

CIP & FINANCIAL OVERVIEW

City Council

3/07/2017

DENTON MUNICIPAL ELECTRIC



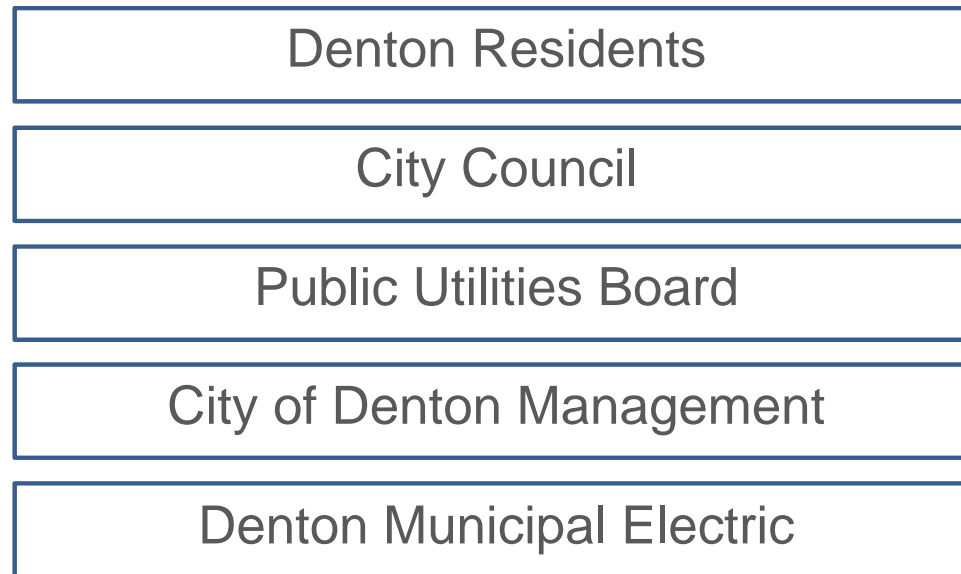
Topics for Discussion

1. Structure of DME
2. Financial Overview
3. Capital Improvement Plan
4. Denton Energy Center
5. Debt
6. Rates

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Governance

DME was founded in 1905 as the municipally-owned electric utility for Denton, Texas.



MOUs in Texas

There are 72 municipally owned electric utilities (MOUs) in Texas. Texas has nine of the largest 100 MOUs in the country.

City	number of customers	owns generation
San Antonio	728,340	Yes
Austin	448,000	Yes
Lubbock	103,475	Yes
Garland	69,262	Yes
Bryan	54,243	Yes
Denton	50,059	No*
Brownsville	48,812	Yes
College Station	38,908	No
New Braunfels	35,455	No

*DME currently has partial ownership of the Gibbon's Creek plant. The Denton Energy Center, which will be owned by the City of Denton, is currently under construction

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Budget Highlights, Revenues Definitions

- “Base rate” refers to the portion of the electric rate that pays for the delivery of power, such as constructing and maintaining the electric system.
- “TCRF” stands for transmission cost of recovery factor, and refers to the portion of the electric rate that pays other entities across Texas for constructing transmission infrastructure.
- “ECA” stands for energy cost adjustment, and refers to the portion of the electric rate that pays for power purchases.
- “TMPA coverage return” refers to the working capital that is provided to and returned from TMPA each year by the four member cities.
- “TCOS” stands for transmission cost of service, and refers to the payment DME receives from other entities across Texas for constructing transmission infrastructure.

