City of Denton

Legislation Details (With Text)

File #:	PUB17-197 **Version:** 1	**Name:**	
Type:	Public Utilities Board		
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On agenda:	10/9/2017	**Final action:**	

Title: Consider recommending 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).

Sponsors:

Indexes:

Code sections:

Attachments: 1. Exhibit 1 - Presidio Quote, 2. Exhibit 2 - Cisco Systems Quote, 3. Exhibit 3 - General DataTech Quote, 4. Exhibit 4 - Cost Comparison

Date	Ver.	Action By	Action	Result

AGENDA INFORMATION SHEET

DEPARTMENT: **Materials Management**

CM/DCM/ACM: **Bryan Langley**

AGENDA DATE **October 9, 2017**

SUBJECT

Consider recommending 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).

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 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 5-year plan.

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

The upgrade to the current SCADA network will bring the following enhancements:
1. Extend 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 our 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 we do not 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 we do not 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 we explored was 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 professional 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.

RECOMMENDATION

SCADA Network Refresh	Presidio	Cisco Systems	General DataTech
Network Equipment Total	$232,193.65	$414,380.00	$265,444.50
Professional Services Total	$34,020.00	$72,000.00	$45,000.00
10% Contingency	$26,621.36	$48,638.00	$31,044.45
Grand Total	**$292,835.00**	**$535,018.00**	**$341,488.95**

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.

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.

PRINCIPAL PLACE OF BUSINESS

Presidio
1955 Lakeway Drive Suite 220
Lewisville, TX 75057

PRIOR ACTION/REVIEW (Council, Boards, Commissions)

The last time the SCADA network equipment was replaced was in 2012, Public Utilities Board approved August 27, 2012 and Council approved September 11, 2012 for $343,590 to replace SCADA network equipment.

FISCAL INFORMATION

The cost of the equipment and professional 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

1.   Presidio Quotes
2.   Cisco Systems Quotes
3.   General DataTech Quotes
4.   Cost Analysis

Respectfully submitted:
Melissa Kraft, 349-7823
Chief Technology Officer

For information concerning this acquisition, contact:

Melissa Kraft, 349-7823
Chief Technology Officer