



City of Denton

City Hall
215 E. McKinney St.
Denton, Texas 76201
www.cityofdenton.com

Meeting Agenda Public Utilities Board

Monday, May 19, 2025

9:00 AM

Council Work Session Room

REGISTRATION GUIDELINES FOR ADDRESSING THE PUBLIC UTILITIES BOARD

Citizens will be able to participate in the following way:

- eComment – The agenda was posted online at <https://tx-denton.civicplus.com/242/Public-Meetings-Agendas>. Once the agenda is posted, a link to make virtual comments using the eComment module will be made available next to the meeting listing on the Upcoming Events Calendar. Using eComment, Individuals may indicate support or opposition and submit a brief comment about a specific agenda item. eComments may be submitted up until the start of the meeting at which time the ability to make an eComment will be closed. eComments will be sent directly to members of the Public Utilities Board immediately upon submission and recorded by the Secretary into the Minutes of the Meeting.

After determining that a quorum is present, the Public Utilities Board of the City of Denton, Texas will convene in a Regular Meeting on Monday, May 19, 2025, at 9:00 a.m. in the Council Work Session Room at City Hall, 215 E. McKinney Street, Denton, Texas at which the following items will be considered:

REGULAR MEETING

1. PRESENTATIONS FROM MEMBERS OF THE PUBLIC

This section of the agenda permits a person to make comments regarding public business on items as listed on the agenda. Each speaker will be allowed a maximum of four (4) minutes. Such person(s) shall have registered under the REGISTRATION GUIDELINES FOR ADDRESSING THE PUBLIC UTILITIES BOARD detailed at the beginning of this agenda. Registration is required prior to the time this agenda item is read into the record.

2. CONSENT AGENDA

Each of the items on the Consent Agenda is recommended by the Staff and approval thereof will be strictly on the basis of the Staff recommendations. Approval of the Consent Agenda authorizes the City Manager or designee to implement each item in accordance with the Staff recommendations. The Public Utilities Board has received background information and has had an opportunity to raise questions regarding these items prior to consideration.

Listed below are bids, purchase orders, contracts, and other items to be approved for payment or other action under the Consent Agenda (Agenda Items A – C). This listing is provided on the Consent Agenda to allow Public Utilities Board Members to discuss or withdraw an item prior to approval of the Consent Agenda. If no items are pulled, the Consent Agenda Items will be approved with one motion. If items are pulled for separate discussion, they may be considered as the first items following approval of the Consent Agenda.

- A. [PUB25-068](#) Consider recommending adoption of an ordinance of the City of Denton, a Texas

home-rule municipal corporation, authorizing the City Manager to execute a Professional Services Agreement with Raftelis Financial Consultants, Inc., for the Water, Wastewater, and Drainage Utilities Cost of Service Study for the Water Utilities Department as set forth in the contract; providing for the expenditure of funds therefor; and providing an effective date (RFQ 8738 - Professional Services Agreement for a Cost of Service Study awarded to Raftelis Financial Consultants, Inc., in the five (5) year not-to-exceed amount of \$689,803.00).

Attachments: [Exhibit 1 - Agenda Information Sheet](#)
 [Exhibit 2 - Evaluation Sheet](#)
 [Exhibit 3 - Ordinance and Contract](#)

- B. [PUB25-074](#) Consider recommending adoption of an ordinance of the City of Denton, a Texas home-rule municipal corporation, authorizing the City Manager to execute a contract with Flowpoint Environmental Systems, Inc., for a bulk-fill station for the Water Utilities Department; providing for the expenditure of funds therefor; and providing an effective date (RFP 8750 - awarded to Flowpoint Environmental Systems, Inc., for one (1) year, with the option for four (4) additional one (1) year extensions, in the total five (5) year not-to-exceed amount of \$94,000.00).

Attachments: [Exhibit 1 - Agenda Information Sheet](#)
 [Exhibit 2 - Pricing Evaluation](#)
 [Exhibit 3 - Ordinance and Contract](#)

- C. [PUB25-075](#) Consider recommending adoption of an ordinance of the City of Denton, a Texas home-rule municipal corporation, authorizing the City Manager to execute a contract with Samsara Inc. through the Sourcewell Cooperative Purchasing Network Contract No. 020221, for the Samsara Camera Software System for the Solid Waste and Recycling Department; authorizing the expenditure of funds therefor; and providing an effective date (File 8679 - awarded to Samsara Inc., for one (1) year, with the option for four (4) additional one (1) year extensions, in the total five (5) year not-to-exceed amount of \$434,929.00).

Attachments: [Exhibit 1 - Agenda Information Sheet](#)
 [Exhibit 2 - Ordinance](#)

3. ITEMS FOR INDIVIDUAL CONSIDERATION

- A. [PUB25-066](#) Consider approval of the April 28, 2025, minutes.

Attachments: [4.28.2025 PUB Minutes](#)

- B. [PUB25-071](#) Consider approval of the May 5, 2025, minutes.

Attachments: [5.5.25 PUB No Quorum](#)

- C. [PUB25-039](#) Consider recommending adoption of an ordinance directing the publication of Notice of Intention to issue \$46,535,000 in principal amount of Certificates of Obligation of the City of Denton for General Government and Solid Waste projects; and providing an effective date.

Attachments: [Exhibit 1. Agenda Information Sheet](#)

[Exhibit 2. Ordinance](#)

[Exhibit 3. Presentation](#)

- D. [PUB25-040](#) Consider recommending adoption of an ordinance directing the publication of Notice of Intention to issue \$207,515,000 in principal amount of Certificates of Obligation of the City of Denton for Waterworks and Wastewater System and Electric System projects; and providing an effective date.

Attachments: [Exhibit 1. Agenda Information Sheet](#)

[Exhibit 2. Ordinance](#)

[Exhibit 3. Presentation](#)

- E. [PUB25-073](#) Management Reports
1. PUB25-036 Inquiry Memo
 2. 6590-097 - Memo for PUB
 3. 8662 - Memo for PUB
 4. Future Agenda Items
 5. New Business Action Items

Attachments: [1. PUB25-036 Inquiry Memo](#)

[2. 6590-097 - Memo for PUB](#)

[3. 8662 - Memo for PUB](#)

[4. Future Agenda Items](#)

[5. New Business Action Items](#)

4. CONCLUDING ITEMS

A. 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.

Following the completion of the Regular Meeting, the Public Utilities Board will convene in a Work Session at which the following items will be considered:

WORK SESSION

- A. [PUB24-208](#) Receive a report, hold a discussion, and give staff direction regarding updates to the Denton Renewable Resource Plan.

Attachments:[Exhibit 1 - Agenda Information Sheet](#)[Exhibit 2 - Resolution No. 18-085](#)[Exhibit 3 - Resolution No. 20-249](#)[Exhibit 4 - Guide to Making Claims About Your Solar Power Use \(EPA\)](#)[Exhibit 5 - Letter from Energy Risk Consulting](#)[Exhibit 6 - Presentation](#)

CERTIFICATE

I certify that the above notice of meeting was posted on the official website (<https://tx-denton.civicplus.com/242/Public-Meetings-Agendas>) and bulletin board at City Hall, 215 E. McKinney Street, Denton, Texas, on May 15, 2025, in advance of the 72-hour posting deadline, as applicable, and in accordance with Chapter 551 of the Texas Government Code.

OFFICE OF THE CITY SECRETARY

NOTE: THE CITY OF DENTON'S DESIGNATED PUBLIC MEETING FACILITIES ARE ACCESSIBLE IN ACCORDANCE WITH THE AMERICANS WITH DISABILITIES ACT. THE CITY WILL PROVIDE ACCOMMODATION, SUCH AS SIGN LANGUAGE INTERPRETERS FOR THE HEARING IMPAIRED, IF REQUESTED AT LEAST 48 HOURS IN ADVANCE OF THE SCHEDULED MEETING. PLEASE CALL THE CITY SECRETARY'S OFFICE AT 940-349-8309 OR USE TELECOMMUNICATIONS DEVICES FOR THE DEAF (TDD) BY CALLING 1-800-RELAY-TX SO THAT REASONABLE ACCOMMODATION CAN BE ARRANGED.



City of Denton

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215 E. McKinney St.
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Legislation Text

File #: PUB25-068, **Version:** 1

AGENDA CAPTION

Consider recommending adoption of an ordinance of the City of Denton, a Texas home-rule municipal corporation, authorizing the City Manager to execute a Professional Services Agreement with Raftelis Financial Consultants, Inc., for the Water, Wastewater, and Drainage Utilities Cost of Service Study for the Water Utilities Department as set forth in the contract; providing for the expenditure of funds therefor; and providing an effective date (RFQ 8738 - Professional Services Agreement for a Cost of Service Study awarded to Raftelis Financial Consultants, Inc., in the five (5) year not-to-exceed amount of \$689,803.00).



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AGENDA INFORMATION SHEET

DEPARTMENT: Procurement
ACM: Christine Taylor
DATE: May 19, 2025

SUBJECT

Consider recommending adoption of an ordinance of the City of Denton, a Texas home-rule municipal corporation, authorizing the City Manager to execute a Professional Services Agreement with Raftelis Financial Consultants, Inc., for the Water, Wastewater, and Drainage Utilities Cost of Service Study for the Water Utilities Department as set forth in the contract; providing for the expenditure of funds therefor; and providing an effective date (RFQ 8738 – Professional Services Agreement for a Cost of Service Study awarded to Raftelis Financial Consultants, Inc., in the five (5) year not-to-exceed amount of \$689,803.00).

INFORMATION/BACKGROUND

The Water, Wastewater, and Drainage Utilities has contracted for outside consulting services to perform cost-of-service and rate design analyses approximately every five (5) years. Contracts with our wholesale customers also require a rate study to be performed by an outside consultant within the same timeframe. During interim years, in-house financial staff members perform these studies. These consulting services provide expertise in reviewing all departmental costs (both direct and indirect) and allocation processes, which helps ensure rates are consistent across all rate classes. Although separate rate studies for Water, Wastewater, and Drainage could be accomplished, the close operational relationship between the three (3) utilities makes it technically and financially desirable to complete the studies in a single, coordinated effort.

Their project team will consist of John Mastracchio as project director, Angie Flores as the project manager, and Christopher Williams will serve as Technical Lead/Assistant Project Manager. Additional analytical support will be provided by supporting staff. Raftelis Financial Consultants, Inc., has been involved in numerous water and wastewater cost-of-service analyses across the United States and Texas, including previously for Denton.

Project Description	Estimated Expenditure
Water/Wastewater, Drainage Utilities Study	\$235,093
Annual Maintenance Water/Wastewater	196,000
Annual Maintenance Drainage	196,000
10% Contingency	62,710
Total	\$689,803

Request for Qualifications (RFQ) for professional surveying services was sent to 417 prospective firms, including 14 Denton firms, for these services. In addition, the RFQ was placed on the Procurement website for prospective respondents to download, and advertised in the local newspaper. Four (4) statements of

qualifications (SOQ) were received. The SOQs were evaluated based on published criteria including proposed project scope, content, and sample software model, past performance, experience and qualifications, and schedule. Based upon this evaluation, the recommended award is to Raftelis Financial Consultants, Inc., and is determined to be the most qualified firm for the City.

RECOMMENDATION

Award a contract with Raftelis Financial Consultants, Inc., for the Water, Wastewater, and Drainage Utilities Cost of Service Study for the Utilities Department, in a five (5) year not-to-exceed amount of \$689,803.

PRINCIPAL PLACE OF BUSINESS

Raftelis Financial Consultants, Inc.
Austin, TX

ESTIMATED SCHEDULE OF PROJECT

This is a five (5) year contract.

FISCAL INFORMATION

These services will be funded from Water Project account 630557517.1365.30100. Requisition #170003 has been entered into the Purchasing software system in the amount of \$235,093. The budgeted amount for this item is \$689,803.

EXHIBITS

Exhibit 1: Agenda Information Sheet
Exhibit 2: Evaluation Sheet
Exhibit 3: Ordinance and Contract

Respectfully submitted:
Lori Hewell, 940-349-7100
Purchasing Manager

For information concerning this acquisition, contact: Azura Kerr, 940-349-7718.

Legal point of contact: Marcella Lunn at 940-349-8333.

Exhibit 2
RFQ 8738 - Evaluation Sheet for Water/Wastewater Drainage Utilities Cost of Service and Rate Design Study

Respondent's Business Name:		Raftelis Financial Consultants, Inc.	Carollo Engineers, Inc.	Willdan Financial Services	Baker Tilly Advisory Group, LP
Principal Place of Business (City and State):		Austin, TX	Dallas, TX	Plano, TX	Madison, WI
Item #	Scoring Criteria				
1	Proposed project scope, content, and sample software model - 25%	21.67	19.17	19.17	17.50
2	Past performance and experience on projects, including municipal experience, rate design, and mod - 30%	26.00	24.00	22.00	19.00
3	The Respondent's experience, qualifications, and key personnel are available for this project - 25%	23.33	18.33	17.50	15.83
4	Schedule and employee hours presented for this service as defined in the scope of work - 20%	18.00	14.00	10.00	12.00
Total Score:		89.00	75.50	68.67	64.33

ORDINANCE NO. _____

AN ORDINANCE OF THE CITY OF DENTON, A TEXAS HOME-RULE MUNICIPAL CORPORATION, AUTHORIZING THE CITY MANAGER TO EXECUTE A PROFESSIONAL SERVICES AGREEMENT WITH RAFTELIS FINANCIAL CONSULTANTS, INC., FOR THE WATER, WASTEWATER, AND DRAINAGE UTILITIES COST OF SERVICE STUDY FOR THE WATER UTILITIES DEPARTMENT AS SET FORTH IN THE CONTRACT; PROVIDING FOR THE EXPENDITURE OF FUNDS THEREFOR; AND PROVIDING AN EFFECTIVE DATE (RFQ 8738 – PROFESSIONAL SERVICES AGREEMENT FOR A COST OF SERVICE STUDY AWARDED TO RAFTELIS FINANCIAL CONSULTANTS, INC., IN THE FIVE (5) YEAR NOT-TO-EXCEED AMOUNT OF \$689,803.00).

WHEREAS, Raftelis Financial Consultants, Inc., the professional services provider (the “Provider”) set forth in this ordinance, is being selected as the most highly qualified on the basis of its demonstrated competence and qualifications to perform the proposed professional services; and

WHEREAS, this procurement was undertaken as part of the City’s governmental function; and

WHEREAS, the fees under the proposed contract are fair and reasonable and are consistent with, and not higher than, the recommended practices and fees published by the professional associations applicable to the Provider’s profession, and such fees do not exceed the maximum provided by law; NOW, THEREFORE,

THE COUNCIL OF THE CITY OF DENTON HEREBY ORDAINS:

SECTION 1. The City Manager, or their designee, is authorized to enter into the service contract attached hereto with Raftelis Financial Consultants, Inc., for the Water, Wastewater, and Drainage Utilities Cost of Service Study for the Water Utilities Department.

SECTION 2. The City Manager, or their designee, is authorized to expend funds as required by the attached contract.

SECTION 3. The City Council of the City of Denton, Texas expressly delegates the authority to take any actions that may be required or permitted to be performed by the City of Denton under this ordinance to the City Manager of the City of Denton, or their designee.

SECTION 4. The findings in the preamble of this ordinance are incorporated herein by reference.

SECTION 5. This ordinance shall become effective immediately upon its passage and approval.

The motion to approve this ordinance was made by _____ and seconded by _____. This ordinance was passed and approved by the following vote [____ - ____]:

	Aye	Nay	Abstain	Absent
Mayor Gerard Hudspeth:	_____	_____	_____	_____
Vicki Byrd, District 1:	_____	_____	_____	_____
Brian Beck, District 2:	_____	_____	_____	_____
Paul Meltzer, District 3:	_____	_____	_____	_____
Joe Holland, District 4:	_____	_____	_____	_____
Brandon Chase McGee, At Large Place 5:	_____	_____	_____	_____
Jill Jester, At Large Place 6:	_____	_____	_____	_____

PASSED AND APPROVED this the _____ day of _____, 2025.

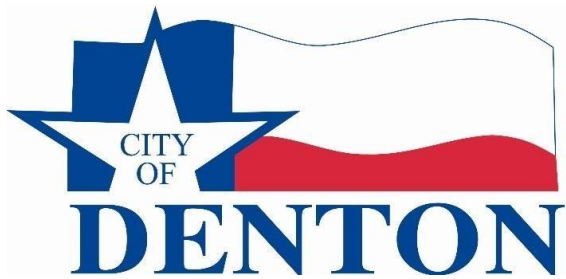
GERARD HUDSPETH, MAYOR

ATTEST:
LAUREN THODEN, CITY SECRETARY

BY: _____

APPROVED AS TO LEGAL FORM:
MACK REINWAND, CITY ATTORNEY

Marcella Lunn
BY: _____



Docusign City Council Transmittal Coversheet

RFQ	8738
File Name	water/Wastewater & Drainage Utilities Cost of Service/Rate Study
Purchasing Contact	Christina Dormady
City Council Target Date	
Piggy Back Option	No
Contract Expiration	
Ordinance	

**PROFESSIONAL SERVICES AGREEMENT
FOR CONSULTING SERVICES
FILE 8738**

STATE OF TEXAS §

COUNTY OF DENTON §

THIS AGREEMENT (the “Agreement”) is made and entered into on _____, by and between the City of Denton, Texas, a Texas municipal corporation, with its principal office at 215 East McKinney Street, Denton, Denton County, Texas 76201, hereinafter called “OWNER” and Raftelis Financial Consultants, Inc, with its corporate office at 227 W Trade St #1400, Charlotte, NC 28202, hereinafter called “CONSULTANT,” acting herein, by and through their duly authorized representatives.

WITNESSETH, that in consideration of the covenants and agreements herein contained, the parties hereto do mutually agree as follows:

**ARTICLE I
CONSULTANT AS INDEPENDENT CONTRACTOR**

The OWNER has selected CONSULTANT on the basis of demonstrated competence and qualifications to perform the services herein described for a fair and reasonable price pursuant to Chapter 2254 of the Texas Government Code. The OWNER hereby contracts with the CONSULTANT as an independent contractor and not as an employee, and as such, the OWNER will not assert control over the day-to-day operations of the CONSULTANT. The CONSULTANT is customarily engaged to provide services as described herein independently and on a nonexclusive basis in the course of its business. This Agreement does not in any way constitute a joint venture between OWNER and CONSULTANT. The CONSULTANT hereby agrees to perform the services described herein based on the skills required for the scope of work in connection with the Project as stated in the sections to follow, with diligence and in accordance with the highest professional standards customarily obtained for such services in the State of Texas, as of the time and at the location the services are provided. CONSULTANT may rely on all data and information provided by or on behalf of the OWNER. The professional services set out herein are in connection with the following described project:

The Project shall include, without limitation, Water/Wastewater Drainage Utilities Cost of Service and Rate Design Study, as described in **Exhibit A**, which is on file at the purchasing office and incorporated herein (the “Project”).

**ARTICLE II
SCOPE OF BASIC SERVICES**

The CONSULTANT shall perform the following services in a professional manner:

Contract 8738

- A. The CONSULTANT shall perform all those services as necessary and as described in the OWNER's RFQ 8738 – Water/Wastewater Drainage Utilities Cost of Service and Rate Design Study, which is on file at the purchasing office and made a part hereof as **Exhibit A** as if written word for word herein.
- B. To perform all those services set forth in CONSULTANT's proposal, which proposal is attached hereto and made a part hereof as **Exhibit B** as if written word for word herein.
- C. CONSULTANT shall perform all those services set forth in individual task orders, as described in **Exhibit B**, which shall be attached to this Agreement and made a part hereof.
- D. If there is any conflict between the terms of this Agreement and the exhibits attached to this Agreement, the terms and conditions of this Agreement will control over the terms and conditions of the attached exhibits or task orders.

ARTICLE III **ADDITIONAL SERVICES**

Additional services to be performed by the CONSULTANT, if authorized by the OWNER, which are not included in the above-described Basic Services, may be negotiated as needed, per rates included in **Exhibit C**.

- A. Preparing applications and supporting documents for government grants, loans, or planning advances and providing data for detailed applications.
- B. Preparing data and reports for assistance to OWNER in preparation for hearings before regulatory agencies, courts, arbitration panels or mediator, giving testimony, personally or by deposition, and preparations therefore before any regulatory agency, court, arbitration panel or mediator.
- C. Assisting OWNER in preparing for, or appearing at litigation, mediation, arbitration, dispute review boards, or other legal and/or administrative proceedings in the defense or prosecution of claims disputes with Contractor(s).
- D. Assisting OWNER in the defense or prosecution of litigation in connection with or in addition to those services contemplated by this AGREEMENT. Such services, if any, shall be furnished by CONSULTANT on a fee basis negotiated by the respective parties outside of and in addition to this AGREEMENT.
- E. Visits to the site in excess of the number of trips included in **Exhibit B**.
- F. Preparing statements for invoicing or other documentation for billing other than for the standard invoice for services attached to this professional services agreement.

ARTICLE IV

TIME OF COMPLETION

CONSULTANT is authorized to commence work under this contract upon execution of this AGREEMENT. CONSULTANT shall perform and complete its obligations herein in a prompt and continuous manner, so as to not delay the completion of the Project in accordance with the schedules as described in **Exhibit B**. The contract shall remain effective for five (5) year period.

The Contract shall commence upon the issuance of a Notice of Award/Issuance of Purchase Order by the City of Denton. At the sole option of the City of Denton, the Contract may be further extended as needed, not to exceed a total of six (6) months..

ARTICLE V

COMPENSATION

A. COMPENSATION TERMS:

1. “Subcontract Expense” is defined as expenses incurred by the CONSULTANT in employment of others in outside firms for services related to this agreement.
2. “Direct Non-Labor Expense” is defined as that expense for any assignment incurred by the CONSULTANT for supplies, transportation and equipment, travel, communications, subsistence, and lodging away from home, and similar incidental expenses in connection with that assignment.

B. BILLING AND PAYMENT: For and in consideration of the professional services to be performed by the CONSULTANT herein, the OWNER agrees to pay, based on the cost estimate detail at an hourly rate shown in **Exhibit C** which is attached hereto and made a part of this Agreement as if written word for word herein, a total fee, including reimbursement for direct non-labor expenses not to exceed **\$689,803**.

Partial payments to the CONSULTANT will be made on the basis of detailed monthly statements rendered to and approved by the OWNER through its City Manager or his designee; however, under no circumstances shall any monthly statement for services exceed the value of the work performed at the time a statement is rendered.

Nothing contained in this Article shall require the OWNER to pay for any work which is unsatisfactory, as reasonably determined by the City Manager or his designee, or which is not submitted in compliance with the terms of this Agreement. The OWNER shall not be required to make any payments to the CONSULTANT when the CONSULTANT is in default under this Agreement.

It is specifically understood and agreed that the CONSULTANT shall not be authorized to undertake any work pursuant to this Agreement which would require additional payments by the OWNER for any charge, expense, or reimbursement above the maximum not to exceed fee as stated, without first having obtained written authorization from the OWNER. The CONSULTANT shall not proceed to perform the services listed in Article III “Additional Services,” without obtaining prior written authorization from the OWNER.

Contract 8738

- C. **ADDITIONAL SERVICES:** For additional services authorized in writing by the OWNER in Article III, the CONSULTANT shall be paid based on the Schedule of Charges at an hourly rate shown in **Exhibit C**. Payments for additional services shall be due and payable upon submission by the CONSULTANT and approval by the City staff, and shall be in accordance with subsection B hereof. Statements shall not be submitted more frequently than monthly.
- D. **PAYMENT:** If the OWNER fails to make payments due the CONSULTANT for services and expenses within thirty (30) days after receipt of the CONSULTANT's undisputed statement thereof, the amounts due the CONSULTANT will be paid interest in accordance with the Texas Government Code 2251.025. Additionally, the CONSULTANT may, after giving seven (7) days' written notice to the OWNER, suspend services under this Agreement until the CONSULTANT has been paid in full all amounts due for services, expenses, and charges. Nothing herein shall require the OWNER to pay the late charge if the OWNER reasonably determines that the work is unsatisfactory, in accordance with this Article V, "Compensation," there is a bona fide dispute concerning the amount due, or the invoice was not mailed to the address or in the form as described in this Agreement. The OWNER will notify CONSULTANT of any disputes within twenty-one (21) days of receipt of the invoice.
- E. **Invoices** shall be sent directly to the City of Denton Accounts Payable Department, 215 E McKinney St, Denton, TX, 76201-4299. A pro-forma invoice shall be sent to the contract administrator. It is the intention of the City of Denton to make payment on completed orders within thirty days after receipt of invoice or items; whichever is later, unless unusual circumstances arise. **Invoices must be fully documented as to labor, materials, and equipment provided, if applicable, and must reference the City of Denton Purchase Order Number in order to be processed. No payments shall be made on invoices not listing a Purchase Order Number.**

ARTICLE VI

OBSERVATION AND REVIEW OF THE WORK

The CONSULTANT will exercise reasonable care and due diligence in discovering and promptly reporting to the OWNER any defects or deficiencies in the work of the CONSULTANT or any subcontractors or subconsultants.

ARTICLE VII

OWNERSHIP OF DOCUMENTS

All documents prepared and furnished by the CONSULTANT (and CONSULTANT's subcontractors or subconsultants) pursuant to this Agreement are instruments of service, and shall become the property of the OWNER upon the termination of this Agreement and CONSULTANT's receipt of payment therefor. The CONSULTANT is entitled to retain copies of all such documents. The documents prepared and furnished by the CONSULTANT are intended only to be applicable to this Project, and OWNER's use of these documents in other projects shall be at OWNER's sole risk and expense. In the event the OWNER uses any of the information or

materials developed pursuant to this Agreement in another project or for other purposes than specified herein, CONSULTANT is released from any and all liability relating to their use in that project. Nothing in this Agreement shall be deemed or construed as a waiver, release, transfer, assignment or divestiture by CONSULTANT of any of its intellectual property, know-how or trade secrets.

ARTICLE VIII **INDEMNITY AGREEMENT**

THE CONSULTANT SHALL INDEMNIFY AND SAVE AND HOLD HARMLESS THE OWNER AND ITS OFFICERS, OFFICIALS, AGENTS, AND EMPLOYEES FROM AND AGAINST ANY AND ALL LIABILITY, CLAIMS, DEMANDS, DAMAGES, LOSSES, AND EXPENSES, INCLUDING, BUT NOT LIMITED TO COURT COSTS AND REASONABLE ATTORNEY FEES ASSERTED AGAINST OR INCURRED BY THE OWNER, AND INCLUDING, WITHOUT LIMITATION, DAMAGES FOR BODILY AND PERSONAL INJURY, DEATH AND PROPERTY DAMAGE, RESULTING FROM THE NEGLIGENT ACTS OR OMISSIONS OF THE CONSULTANT OR ITS OFFICERS, SHAREHOLDERS, AGENTS, OR EMPLOYEES INCIDENTAL TO, RELATED TO, AND IN THE EXECUTION, OPERATION, OR PERFORMANCE OF THIS AGREEMENT.

Nothing in this Agreement shall be construed to create a liability to any person who is not a party to this Agreement, and nothing herein shall waive any of the parties' defenses, both at law or equity, to any claim, cause of action, or litigation filed by anyone not a party to this Agreement, including the defense of governmental immunity, which defenses are hereby expressly reserved.

ARTICLE IX **INSURANCE**

During the performance of the services under this Agreement, CONSULTANT shall maintain insurance in compliance with the requirements of **Exhibit D** which is attached hereto and made a part of this Agreement as if written word for word herein.

ARTICLE X **ALTERNATIVE DISPUTE RESOLUTION**

The parties may agree to settle any disputes under this Agreement by submitting the dispute to mediation with each party bearing its own costs of mediation. No mediation arising out of or relating to this Agreement, involving one party's disagreement may include the other party to the disagreement without the other's approval. Mediation will not be a condition precedent to suit.

ARTICLE XI **TERMINATION OF AGREEMENT**

- A. Notwithstanding any other provision of this Agreement, either party may terminate by giving thirty (30) days' advance written notice to the other party.

- B. This Agreement may be terminated in whole or in part in the event of either party substantially failing to fulfill its obligations under this Agreement. No such termination will be affected unless the other party is given (1) written notice (delivered by certified mail, return receipt requested) of intent to terminate and setting forth the reasons specifying the non-performance, and not less than fifteen (15) calendar days to cure the failure; and (2) an opportunity for consultation with the terminating party prior to termination.
- C. If the Agreement is terminated prior to completion of the services to be provided hereunder, CONSULTANT shall immediately cease all services and shall render a final bill for services to the OWNER within thirty (30) days after the date of termination. The OWNER shall pay CONSULTANT for all services properly rendered and satisfactorily performed and for reimbursable expenses to termination incurred prior to the date of termination, in accordance with Article V "Compensation." Should the OWNER subsequently contract with a new consultant for the continuation of services on the Project, CONSULTANT shall cooperate in providing information. The CONSULTANT shall turn over all documents prepared or furnished by CONSULTANT pursuant to this Agreement to the OWNER on or before the date of termination, but may maintain copies of such documents for its use.

ARTICLE XII

RESPONSIBILITY FOR CLAIMS AND LIABILITIES

Approval by the OWNER shall not constitute, nor be deemed a release of the responsibility and liability of the CONSULTANT, its employees, associates, agents, subcontractors, and subconsultants for the accuracy and competency of their designs or other work; nor shall such approval be deemed to be an assumption of such responsibility by the OWNER for any defect in the design or other work prepared by the CONSULTANT, its employees, subcontractors, agents, and consultants.

ARTICLE XIII

NOTICES

All notices, communications, and reports required or permitted under this Agreement shall be personally delivered or mailed to the respective parties by depositing same in the United States mail to the address shown below, certified mail, return receipt requested, unless otherwise specified herein. Mailed notices shall be deemed communicated as of three (3) days' mailing:

To CONSULTANT:

Raftelis Financial Consultants, Inc.
Angie Flores
1031 South Caldwell St.
Suite 100
Charlotte, NC 38203

To OWNER:

City of Denton
Lori Hewell –File 8738
901B Texas Street
Denton, Texas 76209

All notices shall be deemed effective upon receipt by the party to whom such notice is given, or within three (3) days' mailing.

ARTICLE XIV

Contract 8738

ENTIRE AGREEMENT

This Agreement and related exhibits constitute the complete and final expression of this Agreement of the parties, and is intended as a complete and exclusive statement of the terms of their agreements, and supersedes all prior contemporaneous offers, promises, representations, negotiations, discussions, communications, and agreements which may have been made in connection with the subject matter hereof.

ARTICLE XV **SEVERABILITY**

If any provision of this Agreement is found or deemed by a court of competent jurisdiction to be invalid or unenforceable, it shall be considered severable from the remainder of this Agreement and shall not cause the remainder to be invalid or unenforceable. In such event, the parties shall reform this Agreement to replace such stricken provision with a valid and enforceable provision which comes as close as possible to expressing the intention of the stricken provision.

ARTICLE XVI **COMPLIANCE WITH LAWS**

The CONSULTANT shall comply with all federal, state, and local laws, rules, regulations, and ordinances applicable to the work covered hereunder as those laws may now read or hereinafter be amended.

ARTICLE XVII **DISCRIMINATION PROHIBITED**

In performing the services required hereunder, the CONSULTANT shall not discriminate against any person on the basis of race, color, religion, sex, sexual orientation, national origin or ancestry, age, or physical handicap.

ARTICLE XVIII **PERSONNEL**

- A. The CONSULTANT represents that it has or will secure, at its own expense, all personnel required to perform all the services required under this Agreement. Such personnel shall not be employees or officers of, or have any contractual relations with the OWNER. CONSULTANT shall inform the OWNER of any conflict of interest or potential conflict of interest that may arise during the term of this Agreement.
- B. All services required hereunder will be performed by the CONSULTANT or under its supervision. All personnel engaged in work shall be qualified, and shall be authorized and permitted under state and local laws to perform such services.

ARTICLE XIX **ASSIGNABILITY**

The CONSULTANT acknowledges that this Agreement is based on the demonstrated competence and specific qualifications of the CONSULTANT and is therefore personal as to the CONSULTANT. Therefore, the CONSULTANT shall not assign any interest in this Agreement, and shall not transfer any interest in this Agreement (whether by assignment, novation, or otherwise) without the prior written consent of the OWNER.

ARTICLE XX **MODIFICATION**

No waiver or modification of this Agreement or of any covenant, condition, or limitation herein contained shall be valid unless in writing and duly executed by the party to be charged therewith, and no evidence of any waiver or modification shall be offered or received in evidence in any proceeding arising between the parties hereto out of or affecting this Agreement, or the rights or obligations of the parties hereunder, and unless such waiver or modification is in writing and duly executed; and the parties further agree that the provisions of this section will not be waived unless as set forth herein.

ARTICLE XXI **MISCELLANEOUS**

A. The following exhibits are attached to and made a part of this Agreement:

Exhibit A – RFQ 6396 – Assessment of Organization Structure Related to Capital Projects
for the City of Denton (on file at the purchasing office)
Exhibit B – Consultant’s Scope of Services Offer and Project Schedule
Exhibit C – Consultant’s Compensation Rate Sheet
Exhibit D – Consultant’s Insurance Requirements
Exhibit E – Conflict of Interest Questionnaire

What is called for by one exhibit shall be as binding as if called for by all. In the event of an inconsistency or conflict in this Agreement and any of the provisions of the exhibits, the inconsistency or conflict shall be resolved by giving precedence first to this Agreement then to the exhibits in the order in which they are listed above.

- B. This Agreement shall be governed by, construed, and enforced in accordance with, and subject to, the laws of the State of Texas or federal law, where applicable, without regard to the conflict of law principles of any jurisdiction. In the event there shall be any dispute arising out of the terms and conditions of, or in connection with, this Agreement, the party seeking relief shall submit such dispute to the District Courts of Denton County or if federal diversity or subject matter jurisdiction exists, to the United States District Court for the Eastern District of Texas-Sherman Division.
- C. For the purpose of this Agreement, the key persons who will perform most of the work hereunder shall be Angie Flores. However, nothing herein shall limit CONSULTANT from using other equally qualified and competent members of its firm to perform the services required herein.

- D. CONSULTANT shall commence, carry on, and complete any and all projects with all applicable dispatch, in a sound, economical, and efficient manner and in accordance with the provisions hereof. In accomplishing the projects, CONSULTANT shall take such steps as are appropriate to ensure that the work involved is properly coordinated with related work being carried on by the OWNER.
- E. The OWNER shall assist the CONSULTANT by placing at the CONSULTANT's disposal all available information pertinent to the Project, including previous reports, any other data relative to the Project, and arranging for the access thereto, and make all provisions for the CONSULTANT to enter in or upon public and private property as required for the CONSULTANT to perform services under this Agreement.
- F. The captions of this Agreement are for informational purposes only, and shall not in any way affect the substantive terms or conditions of this Agreement.
- G. The parties agree to transact business electronically. Any statutory requirements that certain terms be in writing will be satisfied using electronic documents and signing. Electronic signing of this document will be deemed an original for all legal purposes.

ARTICLE XXII

INDEPENDENT CONTRACTOR

CONSULTANT shall provide services to OWNER as an independent contractor, not as an employee of the OWNER. CONSULTANT shall not have or claim any right arising from employee status.

ARTICLE XXIII

RIGHT TO AUDIT

The OWNER shall have the right to audit and make copies of the books, records and computations pertaining to this agreement. The CONTRACTOR shall retain such books, records, documents and other evidence pertaining to this agreement during the contract period and five years thereafter, except if an audit is in progress or audit findings are yet unresolved, in which case records shall be kept until all audit tasks are completed and resolved. These books, records, documents and other evidence shall be available, within 10 business days of written request. Further, the CONTRACTOR shall also require all Subcontractors, material suppliers, and other payees to retain all books, records, documents and other evidence pertaining to this agreement, and to allow the OWNER similar access to those documents. All books and records will be made available within a 50 mile radius of the City of Denton. The cost of the audit will be borne by the OWNER unless the audit reveals an overpayment of 1% or greater. If an overpayment of 1% or greater occurs, the reasonable cost of the audit, including any travel costs, must be borne by the CONTRACTOR which must be payable within five business days of receipt of an invoice.

Failure to comply with the provisions of this section shall be a material breach of this contract and shall constitute, in the OWNER'S sole discretion, grounds for termination thereof. Each of the terms "books", "records", "documents" and "other evidence", as used above, shall be construed to

include drafts and electronic files, even if such drafts or electronic files are subsequently used to generate or prepare a final printed document.

ARTICLE XXIV
PROHIBITION ON CONTRACTS WITH COMPANIES BOYCOTTING ISRAEL

Contractor acknowledges that in accordance with Chapter 2271 of the Texas Government Code, City is prohibited from entering into a contract with a company for goods or services unless the contract contains a written verification from the company that it: (1) does not boycott Israel; and (2) will not boycott Israel during the term of the contract. The terms “boycott Israel” and “company” shall have the meanings ascribed to those terms in Section 808.001 of the Texas Government Code. ***By signing this agreement, Contractor certifies that Contractor’s signature provides written verification to the City that Contractor: (1) does not boycott Israel; and (2) will not boycott Israel during the term of the agreement.*** Failure to meet or maintain the requirements under this provision will be considered a material breach.

ARTICLE XXV
PROHIBITION ON CONTRACTS WITH COMPANIES DOING BUSINESS WITH IRAN, SUDAN, OR A FOREIGN TERRORIST ORGANIZATION

Sections 2252 and 2270 of the Texas Government Code restricts CITY from contracting with companies that do business with Iran, Sudan, or a foreign terrorist organization. ***By signing this agreement, Contractor certifies that Contractor’s signature provides written verification to the City that Contractor, pursuant to Chapters 2252 and 2270, is not ineligible to enter into this agreement and will not become ineligible to receive payments under this agreement by doing business with Iran, Sudan, or a foreign terrorist organization.*** Failure to meet or maintain the requirements under this provision will be considered a material breach.

ARTICLE XXVI
PROHIBITION ON CONTRACTS WITH COMPANIES BOYCOTTING CERTAIN ENERGY COMPANIES

Contractor acknowledges that in accordance with Chapter 2274 of the Texas Government Code, City is prohibited from entering into a contract with a company for goods or services unless the contract contains written verification from the company that it (1) does not boycott energy companies; and (2) will not boycott energy companies during the term of the contract. The terms “boycott energy company” and “company” shall have the meanings ascribed to those terms in Section 809.001 of the Texas Government Code. ***By signing this agreement, Contractor certifies that Contractor’s signature provides written verification to the City that Contractor: (1) does not boycott energy companies; and (2) will not boycott energy companies during the term of the agreement.*** Failure to meet or maintain the requirements under this provision will be considered a material breach.

ARTICLE XXVII
PROHIBITION ON CONTRACTS WITH COMPANIES BOYCOTTING CERTAIN FIREARM ENTITIES AND FIREARM TRADE ASSOCIATIONS

Contractor acknowledges that in accordance with Chapter 2274 of the Texas Government Code, City is prohibited from entering into a contract with a company for goods or services unless the

contract contains written verification from the company that it (1) does not have a practice, policy, guidance, or directive that discriminates against a firearm entity or firearm trade association; and (2) will not discriminate during the term of the contract against a firearm entity or firearm trade association. The terms “discriminate against a firearm entity or firearm trade association,” “firearm entity” and “firearm trade association” shall have the meanings ascribed to those terms in Chapter 2274 of the Texas Government Code. ***By signing this agreement, Contractor certifies that Contractor’s signature provides written verification to the City that Contractor: (1) does not have a practice, policy, guidance, or directive that discriminates against a firearm entity or firearm trade association; and (2) will not discriminate during the term of the contract against a firearm entity or firearm trade association.*** Failure to meet or maintain the requirements under this provision will be considered a material breach.

ARTICLE XXVIII

TERMINATION RIGHT FOR CONTRACTS WITH COMPANIES DOING BUSINESS WITH CERTAIN FOREIGN-OWNED COMPANIES

The City of Denton may terminate this Contract immediately without any further liability if the City of Denton determines, in its sole judgment, that this Contract meets the requirements under Chapter 2274, and Contractor is, or will be in the future, (i) owned by or the majority of stock or other ownership interest of the company is held or controlled by individuals who are citizens of China, Iran, North Korea, Russia, or other designated country (ii) directly controlled by the Government of China, Iran, North Korea, Russia, or other designated country, or (iii) is headquartered in China, Iran, North Korea, Russia, or other designated country.

ARTICLE XXIX

CERTIFICATE OF INTERESTED PARTIES ELECTRONIC FILING

In 2015, the Texas Legislature adopted House Bill 1295, which added section 2252.908 of the Government Code. The law states that the City may not enter into this contract unless the Consultant submits a disclosure of interested parties (Form 1295) to the City at the time the Consultant submits the signed contract. The Texas Ethics Commission has adopted rules requiring the business entity to file Form 1295 electronically with the Commission.

Consultant will be required to furnish a Certificate of Interest Parties before the contract is awarded, in accordance with Government Code 2252.908.

The consultant shall:

1. Log onto the State Ethics Commission Website at : <https://www.ethics.state.tx.us/filinginfo/1295/>
2. Register utilizing the tutorial provided by the State
3. Print a copy of the completed Form 1295
4. Enter the Certificate Number on page 2 of this contract.
5. Complete and sign the Form 1295
6. Email the form to purchasing@cityofdenton.com with the contract number in the subject line. (EX: Contract 1234 – Form 1295)

The OWNER must acknowledge the receipt of the filed Form 1295 not later than the 30th day

Contract 8738

after Council award. Once a Form 1295 is acknowledged, it will be posted to the Texas Ethics Commission's website within seven business days.

ARTICLE XXX **PROHIBITION AGAINST PERSONAL INTEREST IN CONTRACTS**

No officer, employee, independent consultant, or elected official of the City who is involved in the development, evaluation, or decision-making process of the performance of any solicitation shall have a financial interest, direct or indirect, in the Contract resulting from that solicitation as defined in the City's Ethic Ordinance 23-1165 and in the City Charter chapter 2 article XI(Ethics). Any willful violation of this section shall constitute impropriety in office, and any officer or employee guilty thereof shall be subject to disciplinary action up to and including dismissal. Any violation of this provision, with the knowledge, expressed or implied, of the Contractor shall render the Contract voidable by the City. The Consultant shall complete and submit the City's Conflict of Interest Questionnaire.

The parties agree to transact business electronically. Any statutory requirements that certain terms be in writing will be satisfied using electronic documents and signing. Electronic signing of this document will be deemed an original for all legal purposes.

IN WITNESS HEREOF, the City of Denton, Texas has caused this Agreement to be executed by its duly authorized City Manager, and CONSULTANT has executed this Agreement through its duly authorized undersigned officer on this date_____.

CONSULTANT
BY John Mastracchio
23A00006300941A
AUTHORIZED SIGNATURE

Printed Name: John Mastracchio

Title: Executive Vice President

518-391-8944
PHONE NUMBER

jmastracchio@rafttelis.com
EMAIL ADDRESS

2025-1299829
TEXAS ETHICS COMMISSION 1295 CERTIFICATE NUMBER

CITY OF DENTON, TEXAS

BY: _____
SARA HENSLEY
CITY MANAGER

ATTEST:
LAUREN THODEN, CITY SECRETARY

Contract 8738

BY: _____

APPROVED AS TO LEGAL FORM:
MACK REINWAND, CITY ATTORNEY

DocuSigned by:
BY Marcella Lunn
4B070831B4AA438...

THIS AGREEMENT HAS BEEN
BOTH REVIEWED AND APPROVED
as to financial and operational obligations and business terms.

<small>Signed by:</small>	
<u>Jessica Williams</u>	Jessica Williams
<small>8E9A3B6E0C4B0C...</small>	
SIGNATURE	PRINTED NAME

Chief Financial officer	Finance
_____	_____
TITLE	DEPARTMENT

Exhibit B

Drainage Schedule

TASKS	Apr 2025	May 2025	Jun 2025	Jul 2025	Aug 2025	Sep 2025	Oct 2025	Nov 2025
Project Management.								
Drainage and Stormwater Study.	●	●	●	●	●	●	●	●
Drainage and Stormwater Study.								
Project Initiation, Data Request, Kick-off Meeting.	●							
Financial Plan Development.		●						
Cost of Service Analysis and Rate Calculation.			●					
Rate Model Development.				●				
Drainage Fee Implementation.					●			
Final Deliverables.						●	●	
Capital Improvement Program Review.								
Drainage Capital & Operating Budgets Review.			●					

● Complete (Update as Needed)

● In-person Meetings

● Web Meetings

● Deliverables

● On-going

Exhibit B

Water/Wastewater Schedule

TASKS	Apr 2025	May 2025	Jun 2025	Jul 2025	Aug 2025	Sep 2025	Oct 2025	Nov 2025
Project Management.								
Water & Wastewater Study.	●	●	●	●	●	●	●	●
Water & Wastewater Study.								
Project Initiation, Data Request, Kick-off Meeting.	●							
Demand Analysis & Revenue Proof.	●	●						
Revenue Requirement Review.	●	●						
Financial Plan Model Development.	●	●						
Cost-of-Service Analysis by Utility.		●	●					
Model Rate Design by Each Utility.				●	●			
Final Deliverables.				●	●	●	●	
Capital Improvement Program Review.								
Water Capital & Operating Budgets Review.		●						
Wastewater Capital & Operating Budgets Review.		●						

- Complete (Update as Needed)
- In-person Meetings
- Web Meetings
- Deliverables
- On-going

Exhibit C												
They bill per 1/4 hour												
Tasks	Meetings		Hours									
	Virtual	In Person	John Mastracchio	Angie Flores	Jennifer Tavantzis	Brandon Vatter	Christopher Williams	Summer Simpson	Aaron Worley	Norah McKinley	Total Hours	
Project Management												
Water & Wastewater Study			8	16							24	\$9,400
Drainage and Stormwater Study			8	16							24	\$9,400
Water & Wastewater Study												
Project Initiation, Data Request, Kick-off Meeting		1		4			4	4			12	\$3,460
Demand Analysis & Revenue Proof				2			4	4			10	\$2,710
Revenue Requirement Review				2			4	4			10	\$2,710
Financial Plan Model Development				2			4	4			10	\$2,710
Cost-of-Service Analysis by Utility	1			4			8	32			44	\$10,100
Model Rate Design by Each Utility	1			8			8	32			48	\$11,600
Final Deliverables		2		24			24	16			64	\$19,200
Drainage and Stormwater Study												
Project Initiation, Data Request, Kick-off Meeting		1		4	12				5	5	26	\$7,950
Financial Plan Development				4	36				20	20	80	\$22,800
Cost of Service Analysis and Rate Calculation	1			4	24				34	34	96	\$23,760
Rate Model Development	1			4	24				40	40	108	\$26,100
Drainage Fee Implementation	1			2	16				18	18	54	\$13,770
Final Deliverables		1		2	24				26	26	78	\$19,890
Capital Improvement Program Review												
Water Capital & Operating Budgets Review	1					20	8	12			40	\$11,500
Wastewater Capital & Operating Budgets Review						20	8	12			40	\$11,500
Drainage Capital & Operating Budgets Review	1					20			10	10	40	\$10,700
	7	5	16	98	136	60	72	120	153	153	808	
	-	-	\$425	\$375	\$375	\$340	\$295	\$195	\$195	\$195	-	
	-	-	\$6,800	\$36,750	\$51,000	\$20,400	\$21,240	\$23,400	\$29,835	\$29,835	-	\$219,260
Travel Expenses for In Person Meetings (will present actual receipts)		# of Meeting									Travel Expense Cost	
W/WW Project Initiation, Data Request, Kick-off Meeting (2 People)		1									\$1,451.00	
W/WW Final Deliverables (2 People)		2									\$1,601.00	
Drainage & Stormwater Project Initiation, Data Request, Kick-off Meeting (1 Person)		1									\$1,550.00	
Drainage & Stormwater Final Deliverables (1 Person)		1									\$1,550.00	
Total Travel Expense		Rate									Hours	\$7,753
Technology Fee (\$10/hour)		\$10.00									808	\$8,080
		QTY									Total Hourly Rate, Fees, & Expenses	\$235,093
Annual Maintenance (Water/wastewater)	4	This will be billed each year, starting with year 2 through year 5. It will be broken out hourly.								Not to exceed	\$49,000.00	\$196,000
Annual Maintenance (Drainage)	4	This will be billed each year, starting with year 2 through year 5. It will be broken out hourly.								Not to exceed	\$49,000.00	\$196,000

Exhibit D

INSURANCE REQUIREMENTS

Respondent's attention is directed to the insurance requirements below. It is highly recommended that respondents confer with their respective insurance carriers or brokers to determine in advance of Proposal/Bid submission the availability of insurance certificates and endorsements as prescribed and provided herein. If an apparent low respondent fails to comply strictly with the insurance requirements, that respondent may be disqualified from award of the contract. Upon contract award, all insurance requirements shall become contractual obligations, which the successful contractor shall have a duty to maintain throughout the course of this contract.

STANDARD PROVISIONS:

Without limiting any of the other obligations or liabilities of the Contractor, the Contractor shall provide and maintain until the contracted work has been completed and accepted by the City of Denton, Owner, the minimum insurance coverage as indicated hereinafter.

As soon as practicable after notification of contract award, Contractor shall file with the Purchasing Department satisfactory certificates of insurance including any applicable addendum or endorsements, containing the contract number and title of the project. Contractor may, upon written request to the Purchasing Department, ask for clarification of any insurance requirements at any time; however, Contractors are strongly advised to make such requests prior to proposal/bid opening, since the insurance requirements may not be modified or waived after proposal/bid opening unless a written exception has been submitted with the proposal/bid. Contractor shall not commence any work or deliver any material until he or she receives notification that the contract has been accepted, approved, and signed by the City of Denton.

All insurance policies proposed or obtained in satisfaction of these requirements shall comply with the following general specifications, and shall be maintained in compliance with these general specifications throughout the duration of the Contract, or longer, if so noted:

- Each policy shall be issued by a company authorized to do business in the State of Texas with an A.M. Best Company rating of at least **A- or better**.
- Any deductibles or self-insured retentions shall be declared in the proposal. If requested by the City, the insurer shall reduce or eliminate such deductibles or self-insured retentions with respect to the City, its officials, agents, employees, and volunteers; or, the contractor shall procure a bond guaranteeing payment of losses and related investigations, claim administration and defense expenses.
- Liability policies shall be endorsed to provide the following:

- Name as Additional Insured the City of Denton, its Officials, Agents, Employees, and volunteers.
 - That such insurance is primary to any other insurance available to the Additional Insured with respect to claims covered under the policy and that this insurance applies separately to each insured against whom claim is made or suit is brought. The inclusion of more than one insured shall not operate to increase the insurer's limit of liability.
 - Provide a Waiver of Subrogation in favor of the City of Denton, its officials, agents, employees, and volunteers.
- ***Cancellation: City requires 30 day written notice should any of the policies described on the certificate be cancelled or materially changed before the expiration date.***
 - Should any of the required insurance be provided under a claims made form, Contractor shall maintain such coverage continuously throughout the term of this contract and, without lapse, for a period of three years beyond the contract expiration, such that occurrences arising during the contract term which give rise to claims made after expiration of the contract shall be covered.
 - Should any of the required insurance be provided under a form of coverage that includes a general annual aggregate limit providing for claims investigation or legal defense costs to be included in the general annual aggregate limit, the Contractor shall either double the occurrence limits or obtain Owners and Contractors Protective Liability Insurance.
 - Should any required insurance lapse during the contract term, requests for payments originating after such lapse shall not be processed until the City receives satisfactory evidence of reinstated coverage as required by this contract, effective as of the lapse date. If insurance is not reinstated, City may, at its sole option, terminate this agreement effective on the date of the lapse.

SPECIFIC ADDITIONAL INSURANCE REQUIREMENTS:

All insurance policies proposed or obtained in satisfaction of this Contract shall additionally comply with the following specifications, and shall be maintained in compliance with these additional specifications throughout the duration of the Contract, or longer, if so noted:

A. COMMERCIAL GENERAL LIABILITY INSURANCE

Commercial General Liability Insurance including, but not limited to, Premises/Operations, Personal & Advertising Injury, Products/Completed Operations, Independent Contractors, and Contractual Liability with minimum

combined bodily injury (including death) and property damage limits of \$1,000,000.00 per occurrence and \$2,000,000.00 general aggregate.

B. PROFESSIONAL LIABILITY INSURANCE

If CONTRACTOR is a licensed or certified person who renders professional services, then **Professional Liability Insurance** to provide coverage against any claim which the CONTRACTOR becomes legally obligated to pay as damages arising out of the performance of professional services caused by any negligent error, omission or act with minimum limits of \$1,000,000.00 per claim, \$2,000,000.00 annual aggregate.

SUBCONTRACTING LIABILITY

(1) Without limiting any of the other obligations or liabilities of the CONTRACTOR, the CONTRACTOR shall require each Subcontractor performing work under the contract, at the Subcontractor's own expense, to maintain during the engagement with the CITY, types and limits of insurance that are appropriate for the services/work being performed, comply with all applicable laws and are consistent with industry standards. The Subcontractor's liability insurance shall name CONTRACTOR as an additional insured.

(2) CONTRACTOR shall obtain and monitor the certificates of insurance from each Subcontractor. CONTRACTOR must retain the certificates of insurance for the duration of the contract and shall have the responsibility of enforcing insurance requirements among its subcontractors. The CITY shall be entitled, upon request and without expense, to receive copies of these certificates.

Exhibit E**CONFLICT OF INTEREST QUESTIONNAIRE -****FORM CIQ****For vendor or other person doing business with local governmental entity****This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session.**

This questionnaire is being filed in accordance with Chapter 176, Local Government Code, by a vendor who has a business relationship as defined by Section 176.001(1-a) with a local governmental entity and the vendor meets requirements under Section 176.006(a).

By law this questionnaire must be filed with the records administrator of the local government entity not later than the 7th business day after the date the vendor becomes aware of facts that require the statement to be filed. *See* Section 176.006(a-1), Local Government Code.

A vendor commits an offense if the vendor knowingly violates Section 176.006, Local Government Code. An offense under this section is a misdemeanor.

1 Name of vendor who has a business relationship with local governmental entity.
Raftelis Financial Consultants

2 ☐ Check this box if you are filing an update to a previously filed questionnaire.

(The law requires that you file an updated completed questionnaire with the appropriate filing authority not later than the 7th business day after the date on which you became aware that the originally filed questionnaire was incomplete or inaccurate.)

3 Name of local government officer about whom the information in this section is being disclosed.
N/A

Name of Officer

This section, (item 3 including subparts A, B, C & D), must be completed for each officer with whom the vendor has an employment or other business relationship as defined by Section 176.001(1-a), Local Government Code. Attach additional pages to this Form CIQ as necessary.

A. Is the local government officer named in this section receiving or likely to receive taxable income, other than investment income, from the vendor?
☐ Yes ☐ No

B. Is the vendor receiving or likely to receive taxable income, other than investment income, from or at the direction of the local government officer named in this section AND the taxable income is not received from the local governmental entity?
☐ Yes ☐ No

C. Is the filer of this questionnaire employed by a corporation or other business entity with respect to which the local government officer serves as an officer or director, or holds an ownership of one percent or more?
☐ Yes ☐ No

D. Describe each employment or business and family relationship with the local government officer named in this section.

4 ☒ I have no Conflict of Interest to disclose.

5 DocuSigned by:

1/29/2025

4/24/2025

John Mastracchio

Signature of vendor doing business with the governmental entity

Date

Certificate Of Completion

Envelope Id: E33879C4-F22F-4C4A-9E92-8AA6AA9E0165

Status: Sent

Subject: Please DocuSign: City Council Contract 8738 Water/Wastewater & Drainage Utilities Rate Study

Source Envelope:

Document Pages: 21

Signatures: 4

Envelope Originator:

Certificate Pages: 6

Initials: 1

Christina Dormady

AutoNav: Enabled

901B Texas Street

Envelopeld Stamping: Enabled

Denton, TX 76209

Time Zone: (UTC-06:00) Central Time (US & Canada)

christina.dormady@cityofdenton.com

IP Address: 198.49.140.10

Record Tracking

Status: Original

Holder: Christina Dormady

Location: DocuSign

4/18/2025 1:17:08 PM

christina.dormady@cityofdenton.com

Signer Events

Signature

Timestamp

Christina Dormady

Completed

Sent: 4/18/2025 1:22:59 PM

christina.dormady@cityofdenton.com

Viewed: 4/18/2025 1:23:06 PM

Buyer

Signed: 4/18/2025 1:24:01 PM

City of Denton

Using IP Address: 198.49.140.10

Security Level: Email, Account Authentication (None)

Electronic Record and Signature Disclosure:

Not Offered via DocuSign

Lori Hewell

Sent: 4/18/2025 1:24:02 PM

lori.hewell@cityofdenton.com

Viewed: 4/18/2025 2:56:22 PM

Purchasing Manager

Signed: 4/18/2025 2:56:45 PM

City of Denton

Security Level: Email, Account Authentication (None)

Signature Adoption: Pre-selected Style

Using IP Address: 198.49.140.104

Electronic Record and Signature Disclosure:

Not Offered via DocuSign

Marcella Lunn

DocuSigned by:
Marcella Lunn
4B070831B4AA438...

Sent: 4/18/2025 2:56:47 PM

marcella.lunn@cityofdenton.com

Viewed: 4/22/2025 8:23:05 PM

Senior Deputy City Attorney

Signed: 4/22/2025 8:34:08 PM

City of Denton

Security Level: Email, Account Authentication (None)

Signature Adoption: Pre-selected Style

Using IP Address: 47.38.247.221

Signed using mobile

Electronic Record and Signature Disclosure:

Not Offered via DocuSign

John Mastracchio

DocuSigned by:
John Mastracchio
23AE90C6500541A...

Sent: 4/22/2025 8:34:10 PM

jmastracchio@raftelis.com

Resent: 4/23/2025 8:53:16 AM

Executive Vice President

Viewed: 4/23/2025 9:03:01 AM

Raftelis Financial Consultants

Signed: 4/24/2025 6:19:23 AM

Security Level: Email, Account Authentication (None)


Signature Adoption: Pre-selected Style

Using IP Address: 72.0.153.162

Electronic Record and Signature Disclosure:

Accepted: 4/23/2025 9:03:01 AM

ID: 1d84f3f9-482c-4f41-9c8e-5c03ba83ee89

Signer Events	Signature	Timestamp
Jessica Williams jessica.jwilliams@cityofdenton.com Chief Financial Officer Security Level: Email, Account Authentication (None)	Signed by:  8E9AFB49EC4C49C... Signature Adoption: Pre-selected Style Using IP Address: 198.49.140.10	Sent: 4/24/2025 6:19:25 AM Resent: 4/25/2025 2:00:06 PM Viewed: 4/25/2025 2:37:02 PM Signed: 4/25/2025 2:37:30 PM

Electronic Record and Signature Disclosure:
Not Offered via DocuSign

Cheyenne Defee
 cheyenne.defee@cityofdenton.com
 Procurement Administration Supervisor
 City of Denton
 Security Level: Email, Account Authentication (None)

Sent: 4/25/2025 2:37:33 PM

Electronic Record and Signature Disclosure:
Not Offered via DocuSign

Sara Hensley
 sara.hensley@cityofdenton.com
 Security Level: Email, Account Authentication (None)

Electronic Record and Signature Disclosure:
Not Offered via DocuSign

Lauren Thoden
 lauren.thoden@cityofdenton.com
 Security Level: Email, Account Authentication (None)

Electronic Record and Signature Disclosure:
Not Offered via DocuSign

In Person Signer Events	Signature	Timestamp
Editor Delivery Events	Status	Timestamp
Agent Delivery Events	Status	Timestamp
Intermediary Delivery Events	Status	Timestamp
Certified Delivery Events	Status	Timestamp

Carbon Copy Events	Status	Timestamp
Cheyenne Defee cheyenne.defee@cityofdenton.com Procurement Administration Supervisor City of Denton Security Level: Email, Account Authentication (None)	<div>COPIED</div>	Sent: 4/18/2025 1:24:03 PM
Electronic Record and Signature Disclosure: Not Offered via DocuSign		

Gretna Jones gretna.jones@cityofdenton.com Legal Secretary City of Denton Security Level: Email, Account Authentication (None)	<div>COPIED</div>	Sent: 4/25/2025 2:37:32 PM Viewed: 4/28/2025 10:10:27 AM
Electronic Record and Signature Disclosure:		

Carbon Copy Events	Status	Timestamp
Not Offered via DocuSign		
City Secretary Office citysecretary@cityofdenton.com Security Level: Email, Account Authentication (None) Electronic Record and Signature Disclosure: Not Offered via DocuSign		
Azura Kerr Azura.Kerr@cityofdenton.com Security Level: Email, Account Authentication (None) Electronic Record and Signature Disclosure: Accepted: 12/11/2024 1:09:15 PM ID: 96be3874-94ae-43a3-80dc-324dd3007a85		
Angie Flores Aflores@raftelis.com Security Level: Email, Account Authentication (None) Electronic Record and Signature Disclosure: Not Offered via DocuSign		
Witness Events	Signature	Timestamp
Notary Events	Signature	Timestamp
Envelope Summary Events	Status	Timestamps
Envelope Sent	Hashed/Encrypted	4/18/2025 1:22:59 PM
Envelope Updated	Security Checked	4/25/2025 2:01:19 PM
Payment Events	Status	Timestamps
Electronic Record and Signature Disclosure		

ELECTRONIC RECORD AND SIGNATURE DISCLOSURE

From time to time, City of Denton (we, us or Company) may be required by law to provide to you certain written notices or disclosures. Described below are the terms and conditions for providing to you such notices and disclosures electronically through your DocuSign, Inc. (DocuSign) Express user account. Please read the information below carefully and thoroughly, and if you can access this information electronically to your satisfaction and agree to these terms and conditions, please confirm your agreement by clicking the 'I agree' button at the bottom of this document.

