



**City of Denton  
DRAFT MINUTES  
PUBLIC UTILITIES BOARD**

City Hall  
215 E. McKinney Street  
Denton, Texas  
www.cityofdenton.com

**Monday, April 23, 2018**

**6:00 pm**

**City Council Work Session Room**

After determining that a quorum of the Public Utilities Board of the City of Denton, Texas is present, the Chair of the Public Utilities Board will thereafter convene into an open meeting on Monday, April 23, 2018 at 6:01 p.m. in the Council Work Session Room at City Hall, 215 E. McKinney Street, Denton, Texas

**Board Members: Chair Randy Robinson, Lilia Bynum, Allen Bishop, Charles Jackson and Deb Armintor**

**Ex Officio Members: Todd Hileman, City Manager and Mario Canizares, Assistant City Manager**

**Absent: Vice Chair Susan Parker and Brendan Carroll**

**WORK SESSION**

**A. PUB18-068 - Receive a report and hold a discussion regarding the FY 2017 water audit.**

Haley Salazar gave the presentation regarding the water audit. A water audit is where staff takes all the water that is produced and subtract out how much water is sold and captured in the billing system. The difference that is left over is called non-revenue water. There are several reasons for having non-revenue water that include but not limited to fire hydrant use, system breaks and leaks, data and meter errors and theft. Analyzing non-revenue water is good for a starting point, budgeting, identifying potential concerns and operation decision making.

Salazar went on to talk about benchmarking considerations. Some of those considerations include the size of the system, infrastructure age, audit validation and differences in unbilled authorized consumption across utilities.

Types of non-revenue water include unbilled authorized consumption which an example is firefighting. Apparent loss is water that wasn't captured in the billing system but did go through the meter an example of that is theft. On occasion residents may have a leak where water is passed through the system but not charged or forgiven. Lastly there is real loss with an example of main breaks.

For benchmarking the Water Development Board and the American Water Works Association (AWWA) looks at three different performance indicators. Those are real loss, apparent loss and the infrastructure leakage index.

Salazar then showed a chart of how the water audit tree works and looks.

Real loss and system health are explained as main breaks and leakage that will show staff where capital improvements need to be spent. The water audit helps to estimate their costs and gauge system health. Denton's FY2017 losses were 531MG which is 8.5 percent.

Apparent loss and fiscal health are mostly due to customer meter inaccuracies. The meters become more inaccurate the longer they are installed. Apparent loss is much more expensive than real loss. Denton's FY2017 losses were 197 MG which is 3.1 percent.

Lastly the infrastructure leakage index is the ratio of the theoretical minimum leakage a system can have to a systems real loss. Denton's FY2017 losses were 2.07. The target ranges were shown as:

1-3 Water scare/no tolerance for rate increase

3-5 Water supply is sufficient for long term/public tolerance to rate increase

5-8 Water is inexpensive and plentiful

>8 Not recommended

<1 Not accepted for benchmarking

Salazar showed a graph of where Denton falls in region C.

To summarize the reason to audit is to help gauge how our water resources and how efficiently our water resources are turned into income. The results help drive management decisions on leak detection, system reinvestment and meter accuracies.

Board Member Armintor asked about the meters and when they are first installed, Salazar stated as they age they become slower at metering the water. Meters are replaced on about a fourteen year cycle.

Board Member Jackson asked the method for breaking down the non-revenue water into those three categories. Salazar further explained the categories of unbilled, apparent loss and real loss.

Armintor asked about protocol for high bills to be forgiven or policies. There was some explanation by Salazar and Bryan Langley further explained that water that is produced and paid for then passed through the meter is billed out. Staff will bring back a report regarding this subject.

Chair Robinson asked how this audit compares to our last audits. Salazar answered they do fluctuate but as long as it says under 15 percent that is what is expected by the Water Board and AWWA, currently at 12 percent.

## **CLOSED MEETING**

- A. PUB18-075 -**Deliberations Regarding Certain Public Power Utilities: Competitive Matters – Under Texas Government Code Section 551.086; Consultation with Attorneys - Under Texas Government Code Section 551.071.

