

**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)
Cooperative, Inc. Assigned as its Electric) Docket No. EL24-____
Provider in the Service Area of Otter Tail)
Power Company)
)**

PETITION FOR ELECTRIC SERVICE

I. Introduction.

Pursuant to SDCL § 49-34A-56, Gevo Net-Zero 1, LLC (“NZ1”) respectfully petitions the South Dakota Public Utilities Commission for an order allowing NZ1 to take electric service from Kingsbury Electric Cooperative, Inc. (“KEC”) for its proposed sustainable aviation jet fuel facility outside Lake Preston, South Dakota and currently within the assigned service area of Otter Tail Power Company (“Otter Tail”). See Exhibit 1.

Under § 49-34A-56, new customers at new locations which develop after March 21, 1975 and who require electric service with a contracted minimum demand of two thousand kilowatts or more may take electric service from a utility other than the utility in whose assigned service area the customer is located if, following a hearing in which the Commission has considered a number of factors, including the customer’s preference, the adequacy of the facilities from which service would be provided, the cost of such service, and related economic factors, the Commission so determines.

Because an examination of the relevant factors, individually and together, demonstrate that KEC is in the best position to provide service to NZ1, and because NZ1 is a new customer at a new location with a contracted minimum demand of two thousand kilowatts or more and prefers

that KEC provide such service, NZ1 respectfully requests that following an appropriate hearing, the Commission grant NZ1's request.

II. The Party and the Project.

A. Gevo Net-Zero 1, LLC.

NZ1 is a Delaware wholly-owned, special purpose subsidiary of Gevo, Inc. ("Gevo"). Gevo is a market leading advanced fuels and renewable chemicals company headquartered in Colorado.¹ Gevo serves various renewable markets, including renewable premium gasoline, sustainable aviation fuel (SAF), specialty oxygenate blend stocks, renewable diesel and material feedstocks.

NZ1 proposes to construct, own and operate a low-carbon, 62 million gallon per year sustainable aviation and related renewable fuels plant ("NZ1 Facility") on approximately 245 acres of undeveloped land it owns just east of Lake Preston on US Highway 14. The NZ1 Facility will be sited on the parcels (the "Project Site") platted as:

"Tract 2 and that portion of Tract 3 of Gevo Addition in the North Half (N1/2) of Section 5 and the Northwest Quarter (NW 1/4) of Section 4, Township 110 North, Range 54 West of the 5th P.M, Kingsbury County, South Dakota, as seen on Plat recorded in Slide 417B, Document #48284" and "Tract 1A of Gevo Addition, an Addition in the Northeast Quarter (NE1/4) of Section 6 and the North Half (N1/2) of Section 5, Township 110 North, Range 54 West of the 5th P.M., Kingsbury County, South Dakota, as seen on Plat recorded in Slide 425A, Document #50310".

¹ <https://www.gevo.com/>

See Exhibit 2.

Exhibit 3 provides a visual depiction of the NZ1 Facility footprint.

The products from the NZ1 Facility will include sustainable aviation fuel, renewable naphtha, renewable diesel, high protein animal feed in the form of wet distillers' grains, and corn oil. The NZ1 Facility is expected to cost approximately \$1 billion to construct and it is expected to be one of the largest commitments of private capital in South Dakota history. Once fully operational, the NZ1 Facility will use approximately 38 million bushels of corn per year, primarily sourced from area farmers. Gevo's primary purpose in building the facility is to create low-carbon transportation fuels, which have the potential to yield net-zero greenhouse gas emissions when measured across the products' full life cycle.

The NZ1 Facility will have three distinct process areas: feedstock receiving and ethanol production, ethanol to jet/hydrocarbons processing, and balance of plant. The NZ1 Facility will have a peak load of 45 megawatts (MW), excluding both hydrogen production and on-site carbon capture and processing (see below for additional information regarding these additional on-site facilities).

To ensure that its processes produce sustainable aviation fuel and other products with low carbon intensity, NZ1 will be procuring wind generated electricity from the proposed 99 MWac wind farm to be constructed, owned and operated by Kingsbury County Wind Fuel LLC ("KCWF"), purchasing "green" hydrogen produced by the Dakota Renewable Hydrogen LLC ("DRH") on-site hydrogen production facility, and arranging for the capture, transport and sequestration of the plant's CO2 by SCS Carbon Removal LLC ("SCS").

