



Moody/Via

RESOLUTION NO. 6645

WHEREAS, the North Omaha Station Unit 5 (“NO5”) steam turbine was inspected and found to have cracks on several of the L-0 blades on the low pressure (LP) rotor and after evaluation of potential temporary repair options it was determined that the L-0 blades should be replaced during the existing NO5 unit outage; and

WHEREAS, the District’s Engineer has certified that the replacement of the blades requires specialized parts and services to ensure reliable operation due to the fact that there is a limited supply of the unique parts that can be installed onto the turbine rotor; and the replacement of the parts and associated balancing are technologically complex and require specialized tooling, manufacturing capability and extensive steam turbine specific engineering knowledge; and

WHEREAS, extended delays in restoring NO5 to service coupled with possible other generating unit challenges, poses an unacceptable reliability risk to the grid. Management has taken preliminary action per Board Linkage Policy 8 to expedite eventual procurement of the replacement blades to reduce the schedule impact and assist in mitigating this potential reliability risk pending board action; and

WHEREAS, a negotiated contract provides the proper mechanism to develop terms and conditions with acceptable risk mitigation and provides a better understanding and comparison of the technologically complex parts and services required to replace the blades while mitigating operational risk, and therefore a negotiated contract is in the best interest of the District; and

WHEREAS, pursuant to Nebraska Revised Statute Section 70-637 (as amended), and upon approval of the Engineer’s Certification by the Board of Directors, the District may negotiate and enter into a contract or contracts related to such project without sealed bidding.

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of the Omaha Public Power District that:

1. The Engineer’s Certification requesting that the Board waive the sealed bid requirements, in accordance with Nebraska Revised Statutes Sections 70-637 through 70-641, is hereby approved.
2. Management is hereby authorized and directed to negotiate and enter into the necessary contract or contracts for the replacement of the North Omaha Station Unit 5 L-0 turbine blades, subject to review and approval of the final contract(s) by the District’s General Counsel.
3. The notice required by Nebraska Revised Statutes Section 70-637 shall be published in the Omaha World Herald, or other similar newspaper of general circulation.



DATE: April 5, 2024

UO-2024-03

FROM: S.A. Eidem

TO: T.R. Via

SUBJECT: North Omaha Station Unit 5 Low Pressure Turbine Blade Replacement

1.0 GENERAL

In March 2024, the North Omaha Station Unit 5 (NO5) low pressure (LP) turbine rotor was inspected using non-destructive examination techniques and found to have several cracks on multiple L-0 blades. These cracks create an unacceptable safety and reliability risk to personnel and equipment due to a potential blade material liberation event. Temporary repair methods were evaluated and deemed non-optimal due to operational and/or reliability risk, including an additional future outage for blade replacement. The option that best addresses associated risks and restore safe and reliable operation is to replace the L-0 blades on the LP turbine rotor during the current planned outage in progress.

General Electric, the Original Equipment Manufacturer (OEM), cannot supply new L-0 blades for approximately twelve months. Two other contractors were found to have appropriate L-0 blades available in a shorter time period. Both contractors can provide new blades incorporating enhancements to improve their strength and reduce the potential for cracking. Both contractors also have the specialized tools and services needed to replace the blades and ensure the rotor is properly balanced.

Extended delays in restoring NO5 to service, coupled with other possible generating unit challenges, poses an unacceptable reliability risk to the OPPD and regional grid. Internal technical and supply chain teams are working to expedite eventual procurement of the replacement blades to reduce the schedule impact and assist in mitigating this potential reliability risk.

Contracts for parts, specialized shop services, and field assistance are expected to exceed \$500,000.

Compliance with the sealed bidding requirements of the Nebraska Statutes is impractical and not in the public interest. Contract negotiations will provide OPPD a better understanding and comparison of the technologically complex parts and services required to replace the blades while mitigating operational risk.

2.0 RECOMMENDATION

An Engineer's Certification for the above has been prepared. Approval of that Certification is recommended. We request the Board of Directors to approve the Engineer's Certification and to authorize management and enter into contract(s) to provide the parts and services required to replace the L-0 turbine blades on North Omaha Station Unit 5.



S.A. Eidem, P.E.
Director, Engineering Services
Utility Operations

ENGINEER'S CERTIFICATION

The Omaha Public Power District's (OPPD) North Omaha Station Unit 5 steam turbine was inspected and found to have cracks on several of the L-0 blades on the low pressure (LP) rotor. After evaluation of potential temporary repair options, it was determined that the L-0 blades should be replaced during the existing unit outage. The replacement of the blades requires specialized parts and services to ensure reliable operation.