Discuss and deliberate strategies and opportunities for the City to acquire natural gas for the DEC and enter into agreements regarding the same; receive a presentation from staff regarding public power competitive and financial matters for the purchase of natural gas under an existing Base Contract for the Purchase and Sale of Natural Gas with Enterprise Products, LLC, ("Enterprise Base Contract") for the operation of the Denton Energy Center ("DEC"); and, provide recommendations to City Council on the acquisition for natural gas for the DEC and the purchase of natural gas under the Enterprise Base Contract. Consultation with the City's attorneys regarding legal issues associated with the agreements described above where discussion of these legal matters in an open meeting would conflict with the duty of the City's attorneys to the City of Denton and the Denton City Council under the Texas Disciplinary Rules of Professional Conduct of the State Bar of Texas.

## **REGULAR MEETING**

### **1. CONSENT AGENDA**

- A. **PUB18-023** - Consider recommending adoption of an ordinance of the City Council of the City of Denton, Texas adopting revisions to the Denton Municipal Electric - Energy Risk Management Policy; and providing an effective date.
- B. **PUB18-042** - Consider recommending approval of an ordinance approving a pipeline crossing contract by and between the City of Denton, Texas and the Kansas City Southern Railway Company relating to the location of a City water pipeline within the railroad right-of-way, located at the railroad's intersection with South Bonnie Brae at Mile Post D103.24 Alliance Subdivision, within the County and City of Denton, Texas; authorizing the City Manager to execute the Agreement; authorizing the expenditure of funds therefore; and providing an effective date. (North-South 42-inch Water Transmission Main project - Phase 2)
- C. **PUB18-071** - Consider recommending adoption of an ordinance of the City of Denton, Texas, a Texas home-rule municipal corporation, authorizing the City Manager to execute a contract for Odor Neutralizer Chemicals with Probe America, Inc.; providing for the expenditure of funds therefor; and providing an effective date (RFP 6651- awarded to Probe America, Inc., in the three (3) year not-to-exceed amount of \$130,000).

Board Member Bynum pulled this item. Bynum asked if we have used this before. Ethan Cox answered we have there are two layers of our odor controls. First is the perimeter where a network of tubes spray into the air. This is the odor control that is put into the water trucks that is used on the working face to try and neutralize the odors.

Bynum is concerned about chemicals transferring to water and how they may affect the environment, animals and humans. Cox will get a report on this and bring it back.

Armintor asked how bad the smell would be without this. Cox there is an odor control requirement in our TCEQ permit.

Bishop asked if the chemicals are approved by EPA. Cox will clarify and bring back.

This item was pulled and tabled until the chemical information is added.

- D. **PUB18-073** - Consider recommending adoption of an ordinance of the City of Denton, Texas, a Texas home-rule municipal corporation, rejecting any and all competitive bids under IFB 6755 for the physical natural gas supply to provide fuel for the Denton Energy Center; and providing an effective date (IFB 6755).

**There was a motion by Board Member Jackson with a second by Board Member Bishop to approve the consent agenda items A, B and D. Vote 5-0 approved.**

### **2. ITEMS FOR INDIVIDUAL CONSIDERATION**

- A. **PUB18-066** - Consider approval of the Public Utilities Board Meeting minutes of April 9, 2018.

**Approved.**

- B. PUB18-072** - Consider recommending adoption of an ordinance of the City of Denton, Texas, a Texas home-rule municipal corporation, authorizing the City Manager to execute a contract for the supply of emission system reducing agent (ammonia) for the Denton Energy Center with Southern Ionics, Inc.; providing for the expenditure of funds therefor; and providing an effective date (IFB 6701- awarded to Southern Ionics, Inc., in the three (3) year not-to-exceed amount of \$1,287,772.50).

Chris Lutrick gave this presentation.

Topics of this presentation will include:

- What is ammonia,
- What is the function of Aqua Ammonia at the DEC
- Storage and handling of Aqua Ammonia
- Emergency Response
- Bid Summary

Ammonia (NH<sub>3</sub>) was defined for the chemical properties as a colorless gas with a characteristic pungent smell. It is a naturally occurring compound that is present in nature and the human body. It readily dissolves in water. Anhydrous Ammonia is 99 percent ammonia. Aqueous Ammonia is a solution of water and ammonia.

Industrial and household uses include Anhydrous Ammonia used worldwide as an agriculture fertilizer. Ammonia Solutions (5 to 10 percent) are used as household and industrial cleaners. Aqueous Ammonia is widely used as reducing agents in Selective Catalytic Reduction Systems (SCR).

