STATE OF NEBRASKA
NEBRASKA POWER REVIEW BOARD

IN THE MATTER OF THE APPLICATION OF THE NORTHEAST NEBRASKA PUBLIC POWER DISTRICT, HEADQUARTERED IN WAYNE, NEBRASKA, REQUESTING AUTHORITY TO INSTALL A 1,600 KILOWATT DIESEL GENERATION FACILITY IN PIERCE COUNTY, NEBRASKA.	)	**PRB-3961-G** **ORDER**

References in this Order to testimony are designated by a "T" followed by the transcript page, then the lines upon which the testimony appears, while references to exhibits are designated by "Exh."

ON THE 21st day of January, 2022, the above-captioned matter came on for consideration before the Nebraska Power Review Board (the Board). The Board, being fully advised in the premises, and upon reviewing said application and the evidence presented to the Board at said hearing, HEREBY FINDS AS FOLLOWS:

FINDINGS OF FACT

1. That on November 22, 2021, the Northeast Nebraska Public Power District (Northeast NE PPD), headquartered in Wayne, Nebraska, filed an application with the Board requesting authority to install a 1,600 kilowatt (KW), or 1.6 megawatt (MW), diesel generation facility and related facilities. (Exh. 1). The application was designated "PRB-3961-G".

2. The estimated total cost for PRB-3961-G is $600,000. (Exh. 1, page 2; Exh. 13, pages1-2).

3. That the proposed location for the generation facility in PRB-3961-G is just north of the intersection of North State Street and 865th Road, Osmond, Nebraska, which is on the northern outskirts of the City of Osmond, Pierce County, Nebraska. (Exh. 1, pages 4 and 5).

4. That those power suppliers, other than the Applicant, that the Board deemed to be potentially affected by or interested in application PRB-3961-G were the Municipal Energy Agency of Nebraska, the Nebraska Public Power District, the City of Pender, the City of Neligh, the City of Wayne and the City of Wakefield. (Exh. 2, page 5). Written notice of the filing of the application and the hearing date, and the opportunity to file a Petition for Intervention or a Protest, was provided to these potentially interested power suppliers and the Applicant via certified U.S. mail. (Exh. 2).

5. Notice of the filing of the application and the hearing date, and the opportunity to file a Petition for Intervention, was provided to the general public by publication in the *Wayne Herald* newspaper on Thursday, December 2, 2021. (Exh. 3). Notice of the filing of the application and the hearing date, and the opportunity to file a Petition for Intervention, was also provided to the general public by publication in the *Osmond Republican* newspaper on Wednesday, December 1, 2021. (Exh. 4).

6. A certified copy of a Waiver form was offered and accepted into evidence at the hearing, as provided by law and the Board's Rules of Practice and Procedure, whereby the Nebraska Public Power District waived any objection to the approval of

application PRB-3961-G. (Exh. 5). A certified copy of Consent and Waiver forms were offered and accepted into evidence whereby the Municipal Energy Agency of Nebraska, the City of Wayne, the City of Wakefield and the Village of Pender consented to the approval of application PRB-3961-G without a hearing and waived any objection. (Exhs. 7, 8, 9 and 10). No power suppliers that received notice of the application filed a Protest or Petition for Intervention.

7. That pursuant to the requirement set out in Neb. Rev. Stat. § 37-807(3), the Board consulted with the Nebraska Game and Parks Commission (the Commission) to ensure that the Board utilizes its authority in furtherance of the purposes of the Nebraska Nongame and Endangered Species Act, and to ensure that approval of the proposed generation facilities would not jeopardize the continued existence of any endangered or threatened species or result in the destruction or modification of habitat of such species which is determined by the Commission to be critical. The Commission provided a letter to the Board, dated December 2, 2021, addressing PRB-3961-G. In the letter, the Commission stated that the project area is within the range of the threatened Western Prairie Fringed Orchid, Northern Long-Eared Bat and Small White Lady's Slipper. However, because the site has been previously disturbed, and the project will not include removal of any trees, the project is not anticipated to have any impact on any state-listed threatened or endangered species. The Commission therefore did not object to the Board's approval of the project. (Exh. 6, page 2).

8. That on January 21, 2022, the Board convened the formal evidentiary hearing to address the merits of application PRB-3961-G.