Getting paper copies

At any time, you may request from us a paper copy of any record provided or made available electronically to you by us. For such copies, as long as you are an authorized user of the DocuSign system you will have the ability to download and print any documents we send to you through your DocuSign user account for a limited period of time (usually 30 days) after such documents are first sent to you. After such time, if you wish for us to send you paper copies of any such documents from our office to you, you will be charged a \$0.00 per-page fee. You may request delivery of such paper copies from us by following the procedure described below.

Withdrawing your consent

If you decide to receive notices and disclosures from us electronically, you may at any time change your mind and tell us that thereafter you want to receive required notices and disclosures only in paper format. How you must inform us of your decision to receive future notices and disclosure in paper format and withdraw your consent to receive notices and disclosures electronically is described below.

Consequences of changing your mind

If you elect to receive required notices and disclosures only in paper format, it will slow the speed at which we can complete certain steps in transactions with you and delivering services to you because we will need first to send the required notices or disclosures to you in paper format, and then wait until we receive back from you your acknowledgment of your receipt of such paper notices or disclosures. To indicate to us that you are changing your mind, you must withdraw your consent using the DocuSign 'Withdraw Consent' form on the signing page of your DocuSign account. This will indicate to us that you have withdrawn your consent to receive required notices and disclosures electronically from us and you will no longer be able to use your DocuSign Express user account to receive required notices and consents electronically from us or to sign electronically documents from us.

All notices and disclosures will be sent to you electronically

Unless you tell us otherwise in accordance with the procedures described herein, we will provide electronically to you through your DocuSign user account all required notices, disclosures, authorizations, acknowledgements, and other documents that are required to be provided or made available to you during the course of our relationship with you. To reduce the chance of you inadvertently not receiving any notice or disclosure, we prefer to provide all of the required notices and disclosures to you by the same method and to the same address that you have given us. Thus, you can receive all the disclosures and notices electronically or in paper format through the paper mail delivery system. If you do not agree with this process, please let us know as described below. Please also see the paragraph immediately above that describes the consequences of your electing not to receive delivery of the notices and disclosures electronically from us.

How to contact City of Denton:

You may contact us to let us know of your changes as to how we may contact you electronically, to request paper copies of certain information from us, and to withdraw your prior consent to receive notices and disclosures electronically as follows:

To contact us by email send messages to: purchasing@cityofdenton.com

To advise City of Denton of your new e-mail address

To let us know of a change in your e-mail address where we should send notices and disclosures electronically to you, you must send an email message to us at melissa.kraft@cityofdenton.com and in the body of such request you must state: your previous e-mail address, your new e-mail address. We do not require any other information from you to change your email address..

In addition, you must notify DocuSign, Inc to arrange for your new email address to be reflected in your DocuSign account by following the process for changing e-mail in DocuSign.

To request paper copies from City of Denton

To request delivery from us of paper copies of the notices and disclosures previously provided by us to you electronically, you must send us an e-mail to purchasing@cityofdenton.com and in the body of such request you must state your e-mail address, full name, US Postal address, and telephone number. We will bill you for any fees at that time, if any.

To withdraw your consent with City of Denton

To inform us that you no longer want to receive future notices and disclosures in electronic format you may:

- i. decline to sign a document from within your DocuSign account, and on the subsequent page, select the check-box indicating you wish to withdraw your consent, or you may;
- ii. send us an e-mail to purchasing@cityofdenton.com and in the body of such request you must state your e-mail, full name, US Postal Address, telephone number, and account number. We do not need any other information from you to withdraw consent.. The consequences of your withdrawing consent for online documents will be that transactions may take a longer time to process..

Required hardware and software

Operating Systems:	Windows2000? or WindowsXP?
Browsers (for SENDERS):	Internet Explorer 6.0? or above
Browsers (for SIGNERS):	Internet Explorer 6.0?, Mozilla FireFox 1.0, NetScape 7.2 (or above)
Email:	Access to a valid email account
Screen Resolution:	800 x 600 minimum
Enabled Security Settings:	<ul style="list-style-type: none">•Allow per session cookies•Users accessing the internet behind a Proxy Server must enable HTTP 1.1 settings via proxy connection

** These minimum requirements are subject to change. If these requirements change, we will provide you with an email message at the email address we have on file for you at that time providing you with the revised hardware and software requirements, at which time you will have the right to withdraw your consent.

Acknowledging your access and consent to receive materials electronically

To confirm to us that you can access this information electronically, which will be similar to other electronic notices and disclosures that we will provide to you, please verify that you were able to read this electronic disclosure and that you also were able to print on paper or electronically save this page for your future reference and access or that you were able to e-mail this disclosure and consent to an address where you will be able to print on paper or save it for your future reference and access. Further, if you consent to receiving notices and disclosures exclusively in electronic format on the terms and conditions described above, please let us know by clicking the 'I agree' button below.

By checking the 'I Agree' box, I confirm that:

- I can access and read this Electronic CONSENT TO ELECTRONIC RECEIPT OF ELECTRONIC RECORD AND SIGNATURE DISCLOSURES document; and
- I can print on paper the disclosure or save or send the disclosure to a place where I can print it, for future reference and access; and
- Until or unless I notify City of Denton as described above, I consent to receive from exclusively through electronic means all notices, disclosures, authorizations, acknowledgements, and other documents that are required to be provided or made available to me by City of Denton during the course of my relationship with you.



City of Denton

City Hall
215 E. McKinney St.
Denton, Texas 76201
www.cityofdenton.com

Legislation Text

File #: PUB25-074, **Version:** 1

AGENDA CAPTION

Consider recommending adoption of an ordinance of the City of Denton, a Texas home-rule municipal corporation, authorizing the City Manager to execute a contract with Flowpoint Environmental Systems, Inc., for a bulk-fill station for the Water Utilities Department; providing for the expenditure of funds therefor; and providing an effective date (RFP 8750 - awarded to Flowpoint Environmental Systems, Inc., for one (1) year, with the option for four (4) additional one (1) year extensions, in the total five (5) year not-to-exceed amount of \$94,000.00).



City of Denton

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

AGENDA INFORMATION SHEET

DEPARTMENT: Procurement
ACM: Christine Taylor
DATE: May 19, 2025

SUBJECT

Consider recommending adoption of an ordinance of the City of Denton, a Texas home-rule municipal corporation, authorizing the City Manager to execute a contract with Flowpoint Environmental Systems, Inc., for a bulk-fill station for the Water Utilities Department; providing for the expenditure of funds therefor; and providing an effective date (RFP 8750 – awarded to Flowpoint Environmental Systems, Inc., for one (1) year, with the option for four (4) additional one (1) year extensions, in the total five (5) year not-to-exceed amount of \$94,000.00).

STRATEGIC ALIGNMENT

This action supports Key Focus Area: Promote Sustainability and the Environment.

INFORMATION/BACKGROUND

Staff issued a Request for Proposal (RFP) to procure a turnkey bulk-fill station to facilitate the efficient and controlled dispensing of reclaimed water to authorized users. This initiative aligns with the City's commitment to expanding reclaimed water utilization while reducing the use of potable water for non-potable purposes. Additionally, the station will enhance drought resilience by serving as a mandatory alternative to potable water for non-potable truck use during Stages II and III of the Drought Contingency Plan.

The City of Denton operates a reclaimed water program that distributes treated wastewater effluent through a separate distribution system for non-potable applications. The proposed bulk-fill station will connect to this system along the commercial entry road at the City of Denton Landfill, providing convenient access for both city and commercial vehicles equipped with appropriate water tanks. These vehicles will use the reclaimed water for applications such as construction, irrigation, and municipal operations.

Flowpoint Environmental Systems Inc. has submitted a proposal for a cloud-based, remotely monitored, and controlled water dispensing system. Key features include a user-friendly interface that allows customers to enter a unique PIN and specify the desired number of gallons, followed by automatic dispensing. The station will fill trucks through either an overhead 3-inch fill arm or a 3-inch side hose.

Project Description	Estimated 5-Year Expenditure
One Time Cost	\$77,631.49
Annual Cell Service years 2-5 (\$1,800 a year)	7,200.00
Contingency	9,168.51
Total	\$94,000.00

Request for Proposals was sent to 1,447 prospective suppliers of this item, including 93 Denton firms. In addition, specifications were placed on the Procurement website for prospective suppliers to download and advertised in the local newspaper. Two (2) proposals were received and evaluated based upon published criteria including schedule, compliance with specifications, probable performance, and price. Best and Final Offers (BAFO) were requested from the top firm. Based upon this evaluation, Flowpoint Environmental Systems Inc. was ranked the highest and determined to be the best value for the City.

NIGP Code Used for Solicitation:	913, 961, 962, and 968
Notifications sent for Solicitation sent in IonWave:	1,447
Number of Suppliers that viewed Solicitation in IonWave:	31
HUB-Historically Underutilized Business Invitations sent out:	157
SBE-Small Business Enterprise Invitations sent out:	497
Responses from Solicitation:	2

RECOMMENDATION

Award a contract with Flowpoint Environmental Systems Inc., for a bulk-fill Station for the Water Utilities Department, in a (1) year, with the option for four (4) additional one (1) year extensions, in the total five (5) year, not-to-exceed amount of \$94,000.

PRINCIPAL PLACE OF BUSINESS

Flowpoint Environmental Systems, Inc.
Denver, CO

SUSTAINABILITY MEASURES

This purchase supports the City of Denton's core strategic goal of promoting water conservation. For every gallon of reclaimed water used, a gallon of potable water demand is offset. The same water that was already used once in the city is being used a second time, extending the city's water resources.

ESTIMATED SCHEDULE OF PROJECT

This is an initial one (1) year contract with options to extend the contract for four (4) additional one (1) year periods, with all terms and conditions remaining the same. This project will be started upon approval with an estimated completion date of August 1, 2025.

FISCAL INFORMATION

These services will be funded from Refuse Bulk Fill Station account 630551517.1360.40100. Requisition #169900 has been entered into the Purchasing software system in the amount of \$77,631.49. The budgeted amount for this item is \$94,000.

EXHIBITS

Exhibit 1: Agenda Information Sheet
Exhibit 2: Pricing Evaluation
Exhibit 3: Ordinance and Contract

Respectfully submitted:
Lori Hewell, 940-349-7100
Purchasing Manager

For information concerning this acquisition, contact: Michael Hunter, 940-349-7256.

Legal point of contact: Marcella Lunn at 940-349-8333.

Exhibit 2

RFP 8750 - Pricing Evaluation for Reclaimed Water Bulk Fill Station

Respondent's Business Name:				Flowpoint Environmental Systems Inc.	Elemech, Inc.
Principal Place of Business (City and State):				Denver, CO	Aurora, IL
Line #	Description	QTY	UOM	Unit	Unit
1	One time equipment cost				
2	Bulk Fill Station - 3" Dual Outlet including overhead and side, Meter, Valve, User interface and Keypad including freight	1	EA	\$56,852.53	\$50,800.00
3	Side Hose Fill	1	EA	\$5,125.18	\$200.00
4	Overhead Fill Arm	1	EA	\$8,353.78	\$17,500.00
5	Software				
6	Initial System Software	1	LS	\$0.00	\$0.00
7	Cloud Hosting	1	Annual	\$0.00	\$1,100.00
8	Cellular Model and Data Plan	1	Annual	\$1,800.00	no bid
Lines 1 - 8 Total:				\$72,131.49	\$69,600.00
9	Additional Services (excluded from scoring)				
11	Onsite Startup and Training	1	EA	\$5,500.00	\$5,800.00
12	Installation	1	Per Hour	No Bid	No Bid
Total:				\$77,631.49	\$75,400.00

Evaluation			
Item #	Scoring Criteria	Flowpoint Environmental Systems Inc.	Elemech, Inc.
1	Delivery/Project Schedule-20%	17.33	14.67
2	Compliance with Specifications-30%	26.00	20.00
3	Probable Performance-10%	7.33	7.33
4	Price, Total Cost of Ownership-40%	38.60	40.00
Total Score:		89.27	82.00

ORDINANCE NO. _____

AN ORDINANCE OF THE CITY OF DENTON, A TEXAS HOME-RULE MUNICIPAL CORPORATION, AUTHORIZING THE CITY MANAGER TO EXECUTE A CONTRACT WITH FLOWPOINT ENVIRONMENTAL SYSTEMS, INC., FOR A BULK-FILL STATION FOR THE WATER UTILITIES DEPARTMENT; PROVIDING FOR THE EXPENDITURE OF FUNDS THEREFOR; AND PROVIDING AN EFFECTIVE DATE (RFP 8750 – AWARDED TO FLOWPOINT ENVIRONMENTAL SYSTEMS, INC., FOR ONE (1) YEAR, WITH THE OPTION FOR FOUR (4) ADDITIONAL ONE (1) YEAR EXTENSIONS, IN THE TOTAL FIVE (5) YEAR NOT-TO-EXCEED AMOUNT OF \$94,000.00).

WHEREAS, the City has solicited, received, and evaluated competitive proposals for a bulk-fill station for the Water Utilities Department; and

WHEREAS, the City Manager, or a designated employee, has received, reviewed, and recommended that the herein described proposals are the most advantageous to the City considering the relative importance of price and the other evaluation factors included in the request for proposals; and

WHEREAS, this procurement was undertaken as part of the City’s governmental function [Water and sewer service]; and

WHEREAS, the City Council has provided in the City Budget for the appropriation of funds to be used for the purchase of the materials, equipment, supplies, or services approved and accepted herein; NOW, THEREFORE,

THE COUNCIL OF THE CITY OF DENTON HEREBY ORDAINS:

SECTION 1. The items in the following numbered request for proposal for materials, equipment, supplies, or services shown in the “Request Proposals” on file in the office of the Purchasing Agent, are hereby accepted and approved as being the most advantageous to the City considering the relative importance of price and the other evaluation factors included in the request for proposals.

<u>RFP NUMBER</u>	<u>CONTRACTOR</u>	<u>AMOUNT</u>
8750	Flowpoint Environmental Systems, Inc.	\$94,000.00

SECTION 2. That by the acceptance and approval of the above numbered items of the submitted proposals, the City accepts the offer of the persons submitting the proposals for such items and agrees to purchase the materials, equipment, supplies, or services in accordance with the terms, specifications, standards, quantities, and for the specified sums contained in the Proposal Invitations, Proposals, and related documents.

SECTION 3. That should the City and person submitting approved and accepted items wish to enter into a formal written agreement as a result of the acceptance, approval, and awarding of the proposals, the City Manager, or their designated representative, is hereby authorized to execute the written contract which shall be attached hereto; provided that the written contract is in accordance with the terms, conditions, specifications, standards, quantities, and specified sums contained in the Proposal and related documents herein approved and accepted.

SECTION 4. The City Council of the City of Denton hereby expressly delegates the authority to take any actions that may be required or permitted to be performed by the City of Denton under this ordinance to the City Manager of the City of Denton, or their designee.

SECTION 5. By the acceptance and approval of the above enumerated bids, the City Council hereby authorizes the expenditure of funds therefor in the amount and in accordance with the approved bids.

SECTION 6. This ordinance shall become effective immediately upon its passage and approval.

The motion to approve this ordinance was made by _____ and seconded by _____. This ordinance was passed and approved by the following vote [___ - ___]:

	Aye	Nay	Abstain	Absent
Mayor Gerard Hudspeth:	_____	_____	_____	_____
Vicki Byrd, District 1:	_____	_____	_____	_____
Brian Beck, District 2:	_____	_____	_____	_____
Paul Meltzer, District 3:	_____	_____	_____	_____
Joe Holland, District 4:	_____	_____	_____	_____
Brandon Chase McGee, At Large Place 5:	_____	_____	_____	_____
Jill Jester, At Large Place 6:	_____	_____	_____	_____

PASSED AND APPROVED this the _____ day of _____, 2025.

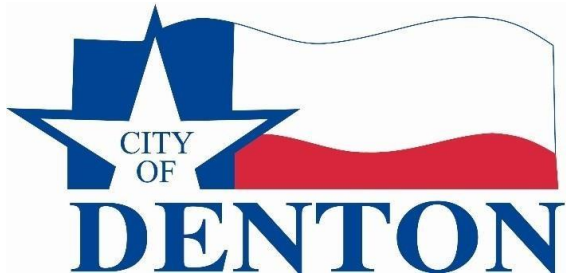
GERARD HUDSPETH, MAYOR

ATTEST:
LAUREN THODEN, CITY SECRETARY

BY: _____

APPROVED AS TO LEGAL FORM:
MACK REINWAND, CITY ATTORNEY

BY: Marcella Lunn



Docusign City Council Transmittal Coversheet

RFP	8750
File Name	Reclaimed water Bulk Fill Station
Purchasing Contact	Gabby Leeper
City Council Target Date	
Piggy Back Option	No
Contract Expiration	
Ordinance	

**CONTRACT BY AND BETWEEN
CITY OF DENTON, TEXAS AND FLOWPOINT ENVIRONMENTAL SYSTEMS, INC.
(Contract #8750)**

THIS CONTRACT is made and entered into this date _____, by and between Flowpoint Environmental Systems, Inc. a Montana limited liability company, whose address 191 University Blvd #467 Denver Colorado 80206, hereinafter referred to as “Contractor,” and the **CITY OF DENTON, TEXAS**, a home rule municipal corporation, hereinafter referred to as “City,” to be effective upon approval of the Denton City Council and subsequent execution of this Contract by the Denton City Manager or their duly authorized designee.

For and in consideration of the covenants and agreements contained herein, and for the mutual benefits to be obtained hereby, the parties agree as follows:

SCOPE OF SERVICES

Contractor shall provide services in accordance with the City’s RFP 8750 a copy of which is on file at the office of Purchasing Agent and incorporated herein for all purposes. The Contract consists of this written agreement and the following items which are attached hereto, or on file, and incorporated herein by reference:

- (a) Special Terms and Conditions (**Exhibit “A”**);
- (b) City of Denton’s RFP 8750 (the “Solicitation”) (**Exhibit “B” on file at the office of the Purchasing Agent**);
- (c) City of Denton Standard Terms and Conditions (**Exhibit “C”**);
- (d) Certificate of Interested Parties Electronic Filing (**Exhibit “D”**);
- (e) Insurance Requirements (**Exhibit “E”**);
- (f) Contractor’s Proposal (“Contractor’s Offer”) (**Exhibit “F”**);
- (g) Form CIQ – Conflict of Interest Questionnaire (**Exhibit “G”**)

These documents make up the Contract documents and what is called for by one shall be as binding as if called for by all. In the event of an inconsistency or conflict in any of the provisions of the Contract documents, the inconsistency or conflict shall be resolved by giving precedence first to the written agreement then to the contract documents in the order in which they are listed above. These documents shall be referred to collectively as “Contract Documents.”

Prohibition on Contracts with Companies Boycotting Israel

Contractor acknowledges that in accordance with Chapter 2271 of the Texas Government Code, City is prohibited from entering into a contract with a company for goods or services unless the contract contains a written verification from the company that it: (1) does not boycott Israel; and (2) will not boycott Israel during the term of the contract. The terms “boycott Israel” and “company” shall have the meanings ascribed to those terms in Section 808.001 of the Texas Government Code. ***By signing this Contract, Contractor certifies that Contractor’s signature provides written verification to the City that Contractor: (1) does not boycott Israel; and (2) will not boycott Israel during the term of the Contract.*** Failure to meet or maintain the requirements under this provision will be considered a material breach.

Prohibition on Contracts with Companies Boycotting Certain Energy Companies

Contractor acknowledges that in accordance with Chapter 2276 of the Texas Government Code, City is prohibited from entering into a contract with a company for goods or services unless the contract contains

written verification from the company that it (1) does not boycott energy companies; and (2) will not boycott energy companies during the term of the contract. The terms “boycott energy company” and “company” shall have the meanings ascribed to those terms in Section 809.001 of the Texas Government Code. ***By signing this agreement, Contractor certifies that Contractor’s signature provides written verification to the City that Contractor: (1) does not boycott energy companies; and (2) will not boycott energy companies during the term of the Contract.*** Failure to meet or maintain the requirements under this provision will be considered a material breach.

Prohibition on Contracts with Companies Boycotting Certain Firearm Entities and Firearm Trade Associations

Contractor acknowledges that in accordance with Chapter 2274 of the Texas Government Code, City is prohibited from entering into a contract with a company for goods or services unless the contract contains written verification from the company that it (1) does not have a practice, policy, guidance, or directive that discriminates against a firearm entity or firearm trade association; and (2) will not discriminate during the term of the contract against a firearm entity or firearm trade association. The terms “discriminate against a firearm entity or firearm trade association,” “firearm entity” and “firearm trade association” shall have the meanings ascribed to those terms in Chapter 2274 of the Texas Government Code. ***By signing this Contract, Contractor certifies that Contractor’s signature provides written verification to the City that Contractor: (1) does not have a practice, policy, guidance, or directive that discriminates against a firearm entity or firearm trade association; and (2) will not discriminate during the term of this Contract against a firearm entity or firearm trade association.*** Failure to meet or maintain the requirements under this provision will be considered a material breach.

Prohibition On Contracts with Companies Doing Business with Iran, Sudan, or a Foreign Terrorist Organization

Section 2252 of the Texas Government Code restricts City from contracting with companies that do business with Iran, Sudan, or a foreign terrorist organization. ***By signing this Contract, Contractor certifies that Contractor’s signature provides written verification to the City that Contractor, pursuant to Chapter 2252, is not ineligible to enter into this Contract and will not become ineligible to receive payments under this Contract by doing business with Iran, Sudan, or a foreign terrorist organization.*** Failure to meet or maintain the requirements under this provision will be considered a material breach.

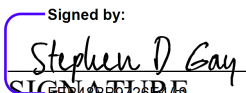
Termination Right for Contracts with Companies Doing Business with Certain Foreign-Owned Companies

The City of Denton may terminate this Contract immediately without any further liability if the City of Denton determines, in its sole judgment, that this Contract meets the requirements under Chapter 2275, and Contractor is, or will be in the future, (i) owned by or the majority of stock or other ownership interest of the company is held or controlled by individuals who are citizens of China, Iran, North Korea, Russia, or other designated country (ii) directly controlled by the Government of China, Iran, North Korea, Russia, or other designated country, or (iii) is headquartered in China, Iran, North Korea, Russia, or other designated country.

The parties agree to transact business electronically. Any statutory requirements that certain terms be in writing will be satisfied using electronic documents and signing. Electronic signing of this document will be deemed an original for all legal purposes.

IN WITNESS WHEREOF, the parties of these presents have executed this Contract in the year and day first above written.

THIS CONTRACT HAS BEEN
BOTH REVIEWED AND APPROVED
as to financial and operational obligations
and business terms.

Signed by:

Stephen D Gay
SIGNATURE PRINTED NAME


General Manager
TITLE

Water Utilities and Street Operations
DEPARTMENT

ATTEST:
LAUREN THODEN, CITY SECRETARY

BY: _____

APPROVED AS TO LEGAL FORM:
MACK REINWAND, CITY ATTORNEY

DocuSigned by:
BY: 
4B070831B4AA438...

CONTRACTOR

Signed by:
BY: 
AUTHORIZED SIGNATURE

Printed Name: Jay Morrison

Title: Vice President

780-242-5994
PHONE NUMBER

jmorrison@flowpointsystems.com
EMAIL ADDRESS

tbd
TEXAS ETHICS COMMISSION
CERTIFICATE NUMBER

CITY OF DENTON, TEXAS

BY: _____
SARA HENSLEY
CITY MANAGER

Exhibit A

Special Terms and Conditions

1. Total Contract Amount

The contract total for services shall not exceed \$94,000. Pricing shall be per Exhibit F attached.

2. The Quantities

The quantities indicated on Exhibit F are estimates based upon the best available information. The City reserves the right to increase or decrease the quantities to meet its actual needs without any adjustments in the bid price. Individual purchase orders will be issued on an as needed basis.

3. Contract Terms

The contract term will be one (1) year, effective from date of award. The City and the Supplier shall have the option to renew this contract for an additional four (4) one-year periods.

The Contract shall commence upon the issuance of a Notice of Award by the City of Denton and shall automatically renew each year, from the date of award by City Council. The Supplier's request to not renew the contract must be submitted in writing to the Purchasing Manager at least 60 days prior to the contract renewal date for each year. At the sole option of the City of Denton, the Contract may be further extended as needed, not to exceed a total of six (6) months.

4. Price Escalation and De-escalation

On Supplier's request in the form stated herein, the City will implement an escalation/de-escalation price adjustment annually based on these special terms. Any request for price adjustment must be based on the, U.S Department of Labor, Bureau of Labor Statistics, Producer Price Index (PPI) or the manufacturer published pricing list. The maximum escalation will not exceed +/- 8% for any individual year. The escalation will be determined annually at the renewal date. The price will be increased or decreased based upon the annual percentage change in the PPI or the percentage change in the manufacturer's price list. Should the PPI or manufacturer price list change exceed a minimum threshold value of +/-1%, then the stated eligible bid prices shall be adjusted in accordance with the percent change not to exceed the 8% limit per year. The supplier should provide documentation as percentage of each cost associated with the unit prices quoted for consideration.

Request must be submitted in writing with supporting evidence for need of such increase to the Purchasing Manager at least 60 days prior to contract expiration of each year. Respondent must also provide supporting documentation as justification for the request. If no request is made, then it will be assumed that the current contract price will be in effect.

Upon receipt of such request, the City of Denton reserves the right to either: accept the escalation as competitive with the general market price at the time, and become effective upon the renewal date of the contract award or reject the increases within 30 calendar days after receipt of a properly submitted request. If a properly submitted increase is rejected, the Contractor may request cancellation of such items from the Contract by giving the City of Denton written notice. Cancellation will not go into effect for 15 calendar days after a determination has been issued. Pre-price increase prices must be honored on orders dated up to the official date of the City of Denton approval and/or cancellation.

The request can be sent by e-mail to: purchasing@cityofdenton.com noting the solicitation number.

The City of Denton reserves the right to accept, reject, or negotiate the proposed price changes.

5. Performance Liquidated Damages

The Contractor shall incur contractual payment losses, as initiated by the City for performance that falls short of specified performance standards as outlined below:

- Delivery beyond contracted lead times
- Performance below contracted levels (services only)

The Contractor shall be assessed a one (1%) percent fee each month when any one of the performance standards outlined above are not met in full. The Contractor shall be assessed a two (2%) percent profit fee each month when any two (2) or more performance standards outlined above are not met in full. At the end of each month, the City will review the monthly reports and determine the percentage of penalty to be assessed to the Contractor's monthly profit margin.

Exhibit C
City of Denton
Standard Purchase Terms and Conditions

These standard Terms and Conditions and the Terms and Conditions, Specifications, Drawings and other requirements included in the City of Denton's contract are applicable to contracts/purchase orders issued by the City of Denton hereinafter referred to as the City or Buyer and the Seller or respondent herein after referred to as Contractor. Any deviations must be in writing and signed by a representative of the City's Procurement Department and the Contractor. No Terms and Conditions contained in the seller's proposal response, invoice, or statement shall serve to modify the terms set forth herein. If there is a conflict between the provisions on the face of the contract/purchase order these written provisions will take precedence.

The Contractor agrees that the Contract shall be governed by the following terms and conditions, unless exceptions are duly noted and fully negotiated. Unless otherwise specified in the Contract, Sections 3, 4, 5, 6, 7, 8, 20, and 21 shall apply only to a solicitation to purchase goods, and sections 9, 10, 11, and 22 shall apply only to a solicitation to purchase services to be performed principally at the City's premises or on public rights-of-way.

1. CONTRACTOR'S OBLIGATIONS. The Contractor shall fully and timely provide all deliverables described in the Solicitation and in the Contractor's Offer in strict accordance with the terms, covenants, and conditions of the Contract and all applicable federal, State, and local laws, rules, and regulations.

2. EFFECTIVE DATE/TERM. Unless otherwise specified in the Solicitation or Exhibit A, this Contract shall be effective as of the date this Contract is signed by the City and shall continue in effect until all obligations are performed in accordance with the Contract.

3. CONTRACTOR TO PACKAGE DELIVERABLES: The Contractor will package deliverables in accordance with good commercial practice and shall include a packing list showing the description of each item, the quantity and unit price unless otherwise provided in the Solicitation or Contractor's Offer, each shipping container shall be clearly and permanently marked as follows: (a) The Contractor's name and address, (b) the City's name, address, purchase order or purchase release number, and the price agreement number, if applicable, (c) container number and total number of containers, e.g. box 1 of 4 boxes, and (d) the number of the container bearing the packing list. The Contractor shall bear cost of packaging. Deliverables shall be suitably packed to secure lowest transportation costs and to conform to all the requirements of common carriers and any applicable specification. The City's count or weight shall be final and conclusive on shipments not accompanied by packing lists.

4. SHIPMENT UNDER RESERVATION PROHIBITED: The Contractor is not authorized to ship the deliverables under reservation and no tender of a bill of lading will operate as a tender of deliverables.

5. TITLE & RISK OF LOSS: Title to and risk of loss of the deliverables shall pass to the City only when the City actually receives and accepts the deliverables.

6. DELIVERY TERMS AND TRANSPORTATION CHARGES: Deliverables shall be shipped F.O.B. point of delivery unless otherwise specified in the Solicitation or Contractor's Offer. Unless otherwise stated in the Contractor's Offer, the Contractor's price shall be deemed to include all delivery and transportation charges. The City shall have the right to designate what method of transportation shall be used to ship the deliverables. The place of delivery shall be that set forth in the purchase order.

7. RIGHT OF INSPECTION AND REJECTION: The City expressly reserves all rights under law, including, but not limited to the Uniform Commercial Code, to inspect the deliverables at delivery before accepting them, and to reject defective or non-conforming deliverables. If the City has the right to inspect the Contractor's, or the Contractor's Subcontractor's, facilities, or the deliverables at the Contractor's, or the Contractor's Subcontractor's, premises, the Contractor shall furnish, or cause to be furnished, without additional charge, all reasonable facilities and assistance to the City to facilitate such inspection.

8. NO REPLACEMENT OF DEFECTIVE TENDER: Every tender or delivery of deliverables must fully comply with all provisions of the Contract as to time of delivery, quality, and quantity. Any non-complying tender shall constitute a breach and the Contractor shall not have the right to substitute a conforming tender; provided, where the time for performance has not yet expired, the Contractor may notify the City of the intention to cure and may then make a conforming tender within the time allotted in the contract to perform but not afterward. If, instead of requiring immediate correction or removal and replacement of defective or non-conforming deliverables, the City prefers to accept it, the City may do so. The Contractor shall pay all claims, costs, losses and damages attributable to the City's evaluation of and determination to accept such defective or non-conforming deliverables. If any such acceptance occurs prior to final payment, the City may deduct such amounts as are necessary to compensate the City for the diminished value of the defective or non-conforming deliverables. If the acceptance occurs after final payment, such amount will be refunded to the City by the Contractor.

9. PLACE AND CONDITION OF WORK: This paragraph only applies to the purchase of services to be primarily performed at the City's premises or on City property/right-of-way. The City shall provide the Contractor access to the sites where the Contractor is to perform the services as required in order for the Contractor to perform the services in a timely and efficient manner, in accordance with and subject to the applicable security laws, rules, and regulations. The Contractor acknowledges that it has satisfied itself as to the nature of the City's service requirements and specifications, the location and essential characteristics of the work sites, the quality and quantity of materials, equipment, labor and facilities necessary to perform the services, and any other condition or state of fact which could in any way affect performance of the Contractor's obligations under the Contract. The Contractor hereby releases and holds the City harmless from and against any liability or claim for damages of any kind or nature if the actual site or service conditions differ from expected conditions.

The Contractor shall, at all times, exercise reasonable precautions for the safety of their employees, City Staff, participants and others on or near the City's facilities.

10. WORKFORCE This paragraph only applies to the purchase of services to be primarily performed at the City's premises or on City property/right-of-way.

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A. The Contractor shall employ only orderly and competent workers, skilled in the performance of the services which they will perform under the Contract.

B. The Contractor, its employees, Subcontractors, and Subcontractor's employees may not (1) while engaged in, participating, or responding to a solicitation; or (2) while in the course and scope of delivering goods or services under a City of Denton contract; or (3) on the City's property.

i. use or possess a firearm, including a concealed handgun that is licensed under State law, except as required by the terms of the contract; or

ii. use or possess alcoholic or other intoxicating beverages, illegal drugs, or controlled substances, nor may such workers be intoxicated, or under the influence of alcohol or drugs.

C. If the City or the City's representative notifies the Contractor that any worker is incompetent, disorderly or disobedient, has knowingly or repeatedly violated safety regulations, has possessed any firearms, or has possessed or was under the influence of alcohol or drugs, the Contractor shall immediately remove such worker from Contract services, and may not employ such worker again on Contract services without the City's prior written consent.

IMMIGRATION: THE CONTRACTOR REPRESENTS AND WARRANTS THAT IT SHALL COMPLY WITH THE REQUIREMENTS OF THE IMMIGRATION REFORM AND CONTROL ACT OF 1986 AND 1990 REGARDING EMPLOYMENT VERIFICATION AND RETENTION OF VERIFICATION FORMS FOR ANY INDIVIDUALS HIRED ON OR AFTER NOVEMBER 6, 1986, WHO WILL PERFORM ANY LABOR OR SERVICES UNDER THE CONTRACT AND THE ILLEGAL IMMIGRATION REFORM AND IMMIGRANT RESPONSIBILITY ACT OF 1996 ("IIRIRA") ENACTED ON SEPTEMBER 30, 1996, AND SHALL INDEMNIFY AND HOLD THE CITY HARMLESS FROM ANY ACTION ARISING RELATED THERETO.

11. COMPLIANCE WITH HEALTH, SAFETY, AND ENVIRONMENTAL REGULATIONS: This paragraph only applies to the purchase of services to be primarily performed at the City's premises or on City property/right-of-way. The Contractor, its Subcontractors, and their respective employees, shall comply fully with all applicable federal, state, and local health, safety, and environmental laws, ordinances, rules, and regulations in the performance of the services, including but not limited to those promulgated by the City and by the Occupational Safety and Health Administration (OSHA). In case of conflict, the most stringent safety requirement shall govern. **THE CONTRACTOR SHALL INDEMNIFY AND HOLD THE CITY HARMLESS FROM AND AGAINST ALL CLAIMS, DEMANDS, SUITS, ACTIONS, JUDGMENTS, FINES, PENALTIES AND LIABILITY OF EVERY KIND ARISING FROM THE BREACH OF THE CONTRACTOR'S OBLIGATIONS UNDER THIS PARAGRAPH.**

Environmental Protection: The Contractor shall be in compliance with all applicable standards, orders, or regulations issued pursuant to the mandates of the Clean Air Act (42 U.S.C. §7401 *et seq.*) and the Federal Water Pollution Control Act, as amended, (33 U.S.C. §1251 *et seq.*).

12. INVOICES:

A. The Contractor shall submit separate invoices on each purchase order or purchase release after each delivery. If partial shipments or deliveries are authorized by the City, a separate invoice must be sent for each shipment or delivery made.

B. Proper Invoices must include a unique invoice number, invoice date, the purchase order number, and the master agreement number if applicable, the Department's Name, and the name of the point of contact for the Department. Invoices shall be itemized and transportation charges, if any, shall be listed separately. A copy of the bill of lading and the freight waybill, when applicable, shall be attached to the invoice. The Contractor's name, remittance address and, if

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applicable, the tax identification number on the invoice must exactly match the information in the Vendor's registration with the City. Unless otherwise instructed in writing, the City may rely on the remittance address specified on the Contractor's invoice.

C. Invoices for labor shall include a copy of all time-sheets with trade labor rate and deliverables order number clearly identified. Invoices shall also include a tabulation of work-hours at the appropriate rates and grouped by work order number. Time billed for labor shall be limited to hours actually worked at the work site.

D. Unless otherwise expressly authorized in the Contract, the Contractor shall pass through all Subcontract and other authorized expenses at actual cost without markup.

E. Federal excise taxes, State taxes, or City sales taxes must not be included in the invoiced amount. The City will furnish a tax exemption certificate upon request.

13. PAYMENT:

A. All proper invoices need to be sent to Accounts Payable – accountspayable@cityofdenton.com. Approved invoices will be paid within thirty (30) calendar days of the invoice being received in Accounts Payable.

B. If payment is not timely made, (per paragraph A); interest shall accrue on the unpaid balance at the lesser of the rate specified in Texas Government Code Section 2251.025 or the maximum lawful rate; except, if payment is not timely made for a reason for which the City may withhold payment hereunder, including, but not limited to, those in Paragraph D , below, interest shall not accrue until ten (10) calendar days after the grounds for withholding payment have been resolved.

C. If partial shipments or deliveries are authorized by the City, the Contractor will be paid for the partial shipment or delivery, as stated above, provided that the invoice matches such shipment or delivery.

D. The City may withhold or set off the entire payment or part of any payment otherwise due to the Contractor to such extent as may be necessary on account of:

- i. delivery of defective or non-conforming deliverables by the Contractor;
- ii. third party claims, which are not covered by the insurance which the Contractor is required to provide, are filed or reasonable evidence indicating probable filing of such claims;
- iii. failure of the Contractor to pay Subcontractors, or for labor, materials, or equipment;
- iv. damage to the property of the City or the City's agents, employees, or contractors, which is not covered by insurance required to be provided by the Contractor;
- v. reasonable evidence that the Contractor's obligations will not be completed within the time specified in the Contract, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay;
- vi. failure of the Contractor to submit proper invoices with purchase order number, all required attachments, and supporting documentation; or
- vii. failure of the Contractor to comply with any material provision of the Contract Documents.

E. Notice is hereby given to any awarded firm who is in arrears to the City for delinquent taxes of any kind or otherwise indebted to the City that the City shall be entitled to counterclaim and/or offset against any such debt, claim, demand, or account owed to the City through payment withholding until the debt is paid in full, and no assignment of such debt, claim, demand, or account after the said taxes or debt are due shall affect the right of the City to offset the said taxes or debt against same.

F. Payment will be made by check unless the parties mutually agree to payment by credit card or Contract 8750

electronic transfer of funds. The Contractor agrees that there shall be no additional charges, surcharges, or penalties to the City for payments made by credit card or electronic funds transfer. G. The Contractor acknowledges and agrees that the awarding or continuation of this Contract is dependent upon the availability of funding. The City's payment obligations are payable only and solely from funds appropriated and available for this Contract. The absence of appropriated or other lawfully available funds shall render the Contract null and void to the extent funds are not appropriated or available and any deliverables delivered but unpaid shall be returned to the Contractor. The City will not incur a debt or obligation to pay Contractor any amounts the City does not have the current funds available to pay. The City shall provide the Contractor written notice of the failure of the City to make an adequate appropriation for any fiscal year to pay the amounts due under the Contract, or the reduction of any appropriation to an amount insufficient to permit the City to pay its obligations under the Contract. In the event of none or inadequate appropriation of funds, there will be no penalty or liability to the City, nor removal fees, cancellation fees, or the like charged to the City.

14. TRAVEL EXPENSES: All travel, lodging, and per diem expenses in connection with the Contract shall be paid by the Contractor, unless otherwise stated in the Contract Documents. During the term of this Contract, the Contractor shall bill and the City shall reimburse Contractor for all reasonable and approved out of pocket expenses which are incurred in the connection with the performance of duties hereunder. Notwithstanding the foregoing, expenses for the time spent by the Contractor in traveling to and from City facilities shall not be reimbursed, unless otherwise negotiated.

15. FINAL PAYMENT AND CLOSE-OUT:

A. If a DBE/MBE/WBE Program Plan is agreed to and the Contractor has identified Subcontractors, the Contractor is required to submit a Contract Close-Out MBE/WBE Compliance Report to the Purchasing Manager no later than the fifteenth (15th) calendar day after completion of all work under the contract. Final payment, retainage, or both may be withheld if the Contractor is not in compliance with the requirements as accepted by the City.

B. The making and acceptance of final payment will constitute:

i. a waiver of all claims by the City against the Contractor, except claims (1) which have been previously asserted in writing and not yet settled, (2) arising from defective work appearing after final inspection, (3) arising from failure of the Contractor to comply with the Contract or the terms of any warranty specified herein, (4) arising from the Contractor's continuing obligations under the Contract, including but not limited to indemnity and warranty obligations, or (5) arising under the City's right to audit; and

ii. a waiver of all claims by the Contractor against the City other than those previously asserted in writing and not yet settled.

16. SPECIAL TOOLS & TEST EQUIPMENT: If the price stated on the Contractor's Offer includes the cost of any special tooling or special test equipment fabricated or required by the Contractor for the purpose of filling this order, such special tooling equipment and any process sheets related thereto shall become the property of the City and shall be identified by the Contractor as such.

17. RIGHT TO AUDIT:

A. The Contractor agrees that the City shall, until the expiration of five (5) years after final payment under this Contract unless required to be retained for longer under applicable law, have Contract 8750

electronic access to and the right to examine all books, records, and computations pertaining to this Contract. If necessary, the City shall have the right to audit and make copies of the books, records, and computations pertaining to the Contract. The Contractor shall retain such books, records, documents, and other evidence pertaining to the Contract period and five (5) years thereafter, except if an audit is in progress or audit findings are yet unresolved, in which case records shall be kept until all audit tasks are completed and resolved. These books, records, documents, and other evidence shall be available, within ten (10) business days of written request. All books and records will be made available within a fifty (50) mile radius of the City of Denton if the vendor is not able to provide electronic access. The cost of the audit will be borne by the City unless the audit reveals an overpayment of 1% or greater. If an overpayment of 1% or greater occurs, the reasonable cost of the audit, including any travel costs, must be borne by the Contractor which must be payable within five (5) business days of receipt of an invoice.

B. The Contractor further agrees to include in all its subcontracts hereunder a provision to the effect that the Subcontractor, material supplier, or other payee agrees that the City shall, until the expiration of five (5) years after final payment under the subcontract unless required to be retained for longer under applicable law, have electronic access to and the right to examine all books, records, documents, and other evidence of the Subcontractor, material supplier, or other payee involving transactions relating to the subcontract. If necessary, the City maintains the right to photocopy any physical books, documents, papers, and records of the subconsultant involving transactions relating to the subcontract. All books and records will be made available within a fifty (50) mile radius of the City of Denton. The cost of the audit will be borne by the City unless the audit reveals an overpayment of 1% or greater. If an overpayment of 1% or greater occurs, the reasonable cost of the audit, including any travel costs, must be borne by the Contractor which must be payable within five (5) business days of receipt of an invoice.

C. Failure to comply with the provisions of this section shall be a material breach of the Contract and shall constitute, in the City's sole discretion, grounds for termination thereof. Each of the terms "books", "records", "documents", and "other evidence", as used above, shall be construed to include drafts and electronic files, even if such drafts or electronic files are subsequently used to generate or prepare a final printed document.

18. SUBCONTRACTORS:

A. If the Contractor-identified subcontractors ("Subcontractor") in a DBE/MBE/WBE agreed-to plan (the "Plan"), the Contractor shall comply with all requirements approved by the City. The Contractor shall not initially employ any subcontractor except as provided in the Contractor's Plan. The Contractor shall not substitute any Subcontractor identified in the Plan, unless the substitute has been accepted by the City in writing. No acceptance by the City of any subcontractor shall constitute a waiver of any rights or remedies of the City with respect to defective deliverables provided by a Subcontractor. If a Plan has been approved, the Contractor is additionally required to submit a monthly Subcontract Awards and Expenditures Report to the Procurement Manager, no later than the tenth calendar day of each month.

B. Work performed for the Contractor by a Subcontractor shall be pursuant to a written contract between the Contractor and Subcontractor. The terms of the subcontract may not conflict with the terms of the Contract Documents, and shall contain provisions that:

- i. require that all deliverables to be provided by the Subcontractor be provided in strict accordance with the provisions, specifications and terms of the Contract;
- ii. prohibit the Subcontractor from further subcontracting any portion of the Contract

without the prior written consent of the City and the Contractor. The City may require, as a condition to such further subcontracting, that the Subcontractor post a payment bond in form, substance and amount acceptable to the City;

iii. require Subcontractors to submit all invoices and applications for payments, including any claims for additional payments, damages or otherwise, to the Contractor in sufficient time to enable the Contractor to include same with its invoice or application for payment to the City in accordance with the terms of the Contract;

iv. require that all Subcontractors obtain and maintain, throughout the term of their contract, insurance in the type and amounts specified for the Contractor, with the City being a named insured as its interest shall appear; and

V. REQUIRE THAT THE SUBCONTRACTOR INDEMNIFY AND HOLD THE CITY HARMLESS TO THE SAME EXTENT AS THE CONTRACTOR IS REQUIRED TO INDEMNIFY THE CITY.

C. The Contractor shall be fully responsible to the City for all acts and omissions of the Subcontractors just as the Contractor is responsible for the Contractor's own acts and omissions. Nothing in the Contract shall create for the benefit of any such Subcontractor any contractual relationship between the City and any such Subcontractor, nor shall it create any obligation on the part of the City to pay or to see to the payment of any moneys due any such Subcontractor except as may otherwise be required by law.

D. The Contractor shall pay each Subcontractor its appropriate share of payments made to the Contractor not later than ten (10) calendar days after receipt of payment from the City.

19. WARRANTY-PRICE:

A. The Contractor warrants the prices quoted in the Contractor's Offer are no higher than the Contractor's current prices on orders by others for like deliverables under similar terms of purchase.

B. The Contractor certifies that the prices in the Contractor's Offer have been arrived at independently without consultation, communication, or agreement for the purpose of restricting competition, as to any matter relating to such fees with any other firm or with any competitor.

C. In the event Contractor breaches this warranty, in addition to any other remedy available, the City may deduct from any amounts owed to the Contractor, or otherwise recover, any amounts paid for items in excess of the Contractor's current prices on orders by others for like deliverables under similar terms of purchase, or in the alternative, the City may cancel this Contract without liability to Contractor for breach.

20. WARRANTY – TITLE: THE CONTRACTOR WARRANTS THAT IT HAS GOOD AND INDEFEASIBLE TITLE TO ALL DELIVERABLES FURNISHED UNDER THE CONTRACT, AND THAT THE DELIVERABLES ARE FREE AND CLEAR OF ALL LIENS, CLAIMS, SECURITY INTERESTS, AND ENCUMBRANCES. THE CONTRACTOR SHALL INDEMNIFY AND HOLD THE CITY HARMLESS FROM AND AGAINST ALL ADVERSE TITLE CLAIMS TO THE DELIVERABLES.

21. WARRANTY – DELIVERABLES: The Contractor warrants and represents that all deliverables sold the City under the Contract shall be free from defects in design, workmanship, or manufacture, and conform in all material respects to the specifications, drawings, and descriptions in the Contract Documents, to any samples furnished by the Contractor, to the terms, covenants, and conditions of the Contract, and to all applicable State, federal, or local laws, rules, and regulations, and industry codes and standards. Unless otherwise stated in the Solicitation, the deliverables shall be new or recycled merchandise, and not used or reconditioned. In addition, Contractor warrants that the goods sold to City shall conform to the standards promulgated by the Contract 8750

U.S. Department of Labor under the Occupational Safety and Health Act (OSHA). In the event the product does not conform to OSHA standards, City may return the product for correction or replacement at the Contractor's expense. In the event Contractor fails to make the appropriate correction within a reasonable time, correction made by City will be at Contractor's expense.

A. Recycled deliverables shall be clearly identified as such.

B. The Contractor may not limit, exclude, or disclaim the foregoing warranty or any warranty implied by law; and any attempt to do so shall be without force or effect.

C. Unless otherwise specified in the Contract or required by the Solicitation, the warranty period shall be at least one (1) year from the date of acceptance of the deliverables or from the date of acceptance of any replacement deliverables. If during the warranty period, one or more of the above warranties are breached, the Contractor shall promptly upon receipt of demand either repair the non-conforming deliverables, or replace the non-conforming deliverables with fully conforming deliverables, at the City's option and at no additional cost to the City. All costs incidental to such repair or replacement, including but not limited to, any packaging and shipping costs shall be borne exclusively by the Contractor. The City shall endeavor to give the Contractor written notice of the breach of warranty within thirty (30) calendar days of discovery of the breach of warranty, but failure to give timely notice shall not impair the City's rights under this section.

D. If the Contractor is unable or unwilling to repair or replace defective or non-conforming deliverables as required by the City, then in addition to any other available remedy, the City may reduce the quantity of deliverables it may be required to purchase under the Contract from the Contractor, and purchase conforming deliverables from other sources. In such event, the Contractor shall pay to the City upon demand the increased cost, if any, incurred by the City to procure such deliverables from another source.

E. If the Contractor is not the manufacturer, and the deliverables are covered by a separate manufacturer's warranty, the Contractor shall transfer and assign such manufacturer's warranty to the City. If for any reason the manufacturer's warranty cannot be fully transferred to the City, the Contractor shall assist and cooperate with the City to the fullest extent to enforce such manufacturer's warranty for the benefit of the City.

F. Contractor shall not limit, exclude, or disclaim any implied warranties, and any attempt to do so shall be without force or effect, or alternatively, at the City's option, render this Contract voidable.

22. WARRANTY – SERVICES: The Contractor warrants and represents that all services to be provided to the City under the Contract will be fully and timely performed in a good and workmanlike manner in accordance with generally accepted industry standards and practices, the terms, conditions, and covenants of the Contract, and all applicable federal, State, and local laws, rules or regulations.

A. The Contractor may not limit, exclude, or disclaim the foregoing warranty or any warranty implied by law, and any attempt to do so shall be without force or effect, or alternatively, at the City's option, render this Contract voidable.

B. Unless otherwise specified in the Contract, the warranty period shall be at least one (1) year from the date of acceptance of the work. If during the warranty period, one or more of the above warranties are breached, the Contractor shall promptly upon receipt of demand perform the services again in accordance with above standard at no additional cost to the City. All costs incidental to such additional performance shall be borne by the Contractor. The City shall endeavor to give the Contractor written notice of the breach of warranty within thirty (30) calendar days of discovery of the breach warranty, but failure to give timely notice shall not impair the City's rights under this section.

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C. If the Contractor is unable or unwilling to perform its services in accordance with the above standard as required by the City, then in addition to any other available remedy, the City may reduce the amount of services it may be required to purchase under the Contract from the Contractor, and purchase conforming services from other sources. In such event, the Contractor shall pay to the City upon demand the increased cost, if any, incurred by the City to procure such services from another source.

23. ACCEPTANCE OF INCOMPLETE OR NON-CONFORMING DELIVERABLES: If, instead of requiring immediate correction or removal and replacement of defective or non-conforming deliverables, the City prefers to accept it, the City may do so. The Contractor shall pay all claims, costs, losses, and damages attributable to the City's evaluation of and determination to accept such defective or non-conforming deliverables. If any such acceptance occurs prior to final payment, the City may deduct such amounts as are necessary to compensate the City for the diminished value of the defective or non-conforming deliverables. If the acceptance occurs after final payment, such amount will be refunded to the City by the Contractor.

24. RIGHT TO ASSURANCE: Whenever one party to the Contract in good faith has reason to question the other party's intent to perform, demand may be made to the other party for written assurance of the intent to perform. In the event that no assurance is given within the time specified (being a minimum of 5 days) after demand is made, the demanding party may treat this failure as an anticipatory repudiation of the Contract.

25. STOP WORK NOTICE: The City may issue an immediate Stop Work Notice in the event the Contractor is observed performing in a manner that is in violation of federal, State, or local guidelines, or in a manner that is determined by the City to be unsafe to either life or property. Upon notification, the Contractor will cease all work until notified by the City that the violation or unsafe condition has been corrected. The Contractor shall be liable for all costs incurred by the City as a result of the issuance of such Stop Work Notice.

26. DEFAULT:

A. The Contractor shall be in default under the Contract if the Contractor (a) fails to fully, timely, and faithfully perform any of its material obligations under the Contract, (b) fails to provide adequate assurance of performance under Paragraph 25, (c) becomes insolvent or seeks relief under the bankruptcy laws of the United States or (d) makes a material misrepresentation in Contractor's Offer, or in any report or deliverable required to be submitted by the Contractor to the City.

B. In the event the City terminates the awarded contract for default or any other reason, the Contractor shall not be relieved of liability to the City for damages sustained by the City by reason of any default of the contract by the Contractor or otherwise, and the City may withhold any payments to the Contractor for the purpose of an offset until such time as the amount of damages due the City from the Contractor can be determined.

27. TERMINATION FOR CAUSE: In the event of a default by the Contractor, the City shall have the right to terminate the Contract for cause, by written notice effective ten (10) calendar days, unless otherwise specified, after the date of such notice, unless the Contractor, within such ten (10) day period, cures such default, or provides evidence sufficient to prove to the City's reasonable satisfaction that such default does not, in fact, exist. In addition to any other remedy available under law or in equity, the City shall be entitled to recover all actual damages, costs,

losses and expenses, incurred by the City as a result of the Contractor's default, including, without limitation, cost of cover, reasonable attorneys' fees, court costs, and prejudgment and post-judgment interest at the maximum lawful rate. Additionally, in the event of a default by the Contractor, the City may remove the Contractor from the City's vendor list for three (3) years and/or any offer submitted by the Contractor may be disqualified for up to three (3) years. All rights and remedies under the Contract are cumulative and are not exclusive of any other right or remedy provided by law. The requirements of Subchapter J, Chapter 552 of the Texas Government Code, may apply to this Contract and the Contractor agrees that the Contract can be terminated if the Contractor knowingly or intentionally fails to comply with a requirement of that subchapter.

28. TERMINATION WITHOUT CAUSE: The City shall have the right to terminate the Contract, in whole or in part, without cause and/or for convenience any time upon thirty (30) calendar days' prior written notice. Upon receipt of a notice of termination, the Contractor shall promptly cease all further work pursuant to the Contract, with such exceptions, if any, specified in the notice of termination. The City shall pay the Contractor, to the extent of funds appropriated or otherwise legally available for such purposes, for all goods delivered and services performed and obligations incurred prior to the date of termination in accordance with the terms hereof, provided such payment amount is not disputed by City. The City reserves all rights, causes of action, and remedies available under law or in equity with respect to any dispute under this Contract and a termination under this provision does not waive such rights, causes of action, and remedies.

29. FRAUD: Fraudulent statements by the Contractor in any offer, Contract Document, or in any report or deliverable required to be submitted by the Contractor to the City shall be grounds for the termination of the Contract for cause by the City and may result in legal action.

30. DELAYS:

A. The City may delay scheduled delivery or other due dates by written notice to the Contractor if the City deems it is in its best interest. If such delay causes an increase in the cost of the work under the Contract, the City and the Contractor shall negotiate an equitable adjustment for costs incurred by the Contractor in the Contract price and execute an amendment to the Contract. The Contractor must assert its right to an adjustment within thirty (30) calendar days from the date of receipt of the notice of delay. Failure to agree on any adjusted price shall be handled under the Dispute Resolution process specified in Paragraph 53. However, nothing in this provision shall excuse the Contractor from delaying the delivery as notified.

B. Neither party shall be liable for any default or delay in the performance of its obligations under this Contract if, while and to the extent such default or delay is caused by acts of God, fire, riots, civil commotion, labor disruptions, sabotage, sovereign conduct, or any other cause beyond the reasonable control of such party. In the event of default or delay in Contract performance due to any of the foregoing causes, then the time for completion of the services will be extended; provided, however, in such an event, a conference will be held within three (3) business days to establish a mutually agreeable period of time reasonably necessary to overcome the effect of such failure to perform.

31. TIME OF COMPLETION AND LIQUIDATED DAMAGES: Contractor agrees and acknowledges that completing the services and/or delivering the goods described in this Contract in a timely manner is very important to the City. Contractor agrees to perform all obligations within the timeframes required. As it is impracticable and extremely difficult to fix the actual damages, if any, that may proximately result from a failure by Contractor to provide the goods or

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perform the service, should Contractor fail to timely perform its obligations, Contractor agrees to pay to City, or have withheld and offset from monies due it, the amount stated in the Contract Documents as liquidated damages for each calendar day of delay or nonperformance. Any sums due and payable hereunder by the Contractor shall be payable, not as a penalty, but as liquidated damages representing an estimate of delay damages likely to be sustained by the City, estimated at the time of executing this Contract. Execution of the Contract shall constitute agreement by the City and Contractor that said amount is the minimum value of the costs and actual damage caused by the Contractor's failure to timely perform. Adjustments to the contract times can only be made as provided in the Contract Documents and any conditions or specifications referenced therein.

32. INDEMNITY:

A. Definitions:

i. "Indemnified Claims" shall include any and all claims, demands, suits, causes of action, judgments, and liability of every character, type, or description, including all reasonable costs and expenses of litigation, mediation, or other alternate dispute resolution mechanism, including attorney and other professional fees for: (1) damage to or loss of the property of any person (including, but not limited to the City, the Contractor, their respective agents, officers, employees and Subcontractors; the officers, agents, and employees of such Subcontractors; and third parties); and/or (2) death, bodily injury, illness, disease, worker's compensation, loss of services, or loss of income or wages to any person (including but not limited to the agents, officers and employees of the City, the Contractor, the Contractor's Subcontractors, and third parties), ii. "Fault" shall include the sale of defective or non-conforming deliverables, negligence, willful misconduct or a breach of any legally imposed strict liability standard.

B. THE CONTRACTOR SHALL DEFEND (AT THE OPTION OF THE CITY), INDEMNIFY, AND HOLD THE CITY, ITS SUCCESSORS, ASSIGNS, OFFICERS, EMPLOYEES AND ELECTED OFFICIALS HARMLESS FROM AND AGAINST ALL INDEMNIFIED CLAIMS DIRECTLY ARISING OUT OF, INCIDENT TO, CONCERNING OR RESULTING FROM THE FAULT OF THE CONTRACTOR, OR THE CONTRACTOR'S AGENTS, EMPLOYEES OR SUBCONTRACTORS, IN THE PERFORMANCE OF THE CONTRACTOR'S OBLIGATIONS UNDER THE CONTRACT. NOTHING HEREIN SHALL BE DEEMED TO LIMIT THE RIGHTS OF THE CITY OR THE CONTRACTOR (INCLUDING, BUT NOT LIMITED TO, THE RIGHT TO SEEK CONTRIBUTION) AGAINST ANY THIRD PARTY WHO MAY BE LIABLE FOR AN INDEMNIFIED CLAIM.

33. LIMITATION OF LIABILITY: This Contract does not, and shall not be interpreted to, contain an artificial limitation of liability (e.g. liability limited to contract price or liability capped at an amount actually paid in previous 3 months, etc.) or an artificial statute of limitations (e.g. any lawsuit must be commenced within one year of the event).

34. INSURANCE: The Contractor shall procure and maintain insurance of the types and in the minimum amounts acceptable to the City of Denton outlined in the Insurance Exhibit attached hereto, if applicable. The insurance shall be written by a company licensed to do business in the State of Texas and satisfactory to the City of Denton. The City of Denton reserves the right to add insurance during the contract term.

