Calvert Cliffs Nuclear Power Plant Unit 3

Combined License Application

Part 9: Proprietary and Sensitive Unclassified Non-Safeguards Information

This COLA Part is completely Site Specific

Revision 6
September 2009

PROPRIETARY AND SENSITIVE UNCLASSIFIED NON-SAFEGUARDS INFORMATION

This part of the CCNPP Unit 3 COLA delineates the information withheld from public disclosure in accordance with 10 CFR 2.390 because it contains Commercial Proprietary and Sensitive Unclassified Non-Safeguards Information (SUNSI).

1.1 PART 1: GENERAL INFORMATION

The following Commerical Proprietary Information is withheld in Part 1 of the CCNPP Unit 3 COLA:

- Page 1-16, total estimated cost of the CCNPP Unit 3
- Page 1-19, initial sinking fund contributions
- Page 1-28, Table 1.0-1—Calvert Cliffs Nuclear Power Plant Unit 3 Projected Income Statement, Base Case
- Page 1-30, Table 1.0-2—Calvert Cliffs Nuclear Power Plant Unit 3 Projected Statement of Operating Cash Flow
- Page 1-32, Table 1.0-3—Calvert Cliffs Nuclear Power Plant Unit 3 Projected Project Cost
- Page 1-34, Table 1.0-4—Calvert Cliffs Nuclear Power Plant Unit 3 Projected Income Statement Sensitivity, Cost of Borrowing Increased 200 Basis Points
- Page 1-36, Table 1.0-5—Calvert Cliffs Nuclear Power Plant Unit 3 Projected Income Statement Sensitivity, 10% Reduction in Projected Market Prices
- Page 1-38, Table 1.0-6—Calvert Cliffs Nuclear Power Plant Unit 3 Projected Income Statement Sensitivity, 10% Reduction in Capacity Factor
- Page 1-40, Table 1.0-7—Calvert Cliffs Nuclear Power Plant Unit 3 Projected Income Statement Sensitivity, No Receipt of Production Tax Credits
- Page 1-42, Table 1.0-8—Calvert Cliffs Nuclear Power Plant Unit 3 Projected Income Statement Sensitivity, 10% Higher Capital Cost
- Page 1-44, Table 1.0-9—Calvert Cliffs Nuclear Power Plant Unit 3 Projected Income Statement, 6-Month Regulatory Delay

1.2 PART 2: FSAR

The following SUNSI material is withheld in Part 2 of the CCNPP Unit 3 COLA:

- Figure 3.8-2—{Schematic Site Plan of Category I Buried Utilities at the NI (Electrical Duct Banks)}
- Figure 3.8-4—{Schematic Site Plan of Category I Buried Utilities at the NI (Underground Piping)}
- Section 9B.3.1.3, Fire area FA-UMA-03 (Table 9B-2, Column 3), first paragraph
- Section 9B.3.1.5, Fire area FA-UMA-05 (Table 9B-2, Column 5), first paragraph
- Section 9B.3.2.1, Fire area FA-UBA-01 (Table 9B-2, Column 9), last paragraph, last sentence
- Section 9B.3.2.2, Fire area FA-UBA-02 (Table 9B-2, Column 10), last paragraph, last sentence
- Section 9B.3.2.4, Fire area FA-UBA-04 (Table 9B-2, Column 12), last paragraph, last sentence
- Figure 9B-10, CCNPP Unit 3 - Fire Barrier Location SWGR/SBO Buildings Plan at Elevation -13 Feet
- Figure 9B-11, CCNPP Unit 3 - Fire Barrier Location SWGR/SBO/AUX Blr Buildings Plan at Elevation 0’-0”
- Figure 9B-12, CCNPP Unit 3 - Fire Barrier Location SWGR/SBO/AUX Blr Buildings Plan at Elevation 13’-0”
- Figure 9B-13, CCNPP Unit 3 - Fire Barrier Location SWGR/SBO/AUX Blr Buildings Plan at Elevation 24’-6”
- Figure 9B-14, CCNPP Unit 3 - Fire Barrier Location SWGR/SBO/AUX Blr Buildings Plan Section A-A
- Figure 9B-18, CCNPP Unit 3 - Fire Barrier Location Central Gas Supply Building Plan at Elevation 85’-0”

1.3 PART 3: ENVIRONMENTAL REPORT

The following Commercial Proprietary Information is withheld in Part 3 of the CCNPP Unit 3 COLA:

- Page 4-82, Section 4.4.2.6.2, Two-County Region of Influence, second paragraph:
  - CCNPP Unit 3 estimated total project capital cost
  - CCNPP Unit 3 2007 estimated total property taxes
  - CCNPP Unit 3 2008 through 2010 county property taxes
  - CCNPP Unit 3 subsequent years property taxes
  - CCNPP Unit 3 maximum property taxes and Calvert County's percent increase in annual property tax revenue
- Page 5-157, Section 5.8.2.4.2, Two-County Region of Influence, first paragraph:
  - CCNPP Unit 3 assessed and reduced personal property values
  - CCNPP Unit 3 total property tax payments in 2016
  - Calvert County increase in annual property tax revenue percentages
- Page 5-162, Section 5.8.3.2.3, Tax Revenues, first paragraph:
  - UniStar estimated annual property taxes
  - Calvert County annual property tax revenue increase percentages
- Page 10-27, Section 10.4.1.4, Benefits of the Proposed Facility, first paragraph:
  - CCNPP Unit 3 estimated annual property taxes
  - CCNPP Unit 3 maximum estimated annual property taxes
- Page 10-28, Section 10.4.2.1, Monetary - Construction, second paragraph:
  - CCNPP Unit 3 estimated overnight capital cost
  - CCNPP Unit 3 estimated cost of construction
- Table 10.4-1, Benefit and Costs of the Proposed Project Summarized
  - CCNPP Unit 3 construction cost
  - Cost per kW

1.2 FINANCIAL QUALIFICATION

As shown on Figure 1.0-1, both applicant organizations share common parent organizations that lead to a joint ownership structure by Constellation Energy Group, Inc. and EDF, SA.

Current and historical financial information regarding Constellation Energy Group and its subsidiaries is provided to the Securities and Exchange Commission (SEC) and is available at http://www.constellation.com/. Similarly, EDF's participation in the applicant organizations demonstrates a strong financial ability to support the project. Current and historical financial information regarding EDF and its subsidiaries is available at http://www.edf.com/. That information supports the conclusion that Constellation Energy Group, EDF, and their subsidiaries possess, or have reasonable assurance of obtaining, the funds necessary to cover the construction and operating costs of CCNPP Unit 3 for the period of the License in accordance with 10 CFR 50.33(f)(2) (CFR, 2007a), and NUREG-1577, the Standard Review Plan on Power Reactor Licensee Financial Qualifications and Decommissioning Funding Assurance (NRC, 1999). This conclusion is further evidenced by Constellation Energy Group being the ultimate parent for five operating reactors[1], and by EDF being the ultimate parent for fifty-nine operating reactors.

To provide financial assurance of the ability of Calvert Cliffs 3 Nuclear Project and UniStar Nuclear Operating Services to protect public health and safety, both companies are authorized to execute and deliver an inter-company credit agreement with Constellation Energy Group and EDF authorizing each of the companies to borrow, from time-to-time as needed, funds for the CCNPP Unit 3 project. In addition, to provide for the daily cash needs of Calvert Cliffs 3 Nuclear Project and UniStar Nuclear Operating Services for the CCNPP Unit 3 project, both companies are authorized to execute and deliver demand notes which will allow each of the two companies to participate in a cash pool operated by Constellation Energy Group.

