

# Wildcat Point Generation Facility

## State of the Art Advanced Combined-Cycle EPC Project



<b>Client:</b>	Old Dominion Electric Cooperative		
<b>Project Name:</b>	Wildcat Point Generation Facility		
<b>Location:</b>	Rising Sun, Maryland (adjacent to Rock Springs Generation Facility in Cecil County)		
<b>Plant Type:</b>	Combined-cycle		
<b>Fuel:</b>	Natural gas		
<b>Size:</b>	1,000-MW nominal		
<b>Configuration:</b>	2x1		
<b>Major Equipment:</b>	MHI 501GAC CTs (2)	Alstom HRSGs (2) and ST	SMIT GSUs
<b>Schedule:</b>	June 2014 – project award	2018 – commercial operation	



### Description:

In June 2014, Old Dominion Electric Cooperative (ODEC) awarded the Wildcat Point Generation Facility engineering, procurement, and construction (EPC) project to White Oak Power Constructors (WOPC), the joint venture (JV) of Sargent & Lundy and PCL Industrial Construction Company. The Wildcat Point site is located in Rising Sun, Maryland (adjacent to Rock Springs Generation Facility in Cecil County). The project is on an existing operating site with four combustion turbines in Cecil County, Maryland, adjacent to the Pennsylvania state border. The facility is a state of the art advanced combined-cycle 2x1 configuration employing Mitsubishi Heavy Industries (MHI) and Alstom technologies, with commercial operation scheduled for 2018.

As the EPC contractor, WOPC was responsible for engineering, procurement, construction, and commissioning of all works necessary to install the plant, including the associated mechanical, electrical, instrumentation and controls (I&C), and civil, structural, and architectural scopes. Sargent & Lundy was responsible for all detailed design, engineered equipment procurement, commissioning, and JV executive

management. The facility is designed for a 1,000-MW nominal capacity at ambient conditions based on the following overall arrangement:

- Two ODEC-supplied MHI 501GAC combustion turbines (CTs)
- Two ODEC-supplied Alstom heat recovery steam generators (HRSGs) and Alstom steam turbine (ST)
- SMIT GSUs
- 16-cell counterflow mechanical-draft cooling tower in back-to-back configuration
- One distributed control system (DCS)
- Emergency diesel generator (EDG)
- Raw and demineralized water treatment facilities
- Administration building with control room
- Maintenance/warehouse building

The CTs are equipped with evaporative inlet air coolers and a dry low-NO<sub>x</sub> burner (LNB) combustion system. The HRSGs are equipped with CO catalysts to reduce carbon emissions and selective catalytic reduction (SCR) technology to reduce NO<sub>x</sub> emissions. The design also includes an ST bypass. The CTs, the ST, and their associated generators are located indoors, with the HRSG and its associated auxiliary equipment located outdoors.

The graded site drains storm water to the existing storm water pond by ditches, culverts, and piping, as appropriate. The WOPC design layout was such that the buried circulating water supply and return piping did not disturb the pond, enabling ODEC's use of the pond during the facility's construction period. Wildcat Point is ODEC's first combined-cycle power generation facility.

### **Sargent & Lundy Contact**

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