B. Specific Coverage Requirements: Specific insurance requirements are contained in the Contract 8750

Solicitation and the Insurance Exhibit.

35. CLAIMS: If any claim, demand, suit, or other action is asserted against the Contractor which arises under or concerns the Contract, or which could have a material adverse effect on the Contractor's ability to perform thereunder, the Contractor shall give written notice thereof to the City within ten (10) calendar days after receipt of notice by the Contractor. Such notice to the City shall state the date of notification of any such claim, demand, suit, or other action; the names and addresses of the claimant(s); the basis thereof; and the name of each person against whom such claim is being asserted. Such notice shall be delivered personally or by mail and shall be sent to the City and to the Denton City Attorney. Personal delivery to the City Attorney shall be to City Hall, 215 East McKinney Street, Denton, Texas 76201.

36. NOTICES: Unless otherwise specified, all notices, requests, or other communications required or appropriate to be given under the Contract shall be in writing and shall be deemed delivered three (3) business days after postmarked if sent by U.S. Postal Service Certified or Registered Mail, Return Receipt Requested. Notices delivered by other means shall be deemed delivered upon receipt by the addressee. Routine communications may be made by first class mail, telefax, or other commercially accepted means. Notices to the Contractor shall be sent to the address specified in the Contractor's Offer, or at such other address as a party may notify the other in writing. Notices to the City shall be addressed to the City at 901B Texas Street, Denton, Texas 76209 and marked to the attention of the Purchasing Manager.

37. RIGHTS TO BID, PROPOSAL AND CONTRACTUAL MATERIAL: All material submitted by the Contractor to the City shall become property of the City upon receipt. Any portions of such material claimed by the Contractor to be proprietary must be clearly marked as such. Determination of the public nature of the material is subject to the Texas Public Information Act, Chapter 552, and Texas Government Code. The requirements of Subchapter J, Chapter 552 of the Texas Government Code, may apply to this Contract and the Contractor agrees that the Contract can be terminated if the Contractor knowingly or intentionally fails to comply with a requirement of that subchapter.

38. INDEMNIFICATION AGAINST INFRINGEMENTS: The Contractor represents and warrants to the City that: (i) the Contractor shall provide the City good and indefeasible title to the deliverables and (ii) the deliverables supplied by the Contractor in accordance with the specifications in the Contract will not infringe, directly or contributorily, any patent, trademark, copyright, trade secret, or any other intellectual property right of any kind of any third party; that no claims have been made by any person or entity with respect to the ownership or operation of the deliverables and the Contractor does not know of any valid basis for any such claims. Moreover, Contractor does not know of any valid basis for any such claims. **THE CONTRACTOR SHALL, AT ITS SOLE EXPENSE, DEFEND, INDEMNIFY, AND HOLD THE CITY HARMLESS FROM AND AGAINST ALL LIABILITY, DAMAGES, AND COSTS (INCLUDING COURT COSTS AND REASONABLE FEES OF ATTORNEYS AND OTHER PROFESSIONALS) ARISING OUT OF OR RESULTING FROM: (I) ANY CLAIM THAT THE CITY'S EXERCISE ANYWHERE IN THE WORLD OF THE RIGHTS ASSOCIATED WITH THE CITY'S OWNERSHIP, AND IF APPLICABLE, LICENSE RIGHTS, AND ITS USE OF THE DELIVERABLES INFRINGES THE INTELLECTUAL PROPERTY RIGHTS OF ANY THIRD PARTY; OR (II) THE CONTRACTOR'S BREACH OF ANY OF CONTRACTOR'S REPRESENTATIONS OR WARRANTIES STATED IN THIS CONTRACT. IN THE EVENT OF ANY SUCH CLAIM, THE CITY SHALL HAVE THE**

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RIGHT TO MONITOR SUCH CLAIM OR AT ITS OPTION ENGAGE ITS OWN SEPARATE COUNSEL TO ACT AS CO-COUNSEL ON THE CITY'S BEHALF. FURTHER, CONTRACTOR AGREES THAT THE CITY'S SPECIFICATIONS REGARDING THE DELIVERABLES SHALL IN NO WAY DIMINISH CONTRACTOR'S WARRANTIES OR OBLIGATIONS UNDER THIS PARAGRAPH AND THE CITY MAKES NO WARRANTY THAT THE PRODUCTION, DEVELOPMENT, OR DELIVERY OF SUCH DELIVERABLES WILL NOT IMPACT SUCH WARRANTIES OF CONTRACTOR. THIS PARAGRAPH SHALL SURVIVE THE TERMINATION OF THIS CONTRACT.

39. CONFIDENTIALITY: In order to provide the deliverables to the City, Contractor may require access to certain of the City's and/or its licensors' confidential information (including inventions, employee information, trade secrets, confidential know-how, confidential business information, and other information which the City or its licensors consider confidential) (collectively, "Confidential Information"). Contractor acknowledges and agrees that the Confidential Information is the valuable property of the City and/or its licensors and any unauthorized use, disclosure, dissemination, or other release of the Confidential Information will substantially injure the City and/or its licensors. The Contractor (including its employees, subcontractors, agents, or representatives) agrees that it will maintain the Confidential Information in strict confidence and shall not disclose, disseminate, copy, divulge, recreate, or otherwise use the Confidential Information without the prior written consent of the City or in a manner not expressly permitted under this Contract, unless the Confidential Information is required to be disclosed by law or an order of any court or other governmental authority with proper jurisdiction, provided the Contractor promptly notifies the City before disclosing such information so as to permit the City reasonable time to seek an appropriate protective order. The Contractor agrees to use protective measures no less stringent than the Contractor uses within its own business to protect its own most valuable information, which protective measures shall under all circumstances be at least reasonable measures to ensure the continued confidentiality of the Confidential Information.

40. OWNERSHIP AND USE OF DELIVERABLES: The City shall own all rights, titles, and interests throughout the world in and to the deliverables.

A. Patents. As to any patentable subject matter contained in the deliverables, the Contractor agrees to disclose such patentable subject matter to the City. Further, if requested by the City, the Contractor agrees to assign and, if necessary, cause each of its employees to assign the entire right, title, and interest to specific inventions under such patentable subject matter to the City and to execute, acknowledge, and deliver and, if necessary, cause each of its employees to execute, acknowledge, and deliver an assignment of letters patent, in a form to be reasonably approved by the City, to the City upon request by the City.

B. Copyrights. As to any deliverables containing copyrightable subject matter, the Contractor agrees that upon their creation, such deliverables shall be considered as work made-for-hire by the Contractor for the City and the City shall own all copyrights in and to such deliverables, provided however, that nothing in this Paragraph 41 shall negate the City's sole or joint ownership of any such deliverables arising by virtue of the City's sole or joint authorship of such deliverables. Should by operation of law, such deliverables not be considered works made-for-hire, the Contractor hereby assigns to the City (and agrees to cause each of its employees providing services to the City hereunder to execute, acknowledge, and deliver an assignment to the City of) all worldwide right, title, and interest in and to such deliverables. With respect to such work made-for-hire, the Contractor agrees to execute, acknowledge, and deliver and cause each of its employees providing services to the City hereunder to execute, acknowledge, and deliver a work-made-for-hire agreement, in a form to be reasonably approved by the City, to the City upon

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delivery of such deliverables to the City or at such other time as the City may request.

C. **Additional Assignments.** The Contractor further agrees to, and if applicable, cause each of its employees to, execute, acknowledge, and deliver all applications, specifications, oaths, assignments, and all other instruments which the City might reasonably deem necessary in order to apply for and obtain copyright protection, mask work registration, trademark registration and/or protection, letters patent, or any similar rights in any and all countries and in order to assign and convey to the City, its successors, assigns and nominees, the sole and exclusive right, title, and interest in and to the deliverables. The Contractor's obligations to execute, acknowledge, and deliver (or cause to be executed, acknowledged, and delivered) instruments or papers such as those described in this Paragraph 41 A., B., and C. shall continue after the termination of this Contract with respect to such deliverables. In the event the City should not seek to obtain copyright protection, mask work registration or patent protection for any of the deliverables, but should desire to keep the same secret, the Contractor agrees to treat the same as Confidential Information under the terms of Paragraph 40 above.

41. PUBLICATIONS: All published material and written reports submitted under the Contract must be originally developed material unless otherwise specifically provided in the Contract. When material not originally developed is included in a report in any form, the source shall be identified.

42. ADVERTISING: The Contractor shall not advertise or publish, without the City's prior consent, the fact that the City has entered into the Contract, except to the extent necessary to comply with proper requests for information from an authorized representative of the federal, State, or local government.

43. NO CONTINGENT FEES: The Contractor warrants that no person or selling agency has been employed or retained to solicit or secure the Contract upon any agreement or understanding for commission, percentage, brokerage, or contingent fee, excepting bona fide employees of bona fide established commercial or selling agencies maintained by the Contractor for the purpose of securing business. For breach or violation of this warranty, the City shall have the right, in addition to any other remedy available, to cancel the Contract without liability and to deduct from any amounts owed to the Contractor, or otherwise recover, the full amount of such commission, percentage, brokerage or contingent fee.

44. GRATUITIES: The City may, by written notice to the Contractor, cancel the Contract without liability if it is determined by the City that gratuities were offered or given by the Contractor or any agent or representative of the Contractor to any officer or employee of the City of Denton with a view toward securing the Contract or securing favorable treatment with respect to the awarding or amending or the making of any determinations with respect to the performing of such contract. In the event the Contract is canceled by the City pursuant to this provision, the City shall be entitled, in addition to any other rights and remedies, to recover or withhold the amount of the cost incurred by the Contractor in providing such gratuities.

45. PROHIBITION AGAINST PERSONAL INTEREST IN CONTRACTS: The Contractor agrees to comply with the conflict of interest provisions of the City of Denon Code of Ordinances and/or State law. No officer, employee, independent consultant, or elected official of the City who is involved in the development, evaluation, or decision-making process of the performance of any solicitation shall have a financial interest, direct or indirect, in the Contract resulting from that Contract 8750

solicitation as defined in the City's Ethic Ordinance codified at Chapter 2, Article XI and in the City Charter Section 14.04, as amended. Any willful violation of this section shall constitute impropriety in office, and any officer or employee guilty thereof shall be subject to disciplinary action up to and including dismissal. Any violation of this provision, with the knowledge, expressed or implied, of the Contractor shall render the Contract voidable by the City. The Contractor shall complete and submit the City's Conflict of Interest Questionnaire. The Contractor agrees to maintain current, updated disclosure of information on file with the Procurement Department throughout the term of this Contract.

46. NO SUBCONTRACTING BID AFTER AWARD: Following the award of the Contract, no subcontracting except that specifically identified in the response to the Solicitation will be permitted without the express prior written consent of the City.

47. NO GIFT OF PUBLIC PROPERTY: The City will not agree to any terms or conditions that cause the City to lend its credit or grant public money or anything of value to the selected Contractor.

48. INDEPENDENT CONTRACTOR: The Contract shall not be construed as creating an employer/employee relationship, a partnership, or a joint venture. The Contractor's services shall be those of an independent contractor. The Contractor agrees and understands that the Contract does not grant any rights or privileges established for employees of the City of Denton, Texas for the purposes of income tax, withholding, social security taxes, vacation or sick leave benefits, worker's compensation, or any other City employee benefit. The City shall not have supervision and control of the Contractor or any employee of the Contractor, and it is expressly understood that Contractor shall perform the services hereunder according to the attached specifications at the general direction of the City Manager of the City of Denton, Texas, or their designee under this Contract. The Contractor is expressly free to advertise and perform services for other parties while performing services for the City.

49. ASSIGNMENT-DELEGATION: The Contract shall be binding upon and enure to the benefit of the City and the Contractor and their respective successors and assigns, provided however, that no right or interest in the Contract shall be assigned and no obligation shall be delegated by the Contractor without the prior written consent of the City. Any attempted assignment or delegation by the Contractor shall be void unless made in conformity with this Paragraph. The Contract is not intended to confer rights or benefits on any person, firm or entity not a party hereto; it being the intention of the parties that there are no third party beneficiaries to the Contract.

The Vendor shall notify the City's Purchasing Manager, in writing, of a company name, ownership, or address change for the purpose of maintaining updated City records. The president of the company or authorized official must sign the letter. A letter indicating changes in a company name or ownership must be accompanied with supporting legal documentation such as an updated W-9, documents filed with the state indicating such change, copy of the board of director's resolution approving the action, or an executed merger or acquisition agreement. Failure to do so may adversely impact future invoice payments.

50. WAIVER: No claim or right arising out of a breach of the Contract can be discharged in whole or in part by a waiver or renunciation of the claim or right unless the waiver or renunciation is supported by consideration and is in writing signed by the aggrieved party. No waiver by either

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the Contractor or the City of any one or more events of default by the other party shall operate as, or be construed to be, a permanent waiver of any rights or obligations under the Contract, or an express or implied acceptance of any other existing or future default or defaults, whether of a similar or different character. No delay, failure, or waiver of either party's exercise or partial exercise of any right or remedy under the Contract shall operate to limit, impair, preclude, cancel, waive or otherwise affect such right or remedy.

51. MODIFICATIONS: The Contract can be modified or amended only by a writing signed by both parties. No pre-printed or similar terms on any the Contractor invoice, order or other document submitted to the City by Contractor shall have any force or effect to change the terms, covenants, and conditions of the Contract.

52. INTERPRETATION: The Contract is intended by the parties as a final, complete and exclusive statement of the terms of their agreement. No course of prior dealing between the parties or course of performance or usage of the trade shall be relevant to supplement or explain any term used in the Contract. Acceptance or acquiescence in a course of performance rendered under this Contract shall not be relevant to determine the meaning of this agreement even though the accepting or acquiescing party has knowledge of the performance and opportunity for objection. Although the Contract may have been substantially drafted by one party, it is the intent of the parties that all provisions be construed in a manner to be fair to both parties, reading no provisions more strictly against one party or the other. Whenever a term defined by the Uniform Commercial Code, as enacted by the State of Texas, is used in the Contract, the UCC definition shall control, unless otherwise defined in the Contract.

53. DISPUTE RESOLUTION:

A. If a dispute arises out of or relates to the Contract, or the breach thereof, the parties agree to negotiate prior to prosecuting a suit for damages. However, this section does not prohibit the filing of a lawsuit to toll the running of a statute of limitations or to seek injunctive relief. Either party may make a written request for a meeting between representatives of each party within fourteen (14) calendar days after receipt of the request or such later period as agreed by the parties. Each party shall include, at a minimum, one (1) senior level individual with decision-making authority regarding the dispute, however any decision requiring approval of the City Council of the City will be required to be submitted to the City Council and the senior level person shall have authority to recommend approval of any resolution. The purpose of this and any subsequent meeting is to attempt in good faith to negotiate a resolution of the dispute. If, within thirty (30) calendar days after such meeting, the parties have not succeeded in negotiating a resolution of the dispute, they will proceed directly to mediation as described below. Negotiation may be waived by a written agreement signed by both parties, in which event the parties may proceed directly to mediation as described below.

B. If the efforts to resolve the dispute through negotiation fail, or the parties waive the negotiation process, the parties may select, within thirty (30) calendar days, a mediator trained in mediation skills to assist with resolution of the dispute. Should they choose this option; the City and the Contractor agree to act in good faith in the selection of the mediator and to give consideration to qualified individuals nominated to act as mediator. Nothing in the Contract prevents the parties from relying on the skills of a person who is trained in the subject matter of the dispute or a contract interpretation expert. If the parties fail to agree on a mediator within thirty (30) calendar days of initiation of the mediation process, the mediator shall be selected by the Denton County Alternative Dispute Resolution Program (DCAP). The parties agree to participate in mediation in good faith

for up to thirty (30) calendar days from the date of the first mediation session. The City and the Contractor will share the mediator's fees equally and the parties will bear their own costs of participation such as fees for any consultants or attorneys they may utilize to represent them or otherwise assist them in the mediation.

C. The parties shall not be required to submit to binding arbitration.

54. JURISDICTION AND VENUE: The Contract is made under and shall be governed by the laws of the State of Texas, including, when applicable, the Uniform Commercial Code as adopted in Texas, V.T.C.A., Bus. & Comm. Code, Chapter 1, excluding any rule or principle that would refer to and apply the substantive law of another state or jurisdiction. All issues arising from this Contract shall be resolved in the courts of Denton County, Texas and the parties agree to submit to the exclusive personal jurisdiction of such courts. The foregoing, however, shall not be construed or interpreted to limit or restrict the right or ability of the City to seek and secure injunctive relief from any competent authority as contemplated herein.

55. INVALIDITY: The invalidity, illegality, or unenforceability of any provision of the Contract shall in no way affect the validity or enforceability of any other portion or provision of the Contract. Any void provision shall be deemed severed from the Contract and the balance of the Contract shall be construed and enforced as if the Contract did not contain the particular portion or provision held to be void. The parties further agree to reform the Contract to replace any stricken provision with a valid provision that comes as close as possible to the intent of the stricken provision. The provisions of this section shall not prevent this entire Contract from being void should a provision which is the essence of the Contract be determined to be void.

56. HOLIDAYS: The following holidays are observed by the City:

New Year's Day (observed)
Martin Luther King, Jr. Day
Memorial Day
Juneteenth
Independence Day
Labor Day
Veteran's Day
Thanksgiving Day
Friday After Thanksgiving
Christmas Eve (observed)
Christmas Day (observed)

If a Legal Holiday falls on Saturday, it will be observed on the preceding Friday. If a Legal Holiday falls on Sunday, it will be observed on the following Monday. Normal hours of operation shall be between 8:00 am and 4:00 pm, Monday through Friday, excluding City of Denton Holidays. Any scheduled deliveries or work performance not within the normal hours of operation **must be approved** by the City Manager of Denton, Texas or their authorized designee.

57. SURVIVABILITY OF OBLIGATIONS: All provisions of the Contract that impose continuing obligations on the parties, including but not limited to the warranty, indemnity, and confidentiality obligations of the parties, shall survive the expiration or termination of the Contract for fifteen (15) years.

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58. NON-SUSPENSION OR DEBARMENT CERTIFICATION:

The City of Denton is prohibited from contracting with or making prime or sub-awards to parties that are suspended or debarred or whose principals are suspended or debarred from Federal, State, or City of Denton Contracts. By accepting a Contract with the City, the Vendor certifies that its firm and its principals are not currently suspended or debarred from doing business with the Federal Government, as indicated by the General Services Administration List of Parties Excluded from Federal Procurement and Non-Procurement Programs, the State of Texas, or the City of Denton.

59. EQUAL OPPORTUNITY Contractor agrees that during the performance of its contract it will:

A. Treat all applicants and employees without discrimination as to race, color, religion, sex, national origin, marital status, age, or handicap.

B. Identify itself as an "Equal Opportunity Employer" in all help wanted advertising or request. The Contractor shall be advised of any complaints filed with the City alleging that Contractor is not an Equal Opportunity Employer. The City reserves the right to consider its reports from its human relations administrator in response to such complaints in determining whether or not to terminate any portion of this contract for which purchase orders or authorities to deliver have not been included, however, the Contractor is specifically advised that no Equal Opportunity Employment complaint will be the basis for cancellation of this contract for which a purchase order has been issued or authority to deliver granted.

C. **Americans with Disabilities Act (ADA) Compliance:** No Contractor, or Contractor's agent, shall engage in any discriminatory employment practice against individuals with disabilities as defined in the ADA.

60. BUY AMERICAN ACT-SUPPLIES (Applicable to certain federally funded requirements)

The following federally funded requirements are applicable. A. Definitions. As used in this paragraph –

i. "Component" means an article, material, or supply incorporated directly into an end product.

ii. "Cost of components" means -

(1) For components purchased by the Contractor, the acquisition cost, including transportation costs to the place of incorporation into the end product (whether or not such costs are paid to a domestic firm), and any applicable duty (whether or not a duty-free entry certificate is issued); or
(2) For components manufactured by the Contractor, all costs associated with the manufacture of the component, including transportation costs as described in paragraph (1) of this definition, plus allocable overhead costs, but excluding profit. Cost of components does not include any costs associated with the manufacture of the end product.

iii. "Domestic end product" means-

(1) An unmanufactured end product mined or produced in the United States; or

(2) An end product manufactured in the United States, if the cost of its components mined, produced, or manufactured in the United States exceeds 50 percent of the cost of all its components. Components of foreign origin of the same class or kind as those that the agency determines are not mined, produced, or manufactured in sufficient and reasonably available commercial quantities of a satisfactory quality are treated as domestic. Scrap generated, collected, and prepared for processing in the United States is considered domestic.

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iv. "End product" means those articles, materials, and supplies to be acquired under the contract for public use.

v. "Foreign end product" means an end product other than a domestic end product.

vi. "United States" means the 50 States, the District of Columbia, and outlying areas.

B. The Buy American Act (41 U.S.C. 10a - 10d) provides a preference for domestic end products for supplies acquired for use in the United States.

C. The City does not maintain a list of foreign articles that will be treated as domestic for this Contract; but will consider for approval foreign articles as domestic for this product if the articles are on a list approved by another Governmental Agency. The Contractor shall submit documentation with their offer demonstrating that the article is on an approved Governmental list.

D. The Contractor shall deliver only domestic end products except to the extent that it specified delivery of foreign end products in the provision of the Solicitation entitled "Buy American Act Certificate".

61. RIGHT TO INFORMATION: The City of Denton reserves the right to use any and all information presented in any response to this Contract, whether amended or not, except as prohibited by law. Selection of rejection of the submittal does not affect this right.

62. LICENSE FEES OR TAXES: Provided the solicitation requires an awarded contractor or supplier to be licensed by the State of Texas, any and all fees and taxes are the responsibility of the respondent.

63. PREVAILING WAGE RATES: The Contractor shall comply with prevailing wage rates as defined by the United States Department of Labor Davis-Bacon Wage Determination at <http://www.dol.gov/whd/contracts/dbra.htm> and at the Wage Determinations website www.wdol.gov for Denton County, Texas (WD-2509).

64. COMPLIANCE WITH ALL STATE, FEDERAL, AND LOCAL LAWS: The Contractor or supplier shall comply with all State, federal, and local laws and requirements. The Contractor must comply with all applicable laws at all times, including, without limitation, the following: (i) §36.02 of the Texas Penal Code, which prohibits bribery; (ii) §36.09 of the Texas Penal Code, which prohibits the offering or conferring of benefits to public servants; and (iii) Chapter 552 of the Texas Government Code, which outlines policy for public information. The Contractor shall give all notices and comply with all laws and regulations applicable to furnishing and performance of the Contract.

65. FEDERAL, STATE, AND LOCAL REQUIREMENTS: Contractor shall demonstrate on-site compliance with the provisions of federal law dealing with issuance of Form W-2's to common law employees. Contractor is responsible for both federal and State unemployment insurance coverage and standard Workers' Compensation insurance coverage. Contractor shall ensure compliance with all federal and State tax laws and withholding requirements. The City of Denton shall not be liable to Contractor or its employees for any Unemployment or Workers' Compensation coverage, or federal or State withholding requirements. Contractor shall indemnify the City of Denton and shall pay all costs, penalties, or losses resulting from Contractor's omission or breach of this Section.

66. ATTORNEY'S FEES; LEGAL COSTS: Contractor and City agree that the City will not be required to pay Contractor's attorney's fees or legal costs under any circumstances, unless expressly required by law.

67. DRUG FREE WORKPLACE: The Contractor shall comply with the applicable provisions of the Drug-Free Work Place Act of 1988 (Public Law 100-690, Title V, Subtitle D; 41 U.S.C. 701 ET SEQ.) and maintain a drug-free work environment; and the final rule, government-wide requirements for drug-free work place (grants), issued by the Office of Management and Budget and the Department of Defense (32 CFR Part 280, Subpart F) to implement the provisions of the Drug-Free Work Place Act of 1988 is incorporated by reference and the Contractor shall comply with the relevant provisions thereof, including any amendments to the final rule that may hereafter be issued.

68. CONTRACTOR LIABILITY FOR DAMAGE TO GOVERNMENT PROPERTY: The Contractor shall be liable for all damages to government-owned, leased, or occupied property and equipment caused by the Contractor and its employees, agents, subcontractors, and suppliers, including any delivery or cartage company, in connection with any performance pursuant to the Contract. The Contractor shall notify the City of Denton Procurement Manager in writing of any such damage within one (1) calendar day.

69. FORCE MAJEURE: The City of Denton, any Customer, and the Contractor shall not be responsible for performance under the Contract should it be prevented from performance by an act of war, order of legal authority, act of God, or other unavoidable cause not attributable to the fault or negligence of the City of Denton. In the event of an occurrence under this Section, the Contractor will be excused from any further performance or observance of the requirements so affected for as long as such circumstances prevail and the Contractor continues to use commercially reasonable efforts to recommence performance or observance whenever and to whatever extent possible without delay. The Contractor shall immediately notify the City of Denton Procurement Manager by telephone (to be confirmed in writing within five (5) calendar days of the inception of such occurrence) and describe at a reasonable level of detail the circumstances causing the non-performance or delay in performance.

70. NON-WAIVER OF RIGHTS: Failure of a Party to require performance by another Party under the Contract will not affect the right of such Party to require performance in the future. No delay, failure, or waiver of either Party's exercise or partial exercise of any right or remedy under the Contract shall operate to limit, impair, preclude, cancel, waive or otherwise affect such right or remedy. A waiver by a Party of any breach of any term of the Contract will not be construed as a waiver of any continuing or succeeding breach.

71. NO WAIVER OF SOVEREIGN IMMUNITY: The Parties expressly agree that no provision of the Contract is in any way intended to constitute a waiver by the City of Denton of any immunities from suit or from liability that the City of Denton may have by operation of law.

72. RECORDS RETENTION: The Contractor shall retain all financial records, supporting documents, statistical records, and any other records or books relating to the performances called for in the Contract. The Contractor shall retain all such records for a period of four (4) years after the expiration of the Contract, or until the CPA or State Auditor's Office is satisfied that all audit and litigation matters are resolved, whichever period is longer. The Contractor shall grant access

Contract 8750

to all books, records and documents pertinent to the Contract to the CPA, the State Auditor of Texas, and any federal governmental entity that has authority to review records due to federal funds being spent under the Contract. In the event the value of this Contract is One Million (\$1,000,000) Dollars or greater: (i) all contracting information related to this contract will be preserved for the duration of the Contract; (ii) the Contractor shall provide any contracting information in its possession promptly upon request by the City; and (iii) at the expiration of this Contract, the Contractor will either provide all contracting information in its possession to the City or preserve same as required by the record retention requirements of the State of Texas.

73. PROCUREMENT LAWS: The City will not agree to any terms or conditions that cause the City to violate any federal, State, or local procurement laws, including its own Charter or Procurement Policy and any such laws included in boilerplate terms, online terms or other terms provided by the Contractor are considered null and void.

74. AUTHORITY: Contractor represents and warrants to the other that (a) it has company authority to execute and perform this Contract; (b) executing this Contract does not constitute a material conflict with, breach, or default under any applicable law, its respective organizational documents, or any documents, agreements, contracts or instruments which are binding upon it; and (c) this Contract creates valid, legal, and binding obligation enforceable against it, subject to applicable insolvency and bankruptcy laws. Contractor recognizes and agrees that a violation of this provision constitutes a material breach under this Contract.

Exhibit D
Certificate of Interested Parties Electronic Filing

In 2015, the Texas Legislature adopted House Bill 1295, which added section 2252.908 of the Government Code. The law states that the City may not enter into this contract unless the Contractor submits a disclosure of interested parties (Form 1295) to the City at the time the Contractor submits the signed contract. The Texas Ethics Commission has adopted rules requiring the business entity to file Form 1295 electronically with the Commission.

Contractor will be required to furnish a Certificate of Interest Parties before the Contract is awarded, in accordance with Government Code 2252.908.

The Contractor shall:

1. Log onto the State Ethics Commission Website at :
https://www.ethics.state.tx.us/whatsnew/elf_info_form1295.htm
2. Register utilizing the tutorial provided by the State
3. Print a copy of the completed Form 1295
4. Enter the Certificate Number on page 2 of this contract.
5. Complete and sign the Form 1295
6. Email the form to purchasing@cityofdenton.com with the contract number in the subject line.
(EX: Contract 1234 – Form 1295)

The City must acknowledge the receipt of the filed Form 1295 not later than the 30th day after Council award. Once a Form 1295 is acknowledged, it will be posted to the Texas Ethics Commission's website within seven business days.

Exhibit E

INSURANCE REQUIREMENTS

Respondent's attention is directed to the insurance requirements below. It is highly recommended that respondents confer with their respective insurance carriers or brokers to determine in advance of Proposal/Bid submission the availability of insurance certificates and endorsements as prescribed and provided herein. If an apparent low respondent fails to comply strictly with the insurance requirements, that respondent may be disqualified from award of the contract. Upon contract award, all insurance requirements shall become contractual obligations, which the successful contractor shall have a duty to maintain throughout the course of this contract.

STANDARD PROVISIONS:

Without limiting any of the other obligations or liabilities of the Contractor, the Contractor shall provide and maintain until the contracted work has been completed and accepted by the City of Denton, Owner, the minimum insurance coverage as indicated hereinafter.

As soon as practicable after notification of contract award, Contractor shall file with the Purchasing Department satisfactory certificates of insurance including any applicable addendum or endorsements, containing the contract number and title of the project. Contractor may, upon written request to the Purchasing Department, ask for clarification of any insurance requirements at any time; however, Contractors are strongly advised to make such requests prior to proposal/bid opening, since the insurance requirements may not be modified or waived after proposal/bid opening unless a written exception has been submitted with the proposal/bid. Contractor shall not commence any work or deliver any material until he or she receives notification that the contract has been accepted, approved, and signed by the City of Denton.

All insurance policies proposed or obtained in satisfaction of these requirements shall comply with the following general specifications, and shall be maintained in compliance with these general specifications throughout the duration of the Contract, or longer, if so noted:

- Each policy shall be issued by a company authorized to do business in the State of Texas with an A.M. Best Company rating of at least **A- or better**.
- Any deductibles or self-insured retentions shall be declared in the proposal. If requested by the City, the insurer shall reduce or eliminate such deductibles or self-insured retentions with respect to the City, its officials, agents, employees, and volunteers; or, the contractor shall procure a bond guaranteeing payment of losses and related investigations, claim administration and defense expenses.
- Liability policies shall be endorsed to provide the following:

- Name as Additional Insured the City of Denton, its Officials, Agents, Employees, and volunteers.
 - That such insurance is primary to any other insurance available to the Additional Insured with respect to claims covered under the policy and that this insurance applies separately to each insured against whom claim is made or suit is brought. The inclusion of more than one insured shall not operate to increase the insurer's limit of liability.
 - Provide a Waiver of Subrogation in favor of the City of Denton, its officials, agents, employees, and volunteers.
- ***Cancellation: City requires 30 day written notice should any of the policies described on the certificate be cancelled or materially changed before the expiration date.***
 - Should any of the required insurance be provided under a claims made form, Contractor shall maintain such coverage continuously throughout the term of this contract and, without lapse, for a period of three years beyond the contract expiration, such that occurrences arising during the contract term which give rise to claims made after expiration of the contract shall be covered.
 - Should any of the required insurance be provided under a form of coverage that includes a general annual aggregate limit providing for claims investigation or legal defense costs to be included in the general annual aggregate limit, the Contractor shall either double the occurrence limits or obtain Owners and Contractors Protective Liability Insurance.
 - Should any required insurance lapse during the contract term, requests for payments originating after such lapse shall not be processed until the City receives satisfactory evidence of reinstated coverage as required by this contract, effective as of the lapse date. If insurance is not reinstated, City may, at its sole option, terminate this agreement effective on the date of the lapse.

SPECIFIC ADDITIONAL INSURANCE REQUIREMENTS:

All insurance policies proposed or obtained in satisfaction of this Contract shall additionally comply with the following specifications, and shall be maintained in compliance with these additional specifications throughout the duration of the Contract, or longer, if so noted:

A. COMMERCIAL GENERAL LIABILITY INSURANCE

Commercial General Liability Insurance including, but not limited to, Premises/Operations, Personal & Advertising Injury, Products/Completed Operations, Independent Contractors, and Contractual Liability with minimum

combined bodily injury (including death) and property damage limits of \$2,000,000.00 per occurrence and \$4,000,000.00 general aggregate.

B. WORKERS' COMPENSATION and EMPLOYERS LIABILITY INSURANCE

Workers' Compensation within the regulations of the Texas Workers' Compensation Act. The minimum policy limits for **Employers Liability** are:

Bodily Injury by Accident: \$500,000.00 Each Accident
 Bodily Injury by Disease: \$500,000.00 Each Employee
 Bodily Injury by Disease: \$500,000.00 Policy Limit

NOTES:

- a. If CONTRACTOR will not be providing services under the contract at a City facility, has no employees and/or is operating as a sole owner and single operator, CONTRACTOR shall provide a signed letter, with the current date, on official letterhead stating such to meet the requirement.
- b. If CONTRACTOR is a non-subscriber or is self-insured CONTRACTOR shall provide a copy of its Certificate of Authority to Self-Insure from the Texas Department of Insurance, Division of Workers' Compensation Self Insurance Regulation Program, evidence of alternative coverage and internal safety and injury coverage policies and procedures.

C. BUSINESS AUTOMOBILE LIABILITY INSURANCE

Business Automobile Liability Insurance covering owned, hired, and non-owned vehicles, with a minimum combined single limit for bodily injury (including death) and property damage limit of \$2,000,000.00 per occurrence.

NOTE:

- a. If CONTRACTOR does not have owned, hired and non-owned autos or vehicles and/or no autos or vehicles will not be used in the performance of services under the contract, CONTRACTOR shall provide a signed letter, with the current date, on official letterhead stating such to meet the requirement for owned autos.

D. CYBER/TECHNOLOGY NETWORK LIABILITY AND RISK INSURANCE

Cyber/Technology Network Liability and Risk Insurance, inclusive of Information Security and Privacy (first and third party coverage) to provide coverage for any damage caused by a network risk, cyber act or breaches of data and privacy right, the rendering of, or the failure to properly perform

professional services for, but not limited to, computer programming, management information systems, negligent system design, disclosure of confidential information, and copyright infringement with minimum limits of \$1,000,000.00 per claim.

NOTE: Professional Liability Insurance and Cyber/Technology Network Liability and Network Risk Insurance may be combined on one policy with a \$2,000,000.00 limit.

SUBCONTRACTING LIABILITY

(1) Without limiting any of the other obligations or liabilities of the CONTRACTOR, the CONTRACTOR shall require each Subcontractor performing work under the contract, at the Subcontractor's own expense, to maintain during the engagement with the CITY, types and limits of insurance that are appropriate for the services/work being performed, comply with all applicable laws and are consistent with industry standards. The Subcontractor's liability insurance shall name CONTRACTOR as an additional insured.

(2) CONTRACTOR shall obtain and monitor the certificates of insurance from each Subcontractor. CONTRACTOR must retain the certificates of insurance for the duration of the contract and shall have the responsibility of enforcing insurance requirements among its subcontractors. The CITY shall be entitled, upon request and without expense, to receive copies of these certificates.

Bid Lines

Exhibit F

1 One time equipment cost*(Line excluded from response total)***2 Bulk Fill Station - 3" Dual Outlet including overhead and side, Meter, Valve, User interface and Keypad including freight**Quantity: 1 UOM: EA Price: \$56,852.53 Total: \$56,852.53

Item Notes: Please provide your cost including shipping if applicable

3 Side Hose FillQuantity: 1 UOM: EA Price: \$5,125.18 Total: \$5,125.18

Item Notes: Please provide your cost including shipping, if applicable

4 Overhead Fill ArmQuantity: 1 UOM: EA Price: \$8,353.78 Total: \$8,353.78

Item Notes: Please provide your cost including shipping, if applicable

5 Software*(Line excluded from response total)***6 Initial System Software**Quantity: 1 UOM: LS Price: \$0.00 Total: \$0.00

Supplier Notes: The 1st year is included with the station. See additional service notes for future pricing in subsequent years.

7 Cloud HostingQuantity: 1 UOM: Annual Price: \$0.00 Total: \$0.00

Supplier Notes: The 1st year is included with the station. See additional service notes for future pricing in subsequent years.

8 Cellular Model and Data PlanQuantity: 1 UOM: Annual Price: \$1,800.00 Total: \$1,800.00**9 Additional Services***(Line excluded from response total)***10 Warranty and IT Support***(Line excluded from response total)*Quantity: 1 UOM: EA Price: \$4,200.00 Total: \$4,200.00

Supplier Notes: The Manufacturer's warranty will apply for a period of 5 (five) years from the date of shipment, extending this will be \$1,000 per additional year for another 5 years maximum. After the first year of the included software subscription expires, IT support is provided as long as the subscription is continued thereafter. For our cloud-lite version that is \$2,400 annually and for our cloud-pro ecommerce version that is \$3,600 annually. If the cellular and Data plan also needs to be continued, that will be another \$1,800 annually. The price in the box is entered as cloud-lite with a cellular data plan managed by Flowpoint.

Flowpoint Five Year Manufacturer's Warranty (Included):

Flowpoint Environmental Systems (Manufacturer) warranty is as follows, and extends ONLY to the original purchaser of the equipment and is limited to the purchase price of each part. Manufacturer warrant products against defects in materials or workmanship as follows:

DURATION: The Manufacturer's warranty will apply for a period of 5 (five) years from the date of shipment.

PARTS: Manufacturer will supply, at no charge, new or rebuilt replacement parts in exchange for parts that the Manufacturer determines are defective subject to the limitations of this warranty. Manufacturer warrants any such replacement parts against defects in materials or workmanship for the remaining portion of the original warranty period.

This warranty "does not cover" installation of the system or damages incurred during shipping.

This warranty "does not cover" consumer instruction, physical set up or adjustment of any electronic equipment, communication / signal reception problems, loss of use of the equipment, or unused programming charges due to equipment malfunction.

This warranty "does not cover" cosmetic damage, damage due to lightning, electrical surges, fire, flood, or other acts of God, accident, misuse, abuse, vandalism, repair or alteration by other than factory service, negligence, or improper or neglected maintenance.

This warranty "does not cover" equipment sold AS IS, REFURBISHED, or WITH ALL FAULTS, auction sales, equipment removal or reinstallation, nor equipment purchased, serviced, or operated by other dealers.

Exhibit G

CONFLICT OF INTEREST QUESTIONNAIRE

CONFLICT OF INTEREST QUESTIONNAIRE -

FORM CIQ

For vendor or other person doing business with local governmental entity

This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session.

This questionnaire is being filed in accordance with Chapter 176, Local Government Code, by a vendor who has a business relationship as defined by Section 176.001(1-a) with a local governmental entity and the vendor meets requirements under Section 176.006(a).

By law this questionnaire must be filed with the records administrator of the local government entity not later than the 7th business day after the date the vendor becomes aware of facts that require the statement to be filed. *See* Section 176.006(a-1), Local Government Code.

A vendor commits an offense if the vendor knowingly violates Section 176.006, Local Government Code. An offense under this section is a misdemeanor.

1 Name of vendor who has a business relationship with local governmental entity.

Flowpoint Environmental Systems, Inc.

2 ☐ **Check this box if you are filing an update to a previously filed questionnaire.**

(The law requires that you file an updated completed questionnaire with the appropriate filing authority not later than the 7th business day after the date on which you became aware that the originally filed questionnaire was incomplete or inaccurate.)

3 Name of local government officer about whom the information in this section is being disclosed.

Name of Officer

This section, (item 3 including subparts A, B, C & D), must be completed for each officer with whom the vendor has an employment or other business relationship as defined by Section 176.001(1-a), Local Government Code. Attach additional pages to this Form CIQ as necessary.

A. Is the local government officer named in this section receiving or likely to receive taxable income, other than investment income, from the vendor?

☐

Yes

☐

No

B. Is the vendor receiving or likely to receive taxable income, other than investment income, from or at the direction of the local government officer named in this section AND the taxable income is not received from the local governmental entity?

☐

Yes

☐

No

C. Is the filer of this questionnaire employed by a corporation or other business entity with respect to which the local government officer serves as an officer or director, or holds an ownership of one percent or more?

☐

Yes

☐

No

D. Describe each employment or business and family relationship with the local government officer named in this section.

4 ☒ **I have no Conflict of Interest to disclose.**

5 _____
Signature of vendor doing business with the governmental entity

Feb 18, 2025

Date

Certificate Of Completion

Envelope Id: 6B8095A7-93F5-48EC-8E81-8FC2B9B4508A

Status: Sent

Subject: Please DocuSign: City Council Contract 8750 Reclaimed Water Bulk Fill Station

Source Envelope:

Document Pages: 35

Signatures: 3

Envelope Originator:

Certificate Pages: 6

Initials: 1

Gabby Leeper

AutoNav: Enabled

901B Texas Street

Envelopeld Stamping: Enabled

Denton, TX 76209

Time Zone: (UTC-06:00) Central Time (US & Canada)

Gabby.Leeper@cityofdenton.com

IP Address: 10.104.81.9

Record Tracking

Status: Original

Holder: Gabby Leeper

Location: DocuSign

4/29/2025 10:35:12 AM

Gabby.Leeper@cityofdenton.com

Signer Events

Signature

Timestamp

Gabby Leeper

Completed

Sent: 4/29/2025 10:46:30 AM

gabby.leeper@cityofdenton.com

Viewed: 4/29/2025 10:46:41 AM

Senior Buyer

Signed: 4/29/2025 10:48:02 AM

City of Denton

Using IP Address: 198.49.140.10

Security Level: Email, Account Authentication
(None)

Electronic Record and Signature Disclosure:

Not Offered via DocuSign

Lori Hewell

Sent: 4/29/2025 10:48:04 AM

lori.hewell@cityofdenton.com

Viewed: 4/29/2025 11:38:05 AM

Purchasing Manager

Signed: 4/29/2025 11:40:38 AM

City of Denton

Security Level: Email, Account Authentication
(None)

Signature Adoption: Pre-selected Style

Using IP Address: 198.49.140.104

Electronic Record and Signature Disclosure:

Not Offered via DocuSign

Marcella Lunn

DocuSigned by:
Marcella Lunn
4B070831B4AA438...

Sent: 4/29/2025 11:40:40 AM

marcella.lunn@cityofdenton.com

Viewed: 4/29/2025 3:09:49 PM

Senior Deputy City Attorney

Signed: 4/29/2025 3:12:05 PM

City of Denton

Security Level: Email, Account Authentication
(None)

Signature Adoption: Pre-selected Style

Using IP Address: 198.49.140.10

Electronic Record and Signature Disclosure:

Not Offered via DocuSign

Jay Morrison

Signed by:
Jay Morrison
A24F7BD456B44FB...

Sent: 4/29/2025 3:12:07 PM

jmmorrison@flowpointsystems.com

Viewed: 4/30/2025 2:03:26 PM

Vice President

Signed: 4/30/2025 2:04:50 PM

Security Level: Email, Account Authentication
(None)

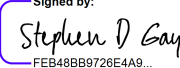
Signature Adoption: Drawn on Device

Using IP Address: 204.191.63.130

Electronic Record and Signature Disclosure:

Accepted: 4/30/2025 2:03:26 PM

ID: 82e72191-0988-46cb-ab42-56c5eb5665bb

Signer Events	Signature	Timestamp
Stephen D Gay Stephen.Gay@cityofdenton.com General Manager Water Utilities Security Level: Email, Account Authentication (None)	<div>Signed by:  FEB48BB9726E4A9...</div> Signature Adoption: Pre-selected Style Using IP Address: 198.49.140.10	Sent: 4/30/2025 2:04:52 PM Viewed: 5/5/2025 1:24:58 PM Signed: 5/5/2025 1:25:32 PM

Electronic Record and Signature Disclosure:
Accepted: 5/5/2025 1:24:58 PM
ID: f19394d2-d262-41a6-8de7-3105d793d6ae

Cheyenne Defee
cheyenne.defee@cityofdenton.com
Procurement Administration Supervisor
City of Denton
Security Level: Email, Account Authentication (None)

Sent: 5/5/2025 1:25:36 PM

Electronic Record and Signature Disclosure:
Not Offered via DocuSign

Sara Hensley
sara.hensley@cityofdenton.com
Security Level: Email, Account Authentication (None)

Electronic Record and Signature Disclosure:
Not Offered via DocuSign

Lauren Thoden
lauren.thoden@cityofdenton.com
Security Level: Email, Account Authentication (None)

Electronic Record and Signature Disclosure:
Not Offered via DocuSign

In Person Signer Events	Signature	Timestamp
Editor Delivery Events	Status	Timestamp
Agent Delivery Events	Status	Timestamp
Intermediary Delivery Events	Status	Timestamp
Certified Delivery Events	Status	Timestamp
Carbon Copy Events	Status	Timestamp

Cheyenne Defee
cheyenne.defee@cityofdenton.com
Procurement Administration Supervisor
City of Denton
Security Level: Email, Account Authentication (None)

Electronic Record and Signature Disclosure:
Not Offered via DocuSign

COPIED

Sent: 4/29/2025 10:48:04 AM

Gretna Jones
gretna.jones@cityofdenton.com
Legal Secretary
City of Denton
Security Level: Email, Account Authentication (None)

COPIED

Sent: 5/5/2025 1:25:35 PM
Viewed: 5/5/2025 3:19:49 PM

Carbon Copy Events	Status	Timestamp
Electronic Record and Signature Disclosure: Not Offered via DocuSign City Secretary Office citysecretary@cityofdenton.com Security Level: Email, Account Authentication (None) Electronic Record and Signature Disclosure: Not Offered via DocuSign Michael Hunter Michael.Hunter@cityofdenton.com Security Level: Email, Account Authentication (None) Electronic Record and Signature Disclosure: Accepted: 4/23/2025 1:26:46 PM ID: a46c1af2-3b28-47d1-aae5-32c445d996ca		
Witness Events	Signature	Timestamp
Notary Events	Signature	Timestamp
Envelope Summary Events	Status	Timestamps
Envelope Sent	Hashed/Encrypted	4/29/2025 10:46:30 AM
Payment Events	Status	Timestamps
Electronic Record and Signature Disclosure		

ELECTRONIC RECORD AND SIGNATURE DISCLOSURE

From time to time, City of Denton (we, us or Company) may be required by law to provide to you certain written notices or disclosures. Described below are the terms and conditions for providing to you such notices and disclosures electronically through your DocuSign, Inc. (DocuSign) Express user account. Please read the information below carefully and thoroughly, and if you can access this information electronically to your satisfaction and agree to these terms and conditions, please confirm your agreement by clicking the 'I agree' button at the bottom of this document.

Getting paper copies

At any time, you may request from us a paper copy of any record provided or made available electronically to you by us. For such copies, as long as you are an authorized user of the DocuSign system you will have the ability to download and print any documents we send to you through your DocuSign user account for a limited period of time (usually 30 days) after such documents are first sent to you. After such time, if you wish for us to send you paper copies of any such documents from our office to you, you will be charged a \$0.00 per-page fee. You may request delivery of such paper copies from us by following the procedure described below.

Withdrawing your consent

If you decide to receive notices and disclosures from us electronically, you may at any time change your mind and tell us that thereafter you want to receive required notices and disclosures only in paper format. How you must inform us of your decision to receive future notices and disclosure in paper format and withdraw your consent to receive notices and disclosures electronically is described below.

Consequences of changing your mind

If you elect to receive required notices and disclosures only in paper format, it will slow the speed at which we can complete certain steps in transactions with you and delivering services to you because we will need first to send the required notices or disclosures to you in paper format, and then wait until we receive back from you your acknowledgment of your receipt of such paper notices or disclosures. To indicate to us that you are changing your mind, you must withdraw your consent using the DocuSign 'Withdraw Consent' form on the signing page of your DocuSign account. This will indicate to us that you have withdrawn your consent to receive required notices and disclosures electronically from us and you will no longer be able to use your DocuSign Express user account to receive required notices and consents electronically from us or to sign electronically documents from us.

All notices and disclosures will be sent to you electronically

Unless you tell us otherwise in accordance with the procedures described herein, we will provide electronically to you through your DocuSign user account all required notices, disclosures, authorizations, acknowledgements, and other documents that are required to be provided or made available to you during the course of our relationship with you. To reduce the chance of you inadvertently not receiving any notice or disclosure, we prefer to provide all of the required notices and disclosures to you by the same method and to the same address that you have given us. Thus, you can receive all the disclosures and notices electronically or in paper format through the paper mail delivery system. If you do not agree with this process, please let us know as described below. Please also see the paragraph immediately above that describes the consequences of your electing not to receive delivery of the notices and disclosures electronically from us.

How to contact City of Denton:

You may contact us to let us know of your changes as to how we may contact you electronically, to request paper copies of certain information from us, and to withdraw your prior consent to receive notices and disclosures electronically as follows:

To contact us by email send messages to: purchasing@cityofdenton.com

To advise City of Denton of your new e-mail address

To let us know of a change in your e-mail address where we should send notices and disclosures electronically to you, you must send an email message to us at melissa.kraft@cityofdenton.com and in the body of such request you must state: your previous e-mail address, your new e-mail address. We do not require any other information from you to change your email address..

In addition, you must notify DocuSign, Inc to arrange for your new email address to be reflected in your DocuSign account by following the process for changing e-mail in DocuSign.

To request paper copies from City of Denton

To request delivery from us of paper copies of the notices and disclosures previously provided by us to you electronically, you must send us an e-mail to purchasing@cityofdenton.com and in the body of such request you must state your e-mail address, full name, US Postal address, and telephone number. We will bill you for any fees at that time, if any.

To withdraw your consent with City of Denton

To inform us that you no longer want to receive future notices and disclosures in electronic format you may:

- i. decline to sign a document from within your DocuSign account, and on the subsequent page, select the check-box indicating you wish to withdraw your consent, or you may;
- ii. send us an e-mail to purchasing@cityofdenton.com and in the body of such request you must state your e-mail, full name, US Postal Address, telephone number, and account number. We do not need any other information from you to withdraw consent.. The consequences of your withdrawing consent for online documents will be that transactions may take a longer time to process..

Required hardware and software

Operating Systems:	Windows2000? or WindowsXP?
Browsers (for SENDERS):	Internet Explorer 6.0? or above
Browsers (for SIGNERS):	Internet Explorer 6.0?, Mozilla FireFox 1.0, NetScape 7.2 (or above)
Email:	Access to a valid email account
Screen Resolution:	800 x 600 minimum
Enabled Security Settings:	<ul style="list-style-type: none">•Allow per session cookies•Users accessing the internet behind a Proxy Server must enable HTTP 1.1 settings via proxy connection

** These minimum requirements are subject to change. If these requirements change, we will provide you with an email message at the email address we have on file for you at that time providing you with the revised hardware and software requirements, at which time you will have the right to withdraw your consent.

Acknowledging your access and consent to receive materials electronically

To confirm to us that you can access this information electronically, which will be similar to other electronic notices and disclosures that we will provide to you, please verify that you were able to read this electronic disclosure and that you also were able to print on paper or electronically save this page for your future reference and access or that you were able to e-mail this disclosure and consent to an address where you will be able to print on paper or save it for your future reference and access. Further, if you consent to receiving notices and disclosures exclusively in electronic format on the terms and conditions described above, please let us know by clicking the 'I agree' button below.

By checking the 'I Agree' box, I confirm that:

- I can access and read this Electronic CONSENT TO ELECTRONIC RECEIPT OF ELECTRONIC RECORD AND SIGNATURE DISCLOSURES document; and
- I can print on paper the disclosure or save or send the disclosure to a place where I can print it, for future reference and access; and
- Until or unless I notify City of Denton as described above, I consent to receive from exclusively through electronic means all notices, disclosures, authorizations, acknowledgements, and other documents that are required to be provided or made available to me by City of Denton during the course of my relationship with you.



City of Denton

City Hall
215 E. McKinney St.
Denton, Texas 76201
www.cityofdenton.com

Legislation Text

File #: PUB25-075, Version: 1

AGENDA CAPTION

Consider recommending adoption of an ordinance of the City of Denton, a Texas home-rule municipal corporation, authorizing the City Manager to execute a contract with Samsara Inc. through the Sourcewell Cooperative Purchasing Network Contract No. 020221, for the Samsara Camera Software System for the Solid Waste and Recycling Department; authorizing the expenditure of funds therefor; and providing an effective date (File 8679 - awarded to Samsara Inc., for one (1) year, with the option for four (4) additional one (1) year extensions, in the total five (5) year not-to-exceed amount of \$434,929.00).



City of Denton

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

AGENDA INFORMATION SHEET

DEPARTMENT: Procurement
ACM: Christine Taylor
DATE: May 19, 2025

SUBJECT

Consider recommending adoption of an ordinance of the City of Denton, a Texas home-rule municipal corporation, authorizing the City Manager to execute a contract with Samsara Inc. through the Sourcewell Cooperative Purchasing Network Contract No. 020221, for the Samsara Camera Software System for the Solid Waste and Recycling Department; authorizing the expenditure of funds therefor; and providing an effective date (File 8679 – awarded to Samsara Inc., for one (1) year, with the option for four (4) additional one (1) year extensions, in the total five (5) year not-to-exceed amount of \$434,929.00).

STRATEGIC ALIGNMENT

This action supports Key Focus Area: Support Healthy and Safe Communities.

INFORMATION/BACKGROUND

The City Council is being asked to approve the adoption of Samsara Inc. for managing our city's fleet and operations. Samsara Inc. is an advanced system that helps manage vehicles, monitor driver safety, and track equipment in real-time. The platform combines GPS tracking, cameras, and sensors to provide a complete picture of our operations, leading to safer, more efficient, and cost-effective city services.

Samsara is being proposed to modernize the city's fleet and operations management, addressing outdated systems that cause inefficiencies, increased costs, and safety issues. Recognized as a critical need by city management, Samsara offers real-time tracking, enhances driver safety, ensures compliance with regulations, and reduces operational expenses, aligning with the city's goals of improved public service and safety. This proposal tackles immediate challenges and regulatory requirements. Stakeholder feedback, particularly from fleet operations, strongly supports Samsara due to its intuitive interface and potential for significant cost savings. Chosen for its comprehensive, value-driven features, Samsara promises long-term benefits and future readiness. Upon approval, the implementation will commence immediately with a phased approach, including staff training and ongoing performance monitoring. This strategic initiative aims to modernize city operations, cut accident-related costs, and boost public safety, making it the most effective way forward.

	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Hardware/Licenses	\$83,224.94	\$82,425.94	\$82,425.94	\$82,425.94	\$82,425.94	\$412,928.70
Contingency	4,400.06	4,400.06	4,400.06	4,400.06	4,400.06	22,000.30
					Total:	\$434,929.00

Pricing obtained through Sourcewell Cooperative Purchasing Network has been competitively bid and meets the statutory requirements of Texas Local Government Code 271.102.

PRIOR ACTION/REVIEW (COUNCIL, BOARDS, COMMISSIONS)

On January 28, 2020, City Council approved the interlocal agreement with Sourcewell (Ordinance 20-197).

RECOMMENDATION

Award a contract with Samsara Inc., for the Samsara Camera Software System for the Solid Waste and Recycling Department, in a one (1) year, with the option for four (4) additional one (1) year extensions, in the total five (5) year not-to-exceed amount of \$434,929.

PRINCIPAL PLACE OF BUSINESS

Samsara Inc.
San Francisco, CA

ESTIMATED SCHEDULE OF PROJECT

This is an initial one (1) year contract with options to extend the contract for four (4) additional one (1) year periods, with all terms and conditions remaining the same. This Sourcewell contract expires March 26, 2026.

FISCAL INFORMATION

These services will be funded from Solid Waste Administration Software Licenses account 660001.7803. Requisition #167660 has been entered into the Purchasing software system in the amount of \$83,224.94. The budgeted amount for this item is \$434,929.

EXHIBITS

Exhibit 1: Agenda Information Sheet
Exhibit 2: Ordinance

Respectfully submitted:
Lori Hewell, 940-349-7100
Purchasing Manager

For information concerning this acquisition, contact: Adrian Hill, 940-349-8061.

Legal point of contact: Marcella Lunn at 940-349-8333.

ORDINANCE NO. _____

AN ORDINANCE OF THE CITY OF DENTON, A TEXAS HOME-RULE MUNICIPAL CORPORATION, AUTHORIZING THE CITY MANAGER TO EXECUTE A CONTRACT WITH SAMSARA INC. THROUGH THE SOURCEWELL COOPERATIVE PURCHASING NETWORK CONTRACT NO. 020221, FOR THE SAMSARA CAMERA SOFTWARE SYSTEM FOR THE SOLID WASTE AND RECYCLING DEPARTMENT; AUTHORIZING THE EXPENDITURE OF FUNDS THEREFOR; AND PROVIDING AN EFFECTIVE DATE (FILE 8679 – AWARDED TO SAMSARA INC., FOR ONE (1) YEAR, WITH THE OPTION FOR FOUR (4) ADDITIONAL ONE (1) YEAR EXTENSIONS, IN THE TOTAL FIVE (5) YEAR NOT-TO-EXCEED AMOUNT OF \$434,929.00).

WHEREAS, pursuant to Ordinance 20-197, Sourcewell has solicited, received, and tabulated competitive bids for the purchase of necessary materials, equipment, supplies, or services in accordance with the procedures of state law on behalf of the City of Denton; and

WHEREAS, the City Manager, or a designated employee, has reviewed and recommended that the herein described materials, equipment, supplies, or services can be purchased by the City through the Sourcewell program at less cost than the City would expend if bidding these items individually; and

WHEREAS, this procurement was undertaken as part of the City's governmental function; and

WHEREAS, the City Council has provided in the City Budget for the appropriation of funds to be used for the purchase of the materials, equipment, supplies, or services approved and accepted herein; NOW, THEREFORE,

THE COUNCIL OF THE CITY OF DENTON HEREBY ORDAINS:

SECTION 1. The items shown in the "File Number" referenced herein and on file in the office of the Purchasing Agent, are hereby accepted and approved as being the lowest responsible bids for such items:

<u>FILE NUMBER</u>	<u>VENDOR</u>	<u>AMOUNT</u>
8679	Samsara Inc.	\$434,929.00

SECTION 2. By the acceptance and approval of the items set forth in the referenced file number, the City accepts the offer of the persons submitting the bids to Sourcewell for such items and agrees to purchase the materials, equipment, supplies, or services in accordance with the terms, conditions, specifications, standards, quantities, and for the specified sums contained in the bid documents and related documents filed with Sourcewell and the purchase orders issued by the City.

SECTION 3. Should the City and persons submitting approved and accepted items set forth in the referenced file number wish to enter into a formal written agreement as a

result of the City's ratification of bids awarded by Sourcewell, the City Manager, or their designated representative, is hereby authorized to execute the written contract which shall be referenced herein; provided that the written contract is in accordance with the terms, conditions, specifications, and standards contained in the Proposal submitted to Sourcewell, and the quantities and specified sums contained in the City's purchase orders and related documents referenced herein are approved and accepted.

SECTION 4. The City Council of the City of Denton hereby expressly delegates the authority to take any actions that may be required or permitted to be performed by the City of Denton under this ordinance to the City Manager of the City of Denton, or their designee.

SECTION 5. By the acceptance and approval of the items set forth in the referenced file number, the City Council hereby authorizes the expenditure of funds therefor in the amount and in accordance with the approval purchase orders or pursuant to a written contract made pursuant thereto as authorized herein.

SECTION 6. This ordinance shall become effective immediately upon its passage and approval.

The motion to approve this ordinance was made by _____ and seconded by _____. This ordinance was passed and approved by the following vote [___ - ___]:

	Aye	Nay	Abstain	Absent
Mayor Gerard Hudspeth:	_____	_____	_____	_____
Vicki Byrd, District 1:	_____	_____	_____	_____
Brian Beck, District 2:	_____	_____	_____	_____
Paul Meltzer, District 3:	_____	_____	_____	_____
Joe Holland, District 4:	_____	_____	_____	_____
Brandon Chase McGee, At Large Place 5:	_____	_____	_____	_____
Jill Jester, At Large Place 6:	_____	_____	_____	_____

PASSED AND APPROVED this the _____ day of _____, 2025.

