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To: <u>UTC DL Records Center</u>

Subject: Docket Numbers UE-160918 and UG-160919

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This is a Comment on PSE's 2017 Integrated Resource Plan, Docket numbers UE-160918 and UG-

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Testimony Title: Health Dangers Associated with Natural Gas Extraction

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Puget Sound Energy (PSE) proposes to transition from coal to gas, citing gas as a healthier and cleaner alternative for both the environment and public health. It is not. The danger to health caused by the practice of hydraulic fracturing or "fracking" is alarming.

Large epidemiological studies by universities including Duke, Johns Hopkins and Columbia have focused on the health concerns related to fracking. Communities near these sites are reporting increases in the incidence and severity of asthma in both adults and children. Carcinogenic benzene, arsenic, hydrocarbons, endocrine disrupting chemicals and heavy metals have been found in both ground and surface water at these sites. In addition to headache, dizziness, disorientation, ear nose and throat symptoms and seizures, these chemicals can affect blood and bone marrow leading to anemia and immunosuppression. Some communities near fracking sites are reporting increasing numbers of premature births and high-risk pregnancies. Long term neurologic and neurodevelopmental impact on infants and children is of special concern. Exposure to endocrine disrupting chemicals can alter developmental pathways in ways that may not be evident for decades or generations.

Fracking emits massive amounts of methane, a gas that contributes much more significantly to global warming than carbon dioxide and is extremely flammable. It can seep into drinking water sources causing blowback explosions as well as flammable downstream water.

There is disagreement between the scientific community and the gas industry about whether gas is indeed a "cleaner" alternative to coal in terms of environmental impact. However, there is growing evidence that the extraction of gas is having significant negative health impact on surrounding communities. Unfortunately a federal law exempted the fracking industry from compliance with the Underground Injection Control provisions of the Safe Drinking Water Act. The Energy Policy Act of 2005 exempted fluids and chemicals used in fracking from protections under the Clean Air Act, Clean Water Act, Safe Drinking Act and the Superfund. The companies that extract natural gas by fracking are not required to disclose the chemicals used thus it is very difficult to assess the short and long-term impact on public health.

Given the growing evidence of the public health risks associated with fracking, it is unacceptable to continue to present gas as a "healthier" alternative to coal. We urge PSE to

reconsider their plan to rely increasingly on gas and to refocus their efforts on increasing use of renewable energy sources with minimal disruption to climate, air and water quality and human health.