Projected income statements, including statements of operating cash flow and project costs, are provided in Tables 1.0-1 through 1.0-9. Tables 1.0-1 and 1.0-2 provide projected income statements and operating cash flows for CCNPP Unit 3. Table 1.0-3 provides the total project cost estimated for CCNPP Unit 3. Projected income statement sensitivity evaluations are provided, for CCNPP Unit 3, in Tables 1.0-4 through 1.0-9.

The projected income statements and operating cash flows for CCNPP Unit 3 presented in Tables 1.0-1 and 1.0-2 demonstrate the project's financial viability. The project's financial robustness is further evidenced by the results of sensitivity analyses presented Tables 1.0-4 through 1.0-9. The sensitivity analyses, which reflect the financial impact of various potential adverse changes to base case assumptions, including higher borrowing costs, lower market prices, lower output capacity, elimination of Production Tax Credits, and higher construction capital costs, indicate that despite being stressed under various scenarios, the project's proforma income statement continues to remain financially attractive, thus supporting a strong business case for the project.

As reflected in Table 1.0-3, the total project cost estimated for CCNPP Unit 3 is [ ]. The project is expected to be financed with approximately 80% debt and 20% equity, assuming the debt is completely covered by either U.S. federal loan guarantees or a combination of loan guarantees from the U.S. government and foreign export credit agencies. The planned debt/equity ratio for

1. Although Constellation is the parent of the operator licensee at Nine Mile Point, Unit 2, it only owns 82% of that facility. The Long Island Power Authority owns the remaining 18% of that facility.

the combination of letter(s) of credit and/or parent company guarantee(s) and external sinking fund will be based on the amount necessary, assuming a two percent real rate of return over the remaining license term, to satisfy the estimated amount of funds to be necessary for decommissioning.

To satisfy decommissioning funding requirements, Constellation Energy Group and EDF shall implement parent company guarantees and/or letters of credit, which when coupled with the external sinking fund, will provide funds for the total amount of funds estimated for decommissioning CCNPP Unit 3 in the event of default by Calvert Cliffs 3 Nuclear Project. With respect to the external sinking fund, Calvert Cliffs 3 Nuclear Project will also establish a trust in accordance with NRC regulations to receive the funds contributed over the life of the plant. For modeling purposes, the proforma financial statements assume the initial sinking fund contributions are funded at a rate of [ ] per year or approximately [ ] the rate of a 40 year annuity needed to fund the NRC minimum. Finalization of the specific financial instruments to be utilized will be completed, and signed originals of those instruments will be provided to the NRC, prior to initial loading of fuel at CCNPP Unit 3 in accordance with the schedule in 10 CFR 50.75(e)(3) (CFR, 2007j).

Accordingly, Calvert Cliffs 3 Nuclear Project certifies that financial assurance for decommissioning will be provided no later than 30 days after the NRC publishes a notice of intended operation for CCNPP Unit 3 in the Federal Register under 10 CFR 52.103(a) (CFR, 2007c) in the amount which may be more, but not less, than the amount stated in the table in 10 CFR 50.75(c)(1) (CFR, 2007j), adjusted using a rate equal to that stated in 10 CFR 50.75(c)(2) (CFR, 2007j). Calvert Cliffs 3 Nuclear Project intends to provide continuous decommissioning funding assurance from the time period beginning 30 days after the NRC publishes the notice of intended operation for CCNPP Unit 3 to the completion of decommissioning and termination of the license.

The parent company guarantee and/or letter of credit method adopted by Calvert Cliffs 3 Nuclear Project will be implemented consistent with the requirements of 10 CFR 50.75(e)(1)(iii)(A) and (B) (CFR, 2007j). The external sinking fund will be established consistent with the requirements of 10 CFR 50.75(e)(1)(ii) (CFR, 2007j). The parent company guarantee(s) and/or letter(s) of credit will provide the principal assurance that decommissioning costs will be paid in the event Calvert Cliffs 3 Nuclear Project is unable to meet its decommissioning funding obligation. As the amount of decommissioning funds in the external sinking fund grows over the life of the plant, the amount of the parent company guarantee(s) and/or letter(s) of credit will be adjusted to maintain the total amount of decommissioning funding at levels estimated to be necessary to provide continuing assurance that decommissioning funds will be available for decommissioning CCNPP Unit 3 when needed. As funds accumulate in the external sinking fund, the fund balance will offset the required amount of the parent guarantee(s) and/or letter(s) of credit. The parent company guarantee and/or letter of credit, and external sinking fund will also be structured and adopted consistent with other applicable NRC regulatory requirements and in accordance with NRC regulatory guidance contained in Regulatory Guide 1.159 Revision 1 (NRC, 2003). Accordingly, Calvert Cliffs 3 Nuclear Project intends that the parent company guarantee documentation will contain, but not be limited to, the following attributes:

- The parent company guarantee and financial test shall be as contained in Appendix A, Criteria Related to the Use of Financial Tests and Parent Company Guarantees for Providing Reasonable Assurance of Funds for Decommissioning, of 10 CFR 30 (CFR, 2007d).

Table 1.0-1—Calvert Cliffs Nuclear Power Plant Unit 3 Projected Income Statement [a] Base Case

($ Millions)	2016	2017	2018	2019	2020
Revenue					
Market	[ ]	[ ]	[ ]	[ ]	[ ]
Total Revenues	[ ]	[ ]	[ ]	[ ]	[ ]
Operating Expenses					
Nuclear Fuel[b]	[ ]	[ ]	[ ]	[ ]	[ ]
O&M, Non-Outage	[ ]	[ ]	[ ]	[ ]	[ ]
O&M, Refueling Outage	[ ]	[ ]	[ ]	[ ]	[ ]
Property Taxes	[ ]	[ ]	[ ]	[ ]	[ ]
Decommissioning Expenses[c]	[ ]	[ ]	[ ]	[ ]	[ ]
Depreciation	[ ]	[ ]	[ ]	[ ]	[ ]
Total Operating Expense	[ ]	[ ]	[ ]	[ ]	[ ]
Operating Income	[ ]	[ ]	[ ]	[ ]	[ ]
Other income/(expense)					
Interest expense[d]	[ ]	[ ]	[ ]	[ ]	[ ]
Interest income[e]	[ ]	[ ]	[ ]	[ ]	[ ]
Total other income/(expense)	[ ]	[ ]	[ ]	[ ]	[ ]
Pretax Income	[ ]	[ ]	[ ]	[ ]	[ ]
Income Taxes[f]	[ ]	[ ]	[ ]	[ ]	[ ]
Net Income After-Tax	[ ]	[ ]	[ ]	[ ]	[ ]

Footnotes

a. Base Case assumes leverage of approximately 80% Debt/20% Equity with an estimated weighted average [ ] interest rate.
b. Includes DOE disposal fees.
c. Includes the amortization and accretion of the Asset Retirement Obligation (ARO) asset and liability, respectively. The ARO is modeled as 1.5x the NRC minimum.
d. Includes interest expense and the amortization of debt fees.
e. Includes interest income earned from the decommissioning trust fund, debt service reserve and major maintenance reserve accounts.
f. Income taxes are net of Production Tax Credits (estimated at [ ]) and Generation Qualified Production Deductions.