GERARD HUDSPETH, MAYOR

ATTEST:
LAUREN THODEN, CITY SECRETARY

BY: _____

APPROVED AS TO LEGAL FORM:
MACK REINWAND, CITY ATTORNEY

BY: Marcella Lunn



City of Denton

City Hall
215 E. McKinney St.
Denton, Texas 76201
www.cityofdenton.com

Legislation Text

File #: PUB25-066, **Version:** 1

AGENDA CAPTION

Consider approval of the April 28, 2025, minutes.

CITY OF DENTON PUBLIC UTILITIES BOARD MINUTES
April 28, 2025

After determining that a quorum was present of the Public Utilities Board of the City of Denton, convened in a Regular Meeting on Monday, April 28, 2025, at 9:00 a.m. in the Council Work Session Room at City Hall, 215 E. McKinney Street, Denton, Texas.

PRESENT: Chair Billy Cheek, Devin Taylor, Thomas Plock, Robert Rayner, Lee Riback

Also present: General Manager Antonio Puente, Jr. and Deputy City Attorney Marcella Lunn

Absent: Susan Parker, Aaron Newquist

REGULAR MEETING

1. PRESENTATIONS FROM MEMBERS OF THE PUBLIC

There were no presentations from the public.

2. CONSENT AGENDA

The Consent Agenda consisted of Item 2 A.

Board Member Rayner moved to recommend adoption of agenda item 2 A. Motion seconded by Board Member Riback; motion carried.

**YES (5): Chair Billy Cheek, Devin Taylor, Thomas Plock, Robert Rayner, Lee Riback,
NO (0):**

- A. PUB25-060** Consider recommending adoption of an ordinance of the City of Denton, a Texas home-rule municipal corporation, authorizing the City Manager to execute a contract with Credit Systems International, Inc., for unpaid utilities and miscellaneous account collection services owed by customers for various City of Denton departments for the Customer Service Department; providing for the expenditure of funds therefor; and providing an effective date (RFP 8746 - awarded to Credit Systems International, Inc., for one (1) year, with the option for four (4) additional one (1) year extensions, in the total five (5) year not-to-exceed amount of \$545,050.00).

3. ITEMS FOR INDIVIDUAL CONSIDERATION

- A. PUB25-062** Consider approval of April 14, 2025, minutes.

Board Member Taylor moved to recommend adoption of agenda items 3A. Motion seconded by Board Member Rayner; motion carried.

**YES (5): Chair Billy Cheek, Devin Taylor, Thomas Plock, Robert Rayner, Lee Riback
NO (0):**

- B. PUB25-061** Management Reports

1. February Recycling Contamination Rate
2. Robinwood Reconstruction Inquiry
3. Future Agenda Items
4. New Business Action Items

5. CONCLUDING ITEMS

With no further business, the meeting was adjourned at 9:03 AM.

BILLY CHEEK
CHAIR
CITY OF DENTON, TEXAS

CASSIE BLACKBURN
ADMIN MANAGER
CITY OF DENTON, TEXAS

Minutes approved on: 5/19/2025



City of Denton

City Hall
215 E. McKinney St.
Denton, Texas 76201
www.cityofdenton.com

Legislation Text

File #: PUB25-071, **Version:** 1

AGENDA CAPTION

Consider approval of the May 5, 2025, minutes.

City of Denton *Public Utilities Board*

The *Public Utilities Board* of the City of Denton, Texas was noticed to convene in a meeting on *Monday, May 5, 2025*, at *9:00 AM* in *City Council Work Session Room*, The following attendance was recorded:

PRESENT: *Robert Rayner, Lee Riback*

ABSENT: *Thomas Plock, Susan Parker, Aaron Newquist, Devin Taylor, Billy Cheek*

Attendees waited until *9:12 a.m.* for a quorum of members to arrive.

A quorum failed to materialize, no action was taken, and the meeting was adjourned at *9:12 a.m.*

BILLY CHEEK
CHAIR

CASSIE BLACKURN
ADMINISTRATIVE MANAGER

MINUTES APPROVED ON: May 19, 2025



City of Denton

City Hall
215 E. McKinney St.
Denton, Texas 76201
www.cityofdenton.com

Legislation Text

File #: PUB25-039, **Version:** 1

AGENDA CAPTION

Consider recommending adoption of an ordinance directing the publication of Notice of Intention to issue \$46,535,000 in principal amount of Certificates of Obligation of the City of Denton for General Government and Solid Waste projects; and providing an effective date.



City of Denton

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

AGENDA INFORMATION SHEET

DEPARTMENT: Finance

ACM: Christine Taylor

DATE: May 19, 2025

SUBJECT

Consider recommending adoption of an ordinance directing the publication of Notice of Intention to issue \$46,535,000 in principal amount of Certificates of Obligation of the City of Denton for General Government and Solid Waste projects; and providing an effective date.

BACKGROUND

The Board's review of this item includes consideration of only Solid Waste capital projects.

This ordinance provides the Notice of Intention (NOI) to issue \$11,125,711 of Certificates of Obligation (CO) of the City of Denton for Solid Waste projects, as required by state law. The notice will be published once a week for two consecutive weeks in the Denton Record Chronicle, with the date of the first publication to be at least forty-six (46) days before the date tentatively set for the passage of the ordinance authorizing the issuance of the bonds. The notice will also be posted on the City's website.

Staff recommends the sale of \$11,125,711 in COs for Solid Waste. Below is a listing of recommended Solid Waste CO funded projects for FY 2024-25 CIP.

	<u>Reimbursement Ordinance</u>	<u>Notice of Intent</u>
Concrete Replacement	\$ 350,000	\$ 350,000
Scalehouse	640,000	640,000
Fleet Shop at Solid Waste	2,200,000	2,200,000
Cell 5 & 6 Construction	4,000,000	4,000,000
Vehicles - New Additions	285,711	285,711
Vehicles - Replacements	<u>3,650,000</u>	<u>3,650,000</u>
Solid Waste Total	\$ 11,125,711	\$ 11,125,711

The City sells bonds in accordance with the useful life of the asset that is being acquired. For example, vehicles are typically sold with bonds that will be paid within five years. For the FY 2024-25 proposed debt issuance for Solid Waste COs: \$3,935,711 will be 5-year debt, and \$7,190,000 will be 20-year debt.

Concurrently with the sale of COs for Solid Waste, the City anticipates the sale of approximately \$34,988,270 in General Government COs and \$43,507,000 in General Obligation Bonds (GO) to fund the 2019 and 2023 Bond Programs and approximately \$205,645,901 in COs for Water, Wastewater and Electric.

If approved by the City Council, staff will proceed with the publication of the Notice of Intention and will schedule the Bond Ordinance consideration and adoption for July 15, 2025. The bond ordinance will dictate the parameters of the bond sale. Under such an arrangement, staff will be permitted to execute the bond sale within six (6) months of July 15, 2025, provided certain interest rate parameters are met.

RECOMMENDATION

Staff recommends adoption of the ordinance.

PRIOR ACTION/REVIEW (Council, Boards, Commissions)

On October 15, 2024, the City Council adopted a reimbursement ordinance (Ord. No. 24-1662) authorizing the reimbursement of capital program expenditures of \$74,010,000 in GO and \$307,839,583 in CO funded projects for General Government, Solid Waste, Electric, Water and Wastewater.

FISCAL INFORMATION

The ordinance is for the authorization to publish the Notice of Intention to sell \$46,535,000 of Certificates of Obligation for General Government and Solid Waste projects. A notice is only required for Certificates of Obligation.

EXHIBITS

1. Agenda Information Sheet
2. Ordinance
3. Presentation

Respectfully submitted:
Matt Hamilton
Assistant Director of Finance

Prepared by:
Randee Klingele
Treasury Manager

ORDINANCE NO. 25-__

AN ORDINANCE DIRECTING THE PUBLICATION OF NOTICE OF INTENTION TO ISSUE \$46,535,000 IN PRINCIPAL AMOUNT OF CERTIFICATES OF OBLIGATION OF THE CITY OF DENTON FOR GENERAL GOVERNMENT AND SOLID WASTE PROJECTS; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, it is deemed necessary and advisable that the Notice of Intention to Issue Certificates of Obligation be given as hereinafter provided; NOW, THEREFORE,

THE COUNCIL OF THE CITY OF DENTON HEREBY ORDAINS:

SECTION 1. That attached hereto is a form of "NOTICE OF INTENTION TO ISSUE CERTIFICATES OF OBLIGATION OF THE CITY OF DENTON", the form and substance of which are hereby adopted and approved, and made a part of this Ordinance for all purposes.

SECTION 2. That the City Secretary shall cause said NOTICE, in substantially the form attached hereto, to be published once a week for two consecutive weeks in a newspaper of general circulation in the City, with the date of the first publication to be at least forty-six (46) days before the date tentatively set for the passage of the Ordinance authorizing the issuance of such Certificates of Obligation. And further that the City Secretary shall cause said NOTICE, in substantially the form attached hereto, to be posted continuously on the City's Internet website for at least 45 days before the date tentatively set for the passage of the Ordinance authorizing the issuance of the Certificates of Obligation.

SECTION 3. That for purposes of Texas Local Government Code, Subchapter C of Chapter 271, as amended, the City has currently designated \$796,315,000 in principal amount of the following \$1,263,865,000 of outstanding debt obligations as self-supporting debt, provided that such designated amount may be changed from time to time:

- Certificates of Obligation, Series 2014
- General Obligation Refunding and Improvement Bonds, Series 2014
- Certificates of Obligation, Series 2015
- General Obligation Refunding and Improvement Bonds, Series 2015
- General Obligation Refunding Bonds, Series 2015
- Certificates of Obligation, Series 2016
- General Obligation Refunding and Improvement Bonds, Series 2016
- General Obligation Refunding Bonds, Series 2016
- Certificates of Obligation, Series 2017
- General Obligation Refunding and Improvement Bonds, Series 2017
- Certificates of Obligation, Series 2018
- General Obligation Bonds, Series 2018

- Certificates of Obligation, Series 2018A
- Certificates of Obligation, Series 2019
- General Obligation Refunding and Improvement Bonds, Series 2019
- Certificates of Obligation, Series 2020
- General Obligation Refunding and Improvement Bonds, Series 2020
- General Obligation Refunding Bonds, Series 2020A
- Certificates of Obligation, Series 2021
- General Obligation Bonds, Series 2021
- Certificates of Obligation, Series 2022
- General Obligation Refunding and Improvement Bonds, Series 2022
- Certificates of Obligation, Series 2023
- General Obligation Refunding and Improvement Bonds, Series 2023
- Certificates of Obligation, Series 2024
- General Obligation Refunding and Improvement Bonds, Series 2024
- Extendable Commercial Paper Notes, Series A

SECTION 4. That this Ordinance is intended to satisfy the official intent requirements set forth in section 1.150-2 of the rules and regulations of the United States Department of the Treasury.

SECTION 5. That this Ordinance shall become effective immediately upon its passage and approval.

The motion to approve this ordinance was made by _____ and seconded by _____.
The ordinance was passed and approved by the following vote [__ – __]:

	Aye	Nay	Abstain	Absent
Mayor Gerard Hudspeth:	_____	_____	_____	_____
Vicki Byrd, District 1:	_____	_____	_____	_____
Brian Beck, District 2:	_____	_____	_____	_____
Paul Meltzer, District 3:	_____	_____	_____	_____
Joe Holland, District 4:	_____	_____	_____	_____
Brandon Chase McGee, At Large Place 5:	_____	_____	_____	_____
Jill Jester, At Large Place 6:	_____	_____	_____	_____

PASSED AND APPROVED this the 20th day of May, 2025.

GERARD HUDSPETH, MAYOR

ATTEST:
LAUREN THODEN, CITY SECRETARY

BY: _____

APPROVED AS TO LEGAL FORM:
MACK REINWAND, CITY ATTORNEY

BY: _____

THE STATE OF TEXAS :

COUNTY OF DENTON :

CITY OF DENTON :

NOTICE OF INTENTION
TO ISSUE CERTIFICATES OF OBLIGATION
OF THE CITY OF DENTON
(GENERAL GOVERNMENT AND SOLID WASTE PROJECTS)

THE CITY OF DENTON, in Denton County, Texas, hereby gives notice of its intention to issue CITY OF DENTON CERTIFICATES OF OBLIGATION, in accordance with the Certificate of Obligation Act of 1971, as amended and codified, and other applicable laws, in the maximum principal amount of \$46,535,000 for the purpose of paying all or a portion of the City's contractual obligations incurred pursuant to contracts for the purchase, construction and acquisition of certain real and personal property, to wit: (a) acquisition of vehicles and equipment for the fire, police, building inspections, community improvement services, animal services, streets and traffic control, facilities management, airport, technology services, fleet management, warehouse management, and parks and recreation departments; (b) renovations to, and equipping of, existing municipal buildings, including the acquisition and installation of replacement heating, venting and air conditioning equipment, roofing and flooring; (c) acquiring, constructing and installing building security systems, including security system technology equipment and software, for municipal buildings; (d) constructing, reconstructing, renovating, installing and equipping municipal parks; (e) acquisition and installation of technology equipment, including radio equipment, computer equipment and software, for various municipal departments; (f) constructing and improving streets, including traffic signalization, landscaping, drainage, sidewalks, utility line relocations and the acquisition of land and rights-of-way therefor; (g) acquisition of equipment for, and acquiring, constructing, installing and equipping additions, extensions, renovations and improvements to, the City's drainage and storm sewer systems; (h) acquisition of vehicles and equipment for, and acquiring, constructing, installing and equipping additions, extensions, renovations and improvements to, the City's solid waste disposal system; and (i) renovations to existing public safety facility for the police department; and also for the purpose of paying all or a portion of the City's contractual obligations for professional services, including engineers, architects, attorneys, map makers, auditors, and financial advisors, in connection with said projects and said Certificates of Obligation. The City proposes to provide for the payment of such Certificates of Obligation from the levy and collection of ad valorem taxes in the City as provided by law, and from certain surplus revenues (not to exceed \$1,000 in aggregate amount) derived by the City from the ownership and operation of the City's Utility System (consisting of the City's combined waterworks system, wastewater system and electric light and power system). The City Council of the City tentatively proposes to authorize the issuance of such Certificates of Obligation, in one or more series, at a meeting commencing at 6:30 p.m. on July 15, 2025, in the City Council room at the Municipal Building (City Hall), 215 E. McKinney, Denton, Texas. In the event the City Council will be unable to meet at the Municipal Building (City Hall) on July 15, 2025, the City will post on its website, www.cityofdenton.com, information for persons to attend the meeting by telephone, teleconference or other electronic means.

The maximum interest rate for such Certificates of Obligation will not exceed the maximum legal interest rate, the maximum maturity date for such Certificates of Obligation is February 15, 2055, and the estimated combined principal and interest required to pay such Certificates of Obligation to be authorized on time and in full is \$65,006,402.

The City has separately provided notice of its intention to also issue additional Certificates of Obligation in the maximum principal amount of \$207,515,000 for water system, wastewater system and electric system projects (the “Utility System Certificates of Obligation”). The maximum interest rate for the Utility System Certificates of Obligation will not exceed the maximum legal interest rate, the maximum maturity date for the Utility System Certificates of Obligation is February 15, 2055, and the estimated combined principal and interest required to pay the Utility System Certificates of Obligation to be authorized on time and in full is \$330,971,621.

The City currently has outstanding debt obligations secured by and payable from ad valorem taxes (not including \$796,315,000 principal amount of outstanding debt obligations the City has designated as self-supporting debt) equal to \$467,550,000 in principal amount and \$636,200,888 in combined principal and interest required to pay such outstanding debt obligations on time and in full. The City reasonably expects to pay self-supporting debt obligations from revenue sources other than ad valorem taxes, provided, however, that in the event such self-supporting revenue sources are insufficient to pay debt service, the City is obligated to levy ad valorem taxes to pay such debt obligations. Ordinance No. 25-___ designating certain outstanding debt obligations of the City as self-supporting for purposes of Texas Local Government Code, Subchapter C of Chapter 271 is available upon request to the City at the address noted above.

CITY OF DENTON, TEXAS

By: Lauren Thoden, City Secretary



Public Utilities Board Notice of Intentions



Purpose of Notice of Intention

- State Law requires the publication of a Notice of Intent to issue Certificates of Obligation (COs). *(Texas Local Government Code, Chapter 271, Subchapter C – Certificate of Obligation Act)*
- The notice must be published in a newspaper of general circulation in the City (Denton Record Chronicle) and on the City's website.
- Publication must be once a week for two consecutive weeks.
- Passage of Bond Ordinance authorizing the sale of COs must be at least 46 days after the date of the first publication.

Solid Waste Projects

	Reimbursement Ordinance	Notice of Intent
Concrete Replacement	\$ 350,000	\$ 350,000
Scalehouse	640,000	640,000
Fleet Shop at Solid Waste	2,200,000	2,200,000
Cell 5 & 6 Construction	4,000,000	4,000,000
Vehicles - New Additions	285,711	285,711
Vehicles - Replacements	3,650,000	3,650,000
Solid Waste Total	\$ 11,125,711	\$ 11,125,711

Utility Projects – Water 1 of 3

	Reimbursement Ordinance	Notice of Intent
AMI/AMR Replacements	\$ 4,590,000	\$ 2,000,000
Annual Field Service Replacements	1,050,000	1,050,000
Bonnie Brae (Phase 3)	459,000	900,000
Bonnie Brae (Phase 5)	344,250	675,000
Bonnie Brae (Phase 6)	51,000	100,000
Clear Creek Slope Maintenance	1,000,000	1,000,000
Elm and Locust (Phase 2)	1,530,000	3,000,000
VFDs at LLRWPS and the LLWTP HSPS	250,000	250,000
Fallmeadow Street Water Main	500,000	500,000
Fire Hydrant Installs	61,493	61,493
Lake Lewisville Filter Media Replacement	1,020,000	-
Lake Lewisville Raw Water Station Rehab	1,020,000	2,000,000
Lakey Street Water Main	500,000	500,000
Large Valve Replacements	127,500	-

Utility Projects – Water 2 of 3

	Reimbursement Ordinance	Notice of Intent
LCR (Lead and Copper Rule) Compliance	1,000,000	1,000,000
LCR (Lead and Copper Rule) Remediation	500,000	500,000
LLWTP DME Pond Infill	1,020,000	-
LLWTP LAS Bulk Storage Capacity Redesign	255,000	-
LLWTP Raw Water Transmission Line	500,000	500,000
LLWTP Sludge Dewatering Improvement Project	1,932,900	1,000,000
McKenna Park BPS Rehab & Fence Replacement	500,000	500,000
Oversize Participation Agreements	5,360,000	5,360,000
Ray Roberts Ozone Generator PLC Upgrades	459,000	900,000
RRWTP Capacity Rerate and Upgrades	14,892,000	29,200,000
RRWTP Disinfection Conv. and Chemical Impvs.	3,187,500	6,250,000
RRWTP Emergency Generator ATS Upgrade	510,000	1,000,000
RRWTP Fiber Installation	382,500	750,000
RRWTP Raw Electric Assessment	127,500	-

Utility Projects – Water 3 of 3

	Reimbursement Ordinance	Notice of Intent
RRWTP Line Cleaning for Zebra Mussels	153,000	-
Sampling Station Upgrades	200,000	200,000
SCADA/HMI Upgrade Water	637,500	1,000,000
Service Center Renovation	1,530,000	3,000,000
Supplement to Bond Election 2019 Projects	7,140,000	14,000,000
Tank Painting	102,000	200,000
Transmission Line Condition Assessment	1,000,000	1,000,000
Transmission Line Condition Repairs	1,000,000	200,000
Distributor Replacement Program	1,241,139	-
Water Meters	900,000	900,000
Water Production Tank Mixing Options Eval.	250,000	250,000
Water Taps	308,122	308,122
West Allred Transmission Line	1,020,000	-
Westgate Road and Drainage	285,600	560,000
Water Total	\$ 58,897,004	\$ 80,614,615

Utility Projects – Wastewater 1 of 2

	Reimbursement Ordinance	Notice of Intent
12/15-inch Robson Ranch Interceptor	\$ 500,000	\$ 500,000
21/27/30-inch Roark Branch Interceptor Ph. 2	2,500,000	2,500,000
Annual Field Service Replacements	1,050,000	500,000
Bonnie Brae PH 3-6 Wastewater Upgrades	1,020,000	2,000,000
Collector Replacement Program	2,276,552	-
Cooper Creek Lift Station Improvement Project	331,500	650,000
Emergency Equipment Storage Building	400,000	-
Fallmeadow Street Water Main	500,000	500,000
Granada Lift Station Replacement	1,122,000	500,000
Hickory Creek Interceptor IV	3,570,000	1,000,000
Hickory Creek Water Reclamation Plant Ph 1	100,000	100,000
Hobson Lift Station Electrical Upgrade	632,400	500,000
Lakey Street Water Main	500,000	500,000
Legends Sewer Line	510,000	-
Lift Station Replacement	500,000	500,000

Utility Projects – Wastewater 2 of 2

	Reimbursement Ordinance	Notice of Intent
Manhole Repair/Replace/Lining	150,000	150,000
Milam Creek Basin Wastewater Line and LS	12,182,880	23,888,000
Mingo/Ruddell/Quiet Zone Sewer Upgrades	510,000	1,000,000
Oversize Participation	13,040,000	13,040,000
PCWRP Expansion Headworks	4,794,000	9,400,000
PCWRP Utility Power Switch Replacement	250,000	-
Pipe/Force Main Condition Assessment	551,250	-
Robson Ranch Project Phase I & II	1,785,000	-
Robson West Lift Station	2,244,000	1,000,000
SCADA/HMI Upgrade Water Rec	1,250,000	1,000,000
Supplement to Bond Election 2019 Projects	13,000,000	13,000,000
Vehicle Replacement	903,286	903,286
Water Reclamations Grinder	1,500,000	-
Service Center Renovation	4,000,000	4,000,000
Wastewater Total	\$ 71,672,868	\$ 77,131,286

Utility Projects - Electric

	Reimbursement Ordinance	Notice of Intent
Automated Meter Reading	\$ 1,238,730	\$ 1,850,000
Land & Building Construction	2,500,000	3,900,000
Distribution Substations	6,550,000	5,054,394
Distribution Transformers	7,000,000	-
Feeder Extensions & Improvements	15,886,000	9,000,000
New Residential & Commercial	9,205,000	2,000,000
Power Factor Improvement	600,000	150,000
Street Lighting	800,000	176,330
Transmission Lines	6,400,000	625,000
Transmission Substations	8,350,000	10,160,000
Production Plant	6,358,000	6,358,000
Technology	4,090,000	7,626,276
Electric Relocations	6,000,000	1,000,000
Electric Total	\$ 74,977,730	\$ 47,900,000

Total CO Notice of Intentions

Solid Waste	\$ 11,125,711
<hr/>	
Total General Government	
Water	\$ 80,614,615
Wastewater	77,131,286
Electric	47,900,000
Issuance Cost & Pricing Flexibility*	1,869,099
<hr/>	
Total Utility System	\$ 207,515,000

*Shared with GO Bond Sale

Next Steps

- **May 20, 2025**
 - Council considers approval of NOI ordinances.
- **June 23, 2025**
 - PUB considers approval of bond ordinance authorizing the sale of Certificates of Obligation.
- **July 15, 2025**
 - Council considers approval of bond ordinances authorizing the sale of both General Obligation bonds and Certificates of Obligation.
- **July 23, 2025**
 - Preliminary date of sale if market conditions are favorable.
- **August 26, 2025**
 - Preliminary date of close and delivery of funds.

Questions





City of Denton

City Hall
215 E. McKinney St.
Denton, Texas 76201
www.cityofdenton.com

Legislation Text

File #: PUB25-040, **Version:** 1

AGENDA CAPTION

Consider recommending adoption of an ordinance directing the publication of Notice of Intention to issue \$207,515,000 in principal amount of Certificates of Obligation of the City of Denton for Waterworks and Wastewater System and Electric System projects; and providing an effective date.



City of Denton

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

AGENDA INFORMATION SHEET

DEPARTMENT: Finance

ACM: Christine Taylor

DATE: May 19, 2025

SUBJECT

Consider recommending adoption of an ordinance directing the publication of Notice of Intention to issue \$207,515,000 in principal amount of Certificates of Obligation of the City of Denton for Waterworks and Wastewater System and Electric System projects; and providing an effective date.

BACKGROUND

This ordinance provides the Notice of Intention (NOI) to issue \$207,515,000 of Certificates of Obligation (CO) of the City of Denton for Water, Wastewater and Electric System projects, as required by state law. The notice will be published once a week for two consecutive weeks in the Denton Record Chronicle, with the date of the first publication to be at least forty-six (46) days before the date tentatively set for the passage of the ordinance authorizing the issuance of the bonds. The notice will also be posted on the City's website. The additional \$1.8 million is for issuance costs and to allow flexibility in marketing and pricing the bond sale. Issuance costs are shared between the General Government (GO) and CO Bond Sale.

Staff recommends the sale of \$207,515,000 in COs for Water, Wastewater and Electric System. Changes to material pricing and project requirements for large projects were compared to the initial 2024 scopes and pricing in developing the NOI project list. The increase in Water and Wastewater is associated with the timing of the Environmental Protection Agency WIFIA program funding. An overall review of Electric's capital projects resulted in a reduction of NOI project dollars.

Below is a listing of recommended Water, Wastewater and Electric System CO funded projects for FY 2024-25.

<u>Water Projects</u>	<u>Reimbursement Ordinance</u>	<u>Notice of Intent</u>
AMI/AMR Replacements	\$ 4,590,000	\$ 2,000,000
Annual Field Service Replacements	1,050,000	1,050,000
Bonnie Brae (Phase 3)	459,000	900,000
Bonnie Brae (Phase 5)	344,250	675,000
Bonnie Brae (Phase 6)	51,000	100,000
Clear Creek Slope Maintenance	1,000,000	1,000,000
Elm and Locust (Phase 2)	1,530,000	3,000,000
VFDs at LLRWPS and the LLWTP HSPS	250,000	250,000
Fallmeadow Street Water Main	500,000	500,000
Fire Hydrant Installs	61,493	61,493
Lake Lewisville Filter Media Replacement	1,020,000	-
Lake Lewisville Raw Water Station Rehab	1,020,000	2,000,000
Lakey Street Water Main	500,000	500,000
Large Valve Replacements	127,500	-

LCR (Lead and Copper Rule) Compliance	1,000,000	1,000,000
LCR (Lead and Copper Rule) Remediation	500,000	500,000
LLWTP DME Pond Infill	1,020,000	-
LLWTP LAS Bulk Storage Capacity Redesign	255,000	-
LLWTP Raw Water Transmission Line	500,000	500,000
LLWTP Sludge Dewatering Improvement Project	1,932,900	1,000,000
McKenna Park BPS Rehab & Fence Replacement	500,000	500,000
Oversize Participation Agreements	5,360,000	5,360,000
Ray Roberts Ozone Generator PLC Upgrades	459,000	900,000
RRWTP Capacity Rerate and Upgrades	14,892,000	29,200,000
RRWTP Disinfection Conv. and Chemical Impvs.	3,187,500	6,250,000
RRWTP Emergency Generator ATS Upgrade	510,000	1,000,000
RRWTP Fiber Installation	382,500	750,000
RRWTP Raw Electric Assessment	127,500	-
RRWTP Line Cleaning for Zebra Mussels	153,000	-
Sampling Station Upgrades	200,000	200,000
SCADA/HMI Upgrade Water	637,500	1,000,000
Service Center Renovation	1,530,000	3,000,000
Supplement to Bond Election 2019 Projects	7,140,000	14,000,000
Tank Painting	102,000	200,000
Transmission Line Condition Assessment	1,000,000	1,000,000
Transmission Line Condition Repairs	1,000,000	200,000
Distributor Replacement Program	1,241,139	-
Water Meters	900,000	900,000
Water Production Tank Mixing Options Eval.	250,000	250,000
Water Taps	308,122	308,122
West Allred Transmission Line	1,020,000	-
Westgate Road and Drainage	285,600	560,000
Water Total	\$ 58,897,004	\$ 80,614,615

Wastewater Projects

Reimbursement Ordinance

Notice of Intent

		\$
12/15-inch Robson Ranch Interceptor	\$ 500,000	500,000
21/27/30-inch Roark Branch Interceptor Ph. 2	2,500,000	2,500,000
Annual Field Service Replacements	1,050,000	500,000
Bonnie Brae PH 3-6 Wastewater Upgrades	1,020,000	2,000,000
Collector Replacement Program	2,276,552	-
Cooper Creek Lift Station Improvement Project	331,500	650,000
Emergency Equipment Storage Building	400,000	-
Fallmeadow Street Water Main	500,000	500,000
Granada Lift Station Replacement	1,122,000	500,000
Hickory Creek Interceptor IV	3,570,000	1,000,000
Hickory Creek Water Reclamation Plant Ph 1	100,000	100,000
Hobson Lift Station Electrical Upgrade	632,400	500,000
Lakey Street Water Main	500,000	500,000
Legends Sewer Line	510,000	-
Lift Station Replacement	500,000	500,000
Manhole Repair/Replace/Lining	150,000	150,000
Milam Creek Basin Wastewater Line and LS	12,182,880	23,888,000

Mingo/Ruddell/Quiet Zone Sewer Upgrades	510,000	1,000,000
Oversize Participation	13,040,000	13,040,000
PCWRP Expansion Headworks	4,794,000	9,400,000
PCWRP Utility Power Switch Replacement	250,000	-
Pipe/Force Main Condition Assessment	551,250	-
Robson Ranch Project Phase I & II	1,785,000	-
Robson West Lift Station	2,244,000	1,000,000
SCADA/HMI Upgrade Water Rec	1,250,000	1,000,000
Supplement to Bond Election 2019 Projects	13,000,000	13,000,000
Vehicle Replacement	903,286	903,286
Water Reclamations Grinder	1,500,000	-
Service Center Renovation	4,000,000	4,000,000
Wastewater Total	\$ 71,672,868	\$ 77,131,286

<u>Electric Projects</u>	<u>Reimbursement Ordinance</u>	<u>Notice of Intent</u>
Automated Meter Reading	\$ 1,238,730	\$ 1,850,000
Land & Building Construction	2,500,000	3,900,000
Distribution Substations	6,550,000	5,054,394
Distribution Transformers	7,000,000	-
Feeder Extensions & Improvements	15,886,000	9,000,000
New Residential & Commercial	9,205,000	2,000,000
Power Factor Improvement	600,000	150,000
Street Lighting	800,000	176,330
Transmission Lines	6,400,000	625,000
Transmission Substations	8,350,000	10,160,000
Production Plant	6,358,000	6,358,000
Technology	4,090,000	7,626,276
Electric Relocations	6,000,000	1,000,000
Electric Total	\$ 74,977,730	\$ 47,900,000

Total CO's for Water, Wastewater, and Electric **\$ 205,645,901**

The City sells bonds in accordance with the useful life of the asset that is being acquired. For example, vehicles are typically sold with bonds that will be paid within five years. For the FY 2024-25 proposed debt issuance for Water, Wastewater and Electric System COs: \$7,626,276 will be 5-year debt, \$157,745,901 will be 20-year debt, and \$40,273,724 will be 30-year debt.

If approved by the City Council, staff will proceed with the publication of the Notice of Intention and will schedule the Bond Ordinance consideration and adoption for July 15, 2025. The bond ordinance will dictate the parameters of the bond sale. Under such an arrangement, staff will be permitted to execute the bond sale within six (6) months of July 15, 2025, provided certain interest rate parameters are met.

RECOMMENDATION

Staff recommends adoption of the ordinance.

PRIOR ACTION/REVIEW (Council, Boards, Commissions)

On October 15, 2024, the City Council adopted reimbursement ordinance (Ord. 24-1662) authorizing the reimbursement of capital program expenditures of \$74,010,000 in GO and \$307,839,583 in CO funded projects for General Government, Solid Waste, Electric, Water and Wastewater.

FISCAL INFORMATION

The ordinance is for the authorization to publish the Notice of Intention to sell \$207,515,000 of Certificates of Obligation for Water, Wastewater and Electric System projects. A notice is only required for Certificates of Obligation.

EXHIBITS

1. Agenda Information Sheet
2. Ordinance
3. Presentation

Respectfully submitted:
Matt Hamilton
Assistant Director of Finance

Prepared by:
Randee Klingele
Treasury Manager

ORDINANCE NO. 25-__

AN ORDINANCE DIRECTING THE PUBLICATION OF NOTICE OF INTENTION TO ISSUE \$207,515,000 IN PRINCIPAL AMOUNT OF CERTIFICATES OF OBLIGATION OF THE CITY OF DENTON FOR WATERWORKS AND WASTEWATER SYSTEM AND ELECTRIC SYSTEM PROJECTS; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, it is deemed necessary and advisable that the Notice of Intention to Issue Certificates of Obligation be given as hereinafter provided; NOW, THEREFORE,

THE COUNCIL OF THE CITY OF DENTON HEREBY ORDAINS:

SECTION 1. That attached hereto is a form of "NOTICE OF INTENTION TO ISSUE CERTIFICATES OF OBLIGATION OF THE CITY OF DENTON", the form and substance of which are hereby adopted and approved, and made a part of this Ordinance for all purposes.

SECTION 2. That the City Secretary shall cause said NOTICE, in substantially the form attached hereto, to be published once a week for two consecutive weeks in a newspaper of general circulation in the City, with the date of the first publication to be at least forty-six (46) days before the date tentatively set for the passage of the Ordinance authorizing the issuance of such Certificates of Obligation. And further that the City Secretary shall cause said NOTICE, in substantially the form attached hereto, to be posted continuously on the City's Internet website for at least 45 days before the date tentatively set for the passage of the Ordinance authorizing the issuance of the Certificates of Obligation.

SECTION 3. That this Ordinance is intended to satisfy the official intent requirements set forth in section 1.150-2 of the rules and regulations of the United States Department of the Treasury.

SECTION 4. That this Ordinance shall become effective immediately upon its passage and approval.

The motion to approve this ordinance was made by _____ and seconded by _____.
The ordinance was passed and approved by the following vote [__ - __]:

	Aye	Nay	Abstain	Absent
Mayor Gerard Hudspeth:	_____	_____	_____	_____
Vicki Byrd, District 1:	_____	_____	_____	_____
Brian Beck, District 2:	_____	_____	_____	_____
Paul Meltzer, District 3:	_____	_____	_____	_____
Joe Holland, District 4:	_____	_____	_____	_____
Brandon Chase McGee, At Large Place 5:	_____	_____	_____	_____
Jill Jester, At Large Place 6:	_____	_____	_____	_____

PASSED AND APPROVED this the 20th day of May, 2025.

GERARD HUDSPETH, MAYOR

ATTEST:
LAUREN THODEN, CITY SECRETARY

BY: _____

APPROVED AS TO LEGAL FORM:
MACK REINWAND, CITY ATTORNEY

BY: _____

THE STATE OF TEXAS :

COUNTY OF DENTON :

CITY OF DENTON :

NOTICE OF INTENTION
TO ISSUE CERTIFICATES OF OBLIGATION
OF THE CITY OF DENTON
(WATERWORKS AND WASTEWATER SYSTEM AND ELECTRIC SYSTEM PROJECTS)

THE CITY OF DENTON, in Denton County, Texas, hereby gives notice of its intention to issue CITY OF DENTON CERTIFICATES OF OBLIGATION, in accordance with the Certificate of Obligation Act of 1971, as amended and codified, and other applicable laws, in the maximum principal amount of \$207,515,000 for the purpose of paying all or a portion of the City's contractual obligations incurred pursuant to contracts for the purchase, construction and acquisition of certain real and personal property, to wit: (a) acquisition of equipment for, and acquiring, constructing, installing and equipping additions, extensions, renovations and improvements to, the City's waterworks and wastewater system; and (b) acquisition of equipment for, and acquiring, constructing, installing and equipping additions, extensions, renovations and improvements to, the City's electric light and power system; and also for the purpose of paying all or a portion of the City's contractual obligations for professional services, including engineers, architects, attorneys, map makers, auditors, and financial advisors, in connection with said projects and said Certificates of Obligation. The City proposes to provide for the payment of such Certificates of Obligation from the levy and collection of ad valorem taxes in the City as provided by law, and from certain surplus revenues (not to exceed \$1,000 in aggregate amount) derived by the City from the ownership and operation of the City's Utility System (consisting of the City's combined waterworks system, wastewater system and electric light and power system). The City Council of the City tentatively proposes to authorize the issuance of such Certificates of Obligation, in one or more series, at a meeting commencing at 6:30 p.m. on July 15, 2025, in the City Council room at the Municipal Building (City Hall), 215 E. McKinney, Denton, Texas. In the event the City Council will be unable to meet at the Municipal Building (City Hall) on July 15, 2025, the City will post on its website, www.cityofdenton.com, information for persons to attend the meeting by telephone, teleconference or other electronic means.

The maximum interest rate for such Certificates of Obligation will not exceed the maximum legal interest rate, the maximum maturity date for such Certificates of Obligation is February 15, 2055, and the estimated combined principal and interest required to pay such Certificates of Obligation to be authorized on time and in full is \$330,971,621.

The City has separately provided notice of its intention to also issue additional Certificates of Obligation in the maximum principal amount of \$46,535,000 for general government and solid waste disposal system projects (the "General Government & Solid Waste Certificates of Obligation"). The maximum interest rate for the General Government & Solid Waste Certificates of Obligation will not exceed the maximum legal interest rate, the maximum maturity date for the General Government & Solid Waste Certificates of Obligation is February 15, 2055, and the estimated combined principal and interest required to pay the General Government & Solid Waste Certificates of Obligation to be authorized on time and in full is \$65,006,402.

The City currently has outstanding debt obligations secured by and payable from ad valorem taxes (not including \$796,315,000 principal amount of outstanding debt obligations the City has designated as self-supporting debt) equal to \$467,550,000 in principal amount and \$636,200,888 in combined principal and interest required to pay such outstanding debt obligations on time and in full. The City reasonably expects to pay self-supporting debt obligations from revenue sources other than ad valorem taxes, provided, however, that in the event such self-supporting revenue sources are insufficient to pay debt service, the City is obligated to levy ad valorem taxes to pay such debt obligations. Ordinance No. 25-___ designating certain outstanding debt obligations of the City as self-supporting for purposes of Texas Local Government Code, Subchapter C of Chapter 271 is available upon request to the City at the address noted above.

CITY OF DENTON, TEXAS

By: Lauren Thoden, City Secretary



Public Utilities Board Notice of Intentions



Purpose of Notice of Intention

- State Law requires the publication of a Notice of Intent to issue Certificates of Obligation (COs). *(Texas Local Government Code, Chapter 271, Subchapter C – Certificate of Obligation Act)*
- The notice must be published in a newspaper of general circulation in the City (Denton Record Chronicle) and on the City's website.
- Publication must be once a week for two consecutive weeks.
- Passage of Bond Ordinance authorizing the sale of COs must be at least 46 days after the date of the first publication.

Solid Waste Projects

	Reimbursement Ordinance	Notice of Intent
Concrete Replacement	\$ 350,000	\$ 350,000
Scalehouse	640,000	640,000
Fleet Shop at Solid Waste	2,200,000	2,200,000
Cell 5 & 6 Construction	4,000,000	4,000,000
Vehicles - New Additions	285,711	285,711
Vehicles - Replacements	3,650,000	3,650,000
Solid Waste Total	\$ 11,125,711	\$ 11,125,711

Utility Projects – Water 1 of 3

	Reimbursement Ordinance	Notice of Intent
AMI/AMR Replacements	\$ 4,590,000	\$ 2,000,000
Annual Field Service Replacements	1,050,000	1,050,000
Bonnie Brae (Phase 3)	459,000	900,000
Bonnie Brae (Phase 5)	344,250	675,000
Bonnie Brae (Phase 6)	51,000	100,000
Clear Creek Slope Maintenance	1,000,000	1,000,000
Elm and Locust (Phase 2)	1,530,000	3,000,000
VFDs at LLRWPS and the LLWTP HSPS	250,000	250,000
Fallmeadow Street Water Main	500,000	500,000
Fire Hydrant Installs	61,493	61,493
Lake Lewisville Filter Media Replacement	1,020,000	-
Lake Lewisville Raw Water Station Rehab	1,020,000	2,000,000
Lakey Street Water Main	500,000	500,000
Large Valve Replacements	127,500	-

Utility Projects – Water 2 of 3

	Reimbursement Ordinance	Notice of Intent
LCR (Lead and Copper Rule) Compliance	1,000,000	1,000,000
LCR (Lead and Copper Rule) Remediation	500,000	500,000
LLWTP DME Pond Infill	1,020,000	-
LLWTP LAS Bulk Storage Capacity Redesign	255,000	-
LLWTP Raw Water Transmission Line	500,000	500,000
LLWTP Sludge Dewatering Improvement Project	1,932,900	1,000,000
McKenna Park BPS Rehab & Fence Replacement	500,000	500,000
Oversize Participation Agreements	5,360,000	5,360,000
Ray Roberts Ozone Generator PLC Upgrades	459,000	900,000
RRWTP Capacity Rerate and Upgrades	14,892,000	29,200,000
RRWTP Disinfection Conv. and Chemical Impvs.	3,187,500	6,250,000
RRWTP Emergency Generator ATS Upgrade	510,000	1,000,000
RRWTP Fiber Installation	382,500	750,000
RRWTP Raw Electric Assessment	127,500	-

Utility Projects – Water 3 of 3

	Reimbursement Ordinance	Notice of Intent
RRWTP Line Cleaning for Zebra Mussels	153,000	-
Sampling Station Upgrades	200,000	200,000
SCADA/HMI Upgrade Water	637,500	1,000,000
Service Center Renovation	1,530,000	3,000,000
Supplement to Bond Election 2019 Projects	7,140,000	14,000,000
Tank Painting	102,000	200,000
Transmission Line Condition Assessment	1,000,000	1,000,000
Transmission Line Condition Repairs	1,000,000	200,000
Distributor Replacement Program	1,241,139	-
Water Meters	900,000	900,000
Water Production Tank Mixing Options Eval.	250,000	250,000
Water Taps	308,122	308,122
West Allred Transmission Line	1,020,000	-
Westgate Road and Drainage	285,600	560,000
Water Total	\$ 58,897,004	\$ 80,614,615

Utility Projects – Wastewater 1 of 2

	Reimbursement Ordinance	Notice of Intent
12/15-inch Robson Ranch Interceptor	\$ 500,000	\$ 500,000
21/27/30-inch Roark Branch Interceptor Ph. 2	2,500,000	2,500,000
Annual Field Service Replacements	1,050,000	500,000
Bonnie Brae PH 3-6 Wastewater Upgrades	1,020,000	2,000,000
Collector Replacement Program	2,276,552	-
Cooper Creek Lift Station Improvement Project	331,500	650,000
Emergency Equipment Storage Building	400,000	-
Fallmeadow Street Water Main	500,000	500,000
Granada Lift Station Replacement	1,122,000	500,000
Hickory Creek Interceptor IV	3,570,000	1,000,000
Hickory Creek Water Reclamation Plant Ph 1	100,000	100,000
Hobson Lift Station Electrical Upgrade	632,400	500,000
Lakey Street Water Main	500,000	500,000
Legends Sewer Line	510,000	-
Lift Station Replacement	500,000	500,000

Utility Projects – Wastewater 2 of 2

	Reimbursement Ordinance	Notice of Intent
Manhole Repair/Replace/Lining	150,000	150,000
Milam Creek Basin Wastewater Line and LS	12,182,880	23,888,000
Mingo/Ruddell/Quiet Zone Sewer Upgrades	510,000	1,000,000
Oversize Participation	13,040,000	13,040,000
PCWRP Expansion Headworks	4,794,000	9,400,000
PCWRP Utility Power Switch Replacement	250,000	-
Pipe/Force Main Condition Assessment	551,250	-
Robson Ranch Project Phase I & II	1,785,000	-
Robson West Lift Station	2,244,000	1,000,000
SCADA/HMI Upgrade Water Rec	1,250,000	1,000,000
Supplement to Bond Election 2019 Projects	13,000,000	13,000,000
Vehicle Replacement	903,286	903,286
Water Reclamations Grinder	1,500,000	-
Service Center Renovation	4,000,000	4,000,000
Wastewater Total	\$ 71,672,868	\$ 77,131,286

Utility Projects - Electric

	Reimbursement Ordinance	Notice of Intent
Automated Meter Reading	\$ 1,238,730	\$ 1,850,000
Land & Building Construction	2,500,000	3,900,000
Distribution Substations	6,550,000	5,054,394
Distribution Transformers	7,000,000	-
Feeder Extensions & Improvements	15,886,000	9,000,000
New Residential & Commercial	9,205,000	2,000,000
Power Factor Improvement	600,000	150,000
Street Lighting	800,000	176,330
Transmission Lines	6,400,000	625,000
Transmission Substations	8,350,000	10,160,000
Production Plant	6,358,000	6,358,000
Technology	4,090,000	7,626,276
Electric Relocations	6,000,000	1,000,000
Electric Total	\$ 74,977,730	\$ 47,900,000

Total CO Notice of Intentions

Solid Waste	\$ 11,125,711
<hr/>	
Total General Government	
Water	\$ 80,614,615
Wastewater	77,131,286
Electric	47,900,000
Issuance Cost & Pricing Flexibility*	1,869,099
<hr/>	
Total Utility System	\$ 207,515,000

*Shared with GO Bond Sale

Next Steps

- **May 20, 2025**
 - Council considers approval of NOI ordinances.
- **June 23, 2025**
 - PUB considers approval of bond ordinance authorizing the sale of Certificates of Obligation.
- **July 15, 2025**
 - Council considers approval of bond ordinances authorizing the sale of both General Obligation bonds and Certificates of Obligation.
- **July 23, 2025**
 - Preliminary date of sale if market conditions are favorable.
- **August 26, 2025**
 - Preliminary date of close and delivery of funds.

Questions





City of Denton

City Hall
215 E. McKinney St.
Denton, Texas 76201
www.cityofdenton.com

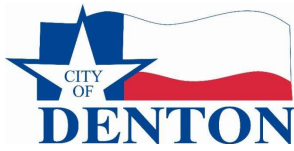
Legislation Text

File #: PUB25-073, Version: 1

AGENDA CAPTION

Management Reports

1. PUB25-036 Inquiry Memo
2. 6590-097 - Memo for PUB
3. 8662 - Memo for PUB
4. Future Agenda Items
5. New Business Action Items

**MEMORANDUM**

DATE: May 5, 2025

TO: Public Utilities Board Members

FROM: Jessica Williams, Chief Financial Officer
Azura Kerr, Senior Business Information Analyst

SUBJECT: Lee Riback, Public Utilities Board Inquiry

In response to your inquiry regarding Credit Systems Internal, Inc. sent on April 25, 2025, the City's Finance Department has prepared the following information.

For the past 21 years, the City of Denton's Utilities Customer Service, Finance, and Fire Departments have contracted with Credit Systems Internal, Inc. to assist with collecting unpaid invoices. The contract is paid out based on a percentage of the amount collected by the agency, and deducted from the total collected. If the agency does not collect, they do not receive payment. Current percentages range between 18% and 23% of total collections, depending on when the account was sent to collections and the contract term. Over the last three years, Customer Service has collected \$440,583.93 from these services, and Fire has collected an additional \$152,723.86.

Customer Service					Fire			
	Paid to Agency	Net Collected	Paid to City	Average Percentage Paid	Paid to Agency	Net Collected	Paid to City	Average Percentage Paid
2021	\$29,171.90	\$180,699.89	\$151,527.99	16.14%	\$53,114.99	\$116,900.42	\$63,785.43	45.44%
2022	26,107.82	174,720.27	148,612.45	14.94%	42,502.01	67,546.11	25,044.10	62.92%
2023	25,682.08	166,125.57	140,443.49	15.46%	52,840.86	116,735.19	63,894.33	45.27%
Total	\$80,961.80	\$521,545.73	\$440,583.93	15.52%	\$148,457.86	\$301,181.72	\$152,723.86	49.29%

OUR CORE VALUES

Inclusion • Collaboration • Quality Service • Strategic Focus • Fiscal Responsibility



MEMORANDUM

DATE: May 19, 2025
TO: Members of the Public Utilities Board
FROM: Jessica Williams, Chief Financial Officer & Sheldon Gatewood,
Construction Project Manager
SUBJECT: Acquiring the ultimate right-of-way for the Ryan Road Widening Project

In February 2021, the City Council approved a contract with Kimely-Horn and Associates, Inc. for the 30% design of the Ryan Road Widening Project. The staff has evaluated the 30% project scope of Ryan Road Widening to progress the design from 30% to the final design of full-depth pavement reconstruction and additional utility work. The addition of the utility work includes water and wastewater lines to current areas that do not receive City utility services. In July 2024, the City Council approved the first amendment to provide funding to finish the project's design.

In December 2024, the decision was made to acquire ultimate Right of Way for the Ryan Road widening project in anticipation for future needs.

Submitted By:
Jessica Williams, MPA, CPFO
Chief Financial Officer

Department Contact
Sheldon Gatewood
Construction Project Manager

OUR CORE VALUES

Inclusion • Collaboration • Quality Service • Strategic Focus • Fiscal Responsibility



MEMORANDUM

DATE: May 19, 2025
TO: Members of the Public Utilities Board
FROM: Jessica Williams, Chief Financial Officer & J. J. Tips, Solid Waste Operations
Manager – HCC & Weigh Station
SUBJECT: Purchase and Installation of A SK240 Styrofoam Densifier

On July 19, 2022, the Denton City Council adopted the City of Denton's Comprehensive Solid Waste Management Strategy to guide the City's future solid waste/materials management system and to develop infrastructure, programs, and policies necessary to manage the diversion of materials for ultimate disposal. As a part of this strategy, styrofoam was identified as a major contaminant in our recycling stream. While styrofoam is recyclable, it is not a programmatic material for our recycling partner, Pratt Industries, as it clogs their sorting machines.

At the beginning of 2024, the City of Denton was awarded a \$70,850 grant from the North Central Texas Council of Governments to purchase a styrofoam densifier. The densifier will not only give the citizens an opportunity to recycle their packing materials, but it will also keep this material out of the landfill, extending its life. Styrofoam will still not be accepted in recycling carts or dumpsters. Customers will be required to deliver the material to the drop-off location at the Home Chemical Collections building at 1527 South Mayhill Road.

Request for Proposals was sent to 121 prospective suppliers, including six (6) Denton firms. In addition, specifications were placed on the City's procurement website for prospective suppliers to download and advertised in the local newspaper. Two (2) proposals were received, with one (1) meeting specifications. References were checked, and proposals were evaluated based upon published criteria including schedule, compliance with specifications, probable performance, and price. Best and Final Offers (BAFO) were requested from the top firm. Based upon this evaluation, Runi Recycling Machinery Inc. was ranked the highest and determined to be the best value for the City.

NIGP Code Used for Solicitation:	545-Machinery & Hardware, Industrial
Notifications sent for Solicitation sent in IonWave:	121
Number of Suppliers that viewed Solicitation in IonWave:	22
HUB-Historically Underutilized Business Invitations sent out:	9
SBE-Small Business Enterprise Invitations sent out:	53
Responses from Solicitation:	2
Responses Meeting Specifications:	1

OUR CORE VALUES

Inclusion • Collaboration • Quality Service • Strategic Focus • Fiscal Responsibility

Submitted By:

Jessica Williams, MPA, CPFO

Chief Financial Officer

Department Contact

J. J. Tips, Solid Waste Operations

Manager – HCC & Weigh Station

Future Public Utilities Board Agenda Items

Note: This is a working draft of pending PUB items and is subject to change without notice.

Meeting Date	Item	Dept
May 19, 2025	Denton Renewable Resource Plan Update	DME
June 9, 2025		
June 23, 2025	Financial Update	Finance
July 14, 2025	Budget Workshop	Finance
July 28, 2025	PUB to Consider recommending Utility Rates & Budget to Council	Finance
August 11, 2025		
August 25, 2025		
September 15, 2025		
September 29, 2025		
October 13, 2025		
October 27, 2025		
November 17, 2025		
December 15, 2025		

Codes: Work Session WS, Consent Agenda CA, Individual Consideration IC

PUBLIC UTILITIES BOARD - NEW BUSINESS ACTION ITEMS

	DATE REQUESTED	REQUESTOR	ITEM	DEPT	STATUS
1.					
2.					



City of Denton

City Hall
215 E. McKinney St.
Denton, Texas 76201
www.cityofdenton.com

Legislation Text

File #: PUB24-208, **Version:** 1

AGENDA CAPTION

Receive a report, hold a discussion, and give staff direction regarding updates to the Denton Renewable Resource Plan.



City of Denton

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

AGENDA INFORMATION SHEET

DEPARTMENT: Denton Municipal Electric

GM: Antonio Puente, Jr.

DATE: May 19, 2025

SUBJECT

Receive a report, hold a discussion, and give staff direction regarding updates to the Denton Renewable Resource Plan.

BACKGROUND

On February 6, 2018, the City Council approved the Denton Renewable Resource Plan (DRRP) through Resolution No. 18-085. The intent of this plan was “to meet the future needs of its electric customers with 100% renewable energy” and it rescinded the previous plan (the “Renewable Denton Plan”), which was approved by Resolution No. R2016-014.

In 2017, the City hired Enterprise Risk Consulting (“ERC”) to both review the Renewable Denton Plan and develop a new plan with a 100% renewable energy goal. ERC developed the DRRP, which would allow the City to meet the goal of as early as either 2020 or 2024. To achieve the goal by 2020 (“Gradual Adoption Path”), this path called for the purchase of short-term (1-4 years) renewable resources along with a variety of renewable resources, demand-side management programs, and another larger resource to replace the Whitetail resource that was scheduled to expire in December 2023. To achieve the goal by 2024 (“Early Adoption Path”), this path called for the City to accelerate the acquisition of wind PPAs, recognized that there may be excess power supply over the next few years, and the City would need to manage fixed-cost risk (the risk of market prices falling) while have excess power. Additionally, the Early Adoption Plan also recognized the possibility of including the Whitetail resource to accelerate meeting the goal by 2020. In this latter option, this called for recognition of 30 MWs of Renewable Energy Credits (RECs) that were provided through the PPA with no corresponding energy. ERC stated that this “could cause an audit risk as to the validity of its renewable status.” And, in a final version addendum to the plan, the City’s Public Utilities Board and City Council opted to not consider the Whitetail resource as a renewable resource, which only applied to the 30 MWs of RECs with no corresponding energy.

On January 28, 2020, the City Council approved Resolution No. 20-249, which allowed the City to recognize all the RECs associated with the Whitetail resources and reversed the prior directive from 2018. In a letter from ERC dated December 13, 2019, they acknowledge that the Whitetail resource RECs could be considered renewable energy. The basis for this treatment is rooted in the State of Texas’ Renewable Energy Credit (REC) Trading Program, which defines a REC as “one MWh of renewable energy that is physically metered and verified in Texas” and is either a new facility, a small producer facility, or a repowered facility. A facility is defined as solar, wind, geothermal, hydroelectric, wave/tidal or biomass.

Based on this latest direction from the City Council, the City reached its 100% renewable energy goal in calendar year 2021 when it counted 262,800 MWhs of RECs from the Whitetail resource. This continued for calendar years 2022 and 2023 along with additional RECs purchased in the wholesale market. Finally, in calendar year 2024, the first year without the Whitetail resource, the City purchased 400,530 MWhs of RECs to meet its goal. Below is a table reflecting this history:

Calendar Year	Load Served (MWh)	Renewable Energy (MWh)	RECs w/o Energy (MWh)	Total Renewable (MWh)	Renewable %
2021	1,593,440	1,343,789	262,800	1,606,589	101%
2022	1,750,135	1,396,335	353,800	1,750,135	100%
2023	1,749,737	1,480,144	269,593	1,749,737	100%
2024	1,776,322	1,375,792	400,530	1,776,322	100%

In terms of cost, the City had already paid for the 30 MW of Whitetail resource RECs in the negotiated PPA price so there was no additional cost for counting these RECs. If replacement renewable energy would have been required, then the City estimated an additional \$5.1 million in cost would have been needed for the remaining 3 years of the contract. For calendar year 2024, the purchase of RECs in the wholesale market averaged \$1.50 or approximately \$600,000. The replacement renewable energy would have cost in excess of \$2.5 million. Staff would note that since the accounting of the renewable goal is after the close of the calendar year and replacement renewable energy would have been purchased during the year, a gap between the load served and the renewable energy would have still be likely and therefore necessitating the purchase of RECs in the wholesale market or alternatively, reported that the goal was not met.

Finally, regulatory and market changes continue to pose challenges in achieving the 100% renewable goal. These changes include State legislation that could require the firming of renewable resources, place caps on new generation entrants into the market, and place dispatchable energy requirements on load serving entities like DME. The changes may not only limit the availability of renewable energy but could also mean higher energy prices in the future if there is not sufficient supply to meet demand. At the Federal level, tax credits which have historically been large incentives to the development of renewal energy may be up for termination and tariffs on critical components and equipment may further pose challenges to already strained supply chains. Impacts to Federal Agencies like the Department of Energy and Environmental Protection Agency may also create additional challenges to new renewable energy developments.

In conclusion, staff has prepared a presentation in which we propose the creation of a City Renewable Energy Policy to address the changing regulatory and market environment while maintaining a 100% renewable energy goal, and the development of an Integrated Resource Plan to address the ongoing generation needs of the utility to meet our stated mission to provide sustainable, safe, reliable and affordable electric power to our community.

EXHIBITS

1. Agenda Information Sheet
2. Resolution No. 18-085
3. Resolution No. 20-249
4. Guide to Making Claims About Your Solar Power Use
5. Letter from Energy Risk Consulting
6. Presentation

Respectfully submitted:
Antonio Puente, Jr.
940-349-8487
DME General Manager

RESOLUTION NO. 18-085

A RESOLUTION OF THE CITY OF DENTON ADOPTING THE “RENEWABLE RESOURCE PLAN” TO MEET THE FUTURE NEEDS OF ITS ELECTRIC CUSTOMERS WITH 100% RENEWABLE ENERGY AND RESCINDING RESOLUTION NO. R2016-014 (THE “RENEWABLE DENTON PLAN”).

WHEREAS, the City Council would like to meet the future energy needs of its electric customers with 100% renewable energy; and

WHEREAS, in 2017 the City hired Enterprise Risk Consulting (“ERC”) to both review the Renewable Denton Plan (approved by the City Council under Resolution No. R2016-014) and develop a plan to meet the energy needs of its electric customers through 100% renewable energy; and

WHEREAS, ERC developed the Renewable Resource Plan which would allow the City to meet the goal of providing its electric customers with 100% renewable energy as early as either 2020 or 2024; and

WHEREAS, ERC presented the Renewable Resource Plan to the City’s Public Utility Board (“PUB”) on January 22, 2018; and

WHEREAS, the PUB voted 6-0 to recommend that the City’s Council approve the Renewable Resource Plan with the goal of meeting the future energy needs of the City’s electric customers with 100% renewable energy as early as 2020.

NOW, THEREFORE, THE COUNCIL OF THE CITY OF DENTON HEREBY RESOLVES:

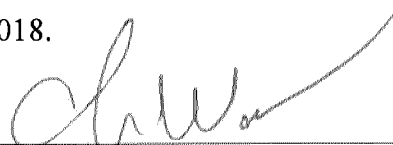
SECTION 1. The recitals set forth in the preamble of this Resolution are incorporated into and is a part of this Resolution for all purposes.

SECTION 2. The City Council adopts this Resolution approving the Renewable Resource Plan to achieve the goal of providing the City’s electric customers with 100% renewable energy as early as 2020 and in a manner that ensures electric reliability and competitive electric rates. The Renewable Resource Plan is attached as Exhibit “A” and is incorporated into and is a part of this Resolution for all purposes.

SECTION 3. The City Council rescinds Resolution R2016-014 (the “Renewable Denton Plan”).

SECTION 4. This Resolution shall take effect immediately after its adoption.

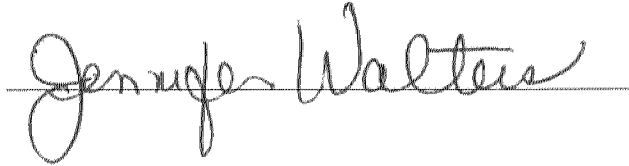
PASSED AND APPROVED on February 6, 2018.