9. The City of Osmond (Osmond) receives its electrical power supply from Northeast NE PPD through a substation. Osmond is provided electricity from a 69 kV subtransmission system that is stepped down to 2400 volts for distribution. Osmond has a "single point of failure", meaning that if something were to happen to the substation, there is no other way to supply Osmond with electricity. The residents and businesses in Osmond would be without service until the substation issue could be repaired or otherwise resolved. Such an outage could last several days. (T23:12 to 24:18; T25:8-16; T25:17-25). Osmond has a population of approximately 1,000 people, with 470 electric customers. (T26:8-16; T40:25 to 41:4).

10. Although the substation serving Osmond is supplied electricity from two transmission lines, the substation itself and into Osmond is a "radial feed", meaning that there is only one pathway for the electric service, with no redundancy in that part of the system. (T27:23 to 28:17).

11. The existing substation that serves Osmond is approximately 30 years old. It is built out of wood. The transformers in the substation were built in the 1960's. The life expectancy for transformers is 40 to 50 years. (T24:19 to 25:7). The transformers in the substation are therefore approaching the end of their life cycle.

12. Northeast NE PPD wants to avoid a situation where an outage lasting several days could occur for the electric customers in Osmond if the lone substation serving the City were to experience a failure. Northeast NE PPD therefore examined different alternatives that would address the situation and create redundancy for Osmond. (T26:16 to 27:5). The management and board of directors determined that installing a

diesel generator at or near the existing substation was the best alternative. (T21:19 to 22:23).

13. The proposed diesel generator will connect directly into the distribution system serving Osmond, thus creating back-up service to the City in the event of a substation outage. (T28:13 to 30:22; T30:4-18; T38:15 to 39:16).

14. The rated capacity of the proposed diesel generator is sufficient to meet the needs of Osmond's peak electric load. Osmond's peak electric load is 1,780 kilowatts. Although the generator is rated at 1,600 kilowatts, it is tested to 1,800 kilowatts, which would allow Northeast NE PPD to supply Osmond with its peak load if the need arose. Osmond's normal electric load is 1,000 to 1,200 kilowatts. (T36:19 to 37:14). The generator could also be used in the event of widespread transmission outage or a curtailment order by the Southwest Power Pool regional transmission organization. (T76:16 to 78:6). This would protect the customers in Osmond from an outage, which could be especially dangerous during the winter. Osmond is a winter-peaking system. (T37:15 to 38:13; T78:16 to 79:6). The generator will have a 2,000 gallon fuel tank, which will provide sufficient fuel for about ten hours of operation. To ensure flow of fuel, there will be heaters for the fuel and fuel lines. (T35:6 to 36:4; T67:20 to 69:13).

15. Due to the age and configuration of the existing substation, there are fuses inside the substation. Although it would be preferable to replace the fuses with oil or gas reclosers and breakers, Northeast NE PPD cannot access the fuses to work on them or replace them without causing a service outage to the entire City of Osmond. The

proposed generator would allow Northeast to run the generator and directly provide service to the City while work is performed on the substation. (T32:11 to 33:12).

16. Northeast NE PPD examined other options to installing a diesel generator. One option was to upgrade the existing substation. To upgrade the existing substation would cost approximately two million dollars. (T33:13 to 34:4; Exh. Pages 2, 6 and 7). Another option would be for Northeast NE PPD to build or expand its 12,500 volt distribution lines from Northeast NE PPD's rural substations to Osmond, then convert Osmond's distribution system to 12,500, also. That would provide a redundant service option to serve Osmond. The distribution system option would require Northeast NE PPD to replace every one of the more than 470 transformers in Osmond. The total cost of the distribution system upgrade option is estimated to be between 1.8 and 2 million dollars. (T43:4 to 45:16; T48:16 to 49:1961). Another alternative would be to install a redundant transformer. A new transformer alone would cost approximately $300,000, and the site adjacent to the existing substation would no longer be large enough. Also, to use this alternative would require that the entire City of Osmond would experience an outage, possibly for several days, while the work was performed. To avoid such an outage would require building another substation and connecting it to the existing substation to parallel the facilities. The exact cost of this option is not known, but it is estimated it would be close to 1.2 million dollars, certainly more than the cost of the proposed diesel generator. (T45:24 to 47:10; T49:20 to 50:15; T58:3 to 61:10; Exh. 13, pages 2 and 8).

