Promus Energy (Alex Banbury)

Please see comments attached.

November 4, 2026

Department of Ecology
Climate Pollution Reduction Program
Lauren Sanner
PO BOX 47600
Olympia, WA 98504-7600
Electronically submitted

RE: Chapter 173-424 WAC and WAC 173-455-150 Clean Fuels Program Rule

Dear Ms. Sanner:

As a developer of dairy digester renewable natural gas (RNG) and biogas-to-electricity projects for electric vehicle charging in West Coast states, Promus Energy appreciates the opportunity to provide feedback following the October 14th, 2026, presentation by Ecology staff.

Promus would like to focus its comments on the Electrical Efficiency (EE) benchmark for biogas-to-electricity projects, as the benchmark has significant implications for the viability of biogas-to-electricity projects in WA.

Promus supports a temporary reduction in the EE benchmark target from 50% to 40% until there is proven operational data in Washington of small-scale projects achieving higher levels of electrical efficiency in a cost-effective manner. Promus supports this position for a variety of reasons:

- 50% EE is not a practically or economically achievable target, particularly given the relatively small scale of biogas-to-electricity projects in WA (typically less than 2MW in capacity):
    - The only commercially available technology that can achieve this target is a fuel cell. However, despite the high efficiency, the high capital and operating expenses of fuel cells on small biogas-to-electricity projects makes them a non-viable option, though with future advances in technology and reductions in price, they may become viable in the future.
    - The next most efficient option is the relatively new Linear Generator (see Mainspring example here), which offers competitive capital and operating costs, simplicity, very low "non-combustion" emissions, and fuel tolerance. However, EE at 46% LHV (about 40% HHV) is still well below the 50% EE benchmark.
- The penalty for not reaching the 50% EE benchmark creates an uneven playing field between fuel types that only exacerbates inequalities in federal fuel production incentives:
    - Even using EE Linear Generators, Promus estimates that the EE penalty would reduce Clean Fuel Standard (CFS) credit generation by about 15% compared to an RNG project using identical feedstock.
    - The CFS is supposed to be technology neutral, but the EE penalty only applies to electricity generation projects and not to other fuel types, tilting the playing field to advantage other fuel types.

    - Federal RIN and 45Z credits provide significant support for RNG and other liquid fuels projects, but federal support for biogas-to-electricity projects is limited (45Y PTC provides very little value to smaller scale biogas projects, and the 48E ITC is a one-time payment that does not provide ongoing project revenue and support).

- A 50% EE benchmark does not reflect real world operational data for non-utility scale generation projects:
    - Data from New York State showing the EE of various generation technology for gas-to-electricity projects shows that fuel cells only reached a 46% EE, CHP reached 23.1% EE, and anaerobic digester biogas-to-electricity projects saw a 25.4% EE (all HHV). Based on these metrics, most projects do not get close to the 50% EE benchmark, even the highest efficiency technology available for smaller projects (fuel cells).[1][2][3]
- One of WA's goals is to support the development of clean electricity projects, particularly in rural areas. [4] If the state wants to see clean electricity projects succeed, barriers to project development and economic viability, like the EE penalty, must be reduced or eliminated

Promus broadly supports alignment and harmonization of Clean Fuels Programs on the West Coast, but in the case of EE, Promus also encourages Ecology to consider how policies like the EE penalty negatively impact the viability of biogas-to-electricity projects. By setting the base EE benchmark at 40% and only moving it higher as more efficient technology is demonstrated to be economically viable, WA can help spur innovation in this sector while at the same time not punishing energy producers that are trying to develop clean electricity projects in WA.

Promus values the opportunity to provide feedback on the proposed changes to the WA CFS and looks forward to participating in future commenting period.

Sincerely,

Dan Evans, President
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[1] NYSERDA DER Integrated Data System
[2] NYSERDA DER Integrated Data System
[3] NYSERDA DER Integrated Data System
[4] 2025 Biennial Energy Report