Response to SEIS Data and Information Request Puget Sound Energy for Tacoma LNG (Excerpt) (5/25/2018)

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May 25, 2018

Ecology and Environment, Inc. (E&E), supported by Life Cycle Associates, LLC (LCA), is preparing the life cycle greenhouse gas (GHG) emissions analysis in support of the Supplemental Environmental Impact Statement (SEIS) for the Tacoma Liquefied Natural Gas (LNG) project. By email dated May 7, 2018, Puget Sound Clean Air Agency (PSCAA), on whose behalf E&E/LCA is preparing the SEIS, provided Puget Sound Energy, Inc. (PSE) with a request for information. Each question presented in that request is reproduced in italics below, followed by PSE's answer.

General Questions

1. If Puget Sound Energy (PSE) has completed a GHG life cycle analysis for the Tacoma LNG project, please provide the report and supporting documentation.

PSE completed a quantitative greenhouse gas (GHG) life cycle analysis for the Tacoma LNG project. Please see the attached document: "<u>Tacoma Liquefied Natural Gas Project</u>, <u>Supplemental Environmental Impact Statement Background Information Document</u>, <u>March 30, 2018 (Revised May 25, 2018)</u>" (BID). Supporting documentation is included with the BID.

2. Please summarize all changes to the Tacoma LNG project construction activities, facility configuration, and operations since the FEIS was published.

Aspects of the Tacoma LNG project have changed since the FEIS was published. The final project is described in detail in the attached BID. Below is a summary of the changes that have occurred in regards to construction activities, facility configuration and operations since the FEIS was published:

Construction:

- The scope of the proposed construction as described in the FEIS remains materially the same. The changes outlined below have been made to the Tacoma LNG project since the FEIS was published but none are significant.
- After the FEIS was completed, PSE stipulated to withdraw the construction of the new concrete barge pier on the Hylebos Waterway from the shoreline development permit.

Questions about the Project Reference Scenarios

The FEIS states that the LNG plant will produce 250,000 to 500,000 gal/day of LNG. The LNG will be stored in an 8-million gallon tank. There are four proposed uses for the LNG:

- *Re-gasify up to 1.1-million gal/day and inject back into distribution system for use by PSE customers.*
- Sell 39 MGY to Totem Ocean Trailer Express (TOTE) Maritime for use in its two orca class ships that transport goods between the Port of Tacoma and the Port of Anchorage.
- Sell to bunker barges that will fuel other vessels in the port.
- Sell to tanker trucks for use as a substitute for diesel in heavy duty trucks or equipment.

A life cycle emission analysis compares the emissions of each of these uses to a reference scenario, effectively expanding the boundaries of the FEIS analysis. Questions about each of these uses and their corresponding reference cases are provided below.

Regasification and Injection to PSE Distribution System

1. The FEIS quantifies emissions associated with the regasification process.

This statement is accurate. However, updated and more detailed information about the Tacoma LNG facility regasification process are presented in the NOC application as well as Section 1.3.4.1 the attached BID.

2. How much LNG will be re-gasified each year?

The maximum allowable production rate is limited to approximately 85,000 Dth/day (~1 million/day LNG) and regasification is not projected to occur more than 10 days per year (240 hours). Thus the maximum amount of LNG that would be regasified in a year would be no more than 10 million gallons.

3. Is the amount projected to change over time?

No, this maximum production rate is not projected to change over time.

4. What would the alternate supply of NG be in the absence of the LNG plant?

If the Tacoma LNG project does not occur then there is no alternate supply of natural gas from regasification. To meet initial customer demand for natural gas during those peak days, PSE would have to repurpose firm gas transmission from peak period electricity generation to residential gas service. In the absence of the Tacoma LNG Facility, during peak periods PSE would have to use this firm gas transmission to supply gas customers and thus would be required to operate "peaker" dual-fuel combustion turbine electric generating units utilizing fuel oil rather than using natural gas. In the absence of the Tacoma LNG facility, PSE would also immediately begin contractual negotiations for expansion of natural gas transmission infrastructure to ensure adequate transmission