NZ1 will derive material economic value from federal clean fuel production credits (26 U.S. Code §45Z), renewable identification numbers ("RINs") and, depending on the ultimate

destination of the sustainable aviation fuel, Low Carbon Fuel Standard credits (California, Washington, Oregon, and British Columbia) or equivalent state tax credits like those in Illinois and Minnesota. The sustainable aviation fuel, as well as the other products, will also generate valuable indirect emission reduction credits in the overall SAF value chain. Sustainable aviation fuel with industry-leading lowest carbon intensity enhances the value of these credits and benefits.

The proposed NZ1 Facility will generate substantial economic benefits for South Dakota. The project is expected to support approximately 1,100 construction jobs over three years and have a positive regional economic impact estimated to be greater than \$250 million annually and more than \$5 billion over the project's life. The plant will employ 90+ full-time persons with average annual wages of \$102,000, and annual payroll of more than \$8,000,000. Overall, it is expected to create an additional 355 full-time regional jobs.

At commercial operation, the NZ1 Facility will have firm, electric demand of approximately 40-45 MW, with a 90% load factor. The NZ1 Facility electric demand includes the corn intake and ethanol processing unit, the SAF/hydrocarbon unit, and the balance of plant. The 40-45 MW demand excludes DRH electric requirements and excludes associated electric requirements for SCS carbon capture and compression for transportation. The NZ1 Facility will have a coincidence factor of 95%, meaning, on average, 95% of the non-coincident peak load is on at the time of the East River/KEC peak. The NZ1 Facility will operate, subject to annual scheduled maintenance, for approximately 8,000 hours per year. The NZ1 Facility demand will be equivalent to 320,000 MWh to 360,000 MWh a year.

Subject to the Commission's approval, NZ1 will be a retail, all requirements electric service customer of KEC under the terms and conditions of the Electric Service Agreement by and

between NZ1 and KEC, which agreement is attached as Exhibit 4, marked as trade secret and not subject to public disclosure.

DRH will be a separate customer of KEC and separately metered from the NZ1 Facility, and DRH is making a separate request that KEC be allowed to serve its retail load.

SCS and other service providers, to the extent of their on-site operations, may also seek to be electric service customers of KEC for its facility to the extent its load exceeds 2 MW.

Through the unique arrangement between NZ1, KEC, East River Electric Power Cooperative, Inc. (“East River”), Basin Electric Power Cooperative (“Basin”), and KCWF, NZ1 intends to obtain 100% of its electric energy requirements (on a net basis) from renewable energy resources. The renewable energy will come from two primary resources: (1) the 99 MW wind farm that KWCF intends to construct, own and operate in Kingsbury County and which facility will directly serve the NZ1 Facility through a dedicated 10-mile, East River 115 kV transmission line, and (2) the purchase of renewable energy credits from KCWF and which renewable energy credits are tied to KCWF.

B. Dakota Renewable Hydrogen LLC.

DRH intends to produce hydrogen gas through the electrolysis of processed water and will become a KEC industrial customer under its applicable large load rate. It too will receive 100% of its electric energy from renewable services. Background information with respect to DRH’s processes and expected load is included in its separate petition for electric service.

C. Terms of the Electric Service Agreement and Related Agreements.

Key to NZ1’s success is to ensure its products achieve a net-zero GHG footprint across its whole life-cycle. For its electric service, that means ensuring the NZ1 Facility (and the DRH facility) obtains 100% of its electric energy from renewable energy resources (on a net basis). All

renewable fuel producers are subject to pressures to lower their low carbon fuel scores and with respect to a producer's electric energy requirements, the lowest scores are obtained when the production plant is connected directly to the renewable energy resource. While scores can be measured using the local utility's overall resource mix, most utilities' mixes continue to include traditional forms of electricity production, including coal and natural gas, which drive up a producer's carbon score. Here, NZ1 has partnered with renewable developer Zero6 Energy Development, Inc. ("Zero6") to help it achieve its low carbon goals.