17. Installing a diesel generator would extend the useful life of the existing substation for five to fifteen years. Another benefit is the maintenance. Northeast NE PPD could allow the aging transformers to operate to the very end of their useful life. Upon the failure of a transformer, Northeast NE PPD could operate the diesel generator to avoid an outage in Osmond. This allows extended use of the existing transformers, providing cost savings to Northeast NE PPD and its customers. (T34:12 to 35:1).

18. Northeast NE PPD currently purchases capacity for its irrigation load through the Southwest Power Pool market. That costs Northeast NE PPD about two dollars per kilowatt per month. If the proposed generator is installed, it will be registered with the Southwest Power Pool. That would allow Northeast NE PPD to reduce its capacity purchases by 1.6 megawatts, which would equate to a savings of approximately $3,200 per month. (T72:11 to 76:12; Exh. 13, pages 3, 9-14).

CONCLUSIONS OF LAW

19. Pursuant to Neb. Rev. Stat. §§ 70-1012, 70-1013, and 70-1014, the Board has jurisdiction to conduct a hearing and either approve or deny an application for authority to construct or install a generation facility located in the State of Nebraska or owned by a power supplier headquartered in the State of Nebraska. Such approval is required prior to commencement of construction of facilities or the installation of a generator such as the one described in application PRB-3961-G.

20. The Board has complied with the requirements under Neb. Rev. Stat. § 37-807(3) to consult with and request the assistance of the Nebraska Game and Parks Commission in order to utilize the Board's authority in furtherance of the purposes of the

Nebraska Nongame and Endangered Species Act, and to insure that approval of the proposed generation facilities would not jeopardize the continued existence of any endangered or threatened species or result in the destruction or modification of habitat of such species which is determined by the Commission to be critical. In this instance, the location where the generator would be installed is an area already disturbed, so it does not appear any threatened or endangered species would be affected by the project.

21. Northeast NE PPD needs a generation resource at the proposed location for several reasons. Without the addition of the new generator, Northeast NE PPD would not be able to ensure reliable electric service to the City of Osmond. An unscheduled outage, especially during winter, could threaten the health and welfare of the residents of Osmond. This demonstrates that Northeast NE PPD requires the addition of a dispatchable generation resource at or near the Osmond substation, and that such a generator will serve the public convenience and necessity.

22. By placing the generation resources close to one of Northeast NE PPD's larger loads (the City of Osmond), the District can help ensure that electricity can be supplied to its customers in Osmond during highly disruptive events such as ice storms or a tornado that can destroy transmission assets and eliminate or curtail the ability to import electricity from other areas. This demonstrates that the proposed generator will serve the public convenience and necessity and does not create unnecessary duplication of existing facilities or operations.

23. The Board therefore finds that the proposed generator will serve the public convenience and necessity.

24. Northeast NE PPD provided evidence that the alternative options would be significantly more costly than the installation of a diesel generator. In addition, some other alternatives would require an outage in the entire City of Osmond while the upgrades were made. It is in the best interests of the residents of Osmond and the Northeast NE PPD to avoid an outage in Osmond if possible and economical.

25. The Board finds that the evidence demonstrates that Northeast NE PPD can most economically and feasibly supply the electric service resulting from the proposed project.

26. The Board finds that the evidence demonstrates the proposed project will not unnecessarily duplicate other facilities or operations.

27. That based on the foregoing findings, the Northeast NE PPD is entitled to an Order approving the installation of the generating unit described in application PRB-3961-G.

ORDER

That during that part of its public meeting on February 18, 2022, a majority of the members of the Power Review Board (4 yes, 0 no) voted in favor of a motion to approve application PRB-3961-G.

IT IS THEREFORE ORDERED by the Nebraska Power Review Board, pursuant to the Board's action taken during its public meeting held February 18, 2022, that the application designated PRB-3961-G, for authorization to install a 1,600 kilowatt diesel generator in Pierce County, Nebraska be, and hereby is, APPROVED.

Reida (Chair), Hutchison (Vice Chair), Grennan and Moen, participating.

Board member Peck not participating, as she was not yet confirmed by the Legislature as a board member at the time of the hearing or the February 18, 2022 vote.

Dated this 13th day of April, 2022.

Frank Reida
Chairman

CERTIFICATE OF SERVICE

I, Timothy J. Texel, Executive Director and General Counsel for the Nebraska Power Review Board, hereby certify that a copy of the foregoing **Order** in PRB-3961-G has been served upon the following parties by mailing a copy of the same to the following persons at the addresses listed below, via certified United States mail, on this 18th day of April, 2022.

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