

STATE OF SOUTH DAKOTA
BEFORE THE
PUBLIC UTILITIES COMMISSION

In the matter of the Petition of Gevo Net-)
Zero 1, LLC to have Kingsbury Electric) Consolidated
Cooperative, Inc. Assigned as its Electric) Docket Nos. EL24-024
Provider in the Service Area of Otter Tail)
Power Company) and EL24-025

PRE-FILED DIRECT TESTIMONY
OF RONALD BORCHARDT
ON BEHALF OF GEVO NET-ZERO 1, LLC

October 11, 2024

1 **Q: Please state your name and business address for the record.**

2 **A:** Ronald Borchardt. My business address is 345 Inverness Dr. S., Bldg. C, Suite 310,
3 Englewood, CO 80112.

4 **Q: Please state your title and responsibilities.**

5 **A:** I am Vice President of Project Engineering for Gevo, Inc. and Gevo Net-Zero 1, LLC
6 (“NZ1”). I am responsible for the overall project engineering of the Net-Zero 1 Project (the
7 “Project”).

8 **Q: What are the Project’s operational elements?**

9 **A:** The Project consists of three interconnected operational processes – (1) grain receiving,
10 handling and milling, (2) ethanol production, and (3) ethanol-to-jet fuel (SAF) processing. The
11 grain receiving, handling and milling section will receive corn and prepare the corn for the ethanol
12 process.

13 The ethanol section will be a traditional ethanol production facility, producing 100 million
14 gallons of ethanol per annum, 34 million pounds of corn oil per annum and 1,319 million pounds
15 of wet distillers’ grains per annum.

16 The ethanol-to-jet processing section will consist of four separate consecutive processes –
17 (1) the conversion of ethanol to ethylene, (2) the dimerization of ethylene into a Dimer cut, a highly
18 olefinic C4-C6 cut, (3) conversion of the Dimer cut feed into a range of C8 – C22 olefins through
19 a process of oligomerization; and (4) the hydrogenation of the olefinic oligomers to their
20 corresponding saturated paraffinic counterparts (SAF), renewable diesel, and renewable naphtha.
21 The ethanol-to-jet fuel processing section will produce 62 million gallons of SAF per annum, 1.4
22 million gallons of renewable diesel per annum, and 4.6 million gallons of renewable naphtha per
23 annum.

24 **Q: What is the construction timeline?**

25 **A:** From the issuance of the notice to proceed to the EPC contractors, the construction timeline
26 to complete the Project is approximately *[TRADE SECRET/CONFIDENTIAL INFORMATION*
27 *BEGINS]* * * *[TRADE SECRET/CONFIDENTIAL INFORMATION ENDS]* months. NZ1 is
28 finalizing negotiations with three separate contractors, one for each of the grain receiving, handling
29 and milling facility and its balance of plant, the ethanol facility and its balance of plant, and the
30 ethanol-to-jet fuel facility and its balance of plant.

31 **Q: What is the electric load of each of the Project’s major components?**

32 **A:** The figures below represent the “operating load” (considering the load factor and
33 utilization) of NZ1’s major components. The grain receiving, storage and handling facility will
34 have *[TRADE SECRET/CONFIDENTIAL INFORMATION BEGINS]* ** *[TRADE*
35 *SECRET/CONFIDENTIAL INFORMATION ENDS]* MW of demand. The ethanol facility

36 *[TRADE SECRET/CONFIDENTIAL INFORMATION BEGINS]* ** *[TRADE*
37 *SECRET/CONFIDENTIAL INFORMATION ENDS]* MW, and associated balance of plant will
38 have *[TRADE SECRET/CONFIDENTIAL INFORMATION BEGINS]* ** *[TRADE*
39 *SECRET/CONFIDENTIAL INFORMATION ENDS]* MW of demand, for an aggregate demand
40 of *[TRADE SECRET/CONFIDENTIAL INFORMATION BEGINS]* ** *[TRADE*
41 *SECRET/CONFIDENTIAL INFORMATION ENDS]*. The ethanol-to-jet fuel hydrocarbon
42 facility will have *[TRADE SECRET/CONFIDENTIAL INFORMATION BEGINS]* ** *[TRADE*
43 *SECRET/CONFIDENTIAL INFORMATION ENDS]* MW of demand, and associated balance
44 of plant will have *[TRADE SECRET/CONFIDENTIAL INFORMATION BEGINS]* **
45 *[TRADE SECRET/CONFIDENTIAL INFORMATION ENDS]* MW, for an aggregate demand
46 of *[TRADE SECRET/CONFIDENTIAL INFORMATION BEGINS]* ** *[TRADE*
47 *SECRET/CONFIDENTIAL INFORMATION ENDS]* MW.

48 **Q:** Does this conclude your pre-filed written testimony?

49 **A:** Yes.