

Before the Public Service Commission
of
The State of North Dakota

In the Matter of the Application of
BASIN ELECTRIC POWER COOPERATIVE
for a Certificate of Site Compatibility
for the Bison Generation Station

Case No. PU-25-086

Pre-filed Testimony
of
Benjamin Hertz

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I. Introduction

Q.1. Please state your name, employer, and business address.

A.1. My name is Benjamin Hertz. I am employed by Basin Electric Power Cooperative ("Basin Electric"). My business address is 1717 East Interstate Avenue, Bismarck, North Dakota.

Q.2. What is your position with Basin Electric?

A.2. I am the Manager of Power Supply Planning. My team is responsible for forecasting our members' electric consumption, identifying the need for new resources, evaluating the various alternatives, and providing recommendations for new resources to align with Basin Electric's forecasted obligations.

Q.3. Please describe your educational and professional background.

A.3. I received a Bachelor of Science degree with a major in Mechanical Engineering from North Dakota State University in 2006. I am a registered Professional Engineer in North Dakota. I have worked for Basin Electric since 2014 in engineering and resource planning roles.

Q.4. What is your role with respect to the Bison Generation Station Project ("Project")?

A.4. My role with respect to the Project has been to forecast the Project need and to recommend the size, resource type, and the timing. These were determined by Basin Electric's annual load forecast and power supply planning processes.

Q.5. Are you familiar with the contents of Basin Electric's Application for a Certificate of Site Compatibility for the Project (the "Application")?

A.5. Yes. I am familiar with the Application's contents.

Q.6. What is the purpose of your testimony?

A.6. The purpose of my testimony is to provide information related to the Project's need. I will provide general information on Basin Electric's load forecasting and power supply planning process. My testimony, together with the Application and other supporting evidence, will demonstrate that the Project will ensure continuing system reliability and integrity and ensure that energy needs are met in an orderly and timely fashion.

II. Project Need

Q.7. What is Basin Electric's commitment to North Dakota consumers regarding their electric power supply?

A.7. Basin Electric is contractually obligated to meet the supplemental power requirements of its rural electric member cooperatives above their allocation from the Western Area Power Administration ("WAPA"). These North Dakota members include Class A generation and transmission members Upper Missouri Power Cooperative and Central Power Electric Cooperative and Class C member Mountrail-Williams Electric Cooperative, which serve members in northwestern North Dakota within the Williston Basin.

Q.8. How did Basin Electric determine the need for the Project?

A.8. The need for the Project was determined through Basin Electric's load forecasting and power supply planning process. This includes an annual load forecast, which is a cooperative effort between distribution members, generation and transmission members, and Basin Electric for its entire service area. Basin Electric collects direct electric sales and survey information from each of its members, along with several sources of demographic and economic information. Basin Electric then develops econometric models to identify the factors in the economy that are expected to influence load in the future. Basin Electric utilizes these models to forecast its member load into the future. The results of the load forecast are then compared to Basin Electric's resource portfolio in order to determine the need for additional resources.

Q.9. Please describe the results of the load forecast and power supply planning forecast that informed the need for the Project.

A.9. Basin Electric's 2024 Load Forecast was approved by the Basin Electric Board of Directors in January 2024. The subsequent power supply planning process compared the results of the 2024 Load Forecast to Basin Electric's existing generation fleet and power purchase agreements. The difference in the load forecast plus losses and reserves, and existing and committed generating resources identified that additional resources in the Southwest Power Pool ("SPP") region were needed to meet the growing demand and provide an adequate supply of capacity. For additional

reference, see Exhibit 4, which is a graph showing the forecasted SPP load and capability produced by Basin Electric. (Ex. 4 to Pre-filed Test.) This quantified deficiency is forecasted to occur in the late 2020s and is expected to grow over time. Basin Electric then implemented capacity expansion modeling in order to determine the most economical means to provide resources to meet the forecasted need. This modeling process was performed with updated performance and pricing information for a wide spectrum of resource types. As a result of this analysis, Basin Electric's resource planning recommendation was to begin the development of a large natural gas combined-cycle facility.

Q.10. What factors are influencing this growing demand for electricity?

A.10. Basin Electric's 2024 Load Forecast highlights strong oil and gas-related growth in the Bakken region, in addition to significant interest in large load development across Basin Electric's service territory. Large load interest from a number of new and emerging sectors including carbon dioxide compression, ethanol and fuels processing, and various data applications have been identified.

Q.11. Did Basin Electric consider alternative solutions to the increased need for generation?

A.11. Yes. Basin Electric considered a wide variety of demand side and supply side resources when selecting the recommended resource, including renewable energy sources, fossil fuel generation, and nuclear technologies. To help evaluate these alternatives, Basin Electric hired Burns & McDonnell to complete a technology and pricing assessment. (Application, Appx. C, Docket No. 1.) Basin Electric performed capacity expansion modeling to determine the most economical solution. Basin Electric selected advanced-class combustion turbines in combined cycle for the Project because that was the best fit, considering economics and reliability.

