246,698.97 |
| SECURITIES PURCHASED | | |
| CASH EQUIVALENT - PRIN | | 36,690,686.37 { - } |
| LONG TERM - PRINCIPAL | | 37,274,375.65 { - } |
| LONG TERM - INTEREST | | 281,636.95 { - } |
| SECURITIES SOLD | | |
| CASH EQUIVALENT - PRIN | 62,055,049.17 | |
| LONG TERM - PRINCIPAL | | 39,154,023.81 { + } |
| LONG TERM - INTEREST | | 22,782,029.41 { + } |
| | | 118,995.95 { + } |
| MATURITY | 0.00 | |
| DIVIDENDS RECEIVED | 181,396.79 | |
| INTEREST RECEIVED | 5,504,357.28 | |
| PAYDOWN RECEIVED | 10,346,585.14 | |
| LONG TERM - PRINCIPAL | | 8,781,478.32 { + } |
| LONG TERM - INTEREST | | 1,565,106.82 { + } |
| PAYUP RECEIVED | 0.00 | |
| DIVIDEND TAX RECLAIM RECEIVED | 0.00 | |
| INTEREST TAX RECLAIM RECEIVED | 0.00 | |
| STATE TAXES | | 82,000.00 |
| CONTRIBUTIONS | 1,929,002.00 | |
| TRUSTEE FEE | | 11,601.55 |
| INVESTMENT MANAGER FEE | | 53,589.86 |
| FEDERAL TAXES | | 1,625,000.00 |
| 12/31/01 --- LEDGER ENDING BALANCE --- | 3,997,500.00 *** | |



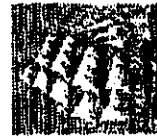
STATE STREET

RUN DATE = 05FEB02

CONSUMERS ENERGY - ZG3E
SSGA - PALISADES
CASH TRANSACTION SUMMARY STATEMENT REPORT
JANUARY 1, 2001 TO DECEMBER 31, 2001

ZG3E ANNUAL
US DOLLAR
ACCOUNT: 12000/000

| DESCRIPTION | RECEIVED (+) | DISBURSED (-) |
|--|------------------|------------------|
| --- BEGINNING BALANCE --- | 32,868.00 *** | 6,411,146.59 |
| SECURITIES PURCHASED CASH EQUIVALENT - PRIN EQUITY - PRINCIPAL | 3,112,999.53 (-) | 3,298,147.06 (-) |
| SECURITIES SOLD CASH EQUIVALENT - PRIN EQUITY - PRINCIPAL | 4,034,340.76 | 3,094,627.80 (+) |
| MATURITY | 0.00 | 939,712.96 (+) |
| FX CONTRACTS PURCHASED | 0.00 | |
| FX CONTRACTS SOLD | 0.00 | |
| DIVIDENDS RECEIVED | 2,429,973.01 | |
| INTEREST RECEIVED | 0.00 | |
| PAYDOWN RECEIVED | 0.00 | |
| PAYUP RECEIVED | 0.00 | |
| DIVIDEND TAX RECLAIM RECEIVED | 2,908.80 | |
| INTEREST TAX RECLAIM RECEIVED | 0.00 | |
| TRUSTEE FEE | | 17,960.29 |
| INVESTMENT MANAGER FEE | | 72,327.69 |
| CAPITAL GAINS ON CORPORATE ACTION | 1,344.00 | |
| 12/31/01 --- LEDGER ENDING BALANCE --- | 0.00 *** | |



STATE STREET

ZG48 ANNUAL
US DOLLAR
ACCOUNT: 12000/000

CONSUMERS ENERGY - ZG48
SSGA-PALISADES
CASH TRANSACTION SUMMARY STATEMENT REPORT
JANUARY 1, 2001 TO DECEMBER 31, 2001

PAGE: 1

| DESCRIPTION | RECEIVED (+) | DISBURSED (-) |
|---------------------------------------|-------------------|------------------|
| --- BEGINNING BALANCE --- | 0.00 *** | |
| SECURITIES PURCHASED | | 90,535,025.97 |
| CASH EQUIVALENT -- PRIN | 35,422,430.95 (-) | |
| LONG TERM -- PRINCIPAL | 54,709,104.86 (-) | |
| LONG TERM -- INTEREST | 403,490.16 (-) | |
| SECURITIES SOLD | 80,415,602.50 | |
| CASH EQUIVALENT -- PRIN | 33,215,767.02 (+) | |
| LONG TERM -- PRINCIPAL | 46,589,969.86 (+) | |
| LONG TERM -- INTEREST | 609,865.62 (+) | |
| NATURITY | 0.00 | |
| DIVIDENDS RECEIVED | 73,369.70 | |
| INTEREST RECEIVED | | |
| INTEREST RECD -- CASH EQUIV | 100.52 (+) | |
| INTEREST RECD -- LONG TERM | 6,460,495.94 (+) | |
| PAYDOWN RECEIVED | 0.00 | |
| PAYUP RECEIVED | 0.00 | |
| DIVIDEND TAX RECLAIM RECEIVED | 0.00 | |
| INTEREST TAX RECLAIM RECEIVED | 0.00 | |
| TRANSFERS IN | 490,577.25 | |
| CONTRIBUTIONS | 3,172,912.36 | |
| TRUSTEE FEE | | 13,503.02 |
| INVESTMENT MANAGER FEE | | 64,529.28 |
| 12/18/01 -- LEDGER ENDING BALANCE --- | 0.00 *** | |



STATE STREET,

RUN DATE - 05FEB02

CONSUMERS ENERGY COMPANY

Palisades Nuclear Plant
Decommissioning Funding Forecast Estimate
SAFSTOR - Plant Retirement in Year 2011

Projection of Fund Balance Deficiency if Surcharge Recovery Stops in 2007

[illegible]

| | |
|-----------|----------------|
| Case No.: | U-14150 |
| Exhibit: | A-4 (TLS-7) |
| Witness: | TLSimonsen |
| Date: | February, 2005 |
| Page: | 1 of 1 |

CONSUMERS ENERGY COMPANY
Palisades Decommissioning Fund Balances 2001-2011
Comparison of Actual versus Estimated

| <u>Year</u> | <u>2001 Report on Adequacy of Provision (1)</u> | <u>2004 Report on Adequacy of Provision (2)</u> | <u>Actual Year-End Balance (3)</u> |
|-------------|---|---|--|
| 2001 | 459,554,015 | | 422,948,954 |
| 2002 | 498,769,207 | | 416,193,599 |
| 2003 | 540,787,782 | 476,906,111 | 476,906,611 |
| 2004 | 585,816,462 | 515,480,293 | 512,459,870 |
| 2005 | 634,077,596 | 556,883,733 | |
| 2006 | 685,810,364 | 621,010,280 | |
| 2007 | 741,272,069 | 689,223,909 | |
| 2008 | 800,583,437 | 759,567,914 | |
| 2009 | 589,735,989 | 836,652,205 | |
| 2010 | 920,901,281 | 919,788,855 | |
| 2011 | 921,464,771 | 931,868,421 | |

- Notes:
- 1 The 2001 Report assumed the current annual surcharge continued through 2011
 - 2 The 2004 Report assumed the current annual surcharge continued through 2005 and in 2006 the surcharge was increased to \$25.5 million.
 - 3 Actual balances based on State Street Annual Reports.