

BEFORE THE
MINNESOTA PUBLIC UTILITIES COMMISSION
STATE OF MINNESOTA

In the Matter of the Application of Great River Energy, Otter Tail Power Co., Western Minnesota Municipal Power Agency, Agralite Electric Coop., and the City of Benson for a Certificate of Need and Route Permit for the Appleton to Benson 115 Kilovolt Transmission Line Project

MPUC DOCKET NO. ET-2, E-017, ET-6135, E-100/ CN-24-263; and
ET-2, E-017, ET-6135, E-100/TL-24-264
OAH DOCKET NO. 23-2500-40748

DIRECT TESTIMONY OF NICK GOATER

August 14, 2025

I. INTRODUCTIONS AND QUALIFICATIONS

Please state your name, employer, and business address.

My name is Nick Goater. I am a Transmission Planning Engineer with Great River Energy. My business address is 12300 Elm Creek Boulevard, Maple Grove, Minnesota 55369.

Please briefly describe your educational and professional background and experience.

I have a master's degree in electrical engineering from the University of Bristol. I am a licensed Professional Engineer in the state of Minnesota. I joined Great River Energy as a Transmission Planning Engineer in 2019. In my role as a Transmission Planning Engineer, I am involved in transmission planning and engineering and am part of a team developing and studying the need for transmission projects. I had 5 years of experience as an electrical engineer prior to joining Great River Energy.

What is your role with respect to the Appleton to Benson 115 kilovolt (kV) transmission line project (Project)?

I coordinated the need analysis for the Project presented in the Joint Application for a Certificate of Need and Route Permit (Application). This analysis is reflected in Chapter 4 and related appendices of the Application.

What is the purpose of your Direct Testimony?

The purpose of my Direct Testimony is to describe why the Project is needed and summarize the related analysis conducted by Applicants.

II. THE PROJECT

Q. Please describe the underlying need for the Project.

4 A. As identified in Section 1.4 of the Application, the Project is needed to meet load
5 serving needs in the Project area and avoid low voltage issues under certain
6 contingency scenarios driven by the retirement of the 55-megawatt (MW)
7 FibroMinn Energy Center near the City of Benson. The system is currently
8 experiencing low voltages resulting in the inability to reliably serve all load under
9 contingency conditions. The Project will provide an additional 47 MW of system
10 capacity under the worst single (N-1) contingency, which is expected to meet the
11 demand for electricity for decades to come.

Q. How was the need for the Project determined?

14 A. In 2020, Great River Energy, Otter Tail Power, MRES, and Xcel Energy completed
15 a study to evaluate the shutdown of the 55 MW FibroMinn Energy Center near
16 Benson, Minnesota. The FibroMinn plant had played a significant role in supplying
17 power and regulating the reactive power need in the local area. The retirement
18 created near-term load-serving reliability concerns. The Benson Area Load
19 Serving Study (2020) (BAL Study) was included as Appendix I to the Application.
20 In addition, future load growth forecasting determined a deficit in the area. The
21 Project will provide needed capacity increases and system improvements to
22 service forecasted load for decades to come.

Q. Please provide a summary of the results of the BAL Study.

25 A. The study results showed that the existing transmission system cannot serve
26 current or forecasted load within the planning criteria. The proposed Project
27 addresses North American Electric Reliability Corporation (NERC) standard
28 reliability violations including contingency low voltage and thermal concerns on the
29 115-kV system, addresses existing N-2 contingency voltage collapse on the 115-
30 kV system, accommodates future load growth in the 41.6-kV and 115-kV
31 transmission systems which is expected to reach a peak demand of 101.61 MW in

1 2028 and 106.87 MW in 2033, and reduces losses in the Project area. Additionally,
2 the Project will provide increased load serving capability to areas outside the
3 immediate Project area, such as 115-kV lines west out of Appleton towards
4 Ortonville and the Morris to Canby 115-kV transmission system.

5

6 **Q. Was there any subsequent analysis or update performed after the 2020 BAL**
7 **Study?**

8 A. Yes. Since the 2020 BAL Study, several system modifications have been
9 completed and updated forecasts have been made available. This planning study
10 update (Update) reanalyzed the load serving need in the area based on the
11 topology changes as updated from the MISO Transmission Expansion Plan
12 (MTEP) 2018 data series to the MTEP 2023 data series. The analysis also
13 incorporates the most recent load forecasts for the distribution substations. The
14 Update analyzed 29 distribution substations, a subset of the original 68 distribution
15 substations analyzed in the BAL Study. The BAL Study encompassed a wider area
16 involving multiple sections but concluded that the key area to be addressed was
17 the 29 distribution substations interconnected to the 115-kV system around
18 Benson. This analysis confirms the need for additional load-serving support. In
19 summary, this Update:

- 20 • Reaffirms the Project will be the best performing option to meet the identified
21 needs.
- 22 • Determines that updated load forecasts predict higher growth rates, reinforcing
23 the need for the Project.
- 24 • Affirms that the existing load cannot be reliably served without the Project.
- 25 • Demonstrates the Project will provide an additional 47 MW of system capacity
26 under the worst single (N-1) contingency and an additional 77 MW capacity
27 under the worst double (N-2) contingency.

1 **Q. Will the Project help improve reliability and service in the event of severe**
2 **weather or other outages?**

3 A. Yes. By way of example, in May 2022, the Benson to Kerkhoven 115-kV line was
4 out of service and severe weather caused an outage of the Morris to Benson 115-
5 kV transmission line. All the 115-kV, 69-kV, and 41.6-kV substations served from
6 Benson were lost as well as all the 41.6-kV substations served from Walden. This
7 resulted in the loss of nine Agralite substations and most of their load as well as
8 four REA substations and ten Otter Tail Power substations. It took a day to restore
9 service to all area substations. Had the proposed Project been in-service, it is likely
10 that only the two substations served directly from the Morris to Benson line would
11 have been affected and reconfiguration and restoration could have occurred more
12 quickly.

13

14 **Q. Did the Applicants analyze whether any alternatives to the Project could**
15 **address the issues shown by the BAL Study and Update?**

16 A. The Applicants examined several different alternatives to the Project, such as
17 using new generation of various technologies, sizes, and fuel types including new
18 dispatchable generation, distributed generation, renewable generation, battery
19 energy storage and conservation, and demand side management; upgrading
20 existing transmission lines or existing generating facilities; using transmission lines
21 with different design voltages or with different numbers, sizes, and types of
22 conductors; using transmission lines with different terminals or substations; using
23 double-circuiting of existing transmission lines; using a high-voltage direct-current
24 (HVDC) line; underground the transmission line; and any reasonable combination
25 of alternatives.

26

27 **Q. Did any of the alternatives compare to the benefits of the Project and address**
28 **the need shown in the analyses?**

29 A. No, none of the alternatives I described above provide the same benefits of the
30 Project or meet the need identified by the BAL Study and Update. Section 4.7 of

1 the Application provides a detailed discussion of the Applicants' evaluation of
2 alternatives.

3

4 **Q. Did the Applicants also examine a no build alternative?**

5 A. Yes. Without any reasonable alternative to meet the need addressed by the
6 Project, a no build alternative would result in the Project area continuing to have a
7 deficit in load serving capability, placing communities at risk of service interruptions
8 under certain contingency conditions.

9

10 **III. CONCLUSION**

11

12 **Q. Does this conclude your Direct Testimony?**

13 A. Yes.