

PSE document describing Tacoma LNG Project,
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INTRO

The Puget LNG Facility

Puget LNG is positioned to be the lead supplier of liquefied natural gas (LNG) in the Pacific Northwest. Located in the Port of Tacoma, Puget LNG is focused on providing customers with a safe, reliable and economic source of LNG with various end uses. With easy access to the water, rail and roadways, Puget LNG is located to efficiently provide LNG to transportation customers within the region.

Puget LNG has the experience to work with customers to provide a collaborative approach to customers looking to switch to a lower carbon fuel. We welcome the ability to work with customers to lower their carbon footprint in combination with lowering operations costs.

The facility will have a shared function, providing LNG for Puget LNG's commercial customers and also providing necessary domestic supply back up for Puget Sound Energy's customers.

Capabilities

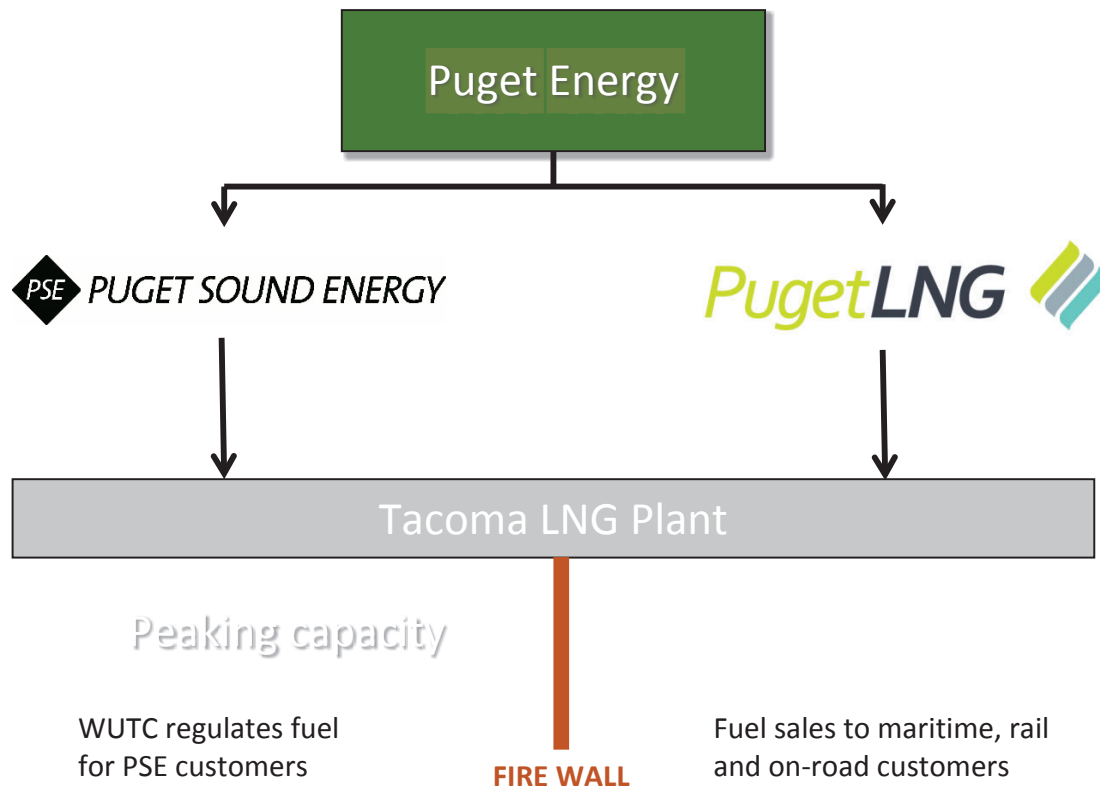
- Shoreside direct loading access
- Designed to meet marine fueling requirements
- Water loading access with a flow rate of 2,640 gallons/min
- 2 tanker truck loading bays with a flow rate of 300 gallons/min
- 225,000 gallons per day liquefaction (expandable)
- 2.2 million gallons of LNG storage
- Rail spur on site for future potential rail car loading

Construction at the facility is currently underway and the LNG plant will be in production by late 2020.

