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Nuclear fuel deal has Northwest ratepayers speculating in a risky commodity

columbiageneratingstation.jpeg

Steam rises from Energy Northwest's Columbia Generating Station near Richland, Wash. *(Jackie Johnston/The Associated Press/2003)*

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A report released last week suggests that public power customers in the Northwest could end up on the losing end of a speculative and politically motivated deal to subsidize an outdated and financially troubled nuclear fuel processing plant in Paducah Kentucky.

The report, authored by **the Portland-based energy consultant Robert McCullough**, describes a complex transaction in which the operator of the Northwest’s sole nuclear plant, **Energy Northwest**, bought $687 million worth of nuclear fuel components, most of which it will never need.

The plan is to sell most of that stockpile to the Tennessee Valley Authority in a series of transactions that begin in 2015 and run until 2022. It will use the rest to fuel its own plant, the Columbia Generating Station near Richland, Wash., until 2028.

It’s a convoluted deal, and its value depends on the economic beholder.

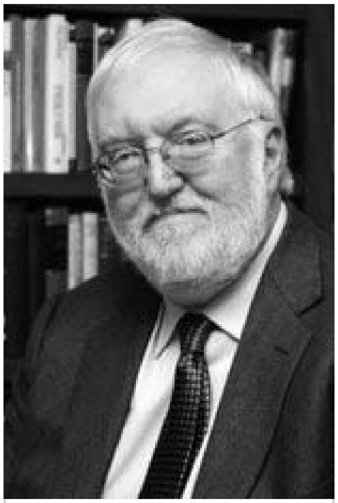
McCullough, for one, insists this is no deal at all for customers of the Bonneville Power Administration, who buy the plant’s output and financially backstopped the fuel purchase. He says it didn’t come through the normal channels, it doesn’t fit Energy Northwest’s typical fueling plans and it didn’t receive adequate vetting for a project of its size. At its most basic level, he says, its commodity speculation.

Moreover, McCullough says Energy Northwest and BPA have been cherry picking their accounting assumptions, first to make a questionable transaction look like a winner, and now to minimize the ongoing risks. His analysis suggests that it could ultimately cost BPA customers – 140 publicly owned utilities in the region - an extra $206 million over the life of the transaction.

“We have a federal agency speculating in a risky commodity,” he said. “Its dicey.”

Energy Northwest and Bonneville, meanwhile, say they’ve engineered a financial home run, or at least a triple, for ratepayers. They’ve locked in a fuel supply for the next two decades with limited downside risk, providing price certainty that’s highly valuable to ratepayers. When all is said and done, they say the deal will leave them with nine years of fuel to use in the reactor worth $236 million. According to their latest accounting methodology, they will have spent $65 million to buy it.

“Energy Northwest has a history of strategic fuel purchases that have resulted in some of the lowest fuel costs in the nation for Columbia Generating Station,” said Dale Atkinson, a vice president at Energy Northwest. “In the end, ratepayers are saving millions of dollars in the Northwest – and these savings will be reflected over the next two BPA rate cases.”


Robert McCullough

McCullough has spent the good part of the last year analyzing the economics of the Colombia Generating Station. The plant is the lone holdover from the financial fiasco that was the Washington Public Power Supply System, which attempted to build five nuclear plans in the 70s and 80s.

In December, **McCullough released a study** funded by an anti nuclear group, **Physicians For Social Responsibility**, concluding that Bonneville could save its ratepayers $1.7 billion over the next 17 years simply by closing the remaining nuke and purchasing power on the open market.

Energy Northwest **has released its own study** – and a **special website** – extolling the plant’s virtues. It maintains the plant is a key piece of the power reliability equation in the Northwest and will save ratepayers $1.6 billion if operated until 2043.

Both studies are heavily dependent on underlying assumptions about future natural gas prices and the resource mix that would be used to replace the output of the nuclear plant if it was shuttered. In the meantime, McCullough said he decided to have a closer look at the fuel purchase after a January meeting to discuss his initial findings with BPA Administrator Elliot Mainzer and his lieutenant, Greg Delwiche.