Budget Highlights, Revenues

EXHIBIT 1

Revenues	FY2010-11 Actual	FY2011-12 Actual	FY 2012-13 Actual	FY 2013-14 Actual	FY 2014-15 Actual	FY 2015-16 Actual ⁽¹⁾	FY 2016-17 Proposed	FY 2017-18 Projected	FY 2018-19 Projected	FY 2019-20 Projected	FY 2020-21 Projected
Base Rate Revenues	\$72.7	\$71.1	\$71.0	\$74.9	\$81.4	\$82.7	\$91.5	\$97.6	\$104.0	\$106.1	\$105.5
TCRF Revenues	\$0.0	\$0.0	\$0.0	\$0.0	\$4.4	\$4.7	\$4.6	\$6.6	\$7.6	\$8.7	\$7.6
ECA Revenues	\$46.4	\$47.1	\$48.5	\$56.3	\$61.7	\$54.7	\$54.8	\$53.5	\$55.8	\$57.6	\$65.4
Total Rate Revenues	\$119.1	\$118.2	\$119.5	\$131.2	\$147.5	\$142.1	\$151.0	\$157.6	\$167.3	\$172.4	\$178.5
TMPA Coverage Return	\$2.4	\$3.0	\$6.8	\$6.8	\$7.2	\$7.4	\$8.6	\$0.8	\$0.8	\$0.8	\$0.9
TCOS Revenue	\$4.5	\$6.2	\$5.4	\$4.8	\$6.3	\$12.0	\$12.7	\$13.1	\$19.8	\$21.3	\$28.4
Other Revenues	\$5.8	\$5.1	\$4.4	\$4.8	\$4.7	\$11.5	\$4.8	\$4.8	\$4.8	\$4.9	\$4.9
Total	\$131.8	\$132.5	\$136.1	\$147.6	\$165.8	\$172.9	\$177.0	\$176.3	\$192.7	\$199.4	\$212.7

¹ Other Revenues includes \$6MM for Revenue Bond Reserves returned to DME due to bond payoff.

Values shown in Millions

Budget Highlights, Expenditures Definitions

- “Purchase Power & Fuel” refers to DME’s expenses related to purchasing wholesale electric power and purchasing fuel for the purpose of generating wholesale power. This cost is projected to drop as the Denton Energy Center reallocates costs from this category to personal services and debt service.
- “Transmission of Power” refers to the cost of transmitting electricity through transmission lines that are not owned by DME.
- “Personal Services” refers to the cost of staffing DME. This cost is projected to rise as more functions (including generating power) are accomplished by DME staff rather than being outsourced.
- “Operations & Maintenance” reflects the cost of keeping Denton’s electric system operational. Examples include vegetation management and replacing aging or damaged utility poles.
- “Return on Investment & Franchise Fee” are paid to the City of Denton based on a percentage of DME’s revenue.
- “Debt Service” refers to the payments DME makes against its debts.
- “Interfund Transfers” are payments made by DME to other City of Denton departments for the services those departments provide to the utility.
- “Fixed Assets” refer to expenses for tools and equipment above \$5,000 that are used to maintain the electric system.

Budget Highlights, Expenditures

EXHIBIT 1

	FY2010-11 Actual	FY2011-12 Actual	FY 2012-13 Actual	FY 2013-14 Actual	FY 2014-15 Actual	FY 2015-16 Actual (1)	FY 2016-17 Proposed	FY 2017-18 Projected	FY 2018-19 Projected	FY 2019-20 Projected	FY 2020-21 Projected
Purchased Power & Fuel	\$72.7	\$73.2	\$96.3	\$102.2	\$95.8	\$74.0	\$80.8	\$89.9	\$29.5	\$28.1	\$29.4
Transmission of Power	\$2.1	\$3.1	\$2.9	\$4.3	\$2.3	\$4.1	\$4.5	\$6.6	\$7.6	\$8.7	\$7.6
Personnel Services	\$7.9	\$8.7	\$9.6	\$11.1	\$12.9	\$15.0	\$18.5	\$20.2	\$23.9	\$25.2	\$26.7
Operations & Maintenance	\$4.4	\$5.1	\$4.7	\$6.9	\$6.4	\$7.4	\$14.2	\$14.0	\$15.7	\$16.2	\$16.6
ROI & Franchise Fee	\$10.4	\$10.3	\$10.2	\$10.8	\$11.7	\$12.0	\$13.4	\$14.2	\$17.8	\$18.3	\$18.9
Debt Service	\$16.0	\$17.4	\$19.2	\$22.0	\$23.1	\$29.1	\$29.6	\$35.7	\$51.7	\$65.6	\$70.3
Interfund Transfers	\$8.2	\$5.5	\$6.7	\$6.1	\$10.0	\$10.2	\$11.6	\$12.0	\$12.5	\$12.9	\$13.3
Fixed Assets	\$0.6	\$5.4	\$2.5	\$2.9	\$0.0	\$1.4	\$0.7	\$0.7	\$0.7	\$0.7	\$0.7
Total	\$122.3	\$128.8	\$152.1	\$166.3	\$162.2	\$153.2	\$173.4	\$193.3	\$159.2	\$175.6	\$183.5