Zero6 subsidiary KCWF has secured land rights, necessary permits, and entered appropriate equipment purchase agreements for its proposed 99 MW wind farm to be located on private property in Kingsbury County. Under a unique arrangement with KEC, Basin, and East River, all the wind energy produced will be delivered directly to and consumed by the NZ1 Facility (and the DRH facility) via a 10+ mile 115 kV transmission line to be owned and operated by transmission utility East River. Because KCWF is not a utility, however, and cannot sell power directly to unrelated retail customers, KCWF and Basin are negotiating the terms of a 20-year *wholesale* power purchase agreement the point of delivery of which will be at the NZ1 Facility substation. In addition, KCWF and NZ1 will enter into a renewable energy credit purchase agreement under which KCWF will sell to NZ1 all the renewable energy credits associated with the wind farm for a 20-year term.

While all the KCWF wind farm energy will be dedicated to serve the NZ1 and DRH retail load, there will be occasions – e.g., when the plant is down for maintenance, etc. – when the wind farm will continue to produce and will need to sell the energy into the Southwest Power Pool Market. For that reason, KWCF has made application to the Southwest Power Pool to interconnect

the facility to the SPP grid under SPP's normal large generator interconnection procedures and that process is currently underway.

Notwithstanding the wholesale Purchase Power Agreement with Basin and the direct interconnection of the windfarm to the NZ1 plant, NZ1 will be a retail electric service customer of KEC, the service of which will be governed by the terms of the Electric Service Agreement, including KEC's applicable electric service rates. The NZ1 Facility will, through the Electric Service Agreement to be signed with KEC, generate more than *[Trade Secret Data Begins]* \$** *[Trade Secret Data Ends]* annual revenues for KEC and its members.

III. The SDCL § 49-34A-56 Factors Weigh in Favor of Granting the Petition.

SDCL§ 49-34A-56 sets forth several factors which the Commission must evaluate in considering whether a new electric service customer at a new location with a contracted minimum demand of two thousand kilowatts or more may take service from a utility other than the utility in whose assigned service area the customer is located. No single factor is determinative and instead the Commission must examine each factor to satisfy itself that service will avoid the unnecessary duplication of expensive utility facilities, and that the selected provider can serve the customer in an economic and reliable manner over the expected life of the customer's load. And while no single factor is determinative, where it appears that either utility could reliably and economically serve, the Commission has rightly given priority to the customer's preference regarding which utility it chooses to provide it with service. *See, e.g., In The Matter of the Petition for Electric Service by Dakota Growers, LLC, Final Decision and Order Determining Right to Receive Service ("Dakota Growers")*, SDPUC, May 23, 2005 (holding that where either utility could provide reliable and efficient electric service, the "customer's preference deserves to be shown significant deference.").

As demonstrated below, not only does NZ1 prefer that KEC, in combination with East River and Basin, serve the NZ1 Facility, but examination of the remaining statutory factors also demonstrate that KEC is better suited than Otter Tail to provide NZ1 with the type of service it needs and desires over the long-term.

A. The electric service requirements of the load to be served.

Presently, the Project Site is undeveloped agricultural land east of Lake Preston. NZ1 is a new customer and the NZ1 Facility will represent a new location for purposes of SDCL§ 49-34A-56.

During the operational phase, the production of sustainable aviation fuel from ethanol will require between 40-45 MW of electrical energy, equivalent to approximately 320,000 MWh to 360,000 MWh a year. Where the electric energy is produced by renewable sources, such as wind, the resulting sustainable aviation fuel will have a low carbon intensity. As a new customer, NZ1 is expected to have a full-requirements load of 40-45 MW with a 90% load factor. NZ1's contracted electric demand will exceed the minimum of 2,000 kW as provided in SDCL§ 49-34A-56. As explained more fully below, KEC, in combination with East River and Basin, is in the best position to serve the NZ1 load.

B. The availability of an adequate power supply.

Given the size of the NZ1 demand, together with the DRH demand, Kingsbury and East River will need to build additional facilities to serve it. Lake Preston has a population of 580 persons and does not have significant agricultural processing or other nearby industrial load which would have justified previous infrastructure buildout. The proposed build-out is described in more detail below. With respect to power supply, however, the Commission can be safely assured the

electric cooperatives, combined with the KCWF wind farm, currently possess and will have in the future adequate supply resources to serve NZ1.

And while the Commission is familiar with the Basin, East River and KEC systems, it is necessary to present a few important highlights.

