

# Frequently Asked Questions

## Seabrooke Renewable Energy Facility

### Updated 06/29/2023\*

#### **What is the Seabrooke Renewable Energy Facility?**

The Seabrooke Renewable Energy Facility is a proposed nominal 200 MW simple-cycle turbine generator that can provide continuous power for at least 72 hours for approximately 200,000 homes using onsite biofuel storage. Operating using regionally produced renewable biofuels, it will run only during periods of peak demand, such as extreme weather or critical events that threaten the reliability and stability of the power grid.

#### **How did the idea for this project originate?**

The Seabrooke Renewable Energy Facility is being proposed in response to needs identified by local utilities who are planning for the region's energy future.

#### **Why do we need this type of facility?**

Seabrooke will provide vital local and regional energy reliability and security:

##### *Energy Reliability*

Washington State [and much of the western U.S. currently face the risk of brownouts](#) due to increasing demand for electricity combined with large amounts of retiring coal-fired generation and increasing reliance on intermittent generation technologies such as wind and solar. The State recently passed [legislation](#) addressing the risk to residents of rolling blackouts and power supply inadequacy events. This project helps ensure that the region will be supported by sufficient reliable generation capacity to prevent power service disruptions while also meeting the State's renewable energy goals.

##### *Energy Security*

The Kitsap Peninsula is home to critical infrastructure, including municipal and tribal facilities and national security interests, that are vulnerable to energy shortfalls. The regional population is growing and consumers increasingly rely on electric power for vehicles and heating/cooling (e.g. heat pumps). The Peninsula also faces transmission reliability challenges because it is fed entirely by a single transmission corridor. This project will help meet the long-term goal of providing backup options in case the existing transmission corridor is damaged.

#### **How will this facility support Washington State's transition to clean energy?**

The Washington Clean Energy Act (CETA), passed in 2019, requires the state's electricity supply to be free of greenhouse gas emissions by 2045. The Seabrooke Renewable Energy Facility will play an important role in supporting both the retirement of fossil fuel-fired resources and increasing use of intermittent renewable energy. Because clean energy sources such as wind and solar provide

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intermittent power, backup options such as the Seabrooke will be critical to providing power when the renewable energy plants are unable to meet system needs.

**How else will the local community benefit from the project?**

In addition to the benefits listed above, this facility will support future economic growth, create new jobs for the local workforce, and invest millions of dollars in the community in the form of new tax revenue for public services and local expenditures on equipment, construction materials, labor, restaurants, hotels, and more.

**Why aren't we developing battery facilities instead?**

The transition to a zero-carbon power grid will require multiple options for providing firm, dispatchable power to replace fossil fuels, including battery storage facilities *and* reserve generating stations like Seabrooke that can provide continuous power for multiple days. Batteries are effective for typical daily demand peaks of 2-4 hours. However, the Pacific Northwest faces unique challenges because of its heavy reliance on weather dependent hydroelectricity generation. The state's grid is at risk of running short on electricity during extended cold snaps in a drought year, especially if the wind and solar resources are not producing at full output. The Kitsap Peninsula also has greater needs for longer duration backup power if key parts of the transmission system fail, which could require weeks or months to repair.

**What about other energy resources such as solar, wind, and hydrogen, or demand reduction such as energy efficiency?**

Renewable technologies such as solar, wind, and hydrogen, coupled with energy efficiency programs, are being pursued aggressively in every corner of the state to ensure we can successfully transition to a carbon-free energy future. Seabrooke will complement (not compete with) these projects by providing firm, dispatchable power to ensure electricity is available during periods of extreme weather, drought, etc., when renewable sources may run well below capacity. Local utilities seek to procure a broad range of clean energy resources to meet the need for reliable clean energy. If selected by a local utility, this facility will be part of their portfolio of clean energy solutions that will power our future grid.

**Where will the proposed facility be sited?**

The Seabrooke Renewable Energy Facility will be located at or near the Kitsap Quarry in Bremerton, WA, on 12-16 acres in a remote and secluded industrial location.

**Why this location?**

This location was carefully chosen to improve the reliability of Kitsap County's power grid. The project developer researched many different locations in Kitsap County before approaching Ueland Tree Farm about siting the facility on its property. There are several key factors that favor this site over others, including:

- Central location in Kitsap County
- Existing key infrastructure such as PSE & BPA power transmission lines, water lines, and industrial roads

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- Proximity to a major local biofuel producer
- Available & sizeable industrial parcel which is already disturbed
- Visual isolation from the surrounding community

**What will the noise impact be for the local community?**

The noise impact to surrounding areas will be minimal and will only occur when the plant is running to provide essential power to the local grid. The project will meet all local noise requirements at its property line. The closest currently platted home is approximately 1,400 feet away, so any detectable sound will be significantly under allowable limits for this area. A detailed noise study will be conducted as part of the permitting process to confirm this.

