To: Irena Netik – Puget Sound Energy (PSE) Director of Energy Supply Planning and Analytics

Cc: Jay Balasbas – UTC Commissioner

Rachel Brombaugh - King County Executive Energy Policy & Partnerships Specialist

Brad Cebulko – UTC Staff

Carla Colamonici – Regulatory Analyst, Public Counsel Division

David Danner – Utilities and Transportation (UTC) Commission Chair

Lisa Gafken – Assistant Attorney General, Public Counsel Unit Chief

Steve Johnson – UTC Staff

Ann Rendahl – UTC Commissioner

Deborah Reynolds – UTC Staff

Kathi Scanlan - UTC Staff

Subject: 2019 IRP Technical Input – Gas Conservation

Note: The TAG acknowledges the WUTC Staff petition for an IRP schedule exemption. This technical input is submitted in response to PSE's commitment to "continue to ... maintain and respond to public input". This technical input should be considered an integral part of the collection of 2019 PSE IRP documents. We appreciate PSE's commitment to also include these technical inputs in the 2021 PSE IRP.

Puget Sound Energy has arguably a limited long-term future in natural gas sales to the public. It seems certain that scientific analysis, societal pressure, and regulation at many levels will force the end to that market by 2050 or earlier, as these realities are ending the use of fossil fuels for electric generation.

This future can be made less disruptive to PSE and its customers if handled with a rational transition to an all-electric future, which ultimately simplifies operational complexity and supports growth of PSE's primary energy business. It should be possible for PSE to begin this transition with a renewed focus on gas conservation – conservation being the proven low-cost approach. PSE's current approach to gas conservation seems to be much less aggressive compared with its electric conservation measures. Some examples follow:

- 1) In 2010, I received a \$1500 rebate for converting my gas furnace system to a geothermal heat pump. That rebate is no longer offered.
- 2) Fewer and smaller rebates are offered for gas heating to heat pump conversions than resistance electric to heat pump conversions.
- 3) It takes a much higher efficiency (HSPF) factor to qualify for gas conversions than for electric conversions, limiting the options for gas conversions.
- 4) Ductless heat pump conversion rebates for commercial customers are not applicable for replacement of gas heating systems.
- 5) Rebates for higher efficiency gas furnaces are not eligible if installed in tandem with a heat pump.
- 6) There are no rebates for replacement of gas cook-tops with electric induction cook-tops.
- 7) Several of the above factors indicate that rebates are based solely on economic factors without consideration of carbon emissions conservation.

Current heat pumps are now much more economical than gas systems to operate, perform well at our winter temperatures, provide cooling for our warmer summers, and are emissions free. If rebates for these and other all-electric equipment and appliances are promoted and made more easily available, customers can afford to install the new technology. More importantly, they can do it on a gradual basis over the years when the service life of their existing equipment expires. Disruption is reduced.

As a member of PSE's Technical Advisory Group, I formally request that PSE post this letter on their 2019 IRP website and provide a written response to these questions:

- Will PSE revisit and intensify its gas conservation program?
- What specific gas conservation program changes will be offered?
- Will PSE offer customer incentives to convert from gas furnaces to electric heat pumps with the same efficiency requirements as current electric conversion to electric heat pumps?
- Will PSE offer customer incentives to convert from gas to electric induction cook-tops?
- Will PSE develop larger efficiency measures in the 2021 IRP?

Willard (Bill) Westre Mechanical Engineer PSE IRP TAG