Specifications

Project: Procurement of (2) two new Variable Frequency Drives

GENERAL INFORMATION

1.0 **Scope of Work:** Purchasing (2) two Variable Frequency Drives (VFD) to replace an end-of-life existing VFDs.

2.0 **Background:** The chilled water plant has 4 secondary chilled water pumps that operate with the chilled water system. The VFDs with the labels "SCHP-3" and "SCHP-4" has reached their end of life and parts to repair them have become obsolete. It will be more cost effective to replace these units with new ones.

REQUIREMENTS – Equivalent and salient characteristics

3.0 **Technical Requirements/Tasks:**

- New units shall be documentable and pre-approved equivalent to an Altivar 660, ATV660C16T4N2ANYBBNX.
- Qty: 2 units, delivered.
- Unit footprints shall be the same size or similar to existing Altivar 660 VFD footprint. Size of existing unit is 25 inches deep, 31 ½ inches wide and 93 inches tall.

Minimum technical specifications shall include:

- Unit shall have main circuit breaker disconnect
- Unit shall be 100k AIC (Ampere Interrupting Capacity) rated
- Unit shall be selected for 460 Vac 3 phase motor
- Unit shall operate with 250 Horsepower
- Unit shall be sized for Normal duty.
- Unit drive controller shall be rated for 302 Max. Output Amps
- Unit Max. Output Current Rating Will Be Lower Than the Continuous Output Current Rating Of The Drive When Bypass Option Is Selected.
- Unit shall include Type 12 Enclosure
- Unit shall have UL508A Label
- Unit shall be RAL7035 (Gray)
- Unit shall include Standard IEC Rated Bypass Contactors
- Unit shall include Isolation and bypass contactors (with mechanical and electrical interlocking).
- Unit shall include Isolation and bypass contactor sequencing provides true motor isolation.
- Unit shall include Remote automatic bypass operation using Auto Start contacts.
- Unit shall include Dv/Dt Motor Filter (Voltage Rate of Change Filter)

Minimum control options shall include:

- Unit shall include AFC-Off-Bypass selector switch
- Unit shall include Hand-Off-Auto selector switch

- Unit shall include Start/Stop push buttons
- Unit shall include Test-Normal selector switch
- Unit shall include Speed Potentiometer

Minimum Pilot Light options shall include:
- Unit shall include Bypass pilot light (yellow)
- Unit shall include Overload Trip pilot light (yellow)
- Unit shall include Power on pilot light (red)
- Unit shall include Run pilot light (green)
- Unit shall include Trip pilot light (yellow)

Minimum Auxiliary contacts shall include:
- 1 Normally Open/Normally Closed run contact
- 1 Normally Open/Normally Closed trip contact
- 1 Normally Open/Normally Closed bypass run contact
- 1 Normally Open auto mode contact
- Unit shall include Line Reactor as standard Output Filter
- Unit shall be compatible with Johnson Controls Metasys N2 Communication

4.0 Deliverables/Schedule: 60 days after receipt of order

5.0 Place of Delivery: USDA, 1920 Dayton Avenue, Bldg 24, Ames, IA 50010