OWNERSHIP

Puget Sound Energy and Puget LNG (a subsidiary of PSE's parent company Puget Energy) are building a \$310 million LNG facility in the Port of Tacoma.

Diagram of ownership structure



COST-EFFECTIVE

Liquefied natural gas (LNG) is less expensive than conventional fossil fuels such as gasoline and diesel. Puget LNG converts clean-burning natural gas into LNG to provide to marine and over-land transportation industries. While converting the operations of your vessels and vehicles to use LNG takes investment, the payback on that investment begins right away with lower fuel and operating costs.

Puget LNG is connected to the Williams Northwest Pipeline and sources natural gas from British Columbia in Canada, trading through the Sumas Hub. The Sumas Hub predominantly supplies natural gas to the Northwestern United States and is less influenced by some of the broader gas markets in the USA. The price of natural gas typically trades lower at the Sumas Hub than the more well know Henry Hub.

Puget LNG is welcomes the chance to work with customers to source their natural gas with a flexible approach to contract structures. We have the ability to provide stable or a floating monthly indexed natural gas commodity price or simple liquefaction tolling for customers with procured gas.

Puget LNG is happy to work with you to realize a positive impact on your bottom line, the local economy and the environment.

Marine Market

LNG is considered to be the best fuel option to meet the International Maritime Organization's 0.5% global Sulphur cap for marine fuels which comes into effect in 2020. This reduction from the current standard of 3.5% Sulphur is in addition to other Sulphur caps on marine fuels within existing Environmental Control Area's (ECA's) in various regions, particularly within the coastal regions of the continental United States and Canada.

LNG meets all of these requirements as it contains virtually no Sulphur (typically about 0.004% on a mass to mass basis). This allows for a LNG fueled ship to operate in all regions without the need for fuel switching or expensive exhaust scrubbers.

Additionally LNG has other distinct benefits over traditional oil-based marine fuels such as;

- Lower NOx, SOx, PM and GHG over HFO without the need for complicated exhaust clean up systems
- Less environmental risk in the case of a fuel spill
- Ability to transition to renewable natural gas as supply becomes available

The IMO strategy for the reduction of GHG emissions from ships, issued in 2018, lays out the plan to reduce the total emissions from global shipping by 40% by 2030 and 70% by 2050, compared to 2008 levels. Fueling ocean going vessels with LNG can greatly contribute to this goal.

North America has as abundant supply of natural gas and with a dedicated marine fuel terminal, Puget LNG provides marine customers with fuel price stability and a dedicated supply chain. The facility is designed specifically to meet maritime fueling requirements with shore side direct loading access. This allows Puget LNG in the future to provide ship-to-ship and truck-to-ship LNG transfer.

Key Customer

TOTE Maritime is a leader the industry in environmental responsibility through many environmental initiatives including plans to convert their vessels to liquefied natural gas power (LNG).

TOTE is converting to dual-fuel, the engines of the two Orca-class container ships that travel from Tacoma to Alaska. These vessels will also surpass the standards put in place by the U.S. Environmental Protection Agency's clean air regulations.

Off-Grid Industrial Markets

The ability to transport LNG and the energy density makes LNG a very suitable fuel for industrial customers who are outside of natural gas service areas. This could be locations where pipeline natural gas is not available or available in required volumes.

Transporting LNG to an industrial location for use in applications such as kilns or steam generation for example, creates a “virtual pipeline”. This allows off-grid industrial customers to benefit from the operational and environmental advantages of natural gas over other fuel types. In many cases LNG can easily replace heavy fuel oil or diesel in applications and there are many examples of this in regions sensitive to criteria air pollutants or GHG emissions. These range from asphalt plants to blast furnaces for other specialty aggregates and raw materials.

Puget LNG is happy to explore opportunities to bring natural gas in the form of LNG to your location.