Values shown in Millions

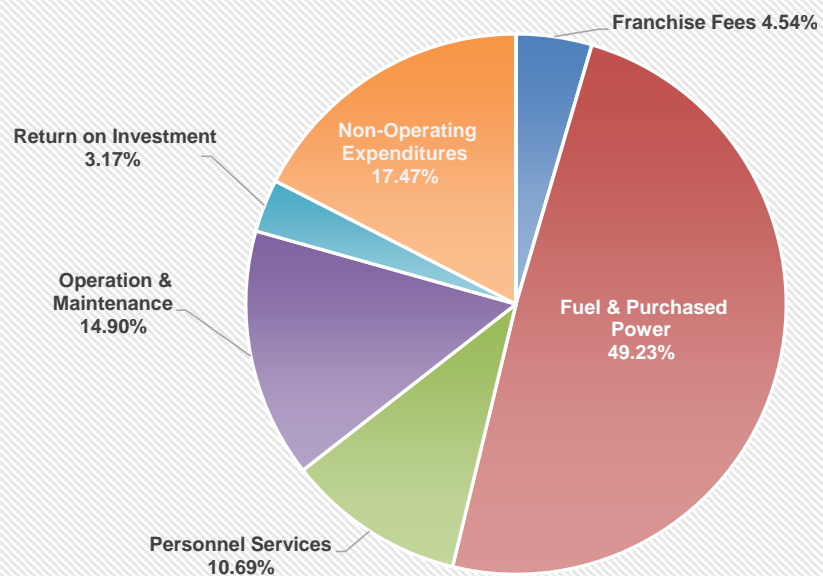
DENTON MUNICIPAL ELECTRIC

Expenditures

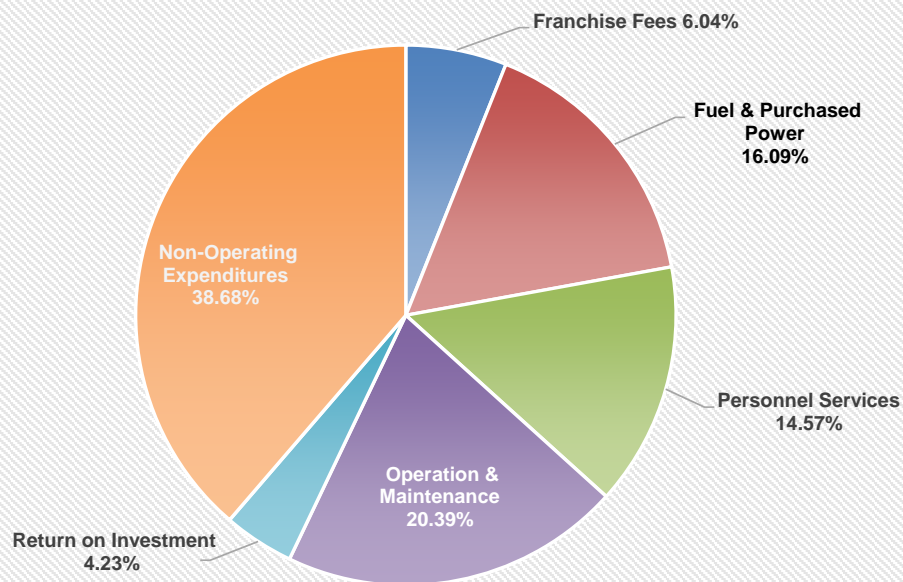
EXHIBIT 1

With the DEC, expenditures will shift from “Fuel & Purchased Power” to debt.

