

Electrochaea Corporation (April Arbour)

Re: EIB 25-23 (R) - In the Matter of Proposed Adoption of 20.2.92 NMAC Clean Transportation Fuel Program

Electrochaea Corporation is pleased to provide comments on the New Mexico Clean Transportation Fuel Program (CTFP). New Mexico's adoption of the CTFP is an important step forward in the reduction of fossil greenhouse gas emissions in New Mexico and in North America. Electrochaea is commenting on the program with regard to its applicability to synthetic transportation fuels produced from renewable electrolytic hydrogen and biogenic CO₂.

Electrochaea is a provider of an e-fuel technology for the industrial-scale production of low CI renewable synthetic biomethane, a renewable and clean drop-in replacement for fossil natural gas. Electrochaea's process uses a biological catalyst, a methanogenic archaeon, to combine CO₂ and hydrogen into synthetic methane. In the first step, renewable electricity is used to produce renewable hydrogen by electrolysis. In the second step, hydrogen and CO₂ are delivered to the reactor. The reactor contains the archaea within a stirred nutrient solution which maintains the activity of the organism. The archaea take up hydrogen and CO₂ and synthesize methane and water. After leaving the reactor, the low CI synthetic methane is prepared for gas grid injection or use. The process produces clean, synthetic methane with a CI that is significantly lower than fossil natural gas.

Electrochaea appreciates that changes were made to the program in response to our previous comments, which make it clear that synthetic methane, in particular e-methane, qualifies for the program. (1) In the definition of biomethane, the word "synthetic" was removed to create a technology-agnostic definition; the quality of the final transportation fuel is critical and not the production method. (2) It is now clear that book and claim accounting can be used to account for the CI of electricity used to produce the hydrogen that is necessary in an e-fuel pathway to produce a transportation e-fuel. (3) It is clear that renewable electricity, as defined in the definition section, has a CI of zero. (4) It is clear that synthetic fuel producers can apply for a pathway using the Tier 2 process. And (5) transportation fuels will not be discriminated against by the state or region of origin.

The CTFP is a well-designed program. It includes ample protection against double counting and fraud and recognizes the importance of maintaining a technology-neutral program that is dependent on scientific-based CI calculations. Given that the CTFP has addressed the previous concerns by Electrochaea on the qualification of synthetic methane, Electrochaea recommends that the Environmental Improvement Board adopt the New Mexico Clean Transportation Program.

September 22, 2025

Environmental Improvement Board
New Mexico Environment Department
1190 St. Francis Dr.
Santa Fe, New Mexico 87505

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Sincerely,

A handwritten signature in dark ink, appearing to read "Chris Wilson". The signature is fluid and cursive, with the first name "Chris" and last name "Wilson" clearly distinguishable.

Chris Wilson
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