To: Department of Ecology
From: Brent Ludeman on behalf of CalPortland
Re: CNG/RNG Infrastructure Capacity Credits
Date: March 24, 2022

Based on CalPortland's experience in California, we believe Washington state can achieve significant carbon emissions reductions by incentivizing heavy duty truck conversions from diesel to CNG/RNG. This memo provides the case for the Department of Ecology to expand capacity credits for investments in CNG/RNG fueling stations in the development of the rulemaking process for WAC Chapter 174-424 (Clean Fuels Program Rule).

Background

CalPortland is major building materials company providing aggregate and producing cement and concrete in the Western United States. In Washington alone, CalPortland has over twenty locations and a large fleet of concrete mixers. CalPortland has been recognized by the EPA as an Energy Star Partner of the Year for Sustained Excellence for 17 consecutive years and is an industry leader for its commitment to the environment and reducing greenhouse gas (GHG) emissions.

Addressing the pollution caused by diesel semi-trucks is integral to reducing air pollution, and CNG/RNG specifically is an ultra-clean and near zero emissions fuel. While electric truck chassis are available, the technology is not viable for concrete truck applications. Because of the weight difference, the electric truck only hauls about 6 yards of concrete whereas a CNG truck can haul 11 yards. Also, an electric truck can travel about 150 miles per charge while a CNG truck can travel about 400 miles on a single tank of fuel. Finally, health and safety concerns arise regarding the use of very high voltage equipment in the wet environment of a concrete plant.

CNG is proven technology available today and by using commercially available RNG, dramatic reductions and greenhouse gas, PM10 and other air pollutants can be reduced dramatically. CalPortland estimates their conversion in California of 118 concrete trucks and 24 bulk cement haulers from diesel to CNG/RNG resulted in a reduction of 10,000 metric tons of greenhouse gas (GHG) annually. By converting to CNG engines and purchasing Renewable Natural Gas, greenhouse gas emissions from these vehicles were reduced by 88.5%.

Diesel concrete trucks operate under load all day, every day often in urban areas and in industrial areas like the Duwamish Valley where air quality is impaired. This has a disproportionate effect on historically marginalized populations. By incentivizing companies to convert their fleets to CNG/RNG, Washington state could realize major progress in reducing emissions in these areas. Conversion of commercial trucks that operate all day, every day to CNG/RNG can provide a greater return on investment for air quality in these areas than converting commuter vehicles from combustion engines to zero emission vehicles.

California Process & Funding Model

The State of California proved that state support of CNG/RNG conversion is a worthy investment of public funds. California's LCFS law does not provide capacity credits for CNG/RNG. Instead, California offers direct grant programs for both CNG/RNG fueling infrastructure and truck engines that are not available in Washington State.

CalPortland's trucks were partially funded with a Proposition 1B grant from the South Coast Air Quality Management District. The Proposition 1B Goods Movement Emission Reduction Program is a partnership between the California Air Resources Board (CARB) and local agencies, air districts, and seaports to quickly reduce air pollution emissions and health risk from freight movement along California's trade corridors. Local agencies apply to CARB for funding, then those agencies offer financial incentives to owners of equipment used in freight movement to upgrade to cleaner technologies. Projects funded under this program must achieve early or extra emission reductions not otherwise required by law or regulation.

Additionally, CalPortland needed to install fueling station infrastructure to sustain the ongoing operations of the trucks. CalPortland received grant funds from the Mobile Source Emission Reductions Program (AB 2766) through the Mojave Desert Air Quality Management District to fund two new CNG fueling stations.

Due to this difference in state funding programs, we believe the Department of Ecology should customize its LCFS program to include capacity credits for CNG/RNG to incentivize these investments.

Incentivizing Investment in Washington

The major obstacle to converting from diesel to CNG/RNG is the cost. The fueling stations alone cost north of $3,000,000 to build. The truck engines cost around $140,000 – while a brand-new truck costs roughly $300,000. Incurring these capital costs in a competitive marketplace is challenging without state involvement.

CalPortland is dedicated to reducing its GHG in Washington and would strongly consider converting its heavy-duty trucks in Washington if the state expanded capacity credits for CNG/RNG infrastructure investments.

Goal Summary

CNG/RNG is the only near-zero carbon fuel for the foreseeable future that works for the demands of concrete trucks. Expanding the LCFS rules to include CNG/RNG infrastructure capacity credits could incentivize similar investments to the successful conversion CalPortland executed in California and make significant strides toward reducing carbon emissions and improving environmental justice in the region.