The fuel deal was hatched in 2012 with Energy Northwest’s agreement to purchase a huge supply of depleted uranium tailings that USEC, formerly U.S. Enrichment Corp. would process into nuclear fuel over the following year at a plant in Paducah, Tennessee.

USEC, which has been heavily subsidized by the U.S. government, was financially troubled at the time of the deal and subsequently announced a plan to enter bankruptcy. Its Paducah plant uses a 1950s era process called gaseous diffusion to enrich uranium. The process requires 20 times as much energy as modern centrifuge technologies, which has caused a dramatic drop in nuclear fuel prices and forced the closure of most plants using the old technology.

McCullough said the Paducah facility faced closure because it could not find customers at its high cost. And follow-up **reporting by Newsweek** suggested that the deal with Energy Northwest and TVA was engineered by Kentucky’s two republican Senators, Mitch McConnell and Rand Paul, to save union jobs in advance of the 2012 congressional elections. The Paducah plant is a substantial employer and a major customer of TVA, the massive yet debt laden government utility that serves a large swath of the southeast.

Whatever the motivation in Kentucky, Energy Northwest agreed to spend $687 million for fuel that McCullough says was cheaper on the open market at the time and is only worth about $440 million today.

Energy Northwest didn't need all that fuel. But the financially strapped TVA was eventually willing to purchase three quarters of it, not only to fuel its own nuclear fleet, but to produce tritium gas for nuclear weapons. Federal rules require that weapons be produced using U.S. technology, so TVA had to buy fuel produced using the older, more expensive enrichment process. The deal with Energy Northwest let the financially strapped utility off the hook for more borrowing, and provided a big electricity sale to U.S. Enrichment Corp.

With BPA's financial backing and TVA's agreement to buy three quarter of the fuel, Energy Northwest agreed to step in. This despite its original analysis of the deal's cash flows that showed a negative present value of $150 million on the fuel sale. McCullough says that fact was obscured in a presentation to Energy Northwest's board by an accounting misstep that resulted in $220 million profit on the financing and made the overall deal look like a winner.

Energy Northwest and BPA insist that the uranium tails transaction was put through a number of analytical screens to scrutinize the risks and see if it was in the best interests of all parties. And a number of contractual measures were put in place to protect Northwest ratepayers if USEC or TVA couldn't deliver.

"We were continually brought back to the same conclusion that there was extreme value in the transaction for Energy Northwest and the region," said Marcus Harris, a financial analyst at BPA.

Energy Northwest and BPA now say their original analysis was probably too conservative, overstating the actual risks and understating the value. Indeed, the fuel has been processed and delivered, so they've already eliminated one of the major counterparty risks.

Accordingly, they've changed their accounting on the deal and are now using a vastly lower interest rate, equivalent to their borrowing rate on the deal of 2.8 percent, to discount the deal's future revenue streams to the present day. That reduction from an original rate of 12 percent transforms the deals economics on paper, turning what was a $150 million loss into a $252 million gain.

It's also out of step with the conventions of corporate finance, or the rates that BPA, Energy Northwest or TVA typically use to evaluate projects.

"This is moving the goal posts because you couldn't make the goal," said McCullough. "It's simply inappropriate cherry picking. They apparently chose the number because they like the result it gets them."

McCullough still sees risk. **TVA has had financial difficulties, and the Obama Administration has considered privatization as one option**. It has the right to delay deliveries under the contracts, and McCullough says it may get serious buyers remorse over the high cost of the fuel. Meanwhile, the spot price of uranium could continue to fall, putting Energy Northwest's share of the fuel out of the money.

Energy Northwest and BPA insist that they've thought through all the angles, and conclude Northwest ratepayers are getting a good deal.

In the meantime, staff at the Northwest Power and Conservation Council have offered to take a neutral look at the dueling studies and their assumptions, or perform their own cost effectiveness study on the nuke for the next regional power plan in 2015. The council, tasked with assuring the federal systems is affordable and reliable, hasn't responded to staff's offer.

-- Ted Sickinger