

Cogeneration at the Capitol Power Plant

Frequently Asked Questions

January 2013



The Capitol Power Plant (CPP) was built in 1910 and today provides steam and chilled water to heat and cool 23 facilities on Capitol Hill including the Capitol Building, Capitol Visitor Center, House and Senate Office Buildings, the Supreme Court, Library of Congress buildings, Union Station, and Folger Library.

The CPP plays a critical role in the Architect of the Capitol's (AOC's) long-term energy conservation strategy and, after more than 100 years in operation, significant investment is needed to replace aging infrastructure and to install new, energy-efficient equipment. As part of the AOC's Strategic Long-Term Energy Plan for the CPP, cogeneration technology was identified as an energy efficient and cost effective means to meet future energy requirements by generating on-site power. The AOC has applied to the District Department of the Environment (DDOE) for a Plantwide Applicability Limit (PAL) permit and Chapter 2 construction permits in order to begin work on the cogeneration project.

Did the Capitol Power Plant (CPP) stop using coal?

Since 2009, the CPP has used natural gas as its primary fuel source. However, the CPP must maintain the capability to potentially use some coal until the cogeneration plant is constructed to ensure that it can provide uninterrupted service to the 23 facilities that it serves. There are certain instances when coal may be used:

- if there is an emergency and natural gas supplies are interrupted;
- abnormally cold conditions place higher than normal demands on the CPP; or
- equipment outages or maintenance on the gas boilers require use of backup fuel.

In Fiscal Year 2012, the CPP relied on natural gas for 92% of its energy needs. By comparison, in 2005 the CPP relied on natural gas for 42% of the time.

Why is the Architect of the Capitol currently included in a federal contract to purchase coal?

While the AOC has drastically reduced coal use at the CPP, it cannot stop the minimal use of coal until the new cogeneration plant is constructed. As a result, the Defense Logistics Agency (DLA) reserves a certain quantity of coal for the AOC should any of the three circumstances listed above occur. The AOC is not obligated to purchase the coal under the current DLA contract.

What fuels will be used at the cogeneration plant?

The cogeneration plant will primarily use natural gas, with fuel oil used as an emergency back-up fuel only in the event of a natural gas shortage. The cogeneration project is part of the AOC's comprehensive efforts to reduce energy and strengthen its culture of sustainability.

<http://www.aoc.gov/sustainability-energy-and-water-conservation-report>

Why did the CPP decide to construct a cogeneration plant?

When the AOC was developing its Strategic Long-Term Energy Plan, which was reviewed by experts convened by the National Academy of Sciences, it considered environmental impacts, cost, and energy efficiencies of several energy systems. The AOC chose to implement cogeneration at the CPP because cogeneration would significantly reduce greenhouse gas emissions and total Hazardous Air Pollutants, thereby helping to improve the air quality in the local neighborhoods specifically, as well as throughout the District of Columbia.

How would the cogeneration plant impact emissions?

Installing a cogeneration plant will significantly reduce NO_x, SO_x and greenhouse gas emissions, helping to improve the air quality in the District of Columbia. For example, the benefit of installing the cogeneration plant over the current practice of importing electricity from a coal-fired power plant is equivalent to reducing the amount of greenhouse gas emissions associated with the operation of 15,000 vehicles each year¹.

Will the CPP stop using coal if the permits for the cogeneration project are not issued?

No. Without the required permits, the CPP will not be able to construct the new cogeneration plant. **Moving to cogeneration will enable the CPP realize its long-term goal to use natural gas 100% of the time.** If the cogeneration plant is not built, the CPP must continue to use its 60-year-old, less energy efficient coal boilers.

For more information, visit www.aoc.gov/capitol-buildings/capitol-power-plant

¹ <http://www.epa.gov/cleanenergy/energy-resources/refs.html>