ULE Refining Process for Fracked Gas-to-Methanol Refinery in Kalama WA

> Northwest Innovation Works is considering a new technology for methanol production that the company calls "Ultra Low Emissions" or "ULE." The ULE technology was developed more than two decades ago at a small refinery in Australia–but no large-scale U.S. methanol refinery has adopted this process.[1] The major difference between ULE and conventional technology is ULE's increased dependence on electricity from the Cowlitz County grid.

Source: http://columbiariverkeeper.org/wp-content/uploads/2016/07/KalamaMethanolRefining_final.pdf

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From Sightline Institute's *Examining Methanol's Green Claims in the Northwest* (20160623):

Project backers claim their facilities would yield big on-site greenhouse gas savings. According to NWIW, the Northwest refineries would incorporate Ultra Low Emission (ULE) technology, which would achieve up to a 75 percent reduction in natural gas use at the facility itself by substituting electricity. Yet the electricity demands of the ULE process are enormous, and project backers have ignored the sizable pollution associated with that added power consumption—a galling oversight in light of the fact that the regional power grid does not have large quantities of available carbon-free electricity.

According to *Seattle Times* reporter Hal Bernton's investigative article on the methanol proposals:

> *So if more hydropower is claimed by the methanol plants, other utilities that use that electricity would have to turn to alternatives. At least for the next few decades, the likely options would include power generated by natural gas or even coal-fired plants that emit carbon emissions, said Tom Eckman, with the Northwest Power and Conservation Council.*

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In short, the hyped carbon reductions at the Northwest methanol refineries would come at a steep cost: they would boost fossil fuel electricity production elsewhere, either scaling up gas-power generation or prolonging the lifespans of coal-fired power plants in the West. In fact, the Draft Environmental Impact Statement for the proposed Kalama, Washington, refinery finds far more modest carbon reductions attributable to ULE processes.

Moreover, although ULE sounds like a promising technology, it is difficult to evaluate and probably warrants skepticism. According to a NWIW factsheet, "the first methanol application was made for a project in 1994 at the Coogee LCM plant in North Laverton, Australia." Yet the Australian plant was a proof-of-concept development that does not appear to have been replicated anywhere on Earth in the subsequent two decades. It's also far smaller than the proposed methanol facilities in the Northwest, so its relevance is not at all clear.

Full article: https://www.sightline.org/2016/06/23/examining-methanols-green-claims-in-the-northwest/