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## AGENDA INFORMATION SHEET

**DEPARTMENT:** Materials Management

**CM:** Todd Hileman

**DATE:** October 17, 2017

### **SUBJECT**

Consider adoption of an ordinance of the City of Denton, Texas providing for, authorizing, and approving the purchase of ERL Tesla 4000 Digital Fault Recorders (DFR) to be installed on specified Texas Municipal Power Agency (TMPA) substations and Denton Municipal Electric substations as mandated by The Electric Reliability Council of Texas (ERCOT). ERLPhase Power Technologies, Ltd. is the sole-source manufacturer and direct seller of the ERL Tesla 4000 Digital Fault Recorder. Therefore this system is available from only one source and in accordance with Chapter 252.022 of the Texas Local Government Code, procurement of commodities and services that are available from one source are exempt from competitive bidding; and if over \$50,000 shall be awarded by the governing body; and providing an effective date (File 6587 awarded to ERLPhase Power Technologies, Ltd. in the three (3) year not-to-exceed amount of \$293,216). The Public Utilities Board recommends approval (4-0).

### **FILE INFORMATION**

The Electric Reliability Council of Texas (ERCOT) in its Nodal Operating Guide, Section 6, mandates that certain substations be equipped with fast acting recorders capable of capturing, saving, and displaying currents, voltages, and changes of states of certain devices simultaneously during protective system events. Examples of protective system events could be rapid or unexpected voltage or current changes, circuit breaker trips, faults (short circuits) on parts of the transmission system that are remote from the station, or incorrect protective device operations. These types of occurrences are generically referred to as “disturbances” and the recording equipment is referred to as “Disturbance Monitoring Equipment” or “Digital Fault Recorders” (DFRs). The information recorded by these devices is used to aid in assessing whether protective systems operated properly or improperly. In the event of incorrect operation, the recorded data provides an analytical tool to help determine what component or setting of the protective system operated incorrectly and why.

DME has substation projects approved in its five year Capital Improvement Plan (CIP) that will require purchase of DFRs and associated input modules and software for monitoring protective system performance. This equipment is necessary to comply with the requirements prescribed in the ERCOT Nodal Operating Guide, Section 6.

ERCOT requires DFRs at all substations and interchanges with five or more non-radial line terminals and also at all generating stations. Below is a list of the existing and future stations on the DME system that will be required to meet the guideline.

- Denton West Interchange (TMPA; two units required)

- Denton North Substation (TMPA station but DME will own this DFR because DME owns the protection system; two units required)
- Spencer Interchange (may be required within three years; TMPA station but DME will own this DFR because DME will own the protection system; two units required)
- Jim Christal Substation (DME - Substation and Generation; three units required)
- Brinker Substation (DME; three units required)

The Texas Municipal Power Agency (TMPA) has selected the ERLPhase Power Technologies, Ltd. (ERL) Tesla 4000 as the DFR to be installed in TMPA stations. The City has entered into a contract with TMPA to operate, to maintain, and to provide engineering and construction services for TMPA stations in the Denton area. Therefore, DME is required to procure, install, and operate these ERCOT mandated devices for TMPA. DME is also required to install DFRs in several DME stations to comply with the ERCOT requirements. Since these are sophisticated devices that require specific software to program and operate, and use specific input modules to capture data, DME proposes to standardize on and use the same ERL Tesla 4000 for all its compliance needs. Attempting to incorporate diverse DFR device types in one system would be difficult to design and operate and more costly to maintain. The Digital Fault Recorders will be purchased over a three (3) year time period. The price quotation for the Tesla 4000 and the required input modules and software is attached as Exhibit 2.

ERL is the company that manufactures the Tesla 4000 and the necessary input modules. The Tesla 4000 meets the ERCOT guideline that states all fault recording devices shall be synchronized with a GPS-based clock with 2 millisecond timing accuracy. The Tesla 4000 is the only DFR to the knowledge of the DME engineering department that fulfills this guideline (Exhibit 3). ERL sells the Tesla 4000 digital fault recorder and its other products directly and has no other representation for sales. Therefore, ERLPhase Power Technologies, LTD is the sole-source vendor for the Tesla 4000 and is exempt from the requirements of competitive bidding. Section 252.022 of the Local Government Code provides that procurement of commodities and services that are exempt from competitive bidding, if over \$50,000, shall be awarded by the governing body.

### **PRIOR ACTION/REVIEW (COUNCIL, BOARDS, COMMISSIONS)**

On October 9, 2017, the Public Utilities Board recommended approval to forward this item to the City Council for consideration.

### **RECOMMENDATION**

Award the purchase of ERL Tesla 4000 Digital Fault Recorders (DFR) from ERLPhase Power Technologies, Ltd. in the three year not-to-exceed amount of \$293,216.

### **PRINCIPAL PLACE OF BUSINESS**

ERLPhase Power Technologies, Ltd.  
Winnipeg, Canada

### **ESTIMATED SCHEDULE OF PROJECT**

Orders will be placed for the Digital Fault Recorders (DFRs) as needed for the City's substations over the three (3) year period ending October 17, 2020.

## **FISCAL INFORMATION**

The costs for material purchased under the proposed agreement will be funded out of amounts budgeted for specific projects. The work proposed will be in the transmission category. These costs for transmission projects will ultimately be recovered through the Public Utility Commission Transmission Cost of Service Program (TCOS).

## **STRATEGIC PLAN RELATIONSHIP**

The City of Denton's Strategic Plan is an action-oriented road map that will help the City achieve its vision. The foundation for the plan is the five long-term Key Focus Areas (KFA): Organizational Excellence; Public Infrastructure; Economic Development; Safe, Livable, and Family-Friendly Community; and Sustainability and Environmental Stewardship. While individual items may support multiple KFAs, this specific City Council agenda item contributes most directly to the following KFA and goal:

**Related Key Focus Area:   Public Infrastructure**

**Related Goal:               2.3 Promote superior utility services and City facilities**

## **EXHIBITS**

Exhibit 1: Agenda Information Sheet

Exhibit 2: Quote

Exhibit 3: Staff Memo

Exhibit 4: Public Utilities Board Minutes

Exhibit 5: Ordinance

Exhibit 6: Contract

Respectfully submitted:

Karen Smith, 349-7100

Purchasing Manager

For information concerning this acquisition, contact: Chuck Sears at 349-7111.