Table 1.0-2—Calvert Cliffs Nuclear Power Plant Unit 3 Projected Statement of Operating Cash Flow

($ Millions)	2016	2017	2018	2019	2020
Revenue					
Market	[ ]	[ ]	[ ]	[ ]	[ ]
Total Revenues	[ ]	[ ]	[ ]	[ ]	[ ]
Operating Costs					
Nuclear Fuel[a]	[ ]	[ ]	[ ]	[ ]	[ ]
O&M, Non-Outage	[ ]	[ ]	[ ]	[ ]	[ ]
O&M, Refueling Outage	[ ]	[ ]	[ ]	[ ]	[ ]
Property Taxes	[ ]	[ ]	[ ]	[ ]	[ ]
Decommissioning Trust Contributions[b]	[ ]	[ ]	[ ]	[ ]	[ ]
Total Operating Costs	[ ]	[ ]	[ ]	[ ]	[ ]
Capital Project Expenditures[c]	[ ]	[ ]	[ ]	[ ]	[ ]
Operating Cash Flows Before Income Taxes & Financing Costs	[ ]	[ ]	[ ]	[ ]	[ ]

Footnotes

a. Includes DOE disposal fees and nuclear fuel cash costs.
b. Contributions made to fund the decommissioning trust fund. modeled at a rate of 1.5x the NRC minimum.
c. Includes recurring/maintenance capital expenditures and outage capital.

Table 1.0-3—Calvert Cliffs Nuclear Power Plant Unit 3 Projected Project Cost

($ Millions)	2016[a]
Uses:	
Plant Cost	[ ]
Transmission	[ ]
Initial Fuel Load	[ ]
Interest During Construction (capitalized)	[ ]
Other Financing Charges[b]	[ ]
Total Capital Project Cost	[ ]
Sources:	
Debt	[ ]
Equity	[ ]
Total Capital Project Cost	[ ]

Footnotes

a. Cumulative projected debt, equity, and financing balances as of Commercial Operation Date (COD).
b. Includes commitment fees, debt service reserve, and other transaction costs.

Table 1.0-4—Calvert Cliffs Nuclear Power Plant Unit 3 Projected Income Statement[a] Sensitivity Cost of Borrowing Increased 200 Basis Points

($ Millions)	2016	2017	2018	2019	2020
Revenue					
Market	[ ]	[ ]	[ ]	[ ]	[ ]
Total Revenues	[ ]	[ ]	[ ]	[ ]	[ ]
Operating Expenses					
Nuclear Fuel[b]	[ ]	[ ]	[ ]	[ ]	[ ]
O&M, Non-Outage	[ ]	[ ]	[ ]	[ ]	[ ]
O&M, Refueling Outage	[ ]	[ ]	[ ]	[ ]	[ ]
Property Taxes	[ ]	[ ]	[ ]	[ ]	[ ]
Decommissioning Expenses[c]	[ ]	[ ]	[ ]	[ ]	[]
Depreciation	[ ]	[ ]	[ ]	[ ]	[ ]
Total Operating Expense	[ ]	[ ]	[ ]	[ ]	[ ]
Operating Income	[ ]	[ ]	[ ]	[ ]	[ ]
Other income/(expense)					
Interest expense[d]	[ ]	[ ]	[ ]	[ ]	[ ]
Interest income[e]	[ ]	[ ]	[ ]	[ ]	[ ]
Total other income/(expense)	[ ]	[ ]	[ ]	[ ]	[ ]
Pretax Income	[ ]	[ ]	[ ]	[ ]	[ ]
Income Taxes[f]	[ ]	[ ]	[ ]	[ ]	[ ]
Net Income After-Tax	[ ]	[ ]	[ ]	[ ]	[ ]

Footnotes

a. Base Case assumes leverage of approximately 80% Debt/20% Equity with an estimated weighted average [ ] interest rate.
b. Includes DOE disposal fees.
c. Includes the amortization and accretion of the Asset Retirement Obligation (ARO) asset and liability, respectively. The ARO is modeled as 1.5x the NRC minimum.
d. Includes interest expense and the amortization of debt fees.
e. Includes interest income earned from the decommissioning trust fund, debt service reserve and major maintenance reserve accounts.
f. Income taxes are net of Production Tax Credits (estimated at [ ]) and Generation Qualified Production Deductions.

Table 1.0-5—Calvert Cliffs Nuclear Power Plant Unit 3 Projected Income Statement[a] Sensitivity, 10% Reduction in Projected Market Prices

($ Millions)	2016	2017	2018	2019	2020
Revenue					
Market	[ ]	[ ]	[ ]	[ ]	[ ]
Total Revenues	[ ]	[ ]	[ ]	[ ]	[ ]
Operating Expenses					
Nuclear Fuel[b]	[ ]	[ ]	[ ]	[ ]	[ ]
O&M, Non-Outage	[ ]	[ ]	[ ]	[ ]	[ ]
O&M, Refueling Outage	[ ]	[ ]	[ ]	[ ]	[ ]
Property Taxes	[ ]	[ ]	[ ]	[ ]	[ ]
Decommissioning Expenses[c]	[ ]	[ ]	[ ]	[ ]	[ ]
Depreciation	[ ]	[ ]	[ ]	[ ]	[ ]
Total Operating Expense	[ ]	[ ]	[ ]	[ ]	[ ]
Operating Income	[ ]	[ ]	[ ]	[ ]	[ ]
Other income/(expense)					
Interest expense[d]	[ ]	[ ]	[ ]	[ ]	[ ]
Interest income[e]	[ ]	[ ]	[ ]	[ ]	[ ]
Total other income/(expense)	[ ]	[ ]	[ ]	[ ]	[ ]
Pretax Income	[ ]	[ ]	[ ]	[ ]	[ ]
Income Taxes[f]	[ ]	[ ]	[ ]	[ ]	[ ]
Net Income After-Tax	[ ]	[ ]	[ ]	[ ]	[ ]

Footnotes

a. Base Case assumes leverage of approximately 80% Debt/20% Equity with an estimated weighted average [ ] interest rate.
b. Includes DOE disposal fees.
c. Includes the amortization and accretion of the Asset Retirement Obligation (ARO) asset and liability, respectively. The ARO is modeled as 1.5x the NRC minimum.
d. Includes interest expense and the amortization of debt fees.
e. Includes interest income earned from the decommissioning trust fund, debt service reserve and major maintenance reserve accounts.
f. Income taxes are net of Production Tax Credits (estimated at [ ]) and Generation Qualified Deductions

Table 1.0-6—Calvert Cliffs Nuclear Power Plant Unit 3 Projected Income Statement[a] Sensitivity, 10% Reduction in Capacity Factor

