Comment received 10/20/16, 7:38 am

Dear Commissioners

PSE keeps claiming the need of an LNG facility in Tacoma. They have spent thousands of dollars trying to convince the public it is in their best interest. There is one big glaring problem with all their rhetoric, there is no need by the public ratepaying customers for the plant. The miniscule proportion of the production could be filled in several other ways. The need for peak-shaving is actually just an indication that the current system is undersized. PSE already has plans to grow their system because of population growth in the region. Including an incremental capacity to prevent the need for peak-shaving is as easy as increasing the size of a new pipe by one or two inches.
The obvious reason that PSE wants to include the peak-shaving capability in their new "for profit" company is to get the residential ratepayers to cover a great deal of the cost and assume a large portion of the risk. Trying to have two different companies with two different financial motives will never work. The new "for profit" company is trying to maximize returns for their owners, while the "public utility" company is mandated to protect the ratepayers. The UTC is the watchdog.

The only true way to make this cobbled scenario work is to make the new PSE "for profit" company build the proposed LNG facility with it's own money. This new company could sell LNG to the current PSE company on the few days a year that extra capacity is needed. It would become immediately obvious that they would not want to continue the project without the financial contribution from the residential ratepayers. It would also become obvious that only the "for profit" company is reaping the benefits.

There is no actual need for this project. There are other simple options to manage peak-shaving demands. Continuing with their current system has proven satisfactory in the past. Gig Harbor has a peak-shaving storage tank. There are huge gas reservoirs available. There are incremental growth plans that can include this demand. Their only need is for the ratepaying customers to help pay the cost for the plant in order to maximize the profits for the foreign owners. The WUTC has the responsibility to protect the public ratepayers, not to help maximize the profits for the foreign owners.

Steven Storms
1316 Browns Pt Blvd
Tacoma, WA. 98422

Comment received 10/20/16, 4:38 pm

Dear Commissioners

While PSE claims there is no danger from an LNG leak from the 8 million gallon storage tank, the results from such a leak would be catastrophic in both the cost of human lives and property damage. I had the opportunity to use the same model used by the Tacoma Fire Department to predict the area that would be impacted if such a leak occurred. Attached are the actual results from the model run with the actual weather conditions on August 29th, 2016. It shows that the vapor cloud of explosive gases would reach 3.5 miles from the plant site with just a 4 inch hole in the storage tank. I made no attempt to find the

worse case scenario by varying the wind direction, the wind speed or the hole size. I have been told it is possible to get results that that go 5 or 10 miles from the plant. This is from a widely used model to help Fire Departments, First Responders, Hazmat Teams and other Federal agencies respond to leaks and fires. The PEAK-WMD model is the standard for fighting these disasters. It combines all the chemical properties with up to date weather information and GPS data to show the impact of a spill. It also shows the locations of schools, gas stations other sites that might impact evaluation plans. This same information van be obtained from the Tacoma Fire Department if requested by the WUTC.

While this is primarily a safety concern, it is also a large financial concern. Besides the thousands of residents and workers that would be put at risk, thousands of homes and businesses would also be put at risk. If you just believe the 3.5 mile danger zone, it would be sufficient to destroy most of the port and much of Tacoma. If you wanted to look for the worst case scenario that might reach Gig Harbor or Auburn, the financial risk is astronomic. These are not risks that anyone should take, even if the probability is low.

A vapor cloud fire is not quite an explosion, but would severely damage anything inside the cloud. I would describe it as a flash fire. An example would be lighting your BBQ grill. If your first match does not light the fire and you let gas escape while you light a second match, you will probably get a flash fire that will blow out toward your face. This is the type of vapor cloud fire that everyone or everything would be exposed to. The only difference would be that you would be inside it instead of standing outside the flash fire. If you or anything flammable were inside the BBQ grill hood, the flash fire would cause severe damage. Clothes would either burn or melt to your skin. Trees and homes would catch on fire. The chances of creating secondary fires at other sites would be much greater. Imagine truck drivers caught in the middle, crashing and spilling their loads or running into a business or school. Greenwood in Seattle experienced a natural gas leak that destroyed several blocks of their community from a very small leak that went undetected. The volumes and concentrations are just too large to allow this to be built in our community. They do not have nearly enough insurance to meet the potential damage. The risk to lives goes beyond financial tolerances.

The WUTC needs to protect user from these financial risks that are created so that PSE can go into a new business venture that is not in the public's interest. Please do not allow them to put us in danger both financially or physically.

Steven Storms
Chemical Engineer - PE
1316 Browns Pt Blvd NE
Tacoma, WA 98422

Below Image was attached to the 10/20/2016, 4:38 pm email

Plume Results

Liquefied natural gas (cryogenic liquid)

CAS 74-82-8
UN 1972 Guide 115 - GASES - FLAMMABLE (Including Refrigerated Liquids)

Initial Location and Time
1001 East Alexander AVe,Tacoma,WA
47° 16' 34.01" N 122° 23' 57.73" W
8/29/2016 14:20:43 GMT -7:00

Meteorology					
Temperature	76 °F	Wind Speed	3 mph	Wind Direction	278 °
Cloud Cover	2 %	Terrain	Crops/Brush	Stability/Theta	B/134.8°
Container (Large Storage)					
Diameter	100 ft	Length	140 ft	Orientation	Vertical
Percent Full	95 %	Volume	8225265 gal	Max Liquid Mass	27518567 lb
Source					
Source Type	Hole or Pipe Release	Hole Diameter	4 in	Hole Height	0 ft

Results				
Level of Concern	Downwind Distance	Max Crosswind Distance	Plume Arrival	Plume Duration
Initial Isolation Zone (ERG 2016)	300 ft (in all directions)		----------	----------
LEL 50000 ppm	1112 yd	128 yd	09m:42s	Continuous
LEL 50% 25000 ppm	1.1 miles	205 yd	15m:54s	Continuous
LEL 10% 5000 ppm	3.5 miles	603 yd	51m:30s	Continuous