

29 November 2023

To: Oregon Department of Environmental Quality

Re: RTE Tier 2 Comment

From: Mobilizing Climate Action Together (MCAT), Transportation Table

Mobilizing Climate Action Together (MCAT) is a group of experienced volunteer advocates affiliated with the Oregon League of Conservation Voters. We write to comment on Red Trail Energy LLC's Tier 2 application for an ethanol fuel pathway with carbon capture and storage, under Oregon's Clean Fuels Program.

As a preliminary matter, we are moved to support RTE's tier 2 application based on the sizable CO₂ emissions reductions for the two new proposed pathways. We note that RTE already earns credits under Oregon's Clean Fuels Program via two pathways that produce ethanol in its North Dakota fermentation facility (CI = 62.19 g. CO_{2(e)}/MJ and CI = 55.8 g. CO_{2(e)}/MJ for pathways ETHCOR304 and ETHCOR305, respectively, as cited in CFP's Current List of Carbon Intensity Values.) By reducing these CI values by about 50%, the inclusion of CCS in ethanol production clearly affords a significant climate benefit during the remaining years in which gasoline will continue to be employed as a transportation fuel in Oregon. We note that RTE's dry mill ethanol production plant with CCS will sequester 0.18 million metric tons of CO₂ yearly, and the 2 million MT to be buried by 2035 is nearly 5% of the emissions reduction needed to meet Oregon's TIGHGER goal of 42 million MT for that year.

In general, MCAT will support the inclusion of CCS in new fuel pathway applications only in cases where thorough analysis of the characteristics of the underground geologic storage formations demonstrates safe and permanent CO₂ removal, and where CO₂ injection and mineralization is not coupled to the extraction of fossil fuel (i.e., enhanced oil recovery (EOR)).

We were pleased to note that EPA's review of RTE's monitoring, reporting and verification (MRV) plan cites RTE's statements that there has been no historic hydrocarbon exploration or production from the subsurface below the Broom Creek Formation, where CO₂ from the fermentation plant will be injected (section 3.7). Thus, there is no possibility of an EOR operation that could be connected to the CO₂ sequestration. EPA also notes that the absence of known commercially viable oil or gas deposits in the project's area of review means that no safety issues associated with concomitant drilling through subsurface formations permeated by the injected CO₂ plume will be present.

The exhaustive EPA report on RTE's MRV plan makes it clear to us that the safety and permanence of CO₂ sequestration at Broom Creek has been thoroughly examined, with many risk mitigation measures implemented. We are particularly pleased to see that the characteristics of the Broom Creek formation have been very well characterized, and afford excellent geologic properties for CO₂ injection and permanent storage. We further note that the approach to detecting and quantifying surface CO₂ leakage from all aspects of the sequestration operations meets federal regulatory guidelines, and that approaches to monitoring any induced seismicity are also well delineated. We will continue to look for such safeguards in future fuel pathway applications to the CFP, and we commend DEQ for enforcing these rigorous requirements.

We are thus pleased to support RTE's fuel pathway application as well as the process by which DEQ is examining and enforcing the MRV requirements for future CFP applications that include CCS. We are confident that this work will further strengthen Oregon's commitment to limiting the damages of climate change by maximizing emissions reductions during the transition to a fully net zero-carbon transportation system.

Thank you for considering our comments. For further questions please contact Dr. John Perona; johnjperona@gmail.com

Sincerely,

Mobilizing Climate Action Together (MCAT) – Transportation Team
Info.mcat.olcv@gmail.com