



## MEMORANDUM

**TO:** Mayor and City Council members

**CC:** Marc A. Ott, City Manager

**FROM:** Larry Weis, General Manager *LW*

**DATE:** April 13, 2015

**SUBJECT:** Additional Information for Item #2 on the April 16, 2015 Council Agenda

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The purpose of this memo is to provide you with additional information for a Recommendation for Council Action (RCA) on the April 16, 2015 Council agenda. This item requests authorization of a contract with Texas Air Systems, LLC, for four heat exchangers required to serve two commercial customers on Austin Energy's Downtown District Cooling (chilled water) system. The total amount for the heat exchanger purchase is \$540,031.

### **Meeting Customers' Construction Schedules**

Heat exchangers serve as the point of delivery for Austin Energy's chilled water service to each customer. As such, they reside in the customer's facility along with Austin Energy's control and revenue meters. Two of the heat exchangers, measuring approximately 8.5' x 4' x 18', will be installed at the Fairmont Hotel site at E. Cesar Chavez and Red River Streets. Two heat exchangers, measuring 7' x 3' x 10', will be installed in an office tower being built at the Green Water site.

Due to the physical size and weight of these four units, they will be shipped directly to the customers' construction sites. The delivery must be coordinated with each customer's construction schedule in order to be set in place after the floor is constructed and before the next level of the building is poured. Both of their schedules are targeting the first week of July for delivery. Since the heat exchangers are custom built according to Austin Energy specifications, a lead time of 10 weeks is required from the date of purchase to delivery, which is the week of April 20, 2015.

### **On-Site Energy Resources**

Austin Energy's On-Site Energy Resources Division constructs, maintains and operates district energy stations or chiller plants. These stations transform electrical energy into thermal energy which is then distributed, via a network of underground pipes, to customers in the form of chilled

water services. The aggregation of loads enables superior efficiencies, reliability, and quality when compared to stand-alone systems. The thermal storage elements within each chilling station enable Austin Energy to shift significant electrical consumption from on-peak to off-peak energy periods.

In this region, 40-45% of the electricity consumed by a typical commercial building goes to powering its air conditioning system. Austin Energy owns and operates three district energy systems serving the Downtown Central Business District, the Domain and Mueller. There are currently 61 customers – nearly 17 million square feet of space – connected to the district energy systems including residential towers, office buildings, hotels, the Austin Convention Center and City Hall. The Downtown and Domain systems provide chilled water services only. Mueller Energy Center provides chilled water to neighboring buildings and chilled water, steam and on-site generated electricity to the Dell Children’s Medical Center.

The benefits of district energy to chilled water customers include reduced construction/capital costs and less space dedicated to onsite equipment, extraordinary reliability, and simple, low risk operations. Benefits to Austin Energy and the City of Austin include having a valuable tool for economic development, providing revenue from long term service agreements, and advancement of environmental stewardship through peak demand reduction. All electric rate payers benefit from reduced power supply adjustment and regulatory charges due to the electrical demand management feature provided by the district cooling system.

The cost of the service connection for each customer, including these heat exchangers, is embedded in their contracted chilled water rate and is recovered over the life of the chilled water service agreement.