CHRIS WATTS, MAYOR

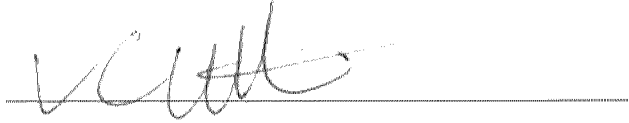
ATTEST:

JENNIFER WALTERS, CITY SECRETARY

A handwritten signature in cursive script, reading "Jennifer Walters", written over a horizontal line.

APPROVED AS TO LEGAL FORM:

AARON LEAL, CITY ATTORNEY

A handwritten signature in cursive script, reading "Aaron Leal", written over a horizontal line.

Renewable Resource Plan for the City of Denton, Texas

Neil McAndrews
Larry Lawrence

Enterprise Risk Consulting, LLC

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Executive Summary

Introduction & Goals of the Resource Plan

This resource plan incorporates the addition of the Denton Energy Center (“DEC”) to Denton’s power supply portfolio, and focuses on analysis and recommendations for meeting Denton’s targets for completing its power supply portfolio through the acquisition of a diversified set of power purchase agreements from renewable energy resource providers.

The focus of this plan is on the examination of the effects and risks of various locations of renewable resources, of how the various types of renewable resource production profiles blend with existing portfolio supply assets to achieve as much diversification as possible (to reduce cost and supply variability), and of a variety of pricing factors including least-cost resources and manageable transmission congestion exposures.

This resource plan also focuses on the strategic design and tactical daily management requirements to efficiently and economically operate a power supply portfolio comprised of renewable resources. Because of the intermittent nature of energy production from renewable resources, and the much wider geographic footprint of power generation resources than is usual for an electric utility, a daily supply portfolio and risk management process involving production forecasting, supply balancing transactions, and seasonal, monthly and daily congestion (basis) hedging becomes paramount to the successful operation of a power supply portfolio of renewable resources.

Planning Goals

The main goal of the resource plan is to identify and recommend least-cost renewable resources so that Denton can meet its resource goal of 70% to 100% renewable energy.

The goal can be broken down into five objectives: least-cost supplies, uncertainty (risk) reduction, sustainability (environmental and production), competitiveness, and the efficient management of a renewable resource power supply portfolio.

Successfully achieving Denton’s renewable resource goals involves several critical strategic planning and tactical operational elements:

1. Location and production profile of the renewable resource(s)
2. Managing the supply portfolio by completing an industry best practice opposition hedge, including:
 - Scheduling of the resource output,
 - Avoiding double purchasing (i.e., “monetizing” the renewable resource by selling it into the market while simultaneously purchasing energy to serve load), and
 - Managing basis (congestion) risk

An important goal and guiding principle for this resource plan is that the design and management of a renewable resource supply portfolio must take into account the structure and conceptual design of the ERCOT market. This resource plan is based on managing Denton's renewable resource power supply portfolio in concert with the intent and design of the ERCOT market, through the use of industry best practice risk management techniques and ERCOT-specific market instruments.

ERCOT is an "energy-only" market. Load in ERCOT does not need to acquire and meet a capacity requirement to ensure that adequate resources on the grid are available so that the demand for electricity can be met at all times. The ERCOT market design requires that load only needs to acquire adequate energy schedules, and most of the supply risk is then neutralized.

In the ERCOT energy-only market, firming is not an explicit requirement. ERCOT automatically "firms" inadequate supplies to meet all load requirements – the important risk management focus is on managing the "firming" in a least-cost manner, both in terms of energy balancing purchases/sales and managing congestion price risk.

Evaluation Factors

The evaluation factors for this resource plan are grouped around the two of the resource plan objectives: 1) least-cost and 2) reducing uncertainty (risk).

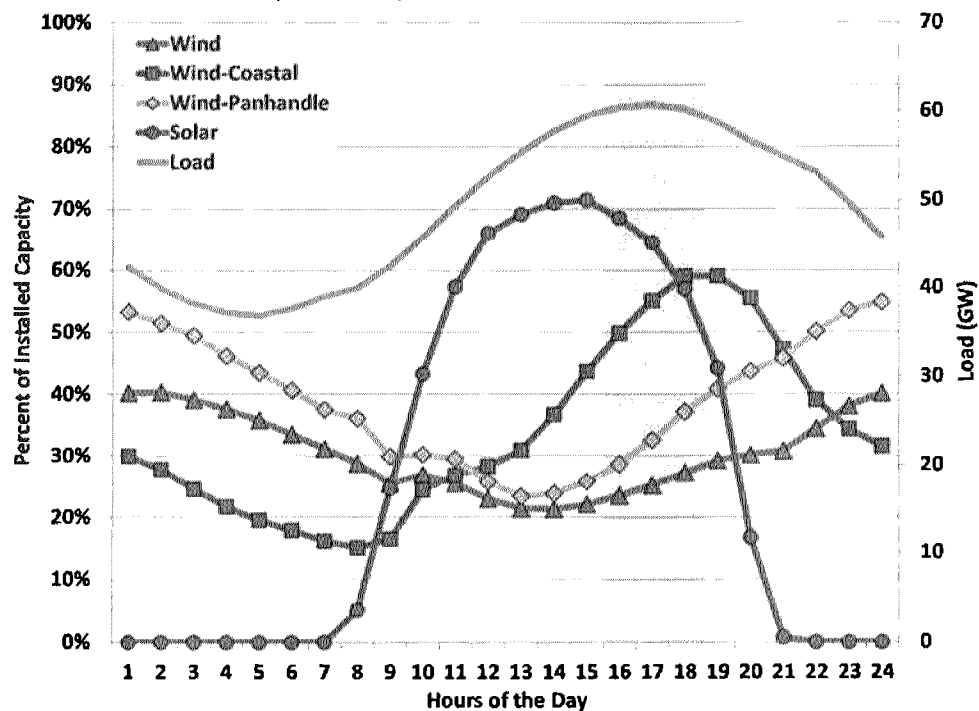
Regarding goal 2) reducing uncertainty (risk), the primary focus from the perspective of evaluation factors for various renewable resources is on best-fit factors for Denton's energy supply portfolio. These best-fit factors include the production profile match relative to Denton's daily and seasonal load profiles, balancing the need for selling excess supply and purchasing shortages, the quality of each resource's production, access to transmission interconnections, and minimizing transmission issues with a particular focus on avoiding or reducing congestion exposure.

The recommendations in this resource plan will range in quantity based on the uncertainty of counting Whitetail as a renewable resource. This leaves Denton needing between 9% and 26% in additional renewable resources to meet its minimum goal of 70% renewable, or between 39% and 56% to meet the target of 100% renewable.

Production versus Load Profiles

Figure ES-1 shows ERCOT data with representative production and load profiles for a typical summer day. Represented are production profiles for "Wind", which would be West Texas wind, plus Coastal wind, Panhandle wind, and Solar. These are plotted against a typical summer load profile for a load-serving entity with a substantial amount of residential and commercial customers.

Figure ES-1- ERCOT Summer Renewable Production Profiles (source: 2016 State of the Market Report for the ERCOT Electricity Markets)



Takeaways on daily production profiles:

- West Texas wind offers the worst match against load. The production increases during less valuable, lower priced hours for energy.
- Solar and Coastal wind offer the best (on-peak) match against load, and can displace market purchases of more expensive on-peak energy.
- Panhandle wind is somewhat superior to West Texas wind.
- Coastal wind production is at a low point during lower priced hours (i.e., it offers the benefit of producing less when production is less valuable).
- Coastal wind and Solar have traditionally commanded a premium in terms of market pricing, but with overall prices for renewable resources falling, the cost premiums versus other renewable resources have compressed, making the assets more compelling:
 - Current low prices are attractive
 - Their production profiles are a better fit for Denton's load, and are a better complement to Denton's existing renewable resources such as Santa Rita (West Texas wind), as opposed to adding more West Texas wind to Denton's supply portfolio, or adding Panhandle wind.

Seasonal variations in both production and load profiles will require active portfolio management to balance Denton's supply portfolio. Daily management will involve forecasting renewable resource production and then transacting in the ERCOT DAM to sell power during

hours with excess supply, and purchasing power during hours with a supply shortage. The optimal balance between excess and shortage is one of Denton's decision criteria for determining renewable resource acquisitions.

During a typical summer day, wind output is typically low, while solar output is high (but not necessarily at its highest during a calendar year), and the DEC has a higher likelihood of being dispatched. Assuming a portfolio with a blend of wind and solar renewable resources, seasonally low wind output will necessitate market purchases during off-peak hours. The combination of solar production and DEC production could cause an excess of supply during certain on-peak hours and would necessitate market sales.

During a typical spring day, wind output is typically at its highest while solar output is modest, and the DEC is unlikely to be dispatched. Assuming a portfolio with a blend of wind and solar renewable resources, seasonally high wind output would necessitate market sales during off-peak hours. The combination of only modest solar production and lack of DEC production could cause a shortage of supply during certain on-peak hours and would necessitate market purchases for supply/demand balancing.

An important consideration in evaluating renewable resources is to verify and correct production output claims of renewable resource developers. Both solar and wind developers typically include a bias to expected performance. Producers typically over-estimate the efficiency of their installations to attract investors. To adjust for these biases, independent data from the National Renewable Energy Laboratory ("NREL") and ERCOT was used in this resource plan. NREL tools allow verification by specifying what type of PV cell is involved, along with the tilt of the PV cells mounts, including fixed, single or dual axis mounting. These tools can be used to produce hourly production curves for various seasons and at various locations across the state. For wind resources, ERCOT has an extensive database of wind production profiles across the state.

The reduction (correction) to developers' claims for wind resources are on the order of 5% to 8%. The reduction in actual performance of solar production is 15% or more depending on the equipment type and installation design.

Location Considerations

In terms of location preferences for wind and solar locations, the following conclusions were reached.

More consistent output and a higher capacity factor supports the choice of Coastal wind.

Advantages of Coastal wind:

- Less with ERCOT System wind, producing higher output during the summer afternoons.
- Lower congestion risk with lower output during the spring and fall when high West Texas Winds increase congestion.
- More reliable for forecasting because it depends on the land, ocean effect.
- Coastal wind resources in the ERCOT South Zone are away from resources built in West Texas, and they are closer to potential retirements of generation in East and South Texas.

Disadvantages of Coastal wind:

- Coastal wind PPAs usually command a cost premium compared to other wind resources.
- Coastal environmental considerations (e.g. hurricanes, sensitive habitat).
- Subject to build restrictions (e.g., near U.S. Air Bases).
- A great deal of additional load being added in the area.

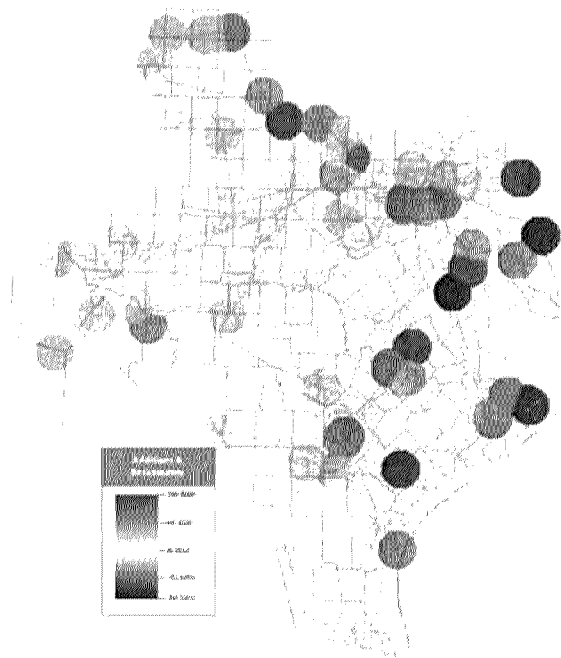
Despite these disadvantages, the advantages of Coastal wind, especially regarding the fit to Denton's supply portfolio, outweigh the disadvantages.

Solar irradiance (the power per unit area received from the Sun) as a function of location is a primary evaluation factor for solar renewable resources. Solar irradiance is impacted by latitude, potential for cloud cover, and temperature factors. An optimal location representing a balance of sufficient irradiance, limited cloud cover, and manageable congestion would be close to Midland, Texas.

An additional consideration for evaluating optimal resource locations is the projection of generation additions and retirements in ERCOT. With more renewable resources expected to be developed, and with conventional resources such as coal-fired generation expected to experience increased retirements, congestion issues may be exacerbated.

ERCOT projects an increase in generation in the West and a decrease in generation in the East as can be seen in Figure ES-2. Yellow to orange circles indicate generation additions, while blue circles indicate projected retirements. This will create a decisive West to East flow of production.

Figure ES-2



In considering resource additions, Coastal wind is not facing heavy competition. Adding resource capacity in an area with retiring conventional generation, and closer to load than the majority of renewable resource additions, presents several advantages. Optimal site selection is more limited for solar however, due to the need to maximize irradiance while minimizing rainfall and cloud cover.

Lastly, another location consideration is the access to transmission. Pricing points cluster at wind resources near big substations and 345 kv interconnects. Ideally, the better locations are in between the pricing clusters and urban areas, east of the clusters in the western region that are dominated by wind resources, and along the coast closer to Corpus Christi than Brownsville.

Congestion Hedging Considerations

Congestion hedging is an important component of completing the opposition hedge, and of carrying out an efficient internal portfolio management operation for renewable resources, as discussed previously. Congestion hedging is like insurance - it is important to insure exposures in a complete manner.

ERC's extensive experience with Congestion Revenue Rights ("CRR") management and hedging for several clients indicates that not only is the net cost of congestion hedging acceptable, but CRRs often pay for themselves when exposure risk increases.

The use of CRRs should not be avoided because of possible curtailments or derations. In fact, the principal hedging method in the market to limit curtailment risk is the purchase of a CRR. A CRR will make the owner indifferent to curtailment because it will fix the price between two points.

Regulatory Considerations

The potential for changes in ERCOT is another factor in the resource plan analysis. ERCOT continually changes the way the system operates.

An example is the proposal to change the market design to incorporate marginal line losses. This will add costs to resources that are farther from load zones. A change in the ERCOT market design to incorporate costs associated with marginal line losses would favor Coastal and North Texas wind resources because they would be closer to a load zone. These two wind resources would reduce the potential risk from the adoption of marginal losses, and CRRs would still be available to mitigate the risk to some degree.

Renewable Resource Portfolio Modeling

The following is a list of variables considered in qualitative and quantitative modeling:

- Natural gas prices
- Power prices
- ERCOT Hub North heat rates
- DEC heat rate and estimate of variable O&M
- Denton load growth
- Renewable resource production profiles
- Renewable Prices
- Basis costs (CRRs and locational basis floating price exposure)
- CRR prices, Point to Point prices
- Regulation changes (e.g., incorporation of Marginal Losses, Local Reserves, potential federal Solar tariff)
- PTC and ITC effects on supply and prices (curtailment frequency)
- Coal and natural gas plant retirements
- Renewable saturation in certain regions
- Lubbock ERCOT integration
- Proposed new resources

An important aspect of modeling portfolio costs and developing a portfolio mix that meets the twin resource plan goals of least-cost and uncertainty (risk) reduction is to achieve as much diversification as possible in the supply portfolio. One important measure of diversification is the correlation of various renewable resource production profiles. The goal is to assemble a

portfolio with a mix of less correlated resources so that the overall portfolio production is more consistent. Combining renewable resources with lower correlations reduces risk and improves overall supply portfolio correlation with Denton's load, and it improves forecast reliability.

An additional diversification factor is the location of resources especially in regard to congestion exposure. Diversifying the supply portfolio reduces overall congestion risk exposure and also contributes to more consistent economic performance.

The portfolio modeling for this resource plan was based on a blend of correlation analysis and scenario valuation. Various mixes of renewable resource quantities, constrained by the results of the correlation analysis, were valued according to the ranges of natural gas and power price projections, along with related DEC dispatch scenarios, with the objectives of finding the least-cost portfolios with the lowest cost variability.

The production profiles of various renewable resource were screened to determine how the profiles performed against historical prices. This involved calculating the balancing costs for each profile to determine the net effective cost of each resource type. Balancing costs are a blend of spot market purchases of market power when renewable production fell short of load requirements, or DEC production when the DEC was a lower priced alternative to DAM purchases, and spot market sales of excess power when renewable production exceeded load requirements.

Prospective renewable resources were also included, along with West Texas wind, in a portfolio optimization model based on Modern Portfolio Theory. Quantifying the optimal resource mix is accomplished by measuring the returns, and the variance and covariance of the individual resources, over an appropriate period of time.

This is a widely accepted approach to portfolio design following the Modern Portfolio Theory ("MPT") developed by Harry Markowitz (who won a Nobel Prize for developing MPT). MPT is a theory of optimal diversification; based on historical data and measures of asset returns, risk and correlations, MPT selects the optimal diversification portfolio mix.

Portfolio optimization was used to measure the optimum percentage weighting of prospective assets in a portfolio. The three assets considered for the portfolio were a solar asset, a coastal wind asset, and West Texas wind. The portfolio optimization model selected additional Solar and Coastal type wind to be added to the portfolio. It does not select other types of additional wind into the portfolio.

Reporting & Summary Analysis

The DEC will play a role in Denton's renewable resource portfolio as a cost hedge during certain super high-priced hours.

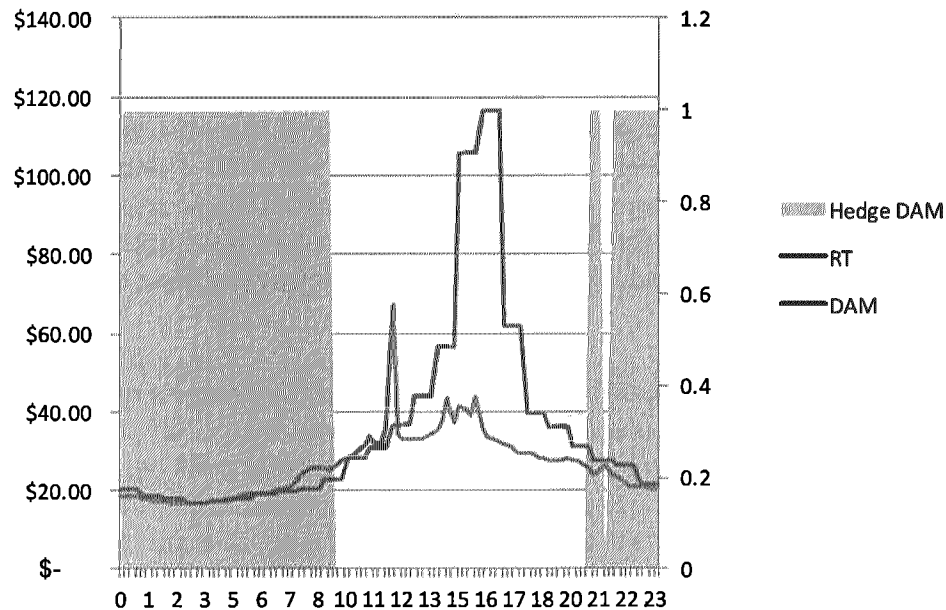
As discussed previously, the greatest challenge in managing a power supply portfolio comprised of renewable energy resources is balancing the supply portfolio around the intermittent production of renewable power plants. Balancing the supply portfolio is often referred to as “firming” inadequate supplies. As explained previously, in the ERCOT energy-only market, firming is not an explicit requirement. ERCOT automatically “firms” inadequate supplies to meet all load requirements – the important focus is on managing the “firming” in a least-cost manner, both in terms of energy balancing purchases/sales and managing congestion price risk.

The results of the quantitative modeling employed for this resource plan show that the DEC should not be the sole resource used to “firm” a renewable resource portfolio. Using the DEC as a sole hedge is not the least cost and lowest risk option for over 75% of the hours in a year. The low heat rate associated with most of the hours in the DAM will allow Denton to firm intermittent renewable production with spot market purchases at a lower cost than the DEC while avoiding congestion and price risk.

An example of when the DEC would be dispatched rather than using DAM purchases to hedge a supply shortfall is in Figure ES-3. During a peak demand month such as August, the DEC might be dispatched about half of the time (the periods of time without the green shading). But in this example, even in a month like August, using the DEC as a hedge is likely not to be the least cost and lowest risk alternative for approximately 50% of the time. Figure ES-3 also shows that during DAM purchase hours (the hours shaded in green) the difference between the DAM fully-hedged price and the variable RT price is negligible (average of \$0.44). Participating in the RT would be a large disadvantage to Denton because of higher risk but little-to-no benefits.

Figure ES-3

August Day Example



Advantages and Disadvantages of the DEC

Advantages:

- The DEC is a heat rate hedge (note that it is not an energy cost hedge unless the price of natural gas is fixed)
- It will reduce cost risk for Denton because at certain times it will be dispatched during price spikes.
- It also provides a long-term hedge benefit in the event of accelerated retirement of conventional fossil fuel generation resources in ERCOT that may elevate heat rates.

Disadvantages:

- As a higher heat rate generator, it offers no pricing power and offers no competitive advantage.
- ERCOT manages the system so that heat rates don't vary much
- Its value to Denton requires that natural gas prices go up substantially in the future.

Additional Alternatives for Extracting Value from the DEC

- Based on the last bullet point under disadvantages, Denton should be prepared to sell DEC output forward when or if there is a spike in natural gas prices. Natural gas prices

tend to revert to the long-term mean after price spikes, so that increased value due to a price spike may be transitory and should be taken advantage of.

- The DEC can be used to sell firming services to other organizations looking to add renewable resources. This can mean that the DEC is not used as a producing generator, but as a contingent financial hedge (i.e., the actual dispatch and fuel use may be unchanged but the revenue from the resource will be increased). This is because at the time Denton might be obligated to provide firming energy, market purchases are more likely than the DEC to be the least cost alternative.
- As previously discussed, because of the mismatch in seasonal production profiles of renewable resources versus Denton's load profile, there are likely to be periods of time when Denton will have excess supplies (e.g., in the Spring). It may be beneficial to sell excess renewable power during these periods using the DEC to firm the transaction.

Takeaway: The DEC will serve a role as a supply cost hedge to firm Denton's renewable resource portfolio, but based on the financial evaluation in this resource plan, the majority of firming the supply portfolio will be more economically efficient through purchases in the DAM. Denton should look for opportunities to sell a portion of the DEC forward during natural gas or heat rate spikes, and for opportunities to sell firming services or to firm sales of excess renewable supplies.

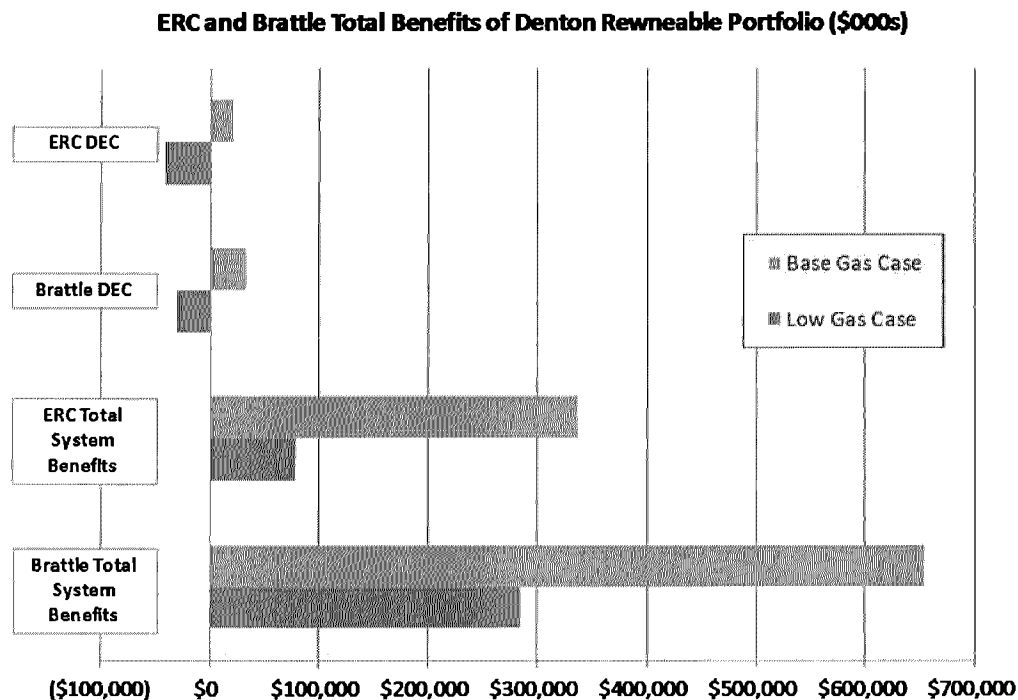
Benefits of the Denton Renewable Portfolio ("DRP")

Figure ES-4 shows the projected financial benefits of the DRP based on the range of price projections used in the analysis for this resource plan. This is based on a portfolio where the 70% goal reached and maintained until 2023, and then additional Wind and Solar are purchased to reach 100%. Every year enough renewables are purchased to keep up with load growth.

The chart projects the financial performance of Denton's supply portfolio based on a range of future prices. Positive benefits would result through avoided additional costs if prices rise in the future. Negative values would result from low price outcomes.

The main takeaway is that the Total System Benefits are completely dependent on the price of natural gas. If gas prices rise, power prices will rise as a result, and over time Denton's fixed-price renewable resource supply portfolio would result in avoided costs from the higher power prices. That is the measure for benefits for both Brattle and ERC evaluations. But if gas prices do not rise, power prices will stay around the current prices and as a result, Denton's fixed-price renewable resources will not avoid higher market prices and fewer benefits would result. This is the biggest uncertainty in the entire evaluation. This difference between high natural gas prices and lower natural gas prices is a change in total benefits of approximately \$575 million in 2018 dollars.

Figure ES-4



Considerations for Selecting Renewable Resources

The analysis and evaluation for this resource plan assumes that Gibbon's Creek will be decommissioned by 2018.

Denton can reach its 70% renewable goal with additional renewable resources from the current RFP submissions. The additional energy to reach the goal ranges from approximately 9% (140,000 MWh) of its load to 27% (400,000 MWh) of its load. This range depends on whether or not the Whitetail resource is designated as a renewable resource. The current energy supply portfolio falls far short of a balanced and diversified portfolio because solar is only 30 MWs. The portfolio is also unbalanced because a large amount of the renewable supply is a low on-peak West Texas wind profile (Santa Rita). Adding the Bluebell solar (30 MW) resource will still produce very little summer on-peak production. The DEC is a heat-rate resource and therefore does not contribute an energy hedge during peak hours (i.e., it is a heat rate hedge only until the price of natural gas is fixed).

This leaves Denton with an on-peak energy supply gap. A minimum of 90 to 120 MWs of solar would help balance the portfolio. To reach the 70% goal at a minimum, another 70 MWs of Solar should be considered as an addition to the portfolio. If Whitetail is not counted, an addition of another 120 MWs of Solar should be considered, with wind representing the balance of energy needed to reach the 70% level.

There is a series of known risks that could drive Denton to accelerate reaching the 100% goal, or decelerate reaching the 100% goal past 2024. A particular risk in the acquisition plan is that there is a possibility of a federal solar tariff. It is not clear how the tariff will affect prices or the term of the additional costs, but preliminary estimates are that it could increase average costs of solar from the current \$25/MWh up to \$40/MWh. Under the current price environment \$40/MWh is not competitive with wind resources.

Alternatives to avoiding the solar tariff:

- Acquire more Coastal wind resources that feature the characteristic summer peak production profile. This is the closest substitute for solar among the renewable resources.
- Utility-scale wind resources with a storage component, now or in the future. Altering the profile of West Texas wind into a more on-peak production profile will improve hedge effectiveness.
- Purchase solar as the tariff prices and supplies readjust to market conditions or the tariff is no longer an issue. Denton can wait and test the market prices after reaching the 70% level. Waiting on solar would decelerate reaching the 100% goal.

Potential purchase accelerators:

- Announced coal retirements totaling 4.2 GW of generation capacity from Vistra Energy (Monticello, Sandow, and Big Brown) may increase power prices during the next few months. This is likely to have much less impact on the price of wind versus the price of solar. This could accelerate the amount of wind purchased by Denton, especially Coastal wind as a substitute for solar.
- PTC reduction lowers the subsidy to wind producers. The supply of wind may be at its maximum now because of the rush to beat the expiration date of the PTC. Because the supply of available PPAs is highest now, this could be an inducement to accelerate the acquisition of wind in a buyer's market.
- The potential for rising natural gas prices. The low number of drilling rigs, increasing demand for exports, and the large substitution of the natural gas for coal in the electric power sector could drive price increases. In the past, when steady increases in demand for natural gas have met with a lower number of drilling rigs over a several-year period, natural gas prices have increased dramatically (e.g., the early 2000s saw prices double and then triple over a few-year period).

The Path to 100% Renewable Resources

The evaluation in this resource plan indicates that Denton's 100% renewable goal ("RE 100") is achievable much earlier than 2035. There is no financial penalty or premium to moving from a 70% renewable resource goal ("RE 70") to a 100% renewable goal.

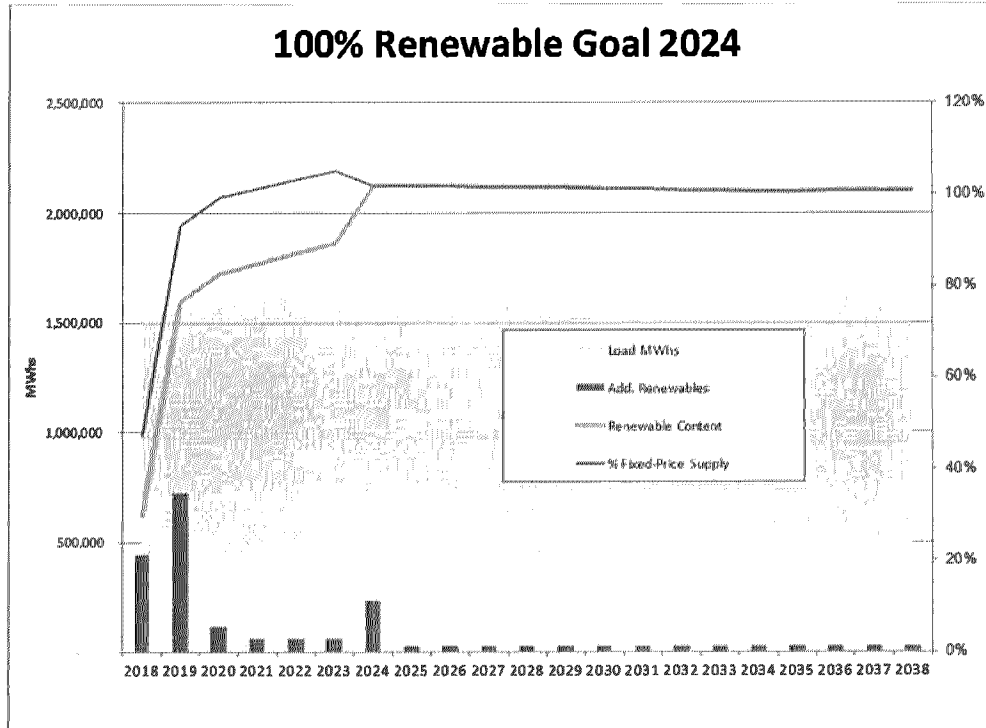
Gradual Adoption Path

Denton has several paths to choose from to reach its RE 100 goal. But the first Denton Renewable Portfolio (DRP) goal is RE 70 by the end of 2019.

The RE 70 level can be achieved by executing PPAs for low-priced supplies that have been offered in the current Renewable RFP (Oct 4, 2017). Figure ES-5 shows a possible outcome to achieve this 70% goal, and eventually the 100% goal by 2024. The chart includes Denton's load, seen as a gradual increase in the light blue shaded area, additional renewable purchases labeled "Add. Renewable" and depicted by the red vertical bars, and lines showing the progression of the proportion of renewable resources and of the amount of supply with fixed prices.

In the chart, the NextERA Whitetail supply is not counted as a renewable source because it is not a physical renewable source, but uses Renewable Energy Credits (RECs) to claim renewable status. An alternative scenario is included later in this discussion that counts the NextERA Whitetail supply as a renewable energy supply. In either case, additional physical renewable supplies are required. Depending on the location, price, congestion environment, and the production profile of the resource, more supply may be added above the additional 47% of load in energy purchases that are needed to achieve the RE 70% goal by 2019.

Figure ES-5



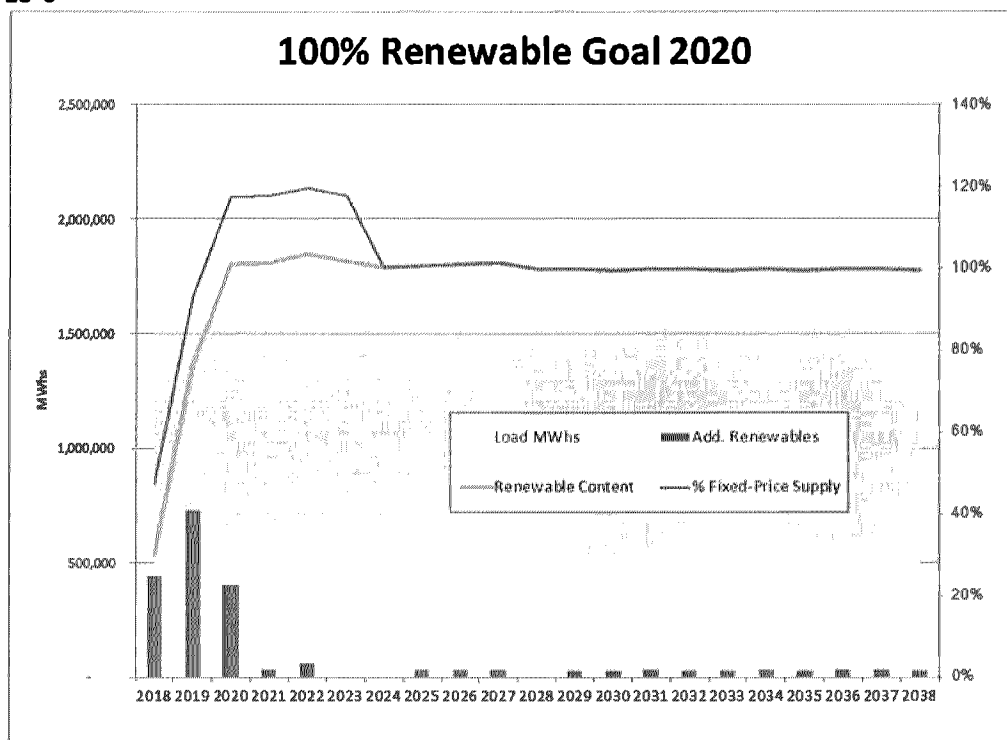
Why possibly purchase more than the 47% needed to meet the RE 70 goal? The amount of additional supply is a function of the uncertainty of renewable production. The amount of wind production can easily vary by 15% on an annual basis. If Denton wants to make sure that it has at least 70% *at a minimum in every year*, it may need to buy additional supplies above the goal, taking into account the annual production variability.

Another part of the acquisition path depicted in Figure ES-6 is the assumption that Denton will purchase shorter term (1 to 4-year duration) renewable resources to adjust the RE goal to reach 100% and to constantly maintain that level. Constantly maintaining a target level can be done with a variety of renewable resources and demand-side management programs. Besides the new acquisitions that are needed by next year to reach the RE 70 goal, another larger supply is the replacement of the Whitetail NextERA supply in 2024 because the contract ends in December of 2023.

Early Adoption Path

A second path for achieving the RE 100 goal is earlier adoption. Denton would accelerate the wind PPAs acquisition to produce the RE 100% goal four years earlier, in 2020 rather than in 2024, as shown in Figure ES-6.

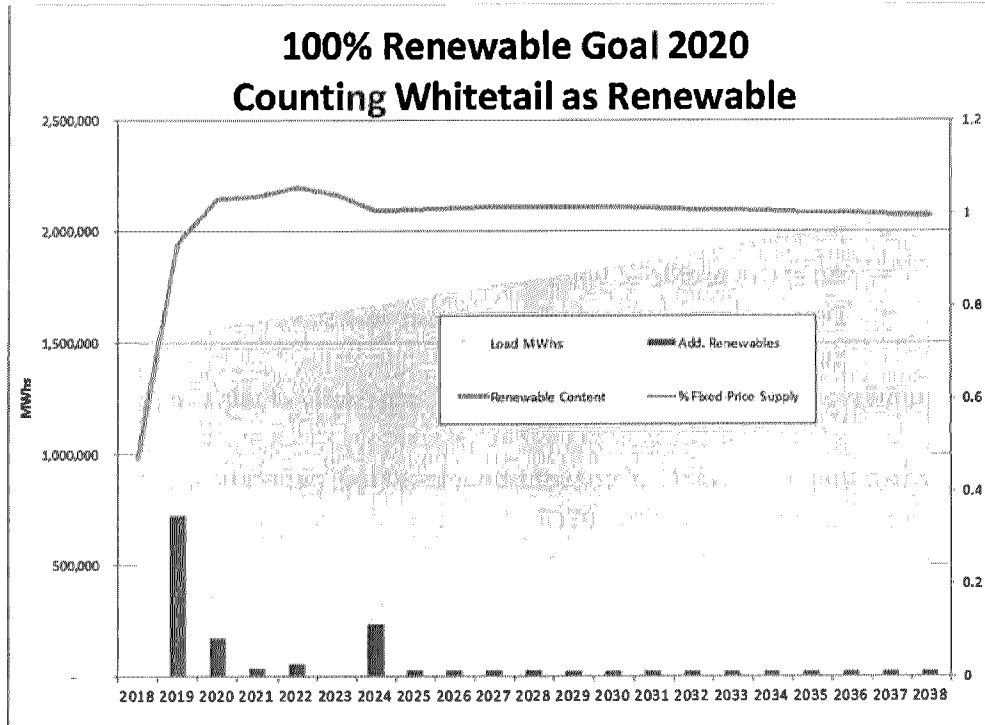
Figure ES-6



This accelerated wind acquisition would result in excess power supply over the next few years due to the Whitetail non-renewable resource, and Denton would have to manage fixed-cost risk (the risk of market prices falling because Denton would have more supply than its load for 4 years). If the Early Adoption path is selected, the excess power supply would be approximately 18% for the years 2020 through 2023. The excess supply would end with the Whitetail contract expiration.

Including the NextERA Whitetail supply in the renewable category will also accelerate the RE 100 goal to 2020. But it also requires replacement of this energy in 2024. This is depicted in Figure ES-7. The principal advantage of this scenario is that it doesn't produce additional fixed-price supply (the 18% excess supply discussed previously). The principal disadvantage with including Whitetail in the supply portfolio is that it could cause an audit risk as to the validity of its renewable status.

Figure ES-7



Summary of Recommendations

To reach its goal of a power supply that is 100% renewable energy, Denton should purchase 200 MWs of solar, preferably in two locations, and 100 MWs of Coastal type wind. Both of these types resources should have low congestion risk. Most of the solar proposals are due to come online by December 31, 2020. Several of the wind proposals will come on line in 2019. The execution of the resource plan is dependent on actual proposals, and terms and conditions from the RFP offers.

An optimal location representing a balance of sufficient irradiance, limited cloud cover, and manageable congestion for would be close to Midland, Texas.

DME needs to hedge both its load with HB North to LZ North CRRs and its resources with Resource Node to HB North CRRs for the upcoming Santa Rita Wind as well as the Blue Bell Solar farm.

Decision Summary

In addition to the recommended amounts, types and locations of renewable resources, Denton will need to make several decisions that will shape the development of its renewable resource supply portfolio.

- Count Whitetail as a renewable resource?
 - If not, is Denton willing to handle the additional fixed-price risk of the Whitetail supply in addition to the fixed-price quantity of renewable resources necessary to meet Denton's goal(s)?
- Will Denton choose to delay solar purchases because of a potential federal solar tariff?
 - If so, potential alternatives include:
 - Purchase additional amounts of Coastal wind as a substitute?
 - Alter the profile of wind resources with storage?
 - Delay solar purchases until the issue is resolved, or solar prices and supplies adjust to the tariff
- Should Denton accelerate renewable purchases, especially of wind resources, because of:
 - increasing retirements of conventional fossil fuel generation capacity?
 - scheduled reduction in the PTC?
 - risk of rising natural gas prices?
- Should Denton move forward the date of the 100% renewable goal?
- Should Denton purchase additional renewable supplies above its target levels because of the annual variance in production amounts?
- Portfolio allocation decisions – there are various allocations between Coastal wind and Solar to meet Denton's goals (e.g., 180 MW of Solar and 150 MW of Coastal to meet a 100% goal, or 120 MW of Solar and 200 MW of Coastal). What is the preferred allocation?

Final Version Addendum

Based on feedback from the City of Denton Public Utilities Board, and the Denton City Council, the following decisions have been made:

- Count Whitetail as a renewable resource? **No**
- Will Denton choose to delay solar purchases because of a potential federal solar tariff? **No**
- Should Denton accelerate renewable purchases? **Yes**
- Should Denton move forward the date of the 100% renewable goal? **Yes**

Other decisions will be finalized in the RFP evaluation process, as they will be a function of the final economic value determined through the evaluation process and final PPA negotiations.

1.0 Introduction

The City of Denton, Texas (“Denton”) engaged Enterprise Risk Consulting, LLC (“ERC”) to provide strategic support by assisting with resource planning, and the design and implementation of a revised long-term power supply portfolio and portfolio management strategy.

This resource plan incorporates the addition of the Denton Energy Center (“DEC”) to Denton’s power supply portfolio, and focuses on analysis and recommendations for meeting Denton’s targets for completing its power supply portfolio through the acquisition of a diversified set of power purchase agreements from renewable energy resource providers.

This document is similar to a typical resource plan, except that the goal of the plan – Denton’s goal of developing a 70% to 100% renewable resource supply portfolio -- has already been established. Instead of a typical resource plan’s focus on evaluating resource and fuel types, and various types of contracts, the focus of this plan is on the examination of the effects and risks of various locations of renewable resources, of how the various types of renewable resource production profiles blend with existing portfolio supply assets to achieve as much diversification as possible (to reduce cost and supply variability), and of a variety of pricing factors including least-cost resources and manageable transmission congestion exposures.

Another important factor that makes this plan unique is the focus on the short time window to make decisions. ERCOT is an evolving market, and the rapid development and integration of renewable resources creates a new world of power supply and transmission challenges. The development of renewable resources, and their rapidly falling costs, have been driven to a large extent by the federal producer tax credit (“PTC”) and the investor tax credit (“ITC”). These tax advantages are being phased out, and this shortens the time window for securing resources at current prices. And recent developments with the accelerating retirement of coal and natural gas-fired generation adds another element that may affect the current low prices on renewables. For other types of beneficial renewable resources, such as demand-side management (Demand Response) programs and assets, a much longer timeframe can be used for planning and decision-making.

This resource plan also focuses on the strategic design and tactical daily management requirements to efficiently and economically operate a power supply portfolio comprised of renewable resources. Because of the intermittent nature of energy production from renewable resources, and the much wider geographic footprint of power generation resources than is usual for an electric utility, a daily supply portfolio and risk management process involving production forecasting, supply balancing transactions, and seasonal, monthly and daily congestion (basis) hedging becomes paramount to the successful operation of a power supply portfolio of renewable resources.

2.0 Goals of the Resource Plan

The main goal of the resource plan is to identify and recommend least-cost renewable resources so that Denton can meet its resource goal of 70% to 100% renewable energy.

The goal can be broken down into five objectives: least-cost supplies, uncertainty (risk) reduction, sustainability, competitiveness, and the efficient management of a renewable resource power supply portfolio.

2.1 Plan Objectives

Least-Cost Supplies – The goal is to acquire a long-term fixed price power supply that is lower than any other market alternative.

Uncertainty (Risk) Reduction involves reducing future uncertainty and exposure to adverse supply cost outcomes. Risks and mitigation factors include:

- Effectively matching load with supply reduces risk
- Diversifying supply resources
- Reducing regulatory risk (including the potentially adverse effects of structural changes to the ERCOT market)
- Technological risk, and
- Economic risk
 - Energy price and congestion price risks
 - Transaction costs and execution risk
 - Supply portfolio management operational risks

Additional renewable resource purchases will reduce the long-term cost volatility of Denton's energy supply.

Diversifying supply sources by incorporating renewable resource technologies with different production profiles reduces supply volumetric uncertainty across multiple timeframes (e.g., reducing volumetric variability by avoiding multiple wind resources with positively correlated production profiles). Securing low fixed-costs for a substantial amount of supply resources, while leaving open a portion of the supply portfolio to remain competitive, requires a delicate balance.

Sustainability - the objective of sustainability covers several areas. It includes environmental sustainability as well as the production sustainability of a generation resource. Stable economics and minimal operations and maintenance ("O&M") costs contribute to sustainability. Renewable resources offer superior sustainability because they don't degrade over time and they require less maintenance, they require less regulatory and legal permitting review, and they avoid potential carbon costs. Fossil fuel resources involve fuel adjustments over time because of substantial fuel cost variability and the depletion of resources. Fossil fuel resource technologies require more overhauling and maintenance compared to renewable

resources. Renewable resources use minimal water and emit no particulates, and other polluting gases, compared to fossil fuels.

2.2 Customer Preference & the Competitive Market

A typical integrated resource plan includes identifying customer preferences and describing the competitive market in which the utility operates. As mentioned previously, this resource plan is unique because the customer preference for a power supply portfolio comprised of renewable energy resources has already been selected.

With regard to competition, Denton doesn't have direct competition per se because it is a Non Opt-In Entity ("NOIE"). Yet NOIEs need to stay competitive to the degree that they can avoid pressure to open up to competition. Denton still needs to be sensitive to competitive pressures, as the city is surrounded by competitive areas, and new ratepayers moving in to the city will expect similar rates.

2.3 Efficient Management of a Renewable Resource Power Supply Portfolio

2.3.1 The Treatment and Management of Renewable Resources as an Energy Supply Hedge

Unfortunately, the track record of many public power entities in ERCOT regarding the efficient management of renewable energy resources is poor. Many municipal utilities and electric cooperatives have not done a good job with their power supply portfolio management in terms of implementing renewables to offset load requirements.

The primary challenge is due to the intermittent nature of renewable resources. They are not "dispatchable" in the sense of the traditional utility generation commitment and dispatch process. Because they consider renewable resources as non-dispatchable, many of these entities simply sell the output into the local market (local resource node pricing) rather than manage around the intermittent production. This is termed "monetizing" the asset. But then they purchase energy at a Hub or at a load zone to meet their load requirements.

This approach results in a double purchase because the energy has been purchased in the first place via a power purchase agreement ("PPA"), which offsets future load requirements, and then the renewable energy is sold in the market while market energy is simultaneously purchased to serve load. This results in a less efficient three-step process (energy purchase, then energy sale, then energy purchase) where inefficiencies and additional costs at each step can add up to higher supply costs.

And this leaves the entities exposed to the substantial price risk of the uncertain locational price differences between the Resource Node and the entity's Load Zone. Double purchasing is almost always very costly and unnecessary.

This is effectively treating the renewable resource as if it were a perfect financial hedge for an energy consumer (offsetting the cash flow from floating price spot market purchases with the cash flow from a fixed-price purchase made in advance), yet via a PPA the resource is effectively a fixed-price physically-delivered forward purchase. It is more efficient to use the physical delivery characteristics from the PPA as an offset to load requirements. This results in a more efficient two-step process involving just the initial purchase from a PPA and then a second balancing transaction (purchase of shortage or sale of excess).

An additional element to the successful management of a renewable resource power supply portfolio is to complete the opposition hedge by financially tying resources to load via Congestion Revenue Rights (“CRRs”). The pricing at the resource node for the physical production from a PPA and pricing at the load are tied together through forecasts and schedules matched with a CRR (an economic locational basis transaction). By using CRRs, the two-step process is governed by the same type of basis transaction that is required in any resource to load transaction in ERCOT.

Successfully achieving Denton’s renewable resource goals involves several critical strategic planning and tactical operational elements:

3. Location and production profile of the renewable resource(s)
4. Managing the supply portfolio by completing an industry best practice opposition hedge, including:
 - Forecasting resource output,
 - Avoiding double purchasing (i.e., “monetizing” the renewable resource by selling it into the market while simultaneously purchasing energy to serve load), and
 - Managing basis (congestion) risk

Item 1 will be addressed as a result of the resource recommendations of this resource plan.

Item 2 involves the design of a daily supply balancing strategy, and the daily operational guidelines and processes for supply portfolio management.

The key to efficiently managing a renewable resource power supply portfolio is understanding (forecasting) when an intermittent asset is likely to produce, and counting that production as supply to offset load, and then purchasing energy from the market only during those hours when the intermittent resource is not likely to produce (and selling excess energy during those hours where resource production is likely to exceed load requirements).

The technical definition of an opposition hedge is the establishment of one or more positions to reduce financial uncertainty or risk from a floating price exposure (more detail on this concept can be found in Appendix A – Hedging 101). In Denton’s context, this involves the following elements:

1. Denton's uncertain or "floating" supply price exposure - this results from its native obligation to serve energy to its ratepayers. Unless it purchases fixed-price supplies of energy in advance, Denton would be obligated to purchase energy in the ERCOT Day Ahead ("DAM") or Real Time ("RT") markets at a variable cost to meet its obligation to serve energy to its ratepayers.
2. "Hedging" Denton's floating price exposure with a fixed-price purchase – this is accomplished by purchasing electric energy to be delivered in the future at a fixed-cost today through PPAs. This is a primary focus of this resource plan. A fixed-price hedge established a known cost in advance avoids exposure to floating prices.
3. Hedging Denton's locational price exposure with CRRs - to complete and perfect the opposition hedge, additional transactions are necessary to translate or tie the pricing of Denton's PPAs at ERCOT resource nodes to the pricing of Denton's load at its Load Zone. This is accomplished through the use of ERCOT CRRs. As will be addressed in multiple sections of this document, a power supply portfolio comprised of multiple and diverse renewable resources results in a variety of delivery locations across Texas. CRRs will be necessary to tie the pricing at various delivery locations to the pricing of energy in Denton's Load Zone.

To summarize, a typical opposition hedge for Denton would include the following components:

1. A floating price exposure for Denton's load at its Load Zone (this is Denton's native energy market exposure),
2. A fixed-price hedge(s) in the form of a PPA delivered to a Resource Node(s), and
3. A CRR hedge(s) to fix the price differential between a Resource Node and Denton's Load Zone.

Of course, renewable resource power supply providers may offer PPAs that are priced at locations closer to Denton, such as at a Hub or Denton's Load Zone. This could obviate or reduce the need for CRRs to close the locational price gap. But this also introduces additional supplier credit risk (contract replacement risk) into the evaluation equation. The greater credit risk comes from how the supplier will provide a delivered price to a Hub or Load Zone. The supplier is going to assume congestion risk, and if not managed properly, could jeopardize its long-term financial viability.

Comparing the costs of renewable energy delivered to Denton's Load Zone or a nearby Hub to the cost of energy delivered to a Resource Node is one of the primary cost evaluation factors of this resource plan.

2.3.2 Managing a Renewable Resource Supply Portfolio in the ERCOT Market

An important goal and guiding principle for this resource plan is that the design and management of a renewable resource supply portfolio must take into account the structure and conceptual design of the ERCOT market.

ERCOT is an “energy-only” market. Load in ERCOT does not need to acquire and meet a capacity requirement to ensure that adequate resources on the grid are available so that the demand for electricity can be met at all times. The ERCOT market design requires that load only needs to acquire adequate energy schedules, and most of the supply risk is then neutralized.

In the ERCOT energy-only market, firming is not an explicit requirement. ERCOT automatically “firms” inadequate supplies to meet all load requirements – the important risk management focus is on managing the “firming” in a least-cost manner, both in terms of energy balancing purchases/sales and managing congestion price risk.

In a bilateral market, utilities build and operate a generation portfolio and transmission grid to produce and deliver power to loads in their service territories. In this type of market structure, it makes sense to have a specific generating plant, as part of a diversified generation portfolio, to meet variable demand requirements. If generation resources are intermittent, a power plant that can be dispatched quickly to fill in the gaps in intermittent production is known as a “firming” plant.

But in a power pool like ERCOT, specific power plants do not discretely serve local load. Rather, generation resources are “pooled” to balance load requirements over a larger grid. The pooling of generations assets results in several benefits, including reduced costs through more efficient marginal dispatch of generation units, savings in reserve capacity requirements, more reliable operation, and minimizing the adverse impacts of maintenance.

Thus, the intent of the ERCOT market design is that “firming” is accomplished using the entire pool of generation assets, not by one or more specific plants in a local service territory. This leads to a primary objective for Denton in the design of a power supply portfolio management strategy where firming of renewable resources is managed in a least-cost manner through forward and spot market purchases and CRR hedges.

The ERCOT market is designed so that generation is offered to the market and load requirements are scheduled on a day-ahead basis. The market is intended for load and generation to primarily participate in the DAM. Given the limitations and inherent error of demand forecasting, and given a variety of other factors that can affect transmission capacity and the availability of generation, ERCOT operates a RT market where it dispatches generation resources based on economics and reliability requirements to meet system demand affected by resource and transmission constraints. The RT market is intended as a balancing market, to adjust for demand, generation and transmission uncertainties that cannot be completely factored-in to the DAM.

Some load-serving entities in ERCOT rely on the RT as their primary source of energy supply because prices are lower **on average** compared to the DAM. Producers often use this approach because it requires less collateral than the DAM and they are typically credit-challenged counterparties. On average, the DAM trades at a premium to the RT because it reduces risk

(i.e., revenue or cost uncertainty) and this risk reduction benefit commands a premium. However, relying on the RT as a primary source of supply is antithetical to the intent and design of the ERCOT market. ERCOT is designed for all generation and load to clear in the DAM, with the RT being used to address imbalances.

In summary, the ERCOT market is designed for load-serving utilities without sufficient generation assets to:

- purchase power in advance through PPAs
- schedule the delivery of the purchased power into the DAM
- purchase any short-term shortages / sell any short-term excess power in the DAM
- use CRRs to hedge
 - Resource Node to Hub locational price differentials
 - Hub to Load Zone locational price differentials
 - DAM to RT price differentials

This resource plan is based on managing Denton's renewable resource power supply portfolio in concert with the intent and design of the ERCOT market, through the use of industry best practice risk management techniques and ERCOT-specific market instruments.

3.0 Information Gathering

This resource plan is based on an evaluation using a variety of types of data from multiple sources. Where useful, specific examples of data and information are presented, along with important takeaways.

Note – figure numbers in this document are based on the presentation order and may conflict with an embedded figure number from the source document.

Information and data for this resource plan was gathered from a variety of sources, including but not limited to Denton, ERCOT, the Texas Public Utility Commission, the U.S. Energy Information Administration, the Chicago Mercantile Exchange and other industry sources. Examples of key data are presented in order within separate sections based on the source.

Denton:

- Load
- Resources (capacity, production, contract start and end dates):
 - Whitetail
 - BlueBell
 - Santa Rita
 - Landfill
- DEC performance data (heat rate and variable operating costs)

Various Sources:

- The U.S. Energy Information Agency (historical spot natural gas prices and natural gas production and consumption data)
- “Least-Cost Electric Utility Planning” Stoll, Harry G. 1989, Wiley-Interscience, ISBN-13: 978-0471636144, ISBN-10: 0471636142
- The Texas Public Utility Commission: various workshops and Rule Makings
- Texas Renewables website (ERCOT) Senate Bill 7 and Subsection (a) of Substantive Rule 25.173, Goal for Renewable Energy

ERCOT:

- DAM, RT prices, and CRR market data from recent years
- historical heat rates
- market dispatch modeling
- resource adequacy studies

ERCOT information was sourced from:

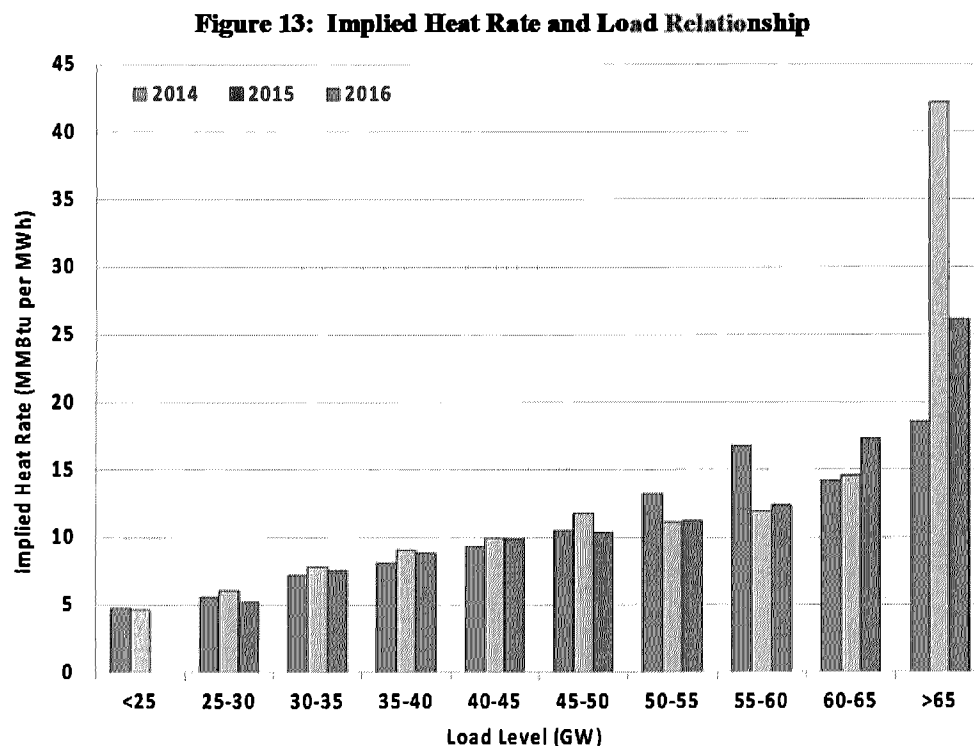
- ERCOT website (ercot.com)
- 2016 ERCOT State of the Market Report
- 2016 Long Term System Assessment for the ERCOT Region
- ERCOT August 2017 Board of Directors Item 4.2.5: Grid Impacts of Natural Gas Price

Heat Rates

Figure 3-1 shows the implied heat rate and load relationship in ERCOT over the last three years.

Takeaway: the curve for the heat rate is almost the same curve that fits very easily over multiple years. Heat rates are generally stationary. The progressive shape of the curve and the relative heat rates don’t change too much, because the units that are dispatched operate the same way year after year. Extraordinary and lower probability events, such as hot weather or transmission outages, such as in 2015, are necessary to get outside of the typical heat rate curve. The heat rate of the DEC does not offer a competitive advantage in ERCOT and will require lower probability and lower frequency events to warrant dispatch.

Figure 3-1



ERCOT Dispatch Curves

Figures 3-2 and 3-3 show the ERCOT resource price stack at \$4.50 per MMBtu and \$2.50 per MMBtu respectively. With an effective heat rate of approximately 10 MMBtu/MWh, the DEC's dispatch cost would be about \$45/MWh on the graph in Figure 2, and about \$25/MWh on the graph in Figure 3-3. The DEC dispatches later in the dispatch queue when gas prices are higher. This is because there is an inverse relationship between natural gas and heat rates. The higher the gas price, the lower the heat rate.

