BID DOCUMENT M1-2023

SUBSTATION POWER TRANSFORMER
SHELTON, WA

ADDENDUM

PUBLIC UTILITY DISTRICT NO. 3 OF MASON COUNTY, WASHINGTON

Addendum No.: 1 Date Prepared: November 22, 2023

A. This Addendum shall be considered part of the bid documents for the above-mentioned project as though it had been issued at the same time and shall be incorporated integrally therewith. Where provisions of the following supplementary data differ from those of the original bid documents, this Addendum shall govern and take precedence.

B. Bidders are hereby notified that they shall make any necessary adjustments in their estimates as a result of this Addendum. It will be construed that each bidder's proposal is submitted with full knowledge of all modifications and supplemental data specified herein.

C. BIDDERS MUST ACKNOWLEDGE THE RECEIPT OF THIS ADDENDUM BY WRITING "1" IN THE SPACE PROVIDED ON BIDDER INFORMATION FORM INCLUDED IN THE QUOTATION DOCUMENT.

This notice of Addendum serves to provide an alternative option for Reinhausen ETOS transformer monitoring unit with TAPMOTION MD-IV OLTC drive and control.

It has come to the District's attention that obtaining the specified Reinhausen ETOS monitoring unit with the TAPMOTION MD-IV OLTC control has posed challenges for acquisition. The District has identified a suitable alternative from Schweitzer Engineering Laboratories, to be utilized along with a Reinhausen TAPMOTION MD-III OLTC drive unit and TAPCON 250 control in place of the ETOS MD-IV OLTC drive and control. Please refer to the updated specification sections below for details on the approved alternative of Schweitzer Engineering Laboratories SEL-2414, TAPMOTION MD-III OLTC drive, and Reinhausen TAPCON 250 OLTC control.

Please see the below edits to the bid document specifications to show the changes for the approved alternate.

1. **Spec-4 4.2 HIGH VOLTAGE BUSHINGS**

   E. Monitoring shall be provided via Reinhausen MESENSE BM-C and wired to the selected transformer monitoring system.~~Reinhausen ETOS Embedded Transformer Operating System.~~

2. **Spec-6 TRANSFORMER OPERATING SYSTEM**

   For the purposes of transformer monitoring, control, and regulation, a Reinhausen ETOS Embedded Transformer Operating System shall be installed, or an SEL-2414 Transformer monitor shall be installed along with a Reinhausen MD-III OLTC drive and TAPCON 250 OLTC control.

3. **Spec-6 6.1 OPERATING SYSTEM CABINET**

C. Provide 10” Reinhausen MCONTROL touchscreen panel inside ETOS cabinet for complete ETOS control and functionality, or access to the SEL-2414 display screen and pushbuttons alongside the TAPCON 250 screen and controls.

H. Provide for manual operation of the LTC via the control panel on the ETOS or TAPCON 250

I. The primary preferred location of the selected transformer monitor and control ~~EOTS~~ cabinet would be on Segment 2 above the existing conduit location shown on “Appendix A” to facilitate ease of entry of existing substation control enclosure conduit system into the operating system cabinet. The secondary preferred locations would be on Segment 1 or Segment 4 respectively, located as close to the existing conduit location as possible as shown on “Appendix A”.

4. **Spec-6 6.2** The Selected Transformer Monitoring system~~ETOS~~ shall be wired to provide the following functions:

5. **Spec-7 ALARMS AND CONTROL CIRCUITS**

A. The following list of alarms shall be provided and shall be connected to the selected transformer monitoring system~~ETOS Embedded Transformer Operating System~~:

6. **Spec-8 8.2 PRESSURE RELIEF**

B. Each pressure relief device shall have an operating semaphore visible from the ground, and two (2) sets of non-grounded hermetically sealed alarm contacts with normally open and normally closed contacts suitable for operation at 125 volts DC and wired to the selected transformer monitoring system~~Reinhausen ETOS Embedded Transformer Operating System~~.

E. Alarm contacts shall be wired into terminal cabinet as specified in Section 5 and to the selected transformer monitoring system~~Reinhausen ETOS Embedded Transformer Operating System~~.

F. Pressure relief devices shall be Reinhausen MESSKO MRPEC Series large pressure relief device and interface with the selected transformer monitoring system~~Reinhausen ETOS Embedded Transformer Operating System~~.

7. **Spec-8 8.4 TEMPERATURE SENSING**

A. Hot-spot winding temperature monitoring shall be via Reinhausen MSENSE FO fiber optic measurement equipment and interface with the selected transformer monitoring system~~Reinhausen ETOS Embedded Transformer Operating System~~.

B. Oil temperature indicator shall be a Reinhausen MESSKO COMPACT mounted on the tank between four (4) and six (6) feet above the transformer base and equipped with non-grounded circuit-closing hermetically sealed alarm contacts suitable for operation at 125 volts DC and a maximum indicating hand with provisions for resetting. The thermal element shall be housed in a well in the cover or wall of the main tank to permit inspection

and replacement without expelling oil or gas from the transformer. The oil temperature alarm shall be set at 90ºC. The indicator shall be wired to the selected transformer monitoring system~~Reinhausen ETOS Embedded Transformer Operating System~~.

8. Spec-8 8.5 OIL LEVEL GAUGE

D. All oil gauge contacts shall be wired into the main control cabinet as specified in Section 5 above and wired into the selected transformer monitoring system~~Reinhausen ETOS Embedded Transformer Operating System~~.

9. Spec-8 8.8 COOLING SYSTEM

C. The fans shall be designed to operate automatically from the selected transformer monitoring system~~Reinhausen ETOS Embedded Transformer Operating System~~, and manually from an ON-OFF switch and in parallel with the automatic control. Fan motors shall be totally enclosed, weatherproof, 240-volt, single phase and shall be provided with individual overload protection. Circuit protection, magnetic contactors, and manual control switch shall be suitably mounted in the weatherproof main control cabinet. Each cooling fan stage shall be provided with a circuit breaker. Each cooling fan shall have an OSHA fan guard. Loss of cooling fans alarm that senses loss of potential to the cooling circuit shall be provided.

10. Spec-8 8.12 ON-LINE DISSOLVED GAS ANALYSIS (DGA) SYSTEM

A Reinhausen MSENSE DGA 3 on-line dissolved gas analysis (DGA) system shall be provided and installed. The system shall provide complete gas monitoring via local and remote user interface. The system shall be wired to interface with the selected transformer monitoring system~~Reinhausen ETOS Embedded Transformer Operating System~~.

11. Spec-14 AUTOMATIC ON-LOAD TAP CHANGER (OLTC) & CONTROLS

14.1 OLTC Main

H. The load tap changing equipment shall consist of a liquid immersed tap selector with a vacuum interrupting switch. All current carrying contact parts are to be full wiping. The drive mechanism shall be a Reinhausen TAPMOTION MD-IV direct motor drive unit and controlled via the Reinhausen ETOS Embedded Transformer Operating System, or a Reinhausen TAPMOTION MD-III drive mechanism and controlled by the TAPCON 250. The following accessories shall be provided:

6. A Reinhausen Messko MPREC self-resealing type pressure relief device complete with visual indicator and alarm contacts wired to the selected transformer system ~~Reinhausen ETOS Embedded Transformer Operating System~~ shall be installed.

The date and time of bid opening is unchanged.

Sealed bids must be received by 3:00 p.m., Wednesday, December 6, 2023, which is when bids will be opened.