Nuclear power plant refueling begins

RICHLAND, Wash. – Columbia Generating Station, the Northwest’s only nuclear power plant, is shut down for approximately five weeks for a scheduled biennial refueling outage.

The 1,150 megawatt plant is tentatively scheduled to restart and reconnect to the Northwest power grid in mid-June, following completion of the refueling operation and plant maintenance activities.

The outage is timed to coincide with spring time snow melt and runoff that maximizes power output from the region’s hydroelectric system and minimizes the impact of taking the nuclear station offline.

The shutdown, originally planned for midnight last night, began several hours early when sensors indicated low pressure in a system that cools the power plant’s main generator.

Officials opted to leave the plant offline and continue with preparation for the refueling outage slated to begin several hours later. A “root-cause” analysis will be conducted to determine the source of the cooling system low pressure and will be added to work already planned for the outage.

More than 1,800 skilled outage workers were hired from across the country in recent weeks. The added workers triple Columbia’s normal work force of about 900 employees and brings substantial economic value to the region.

Work crews will focus on replacing approximately one-third of the 764 fuel assemblies in the reactor core during the outage. The used fuel assemblies, each about 15 feet long and 8 inches square, will be stored on-site in dry, heavy steel and concrete containers.

The volume of actual used fuel is much smaller than the containers utilized to store the material safely. All of the used fuel from Columbia’s quarter-century of operation would fit inside a typical gas station convenience store.

Approximately 95 percent of the used fuel can be recycled into new fuel, leaving about five percent as waste. Many European and Asian countries recycle their used nuclear fuel however recycling is not presently available in the United States.
Other outage work will include the repair, refurbishment and replacement of numerous pumps, valves, motors and other components to ensure the plant is ready for the two-year operating cycle leading up to the next scheduled refueling in 2011.

Officials said they are committed to keeping the outage duration as short as possible, but not at the expense of quality work or safety. “Our outage goals focus on safety, quality and efficiency,” said Scott Oxenford, Energy Northwest Vice President, Nuclear Generation. “Safety is always our first priority. Quality is essential to avoid re-work and ensure operating reliability, and efficiency because Columbia delivers more than one million dollars worth of reliable, affordable, environmentally responsible power every day.

“Columbia is a tremendous value for the region. Only the federal hydropower system provides cheaper electricity and Columbia is a close second in cost and reliability.”

Columbia generates enough electricity to serve about one million Washington homes and more than 10 percent of the power supplied to the region by the Bonneville Power Administration.

The nuclear power station uses a boiling water reactor to produce steam that spins the turbine generator to make electricity. The primary emission from the power plant is water vapor seen as a large steam plume over the plant’s cooling towers, especially on cold, dry days. Columbia’s nuclear power source has no greenhouse gas emissions. A comparable size fossil fuel power plant releases approximately 8,500 tons of sulfur dioxide, 15,000 tons of nitrogen oxide and 8,280,000 metric tons of carbon dioxide into the atmosphere each year.

**About Energy Northwest:**

Energy Northwest is a not-for-profit public power, state Joint Operating Agency headquartered in Richland, Washington. Chartered in 1957, Energy Northwest has 25 public power members; 21 public utility districts and four municipalities. The consortium’s nuclear, hydro, wind, and solar projects deliver nearly 1,300 megawatts of reliable, affordable, environmentally responsible electricity to the Northwest power grid. Energy Northwest continually explores and develops new generation opportunities while offering a wide range of energy and business services.

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