Figure 3-2

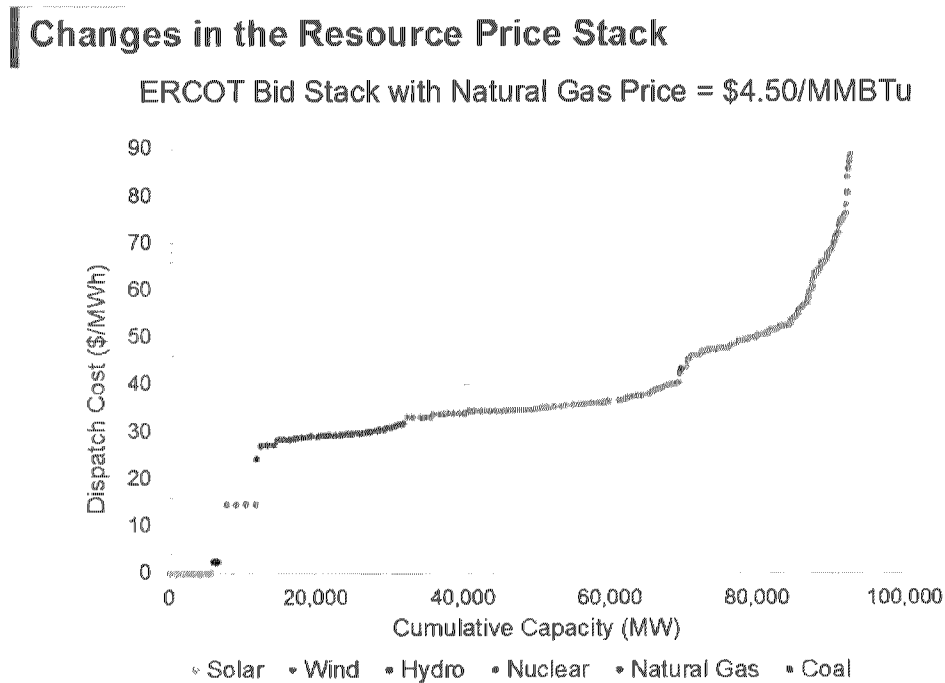
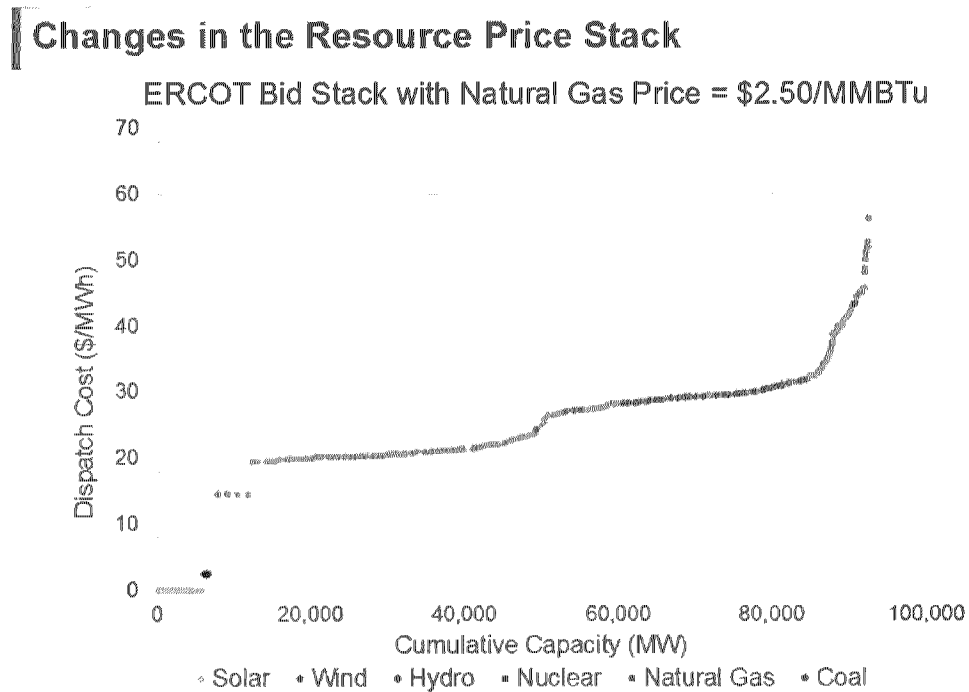


Figure 3-3

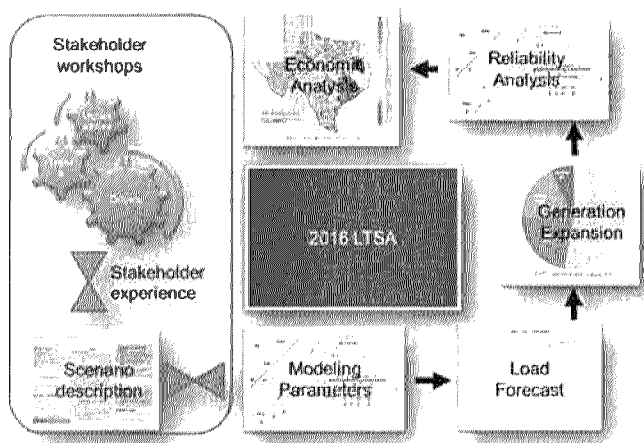


Takeaway: if gas prices are \$4.50, then coal-fired generation is dispatched first, before natural gas-fired units. The DEC would be in a position to earn a high margin, but the number of hours to earn that high margin is small. If gas prices are \$2.50, then coal-fired generation is hardly ever dispatched. The DEC would be dispatched earlier in the queue, but there would be very little profit margin because of substantial competition with other gas-fired generation resources.

ERCOT Expectations

Figure 3-44 comes from ERCOT's Long Term System Assessment ("LTSA")

Figure 3-4



The LTSA is a composite study made up of various processes and analyses such as scenario development, generation expansion analysis, load forecasting analysis, and transmission expansion analysis.

The scenario-based planning approach provided a structured way for participants/stakeholders to identify the most critical trends, drivers, and uncertainties for the upcoming ten- to fifteen-year period. Scenario-based planning

considers sufficiently different, yet plausible futures and is used to evaluate transmission plans across multiple future states.

Among their key findings are two that impact this resource plan:

- Load continued to grow in ERCOT in seven of the eight scenarios.
- All scenarios showed a significant amount of solar generation additions and the retirement of coal and natural gas generation.

In addition to the ERCOT LTSA, this resource plan takes into consideration several studies and recommendations for potential improvements in the ERCOT market. These are discussed in Section 4.5 Regulatory Environment.

The New York Mercantile Exchange ("NYMEX") Division of the Chicago Mercantile Exchange (CME") and other industry sources: power and fuel price data.

Figures 3-5 and 3-6 presents charts of current power and natural gas forward curves. Figure 3-5 shows forward prices as 12-month averages, while Figure 3-6 shows current forward curves with monthly prices along with best-fit lines to better demonstrate overall values through time.

Figure 3-5

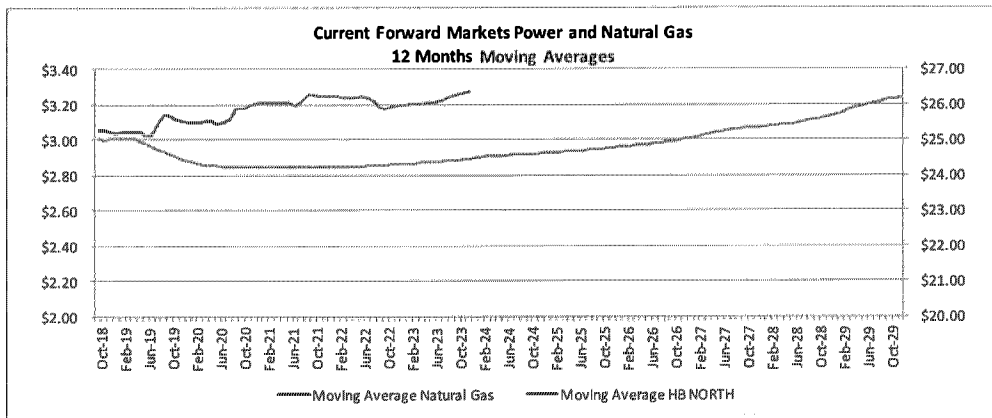
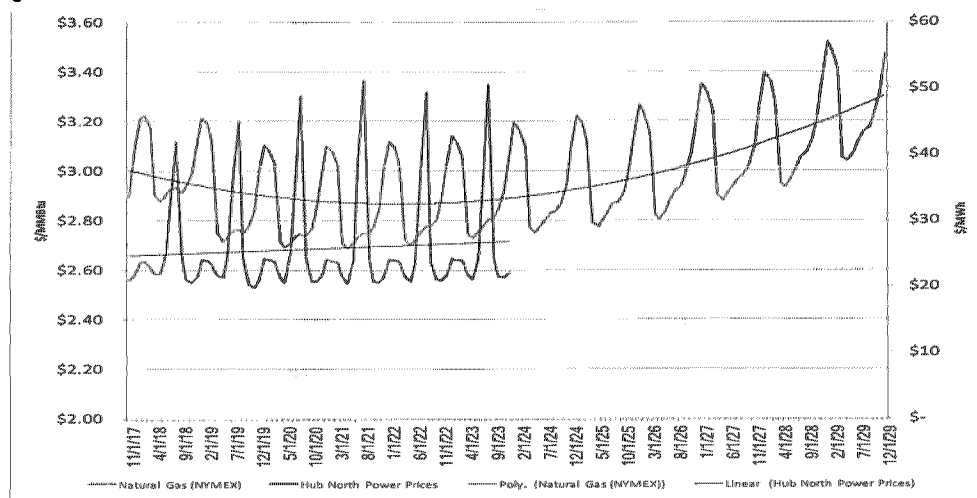


Figure 3-6



A variety of natural gas price curves were considered for use in the evaluation. Those used in the Brattle Report (“Review of the Renewable Denton Plan”) are generally much higher than those from other sources.

Figure 3-7 shows the Brattle Base Case and Low Case compared to the current NYMEX forward curve. Although a forward curve for a commodity market like NYMEX is not predictive of future prices, it is indicative of the clearing price that buyers and sellers are effectively recognizing as a fair future value. Valuations using natural gas price projections should always include the current forward curve as a reference case.

Figure 3-7

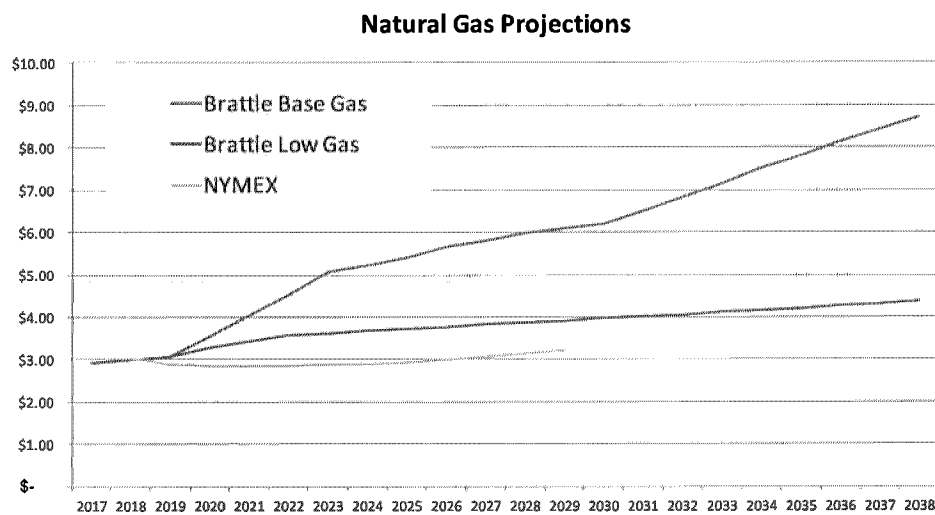


Figure 3-8 includes the last three years of U.S. Energy Information Administration (“EIA”) forecasts. Note the lower trend across the three years. The “HOG” forecast is their high oil and gas production forecast.

Figure 3-8

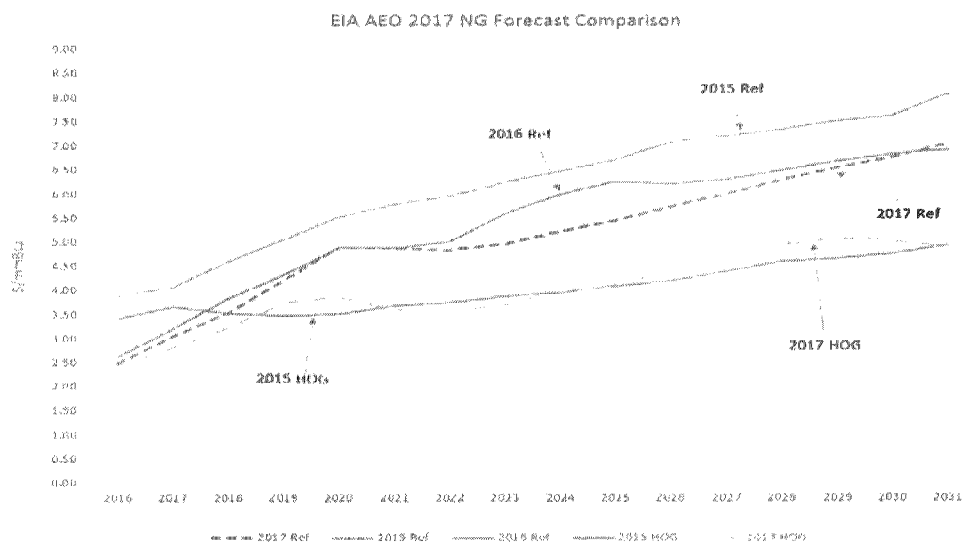
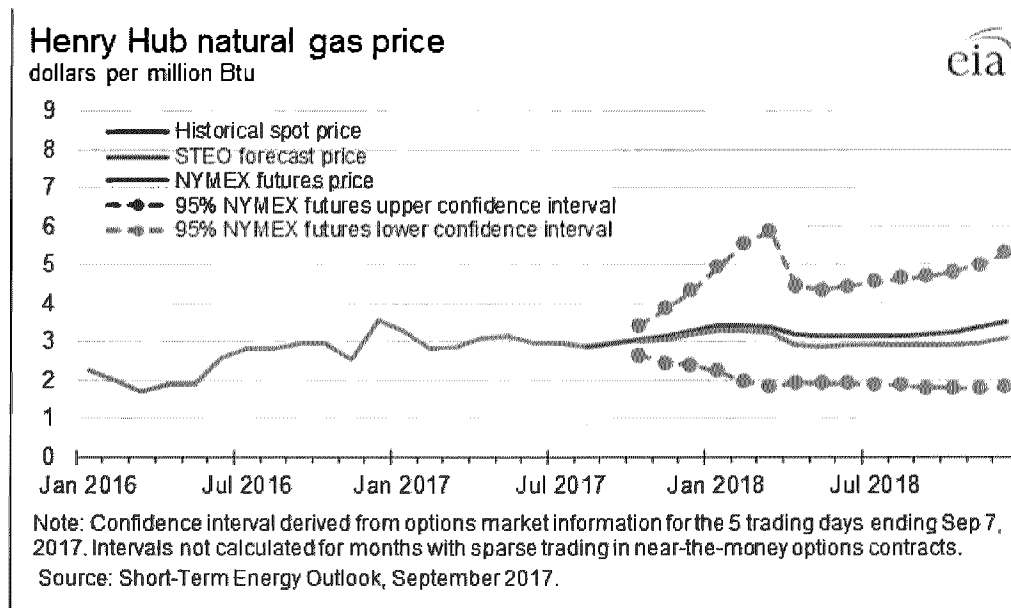


Figure 3-9 offers a somewhat different look at potential gas prices, combining historical spot Henry Hub natural gas prices with the most recent confidence intervals. The confidence intervals expand in the first few months because of higher volatility for winter futures months.

Figure 3-9



Natural Gas Market Expectations

The EIA Annual Energy Outlook is an important source for fundamental supply/demand data on natural gas. EIA's expectations are for increased natural gas trade is dominated by liquefied natural gas ("LNG") exports in the Reference case, which can be seen in Figure 3-10. The increase in exports via pipelines and LNG represents an increase of approximately 4 TCF. This is an increase of approximately 15% that does not have an historical precedence. In the past, unexpected increases of demand of only 5% to 6% due to weather have caused natural gas prices to double. This expected increase in natural gas exports is triple this amount.

Figure 3-10

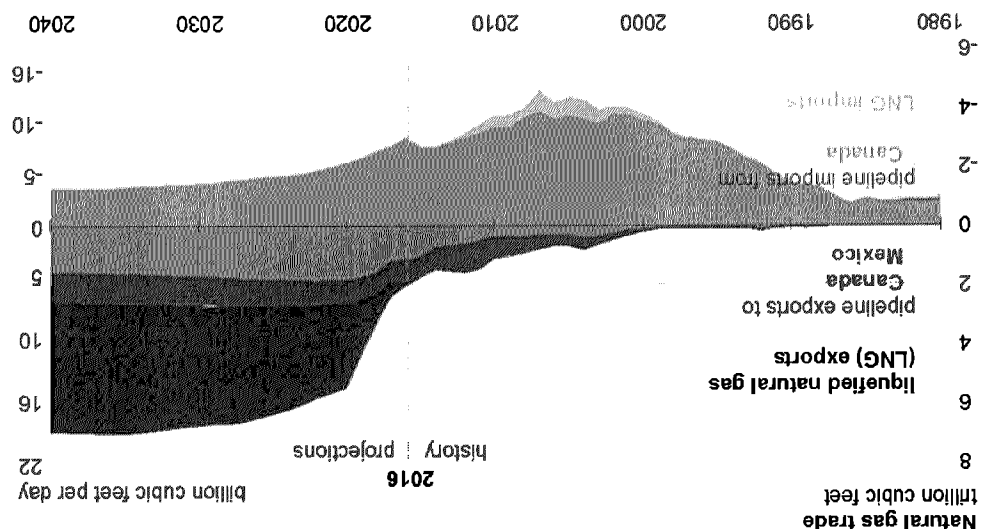
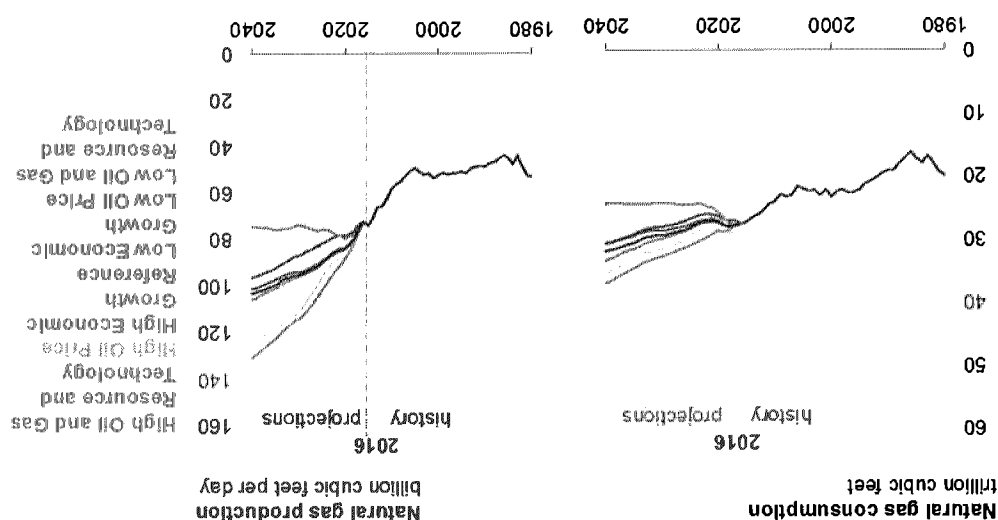


Figure 3-11 shows expectations of increased natural gas consumption in most cases. These analyses point to a potential for increasing natural gas prices, which could put upward pressure on prices for renewable resources targeted by Denton. Longer term though, the substantial overhang of potential supply increases from shale reserves, plus falling drilling costs, is likely to produce a reversion to the long-term lower priced mean for natural gas.

Figure 3-11



Price Projections

The following charts illustrate the price projections used in the economic evaluations in this resource plan. Figure 3-12 shows natural gas price projections, Figure 3-14 shows power price projections.

The economic evaluations in this resource plan use four price scenarios including two from the Brattle Report (“Review of the Renewable Denton Plan”), and two developed by ERC:

- ERC base case
- ERC high case
- Brattle base case
- Brattle low case

The Brattle report was missing a lower natural gas price case that represented the current market environment. In other words, the Brattle report assume that natural gas prices would only rise from the current environment. The ERC base case is important to add to the evaluation mix because it adds a reasonable case that is lower than the Brattle gas price projections.

The ERC base gas case is the linear extension of the current forward natural gas price (NYMEX) as traded on the CME. The ERC high gas case mirrors the escalation and return to the mean seen during the decade of the 2000s, as seen in Figure 3-13.

Figure 3-12

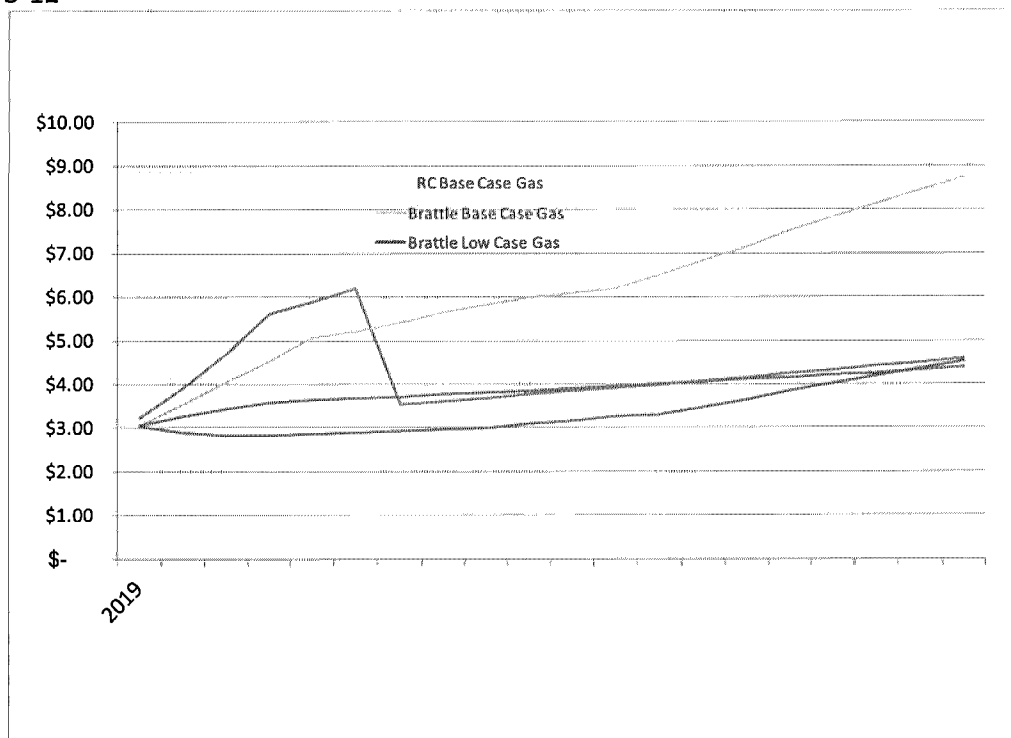
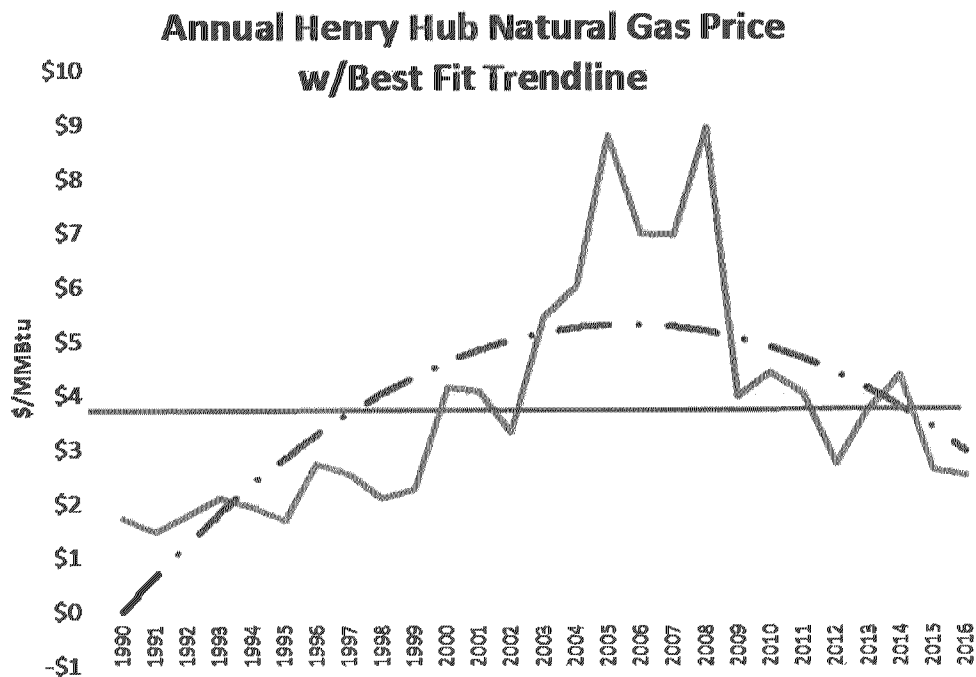
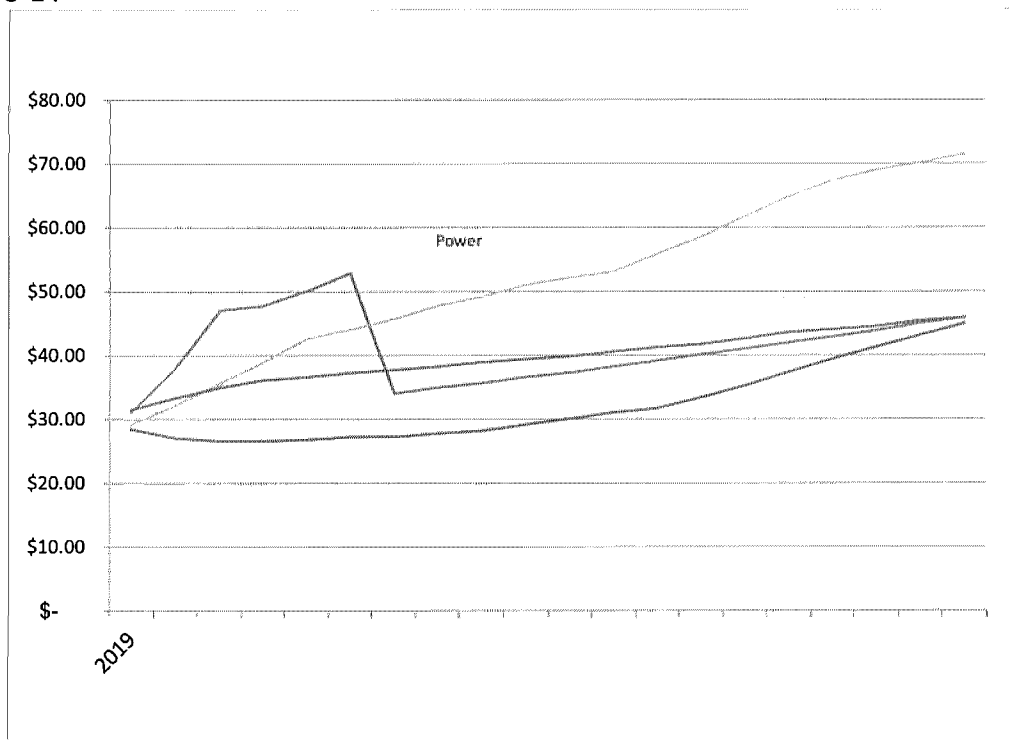


Figure 3-13



Power price forecasts were developed using actual market heat rates over the last few years in ERCOT at Hub North applied to the natural gas price forecasts. Multi-variable regressions were used to reflect the negative correlation of natural gas to power. This produces a forecast that recognizes the relationship that is part of the ERCOT economic dispatch: as natural gas rises heat rates decline.

Figure 3-14



Load Scenarios

The following load scenarios were used for portfolio modeling:

1. A slightly negative growth rate
2. Mean annual growth of 1.6%
3. A high growth case of 3%.

4.0 Renewable Resource Plan Inputs & Analysis

4.1 Evaluation Factors

The evaluation factors are grouped around two of the resource plan objectives: 1) least-cost and 2) reducing uncertainty (risk).

Regarding goal 1) least cost, Figure 4-1 presents a summary list of renewable resources that have been considered for the renewable resource plan. These are grouped according to primary technologies (e.g., wind, solar), secondary technologies (e.g., West Texas wind, coastal wind), and geographic location.

The table in Figure 4-1 shows the expected ranges of prices at the resource node and then at the HB_North. HB_North is the resource delivery point for Denton. To transfer the resources

to the LZ_North, a cost in the basis is \$0.75/MWh. These are the prices used to estimate the costs of the supply. These costs are further adjusted as to profile. For example, a West Texas wind and a Solar resource produce approximately 20% difference in revenue. Solar produces during the higher priced on-peak hours while wind production drops off. Therefore, one would need at least a 20% lower price for West Texas wind to compete with a Solar resource. If a solar resource were priced at the North HUB at \$25/MWh, a wind resource would need to be priced at the same location at \$20/MWh or less. There are also limits of any one type of resource that can be placed into the portfolio given Denton's load shape. Additional resource selections recommended in this resource plan take into account the resources that are already in Denton's supply portfolio and scheduled for delivery. Denton will start receiving a large West Texas wind supply in the spring of 2018 and a Solar resource in 2019. For this reason, the North Texas and Coastal wind regions will be recommended as additions to Denton's portfolio. These wind regions are farther away from the central West Texas wind belt that is located between Abilene and Big Spring, Texas.

Figure 4-1

Resource Prices and Delivery Points

	Delivery at Node	Delivery at HB North	Location
Solar	\$22 to \$26	\$28 to \$32	West Texas
West Texas	\$12 to \$20	\$19 to \$25	West Texas
Coastal	\$22 to \$31	\$23 to \$33	Texas Coast
North Texas	\$15 to \$18	\$18 to \$21	North Texas
South Texas	\$21 to \$22	\$22 to \$23	South Texas
Panhandle	\$12 to \$14	\$20 to \$23	North Texas

Regarding goal 2) reducing uncertainty (risk), the primary focus from the perspective of evaluation factors for various renewable resources is on best-fit factors for Denton's energy supply portfolio. These best-fit factors include the production profile match relative to Denton's daily and seasonal load profiles, balancing the need for selling excess supply and purchasing shortages, the quality of each resource's production, access to transmission interconnections, and minimizing transmission issues with a particular focus on avoiding or reducing congestion exposure.

4.2 Gap Analysis

A critical driver of the quantity of recommended renewable resources is how to quantify Denton's target of 70% to 100% renewable power supply.

Although this can be defined from multiple perspectives, for the purpose of this resource plan the definition of the amount of renewable supplies is the proportion of Denton's load that is offset by renewable supplied over a given time period. Because of seasonal variations in load and in renewable resource production, the most appropriate time period is a year. Thus, the target will be a percentage of annual load in megawatt-hours ("MWhs").

Comparing the quantity in MWhs of Denton’s planned resources with its load allows the quantification of the gap that needs to be filled to meet renewable energy targets.

The reference year and target for increasing the amount of renewable resources in Denton’s supply portfolio is 2018, so the target amount will begin with this year.

Denton’s annual load for 2019 is 1,550,000 MWh.

The gap that needs to be filled can be defined in more than one way. A major difference is in the classification of the Whitetail PPA. According to data provided by Denton, the Whitetail PPA was originally a 60 MW transaction for wind power. The original transaction was subsequently modified, resulting in the conversion of the PPA to what looks like a conventional energy “round-the-clock” (“RTC”) (24 hours per day for 7 days a week) product, a 30 MW RTC transaction matched with renewable energy credits (“RECs”). The open question is this: should the Whitetail PPA still be considered a renewable energy resource?

Several years ago, before renewable resource targets were exceeded in Texas, RECs offered value as an incentive to develop more renewable resources, and could be used to “clean” conventional electric energy when paired with conventional power transaction.

However, in the meantime, several factors worked together to undermine the value and significance of RECs in ERCOT. Texas happens to be an ideal state for both wind and solar generation. And with attractive PTC and ITC tax incentives, the falling cost and increasing productivity of technology (e.g., photovoltaic cells), early targets for the expansion of renewable resources were greatly exceeded, based mainly on least-cost economics, not primarily on the economic incentives of RECs. Thus, RECs are no longer considered a viable way to incentivize renewable development or to “green wash” convention generation resources so that they would be classified as renewable resources.

The decision on whether or not to count Whitetail as a renewable resource is up to the decision-makers at Denton, taking into account the optics and potential reputation risk for a city with a substantial renewable resource target.

Figure 4-2 presents a listing of Denton’s power supply resources.

Figure 4-2

Generator Name	Type	Location	Capacity (MW)	Official Contract Date	Start Date	End Date	Annual Production (MWh)
WhiteTail (Nextera)	Wind	West Texas	30	5/1/09	7/1/11	12/31/23	262,800.00
BlueBell	Solar	West Texas	30	1/1/19	1/1/19	1/1/39	76,212.00
Santa Rita	Wind	West Texas	150	1/1/19	4/1/18	4/1/38	591,300.00
Landfill	Landfill Generation	Denton	1.6	?	1/1/17	12/31/24	14,016.00

Counting Whitetail as a renewable resource leaves Denton at approximately 61% renewable. Without counting Whitetail as a renewable resource results in approximately 44% renewable resources.

The recommendations in this resource plan will range in quantity based on the uncertainty of counting Whitetail as a renewable resource. This leaves Denton needing between 9% and 26% in additional renewable resources to meet its minimum goal of 70% renewable, or between 39% and 56% to meet the target of 100% renewable.

4.3 Production versus Load Profiles

One of the primary challenges in developing a renewable resource plan is the substantial difference between the periodic production profile of various renewable energy resources and Denton's load profile. This issue is not necessarily unique to renewable resources. Fixed-block market purchases also exhibit a substantial difference compared to load, as the fixed-block provides the same quantity for every time unit versus differing load levels for those same time units. Only by purchasing a load-following contract (i.e., a contract that removes imbalances between energy supply and demand in each interval of time) at a substantial premium to fixed-block energy, can a production profile match that of a load profile.

As opposed to the mismatch of a fixed-block supply shape versus a variable load shape, renewable resources present the challenge of mismatches between variable production profiles and variable load profiles. These will be examined from both daily and seasonal perspectives.

4.3.1 Daily Profiles

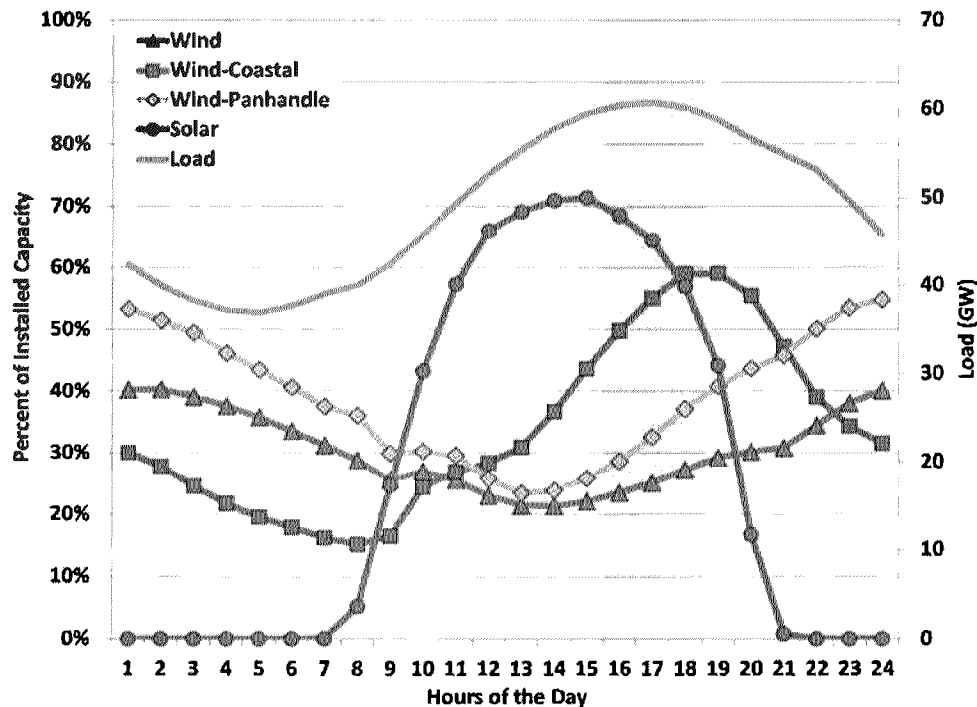
Figure 4-3 shows ERCOT data with representative production and load profiles for a typical summer day. Represented are production profiles for "Wind", which would be West Texas wind, plus Coastal wind, Panhandle wind, and Solar. These are plotted against a typical summer load profile for a load-serving entity with a substantial amount of residential and commercial customers.

Takeaways:

- West Texas wind offers the worst match against load. The production increases during less valuable, lower priced hours for energy.
- Solar and Coastal wind offer the best (on-peak) match against load, and can displace market purchases of more expensive on-peak energy.
- Panhandle wind is somewhat superior to West Texas wind.
- Coastal wind production is at a low point during lower priced hours (i.e., it offers the benefit of producing less when production is less valuable).
- Coastal wind and Solar have traditionally commanded a premium in terms of market pricing, but with overall prices for renewable resources falling, the cost premiums versus other renewable resources have compressed, making the assets more compelling:
 - Current low prices are attractive

- Their production profiles are a better fit for Denton's load, and are a better complement to Denton's existing renewable resources such as Santa Rita (West Texas wind), as opposed to adding more West Texas wind to Denton's supply portfolio, or adding Panhandle wind.

Figure 4-3 - ERCOT Summer Renewable Production Profiles (source: 2016 State of the Market Report for the ERCOT Electricity Markets)



Additional Profiles

In addition to West Texas wind, Panhandle wind and Coastal wind, responses to Denton's current request-for-proposals ("RFP") for renewable resources include wind resources in North Texas and South Texas. The production profile of North Texas wind is similar to that of West Texas wind. The profile for South Texas wind is between that of West Texas wind and Coastal wind. A major difference is not the production profile but the timing coincidence of the profiles. If they are far enough apart they may have the same profile but will not produce at the same time of day. Lack of coincidence lowers the positive correlation of production and lowers the likelihood of curtailment.

4.3.2 Seasonal Profiles

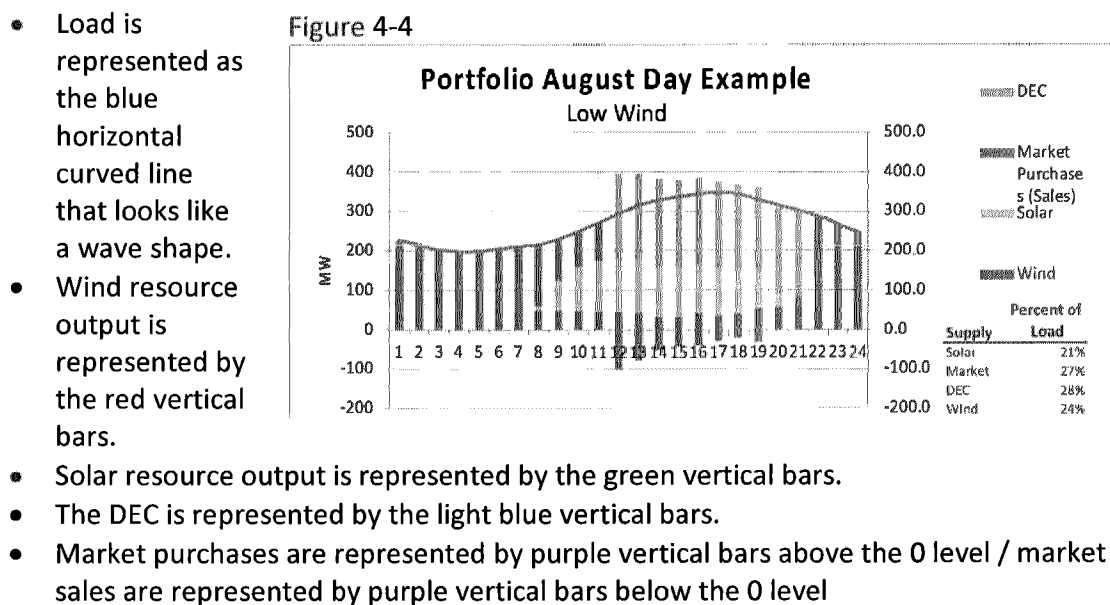
Continuing the theme of mismatched renewable resource production profiles versus Denton's load profile, seasonal variations in both production and load profiles will require active portfolio management to balance Denton's supply portfolio. Daily management will involve forecasting renewable resource production and then transacting in the ERCOT DAM to sell power during

hours with excess supply, and purchasing power during hours with a supply shortage. The optimal balance between excess and shortage is one of Denton's decision criteria for determining renewable resource acquisitions and is discussed in Section 6.0 Reporting & Summary Analysis.

Examples:

Figure 4-4 illustrates the daily supply/demand balance for a typical day in August. During this season, wind output is typically low, while solar output is high (but not necessarily at its highest during a calendar year), and the DEC has a higher likelihood of being dispatched. Specific quantities of renewable resources are used for illustration purposes only.

The horizontal axis in Figure 4-4 represents the 24 hours of a day. The vertical axis is quantity in Megawatts.

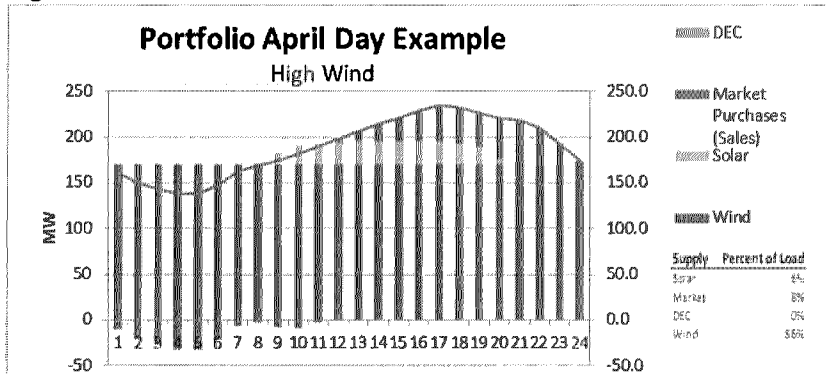


Takeaways:

- Seasonally low wind output would necessitate market purchases during off-peak hours.
- The combination of solar production and DEC production could cause an excess of supply during certain on-peak hours and would necessitate market sales.

Figure 4-5 illustrates the daily supply/demand balance for a typical day in April. During this season wind output is typically at its highest, while solar output is modest, and the DEC is unlikely to be dispatched. Again, specific quantities of renewable resources are used for illustration purposes only.

Figure 4-5



As with Figure 4-4, the horizontal axis in Figure 4-5 represents the 24 hours of a day. The vertical axis is quantity in Megawatts.

- Load is represented as the blue horizontal curved line that looks like a wave shape.
- Wind resource output is represented by the red vertical bars.

- Solar resource output is represented by the green vertical bars.
- The DEC is represented by the light blue vertical bars.
- Market purchases are represented by purple vertical bars above the 0 level / market sales are represented by purple vertical bars below the 0 level

Takeaways:

- Seasonally high wind output would necessitate market sales during off-peak hours.
- The combination of only modest solar production and lack of DEC production could cause a shortage of supply during certain on-peak hours and would necessitate market purchases for supply/demand balancing.

4.3.3 Quality of Specific Renewable Resources

Another critical evaluation factor is the quality of specific renewable resources. As can be seen in Figure 4-3, the “quality” of wind differs depending on the location. Panhandle wind tends to have a higher capacity factor than West Texas wind. Coastal wind offers much greater on-peak production than Panhandle and West Texas.

The location of wind resources also affects the quality of the output in terms of the consistency of the direction of wind and the lack of wind turbulence.

The location of solar affects the degree of power output relative to a given type of photovoltaic (“PV”) cell.

Location also affects the ability to connect to the ERCOT grid in an economically efficient manner, as well as the potential impact of additional costs in the form of charges for transmission congestion.

These location factors are discussed in the following sections.

4.3.3.1 Producer Production Data Bias

An important consideration in evaluating renewable resources is to verify and correct production output claims of renewable resource developers. Both solar and wind developers typically include a bias to expected performance. Producers typically over-estimate the efficiency of their installations to attract investors. They often used idealized models that overlook important details. For sellers of renewable resources, this outcome is not a surprise. A good analogy is the miles per gallon (“MPG”) claims for new cars. They can be achieved under specific and idealized circumstances, but everyday driving rarely achieves the promoted MPG. Something similar occurs with renewable resource developers.

Wind producers cannot predict wake effects well, and typical amounts of reduction (correction) to developers’ claims are on the order of 5% to 8%.

Solar developers often use average values that do not reflect hourly temperature effects, for example, the warmer the ambient conditions, the poorer the PV performance. This can reduce actual performance by 15% or more depending on the equipment type and installation design.

To adjust for these biases, independent data from the National Renewable Energy Laboratory (“NREL”) and ERCOT was used in this resource plan. NREL tools allow verification by specifying what type of PV cell is involved, along with the tilt of the PV cells mounts, including fixed, single or dual axis mounting. These tools can be used to produce hourly production curves for various seasons and at various locations across the state.

For wind resources, ERCOT has an extensive database of wind production profiles across the state.

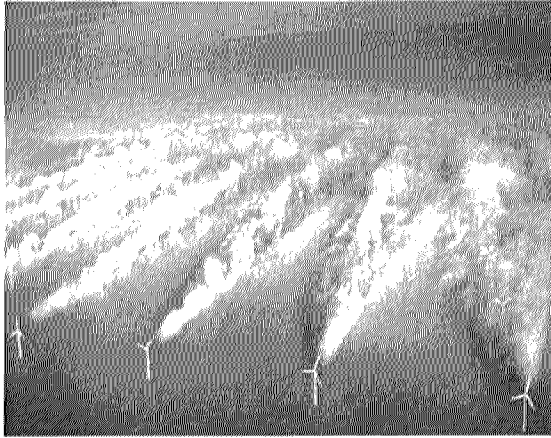
Using these sources of independent data, the following output reductions have been calculated for Denton’s current renewable resources (Whitetail is not included because it has been converted to a fixed 30 MW RTC block) in Figure 4-6:

Figure 4-6

Denton Resource	Original Production Estimate (Annual MWWhs)	Revised Production Estimate (Annual MWWhs)	Reduction (Annual MWWhs)	Reduction
Santa Rita	643860	591300	52560	8%
Bluebell	81468	65700	15768	19%
Total Reduction			68329 (4.41% of load)	

4.3.3.2 Wind Location Considerations

Figure 4-7



There are at least six different wind regions in ERCOT that are not well correlated because of the distance between them. Because Denton owns a large resource in West Texas, other regions will need to be considered.

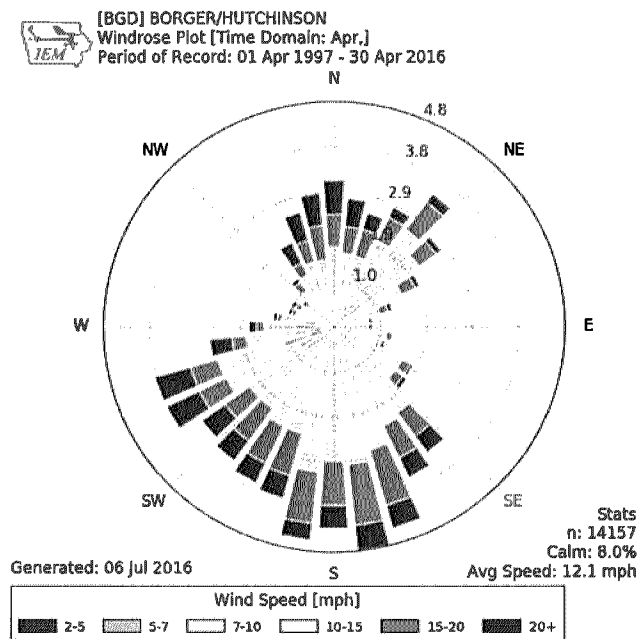
Both Panhandle and Coastal wind resources are not well correlated with System-wide output.

As previously mentioned, coastal wind is superior to other types of wind due to a higher capacity factor and greater production during more valuable on-peak hours.

Wind resource capacity factors are often over estimated because it is difficult to include site-specific losses due to wind shift turbulence and topographic effects. Wind turbines in the wake of other wind turbines suffer from reduced output. A natural illustration of this effect is in Figure 4-7.

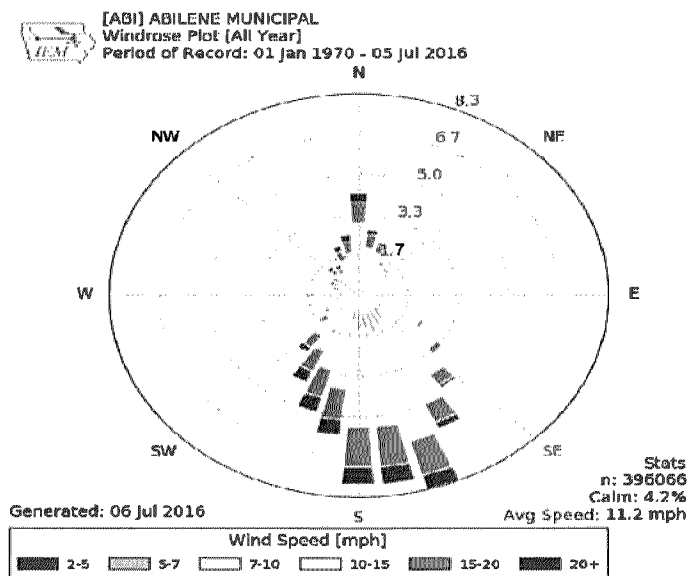
Figures 4-8, 4-9 and 4-10 illustrate three different locations of wind resources. Figure 4-8 shows wind resource and directional diffusion for a wind farm near the Texas/Oklahoma border (Borger), Figure 4-9 shows the output for a wind farm near Abilene, and Figure 4-10 shows the output for a coastal wind resource.

Figure 4-8



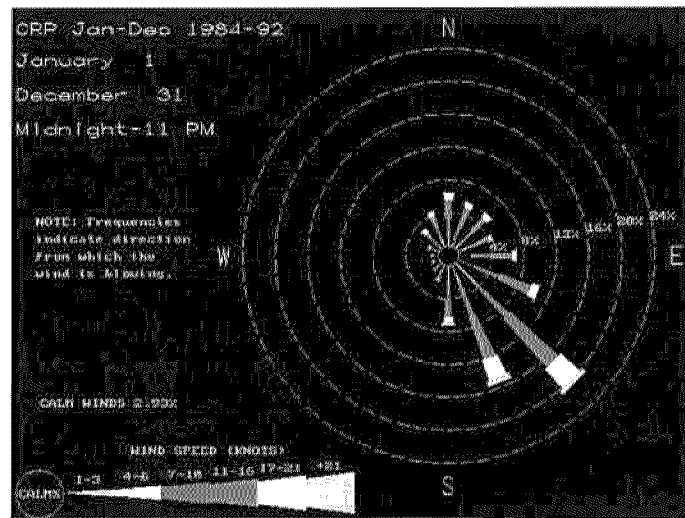
A tighter diffusion pattern and a more consistent wind direction are preferable for more consistent output and a higher capacity factor.

Figure 4-9



This factor supports the choice of Coastal wind.

Figure 4-10



Additional coastal wind factors include the following:

Advantages of Coastal wind:

- Less correlated with ERCOT System wind, producing higher output during the summer afternoons.
- Lower congestion risk with lower output during the spring and fall when high West Texas Winds increase congestion.
- More reliable for forecasting because it depends on the land, ocean effect.
- Coastal wind resources in the ERCOT South Zone are away from resources built in West Texas, and they are closer to potential retirements of generation in East and South Texas.

Disadvantages of Coastal wind:

- Coastal wind PPAs usually command a cost premium compared to other wind resources.
- Coastal environmental considerations (e.g. hurricanes, sensitive habitat).
- Subject to build restrictions (e.g., near U.S. Air Bases).
- A great deal of additional load being added in the area.

Despite these disadvantages, the advantages of Coastal wind, especially regarding the fit to Denton's supply portfolio, outweigh the disadvantages.

4.3.3.3 Solar Location Considerations

Solar irradiance (the power per unit area received from the Sun) as a function of location is a primary evaluation factor for solar renewable resources.

Solar irradiance is impacted by latitude, potential for cloud cover, and temperature factors.

Figure 4-11 presents an overview of solar irradiance.

Figure 4-11

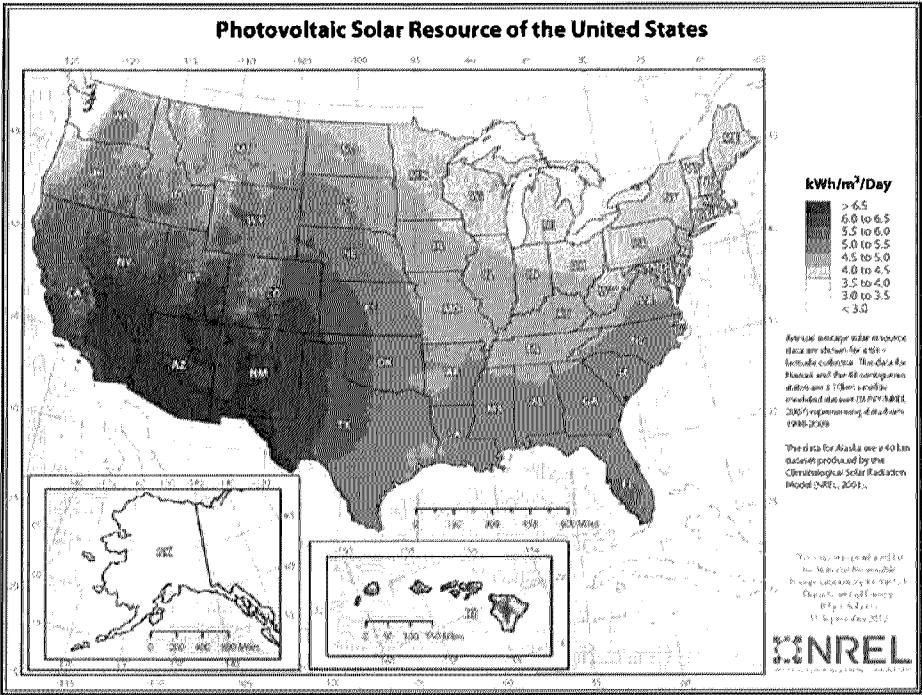


Figure 4-12 shows a map of rainfall in Texas. Rainfall is correlated with cloud cover, which reduces solar output.

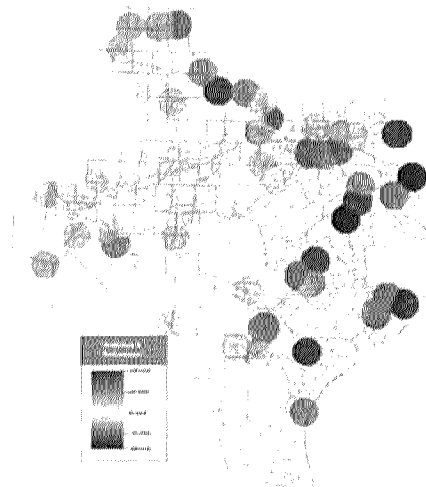
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Typically, the month of June has more solar production than in August, not because it has longer days and a higher sun angle, but because August is usually hotter. Sometimes the month of May can be better than June because of higher temperatures in June.

For optimal irradiance, the best location in

An important consideration for evaluating optimal resource locations is the projection of generation additions and retirements in ERCOT. With more renewable resources expected to be developed, and with conventional resources such as coal-fired generation expected to experience increased retirements, congestion issues may be exacerbated.

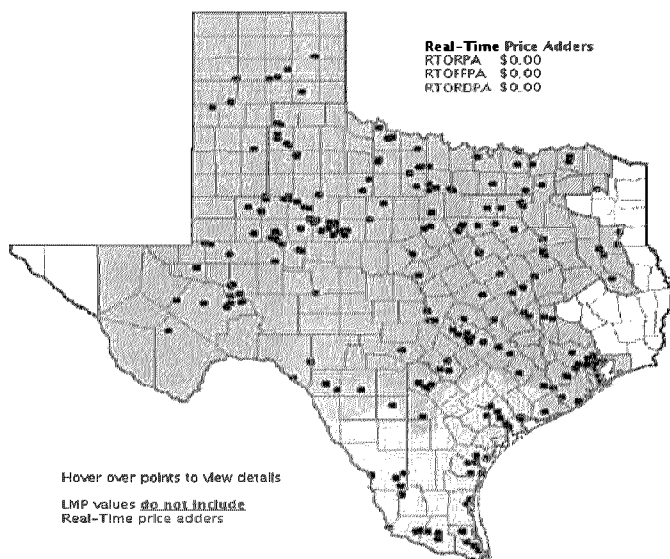
Figure 4-13



conventional generation, and closer to load than the majority of renewable resource additions, presents several advantages.

Optimal site selection is more limited for solar however, due to the need to maximize irradiance while minimizing rainfall and cloud cover. Although there is some solar production in the southeast of Texas, irradiance isn't very good in that region.

Figure 4-14 (source: ERCOT)



Another location consideration is the access to transmission. Pricing points cluster at wind resources near big substations and 345 kv interconnects. The location for renewable resources shouldn't be way out in the middle between the pricing points as illustrated on the map in Figure 4-14. Ideally, the better locations are in between the pricing clusters and urban areas, east of the clusters in the western region, and along the coast closer to Corpus Christi than Brownsville.

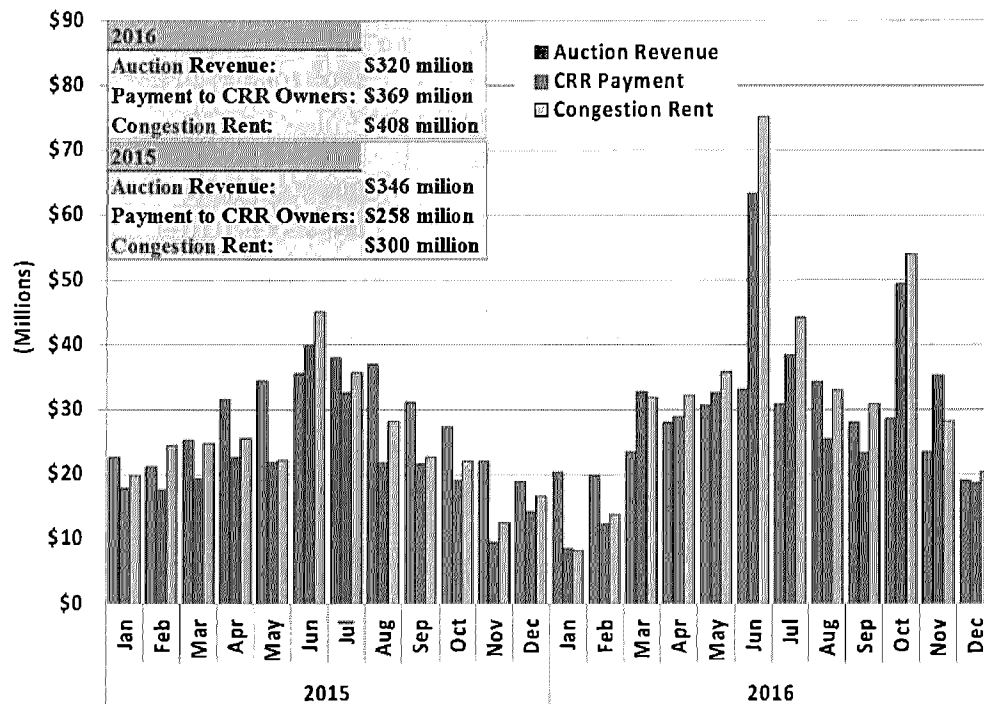
4.4 Congestion (Location Basis) Considerations

Congestion hedging is an important component of completing the opposition hedge, and of carrying out an efficient internal portfolio management operation for renewable resources, as discussed in Section 2.3 Efficient Management of a Renewable Resource Power Supply Portfolio. Congestion hedging is like insurance - it is important to insure exposures in a complete manner.

ERC's extensive experience with CRR management and hedging for several clients indicates that not only is the net cost of congestion hedging acceptable, but CRRs often pay for themselves when exposure risk increases. Notice in Figure 4-15 that when congestion rent in the DAM increased in 2016, the payment to CRR owners exceeded CRR auction revenue. And in addition to congestion rent in the DAM, the total congestion costs experienced in the ERCOT real-time market in 2016 were \$497 million, an increase of 40 percent from 2015. Transmission outages were the primary causes for this increase.