Basin is a not-for-profit generation and transmission cooperative incorporated in 1961 to provide supplemental power to a consortium of rural electric cooperatives and currently provides power services to its three million electric consumer members throughout a 550,000 square mile area in nine states. It owns a diversified energy portfolio of dispatchable and non-dispatchable generating capacity of more than 7,000 MW and has an additional 5,000+ MW of wholesale electric generating resources under contract. Basin owns, operates, and maintains approximately 2,500 miles of high-voltage transmission lines. It owns and operates several subsidiary companies, including the for-profit Dakota Gasification Company, which owns and operates the Great Plains Synfuels Plant near Beulah, North Dakota.

East River is one of the founding owner-members of Basin and serves as a transmission-only utility. One of its original missions was to deliver hydropower from the Fort Randall Dam to the eastern part of the state. East River currently owns, operates, and maintains 3,300 miles of transmission lines, 237 distribution substation, and 44 transmission substations, providing transmission service to its 25-member distribution systems throughout eastern South Dakota and western Minnesota.

KEC, a distribution cooperative established in 1945 and operating reliably since its first electric lines were energized in 1948, currently serves approximately 1,000 customers in Kingsbury County, and owns and operates over 672 miles of distribution lines. Kingsbury will be designated as the service provider for NZ1 but because the NZ1 Facility will be served at the

transmission level, East River is primarily responsible for managing the necessary infrastructure build-out required to serve the NZ1 Facility.

C. Development or improvement of the electric system of the utility seeking to provide electric service; proximity of adequate facilities from which service may be delivered.

East River and KEC expect to invest approximately *[Trade Secret Data Begins]* \$** *[Trade Secret Data Ends]* million in new transmission and related infrastructure to reliably serve the new NZ1 load (including DRH), excluding the cost of the 10+ mile 115 kV transmission line and related facilities from the wind farm collector substation and any interconnection facilities identified in the SPP generator interconnect process, costs which will be assigned directly to the KCWF windfarm. This will provide the NZ1 Facility with full transmission and distribution system redundancy. An illustration of what the full East River/KEC build-out entails is included in Exhibit 5. In addition, NZ1 and DRH will be responsible for sharing (on a load-ratio basis) *[Trade Secret Data Begins]* \$** *[Trade Secret Data Ends]* on an up-front, contribution in-aid of construction (CIAC) basis for facilities necessary for the immediate area around the NZ1 Facility to serve load, including a 115 kV ring bus with seven positions, two 45/56/75 MVA transformers, and a capacitor bank. The transformers will be fully capable of backing each other up (redundant). The KCWF wind farm will likewise be responsible under a contribution in-aid of construction agreement with East River for approximately *[Trade Secret Data Begins]* \$** *[Trade Secret Data Ends]* for the 10+ miles of 115 kV, double-circuited transmission line and related facilities.

East River and KEC are federal Rural Utility Services borrowers, and each intend to fund their respective share of the improvements not covered by the CIAC agreements through long-term Rural Utility Services' loans. East River and KEC also have other sources of financing that can be accessed to fund improvements as necessary, including short term funding through *[Trade*

Secret Data Begins] \$** million [*Trade Secret Data Ends*] existing lines of credit and access to long-term capital funding through CoBank and/or the National Rural Utilities Cooperative Finance Corporation. Though not regulated by the Commission as a public utility, the Commission can be assured that the rates KEC will charge NZ1 and DRH are sufficient to recover its costs associated with serving the load.

D. NZ1 Prefers that KEC and East River Provide it with Service.


As the Commission is likely aware, when the NZ1 project was initially announced, NZ1 first committed to work with Otter Tail Power Company to provide electric service to the project and the parties endeavored for more than one year to come to terms on service. NZ1 appreciates Otter Tail's efforts in trying to reach agreement on acceptable terms. In the end, however, NZ1 and Otter Tail could not reach agreement on mutually acceptable terms that would enable both parties to move forward. Since engaging with East River, KEC, and Basin, NZ1 has appreciated the diligent and cooperative efforts in developing reasonable terms for this important part of the overall project. NZ1 prefers to receive its electric service from KEC, as evidenced by the fully negotiated ESA.

IV. Conclusion.

For the foregoing reasons, NZ1 fully requests a hearing on this petition as soon as possible and following such hearing, that the Commission approve KEC as the supplier of retail electric service to NZ1 at the Project Site.

Dated: June 28, 2024.

GEVO NET-ZERO 1, LLC

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By: 
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Christopher Ryan
Its: President