



# City of Denton

City Hall  
215 E. McKinney Street  
Denton, Texas  
[www.cityofdenton.com](http://www.cityofdenton.com)

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## AGENDA INFORMATION SHEET

**DEPARTMENT:** Materials Management

**CM:** Todd Hileman

**DATE:** October 17, 2017

### **SUBJECT**

Consider adoption of an ordinance awarding a contract to upgrade the Supervisory Control and Data Acquisition (SCADA) network equipment utilized by Denton Municipal Electric to monitor and control substations, as awarded by the State of Texas Department of Information Resources (DIR) through the Go DIRect Program, Contract Number DIR-TSO-2542; providing for the expenditure of funds therefor and providing an effective date. (File 6593 awarded to Presidio Networked Solutions Group, LLC in the not-to-exceed amount of \$292,835.00). The Public Utilities Board recommends approval (4-0).

### **BACKGROUND**

The DME Supervisory Control and Data Acquisition (SCADA) system is used to monitor and control substations and provide real-time load readings to the TMPA Transmission Operator, DME Energy Management Organization's Qualified Scheduling Entity (QSE), Electric Reliability Council of Texas (ERCOT) as well as providing Real-Time system information for DME's Outage Management System. DME also uses the generation short-term load forecast and market operations module to efficiently participate in the ERCOT regional market. DME uses the SCADA system to meet State and Federal regulatory requirements for electric system operation and reliability.

The SCADA system was purchased from Open Systems International (OSI) in November, 2008, refreshed in 2013, and in the process of refresh in 2017. The hardware and software components for the SCADA system should be replaced every four to five years to ensure the highest levels of reliable operation and continued availability of replacement parts in the event of hardware failure. Network hardware upgrades are incorporated into the lifecycle management of the DME's SCADA network, and are included in the Technology Services Five Year plan.

This request has three major components: network switch upgrade, long-range optics, and services.

The upgrade to the current SCADA network will bring the following enhancements:

1. Extend the SCADA network to the Denton Energy Center
2. Upgrade network throughput to 10 Gigabit (GB), up from 1 GB
3. Consolidate smaller, disparate equipment into a common platform which will simplify patching and reduce our maintenance and support requirements from SCADA vendor
4. Resolve limitations related to capacity and service availability that exist on current hardware
5. Separate the firewall, routing, and access switches into separate products, which is recommended as a best practice

6. Better position the SCADA environment for future changes and requirements under NERC critical infrastructure protection (CIP)

If the City elects not to purchase the switch hardware, we can continue to operate in the same manner that we do now, but we will not benefit from Items 2, 5 and 6.

If the City elects not to procure the long-range fiber optics to connect to the Denton Energy Center, there are two alternatives, each with their respective limitations. The first alternative is to use the Communications fiber ring for connectivity. This network was designed for low volume substation connectivity and does not meet the performance requirements for the SCADA network. The second option, that staff explored, is to use a virtual private network (VPN) tunnel over the city network. Due to the various interconnections and additional network hops, this poses a risk in meeting the service level requirements for DME and ERCOT. Due to the age and constraints of the current network design, as well as the limitations of some of the network hardware, Technology Services recommends upgrading the current SCADA equipment with a services engagement.

Funding for this equipment is allocated in the current budget and the equipment is expected to remain in service for 5 to 7 years. The recommended quote from Presidio Networked Solutions Group, LLC which was obtained through the State of Texas Department of Information Resources (DIR) through the Go DIRect Program, meets statutory requirements for competitive bidding, but staff elected to solicit two comparison quotes to ensure that the best value was obtained. A comparison of the total cost is included as Exhibit 2.

#### **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.

The Public Utilities Board approved the last replacement of SCADA network equipment on August 27, 2012. Council approved the replacement on September 11, 2012 in the amount of \$343,590.

#### **RECOMMENDATION**

Staff recommends awarding a contract to upgrade Supervisory Control and Data Acquisition (SCADA) network equipment to Presidio Networked Solutions Group, LLC, in an amount not to exceed \$292,835.00.

#### **PRINCIPAL PLACE OF BUSINESS**

Presidio Networked Solutions Group, LLC  
Lewisville, TX

#### **ESTIMATED SCHEDULE OF PROJECT**

Presidio estimates the total number of hours on the project to be 180, with a completion date no later than January 31, 2018.

#### **FISCAL INFORMATION**

The cost of the equipment and services is budgeted in accounts 604022500.1355.3820 and 840056744.1355.30100.

## **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 facilities**

## **EXHIBITS**

Exhibit 1: Agenda Information Sheet

Exhibit 2: Cost Comparison

Exhibit 3: Public Utilities Board Minutes

Exhibit 4: Ordinance

Respectfully submitted:

Karen Smith, Purchasing Manager

For information concerning this acquisition, contact: Melissa Kraft, 349-7823, Chief Technology Officer