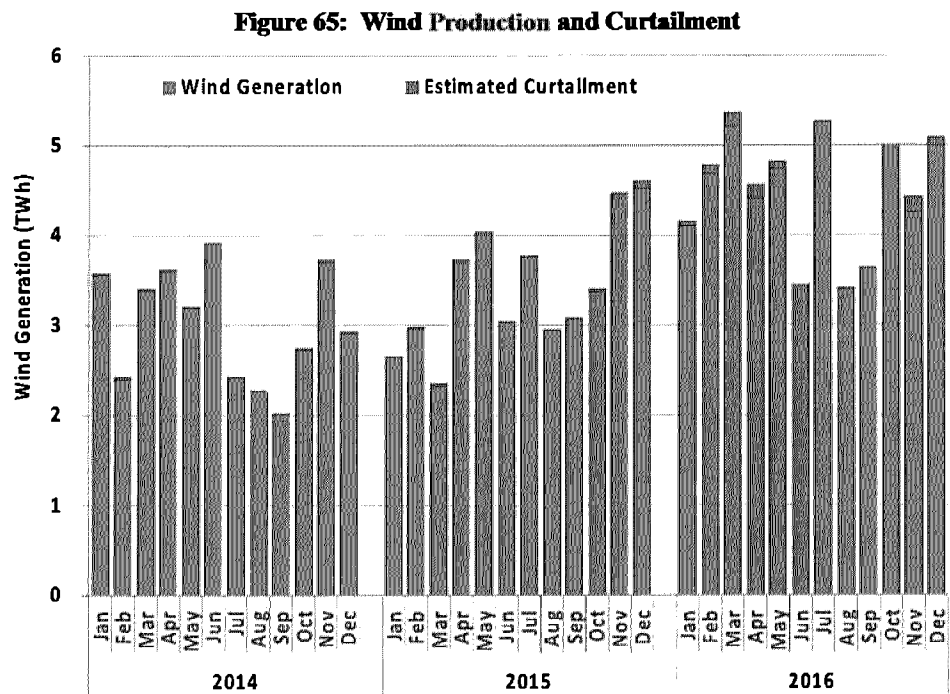
Figure 4-15

Figure 52: CRR Auction Revenue, Payments and Congestion Rent



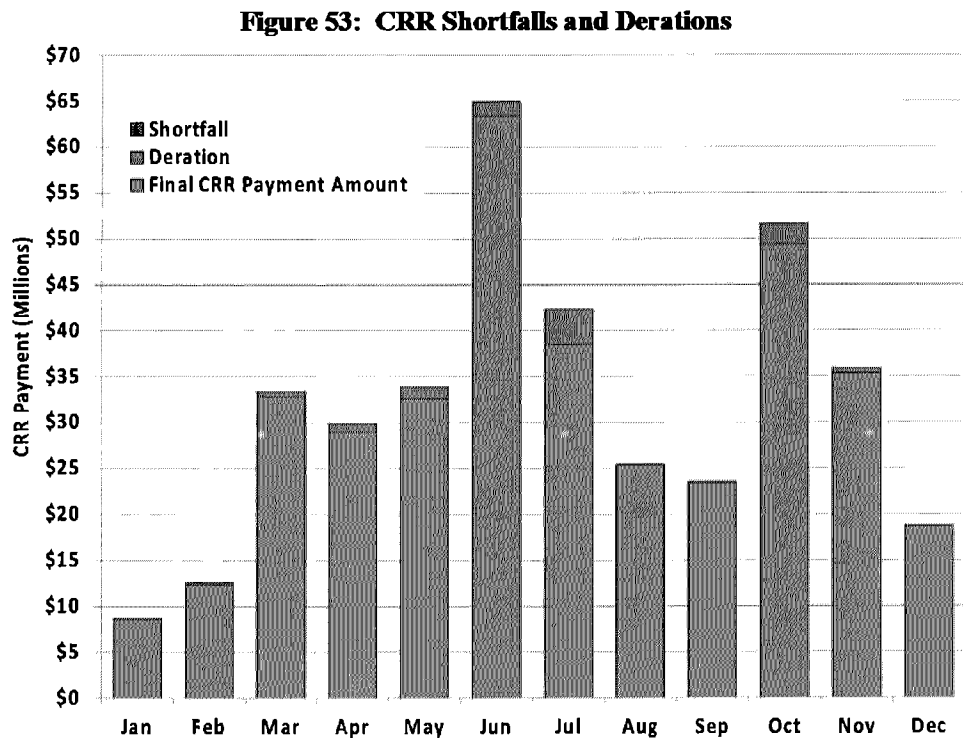
The use of CRRs should not be avoided because of possible curtailments or derations. In fact, the principal hedging method in the market to limit curtailment risk is the purchase of a CRR. A CRR will make the owner indifferent to curtailment because it will fix the price between two points. This is an economic hedge. It is anticipated that curtailments will rise, but will remain modest in most wind regions, as shown in Figure 4-16.

Figure 4-16



Derations are local and less than 3% of the CRR market as can be seen in Figure 4-17.

Figure 4-17



The data in Figure 4-18 shows that congestion hedging with CRRs is a mainstream activity in the ERCOT market. The chart shows the volume of CRR hedging activities brought into the RT market via Point to Point (“PtP”) congestion hedges, as represented by Net System Flow. The Net System Flow exceeds the volume of purchases in the DAM and is more than the average RT load. Figure 4-19 shows that in two of the last three years, revenues from PtP obligations exceeded charges. Informed marketers use CRRs and PtPs to limit their basis risk for their energy portfolios. As can be seen in Figure 4-15, the payment to CRR owners is greater than the cost of ownership. The exposure (basis risk) is higher than the CRR costs. This means that the non-congestion hedging load is paying congestion rents to loads with CRRs. That is where the revenue comes from to pay for any imbalances caused by claims from the CRR owners.

Figure 4-18

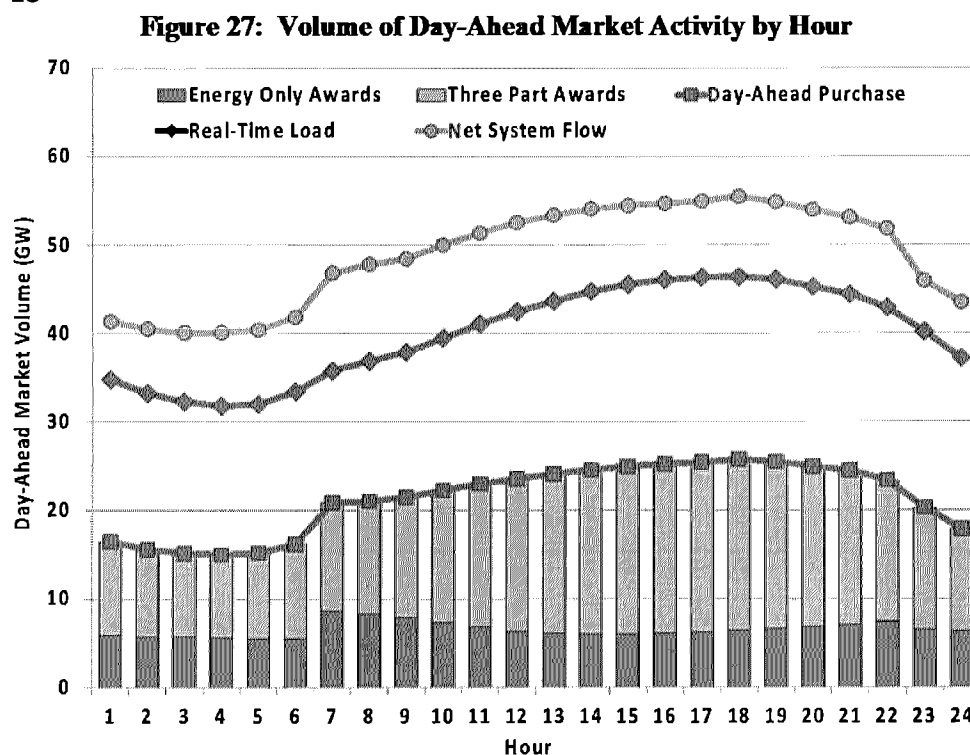
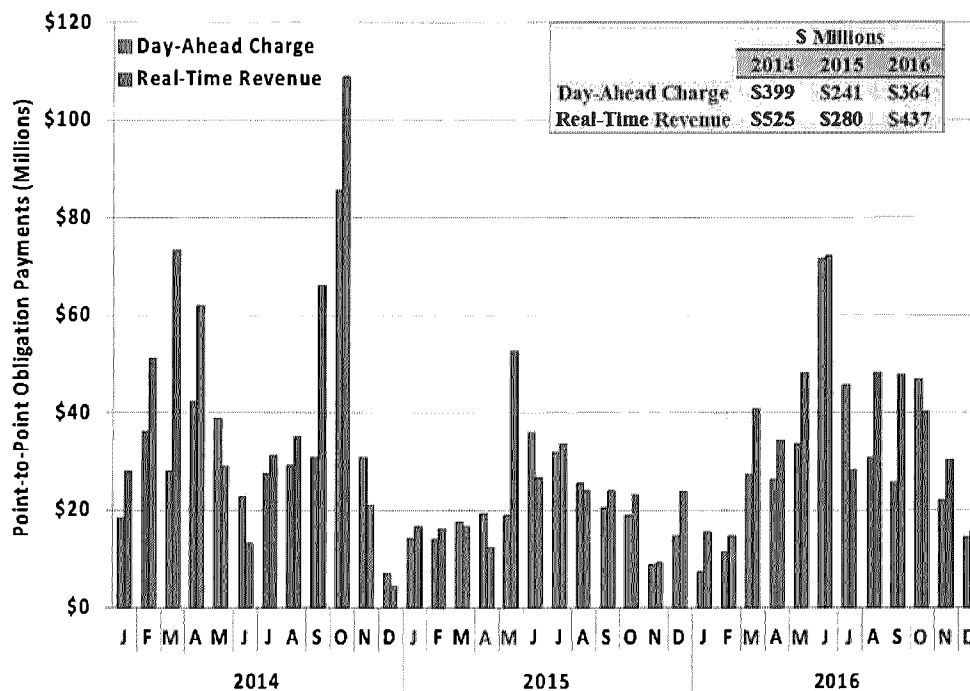


Figure 4-19

Figure 28: Point-to-Point Obligation Charges and Revenues



4.5 Regulatory Environment

The potential for changes in ERCOT is another factor in the resource plan analysis. ERCOT continually changes the way the system operates. For example, the following studies and recommendations for several potential improvements to the ERCOT markets that appear in the 2016 ERCOT State of the Market Report:

1. Evaluate policies and programs that create incentives for loads to reduce consumption for reasons unrelated to real-time energy prices, including: (a) the Emergency Response Service (ERS) program and (b) the allocation of transmission costs.
2. Modify the real-time market software to better commit load and generation resources that can be online within 30 minutes.
3. Implement real-time co-optimization of energy and ancillary services.
4. Price future ancillary services based on the shadow price of procuring the service.
5. Ensure that the price of any energy deployed from a reliability must run (RMR) unit reflects the shortage conditions that exist by the fact that there is an RMR unit.
6. Evaluate the need for a local reserve product.
7. Consider including marginal losses in ERCOT locational marginal prices.

It is not known if any of these improvements will be adopted soon, or ever. Each one has a potential effect on the recommendations for Denton's renewable resources, although mitigating actions aren't available for all of them.

An example is the proposal to change the market design to incorporate marginal line losses. This will add costs to resources that are farther from load zones. A change in the ERCOT market design to incorporate costs associated with marginal line losses would favor Coastal and North Texas wind resources because they would be closer to a load zone. These two wind resources would reduce the potential risk from the adoption of marginal losses, and CRRs would still be available to mitigate the risk to some degree.

5.0 Renewable Resource Portfolio Model Development

5.1 Modeling Factors

The following is a list of variables considered in qualitative and quantitative modeling:

- Natural gas prices
- Power prices
- ERCOT Hub North heat rates
- DEC heat rate and estimate of variable O&M
- Denton load growth
- Renewable resource production profiles
- Renewable Prices
- Basis costs (CRRs and locational basis floating price exposure)
- CRR prices, Point to Point prices
- Regulation changes (e.g., incorporation of Marginal Losses, Local Reserves, potential federal Solar tariff)
- PTC and ITC effects on supply and prices (curtailment frequency)
- Coal and natural gas plant retirements
- Renewable saturation in certain regions
- Lubbock ERCOT integration
- Proposed new resources

5.2 Portfolio Modeling

Correlation Analysis (Diversification)

An important aspect of modeling portfolio costs and developing a portfolio mix that meets the twin resource plan goals of least-cost and uncertainty (risk) reduction is to achieve as much diversification as possible in the supply portfolio.

One important measure of diversification is the correlation of various renewable resource production profiles. A portfolio comprised of renewable resources that are highly positively correlated would suffer from a lack of diversification. When one resource would not be producing, other resources would also not be producing. The goal is to assemble a portfolio with a mix of less correlated resources so that the overall portfolio production is more consistent. An excellent example of this is the match between Solar and a traditional wind resource like West Texas wind. West Texas wind typically produces more during off-peak (nighttime) hours and produces very little during summer on-peak hours (daytime), whereas Solar production is not existent at night and ramps up during the day, peaking during some of the most highly-priced on-peak hours.

Combining renewable resources with lower correlations reduces risk and improves overall supply portfolio correlation with Denton's load, and it improves forecast reliability. The main risk reduction is the combination of solar resources and wind resources. A typical correlation between the two ranges between -70% to -95%. Wind resource combinations have varying correlations due to differences in quality (e.g., higher capacity factor Coastal wind vs. West Texas wind) and location (e.g., West Texas vs. Panhandle). Very few commodity portfolios have the opportunity of such advantageous pairing of assets.

An additional diversification factor is the location of resources especially in regard to congestion exposure. Diversifying the supply portfolio reduces overall congestion risk exposure and also contributes to more consistent economic performance. An example is avoiding having all of Denton's renewable resources in the western part of ERCOT because it is the region with the highest congestion risk, second only to the Panhandle region.

Quantitative Approach

Portfolio modeling was based on a blend of correlation analysis and scenario valuation. Various mixes of renewable resource quantities, constrained by the results of the correlation analysis, were valued according to the ranges of natural gas and power price projections, along with related DEC dispatch scenarios, with the objectives of finding the least-cost portfolios with the lowest cost variability.

The production profiles of various renewable resource were screened to determine how the profiles performed against historical prices. This involved calculating the balancing costs for each profile to determine the net effective cost of each resource type. Balancing costs are a blend of spot market purchases of market power when renewable production fell short of load requirements, or DEC production when the DEC was a lower priced alternative to DAM purchases, and spot market sales of excess power when renewable production exceeded load requirements.

5.3 Portfolio Optimization

Introduction

An additional analytical technique can be applied to confirm the recommended selection of renewable resource assets to Denton's energy supply portfolio: portfolio optimization. In addition to the benefits of a 100% renewable energy supply, Denton will benefit from the reduced cost variability of a well-diversified supply portfolio. Diversification is achieved with an optimal mixture of resources so that the power supply portfolio performs with the lowest risk while meeting Denton's power supply risk management objectives.

Quantifying the optimal resource mix is accomplished by measuring the returns, and the variance and covariance¹ of the individual resources, over an appropriate period of time. In other words, this approach optimizes the asset mix of a portfolio based on the periodic returns of each resource, the volatility of each resource, and the correlations between resources. This is a widely accepted approach to portfolio design following the Modern Portfolio Theory ("MPT") developed by Harry Markowitz (who won a Nobel Prize for developing MPT). MPT is a theory of optimal diversification; based on historical data and measures of asset returns, risk and correlations, MPT selects the optimal diversification portfolio mix.

MPT is used to model portfolios with the aim of maximizing expected portfolio return for a given amount of portfolio risk. The objective is to select a proportional combination of assets that collectively has lower risk than any individual asset. The lower portfolio risk is achieved by the lack of perfect correlation among the assets.

Portfolio optimization can be used to measure the optimum percentage weighting of each prospective asset in a portfolio. It balances the risk of the individual assets with the return for each asset. Typically, higher return assets are riskier (i.e., they have a higher variance or standard deviation of returns). Additionally, an asset's correlation to other assets will determine the best fit in a portfolio. The optimization allows the portfolio to measure the tradeoff between the riskiness of an asset with the return of that asset and the fit of each asset in the portfolio.

The optimization model used for the City of Denton's renewable portfolio was developed by Robert F. Stambaugh of the Wharton School of Business –The University of Pennsylvania (<http://finance.wharton.upenn.edu/~stambaugh/port3.html>).

The user can select different levels of assets in the portfolio. For the purpose of this analysis, a three-asset portfolio was assumed. The reason for this assumption is that Denton has already purchased two renewable assets: Santa Rita Wind and Blue Bell Solar. This has limited the

¹ Variance is an intermediate step in calculating historical price volatility, and covariance is an intermediate step in calculating a correlation coefficient.

choices that can be made to fulfill the renewable goals of 70% and 100%. The choices are now limited to the incremental amounts to reach those goals.

In the input, the following numerical identifier represents the renewable assets under consideration to fill the renewable goals. The optimization goal is to give some guidance as to the relative percentage to add to the portfolio through solicitations to the market. Denton will have only those choices that the market offers. There is a common misperception that the RFPs can ask for terms and conditions that are not non-standard and the seller must respond. Extensive experience with successful RFP's shows that buyers should craft their solicitations around standard and transparent terms and conditions, and this results in a lower purchase cost for the buyer.

The three assets under consideration in the optimization:

1. Solar Asset
2. Santa Rita Wind Asset (West Texas type wind)
3. Coastal Wind Asset

The return, standard deviation, and correlations for each asset can be found in the input table. These were measured using ERCOT prices to calculate an hourly market cost for each asset's hourly production. Renewable production was used to calculate each asset's profile cost using the price of the resource. The two cost matrices were subtracted and this created a net revenue profile matrix for each asset. The renewable asset average returns were calculated for a year for each asset type. The test year used in these simulations was 2014. Other ERCOT price years were tested and yielded similar results.

Figure 5 – 1 Portfolio Optimization Input Table

Portfolio Optimization: Inputs

Assets in Portfolio: 3

To select a different number of assets, return to the [main menu](#).

Objective Function:
 $E(R) - 0.5 * 2 * \text{Var}(R)$
 (Enter coefficient of risk aversion)

Compute:
☐ a two-asset rebalancing to improve the objective
☒ the portfolio that maximizes the objective

Please enter all numerical values in decimal form - e.g., a 4% mean return would be entered as .04, not 4.0.

Initial Portfolio Parameters

Asset #	Asset Parameters		Portfolio Weights		
	Mean	Std Dev	Initial Weight	Lower Bound	Upper Bound
1	59	61	34	2	35
2	41	74	33	2	8
3	53	69	23	2	8

Correlation Matrix

Asset #	Asset #		
	1	2	3
1	1.000		
2	21	1.000	
3	41	92	1.000

Note that there is a hierarchy of outcomes that explains the strong preference of solar to the other two assets, and the preference of Coastal type wind to West Texas type wind profile and cost. This is the relationship that the higher return assets are also the lowest standard deviation assets. This runs counter to typical assets like stocks and bonds, where typically the highest return assets also have the highest standard deviation of returns. Once this relationship is identified, the outcome is expected. The optimization will choose the lowest risk asset with the higher return. Solar produces during the day, especially during the on-peak hours where the returns from a fixed price hedge are higher. Coastal type wind also has a significant on-peak production profile when compared to West Texas wind.

Model Outcomes

The model asks for a *risk aversion* coefficient for Denton. The selection was to choose an average coefficient of 2 (see Figure 5 - 1). Risk aversion is required for the model input, and in portfolio theory it measures the outcome compared to the risk-free rate (i.e., typically the rate of a 1-year U.S. Treasury Bill). This is not germane in the selection of energy supply portfolios, and increasing and decreasing the coefficient did not change the outcomes in this three-asset model.

The model shows that Solar comprising 35% (additional 200 MWs) or greater is always selected (see Figures 5 – 2 and 5 - 3). The label “Initial Weights” are shown in each table and the optimized model outcome percentage weights are listed under the label “Final” weighting table.

Figure 5 – 2 Upper Bound Limits for Solar and West Texas Wind

PORTFOLIO CHARACTERISTICS				
		Initial	Final	
Expected Portfolio Return		50.720%	52.700%	
Standard Deviation of Return		56.277%	56.221%	
Objective (Certainty Equivalent)		19.049%	21.092%	

PORTFOLIO COMPOSITION				
Asset	Weights		Bounds	
	Initial	Final	Lower	Upper
1	0.340	0.350	0.200	0.350
2	0.360	0.200	0.200	0.400
3	0.300	0.450	0.200	0.800

Weights Among Positive-Variance Assets			
Asset	Initial	Final	
1	0.340	0.350	
2	0.360	0.200	
3	0.300	0.450	

Derivatives of the Objective Function			
Asset	Initial	Final	
1	16.518%	13.630%	
2	-33.058%	-29.817%	
3	-21.123%	-20.719%	

Figure 5 – 3 Upper Bound Increased for Solar / Lower Bounds Decreased for Coastal and West Texas wind

Portfolio Optimization Results

PORTFOLIO CHARACTERISTICS				
		Initial	Final	
Expected Portfolio Return		53.057%	56.416%	
Standard Deviation of Return		49.591%	53.504%	
Objective (Certainty Equivalent)		18.800%	27.533%	

PORTFOLIO COMPOSITION				
Asset	Weights		Bounds	
	Initial	Final	Lower	Upper
1	0.125	0.620	0.150	0.650
2	0.330	0.000	0.000	0.800
3	0.300	0.380	0.000	0.550

Weights Among Positive Variance Assets			
Asset	Initial	Final	
1	0.125	0.620	
2	0.330	0.000	
3	0.300	0.380	

Derivatives of the Objective Function			
Asset	Initial	Final	
1	28.633%	3.915%	
2	-11.743%	-0.511%	
3	-21.123%	1.932%	

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The outcomes show that unless (limit the upper boundary) the amount of solar is constrained, the weight of Solar would reach 67% as seen in Figure 5 - 3. This would produce too much solar for Denton at around 400 MWs. The expected on-peak hedged level would be approximately

275 MWs considering all of the current and proposed assets in the portfolio. Limiting the outcome to 200 MWs produces a weight in the portfolio of around 35%. Limiting the outcome for West Texas wind via the lower boundary is also needed, otherwise the optimization would choose 0% (see Figure 5 - 3), and this would not reflect Denton's commitment to Santa Rita.

The portfolio optimization model selected additional Solar and Coastal type wind to be added to the portfolio. It does not select other types of additional wind into the portfolio.

5.4 Demand Response Side (Demand-side Management)

ERC strongly supports and advocates Demand Response and Demand-side Resources. These include residential, commercial and institutional solar, community solar, ERCOT's Emergency Response Service ("ERS") program, and battery storage. Storage is particularly intriguing because the lack of it is one of the main distinguishing characteristics of electricity as a commodity, and is one of the main drivers of electricity's high price volatility. The industry is just on the cusp of commercially viable battery storage, in terms of battery performance capability and cost.

This resource plan and its supply portfolio modeling does not incorporate the potential benefit of demand-side renewable resources for the present, although demand-side resources will be an important part of the future.

In the compressed project timeline for this resource plan, the best course of action is to follow the Pareto Principle (aka the 80/20 rule) and address the small set of issues/variables that will have the greatest impact on Denton's goals. The primary focus in this resource plan is on the issues that will have the greatest near-term impact and benefits for Denton.

The main issue is that Denton is facing near-term critical path issues and multiple risk factors in the present and near future regarding renewable resources. The fuse has already been lighted on a renewable resource acquisition strategy, and specific large-scale issues must be addressed in short order, including the initiation of delivery for a large wind PPA in early 2018, and near-term purchase decision deadlines taking into account the lead time necessary in securing PPAs for renewable resource projects to meet Denton's initial goal of 70% renewable resources.

An immediate gap analysis was needed to identify best-fit renewable resources to achieve as much diversification as possible in Denton's supply portfolio. And this resource plan played catch-up with a RFP process for renewable resources that was already underway. Other near-term issues that demand primary focus in the compressed evaluation timeframe include the potential for a federal tariff on imported solar PV panels, the uncertain future of low renewable resource prices in the wake of announced curtailments of conventional generation, and the pricing effect of the scheduled reduction and eventual elimination of federal tax credits.

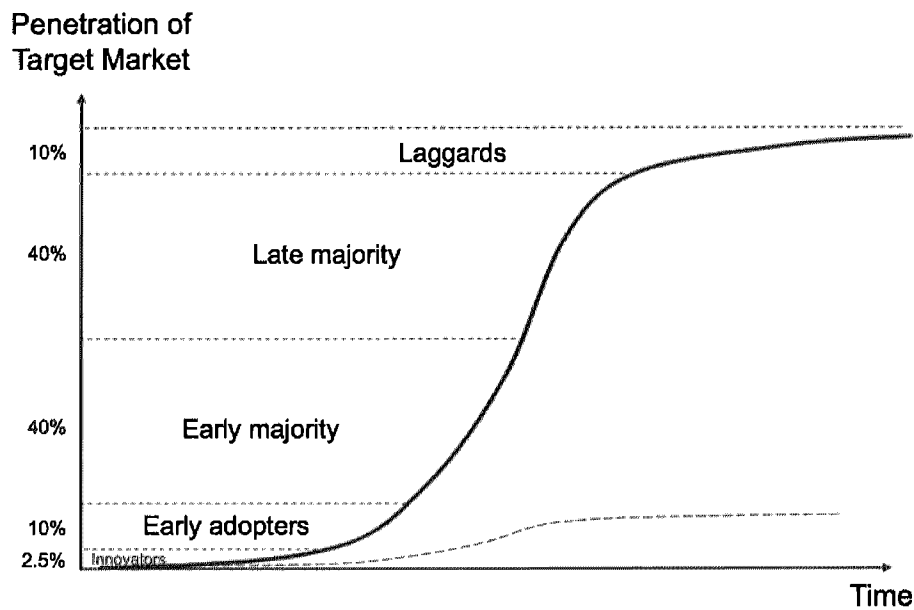
Critical path issues also include developing the operational process requirements to optimally manage a renewable resource power supply portfolio in order to avoid the substantial risks of suboptimal and inefficient portfolio management.

As mentioned previously, Demand Response and other demand-side management programs and assets have an important role to play, and will benefit from a longer timeframe for planning and decision-making. How a utility chooses to incentivize demand-side resources in order to reduce and not increase operations risk requires careful coordination with rate design. For example, some utilities have found that limited penetration of residential solar is the best fit for portions of its distribution system, and thus require irradiation studies to target optimal rooftops within neighborhoods as well as a rate incentive mechanism designed to cap roof-top solar at acceptable levels.

Demand-side distributed generation also requires careful planning based on potential ERCOT interconnection requirements, special NOIE reporting requirements, Resource Entity registration, and specific metering requirements.

Careful consideration must be given to the cost impacts of demand-side resource development. Storage is an intriguing option, but it is just now on the cusp of commercial viability. Figure 5-1 represents a typical adoption curve for new technologies. Enormous increases in battery storage capability (storage capacity and duration) and substantial decreases in cost will occur as the technology transitions into the Early Majority stage. At present, the technology is in the Early Adopter stage. Denton should carefully consider the cost impact of early adoption. A useful example is Austin which has been an early adopter of renewable resources, and has high-priced wind and solar resources in its portfolio. Current prices for wind resources are in the \$12 to \$22/MWh range, and solar resources are in the mid-\$20/MWh range, whereas just a few years ago wind prices were offered between \$40 to \$65/MWh and solar was as much as 5 to 7 times the price of current offers. Austin's Webberville solar project has a cost of \$165/MWh.

Figure 5-4



A potential offset to early adopter cost premiums could be financial assistance from the Texas Emissions Reduction Plan (“TERP”) program which offers financial incentives to local governments, among other entities, for new equipment that contributes to pollution reduction. They have several grant programs including a New Technology Implementation Grant (“NTIG”) program to “provide incentives to assist in the implementation of new technologies to reduce emissions of pollutants from facilities and other stationary sources.” More information can be found at <https://www.tceq.texas.gov/airquality/terp>.

Demand Response programs and other demand-side resources, with careful planning and design, can make a useful and important contribution along the timeline as Denton moves from its near-term goal of 70% renewable resources up to its longer-term goal of 100%. An additional discussion of this subject is in the “Gradual Adoption Path” portion of section 6.4 The Path to 100% Renewable Resources.

6.0 Reporting & Summary Analysis

6.1 The Denton Energy Center

The DEC will play a role in Denton’s renewable resource portfolio as a cost hedge during certain super high-priced hours.

As discussed previously, the greatest challenge in managing a power supply portfolio comprised of renewable energy resources is balancing the supply portfolio around the intermittent production of renewable power plants.

Balancing the supply portfolio is often referred to as “firming” inadequate supplies. As explained previously, in the ERCOT energy-only market, firming is not an explicit requirement. ERCOT automatically “firms” inadequate supplies to meet all load requirements – the important focus is on managing the “firming” in a least-cost manner, both in terms of energy balancing purchases/sales and managing congestion price risk.

The results of the quantitative modeling employed for this resource plan show that the DEC should not be the sole resource used to “firm” a renewable resource portfolio. Using the DEC as a sole hedge is not the least cost and lowest risk option for over 75% of the hours in a year. The low heat rate associated with most of the hours in the DAM will allow Denton to firm intermittent renewable production with spot market purchases at a lower cost than the DEC while avoiding congestion and price risk.

According to DEC performance data provided by Denton, the DEC variable cost at today’s Heat Rate is 9.7 MMBtu per MWh. This assumes an 8.3 fixed heat rate at the high sustained limit and variable operating costs of \$3.8 per MWh. At current natural gas prices the variable cost translates to a 1.4 heat rate.

As can be seen in the ERCOT resource price stack data in Section 3.0 Information Gathering, many hours of the day are likely to be below the effective heat rate of the DEC. For example, considering the ERCOT load and price projections used for this resource report, at a marginal heat rate of 8 and natural gas prices of \$3 per MMBtu, a market price of \$24 per MWh would be available for purchases to supplement intermittent renewable resource production. Because this is lower than the expected cost of the DEC, a market purchase at Load Zone North would be made to balance Denton’s portfolio. The DEC would not be used to hedge this risk because it would result in an increased supply price of over 1.7 heat rate or \$5.10 per MWh before the Dec would dispatch.

The cost of dispatching the DEC and not using market purchases to hedge the supply risk could produce an increased cost of over 20%. The Dec cost would be 9.7 heat rate at a \$3 gas price (\$29.1/MWh) versus a DAM price of an 8 heat rate at a \$3 gas price (\$24/MWh).

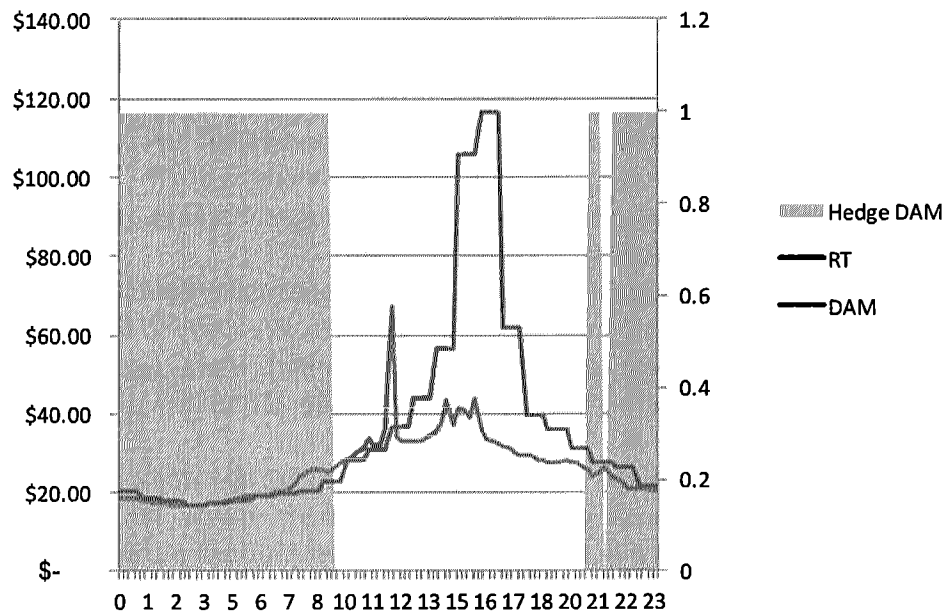
In addition, the DAM is a fully hedged price, whereas the DEC would include the potential of basis loss because the DEC would need Point to Point purchases that match exactly the energy amount consumed by Denton in the RT. Because the dispatch is unknown, the Point to Point would have to be purchased against an energy dispatch. A DAM at Load Zone North does not need the purchase of a Point to Point basis hedge. It would settle the resource CRR in the DAM. And note that this is a conservative difference because of the ramping and effective heat rate of the DEC will be higher than the 9.7 heat rate until the DEC is running long enough to reach its high sustained limit.

An example of when the DEC would be dispatched rather than using DAM purchases to hedge a supply shortfall is in Figure 6-1. During a peak demand month such as August, the DEC might be

dispatched about half of the time (the periods of time without the green shading). But in this example, even in a month like August, using the DEC as a hedge is likely not to be the least cost and lowest risk alternative for approximately 50% of the time. Figure 6-1 also shows that during DAM purchase hours (the hours shaded in green) the difference between the DAM fully-hedged price and the variable RT price is negligible (average of \$0.44). Participating in the RT would be a large disadvantage to Denton because of higher risk but little-to-no benefits. This begs the following question – is taking the higher risk in the RT worth saving the 44-cent difference? Conservative hedgers and risk managers would answer that question with a resounding “no!”.

Figure 6-1

August Day Example



Advantages and Disadvantages of the DEC

Advantages:

- The DEC is a heat rate hedge (note that it is not an energy cost hedge unless the price of natural gas is fixed)
- It will reduce cost risk for Denton because at certain times it will be dispatched during price spikes.
- It also provides a long-term hedge benefit in the event of accelerated retirement of conventional fossil fuel generation resources in ERCOT that may elevate heat rates.

Disadvantages:

- As a higher heat rate generator, it offers no pricing power and offers no competitive advantage.
- ERCOT manages the system so that heat rates don't vary much (see Figure 1)
- Its value to Denton requires that natural gas prices go up substantially in the future.

Additional Alternatives for Extracting Value from the DEC

- Based on the last bullet point under disadvantages, Denton should be prepared to sell DEC output forward when or if there is a spike in natural gas prices. Natural gas prices tend to revert to the long-term mean after price spikes, so that increased value due to a price spike may be transitory and should be taken advantage of.
- The DEC can be used to sell firming services to other organizations looking to add renewable resources. This can mean that the DEC is not used as a producing generator, but as a contingent financial hedge (i.e., the actual dispatch and fuel use may be unchanged but the revenue from the resource will be increased). This is because at the time Denton might be obligated to provide firming energy, market purchases are more likely than the DEC to be the least cost alternative.
- As previously discussed, because of the mismatch in seasonal production profiles of renewable resources versus Denton's load profile, there are likely to be periods of time when Denton will have excess supplies (e.g., in the Spring). It may be beneficial to sell excess renewable power during these periods using the DEC to firm the transaction.

Takeaway: The DEC will serve a role as a supply cost hedge to firm Denton's renewable resource portfolio, but based on the financial evaluation in this resource plan, the majority of firming the supply portfolio will be more economically efficient through purchases in the DAM. Denton should look for opportunities to sell a portion of the DEC forward during natural gas or heat rate spikes, and for opportunities to sell firming services or to firm sales of excess renewable supplies.

6.2 The Benefits of the Denton Renewable Portfolio ("DRP")

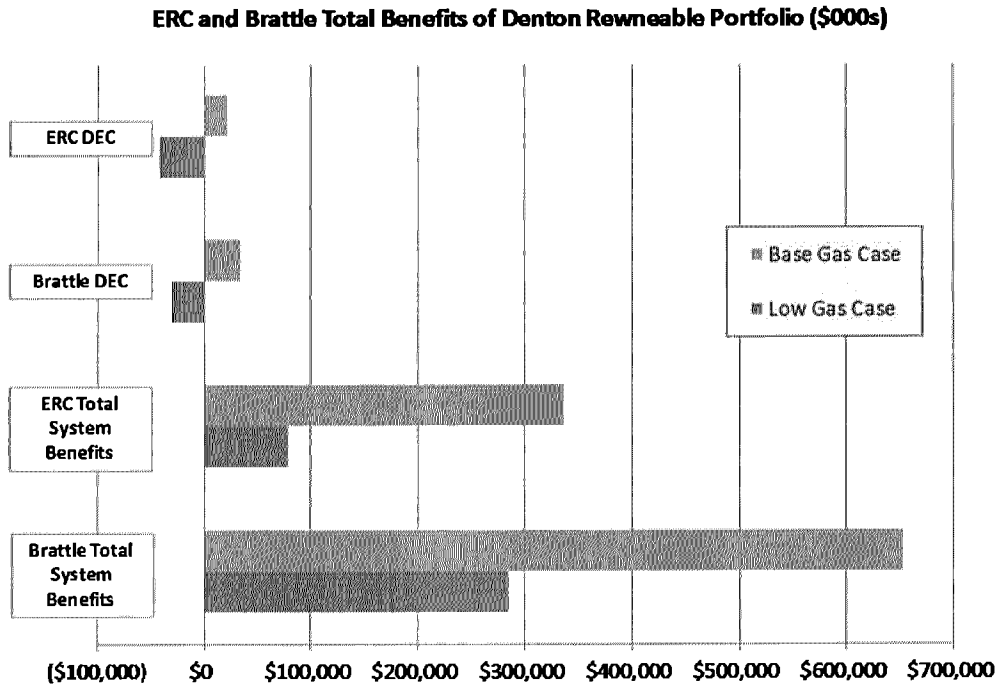
Figure 6-2 shows the projected financial benefits of the DRP based on the range of price projections used in the analysis for this resource plan. This is based on a portfolio where the 70% goal reached and maintained until 2023, and then additional Wind and Solar are purchased to reach 100%. Every year enough renewables are purchased to keep up with load growth.

The chart projects the financial performance of Denton's supply portfolio based on a range of future prices. Positive benefits would result through avoided additional costs if prices rise in the future. Negative values would result from low price outcomes.

The main takeaway is that the Total System Benefits are completely dependent on the price of natural gas. This is true because natural gas sets the power price in most markets because it is the marginal fuel in most markets. This is especially true in ERCOT because of its large fleet of natural gas units. If gas prices rise, power prices will rise as a result, and over time Denton's fixed-price renewable resource supply portfolio would result in avoided costs from the higher power prices. That is the measure for benefits for both Brattle and ERC evaluations. But if gas prices do not rise, power prices will stay around the current prices and as a result, Denton's fixed-price renewable resources will not avoid higher market prices and fewer benefits would result. This is the biggest uncertainty in the entire evaluation. This difference between high

natural gas prices and lower natural gas prices is a change in total benefits of approximately \$575 million in 2018 dollars.

Figure 6-2



6.3 Risks and Opportunities in Selecting Renewable Resources

6.3.1 Resolving the Renewable Status of the Whitetail Supply

Denton can reach its 70% renewable goal with additional renewable resources from the current RFP submissions. The additional energy to reach the goal ranges from approximately 9% (140,000 MWh) of its load to 27% (400,000 MWh) of its load. This range depends on whether or not the Whitetail resource is designated as a renewable resource. More renewable energy is needed if Whitetail is considered a conventional resource. In terms of energy, a single wind resource could cover either the additional energy needed (100 MWs of wind is equal to approximately 400,000 MWhs). Or additional solar could be selected along with a wind resource (100 MWs of solar is equal to approximately 220,000 MWhs of energy).

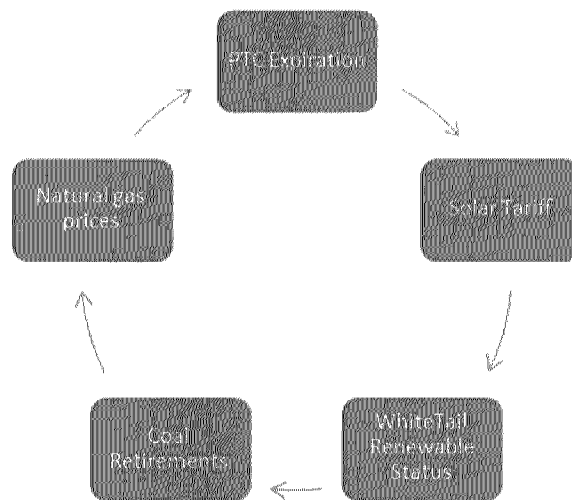
The current energy supply portfolio falls far short of a balanced and diversified portfolio because solar is only 30 MWs. The portfolio is also unbalanced because a large amount of the renewable supply is a low on-peak West Texas wind profile (Santa Rita). Adding the Bluebell solar (30 MW) resource will still produce very little summer on-peak production. The DEC is a heat-rate resource and therefore does not contribute an energy hedge during peak hours (i.e., it is a heat rate hedge only until the price of natural gas is fixed).

This leaves Denton with an on-peak energy supply gap. A minimum of 90 to 120 MWs of solar would help balance the portfolio against a scenario where natural gas price increases raise the power price and lower the market heat rate. Therefore, to reach the 70% goal at a minimum, another 70 MWs of Solar should be considered as an addition to the portfolio. If Whitetail is not counted, an addition of another 120 MWs of Solar should be considered, with wind representing the balance of energy needed to reach the 70% level.

6.3.2 Planning Risks

There is a series of known risks that could drive Denton to accelerate reaching the 100% goal, or decelerate reaching the 100% goal past 2024. These risks are labeled in Figure 6-3. The next section will discuss some of these risks.

Figure 6-3



A particular risk in the acquisition plan is that there is a possibility of a federal solar tariff. It is not clear how the tariff will affect prices or the term of the additional costs, but preliminary estimates are that it could increase average costs of solar from the current \$25/MWh up to \$40/MWh. Under the current price environment \$40/MWh is not competitive with wind resources.

An alternative to avoiding the solar tariff is that Denton could acquire more Coastal wind resources that feature the characteristic summer peak production profile. This is the closest substitute for solar among the renewable resources. A second alternative is utility-scale wind resources with a storage component, now or in the future. Altering the profile of West Texas wind into a more on-peak production profile will improve hedge effectiveness. A third alternative is to purchase solar as the tariff prices and supplies readjust to market conditions or the tariff is no longer an issue. Denton can wait and test the market prices after reaching the 70% level. Waiting on solar would decelerate reaching the 100% goal.

A recent spate of announced coal retirements totaling 4.2 GW of generation capacity from Vistra Energy (Monticello, Sandow, and Big Brown) may increase power prices during the next few months. This is likely to have much less impact on the price of wind versus the price of solar because baseload coal plants count in the market at their full rated capacity amount. Solar counts at only 77% of its installed capacity in ERCOT and West Texas wind counts only 18% of its installed capacity. This could accelerate the amount of wind purchased by Denton, especially Coastal wind as a substitute for solar.

A second accelerator that should be considered is that the PTC has already reduced the subsidy to wind producers. The supply of wind may be at its maximum now because of the rush to beat the expiration date of the PTC. Because the supply of available PPAs is highest now, this could be an inducement to accelerate the acquisition of wind in a buyer's market.

The current natural gas market is reacting to low commodity prices. Natural gas is a byproduct in many regions. This means that it is a product that does not stand on its own economics for production, but depends on the crude oil (natural gas is frequently produced in association with crude oil) or natural gas liquids markets to provide revenue from production. The number of drilling rig dedicated to drilling for gas has declined to a multi-year low. At the same time, demand for exports of this low-cost commodity has been driven up to levels never seen before. Low prices have caused large substitution of the natural gas for coal in the electric power sector. Coal-based power plants are closing all over the country. In the past, when steady increases in demand for natural gas have met with a lower number of drilling rigs over a several-year period, natural gas prices have increased dramatically (e.g., the early 2000s saw prices double and then triple over a few-year period). This recognition of the risk to natural gas prices could act as an accelerator to Denton's acquisition plan.

6.4 The Path to 100% Renewable Resources

Denton has adopted the goals of 70% renewable resources ("RE 70") in its power supply portfolio by the end of 2019, and 100% ("RE 100") by 2035. The evaluation in this resource plan indicates that the RE 100 goal is achievable much earlier than 2035. There is no financial penalty or premium to moving from a 70% renewable resource goal to a 100% renewable goal. This is a decided advantage of ERCOT's energy-only market design. In the ERCOT energy-only market, PPAs are needed by all consumers without sufficient generation resources if they wish to lower their supply cost volatility. It is standard practice for consumers to hedge up to 100% in this market to avoid price risk.

Not only is there no penalty, but because wind and solar PPAs and conventional PPAs are both composed of the same product (i.e., they are all composed of electric energy priced in \$/MWh), they are substitutable. If a consumer wants to establish a 100% supply hedge, it is easier to achieve through daily portfolio balancing with a renewables portfolio than with conventional block purchases. Both renewables and conventional block purchases need to have DAM purchases and real-time sales to match the variable weather-influenced load profile. The difference between the two is just a matter of degree as to the ratio of solar and wind PPAs

acquired and the spot market disposition of the supply. Because solar PPAs cover on-peak supply exclusively, spot market balancing transactions are less risky and costly than the on-peak load-following purchases required with a supply portfolio of conventional forward block purchases. And if wind resources are matched with solar, the combined production profile offers less risk than that of a convention block, with the resulting production better matching the profile of load.

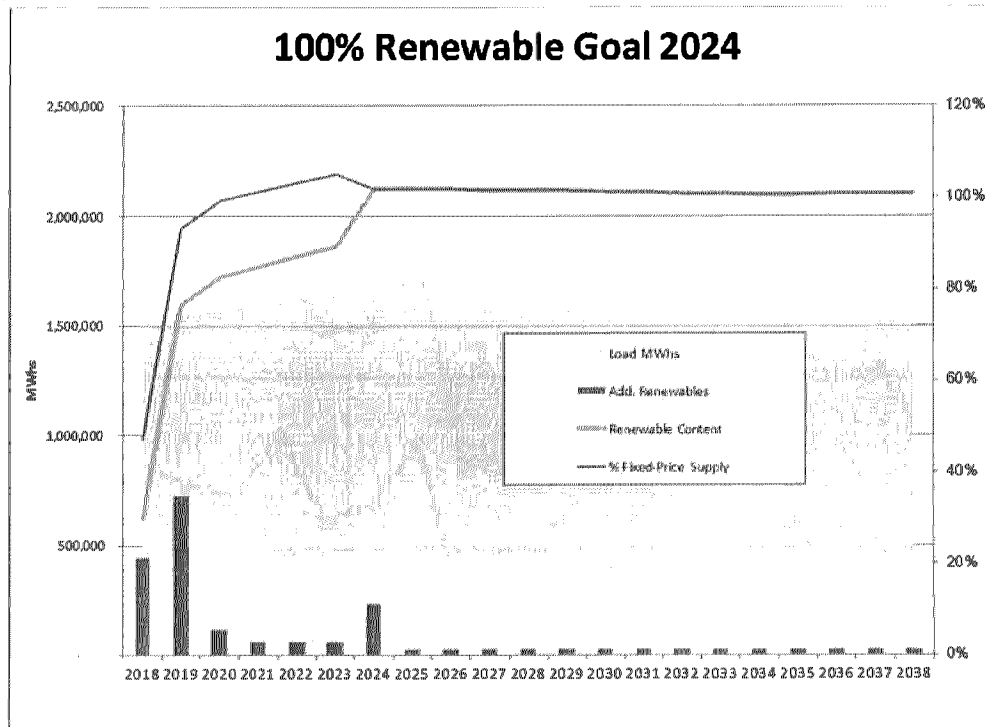
Gradual Adoption Path

Denton has several paths to choose from to reach its RE 100 goal. But the first Denton Renewable Portfolio (DRP) goal is RE 70 by the end of 2019.

The RE 70 level can be achieved by executing PPAs for low-priced supplies that have been offered in the current Renewable RFP (Oct 4, 2017). Because this RFP has several viable low-cost supply options, Denton can easily achieve the 70% level by selecting the lowest cost and lowest risk supplies for its current supply portfolio. Figure 6-4 shows a possible outcome to achieve this 70% goal, and eventually the 100% goal by 2024. The chart includes Denton's load, seen as a gradual increase in the light blue shaded area, additional renewable purchases labeled "Add. Renewable" and depicted by the red vertical bars, and lines showing the progression of the proportion of renewable resources and of the amount of supply with fixed prices.

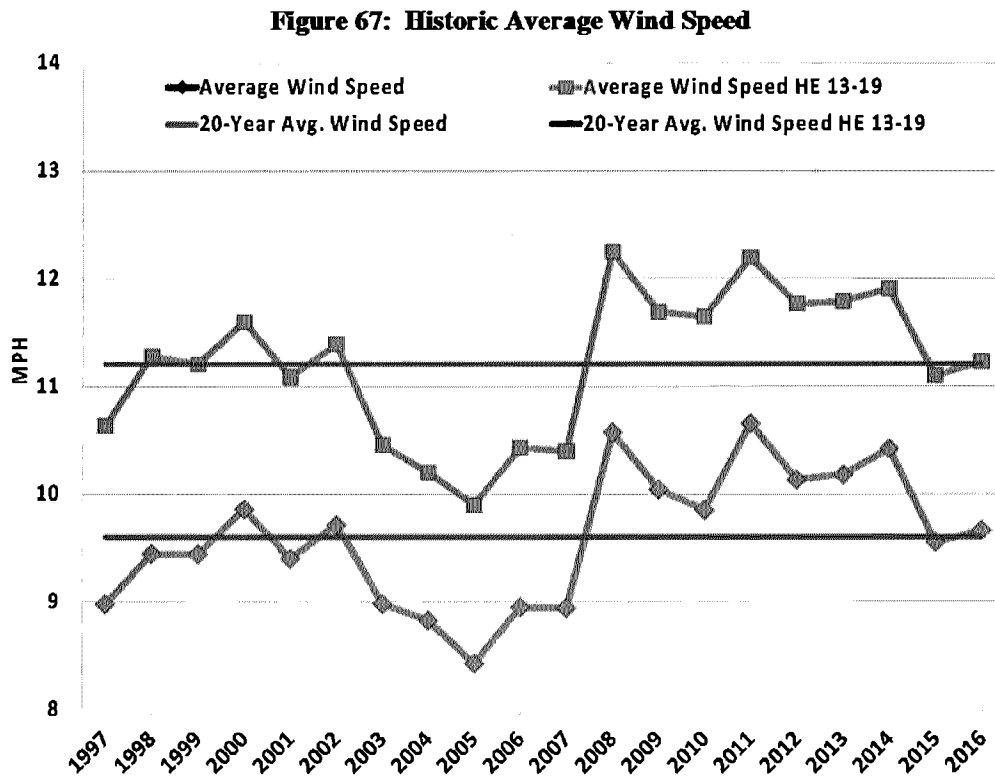
In the chart, the NextERA Whitetail supply is not counted as a renewable source because it is not a physical renewable source, but uses Renewable Energy Credits (RECs) to claim renewable status. An alternative scenario is included later in this discussion that counts the NextERA Whitetail supply as a renewable energy supply. In either case, additional physical renewable supplies are required. Depending on the location, price, congestion environment, and the production profile of the resource, more supply may be added above the additional 47% of load in energy purchases that are needed to achieve the RE 70% goal by 2019.

Figure 6-4



Why possibly purchase more than the 47% needed to meet the RE 70 goal? The amount of additional supply is a function of the uncertainty of renewable production. The amount of wind production can easily vary by 15% on an annual basis. Figure 6-5 show historic average wind speed in ERCOT over the last 20 years. The chart shows the 20-year average for both a 24-hour period and a 7-hour on-peak period, as well as the annual deviation from the 20-year average. This variability in wind speed will affect the amount of wind production. Some years may be 10% over expected production, others may be 10% under, and if Denton wants to make sure that it has at least 70% **at a minimum in every year**, it may need to buy additional supplies above the goal, taking into account the annual production variability.

Figure 6-5



Another part of the acquisition path depicted in Figure 6-6 is the assumption that Denton will purchase shorter term (1 to 4-year duration) renewable resources to adjust the RE goal to reach 100% and to constantly maintain that level.

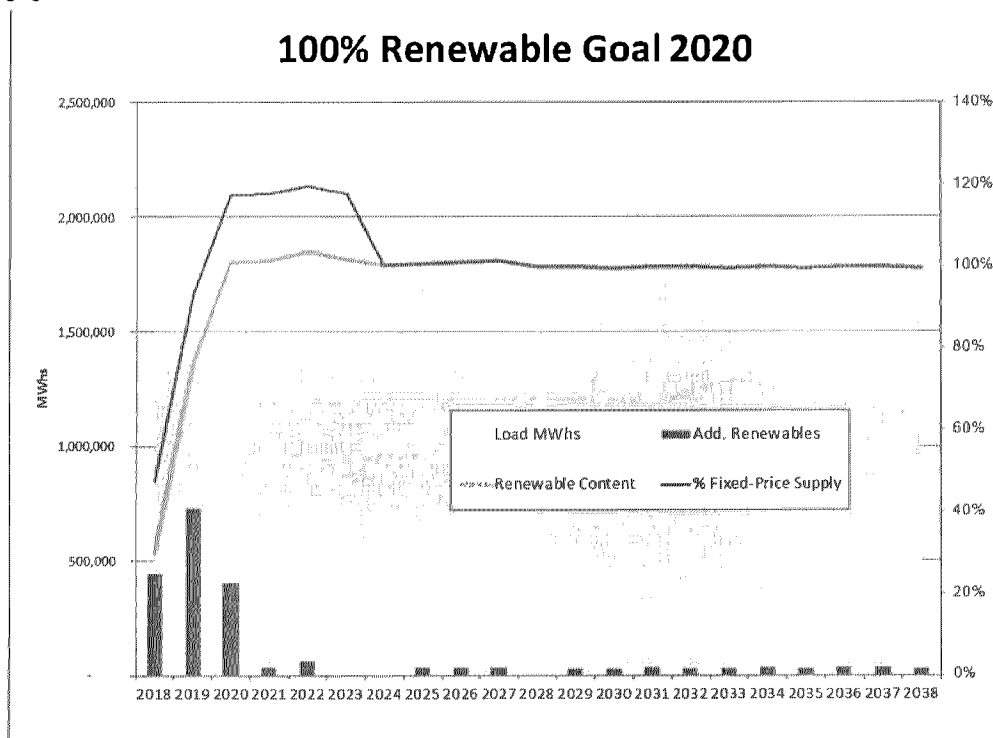
Constantly maintaining a target level can be done with a variety of renewable resources and demand-side management programs. These should include energy efficiency and adjustments to load from rooftop solar installations, battery (storage) installations, Demand Resource programs and any other influences that affect demand. This is a lower-risk strategy because it is flexible, and allows new technology and commercial programs like household battery storage and electric vehicle introduction that are uncertain as to the rate of adoption and cost impact. The magnitude of adoption might be far larger and faster than currently expected. This could be termed a “Wait and See” strategy.

Besides the new acquisitions that are needed by next year to reach the RE 70 goal, another larger supply is the replacement of the Whitetail NextERA supply in 2024 because the contract ends in December of 2023. This acquisition is seen under the “Add. Renewables” category which shows the annual RE PPAs acquired in each year.

Early Adoption Path

A second path for achieving the RE 100 goal is earlier adoption. This path is predicated on the fact that the PTC that benefits wind development is ending. The loss of the subsidy will substantially reduce the number of future wind installations in the state under current regulations and economic conditions. The current low-cost PPAs for wind may not be available in the future. Denton would accelerate the wind PPAs acquisition to produce the RE 100% goal four years earlier, in 2020 rather than in 2024, as shown in Figure 6-6.

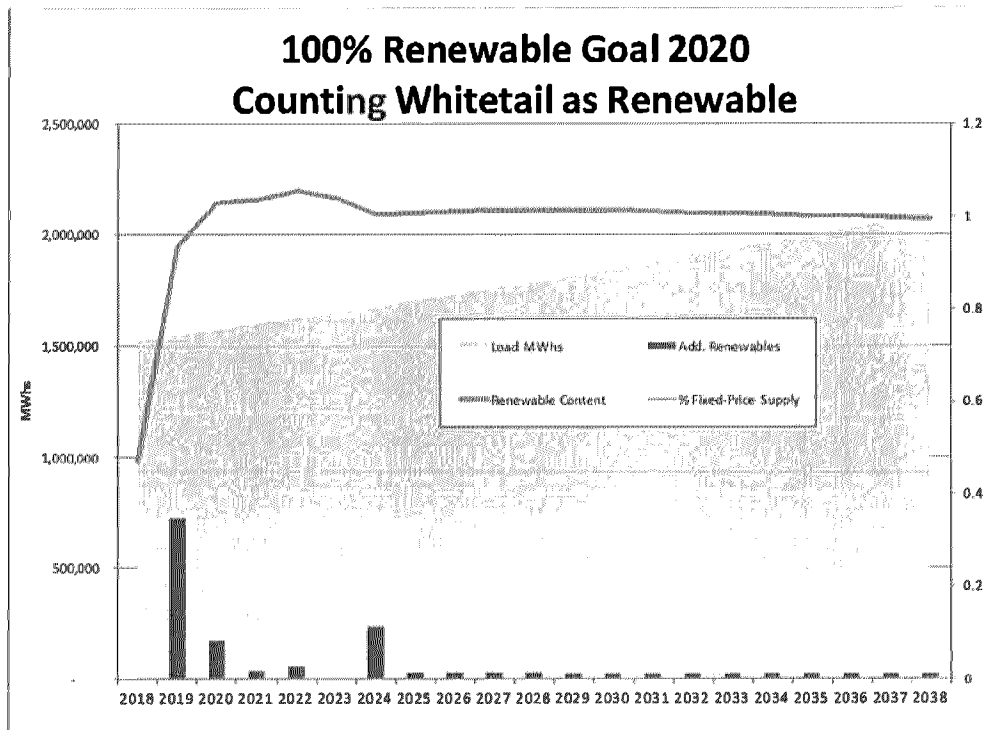
Figure 6-6



This accelerated wind acquisition would result in excess power supply over the next few years due to the Whitetail non-renewable resource, and Denton would have to manage fixed-cost risk (the risk of market prices falling because Denton would have more supply than its load for 4 years). If the Early Adoption path is selected, the excess power supply would be approximately 18% for the years 2020 through 2023. The excess supply would end with the Whitetail contract expiration. This is a potential advantage because it removes the additional demand for a renewable resource purchase in 2024 if renewable resources are more expensive in the future. This path corresponds to the potential for a natural gas rate shock in the next few years as the low rig counts could cause a natural gas price shock while the industry spins up to meet the large increases in demand that will be driven by growth of liquefied natural gas ("LNG") exports and by the increasing retirements of coal-fired generation units in the grid.

Including the NextERA Whitetail supply in the renewable category will also accelerate the RE 100 goal to 2020. But it also requires replacement of this energy in 2024. This is depicted in Figure 6-7. The principal advantage of this scenario is that it doesn't produce additional fixed-price supply (the 18% excess supply discussed previously). The principal disadvantage with including Whitetail in the supply portfolio is that it could cause an audit risk as to the validity of its renewable status. The REC program does not require load to be tied to actual contemporaneous renewable production. It can be from any renewable resource or combination of resources. It can be used in an abstract financial sense. The credits could be used to represent production in previous years and do not represent a contemporaneous physical offset. Because these RECs are not tied to renewable costs, there is a great deal of controversy about their use. This is particularly problematic for a municipal utility that is exempt from the Renewable Portfolio Standards that enabled this program, and it could increase the organization's reputation risk.

Figure 6-7

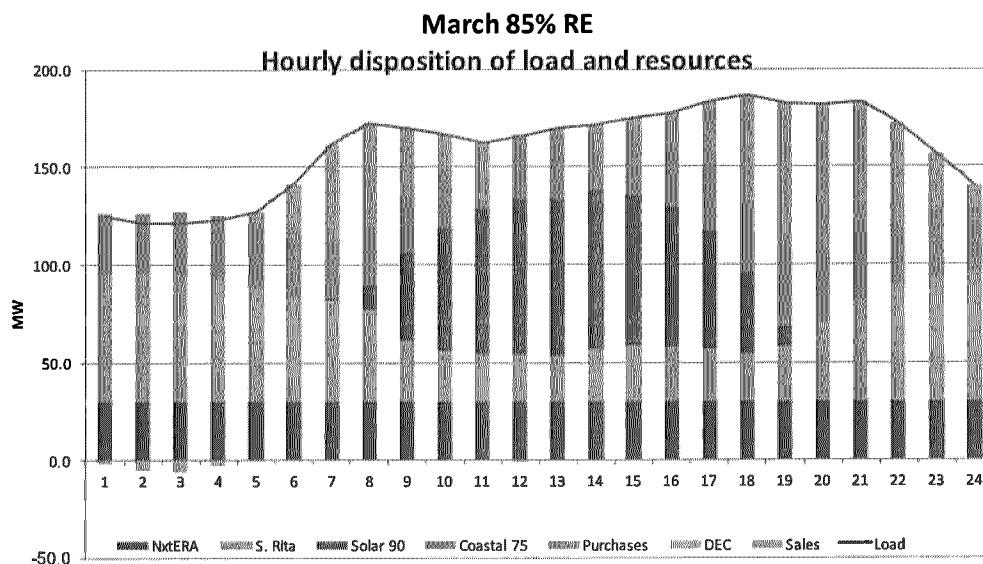


6.5 Additional Considerations

The analysis and evaluation for this resource plan assumes that Gibbon's Creek will be decommissioned by 2018.

