



## **Constellation Energy<sup>®</sup>** **Calvert Cliffs Nuclear Power Plant**

# **GENERAL PLANT INFORMATION**

### **Generation**

Number of units: 2

Total site net generation: 1,700 MWe

### **Type and Manufacturer of Reactor**

Pressurized Light Water Reactor

Unit 1: General Electric; Unit 2: Westinghouse

### **Site Features**

Site size: 2,300 acres

Location: Lusby, Maryland

### **Constellation Energy Ownership**

Unit 1: 100%; Unit 2: 100%

### **Commercial Service**

Unit entered commercial service:

Unit 1: 1975; Unit 2: 1977

Operating license:

Unit 1: licensed until 2034; Unit 2: 2036

### **Key Facts & Accomplishments**

- In 2000, Constellation Energy's Calvert Cliffs made history by becoming the first nuclear power plant in the nation to earn extended licenses from the U.S. Nuclear Regulatory Commission.
- In 2003, Constellation Energy reached a world record by safely completing the Calvert Cliffs Unit 2 outage in 66 days. The outage included refueling, replacing the Unit's two steam generators' lower assemblies, refurbishing the steam generator upper assemblies and replacing the Unit's two main step-up transformers.
- During 2004, Constellation Energy achieved another U.S. energy industry record for duration in replacing three low-pressure turbines on Calvert Cliffs' Unit 1. The outage team completed this replacement five days ahead of schedule, working 105,000 hours in just 20 days with an excellent industrial safety record.
- In 2005, Calvert Cliffs surpassed its own outage record, completing Unit 2 refueling in 21 days—one of the shortest outages ever achieved for a Combustion Engineering-designed nuclear reactor.
- During Calvert Cliffs' 2006 and 2007 refueling outages, the plant replaced and inspected systems and equipment as a proactive measure to help ensure continued equipment reliability through the remainder of its operating license.

### **Architect-Engineer/Constructor**

Bechtel Power Corp.

### **Type**

Pressurized light water. Rated at 1,700 MWe site total (850 MWe per unit)

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# GENERAL PLANT INFORMATION

## Reactor Coolant System

Two loop, one steam generator and two reactor coolant pumps per loop

- Operating pressure: 2,250 psig
- Design temperature at 100% reactor power: Cold Leg 548 F, Average Temperature 572 F: Hot Leg 596 F
- Borated water coolant (light water pressurized water reactors)
- Water flow: 90,000 gallons per minute per loop

## Reactor Vessel

- Material: Carbon steel, with a welded stainless steel cladding overlay weld
- Height: 42 feet
- Thickness: 6.5 inches
- Inside diameter: 166 inches
- Outside diameter: 189 inches
- Weight: 336 tons
- Water volume: 9,701 cubic feet
- Design power: 2,700 MWth

## Reactor Core

- Height: 14 feet
- Diameter: 96.5 inches
- 217 fuel assemblies per core, 176 rods per assembly

## Steam Generators

- Generators per unit: two
- Height: 62.4 feet
- Upper diameter: 239.75 inches
- Lower diameter: 165 inches
- Tubes per generator: 8,519