FY 2016-17 Projected Expenditures



FY 2020-21 Projected Expenditures



Rate Stabilization History & Projections

As of September 30	Total	Target Fund Balance ¹	Additional Fund Balance ²	Expenditures ³	Fund Balance as % of Expenditures
2022	\$118,785,619	\$ 65,000,000	\$ 53,785,619	\$ 189,111,502	34%
2021	100,911,565	60,000,000	40,911,565	183,485,264	33%
2020	82,569,132	55,000,000	27,569,132	175,595,214	31%
2019	63,173,034	50,000,000	13,173,034	159,193,989	31%
2018	33,260,013	33,260,013		193,314,031	17%
2017	52,976,601	52,976,601		173,408,320	31%
2016	76,478,302	76,478,302		153,175,995	50%
2015	59,828,699	59,828,699		162,150,427	37%
2014	59,009,001	59,009,001		166,263,221	35%
2013	78,102,530	78,102,530		152,061,374	51%
2012	92,326,941	92,326,941		128,773,530	72%
2011	87,163,325	87,163,325		122,320,213	71%

¹ Historically, usage of Appropriable Fund Balance was to pay down TMPA debt

² May be used for paying down debt, reducing rates or revenue funding capital

³ Fiscal years 2019 - 2022 include a reduction in energy cost due to the operation of Denton Energy Center.

Rate Stabilization History & Projections

As of September 30	Total	Target Fund Balance ¹	Additional Fund Balance ²	Exp
2022	\$118,785,619	\$ 65,000,000	\$ 53,785,619	\$
2021	100,911,565	60,000,000	40,911,565	
2020	82,569,132	55,000,000	27,569,132	
2019	63,173,034	50,000,000	13,173,034	15
2018	33,260,013	33,260,013		19
2017	52,976,601	52,976,601		17
2016	76,478,302	76,478,302		15
2015	59,828,699	59,828,699		16
2014	59,009,001	59,009,001		16
2013	78,102,530	78,102,530		15
2012	92,326,941	92,326,941		12
2011	87,163,325	87,163,325		12

These balances are estimates of what can be used to pay down debt, reduce rates, revenue fund capital projects, or some combination of the three. This will be discussed in upcoming budget discussions.

¹ Historically, usage of Appropriable Fund Balance was to pay down TMPA debt

² May be used for paying down debt, reducing rates or revenue funding capital

³ Fiscal years 2019 - 2022 include a reduction in energy cost due to the operation of Denton Energy Center.

Reserves

	Electric*
Working Capital	8%
Operating Reserves	8-12%
Total	16-20%
Operating Days	(60-75 days)

