

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF SOUTH DAKOTA

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HP 22-002

IN THE MATTER OF THE APPLICATION :
OF NAVIGATOR HEARTLAND :
GREENWAY, LLC FOR A PERMIT UNDER :
THE SOUTH DAKOTA ENERGY :
CONVERSION AND TRANSMISSION :
FACILITIES ACT TO CONSTRUCT THE :
HEARTLAND GREENWAY PIPELINE IN :
SOUTH DAKOTA :

REBUTTAL TESTIMONY OF
MICHAEL HARRISON

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1. **Please state your name and occupation.**

Answer: My name is Michael Harrison. I am currently the Vice President of Commercial Operations for Valero Renewable Fuels Company, LLC (“VRF”). I oversee the commercial operations of the ethanol plants which includes both planning and economics as well as the sale of all ethanol plant products and procurement of corn feedstocks.

2. **Please state your professional qualifications and experience.**

Answer: I have worked with VRF for 8 years. VRF is the owner and operator of 12 ethanol plants across the United States, including one in South Dakota (Aurora). I have 36 years of experience in making and/or marketing fuels, including renewable fuels. I have a Bachelor of Science degree in Chemical and Petroleum Refining Engineering from the Colorado School of Mines.

4. **Did you provide direct testimony in this proceeding?**

Answer: No.

5. **To whose testimony are you responding to in your rebuttal?**

Answer: I am responding to direct testimony from Denis and Janet Andersen and other landowners who have stated the same concerns about the commercial viability of the proposed pipeline .

6. **The Andersens allege that the commercial foundation and viability are solely reliant on the federal government's 45Q tax program and will abandon the pipeline when the tax credit expires in 12 years, risking the financial security of the ethanol and corn industries. Can you comment on that allegation?**

Answer: This sentiment does not reflect VRF's long-term intentions for the Pipeline. VRF needs the Pipeline to create a low carbon fuel that will keep its ethanol plants competitive and viable. By way of background, many low carbon programs measure the carbon intensity ("CI") of transportation fuels. A CI score from a program typically represents the life cycle Greenhouse Gas ("GHG") emissions calculated for the transportation fuel and includes each step of the process, including those emissions associated with the fuel production. High CI score fuel producers are "obligated parties" or "deficit generators" under such programs, forcing those companies to blend renewable (low CI) fuels or buy credits just to continue operating in those markets. Currently, ethanol plants generally have similar CI scores, but as other ethanol plants in different regions begin using carbon capture sequestration ("CCS") it will cause the average ethanol CI to lower. Those ethanol plants without CCS will not have a low CI score that allows them to remain competitive. In addition, they could eventually become obligated parties, forcing them out of markets.

The Pipeline is a low carbon project that will lower the CI of VRF's current fuel ethanol production process by allowing carbon dioxide from the plants to be transported to a carbon sequestration site for permanent storage. This low carbon project results in an ethanol fuel product with a lower CI score. This is important to VRF because it provides the ability for U.S. ethanol to participate in low carbon markets all over the world. In addition, alcohol-to-jet is a low-carbon pathway to produce sustainable aviation fuel,

but requires a low CI ethanol. A low CI ethanol product gives ethanol plants the potential to participate in the creation of alcohol-to-jet. A low CI keeps U.S. ethanol plants viable long-term and well after the expiration date of the tax credits.

Low CI ethanol also benefits farmers since many of the programs where low CI ethanol is needed also require traceability back to the specific farm where the corn was procured to produce the low CI ethanol. Thus, farmers that employ sustainable farming practices to enable this production can command a premium for their corn.

Many large corporations, including VRF's parent company, have been asked by investors to provide an actionable plan to lower GHG emissions over time. Sequestering CO2 from VRF's ethanol plants is an important component of the company's overall plan to lower GHG emissions and will thus be needed long after the 45Q tax credit expires.

7. The Andersens allege that the low carbon fuel credits existed before the 45Q tax credit and do not provide sufficient financial benefits to justify the Pipeline. In addition, the Andersens allege that these credits will become less valuable with more market participants. Can you comment on that allegation?

Answer: As detailed in the previous response, the world-wide market for ethanol is looking for the lowest CI ethanol and future low-carbon pathways, such as alcohol-to-jet, depend on it. Unless ethanol plants are lowering their CI score, they will be left out of these markets. As additional low CI ethanol is produced, new markets will develop in the U.S. and across the world to take advantage of this.

8. The Andersens allege that carbon dioxide is a liability that is only an asset through the 45Q tax credit. Can you comment on that allegation?

Answer: There are many CO2 processing plants across the U.S. that use the CO2 off of manufacturing production processes to create beverage-grade liquid CO2 for use in carbonated beverages.

At one of VRF's ethanol plants in Iowa, and historically at other ethanol plants in its fleet, VRF sent its CO2 to these types of CO2 processing plants.

9. **Does this conclude your testimony?**

Answer: Yes, it does.

Dated this 26 day of June, 2023.



Michael Harrison