($ Millions)	2016	2017	2018	2019	2020
Revenue					
Market	[ ]	[ ]	[ ]	[ ]	[ ]
Total Revenues	[ ]	[ ]	[ ]	[ ]	[ ]
Operating Expenses					
Nuclear Fuel[b]	[ ]	[ ]	[ ]	[ ]	[ ]
O&M, Non-Outage	[ ]	[ ]	[ ]	[ ]	[ ]
O&M, Refueling Outage	[ ]	[ ]	[ ]	[ ]	[ ]
Property Taxes	[ ]	[ ]	[ ]	[ ]	[ ]
Decommissioning Expenses[c]	[ ]	[ ]	[ ]	[ ]	[ ]
Depreciation	[ ]	[ ]	[ ]	[ ]	[ ]
Total Operating Expense	[ ]	[ ]	[ ]	[ ]	[ ]
Operating Income	[ ]	[ ]	[ ]	[ ]	[ ]
Other income/(expense)					
Interest expense[d]	[ ]	[ ]	[ ]	[ ]	[ ]
Interest income[e]	[ ]	[ ]	[ ]	[ ]	[ ]
Total other income/(expense)	[ ]	[ ]	[ ]	[ ]	[ ]
Pretax Income	[ ]	[ ]	[ ]	[ ]	[ ]
Income Taxes[f]	[ ]	[ ]	[ ]	[ ]	[ ]
Net Income After-Tax	[ ]	[ ]	[ ]	[ ]	[ ]

Footnotes

a. Base Case assumes leverage of approximately 80% Debt/20% Equity with an estimated weighted average [ ] interest rate.
b. Includes DOE disposal fees.
c. Includes the amortization and accretion of the Asset Retirement Obligation (ARO) asset and liability, respectively. The ARO is modeled as 1.5x the NRC minimum.
d. Includes interest expense and the amortization of debt fees.
e. Includes interest income earned from the decommissioning trust fund, debt service reserve and major maintenance reserve accounts.
f. Income taxes are net of Production Tax Credits (estimated at [ ]) and Generation Qualified Production Deductions.

Table 1.0-7—Calvert Cliffs Nuclear Power Plant Unit 3 Projected Income Statement[a] Sensitivity, No Receipt of Production Tax Credits

($ Millions)	2016	2017	2018	2019	2020
Revenue					
Market	[ ]	[ ]	[ ]	[ ]	[ ]
Total Revenues	[ ]	[ ]	[ ]	[ ]	[ ]
Operating Expenses					
Nuclear Fuel[b]	[ ]	[ ]	[ ]	[ ]	[ ]
O&M, Non-Outage	[ ]	[ ]	[ ]	[ ]	[ ]
O&M, Refueling Outage	[ ]	[ ]	[ ]	[ ]	[ ]
Property Taxes	[ ]	[ ]	[ ]	[ ]	[ ]
Decommissioning Expenses[c]	[ ]	[ ]	[ ]	[ ]	[ ]
Depreciation	[ ]	[ ]	[ ]	[ ]	[ ]
Total Operating Expense	[ ]	[ ]	[ ]	[ ]	[ ]
Operating Income	[ ]	[ ]	[ ]	[ ]	[ ]
Other income/(expense)					
Interest expense[d]	[ ]	[]	[ ]	[ ]	[ ]
Interest income[e]	[ ]	[ ]	[ ]	[ ]	[ ]
Total other income/(expense)	[ ]	[ ]	[ ]	[ ]	[ ]
Pretax Income	[ ]	[ ]	[ ]	[ ]	[ ]
Income Taxes[f]	[ ]	[ ]	[ ]	[ ]	[ ]
Net Income After-Tax	[ ]	[ ]	[ ]	[ ]	[ ]

Footnotes

a. Base Case assumes leverage of approximately 80% Debt/20% Equity with an estimated weighted average [ ] interest rate.
b. Includes DOE disposal fees.
c. Includes the amortization and accretion of the Asset Retirement Obligation (ARO) asset and liability, respectively. The ARO is modeled as 1.5x the NRC minimum.
d. Includes interest expense and the amortization of debt fees.
e. Includes interest income earned from the decommissioning trust fund, debt service reserve and major maintenance reserve accounts.
f. Income taxes are net of Generation Qualified Production Deductions.

Table 1.0-8—Calvert Cliffs Nuclear Power Plant Unit 3 Projected Income Statement[a] Sensitivity, 10% Higher Capital Cost

($ Millions)	2016	2017	2018	2019	2020
Revenue					
Market	[ ]	[ ]	[ ]	[ ]	[ ]
Total Revenues	[ ]	[ ]	[ ]	[ ]	[ ]
Operating Expenses					
Nuclear Fuel[b]	[ ]	[ ]	[ ]	[ ]	[ ]
O&M, Non-Outage	[ ]	[ ]	[ ]	[ ]	[ ]
O&M, Refueling Outage	[ ]	[ ]	[ ]	[ ]	[ ]
Property Taxes	[ ]	[ ]	[ ]	[ ]	[ ]
Decommissioning Expenses[c]	[ ]	[ ]	[ ]	[ ]	[ ]
Depreciation	[ ]	[ ]	[ ]	[ ]	[ ]
Total Operating Expense	[ ]	[ ]	[ ]	[ ]	[ ]
Operating Income	[ ]	[ ]	[ ]	[ ]	[ ]
Other income/(expense)					
Interest expense[d]	[ ]	[ ]	[ ]	[ ]	[ ]
Interest income[e]	[ ]	[ ]	[ ]	[ ]	[ ]
Total other income/(expense)	[ ]	[ ]	[ ]	[ ]	[ ]
Pretax Income	[ ]	[ ]	[ ]	[ ]	[ ]
Income Taxes[f]	[ ]	[ ]	[ ]	[ ]	[ ]
Net Income After-Tax	[ ]	[ ]	[ ]	[ ]	[ ]

Footnotes

a. Base Case assumes leverage of approximately 80% Debt/20% Equity with an estimated weighted average [ ] interest rate.
b. Includes DOE disposal fees.
c. Includes the amortization and accretion of the Asset Retirement Obligation (ARO) asset and liability, respectively. The ARO is modeled as 1.5x the NRC minimum.
d. Includes interest expense and the amortization of debt fees.
e. Includes interest income earned from the decommissioning trust fund, debt service reserve and major maintenance reserve accounts.
f. Income taxes are net of Production Tax Credits (estimated at [ ]) and Generation Qualified Production Deductions.

Table 1.0-9—Calvert Cliffs Nuclear Power Plant Unit 3 Projected Income Statement 6-Month Regulatory Delay

A specific sensitivity was not calculated for the 6-month non-regulatory delay scenario as it is believed that the 10% Higher Capital Cost Sensitivity (Table 1.0-8) conservatively bounds the 6-month non-regulatory delay scenario.

A 6-month delay is a scenario whereby the start of operations would be postponed for 6 months due to non-regulatory reasons.

A 6-month non-regulatory delay would increase the Interest During Construction (IDC) and would incur additional operating costs (primarily labor and property tax). Operating costs incurred prior to Commercial Operation Date (COD) are capitalized and financed along with other construction costs.

The incremental capitalized interest and capitalized Operating and Maintenance (O&M) costs are estimated as follows.

($ Millions)	
Total Base Case Capital Cost (from Table 1.0-3)	[ ]
Additional Interest on debt (from Table 1.0-3)	
([ ] * [ ] interest rate * 1/2 year)	[ ]
Additional Capitalized Operating Costs	
(Fixed O&M Cost includes: labor, overhead, property taxes, and insurance)	[ ]
Total 6-Month Non-Regulatory Delay Capital Cost	[ ]

The total capital cost would increase from [ ] to approximately [ ] (an increase of [ ]), which is significantly less than [ ] the total capital cost derived from the 10% Higher Capital Cost Sensitivity.

