



A Proposed Third Reactor at Calvert Cliffs Nuclear Power Plant

Calvert Cliffs Nuclear Power Plant is in Lusby, Maryland, on the western shore of the Chesapeake Bay. It is owned and operated by Baltimore-based Constellation Energy Group, Inc.

UniStar Nuclear Energy, LLC, a 50/50 joint venture between Constellation Energy and the EDF Group, is considering the Calvert Cliffs site as one of the potential sites upon which to build a new nuclear power plant that features multiple backup safety systems.

About the Calvert Cliffs Nuclear Power Plant

The Calvert Cliffs Nuclear Power Plant currently consists of two nuclear reactors: Unit 1, which began operating in 1975, and Unit 2, which began operating in 1977. The two reactors combined generate approximately 1,700 MW of electricity without producing greenhouse gases. The plant sells into the PJM electrical grid and generates a substantial amount of the power needed in Maryland.

This generation facility has demonstrated a strong safety and performance record:

- U.S. Nuclear Regulatory Commission (NRC) annual assessments the past several years state that the site “operates in a manner that protects public health and safety.” In February 2008, Maryland Occupational Safety and Health recognized Calvert Cliffs Nuclear Plant for exceptional achievement in safety and health by naming it a VPP (Voluntary Protection Programs) Star site.
- Calvert Cliffs maintains rigorous plant inspection systems and processes, and continues to make significant investments in equipment and reliability upgrades.
- The facility has a 30-year record of environmental responsibility. Constellation Energy has been recognized for its environmental commitment and is particularly proud of the Wildlife Habitat Council recertification of Calvert Cliffs Nuclear Power Plant. This designation, which Calvert Cliffs has received since 1993, recognizes the active involvement of employee volunteers to sustain wildlife habitat management projects.

Calvert Cliffs Units 1 and 2 were the first nuclear power plants in the nation to receive 20-year license renewals from the NRC. The plant is expected to continue to safely and reliably produce electricity through 2036.

The Calvert Cliffs Nuclear Power Plant is also an important contributor to the county's economy: Constellation Energy paid \$16.5 million in taxes to Calvert County in 2007, and it employs more than 800 people at competitive wages. Constellation Energy has proven to be a good corporate citizen; its employees contributed \$3.7 million in 2007 to the United Way Campaign in Maryland, of which \$334,813 was donated by Calvert Cliffs' employees for the United Way of Southern Maryland.

Expanding Calvert Cliffs Nuclear Power Plant

UniStar Nuclear Energy is considering the Calvert Cliffs site for the possible construction of the first in a series of U.S. Evolutionary Power Reactors (U.S. EPRs) in the United States. The 1,600-megawatt reactor is based on AREVA's Evolutionary Power Reactor (EPR), an advanced design nuclear power plant now under construction in France and Finland. AREVA submitted its application for Design Certification for the U.S. EPR to the U.S. Nuclear Regulatory Commission (NRC) on December 11, 2007.

No decision has been made to build a third reactor at Calvert Cliffs. Several steps remain in a multi-year process before a license would be granted and construction could begin.

To construct and operate a new nuclear power plant, it is necessary to obtain a Combined License (COL) from the NRC. To receive a COL, an entity must submit a COL application to the NRC, and the NRC must then accept and approve the application.

- The COL application contains the Environmental Report (ER), the Final Safety Analysis Report (FSAR), Security and Emergency Plan information and other required documentation to support the issuance of the NRC Environmental Impact Statement and Safety Evaluation Report.
- On July 13, 2007, UniStar submitted a partial application that contained the ER and Chapter 2 of the FSAR. On Jan. 25, 2008, the NRC accepted and docketed the ER section of the COL application for review, and on March 19, the NRC held a public meeting in Solomons, Maryland, on this document.
- UniStar submitted the remainder of the application to the NRC in March 2008. On June 3, 2008, the NRC issued a letter confirming its acceptance of the remainder of the application for technical review.
- The NRC review process for the entire COL application is expected to take 36-42 months.

If the new reactor is approved, and UniStar decides to build at Calvert Cliffs, the new plant could begin operating in 2015.

To construct a new power plant in Maryland, it is also necessary to obtain a Certificate of Public Convenience and Necessity (CPCN), which includes many of the environmental permits needed for construction, from the Maryland Public Service Commission (PSC). On November 13, 2007, UniStar submitted its CPCN application to the PSC. The PSC

held a scheduling conference on January 4, 2008 and public hearings are planned for August in Calvert County. UniStar has asked the PSC to approve the application by December 2008.

In addition to the NRC and the PSC, other regulatory agencies, including the U.S. Army Corps of Engineers, are being asked to review and approve various aspects of the project.

The U.S. EPR is a Safe and Secure Technology

The design of the U.S. EPR features increased redundancy and physical separation of the plant's safety systems. The proposed plant also features a "double-walled" containment to house the nuclear reactor. The wall of the inner building, known as the "reactor containment building," will be made of approximately four-feet, three-inch thick concrete. The concrete is further fortified with a "spider web-like" set of reinforced steel. This inner containment also has a quarter-inch thick steel liner.

The EPR's key safety-related structures are designed to withstand the impact of a large commercial airplane crash.

Benefits of a Possible Third Reactor

Calvert Cliffs Nuclear Power Plant originally was designed to accommodate four reactors. If a new, third reactor is built at Calvert Cliffs, it will produce many benefits. It will help address the need for more base-load, generating power in the Mid-Atlantic region by adding 1,600 megawatts of generating capacity. Adding more power also could help bring stability to power prices in the Mid-Atlantic region.

A new reactor would have a positive effect on the local and state economies and would support expanding infrastructure needs in the area. The Calvert County Board of County Commissioners estimated the expansion could provide the county with approximately \$20 million in additional annual revenue during the first 15 years of operation. A new reactor also would create approximately 4,000 jobs during the peak construction period and approximately 360 permanent, new jobs after completion.

According to the Nuclear Energy Institute (NEI), jobs at nuclear power plants pay 36 percent more than the average salaries for a local area. NEI also estimates the average nuclear power plant generates \$430 million in sales of goods and services (economic output) in the local community and almost \$40 million in total labor income.

Source: UniStar Nuclear Energy, August 2008

More information is available at:

www.unistarnuclear.com