Aqueous Ammonia (AA) in SCR. SCR systems use a chemical reaction to reduce in part Nitrogen Oxides (NO<sub>x</sub>) produced by combustion engines. The three main components of the system are catalyst, reducing agent and heat. The AA is introduced into the exhaust system where it is mixed and heated prior to entering the catalyst housing. The chemical interaction of the three main components effectively reduces NO<sub>x</sub> down to nitrogen and water. The DEC SCR system utilizes AA as the reducing agent. AA will be consumed at a rate of between 18.5 and 14.5 gallons per engine hour. An automated system will ensure that the AA is dosed properly. Photos were shown of the AA storage and handling at the DEC.

The DEC Plant's AA storage capacity is 30,000 gallons (172 plant hours). The AA will be stored in a tank designed to store ammonia. The AA will be delivered via tanker truck. The plant has offloading facilities to properly transfer AA from the tanker truck to the DEC tank.

The emergency response plan is in place. The plan addresses AA spill prevention and containment countermeasures. The AA storage tank concrete containment dike has sufficient capacity to contain all tank contents. The plant has a tanker offloading area designed to contain any discharges that might take place during transfer. Emergency response will be provided by the Denton Fire Department with back up by an environmental contractor if warranted. Any non-contained discharges greater than 25 gallons would be reported to TCEQ.

Summary of bids includes the purchasing method used was by invitation for bid. This would be a three year supply of the AA. Two bids were received. The bid specifics were discussed with staff recommending the lowest cost bid that was submitted by Southern Ionics, Inc. The plant's chemical budget will cover the AA expense.

Armintor stated that this week the testing will begin on the DEC, Lutrick stated the testing is going on now. Armintor added that there is an ammonia test that will be available on site at the end of the day. Armintor asked how the ammonia testing happens. Lutrick answered that the labs come to the DEC with all the testing equipment included. Leads will be run out to the exhaust stacks to perform the testing. As the probes are in the stacks they will be gathering data for testing to generate a report. The turnaround for the report is fairly quick. This will be shared with this Board and Council.

Armintor asked about emergency preparedness that would include the airport. Lutrick stated they have collaborated with the airport on some items, but this ammonia is a liquid form that would be contained not like a refrigeration leak.

**There was a motion by Board Member Bishop with a second by Board Member Jackson to approve. Vote 5-0.**

- C. **PUB18-074** - Consider recommending approval of an ordinance affirming the authority of the City Manager, or his designee, to enter into a purchase of natural gas for operation of the Denton Energy Center after completion of the project's test phase.

George Morrow talked about this ordinance that would affirm and authorize the City Manager to execute an agreement for purchasing natural gas for the commercial operation of the DEC. Previously viewed and recommended a gas agreement for the DEC prior to commercial operation this is the piece that would go beyond that time. The commercial operation is to begin around June 1.

Armintor asked why the City Manager would make the agreement instead of going before Council. Morrow answered it would be taken to Council but there may be a number of short term and long term transactions. There is authority under the risk management policy for the City Manager.

Todd Hileman stated that the terms are set this would be authorizing the agreement after Council approves it. There was some further discussion.

**There was a motion by Board Member Jackson with a second by Board Member Bishop to approve. Vote 4-1 approved.**

- D. **PUB18-069** - ACM Update:
1. Future Agenda Items
  2. Matrix

### **CONCLUDING ITEMS**

Under Section 551.042 of the Texas Open Meetings Act, respond to inquiries from the Public Utilities Board or the public with specific factual information or recitation of policy, or accept a proposal to place the matter on the agenda for an upcoming meeting AND Under Section 551.0415 of the Texas Open Meetings Act, provide reports about items of community interest regarding which no action will be taken, to include: expressions of thanks, congratulations, or condolence; information regarding holiday schedules; an honorary or salutary recognition of a public official, public employee, or other citizen; a reminder about an upcoming event organized or sponsored by the governing body; information regarding a social, ceremonial, or community event organized or sponsored by an entity other than the governing body that was attended or is scheduled to be attended by a member of the governing body or an official or employee of the municipality; or an announcement involving an imminent threat to the public health and safety of people in the municipality that has arisen after the posting of the agenda

**Adjournment: 7:26pm**