Figure 3.8-2—{Schematic Site Plan of Seismic Category I Buried Utilities at the NI (Electrical Duct Banks)}

[

[redacted]

Security-Sensitive Information

]

Figure 3.8-4—{Schematic Site Plan of Seismic Category I Buried Utilities (Underground Piping)}

[

[redacted]

Security-Sensitive Information

]

The following areas contained in FA-UMA-01 are specifically cited for their hazards. Their locations are represented by the following descriptions:

Hazard Location	Hazard Name
UMA03-001	Hydrogen Seal Oil Unit
UMA05-001	Lube Oil Drainage Trench 1
UMA05-002	Lube Oil Lines 1
UMA05-003	Turbine-Generator/Exciter Bearings
UMA05-004	Lube Oil Lines 2
UMA05-005	Lube Oil Drainage Trench 2

The adequacy of the fire protection features provided is sufficient to prevent a fire originating within fire area FA-UMA-01 from affecting adjacent fire areas.

This fire area is frequently occupied during normal plant operations. The egress route from this area in the event of a fire is via grade level exits provided from each room.

9B.3.1.2 Fire Area FA-UMA-02 (Table 9B-2, Column 2)

Fire area FA-UMA-02 is the Stairwell located in the southeast (plant southeast) corner of the Turbine Building that serves those elevations from (-)23 ft to 115 ft.

The adequacy of the fire protection features provided is sufficient to prevent a fire originating within fire area FA-UMA-02 from affecting adjacent fire areas.

This fire area is one of four egress routes/exits from the Turbine Building. If this exit becomes obstructed due to fire conditions, three other exit stairwells are available.

9B.3.1.3 Fire Area FA-UMA-03 (Table 9B-2, Column 3)

[

]

The adequacy of the fire protection features provided is sufficient to prevent a fire originating within fire area FA-UMA-03 from affecting adjacent fire areas.

This fire area is one of four egress routes/exits from the Turbine Building. If this exit becomes obstructed due to fire conditions, three other exit stairwells are available.

9B.3.1.4 Fire Area FA-UMA-04 (Table 9B-2, Column 4)

Fire area FA-UMA-04 is the Stairwell located in the northeast (plant northeast) corner of the Turbine Building that serves those elevations from (-)23 ft to 115 ft.

The adequacy of the fire protection features provided is sufficient to prevent a fire originating within fire area FA-UMA-04 from affecting adjacent fire areas.

This fire area is one of four egress routes/exits from the Turbine Building. If this exit becomes obstructed due to fire conditions, three other exit stairwells are available.

9B.3.1.5 Fire Area FA-UMA-05 (Table 9B-2, Column 5)

[

]

Room Number	Room Name
UBA01-005	SBO Cable Spreading Room 2
UBA01-006	SBO Diesel Tank Room 2
UBA01-007	SBO Aux. Equipment Room 1
UBA01-008	SBO Aux. Equipment Room 2
UBA01-009	Corridor

The adequacy of the fire protection features provided is sufficient to prevent a fire originating within fire area FA-UBA-01 from affecting adjacent fire areas.

This fire area is occasionally occupied during normal plant operations.

[
]

9B.3.2.2 Fire Area FA-UBA-02 (Table 9B-2, Column 10)

Fire area FA-UBA-02 is the Switchgear Building floor located 0 ft (grade) elevation. Fire area FA-UBA-02 is comprised of the following rooms:

Room Number	Room Name
UBA02-001	MV Distribution Board Room 1
UBA02-002	480V LV Main Distribution Room 1
UBA02-003	480V LV Main Distribution Room 2
UBA02-004	MV Distribution Board Room 2
UBA02-005	Engine Room 1
UBA02-006	SBO Control Room 1
UBA02-007	SBO Control Room 2
UBA02-008	Engine Room 2
UBA02-009	Auxiliary Boiler Equipment Room
UBA02-010	Corridor

The adequacy of the fire protection features provided is sufficient to prevent a fire originating within fire area FA-UBA-02 from affecting adjacent fire areas.

This fire area is occasionally occupied during normal plant operations.

[
]

9B.3.2.3 Fire Area FA-UBA-03 (Table 9B-2, Column 11)

Fire area FA-UBA-03 is the Switchgear Building floor located 13 ft above grade elevation. Fire area FA-UBA-03 is comprised of the following rooms:

Room Number	Room Name
UBA03-001	Cable Distribution Division Room 1
UBA03-002	Cable Distribution Division Room 2
UBA03-003	Corridor

The adequacy of the fire protection features provided is sufficient to prevent a fire originating within fire area FA-UBA-03 from affecting adjacent fire areas.

This fire area is occasionally occupied during normal plant operations. The egress route from this area in the event of a fire is via Turbine Building exit stairwells FA-UMA-03 and FA-UMA-05.

9B.3.2.4 Fire Area FA-UBA-04 (Table 9B-2, Column 12)

Fire area FA-UBA-04 is the Switchgear Building floor located 24.5 ft above grade elevation. Fire area FA-UBA-04 is comprised of the following rooms:

Room Number	Room Name
UBA04-001	Battery Room 1
UBA04-002	Battery Charger Room 1
UBA04-003	I&C Control & Protection Panel Room 1
UBA04-004	I&C Control & Protection Panel Room 2
UBA04-005	Battery Charger Room 2
UBA04-006	Battery Room 2
UBA04-007	Air Handling Room 1
UBA04-008	Air Handling Room 2
UBA04-009	Corridor

The adequacy of the fire protection features provided is sufficient to prevent a fire originating within fire area FA-UBA-04 from affecting adjacent fire areas.

This fire area is occasionally occupied during normal plant operations.

[
]

9B.3.3 AUXILIARY POWER TRANSFORMER AREA

9B.3.3.1 Fire Area FA-UBE-01 (Table 9B-2, Column 13)

Fire area FA-UBE-01 is the area that houses the Emergency Auxiliary Power Transformer number 1 (EAT 1) and associated equipment in structure 31UBE. Fire area FA-UBE-01 is comprised of the following zones:

Zone Number	Fire Zone Description
FZ-UBE-01	Cubicle housing the EAT 1 Transformer (30BDT01)

The adequacy of the fire protection features provided is sufficient to prevent a fire originating within fire area FA-UBE-01 from affecting adjacent fire areas.

This fire area is not normally occupied during normal plant operations. This exterior area is not enclosed by significant egress impediments/obstructions.

9B.3.3.2 Fire Area FA-UBE-02 (Table 9B-2, Column 14)

Fire area FA-UBE-02 is the area that houses the Normal Auxiliary Power Transformer number 1 (NAT 1) and associated equipment in structure 32UBE. Fire area FA-UBE-02 is comprised of the following zones:

Zone Number	Fire Zone Description
FZ-UBE-02	Cubicle housing the NAT 1 Transformer (30BBT01)

The adequacy of the fire protection features provided is sufficient to prevent a fire originating within fire area FA-UBE-02 from affecting adjacent fire areas.