Q.12. What would happen if Basin Electric did not build any new generation?

A.12. Basin Electric considered other alternatives such as purchasing surplus power from other entities but was unable to locate options from existing resources of the magnitude required. Basin Electric has an obligation to provide firm power and carry sufficient resources necessary to meet its obligations and has concluded that new resources are necessary at this time.

Q.13. Besides the Project, what else is Basin Electric doing to meet electrical demand throughout Basin Electric's footprint?

A.13. In addition to the Project, Basin Electric recently commissioned the Roundup-to-Kummer Ridge 345-kV transmission line in December of 2024, and is in the process of commissioning the Pioneer Generation Station Phase IV. Basin Electric is also developing the Leland Olds Station-to-Tande 345-kV transmission project which is planned to be energized in late 2026. These investments represent a significant investment in 345-kV transmission and over 2 gigawatts of dispatchable generation in just over five years. Basin Electric has also recently signed power purchase agreements for 250 megawatts ("MW") of wind, 100 MW of battery storage, and other short term capacity purchases in SPP.

III. Project Benefits

Q.14. Will the Project benefit the area in which Basin Electric is proposing to construct?

A.14. The Project will provide a benefit to the area by allowing for reliable service to area consumers. The Project will provide needed energy and capacity to meet Basin Electric's membership obligations, including obligations to local members and the area's oil, gas, and other growth sectors.

Q.15. How does this Project support the reliability of the electrical system in this area of northwestern North Dakota and eastern Montana?

A.15. The Project will provide for a significant delivery of energy into the Bakken area. This will reduce the reliance on serving load in the area across the high-voltage transmission system and is expected to reduce the burden on Basin Electric's simple-cycle generators in the area. Through these factors the Project is expected to bolster the reliability of the system.

Q.16. How will this facility's units be dispatched and what is the time frame for that dispatch?

A.16. The facility's two units will be economically dispatched based on market conditions and local area reliability needed to support the Bakken area. The facility will be notified by the SPP when the units are needed to operate and provided a time for

when they need to be at a specified generation level. These units are capable of being online and generating at minimum load in around 25 minutes and achieving full load in approximately 4.5 hours (from a cold condition).

Q.17. Does the Project ensure that the capacity and energy needs of the area will be fulfilled in an orderly and timely fashion?

A.17. The Project will significantly increase Basin Electric's ability to supply energy and capacity into the local area. Basin Electric plans to meet its forecasted capacity and energy needs in an orderly fashion.

Q.18. Will the Project affect Basin Electric's members' rates?

A.18. This Project, along with other forecasted capital expenditures to maintain reliable service in addition to inflationary pressures and power market dynamics, is driving the need for higher rates. For the first time since 2016, Basin Electric raised its average wholesale member rate in 2025 to \$63.43 per MWh or by approximately 6.5%. Basin Electric has selected this resource as its lowest evaluated alternative to meet its members' future obligations and to minimize member rate impacts. Basin Electric also maintains an open dialog with its members regarding current and future rate impacts.

Q.19. Are there any plans for expansion of the Project?

A.19. No. Basin Electric currently does not have expansion plans for the Project.

IV. Conclusion

Q.20. Based on your knowledge of the Project, will it ensure continued system reliability and integrity?

A.20. Yes. The Project represents a new flagship resource for Basin Electric's membership. It will be capable of providing a long-term base-load supply of generation into the area that can be delivered across Basin Electric's service territory in SPP.

STATE OF NORTH DAKOTA
BEFORE THE
PUBLIC SERVICE COMMISSION

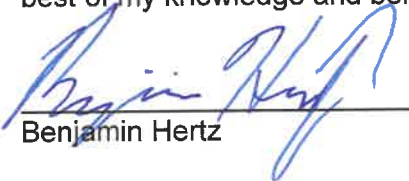
Basin Electric Power Cooperative
Bison Generation Station - Williams County
Siting Application

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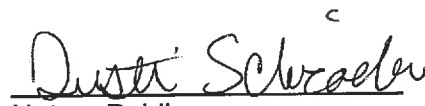
Case No: PU-25-086;
OAH File No. 20250113

**AFFIDAVIT OF
BENJAMIN HERTZ**

I, the undersigned, being duly sworn, state as follows: (1) I have read the pre-filed testimony and exhibits submitted in the above captioned matters under my name; (2) they were prepared by me or under my direction and I know their contents; and (3) they are true and correct to the best of my knowledge and belief.


Benjamin Hertz

Subscribed and sworn to before me, this 12th day of June, 2025.


Notary Public
My Commission Expires:

DUSTI SCHIRADO
NOTARY PUBLIC
STATE OF NORTH DAKOTA
MY COMMISSION EXPIRES MAY. 03, 2027