The undersigned, a Nebraska registered professional engineer employed by OPPD, certifies the following:

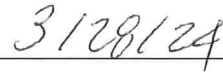
- There is a limited supply of the unique parts that can be installed onto this turbine rotor
- The replacement of the parts and associated balancing are technologically complex requiring specialized tooling, manufacturing capability, and extensive steam turbine specific engineering knowledge.
- A negotiated contract provides the proper mechanism to develop proper scope of work with acceptable risk mitigation and maintains the viability of limited improved design options.
- For the foregoing reasons, it would be impractical and not in the public interest to utilize sealed bidding to secure the required parts and services.

Pursuant to Section 70-637 of the Revised Statutes of Nebraska, the Board of Directors is requested to approve this Engineer's Certification and authorize Management to negotiate and enter a contract(s) to supply parts and specialized services to replace the North Omaha Station Unit 5 L-0 turbine blades without compliance with the sealed bidding requirements of Sections 70-637 to 70-641 of the Revised Statutes of Nebraska.

I, Brian J. Langel (registered Professional Engineer in the State of Nebraska), certify the above to be true and correct to the best of my knowledge and belief.



Brian J. Langel P.E.



Date



March 27, 2024

Omaha Public Power District
444 South 16th Street
Omaha, NE 68102

RE: North Omaha Station Unit 5 - Engineer's Certification for Steam Turbine L-O
Blades

Ladies and Gentlemen:

We have reviewed the Engineer's Certification of Brian J. Langel, a registered professional engineer in the State of Nebraska employed by the District. Mr. Langel's certification states that the North Omaha Station Unit 5 steam turbine was inspected and found to have cracks on the L-O blades on the low pressure rotor part of the turbine. The L-O blades will need to be replaced during the current unit outage. Mr. Langel certifies that there is a limited supply of unique parts that are needed for the refurbishment of the unit, and that the inspection and repair work for the unit is technologically complex, requiring specialized tooling, manufacturing capability, and extensive steam turbine specific engineering knowledge. He further explains that a negotiated contract provides the best structure to develop a proper scope of work with acceptable risk mitigation, and maintains the viability of limited improved design options. For these reasons, Mr. Langel certifies that it would be impractical and not in the public interest to use sealed bidding for this project.

Section 70-637 of the Nebraska Revised Statutes authorizes the District's Board of Directors, by a two-thirds vote, to approve an Engineer's Certification for technologically complex projects for which sealed bidding would be impractical and not in the public interest, and to authorize the District to enter into a contract to complete the project. The District is required to advertise its intention to enter into any such contract in three (3) issues of a newspaper of general circulation within the District's service area, with not less than seven (7) days between issues. The contract cannot be entered into sooner than twenty (20) days after the last advertisement.

It is our opinion that Mr. Langel's Engineer's Certification complies with Section 70-637 and is in a form that is appropriate for approval by the District's Board of Directors. Therefore, the Board of Directors may approve the Engineer's Certification and authorize Management to negotiate and enter into the necessary contract(s) for the replacement of parts for and repair of the North Omaha Station Unit 5 L-O blades. We recommend that any such contract be subject to review and approval by the District's general counsel.

Very truly yours,

A handwritten signature in blue ink, appearing to read "Stephen M. Bruckner", written in a cursive style.

Stephen M. Bruckner
FOR THE FIRM

SMB:ecc



Board Action

BOARD OF DIRECTORS

April 16, 2024

ITEM

North Omaha Station Unit 5 Low Pressure Turbine Blade Replacement

PURPOSE

Provide parts and services for replacing turbine blades on North Omaha Station Unit 5.

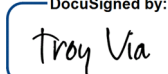
FACTS

- a. During a recent North Omaha Station Unit 5 turbine inspection, cracking was found on the low pressure (LP) turbine L-0 blades creating challenges for continued operation.
- b. The unit is currently in a scheduled outage and replacement of the blades is needed to ensure safe and reliable operations.
- c. The District's engineer has certified the complex nature of the work and that use of the sealed bid process is impractical and not in the public interest.

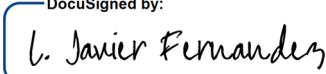
ACTION

Approval of the Engineer's Certification and authorization for management to negotiate and enter into contract(s) for the replacement of LP L-0 turbine blades at North Omaha Station Unit 5.

RECOMMENDED:

DocuSigned by:

 Troy R. Via
 Vice President – Utility Operations
 And Chief Operating Officer

APPROVED FOR BOARD CONSIDERATION:

DocuSigned by:

 L. Javier Fernandez
 President and Chief Executive Officer

TRV:sae

Attachments: Letter of Recommendation
 Engineer's Certificate
 Legal Opinion
 Resolution