**What will the air quality impact be?**

Air quality in surrounding neighborhoods will remain well within the required health-based standards. The facility will be regulated by the Puget Sound Clean Air Agency, who will issue a permit limiting emissions and annual usage.

**How will the Seabrooke Renewable Energy Facility impact area truck traffic?**

Once constructed, Seabrooke will have a negligible impact on annual truck traffic volumes along both SR-3 and Werner Road. There will be no additional truck traffic along Archie Avenue W, Kitsap Lake Road NW, Price Road NW, Northlake Way NW, or Kitsap Way.

**How much additional traffic will there be on Kitsap Lake Road NW?**

Trucks will not access the facility from Kitsap Lake Road. Employees and small service vehicles may use Kitsap Lake Road NW from time to time.

**How much additional truck traffic will there be on Werner Road?**

Once the facility is operating, approximately 100 tanker trucks of fuel will be required in a typical year. It will be greater in times of extraordinary need, of course, but in those cases the increased activity will directly contribute to preventing rolling blackouts. Preliminary estimates suggest the facility will increase average truck volumes on Werner Road by less than 1% and overall vehicle traffic on Werner Road by even less. There will be additional traffic during the construction phase, but it will be temporary. The construction timetable will be finalized once the permitting process is completed.

**When will traffic occur?**

Fuel tanker traffic will occur sporadically because the plant typically will operate less than 5% of the time based on regional power grid conditions. Typically, the fuel tank(s) will be refilled in the autumn with the plant operating during severe cold snaps, heat waves, or emergencies. Following such an event there are anticipated to be several fuel deliveries per day for a few days until the fuel tank is refilled. The facility will have 4-6 full-time employees who will likely commute on weekdays.

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### **What are the biofuels made of and where will they come from?**

Biodiesel and renewable diesel are common fuels, with nearly 3.3 billion gallons consumed in the U.S. in 2021. Washington is one of the largest biodiesel producers in the country, with 100 times more supply available than Seabrooke will require in a typical year. Biodiesel and renewable diesel are commonly produced from waste cooking oil, food waste, soybean oil, and canola oil as the primary feedstocks. Biodiesel production provides economic support to Washington communities both in fuel production steps and to the farms who grow the feedstocks.

### **What is the difference between burning fossil fuel and biofuel when it comes to releasing/adding carbon emissions?**

Biodiesel is produced from plant-based feedstocks and food waste, which remove CO<sub>2</sub> from the atmosphere during the growth stage. In essence, biodiesel stores solar energy in a liquid form and is compatible with most engines and power generation technologies. A [recent study](#) by Argonne National Laboratory, Purdue University and the U.S. Dept. of Agriculture found that biodiesel reduces lifecycle greenhouse gas emissions by up to 72 percent compared with petroleum diesel. For every unit of fossil energy used to produce biodiesel, 4.56 units of renewable energy are returned, the best of any U.S. fuel ([source](#)). Seabrooke will allow Washington State to reduce CO<sub>2</sub> emissions while improving grid reliability and providing a sorely needed source of reserve electricity supply.

### **Is biodiesel or renewable diesel safe?**

Unlike typical petroleum diesel, pure biodiesel contains no hazardous materials and is generally regarded as safe per the U.S. Dept. of Energy's Clean Cities Program ([source](#)). According to standard Material Safety Data Sheets (MSDS) for pure biodiesel, it:

- Contains no hazardous materials.
- Contains **no** chemicals known to the State of California to cause cancer
- Ingestion incidental to industrial exposure is not a hazard.
- Prolonged or repeated skin contact is not likely to cause significant skin irritation

Several studies have found that biodiesel biodegrades substantially more rapidly than conventional diesel ([90% biodegraded within 23 days](#)). Fuel users in environmentally sensitive areas such as wetlands, marine environments, and national parks have taken advantage of this property by replacing petroleum diesel with biodiesel.

### **Will this project impact community access to trails on Ueland Tree Farm?**

No. The Seabrooke Renewable Energy Facility will be over two miles south of the Lebers Lane trailhead and will not impact any marked trail on the tree farm.

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