[

Figure 9B-10—{CCNPP Unit 3 Fire Barrier Location, SWGR/SBO Buildings Plan View at Elevation (-)13'-0"}

SECURITY SENSITIVE

]

Security-Related Information withhold under 10 CFR 2.390

Figure 9B-11—{CCNPP Unit 3 Fire Barrier Location, SWGR/SBO/AUX BLR Buildings Plan View at Elevation 0'-0"}

[

SECURITY SENSITIVE

]

Security-Related Information withhold under 10 CFR 2.390

Figure 9B-12—{CCNPP Unit 3 Fire Barrier Location, SWGR/SBO/AUX BLR Buildings Plan View at Elevation 13'-0"}

[

SECURITY SENSITIVE

]

Security-Related Information withhold under 10 CFR 2.390

Figure 9B-13—{CCNPP Unit 3 Fire Barrier Location, SWGR/SBO/AUX BLR Buildings Plan View at Elevation 24'-6"}

[

SECURITY SENSITIVE

]

Figure 9B-14—{CCNPP Unit 3 Fire Barrier Location, SWGR/SBO/AUX BLR Buildings, Plan View Section A-A}

[

SECURITY SENSITIVE

]

Security-Related Information withhold under 10 CFR 2.390

Figure 9B-18—{CCNPP Unit 3 Fire Barrier Location, Central Gas Supply Building Plan View at Elevation 85'0"}

[

SECURITY SENSITIVE

]

The total project capital cost estimated for CCNPP Unit 3 is [ ] billion (in 2007 dollars). In 2007, the CCNPP Unit 3 site is estimated to generate [ ] million in total property taxes in its current, substantially undeveloped state. Investments in planning, engineering, and an assumed limited work authorization from 2008 through 2010 would result in UniStar paying increased county total property taxes, from about [ ] million in 2008, to [ ] million in 2009, to [ ] million in 2010. Even more substantial increases in total property tax payments would occur in subsequent years once major construction activities commence, including [ ] million in 2011, [ ] million in 2012, [ ] million in 2013, [ ] million in 2014, and [ ] million in 2015. The maximum of [ ] million would represent a significant [ ] percent increase in Calvert County's $78.8 million in annual property (real and personal) tax revenues for fiscal year 2005, and a [ ] percent increase in total county revenues of $174.1 million (see Section 2.5.2).

These increased property tax revenues would either provide additional revenues for existing public facility and service needs or for new needs generated by the power plant and associated workforce. The increased revenues could also help to maintain or reduce future taxes paid by existing non-project related businesses and residents, to the extent that project-related payments provide tax revenues that exceed the public facility and service needs created by CCNPP Unit 3. However, the payment of those taxes often lags behind the actual impacts to public facilities and services, or the time needed to plan for and provide the additional facilities or services. Thus, it is concluded that these increased power plant property tax revenues would be a LARGE economic benefit to Calvert County.

Additional county income taxes would be generated by the in-migrating residents, although the amount cannot be estimated because of the variability of investment income, retirement contributions, tax deductions taken, applicable tax brackets, and other factors. It is estimated that Calvert County would experience a $66.5 million increase in annual wages from the direct workforce. St. Mary's County would experience an estimated annual increase of $22.5 million from the direct workforce. Relative to the existing total wages for the ROI, it is concluded that the potential increase in county income taxes represent a small economic benefit to the jurisdictions.

As with the 50 mi (80 km) comparative geographic area, additional sales taxes also would be generated within the ROI by the power plant and the in-migrating residents. However, these purchases would be much smaller within the ROI. The amount of increased sales tax revenues generated by the in-migrating residents would depend upon their retail purchasing patterns, but would only represent a small benefit to this revenue stream for Calvert and St. Mary's Counties.

Overall, although all tax revenues generated by the CCNPP Unit 3 and the related workforce would be substantial, as described above, they would be relatively small compared to the overall tax base in the ROI. Thus, it is concluded that the overall beneficial impacts to tax revenues would be SMALL.

4.4.2.7 Land Values

The Maryland Department of Natural Resources evaluated three industrial facilities to determine how their presence might affect area property values. The three industrial facilities included CCNPP Units 1 and 2, the Alcoa Eastalco Works in Frederick County, and the Dickerson Generating Plant in Montgomery County. The study showed that residential property values were not adversely affected by their proximity to the CCNPP site. Overall, Maryland power plants have not been observed to have negative impacts on surrounding property values. This on materials, equipment, and outside services (excluding costs for planned outages), which would generate additional state sales and income taxes. The amount of increased sales tax revenues generated by the in-migrating residents would depend upon their retail purchasing patterns, but would only represent a SMALL benefit to this revenue stream for the state and the 50 mi (80 km) radius.

Overall, although all tax revenues generated by the CCNPP Unit 3 and the related workforce would be substantial in absolute dollars, as described above, they would be relatively small compared to the overall tax base in 50 mi (80 km) area and the State of Maryland. Thus, it is concluded that the overall beneficial impacts to state tax revenues would be SMALL.

5.8.2.4.2 Two-County Region of Influence

The facility qualifies for a 50% reduction in assessed personal property value once operation begins in 2016, reducing the personal property assessed value from [ ] billion (excluding financing costs) to [ ] billion. This would result in a drop in total property tax payments for Unit 3 to [ ] million in 2016, which then would slowly decline in following years as a result of taking allowances for depreciation. This would represent a [ ] increase in Calvert County's $78.8 million in annual property (real and personal) tax revenues for fiscal year 2005, and a [ ] increase in total county revenues of $174.1 million (see Section 2.5.2). These increased property tax revenues would either provide additional revenues for existing public facility and service needs or for new needs generated by the power plant and associated workforce. The increased revenues could also help to maintain or reduce future taxes paid by existing non-project related businesses and residents, to the extent that project-related payments provide tax revenues that exceed the public facility and service needs created by CCNPP Unit 3. It is concluded that these increased power plant property tax revenues would be a LARGE economic benefit to Calvert County.

Additional county income taxes would be generated by the in-migrating residents, although the amount cannot be estimated because of the variability of investment income, retirement contributions, tax deductions taken, applicable tax brackets, and other factors. It is estimated that Calvert County would experience a $19.0 million increase in annual wages from the direct workforce and $34.4 million in indirect workforce wages, for a total of $53.4 million. St. Mary's County would experience an estimated annual increase of $6.4 million from the direct workforce and $11.6 million in indirect workforce wages, for a total of $18.0 million.

In 2005, total revenues in Calvert County were about $174.1 million with 45.3% (78.8 million) from property taxes, 31.2% ($54.4 million) from income taxes and 8.3% ($14.5 million) from other taxes. In 2005, St. Mary's received approximately $145 million in revenues. Of this $54.1 million was raised from income taxes, or about 37% (Table 2.5-30). At an income tax rate of 2.8%, the tax increase from $53.4 million additional income in Calvert County would be about $1.5 million. St. Mary's would realize a net tax increase of about $500,000 from an additional

$18.0 million in wages. These increments are relatively small compared to the total income taxes and total wages.

As indicated above, additional sales taxes also would be generated by the power plant and the in-migrating residents. The amount of increased sales tax revenues generated by the in-migrating residents would depend upon their retail purchasing patterns, but would only represent a SMALL benefit to this revenue stream for Calvert and St. Mary's Counties.

Overall, although all tax revenues generated by the CCNPP Unit 3 and the related workforce would be substantial in absolute terms of dollars but, as described above, they would be workforce positions. This beneficial impact is likely to be SMALL, would not be disproportionate compared to the general population, and would not require mitigation.