*does not include Texas Municipal Power Agency (TMPA) Debt payments

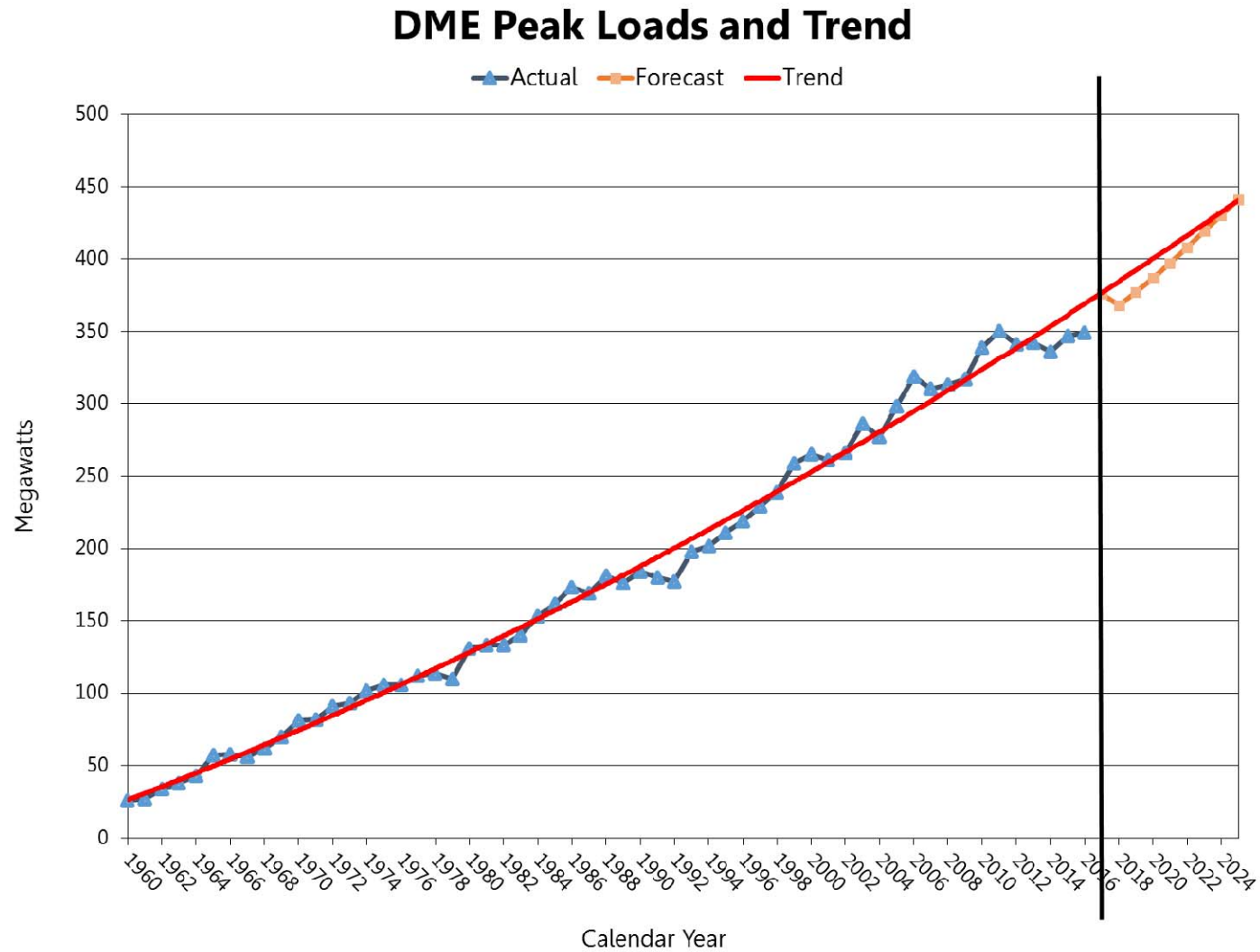
- Working capital provides liquidity for payables and payment cycles. Funds above this level are applied to the operating reserve.
- Operating reserves help managing expense and demand volatility, cover emergencies, and improve overall resiliency. In general, Funds with more stable revenue collection can consider lower OR targets.
- Funds above operating reserves may be used for debt reduction payments, one-time capital expenses, capital funding using cash, or various rate increase mitigation strategies.
- As DME's operations have changed it may be necessary to adjust the operating reserve target percentage. We are reviewing this and will return with a recommendation at a later date.

