November 4, 2026

Lauren Sanner
Washington State Department of Ecology
300 Desmond Dr. SE
Lacey, WA 98503

Re: Clean Fuel Standard Rulemaking – WA-GREET 4.0 Biogas-to-Electricity Efficiency Benchmark

Dear Ms. Sanner:

I am writing on behalf of Maas Energy Works (MEW), a family-owned business based in Redding, California. We develop, own, and operate on-farm renewable energy facilities in partnership with dairy families to create biogas from cow manure and other organic wastes. MEW began its first operations in Washington State and remains a partner in three western Washington digesters.

MEW appreciates the opportunity to provide comments on the Washington Department of Ecology's discussion paper regarding proposed updates to WA-GREET 4.0, specifically the 50% electric generation efficiency benchmark for biogas-to-electricity pathways.

The proposed 50% efficiency benchmark is not achievable by any technologies used at most dairy digester sites. Achieving this level of efficiency would require solid oxide fuel cells, which cost approximately six times as much as a standard lean-burn internal combustion engine generator and have only been installed at a few digesters with access to very large grant funds, or combined-cycle gas turbines, which are 10 to 100 times larger than most digester generators.

The result of this policy will be that digesters receive credit for only a fraction of the methane reduction benefits actually achieved, violating the basic principle of carbon accounting. The existing calculator already accounts for the amount of biogas directed to the generator, so we question why an additional efficiency adjustment should reduce recognition of methane reductions that have actually occurred.

The proposed benchmark will also discourage the installation of new digesters with lean-burn internal combustion generators. Only a very small number of digesters will be installed with alternative technologies, and only if they are heavily subsidized. Even the latest technology being tried on dairies, like Mainspring linear generators, will face significant penalties under this rule since they achieve approximately 40% efficiency in the real world.

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Most small dairies, which represent the vast majority of dairies without a digester, simply will not install one if the capital cost necessary to achieve 50% efficiency is not feasible at their scale. The overall result will be less methane reduction because of this rule.

We recommend that Ecology lower the electric generation efficiency benchmark from 50% to 40%. This would set a reasonable target that can be achieved with technologies actually being used at dairy digesters, without penalizing projects for methane reductions they have already achieved.

As an alternative, Ecology could consider separate rules for dairies above and below 5,000 milking cows. Under this approach, dairies with 5,000 or fewer milking cows would have a 40% efficiency benchmark, while dairies with more than 5,000 milking cows would remain subject to the proposed 50% benchmark.

The goal should be to encourage more dairy digesters to be built and more methane emissions to be reduced. A reasonable efficiency benchmark would allow more dairies to invest in these projects while ensuring that the methane reduction benefits they actually achieve are properly recognized.

Thank you for considering our comments.

Sincerely,

Dallas Spiecker
Public Affairs and Marketing Communications

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