It is estimated that CalvertCliffs 3 Nuclear Project and UniStar Nuclear Operating Services would spend $28 million annually in salaries (an average of $77,135/year/worker for direct labor, excluding benefits). The CCNPP Unit 3 estimated average annual salary is only somewhat less than the $84,388 median income for an entire household in Calvert County in 2005, but noticeably larger than $62,939 median household income in St. Mary's County. Again, minority and low-income residents might benefit from employment at CCNPP Unit 3, to the extent that they can switch from lower paying to higher paying jobs. Given the small number of higher paying jobs created, the beneficial impacts for low-income and minority populations would be SMALL, would not be disproportionate compared to the general population, and would not require mitigation.

5.8.3.2.2 Housing

As described in Section 5.8.2, there are far more vacant housing units available in the ROI than would be needed to house the direct and indirect operational workforces for CCNPP Unit 3. Also, because significantly more units are available than would be needed, the in-migrating workforces alone should not result in an increase in housing prices or rental rates.

In addition, scheduling planned outages for CCNPP Unit 3 at times other than when they would occur for CCNPP Units 1 and 2 should minimize the impacts of the availability and cost for hotel/motel rooms and other short-term accommodations. Thus, CCNPP Unit 3 should not affect the availability or cost of housing for low-income and minority populations. Because the operational workforce would not require significant amounts of the vacant houses or hotel/motel rooms and, thus, would not affect housing or rental prices, the power plant would have a SMALL impact on housing, would not be disproportionate compared to the general population, and would not require mitigation.

5.8.3.2.3 Tax Revenues

Finally, UniStar would pay an estimated [ ] million annually in property taxes (all figures are in 2005 dollars) starting in 2015 when power plant operation would begin. These revenues would slowly decline in the following years as a result of taking allowances for depreciation. These new property taxes from CCNPP Unit 3 would represent a [ ] increase in Calvert County's $78.8 million in annual property (real and personal) tax revenues for fiscal year 2005, and a [ ] increase in total county revenues of $174.1 million.

UniStar also would spend about $9 million annually on materials, equipment, and outside services (excluding costs for planned outages) which would generate additional sales taxes for the county and the state.

The CCNPP Unit 3 operational workforce would generate increased income tax, sales tax, and property tax revenues where they live and where they spend their incomes. Low-income and minority populations might benefit somewhat from these increased tax revenues, either because they might help to avoid some future tax increases or they might fund improvements to or the creation of new public facilities or services. However, the benefits of these additional tax revenues, facilities, or services would be SMALL, would not be disproportionate compared to the general population, and would not require mitigation.

three alternative sites offers no environmental advantages over locating the new nuclear facility at the existing CCNPP site.

10.4.1.4 Benefits of the Proposed Facility

Locating the proposed new nuclear facility at the existing CCNPP property will afford benefits to the local economy. The CCNPP owners will pay property taxes on the proposed new unit for the duration of the operating licenses. CCNPP owners estimate that annual property tax payments could reach approximately [ ] million in 2015, the year of plant startup and a maximum of [ ] million as described in Section 4.4.2.6.2. Most people consider large tax payments a benefit to the taxing entity because they support the development of infrastructure that supports further economic development and growth.

Approximately 833 people are employed at the existing CCNPP facility (BGE, 1998). It is anticipated that construction and operation of the new facility would require a skilled workforce of 363 people. New jobs within approximately a 50 mi (80 km) radius of the plant would be created by the construction and operation of the new facility. Many of these jobs would be in the service sector and could be filled by unemployed local residents, lessening demands on social service agencies in addition to strengthening the economy. It is anticipated that the new jobs would be maintained throughout the life of the plant.

Construction and operation of the new nuclear facility at CCNPP would generate an economic multiplier effect in the area. The economic multiplier effect means that for every dollar spent an additional $0.69 of indirect economic revenue would be generated within the region of influence (BEA, 2007). The economic multiplier effect is one way of measuring direct and secondary effects. Direct effects reflect expenditures for goods, services, and labor, while secondary effects include subsequent spending in the community. The economic multiplier effect due to the increased spending by the direct and indirect labor force created as a result of the construction and operation of the new nuclear reactor unit would increase economic activity in the region, most noticeably in Calvert County.

Given concerns in the State of Maryland about climate change and carbon emissions, CCNPP Unit 3 serves an important environmental benefit need by reducing carbon emissions in the State. Upon operation, CCNPP Unit 3 would displace significant amounts of carbon compared to a coal-fired generating plant. The costs of climate change, which have been quantified, will have a significant impact on the global and national economies.

10.4.2 COSTS

This section summarizes estimated costs for construction and operation of CCNPP Unit 3. The information provided in this section was prepared in accordance with the guidance provided in NUREG-1555 (NRC, 1999), ESRP 10.4.2). The discussion below provides sufficient economic information to assess and predict costs and benefits.

Table 10.4-1 summarizes the benefits and costs of the proposed action. Section 10.5 summarizes the potential cumulative adverse environmental impacts at the proposed project site.

10.4.2.1 Monetary - Construction

The phrase commonly used to describe the monetary cost of constructing a nuclear plant is “overnight capital cost.” The capital costs are those incurred during construction, when the actual outlays for equipment and construction and engineering are expended, in other words, the cost resulting if one were to pay for 100% of the plant “overnight”. Overnight costs are:

- expressed as a constant dollar amount versus actual nominal dollars,
- expressed in $/kW, and
- for the nuclear industry, the overnight capital cost does not include inflation, financing, extraordinary site costs, licensing, transmission or the initial fuel load.

The overnight capital cost for CCNPP Unit 3, excluding contingency costs, is estimated to be [ ]. This is the unlevelized capital cost for Unit 3. The levelized capital cost for the "nth" U.S. EPR will be lower than that for CCNPP Unit 3 as a result of cost savings such as document reuse, supply chain volume savings, labor and construction sequence learning curve, and reduced spare parts inventory, that can be realized by constructing multiple EPRs.

10.4.2.2 Monetary - Operation

Operation costs for CCNPP Unit 3 are in the process of being estimated. Operation costs are frequently expressed as the levelized cost of electricity, which is the price at the busbar needed to cover operating costs and annualized capital costs. Overnight capital costs account for a third of the levelized cost, and interest costs on the overnight costs account for another 25% (UC, 2004). At this time, levelized cost estimates ranging from $31 to $46 per MWh ($0.031 to $0.046 per kWh) has been selected. Factors affecting the range include choices for discount rate, construction duration, plant life span, capacity factor, cost of debt and equity and split between debt and equity financing, depreciation time, tax rates, and premium for uncertainty.

Estimates include decommissioning but, because of the effect of discounting a cost that would occur as much as 40 years in the future, decommissioning costs have relatively little effect on the levelized cost. In addition, the Energy Policy Act of 2005 instituted a production tax credit for the first advanced reactors brought on line in the U.S. (PL, 2005) would tend to lower this estimate.

10.4.3 SUMMARY

Table 10.4-1 summarizes the benefits and costs associated with the proposed construction and operation of CCNPP Unit 3. Costs that are environmental impacts are those anticipated after proposed mitigation measures are implemented. Section 10.5 addresses the environmental costs and cumulative impacts.