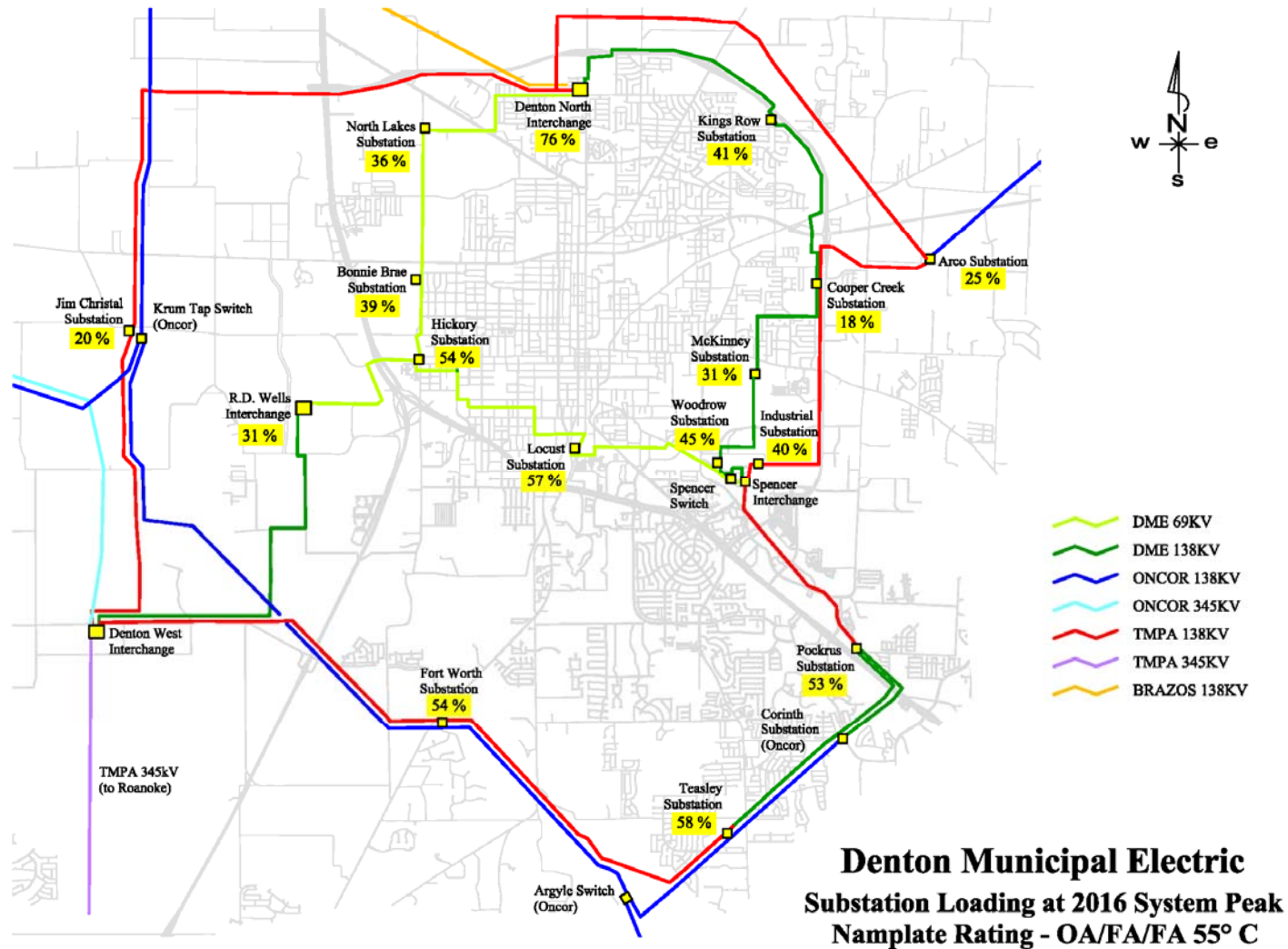
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Capital Improvement Plan

Electric infrastructure is designed to meet peak demand.