An 85% renewable goal may be a natural fit based on Denton's load and the daily and seasonal production profiles of renewable resources.

Figure 6-8



For example, consider the month of March. The chart in Figure 6-8 shows a typical disposition of resources in the month of March at an 85% renewable goal. March is the time of year that would typically require a lot of excess sales of energy due to seasonally high wind production. But at 85% renewable (which would leave open 15% of Denton’s load), only minimal sales in some early-morning hours would be required as can be seen by the bars in the chart that extend below 0. “Solar 90” and “Coastal 75” represent prospective purchases of those resources at 90 MW and 75 MW respectively. At a 100% renewable goal, there would be much more excess sales in certain hours. So, an 85% renewable goal may be a more natural fit to reduce the impact of sales of excess supply.

Potential risk is affected by how Denton chooses to reach its renewable goal. Different combinations of renewable resources will change where Denton will be long and short in certain hours and during certain times of year. For example, a greater amount of Coast wind could be substituted for Solar. This could reduce the potential risk to Denton of a retroactive Solar tariff.

Figure 6-9

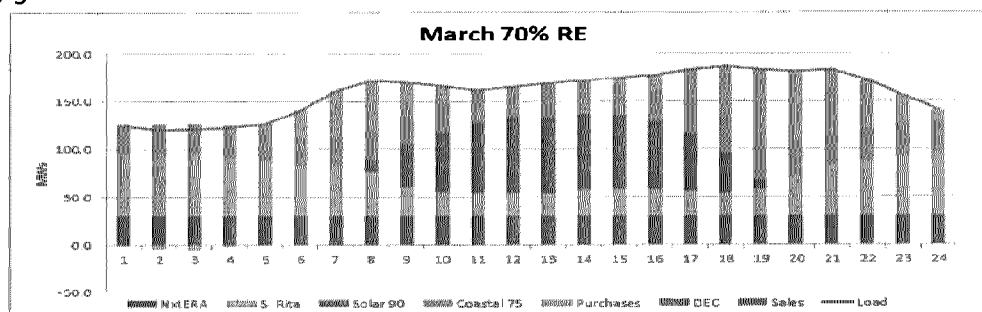


Figure 6-9 shows a daily profile from the Month of March at a 70% renewable goal with the addition of 75 MW of Coastal wind and 90 MW of Solar. Excess sales are reduced in the early morning hours, and a greater amount of purchases are necessary in the earlier and later parts of the day to match load requirements.

Figure 6-10

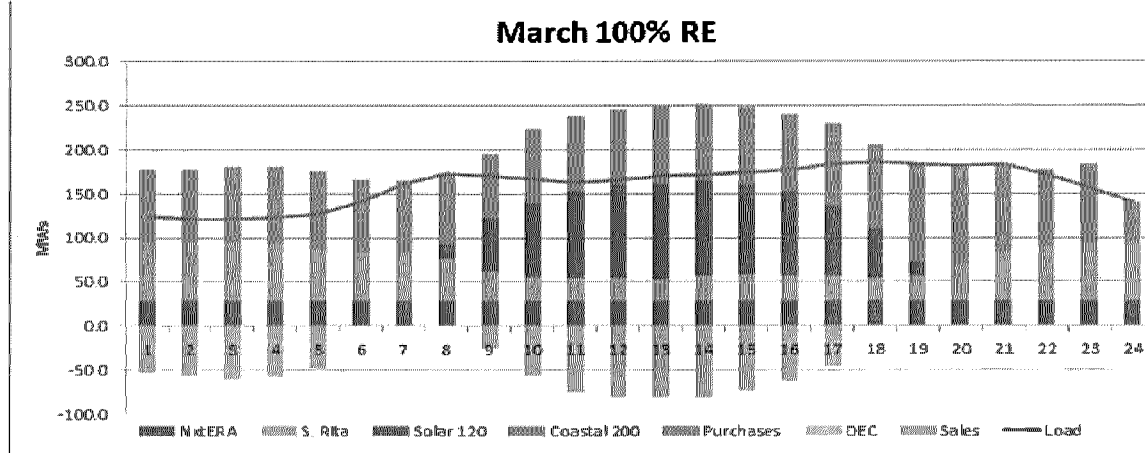


Figure 6-10 show the March profile at a 100% renewable goal, reached by adding 200 MW of Coastal wind and 120 MW of solar. Sales of excess power increase, and would occur in the early morning hours and during on-peak hours.

Figure 6-11 shows the 12 monthly production profiles at a 100% renewable level reached by adding 150 MW of Coastal wind and 180 MW of Solar. An alternative is shown in Figure 6-12, showing the 12 monthly production profiles at a 100% renewable level, reached by adding 200 MW of Coastal and 120 MW of Solar.

Figure 6-11

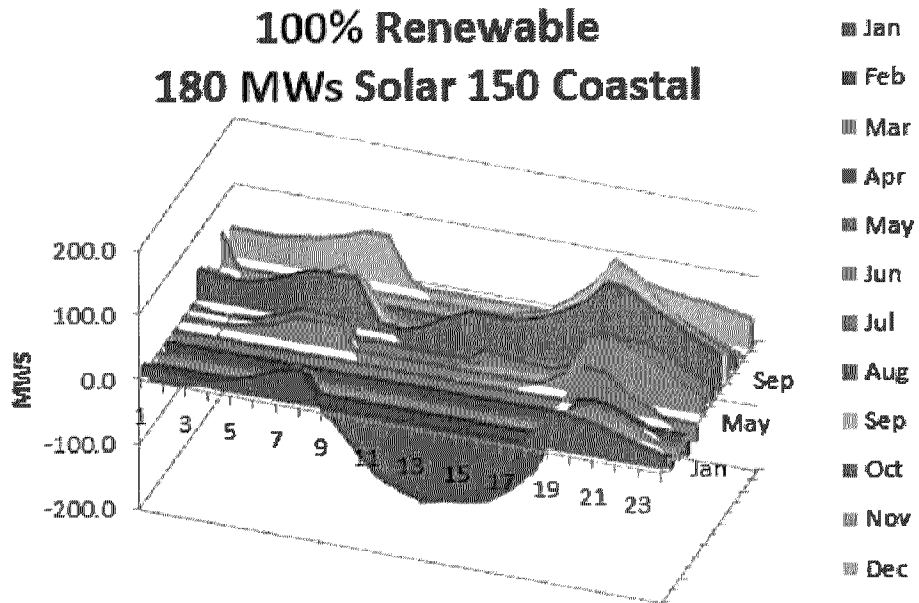
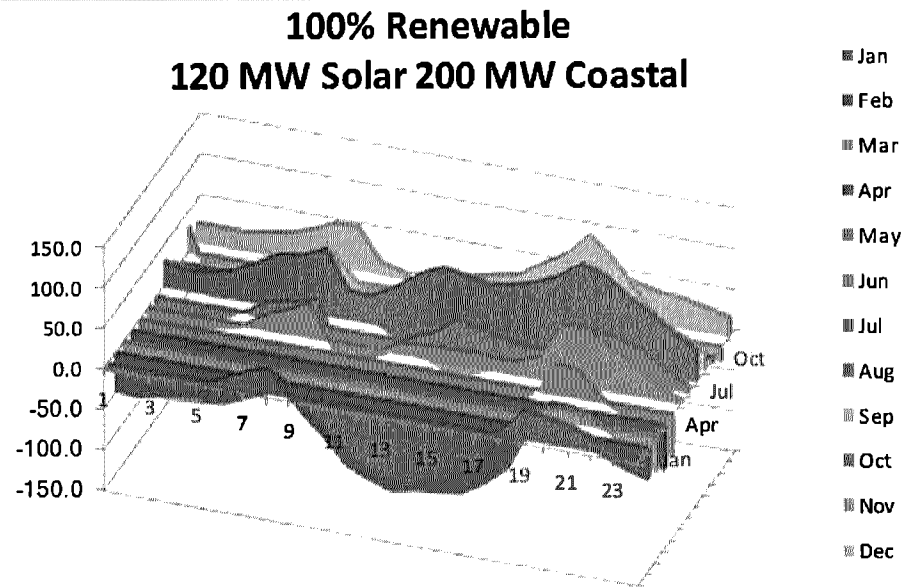


Figure 6-12



200 MW of Coastal and 120 MW of Solar is a different configuration to get to 100% Renewable. This is a configuration where additional Coastal substitutes for some Solar. This combination would be more attractive depending on the degree of concern about a potential federal Solar tariff. It would be possible to substitute even more Coastal wind for Solar.

If it seems less risky to wait to purchase Solar at a later time, to wait for resolution on the Solar tariff issue, Denton could substitute more Coastal wind for Solar. Coastal wind could be featured to get Denton up to the near-term renewable goal of 70%, with the quantity dependent on the decision of how to classify Whitetail, and then wait on a resolution of the Solar tariff issue, and then purchase more Solar in the second stage of purchases to get up to 100% renewable.

The concern is that Solar could go from prices in the mid-\$20 per MWh to the low-\$40s per MWh, and at that level it would no longer be a least-cost supply alternative.

PTC and ITC Reduction and Elimination Schedules

Figure 6-13 shows the reduction and elimination schedules for the federal PTC and ITC. Wind tax subsidies go away by 2019. The wind PTC is already being reduced. Construction needed to have started in 2016 to avoid the first reduction of 20%.

The reduction schedules also reinforce the idea that it is less risky to wait on Solar, whereas earlier action on wind ensures better pricing because of the remaining PTC subsidy.

Figure 6-13

Consolidate Appropriations Act 2016

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Future
Wind PTC	Full	Full	80%	60%	40%	0%	0%	0%	0%	0%	0%	0%
Utility	30%	30%	30%	30%	30%	26%	22%	10%	10%	10%	10%	10%
Commercial/ Third Party												
Solar ITC												
Owned	30%	30%	30%	30%	30%	26%	22%	10%	10%	10%	10%	10%
Residential Host-Owned	30%	30%	30%	30%	30%	26%	22%	0%	0%	0%	0%	0%

7.0 Summary of Recommendations

To reach its goal of a power supply that is 100% renewable energy, Denton should purchase 200 MWs of solar, preferably in two locations, and 100 MWs of Coastal type wind. Both of these types resources should have low congestion risk. Most of the solar proposals are due to come online by December 31, 2020. Several of the wind proposals will come on line in 2019. The execution of the resource plan is dependent on actual proposals, and terms and conditions from the RFP offers.

An optimal location representing a balance of sufficient irradiance, limited cloud cover, and manageable congestion for would be close to Midland, Texas.

DME needs to hedge both its load with HB North to LZ North CRRs and its resources with Resource Node to HB North CRRs for the upcoming Santa Rita Wind as well as the Blue Bell Solar farm.

Decision Summary

In addition to the recommended amounts, types and locations of renewable resources, Denton will need to make several decisions that will shape the development of its renewable resource supply portfolio.

- Count Whitetail as a renewable resource?
 - If not, is Denton willing to handle the additional fixed-price risk of the Whitetail supply in addition to the fixed-price quantity of renewable resources necessary to meet Denton's goal(s)?
- Will Denton choose to delay solar purchases because of a potential federal solar tariff?
 - If so, potential alternatives include:
 - Purchase additional amounts of Coastal wind as a substitute?
 - Alter the profile of wind resources with storage?
 - Delay solar purchases until the issue is resolved, or solar prices and supplies adjust to the tariff
- Should Denton accelerate renewable purchases, especially of wind resources, because of:
 - increasing retirements of conventional fossil fuel generation capacity?
 - scheduled reduction in the PTC?
 - risk of rising natural gas prices?
- Should Denton move forward the date of the 100% renewable goal?
- Should Denton purchase additional renewable supplies above its target levels because of the annual variance in production amounts?
- Portfolio allocation decisions – there are various allocations between Coastal wind and Solar to meet Denton's goals (e.g., 180 MW of Solar and 150 MW of Coastal to meet a 100% goal, or 120 MW of Solar and 200 MW of Coastal). What is the preferred allocation?

Final Version Addendum

Based on feedback from the City of Denton Public Utilities Board, and the Denton City Council, the following decisions have been made:

- Count Whitetail as a renewable resource? **No**
- Will Denton choose to delay solar purchases because of a potential federal solar tariff?
No
- Should Denton accelerate renewable purchases? **Yes**
- Should Denton move forward the date of the 100% renewable goal? **Yes**

Other decisions will be finalized in the RFP evaluation process, as they will be a function of the final economic value determined through the evaluation process and final PPA negotiations.

Appendix A - Hedging 101 & Applications for Denton

Introduction and Definitions/Concepts

The purpose of commodity hedging is to mitigate the risk of adverse financial exposures resulting from the commodity-based business operations of the hedging party. Hedging is typically focus primarily on price risk, but with demand-driven commodities like natural gas and power, it also focuses on the adverse financial exposure from volume risk.

Before discussing the objectives and mechanics of hedging, it is important to introduce some concepts and definitions:

- ***Floating price exposure*** – an exposure to variable market prices resulting from an obligation to supply a commodity without sufficient resources to do so, or ownership of commodity resources (or an obligation to take delivery) without known sales revenues. Floating price exposures involve a volumetric obligation that has a yet-to-be-determined price.
- ***Fixed price exposure*** – the opposite of a floating price exposure: an obligation to purchase or sell a quantity of a commodity for delivery in the future at a known price today, or a paid inventory of a commodity.
- ***Native exposure (or native physical exposure)*** – one or more floating price exposures that are native to the ongoing market operations of the hedging party. An example is an electric distribution utility that has an obligation to provide energy to its customers but lacks the fixed-price generation resources to do so. Because it has a lack of generation resources it must acquire the needed energy supplies in the open market.

It is exposed to price uncertainty during any measurable period in the future when it has insufficient energy resources while maintaining its obligation to serve its customer base. Relative to its fixed rate structure (fixed sales revenues), falling power prices in the future would benefit the utility, whereas rising power prices in the future would hurt the utility. Yes, utilities often have some degree of control over changing rates, which can allow adjustments for changing supply prices, and in the long run can substantially reduce supply cost risk, but the ability to raise rates may be limited for various reasons, and thus a utility may seek to reduce its exposure, completely or to some degree, to potentially higher prices.

For illustrative purposes, additional examples of a native exposure include:

- the risk of falling prices for a natural gas producer

- the risk of reduced margins for a petroleum refiner that has exposures to both rising and falling prices. A refiner is detrimentally exposed to rising crude oil prices and falling prices for oil products (e.g., gasoline, diesel, jet fuel).
- *Note – a natural gas-fired power plant has a native exposure similar to that of a petroleum refinery. A gas-fired plant is exposed to falling power prices **and** rising natural gas prices. This is the native physical exposure of the DEC.*
- **Short** position – a short position refers to a native exposure where the hedging party has an obligation to sell to end users at a fixed price, but **lacks sufficient supply** to meet its sales obligation, and thus is exposed to the floating price risk of potentially rising prices for supplies it will be obligated to purchase in the future. A *short* position is a label for a native exposure based on a **shortage of supply**.

Denton's native physical exposure is a short position. One part of the DEC's native physical exposure is a short fuel position.

- **Long** position – a long position is the opposite of a short position. It is a native exposure where the hedging party has an **excess of supply**, or has a greater quantity of ownership compared to its fixed price sales obligations, and is exposed to the floating price risk of potentially falling prices for inventory that it plans to sell in the future. Natural resource commodity producers typically have a native long position.

The other part of the DEC's native physical exposure is a long power position (combined with its native short fuel position).

- **Opposition hedge** – a useful definition of hedging is the following: *the establishment of one or more positions* to reduce financial uncertainty or risk from a floating price exposure.*

*In this context, the definition of a position is a fixed-price contractual obligation to make or take physical delivery, or to make or take a financial settlement based on a commodity price differential. The key to risk reduction is that the hedge position has a fixed-price that offsets the floating price exposure of the native physical position.

An ideal opposition hedge would be both equal and opposite of the native exposure being hedged:

- Equal in terms of the quality, quantity and duration of the exposure being hedged (or the chosen quality, quantity and duration based on the risk tolerance or risk preference of the hedging party), and
- Opposite in terms of market direction:
 - a long position to hedge a short native exposure
 - a short position to hedge a long native exposure

A producer hedges its exposure by making fixed-price sales in the future to offset excess supply. A consumer (like DME) hedges its exposure by making fixed-price purchases in the future to offset the floating price exposure of a native shortage of supply.

A perfect hedge would result when long positions (or exposures) exactly balance short positions (or exposures) in terms of quantity, quality and duration. A perfect match would result when the financial exposure is completely balanced (no net short or long exposure), and no credit risk exists with any counterparties to any unsettled positions. Of course, no such thing as a perfect hedge exists.

Hedging for Denton

For Denton to hedge its native short position, it needs to purchase fixed-price energy for delivery in the future. These energy purchases (e.g., PPAs, forward purchases from the market) are long positions that hedge Denton's short market exposure. Denton's supply portfolio management operation is a *hedging* operation to manage the price risk (and volumetric risk) of its native short physical position.

Note – it is important to understand that the DEC is an incomplete hedge. The DEC can produce power at a fixed heat rate, but until a supply of natural gas has been procured at a fixed price, the DEC still results in a floating short exposure to natural gas prices. Only when a fixed price for natural gas is paired with the fixed heat rate of the DEC will the result equal fixed-price power.

Basis Risk / Basis Hedging

Hedges frequently come in two parts, or require two separate transactions to make up a complete opposition hedge: a commodity hedge and a basis hedge. Unless the market pricing of the hedge position perfectly tracks the price exposure of the native exposure, a basis risk exists. This leads to another concept and definition:

- **Basis** – there are two definitions of basis. There is a narrow, textbook, futures market-oriented definition, and a broader definition for markets where non exchange-traded instruments are used for hedging (DME's circumstance).

The textbook definition: the basis is the difference between the local cash price of a commodity and the price of a specific futures contract of the same commodity at any given point in time. $\text{Basis} = \text{local cash price} - \text{futures price}$.

A perfect example of this comes from the natural gas market. A primary hedging instrument in natural gas is the Henry Hub natural gas futures contract based on a delivery point in Louisiana, and traded on the New York Mercantile Exchange (NYMEX) division of the Chicago Mercantile Exchange. Yet the vast majority of hedgers using NYMEX natural gas futures are exposed to a local cash price based on a pipeline pricing

point other than the Henry Hub. For example, an electric utility with natural-gas fired generation in northern California will pay a local cash price for natural gas typically based on the PG&E city gate natural gas price index. If it uses Henry Hub natural gas futures contracts as a hedging instrument, it is exposed to the basis of PG&E city gate prices versus Henry Hub prices (geographic price differential).

The correlation between PG&E city gate prices and Henry Hub prices is positive, but not that highly positive, and this results in a substantial price and value tracking error. The financial payoff of the futures contract hedge will not match the price change over the life of the hedge of a physical exposure based on the PG&E city gate price index, resulting in a suboptimal and imperfect (aka “dirty”) hedge.

If a hedger can tolerate the financial uncertainty (risk) of a price index mismatch (e.g., PG&E city gate index vs. Henry Hub index), it may choose not to hedge the basis. But if the hedger decides that it needs to manage the basis risk, it may choose to execute a separate, second transaction to hedge just the basis. For example, a gas-fired electric utility in northern California might hedge its risk of rising natural gas prices by a) purchasing natural gas futures contracts (commodity hedge) and b) by purchasing a basis swap contract that will financially settle based on the difference between the PG&E city gate index and the Henry Hub index (basis hedge). This two-component hedge is commonplace in the natural gas industry.

Thus, a complete opposition hedge requires hedging both the commodity risk and the basis risk.

Fortunately, ERCOT offers a separate instrument for hedging basis risk – Congestion Revenue Rights (CRRs), with two types that pay off like swaps (CRR obligations) or options (CRR options). CRRs will be addressed further in the next section of this document.

The broader and more useful definition of basis is that it is the difference between the local cash price of a commodity and the price of the hedging instrument of the same commodity at any given point in time. In Denton’s terms, it would be the difference between the local cash price of energy that Denton needs to meet its load requirements versus the price of its hedging instruments (e.g., PPAs and forward energy purchases).

Denton’s Basis (Congestion) Risk & Basis Hedging

To further explore this topic, it is important to recall how ERCOT prices energy. Consumers purchase energy at load zones and power plants sell energy at resource nodes. Generally, the prices of resource nodes do not match those of load zones because of congestion in the transmission system. Energy purchased from ERCOT to meet Denton’s obligation to meet its customer load requirements is priced at Denton’s load zone (its “local cash price” in the definition of basis) whereas energy produced from Denton’s generation resources (e.g., PPAs) is

priced at generation resource nodes. This means that in addition to Denton's native short position vis a vis electric energy, it also has a basis risk exposure.

As previously mentioned, ERCOT operates a viable market for hedging basis risk: CRRs. CRRs come in two types: obligations and options. Obligations are like swaps – they have a symmetrical pay off that can be positive or negative. On the other hand, options have an asymmetrical payoff profile – they pay off positively for the option holder, but the option holder is not exposed to a negative payoff. NOIEs can link CRRs to an option to hedge DAM to RT congestion.

ERCOT congestion (basis) risk can be hedged for years forward by consistent participation in the CRR market. It is important to realize that not hedging basis (congestion) risk is implicit speculation on the basis. It is a conservative hedging and risk management practice to perfect hedges as much as possible, and this includes hedging basis risk

Note – although it is recommended to pursue a conservative approach and hedge the basis (congestion risk), not hedging the basis is fine, IF it is a conscious decision by senior management and is explicitly acknowledged as an unhedged risk in Denton's energy risk management policy.

RESOLUTION NO. 20-249

A RESOLUTION OF THE CITY OF DENTON, A TEXAS HOME-RULE MUNICIPAL CORPORATION, ALLOWING THE CITY TO RECOGNIZE ALL OF THE RENEWABLE ENERGY CREDITS ASSOCIATED WITH THE ELECTRIC POWER PURCHASED BY THE CITY FROM THE WHITETAIL WIND TURBINE ELECTRIC GENERATION FACILITY TO ENABLE THE CITY TO ACCURATELY DETERMINE THE PERCENTAGE OF ELECTRIC POWER IT HAS RECEIVED THAT WAS GENERATED EXCLUSIVELY FROM RENEWABLE RESOURCES.

WHEREAS, on February 6, 2018, the City Council, through Resolution No. 18-085 establishing the City's Renewable Resource Plan, adopted the goal that the City meet the electric power needs of its customers solely through electric power generated from renewable resources only ("100% Renewable Energy Goal"); and

WHEREAS, under the City's earlier Renewable Denton Plan (see Resolution R2016-014), a decision was made to purchase an additional thirty megawatts of renewable energy credits ("RECs") generated from the Whitetail wind turbine electric generation facility ("Whitetail facility"; The City was already under contract with the Whitetail facility for thirty megawatts and the associated RECs.), for a total of sixty megawatts of RECs, from the Whitetail facility. These energy power purchases, and the associated RECs, were intended to increase progress towards the 40% renewable energy target of the Renewable Denton Plan; and

WHEREAS, the City Council now wants to include the electric power purchased by the City generated from the Whitetail facility, and the RECs associated with this contract, when determining the percentage of electric power the City it has purchased that was generated from renewable resources; and

WHEREAS, the methodology set forth herein is consistent with the requirements of the Electric Reliability Council of Texas when determining whether electric power has been generated by a renewable resource; and

WHEREAS, the City's Public Utility Board unanimously voted to recommend to City Council that all the electric power the City purchased from the Whitetail facility, including the RECs associated with the same, be used when determining the total percentage of electric power generated from renewable resources the City had purchased as the City works to achieve 100% Renewable Energy Goal; and

NOW, THEREFORE, THE COUNCIL OF THE CITY OF DENTON HEREBY RESOLVES:

SECTION 1. The recitals set forth above are incorporated into and is part of this Resolution for all purposes.

SECTION 2. All electric power purchased by the City from the Whitetail facility, including the RECs associated with the same, is to be used when determining the total percentage

of electric power generated from renewable resources the City has purchased as the City works to achieve 100% Renewable Energy Goal;

SECTION 3. Any REC used by the City to demonstrate it purchased electric power from a renewable resource for the purposes of achieving the City's 100% Renewable Energy Goal shall be retired in accordance with applicable rules and regulations governing the retirement of the same and shall not be traded or sold by the City; and

SECTION 4. The first bullet under the section titled "Final Version Addendum" on page 81 of the City's Renewable Resource Plan is deleted and replaced with:

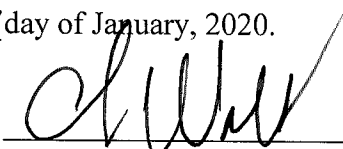
- Count Whitetail as renewable resource? **YES**

SECTION 5. This Resolution shall take effect immediately after its adoption.


The motion to approve this Resolution was made by JOHN RYAN and seconded by JESSE DAVIS; the Resolution was passed and approved by the following vote [5 - 1]:

	<u>Yes</u>	<u>No</u>	<u>Abstain</u>	<u>Absent</u>
Chris Watts, Mayor:	<u>✓</u>	<u> </u>	<u> </u>	<u> </u>
Gerard Hudspeth, District 1:	<u> </u>	<u> </u>	<u> </u>	<u>✓</u>
Keely G. Briggs, District 2:	<u>✓</u>	<u> </u>	<u> </u>	<u> </u>
Jesse Davis, District 3:	<u>✓</u>	<u> </u>	<u> </u>	<u> </u>
John Ryan, District 4:	<u>✓</u>	<u> </u>	<u> </u>	<u> </u>
Deb Armintor, At Large Place 5:	<u> </u>	<u>✓</u>	<u> </u>	<u> </u>
Paul Meltzer, At Large Place 6:	<u>✓</u>	<u> </u>	<u> </u>	<u> </u>

PASSED AND APPROVED on this 28th day of January, 2020.

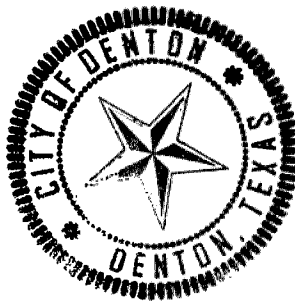

CHRIS WATTS, MAYOR

ATTEST:
ROSA RIOS, CITY SECRETARY



APPROVED AS TO LEGAL FORM
AARON LEAL, CITY ATTORNEY







Guide to Making Claims About Your Solar Power Use

Introduction

This guidance document describes best practices for appropriately explaining and characterizing your solar power activities and the fundamental importance of renewable energy certificates (RECs) for solar power use claims. This guidance is primarily focused on claims associated with on-site projects but is equally relevant for off-site owned projects as well.

RECs Put the “Renewable” in Renewable Electricity

Much of the confusion about renewable electricity use claims, including solar power use claims, is because our electricity grid does not distinguish where the electricity was generated and delivered.¹ Electrons produced by a solar panel are no different than electrons produced by a coal-fired power plant or any other electricity generating technology. The indistinguishability of these electrons coupled with the inability to direct where electrons flow within the grid resulted in the U.S. electricity market establishing a separate accounting framework that tracks the generation, sale, and ultimate “use” of renewable electricity. Renewable electricity generators, therefore, produce two distinct market commodities: 1) electricity and 2) RECs. These commodities can be used and/or sold separately or together. The REC instrument embodies the environmental attributes of the underlying electricity generated from a renewable resource.

Across the United States, 10 regional electronic REC tracking systems facilitate the creation, management, and retirement of RECs for most renewable energy projects and resources.² Even if the renewable energy project is not formally registered with and issued RECs from a regional tracking system, the renewable project still generates the environmental attributes that would normally be conveyed by the REC instruments. These environmental attributes or RECs can be sold or transferred to other parties through contractual agreements.

What is a REC?

A renewable energy certificate – REC (pronounced: rék) is a tradeable, market-based instrument that represents the legal property rights to the “renewable-ness”—or non-power (i.e., environmental) attributes—of renewable electricity generation.

A REC is created for every megawatt-hour (MWh) of electricity generated and delivered to the grid from a renewable energy resource.

Electricity cannot be considered renewable without a REC to substantiate its renewable-ness.

¹ NREL 2015. Renewable Electricity: How do you know you are using it? <http://www.nrel.gov/docs/fy15osti/64558.pdf>

² NREL 2013. Renewable Energy Certificate (REC) Tracking Systems: Costs & Verification Issues. <http://www.nrel.gov/docs/fy14osti/60640.pdf>

RECs are legal instruments that contractually convey the attributes of renewable electricity (i.e. environmental attributes) to their owner.³ As such, the REC owner has exclusive rights to make claims—either explicitly or implicitly—about “using” or “being powered with” the renewable electricity associated with that REC⁴, as well as the associated claims about carbon footprint reductions. Only the owner of a REC should make claims about using renewable electricity, and once made, no other entity can legally make claims about using the renewable electricity associated with that REC. RECs issued through REC tracking systems can be “retired” or removed from circulation once the owner has made a claim against the underlying attributes of the REC.

Making Solar Power Use Claims

Your institution might have solar panels on-site and use the electrical output to power its facilities, but that does not necessarily mean it can claim to use solar power. The ability to claim “use” of solar electricity from the on-site solar system is contingent on your ownership or exclusive rights to the associated RECs. The requirement to own RECs to substantiate your use of solar energy is true of electricity generation from either a self-owned or third-party owned system, such as through a power purchase agreement (PPA) or solar lease.

To make a solar project financially feasible or improve its return on investment, the project’s RECs are often not conveyed to the electricity consumer, but are sold by the project owner or project developer into the open market. Although selling the associated project RECs brings down the delivered cost of electricity to the consumer the consumer cannot in the absence of owning the RECs claim to be using solar power. In these cases, it is the eventual buyer of the project’s RECs that can make the claim of using renewable electricity from the project. So what is the electricity consumer to do if they must sell the RECs associated with the solar project? Read the EPA white paper on [REC Arbitrage](#) to learn about this widely used instrument swap approach.

The following table provides a sampling of appropriate claims for different scenarios of REC ownership. For a more detailed explanation of claims, please visit the Green Power Partnership’s [Solar Claims webpage](#):

Scenario	Appropriate Marketing Claims
Organization has on-site solar system and owns associated project RECs.	<ul style="list-style-type: none"> • We are using solar power. • Our solar panels are reducing our organization’s carbon footprint. • We are powered by solar energy. • Our electricity comes from solar panels.
Organization has on-site solar system but does not own associated project RECs.	<ul style="list-style-type: none"> • We generate solar energy but sell it to another party. • Our solar panels are helping to reduce our energy costs and generate revenue through the sale of RECs. • We are not using solar power, but our solar system is helping to green the grid.

³ Center for Resource Solutions 2015. The Legal Basis for Renewable Energy Certificates. <https://resource-solutions.org/wp-content/uploads/2015/07/The-Legal-Basis-for-RECs.pdf>

⁴ Federal Trade Commission 2012. Guides for the Use of Environmental Marketing Claims https://www.ftc.gov/sites/default/files/documents/federal_register_notices/guides-use-environmental-marketing-claims-green-guides/greenguidesfrn.pdf

Scenario	Appropriate Marketing Claims
	<ul style="list-style-type: none"> By selling RECs from our solar system to our utility, we are helping the utility fulfill its state-mandated renewable energy targets.
Organization has on-site solar system but does not own associated project RECs; however, purchases replacement wind RECs equal to 100 percent of its power needs.	<ul style="list-style-type: none"> We generate solar energy but sell the RECs to another party. However, we purchase 100-percent wind power and have zero Scope 2 emissions.

Best Practices in Making Solar Use Claims from On-Site Systems

When making claims about your solar power use, whether through press releases, websites, speeches, videos or other media or public communications, it is important to accurately reflect your specific solar arrangement. By being clear and accurate in your claims, you are helping to ensure that there are no double use claims being made on the same solar electricity.

In order to make accurate and legitimate solar use claims, we suggest the following as best practices:

Be specific and clearly define RECs and who owns them in any public communication.

In your communications and marketing materials, be specific enough to ensure a reasonable consumer or stakeholder understands your solar power arrangement (i.e., who is ultimately using the solar power as substantiated by ownership of the REC).

We suggest that in any press release or public statement, you define what RECs are and who owns them. Partner organizations are encouraged to [contact](#) the Green Power Partnership for assistance when making voluntary green power claims.

For more information on RECs visit the Green Power Partnership's [RECs webpage](#).

If you are claiming to use solar electricity, ensure you either own or have exclusive contractual rights to the environmental attributes or RECs to substantiate your claims.

Before making any claims about “using” solar power, make sure you own the environmental attributes associated with your system or for systems registered in a tracking system that you own the RECs or have had them retired on your behalf in the system.

If you own your solar system, you can claim to be using the solar power as long as you have not 1) sold the RECs to another party, or 2) entered into any contractual agreements that sell or transfer the RECs or the environmental attributes to another party. If the system is registered in a REC tracking system and formally issued RECs, you must retain and retire these RECs in the tracking system.

If your solar system was installed via a PPA or solar lease, you should review the contract and verify that your organization owns the environmental attributes or RECs if it wishes to make claims about using the associated solar power. RECs can be delivered and retired on your behalf

contractually in the lease or purchase agreement. If the system is registered in a REC tracking system, RECs will be issued to the project owner's account and the project owner must either transfer the RECs to your account in the tracking system, or if you do not have an account, retire the RECs in the tracking system on your behalf.

Note, contracts for solar are not always entirely clear with respect to REC ownership, and how transfer and retirement will occur. You should confirm your understanding of what happens to the RECs in any transaction to ensure exclusive ownership of the RECs and exclusive claim to the solar power.

REC ownership is often affected by state laws and incentives. In most states, the project owner is assigned ownership of the environmental attributes or RECs generated by the project. However, some state policies or programs require that RECs be transferred to a utility to help it meet state mandates, such as renewable portfolio standards. You can learn more about your specific state and utilities policies by visiting the online [Database of State Incentives for Renewables and Efficiency](#). For most states, REC ownership policy is covered by either its net-metering or interconnection policies. Again, you may also want to inquire with your utility or solar installer to confirm REC ownership.

If you do not own the RECs associated with your solar system, do not make claims about using solar electricity.

Without REC ownership, making claims about using solar power can result in a number of risks to your organization as well as violate state and Federal law and guidance, including the following:

- **Legal risks**—Possible scrutiny by the Federal Trade Commission (FTC) and/or your state's attorney general's office for false or deceptive marketing claims. This is not only true of electricity consumers but also third-party suppliers who develop solar projects through PPA contracts. A PPA developer can't claim to be selling solar energy if the PPA doesn't convey the RECs to the off taker of the electricity.
- **Contractual and financial risks**—Potential for breach of contract by conveying the same environmental attributes to multiple users.
- **Brand and reputation risks**—Possible requirement to issue a clarifying statement regarding the claims about your solar power project, use of solar energy or carbon footprint reductions.

An organization that claims to be using solar power, but does not own the RECs associated with their solar generator's output, may be double counting or claiming the renewable attributes of the electricity. Double counting RECs between multiple parties undermines the renewable electricity market by overestimating the amount of renewable electricity generated/used relative to the number of megawatt-hours produced.

Avoid implied claims.

If your company or institution installs on-site solar but does not own the associated RECs, avoid making implied claims that consumers or stakeholders might interpret as you "using" solar. For instance, as the FTC notes in an example of a manufacturer with solar on its facility's rooftop: "Even

if the manufacturer uses the electricity generated by the solar panels, it has, by selling the renewable energy certificates, transferred the right to characterize that electricity as renewable [...]. It also would be deceptive [...] to advertise that it ‘hosts’ a renewable energy facility because reasonable consumers likely interpret this claim to mean that the manufacturer uses renewable energy.” Instead, if you intend to make a public statement about a project you are involved in, make sure that it is clear to reasonable consumers of what is happening.

Ask for communications assistance from industry experts and key stakeholders.

Ask industry experts and key stakeholders to review your communications and marketing materials to help ensure that they are accurate and adhere with industry standards and best practices, including the FTC’s Guides for the Use of Environmental Marketing Claims. Experts and stakeholders could include individuals from EPA’s Green Power Partnership, third party certification programs, regional and national solar power groups, your legal counsel, or your solar developer.

Ensure individuals throughout your organization understand the importance of accurate claims and have multiple stakeholders review communications materials.

You might be the point person for your organization’s solar efforts and understand how the solar market works and the importance of REC ownership for claims. However, the members of your organization’s public relations team are not experts in the solar market and might reasonably assume that because there is a solar project on the organization’s rooftop, it is “using” solar power. To ensure your organization’s messaging is accurate, we suggest you have multiple reviewers from different stakeholder groups within the organization review the communications materials. EPA is available to help inform or support these other stakeholders. We can review content and provide you with communications materials to help explain your organization’s green power use.

Formally retire the RECs associated with your on-site solar power use.

When possible, your organization should ensure that the RECs associated with your solar power use are formally retired. Formal REC retirement mechanisms exist for RECs issued by tracking systems. Ask your solar developer or tracking system representative about REC retirement options. If your solar system is owned by a third-party but is not registered in a tracking system, the RECs or environmental attributes can be retired contractually. Lastly, if your organization owns a solar system that is not registered in a tracking system, it is not possible to formally retire RECs or environmental attributes. Most states convey the environmental attributes to the owner, in those cases.

In all instances, organizations should not transfer or sell RECs or environmental attributes after a claim has been made. Making a claim constitutes a retirement of the REC; any sale or claim by a different owner would constitute double-counting of or claim on the same renewable electricity. In taking these steps, you help avoid two different parties claiming the same environmental attributes on the same renewable power.

Ensure your organization's GHG accounting and carbon footprint reduction claims align with market best practices.

In accounting for your organization's scope 2 emissions, only electricity backed by RECs can be accounted for as zero-emissions. If your organization owns the RECs associated with its solar system then apply the zero-emissions rate specified by the project REC to your purchased electricity consumption under Scope 2. In the absence of owning the project RECs, apply, in order of preference, either a residual mix or grid average emissions rate to calculate the emissions of your unspecified purchased electricity use under Scope 2. For more information on GHG accounting refer to World Resource Institute's *GHG Protocol Scope 2 Guidance* and the Center for Resource Solutions' *The Greenhouse Gas Benefits of Renewable Energy Purchases* and *Scope 2 Greenhouse Gas Accounting for U.S. Renewable Energy*.

In summary, all renewable electricity generation involves the creation of RECs. Only the ultimate owner of a REC can claim the environmental attributes of a particular megawatt-hour of renewable energy. If you are making claims about using renewable electricity, make sure you own and retire the RECs. If you do not own the RECs, do not make public claims, explicit or implied, about using renewable electricity.

Additional Resources

Green Power Partnership's REC video: www.youtube.com/watch?v=_12VYXms6-c

Green Power Partnership's webpage on making environmental claims: www.epa.gov/greenpower/making-environmental-claims

Center for Resource Solutions' (CRS) resources pertaining to RECs and renewable energy claims: resource-solutions.org/learn/rec-claims-and-ownership/

CRS's The Legal Basis for Renewable Energy Certificates:
resource-solutions.org/site/wp-content/uploads/2015/07/The-Legal-Basis-for-RECs.pdf

CRS's Scope 2 Greenhouse Gas Accounting for U.S. Renewable Energy
resource-solutions.org/document/scope-2-greenhouse-gas-accounting-for-u-s-renewable-energy/

CRS's The Greenhouse Gas Benefits of Renewable Energy Purchases
resource-solutions.org/wp-content/uploads/2016/11/GHG-Benefits-of-RE-Purchases.pdf

FTC's Guides for the Use of Environmental Marketing Claims:
www.ftc.gov/sites/default/files/documents/federal_register_notices/guides-use-environmental-marketing-claims-green-guides/greenguidesfrn.pdf

National Renewable Energy Laboratory's Renewable Electricity: How do you know you are using it?:
www.nrel.gov/docs/fy15osti/64558.pdf

National Association of Attorneys General's Environmental Marketing Guidelines for Electricity:

www.naag.org/publications/naagazette/volume-5-number-9/green-marketing-work-continues-to-evolve.php

RE100's Making Credible Renewable Electricity Usage Claims:

www.theclimategroup.org/news/making-credible-renewable-electricity-usage-claims

SEIA Solar Business Code:

www.seia.org/policy/consumer-protection/seia-solar-business-code

World Resource Institute GHG Protocol Scope 2 Guidance

www.ghgprotocol.org/scope_2_guidance

Enterprise Risk Consulting, LLC
1000 Cordova Place, Suite 381
Santa Fe, NM 87505

Via email

December 13, 2019

Denton Municipal Electric
Terry Naulty
Assistant General Manager
1659 Spencer Road
Denton, Texas 76201
Terrance.Naulty@cityofdenton.com

Dear Terry,

We appreciate the opportunity to respond to your query about the potential renewable treatment of offtake from DME's Whitetail/Wolf Ridge contract with NextEra. We will provide a specific response to that issue later in this letter, but the treatment of a legacy contract such as Whitetail/Wolf Ridge and how it is integrated into DME's energy portfolio as part of the Renewable Resource Plan is just a part of the larger issue of how Denton can practically implement and operate the Renewable Resource Plan in a sustainable and cost effective manner.

As you are well aware, in our written Plan as well as in our presentations to the Denton Public Utilities Board and the City Council, we have always advocated prudently pursuing the twin goals of achieving renewable energy targets in a least-cost manner. Your inquiry and our subsequent discussions have highlighted the need to develop and adopt a renewable energy process to govern the metrics for determining progress and attainment of the initial implementation of the Renewable Resource Plan, as well as ongoing operation of the resulting renewable energy supply portfolio. This process should be developed and reviewed by all Denton stakeholders so that the goals of the Plan are achieved. Mismatches between renewable resource production profiles, load uncertainty and load growth, and the constraints of renewable energy supply contracts present challenges in meeting renewable resource goals while prudently managing costs to the ratepayer. A written process developed under the city's governance practices would align all responsible parties and provide clarity for DME staff to manage the supply portfolio in an environmentally as well as economically sustainable manner.

With regard to Whitetail/Wolf Ridge, upon review of your documentation we believe it may be possible to classify a portion of the offtake from the Whitetail/Wolf Ridge contract with NextEra as renewable energy, subject to a) the ability to trace the energy production from the specific renewable generation resource and the renewable energy credits ("RECs") and b) a Denton Renewable Energy formal operational process, as proposed earlier in this letter, that supports such a classification. The support would be based upon the production of physical energy that Denton purchases from a qualified renewable resource.

Please let us know if you require additional assistance with these issues.

Regards,



Larry G. Lawrence and Neil McAndrews



Denton Renewable Resource Plan - 2025




**Tony Puente
DME General Manager
May 19, 2025**

ID PUB24-208

Agenda

- **Part 1 – Denton Renewable Resource Plan (DRRP)**
 - Current Plan & Goal
 - Goal Timeline
 - Challenges & Internal Audit Findings
 - Staff Recommendations – Part 1
- **Part 2 – Integrated Resource Plan (IRP)**
 - What is an IRP?
 - Regulatory & Market Environment
 - DME Load Forecast
 - Staff Recommendations – Part 2
- **Recap – Staff Recommendations**

A black and white photograph of a small seedling with two leaves growing out of dark, textured soil. The seedling is positioned on the left side of the frame. The background is dark and out of focus.

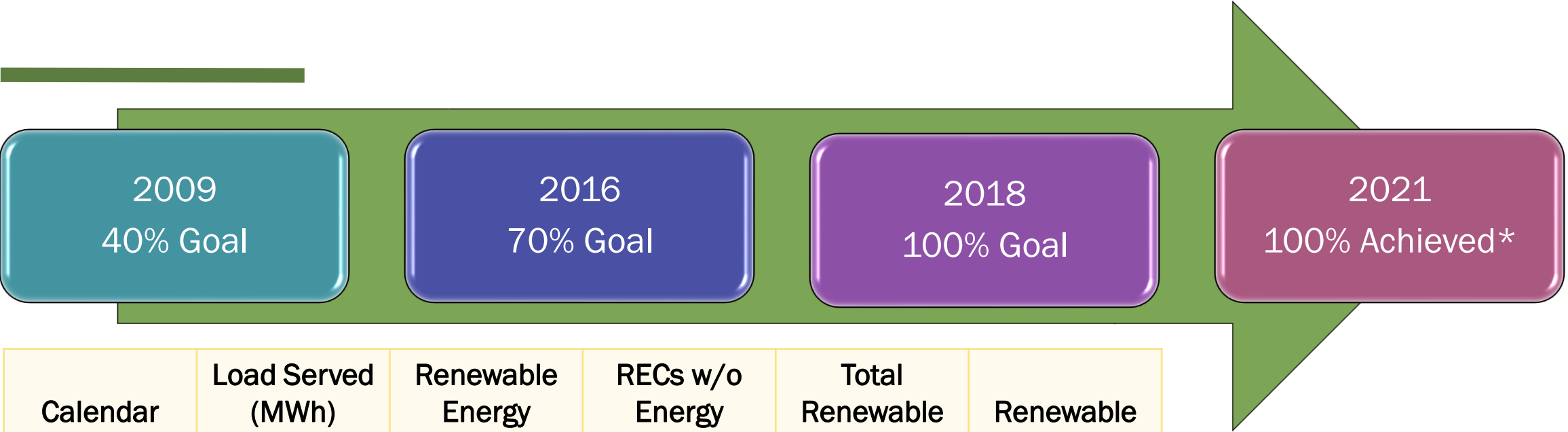
Part 1 - DRRP

Denton Renewable Resource Plan

- Adopted in 2018 (Resolution No. 18-085)
 - Goal was to achieve 100% renewable energy as early as either 2020 or 2024.
 - Through acquisition of diversified set of power purchase agreements for renewable energy resources.
 - Five objectives: Pricing factors including least-cost supplies; uncertainty (risk) reduction; sustainability; competitiveness; and the efficient management of a renewable resource power supply portfolio.
 - Recognized the Denton Energy Center as a cost hedge during certain super high-priced hours.
 - Acknowledged the greatest challenge is balancing the supply portfolio around intermittent renewables.
 - Identified the need to create a portfolio hedging plan and strategies.

Contracted Resources (Capacity)				
Name	Type	MWs	Term	Expires
Santa Rita	Wind	150	20 yrs.	Apr. 2038
Bluebell 1	Solar	30	20 yrs.	Nov. 2038
Bluebell 2	Solar	100	15 yrs.	Jun. 2035
Longdraw	Solar	75	15 yrs.	Jun. 2035
Yellow Viking	Solar	100	15 yrs.	Dec. 2041
Total - All		455		

Renewable Goal Timeline



Calendar Year	Load Served (MWh)	Renewable Energy (MWh)	RECs w/o Energy (MWh)	Total Renewable (MWh)	Renewable %
2021	1,593,440	1,343,789	262,800	1,606,589	101%
2022	1,750,135	1,396,335	353,800	1,750,135	100%
2023	1,749,737	1,480,144	269,593	1,749,737	100%
2024	1,776,322	1,375,792	400,530	1,776,322	100%

⁵ *Resolution No. 20-249 approved on 1/28/20, authorized the recognition of 30 MWs (equals 262,800 MWh) of renewable energy credits (RECs) procured as part of a 60 MW power purchase agreement (Whitetail Wind Resource). The PPA expired on 12/31/23. **252**

Challenges & Internal Audit Findings

- Texas Renewable Portfolio Standard (RPS) – Established in 1999 to incentivize construction of renewable energy in the State and created the Renewable Energy Credit (REC) Program.
 - Resources – Solar, wind, geothermal, hydroelectric, wave/tidal, and biomass.
 - Goals – 5,000 MW by 2015 and 10,000 MW by 2025.
 - Today, Wind is at 39,450 MW of installed capacity, and Texas leads the nation.
 - Today, Solar is at 25,333 MW of installed capacity, and while Texas is behind California, it has led in actual generation.
 - Retail Electric Providers (REPs) and Investor-Owned Utilities required to purchase and retire RECs based on a percentage of retail sales as established by ERCOT. **DME is exempt from this requirement, along with other MOUs that have not opted into customer choice. The DRRP is a locally decisioned plan and goal.**
 - What is a REC?
 - A tradeable, market-based instrument that represents the legal property rights to the environmental attributes of a renewable resource. It is the evidentiary proof to claim these attributes whether you own the energy or not. Under RPS, energy without a REC is not recognized. A REC has a 3-year life. **1 REC = 1 MWh of Energy.**
 - Every eligible renewable resource is awarded RECs and they are the basis by which DME calculates progress toward its 100% goal. In addition, eligible solar resources also receive Compliance Premiums (CPs).
- 6
- EPA Green Power Partnership provides best practice guidance for explaining and characterizing RECs.

Challenges & Internal Audit Findings

- Internal Audit Findings (2021) –
 - Goal calculation not defined.
 - No formal reporting of goal progression. (DME began sending an annual ISR in 2022)
 - Update for load increases and regulatory changes.
 - Evaluate costs & benefits of REC and CP retirements.
- Large Loads > 5 MWs – These loads pose a rate risk to ratepayers if coupled with long-term renewable energy contracts. A reasonable and prudent strategy is needed that addresses these loads while still meeting DME's renewable energy goal.

Staff Recommendations – Part 1

- Creation of a City Renewable Energy Policy
 - Policy Statement – This policy would only address the environmental (“offset”) goal of matching the annual load served with renewable energy, and not the resource mix needed to manage DME’s power portfolio and reliability needs.
 - Allowable Resources – Only those identified in the Texas Renewable Portfolio Standard (RPS).
 - Treatment of Renewable Energy Credits (RECs) & Compliance Premiums (CPs) (**addresses Internal Audit finding**)
 - Retire RECs and CPs counted toward the 100% goal.
 - DME to sell any excess RECs and CPs, when available, since they are not “rolled over” to the following year.
 - When needed to meet the 100% goal, DME to purchase RECs and CPs but only those generated in the same year they are counted.
 - Treatment of Large Loads > 5 MWs
 - DME will evaluate each load to determine if long or short-term energy contracts are viable or if only purchasing RECs and CPs is more appropriate. For new and emerging loads, the strategy could be split until such time as the specific load develops and proves to be more certain.
 - Goal Calculation (**addresses Internal Audit finding**)
 - Annual Goal Progression Reporting (**addresses Internal Audit finding**)
 - Glossary

Part 2 - IRP



What is an IRP?

- A plan created by an electric utility that outlines its strategy for meeting future electricity demand by considering both supply-side options (like building new generation resources) and demand-side options (like energy efficiency programs), aiming to achieve a cost-effective and reliable electricity supply while taking environmental factors into account; essentially, it's a roadmap for how a utility plans to generate electricity over a long period, typically 15-20 years, by balancing different resource options to best serve its customers.
- Key Points:
 - Comprehensive approach.
 - Future-oriented.
 - Cost-effectiveness.
 - Regulatory compliance.
 - Stakeholder involvement.

Regulatory & Market Environment

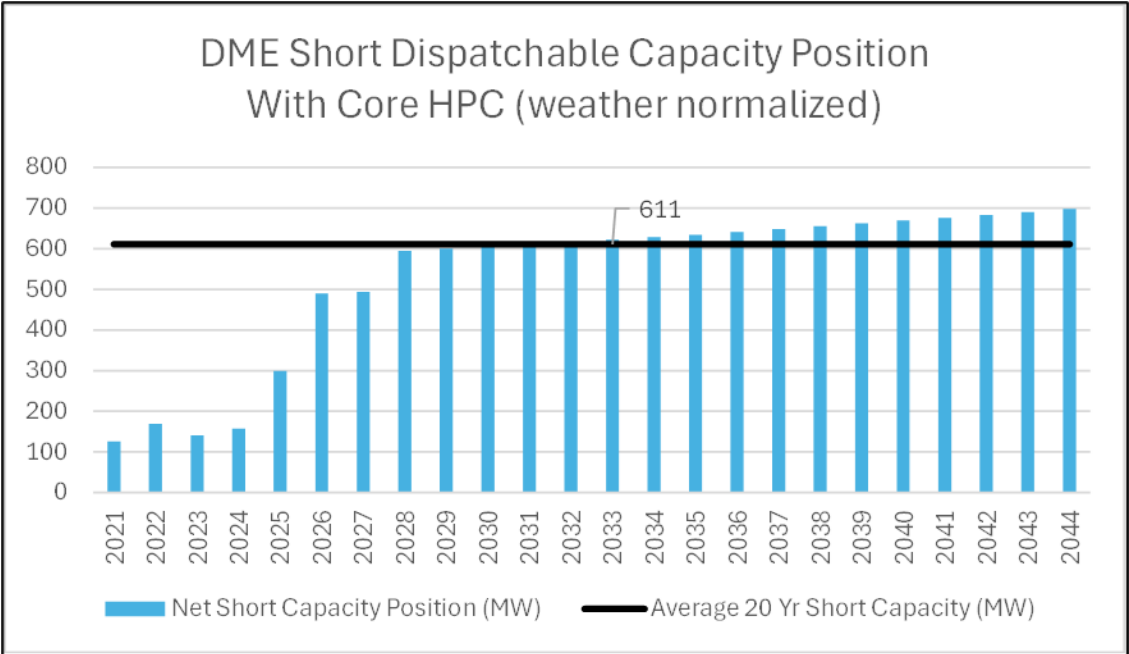
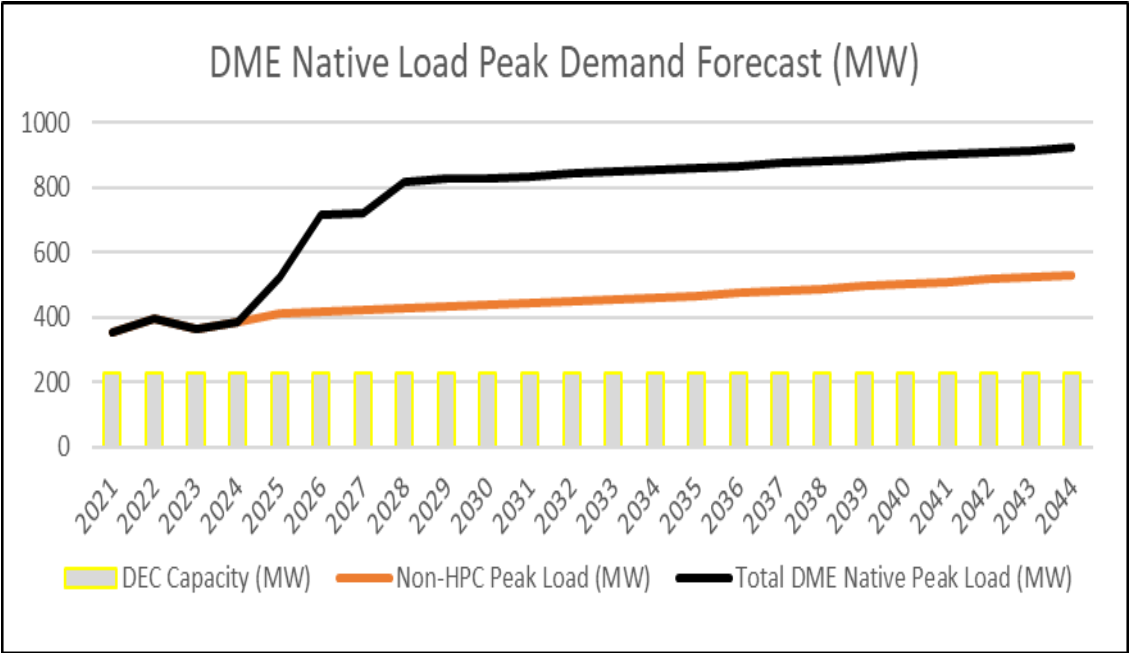
- Good news is no forced outages since 2021! but best characterized as **UNCERTAIN**.
- After Winter Storm Uri, the **scarcity cap** was lowered from \$9,000 to \$5,000 per MWh.
- **ECRS** (ERCOT Contingency Reserve Service) – Generators that can respond within 10 minutes. Independent Market Monitor projected this service added \$8-10 billion of cost to ratepayers. Reports that it has sidelined newer, more efficient generators. **DEC is eligible.**
- **FFSS** (Firm Fuel Supply Service) – Natural gas generators with on-site fuel or off-site storage. For the period 11/15/24 - 3/15/25, ERCOT procured \$51 million. **DEC not eligible.**
- Voter approval (Nov. 2023) of **Texas Energy Fund**:
 - \$7.2 billion – In-ERCOT loans and completion bonus grants to build 10,000 MWs of new dispatchable generation (100 MW minimum per project).
 - PUCT currently reviewing applications submitted in June 2024 totaling approximately 9,700 MWs. **DME did not submit an application.**
 - Next application period anticipated in July 2025, but projects must be shovel ready. **DME has no such project available to submit.**
 - \$1.0 billion – Outside-of-ERCOT resiliency grants.
- 11 • \$1.8 billion – Backup power package still in development. Standalone, behind the meter, multiday backup power for facilities necessary to support community health, safety and well-being.

Regulatory & Market Environment

- **Proliferation of Renewables** – Scarcity periods (Summer - evening hours, & Winter – morning and evening hours). Prices during these hours have hit the scarcity cap on many occasions.
- On the horizon:
 - **DRRS** (Dispatchable Reliability Reserve Service) – 6th ancillary service for offline generators only that can be online within 2 hours and run for at least 4 hours. **DEC would be eligible.**
 - **Real-Time Co-optimization** – Would redesign how ERCOT procures ancillary services from the day-ahead market to the real-time market and allow it to select the most efficient and economical method to serve load.
 - **Firming of Renewables** – Would require renewable resources to have backup battery storage or on-site gas generation. May only impact those interconnected after 1/1/27 but if earlier, could trigger “change in law” provisions in DME’s existing PPAs. (SB 715 / HB 3356)
 - **Dispatchable Generation Credits** – Would require Load Serving Entities (LSEs), like DME, to have 50% of load backed by dispatchable natural gas resources, limit new renewable resources, and require the purchase of credits. SB 388.
 - **Performance Credit Mechanism** – PUCT “shelved” this project pending new legislation. Would have mandated LSEs to backup the load it serves with owned or contracted dispatchable generation or purchase credits
 - **Other Proposals** – DME is closely monitoring legislative and executive activity at both the State and Federal level which could pose additional challenges.

DME Load Forecast

- Today, DME has a dispatchable power deficit of 183 MWs (DEC @ 225 MW less 408 MW Peak Load).
- By 2033, DME forecasts the deficit will grow to 386 MWs. (DEC @ 225 MW less 611 MW Peak Load).
- By 2044, DME forecasts the deficit will grow to 675 MWs. (DEC @ 225 MW less 900 MW Peak Load).
- DME’s current forecast does not include any other large load developments although there continues to be interest. Main barrier for at least 2-3 years is infrastructure improvements.



Staff Recommendations – Part 2

- Creation of a long-term Integrated Resource Plan, preferably 20 years:
 - Evaluate and integrate various types of resources while maintaining City's renewable energy goal.
 - Prioritize renewable resources such as nuclear, hydrogen, geothermal and battery storage as DME's load justifies these types of resources and where possible, leveraging federal and state funding opportunities.
 - Consider short-term needs to reduce rate risk while seeking opportunities that may reduce environmental impacts through innovative technologies or business opportunities to replace older, less efficient resources.
 - Incorporate and develop local demand-side management programs, and community solar installations greater than 1 MW to effectuate reductions in load.
 - Developed in concert with City's Climate Action Plan goals.
 - Utilize an external firm specialized in the development of IRPs with a focus on community engagement.
 - Staff would anticipate this would take 18-24 months to create.

Recap – Staff Recommendations

- Creation of a City Renewable Energy Policy.
 - Staff anticipates this would take 6 – 9 months.
- Creation of a long-term Integrated Resource Plan.
 - Staff anticipates this would take 18 – 24 months.



Questions
