

Phil Lusk
Port Angeles, WA 98362
May 31, 2016

This presentation is provided in support of Resolution 31667, opposing the use of fossil fuels and new nuclear energy to generate electricity, and requiring an ongoing evaluation of existing nuclear power generation on the basis of health, safety, reliability, and cost. While I am not a resident of the City of Seattle, I was a board member of Energy Northwest from 2013-2015. While on the board, I was keenly interested in the McCullough Research analysis suggesting operating the Columbia Generating Station (CGS) would produce a \$1.7 billion cumulative loss for the region.

As background, I recently retired as the Deputy Director of Power and Telecommunication Systems for the City of Port Angeles. My primary duties included advanced financial analysis and modeling for the City's electric utility, including bond financing analysis, resource planning, feasibility studies, rate studies, utility appraisal and valuation studies, and a variety of economic analyses. These duties also required developing and delivering expert testimony.

I created an economic market test model to calculate the CGS losses using the Mid-Columbia (Mid-C) price hub location. My analysis projected a loss of \$2.1 billion, which used a Mid-C price forecast provided by Bonneville Power Administration (BPA). The losses are a bit higher than projected by McCullough Research, most likely due to an even softer power market than two years ago.

A second market test model called "Open Market" was also created. Open Market tests an expectation that removing CGS will cause a short-term rise in Mid-C prices. Fundamentally, it's a bit more conservative projection than assuming that Mid-C prices will not increase following the loss of CGS generation. Existing and emerging energy conservation technologies (*e.g.*, heat pumps, heat pump water heaters, and LEDs) can deeply slash regional power requirements. Increasing the market penetration rate for these technologies will correct increases in Mid-C prices, once the quantity of energy demanded has been fundamentally reduced.

Based on these two market test models, Seattle City Light's (SCL) cumulative loss is estimated to range between \$78,000,000 (Open Market) and \$155,000,000 (Mid-C Market). This specific loss is based on using a 7.5% BPA Tier One Cost Allocator (TOCA) for SCL, which is how the net billing agreement distributes regional BPA power costs.

The two models are an open source calculation, meaning all of the assumptions are transparent and the specific calculations are provided in the addendum. As referenced earlier, the Mid-C data was obtained from BPA from a similar market test procedure

conducted to remove a customer-owned dedicated resource under the BPA's Regional Dialogue power sales contracts. The variable cost information is from Energy Northwest. The data sources are provided in the footnotes. Also attached is an op-ed piece written for the regional energy journal, *Clearing Up*.

I am herewith requesting the presentation be introduced into the record and that Energy Chair Sawant be advised of the newly calculated costs to Seattle City Light. Please let me know if there are any comments or questions.

With best wishes,

Phil Lusk
plusk@pipeline.com