10.4.4 REFERENCES

BEA, 2007. Regional Input-Output Modeling System (RIMS II), Developed for Calvert County and St. Mary's County, Maryland for TetraTech NUS, General RIMS II, U.S. Department of Commerce, Bureau of Economic Analysis, Website: http://www.bea.gov/regional/gsp/action.cfm, Date accessed: May 17, 2007.

BGE, 1998. Calvert Cliffs Nuclear Plant, Units 1 and 2, Docket Numbers 50-317 and 50-318, Application for License Renewal, Letter from C. H. Cruse (Baltimore Gas and Electric) to Nuclear Regulatory Commission, April 8, 1998.

CFR, 2007. Title 10, Code of Federal Regulations, Part 51, Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions, 2007.

EIA, 2004. Annual Energy Outlook 2004, Energy Information Administration, DOE/EIA-0383(2004), January, Website: http://www.eia.doe.gov/oiaf/archive/aeo04/index.html, Date accessed: May 16, 2007.

Table 10.4-1— Benefit and Costs of the Proposed Project Summarized

(Page 1 of 8)

Cost Category	CCNPP Site	Thiokol Site	EASTALCO Site	Bainbridge Site
INTERNAL COSTS				
Construction Cost	[ ] (It is anticipated that CCNPP Unit 3 will have a net electrical output of approximately 1,600 MWe. Using the value of [ ] per kW results in a CCNPP Unit 3 construction cost of approximately [ ].)	[ ] (It is anticipated that the installed reactor will be similar to CCNPP Unit 3 (net electrical output of approximately 1,600 MWe.) Using the value of [ ] per kW results in a construction cost of approximately [ ].)	[ ] (It is anticipated that the installed reactor will be similar to CCNPP Unit 3 (net electrical output of approximately 1,600 MWe. Using the value of [ ] per kW results in a construction cost of approximately [ ].)	[ ] (It is anticipated that the installed reactor will be similar to the CCNPP Unit 3 (net electrical output of approximately 1,600 MWe. Using the value of [ ] per kW results in a construction cost of approximately [ ].)
Operating Cost	$0.031 to $0.046 per kilowatt-hour	$0.031 to $0.046 per kilowatt-hour	$0.031 to $0.0 46 per kilowatt-hour	$0.031 to $0.046 per kilowatt-hour
Land	The CCNPP site is 2,070 acres (838 hectares). Co-located on the CCNPP site with CCNPP Units 1 and 2. Impact on land use is minimal compared to a new site. SMALL	620 acres (251 hectares) of space is available at the property for the new facility. Impact on land use is small to moderate compared to new site. Potential wetland issues. SMALL-MODERATE	2,200 acres (890 hectares) of space is available at the EASTALCO for the new facility. Impact on land use is small compared to new site. SMALL	1,185 acres (480 hectares) of space is available at the Bainbridge property for the new facility. Impact on land use is small to moderate compared to new site. SMALL-MODERATE
Labor	Add 363 direct new jobs, 661 indirect new jobs to the benefits. SMALL	It is assumed that similar size workforce to that which is anticipated for the proposed CCNPP facility. SMALL	It is assumed that similar size work force to that which is anticipated for the proposed CCNPP facility. LARGE	It is assumed that similar size workforce to that which is anticipated for the proposed CCNPP facility. LARGE
Materials	Construction materials include: concrete, aggregate, rebar, conduit, cable, piping, building supplies, and tools. Operating material includes uranium	Construction materials include: concrete, aggregate, rebar, conduit, cable, piping, building supplies, and tools. Operating material includes uranium	Construction materials include: concrete, aggregate, rebar, conduit, cable, piping, building supplies, and tools. Operating material includes uranium	Construction materials include: concrete, aggregate, rebar, conduit, cable, piping, building supplies, and tools. Operating material includes uranium
Equipment	Typical construction equipment will include cranes, cement trucks, excavation equipment, dump truck, and graders. Equipment for the new facility would include all of the necessary components for the facility such as the reactor, turbine, cooling system, water processing/ treatment system, cooling tower, etc.	Typical construction equipment will include cranes, cement trucks, excavation equipment, dump truck, and graders. Equipment for the new facility would include all of the necessary components for the facility such as the reactor, turbine, cooling system, water processing/treatment system, cooling tower, etc.	Typical construction equipment will include cranes, cement trucks, excavation equipment, dump truck, and graders. Equipment for the new facility would include all of the necessary components for the facility such as the reactor, turbine, cooling system, water processing/treatment system, cooling tower, etc.	Typical construction equipment will include cranes, cement trucks, excavation equipment, dump truck, and graders. Equipment for the new facility would include all of the necessary components for the facility such as the reactor, turbine, cooling system, water processing/treatment system, cooling tower, etc.
Services	Support services and supplies would be needed during construction. Security, maintenance, trash removal, and/or landscaping services may be needed during operation of the facility.	Support services and supplies would be needed during construction. Security, maintenance, trash removal, and/or landscaping services may be needed during operation of the facility.	Support services and supplies would be needed during construction. Security, maintenance, trash removal, and/or landscaping services may be needed during operation of the facility.	Support services and supplies would be needed during construction. Security, maintenance, trash removal, and/or landscaping services may be needed during operation of the facility.

Table 10.4-1— Benefit and Costs of the Proposed Project Summarized
(Page 6 of 8)

Cost Category	CCNPP Site	Thiokol Site	EASTALCO Site	Bainbridge Site
State/Local Tax Payments during Construction and Operations	Construction will generate tax revenues from sources including income tax, retail sales tax on materials, supplies, and selected construction services; retail sales tax on expenditures by workers; and corporate income taxes paid by contractors. Tax revenue will be generated on an estimated [ ] in direct and indirect wages on an annual basis. During operation of the facility, local government tax revenues will accrue from property taxes and permitting and impact fees. Tax payments would occur annually over the life of the new reactor units [ ] per year.	Construction will generate tax revenues from sources including income tax, retail sales tax on materials, supplies, and selected construction services; retail sales tax on expenditures by workers; and corporate income taxes paid by contractors. Revenue on wages will be similar to that noted for CCNPP. During operation of the facility, local government tax revenues will accrue from property taxes and permitting and impact fees. Tax payments would occur annually over the life of the new reactor units. Annual expenditures during operation on material, equipment and outside services are assumed to be similar to that noted for CCNPP.	Construction will generate tax revenues from sources including income tax, retail sales tax on materials, supplies, and selected construction services; retail sales tax on expenditures by workers; and corporate income taxes paid by contractors. Revenue on wages will be similar to that noted for CCNPP. During operation of the facility, local government tax revenues will accrue from property taxes and permitting and impact fees. Tax payments would occur annually over the life of the new reactor units. Annual expenditures during operation on material, equipment and outside services are assumed to be similar to that noted for CCNPP.	Construction will generate tax revenues from sources including income tax, retail sales tax on materials, supplies, and selected construction services; retail sales tax on expenditures by workers; and corporate income taxes paid by contractors. Revenue on wages will be similar to that noted for CCNPP. During operation of the facility, local government tax revenues will accrue from property taxes and permitting and impact fees. Tax payments would occur annually over the life of the new reactor units. Annual expenditures during operation on material, equipment and outside services are assumed to be similar to that noted for CCNPP.
State/Local Tax Payments during Construction and Operations (Cont'd)	Beneficial economic impacts associated with station operation. Operations will result in annual expenditures in approximately $9 million on materials, equipment and outside services.			