CHINOOK OBSERVER

Guest Commentary: There's a nuclear reactor in my backyard

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Living here on the Long Beach Peninsula, it seems like every day that we find out about potential risks to the Columbia River, our fisheries and our way of life. As a fifth-generation resident along the Columbia from Walla Walla to Ocean Park, I cannot remember a time in the past when I was this concerned. Ironically, my great grandfather founded the town of Hanford in early 1900s. He built a hydro station on the Columbia to generate power. It could have been a fish killer but not at the scale that our nuclear power plant could bring.

A previous editorial addressed our concerns about suffering dire consequences from the nuclear meltdown in Fukushima, Japan. However, you don't have to look across the ocean for a potential nuclear disaster. We already have a Fukushima model nuclear reactor in our backyard. Even if you are like me, old enough to remember the Washington Public Power Supply System (WPPSS) bond collapse (largest one in history before 2008), you may not realize that one of the five proposed plants were completed. WPPSS#2, renamed as Columbia Generating Station (CGS) has been operating since 1984 close to the Columbia River about 10 miles north of Richland.

Shades of Fukushima

The CGS is a General Electric Boiling Water Reactor (BWR) with a Mark II containment that has been identified by the Nuclear Regulating Commission (NRC) as having the same vulnerability to hydrogen explosions in a loss of power accident as those which experienced three such explosions during the multiple nuclear power plant accident on March 2011 in Fukushima. The response from the NRC has been to require that reactors like CGS make Fukushima Retrofits. However, this process continues to be pushed back by the plant operators and may not ever happen.

The major reason to shut down nuclear power plants is that we do not have a truly safe long-term storage solution for the highly radioactive nuclear waste that results from power generation.

Upriver dam failure

Although there is little risk of a tsunami coming that far upriver, our plant's design and location has its own risks. The reactor is downstream from Grand Coulee and Chief Joseph dams. There have been seven major dam failures in the U.S. since 1963. Last month, we watched as 200,000 people were evacuated in California. The spillways worked, but what about the future.

The second risk that we can all understand is earthquakes. We hear about the big one from the Cascadia subduction zone and how it will affect the coast. What about Eastern Washington? They could have their own big event like the 1872 6.8 earthquake. The spent fuel pool where highly radioactive rods are stored is elevated. This makes it vulnerable to collapse in an earthquake. If an earthquake is strong enough, it could crack the fuel pool, allowing cooling water to drain. This would result in explosions of radioactive material. A recent report by geologists found that the original seismic design did not take into consideration historical earthquake patterns, including the location of the fault that caused the 1872 earthquake. It also found that there are newly identified faults crossing the Hanford reservation. A major fault line is 2.3 miles from the site. Small swarm earthquakes are happening daily.

The third risk is loss of power. Local governments are concerned that our "big" earthquake will cut off power and fuel supplies to Central Washington. The Hanford reservation has had frequent grass fires that have come within miles of the reactor. There was an equipment malfunction at a Bonneville Power Administration (BPA) substation that caused the reactor to shut down last December. Per the plant management, all the backup systems functioned as they are supposed to. What if they didn't function? The plant has diesel generators. What if the cooling pool fails and it is too radioactive to get to the generators to fill them up or to attach temporary power?

There also are safety and economic risks associated with maintenance and operation. The Columbia Reactor is 33 years old. Its systems are antiquated and expensive to keep going. There have been many expensive repairs over the last 10 years. The plant was on a watch list for several years along with some of the worst plants in the U.S. Recently, their operations have improved, but they were fined $35,000 in September 2016 for security lapses. They have also had a higher than normal rate of unexpected plant shutdowns.

Widespread impacts

What does this have to do with me, you ask? The effect of a nuclear accident close to the Columbia is estimated to spread at least 50 miles. The miles would include most of our $49 billion agricultural economy. It would include our salmon spawning grounds and route to the Pacific. Commercial and sports fisheries would be severely damaged. Our reputation as a beautiful recreation area would be destroyed. We may not have the radiation in our air and soil immediately, but real estate values would go down.

Another fact is that the reactor is owned by Energy Northwest, a group of public utilities primarily in Washington state that includes the Pacific County Public Utility District. One hundred percent of the reactor's generation is purchased by the BPA and then distributed throughout the Northwest. The 2015 Fuel Mix report released by the Pacific County PUD states that 9.23 percent of our local power comes from nuclear power (www.pacificpud.org/fuelmix.html). Other major sources are 82 percent from hydro, 5.23 percent from coal and 3.21 percent from natural gas. Surprisingly zero comes from wind or solar.

Switch to renewables

Last week, a new report was released showing that Northwest ratepayers could save money by replacing the generation of the nuclear reactor with renewables. The Portland-based McCullough Research consulting firm estimated savings from $261.2 million to $530.7 million over 10 years. Recently the Seattle City Council directed Seattle City Light to replace its nuclear power with renewables. The handwriting on the wall is to replace dirty fuels like coal, natural gas and nuclear with renewables. (Nuclear power is not a clean carbon free source of energy. The cycle to make nuclear fuel is very greenhouse gas intensive. The last shipment of fuel for CGS was made in a plant that still uses freon, which causes holes in the ozone layer. The use of freon is sanctioned by the DOE but banned everywhere else.

Shouldn’t we ask our PUD commissioners to bring us into the future by reducing our use of nuclear by embracing energy efficiency and renewables? Reducing our demand for nuclear power is imperative to protecting our Columbia from a nuclear disaster.

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