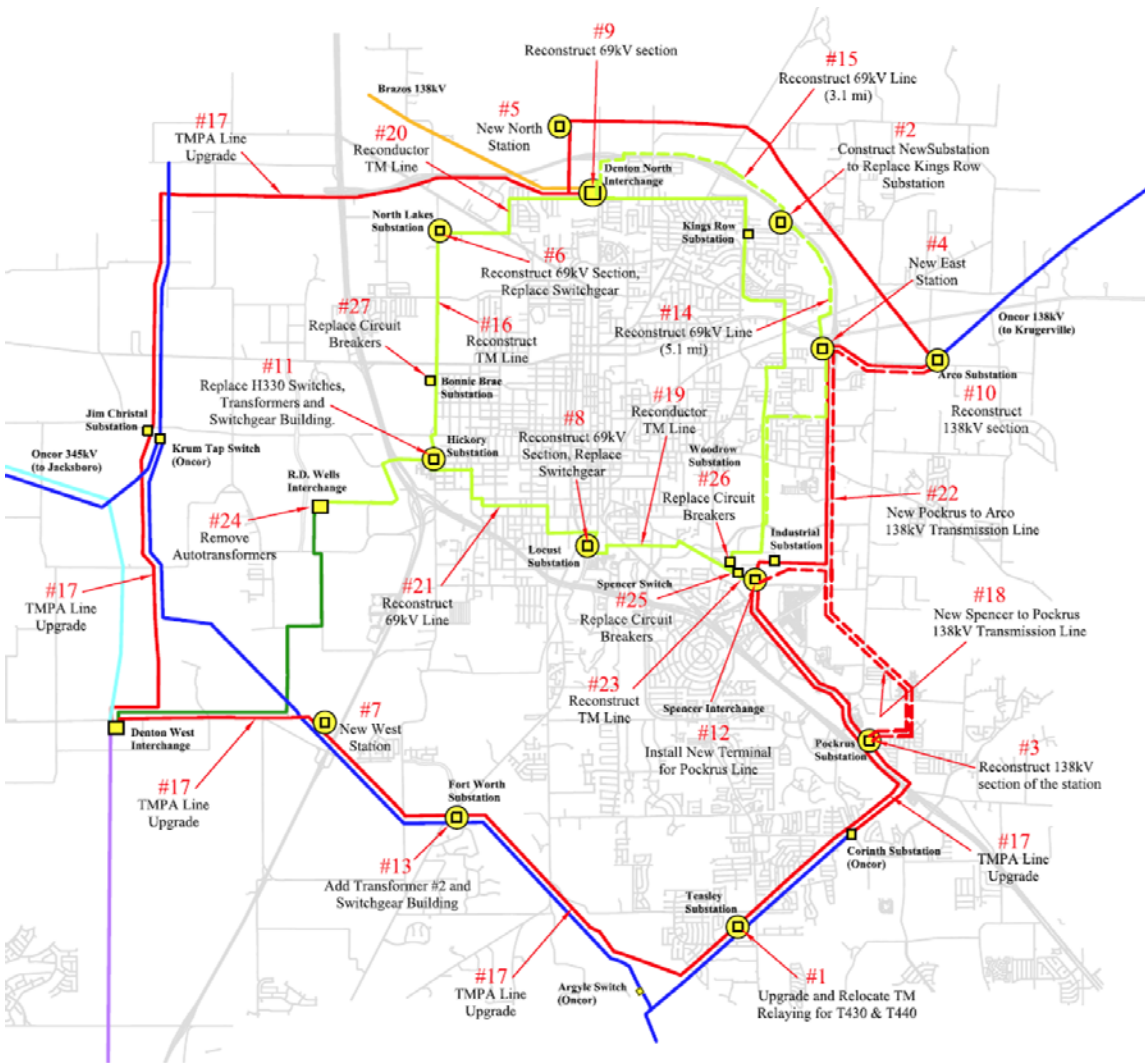
DME CIP BUDGET& ACTUAL CIP EXPENDITURES BY FISCAL YEAR (In Millions)

Fiscal Year	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	Total
FY 2011-12	\$49.9	\$33.1	\$27.3	\$33.2	\$28.5						\$171.8
FY 2012-13		84.6	84.9	59.4	42.1	31.2					302.2
FY 2013-14			113.5	88.9	77.7	47.0	38.8				365.9
FY 2014-15				105.4	92.3	86.3	57.0	45.0			385.9
FY 2015-16					105.3	89.3	85.8	68.0	54.4		402.8
FY 2016-17						204.1	215.1	81.0	84.7	62.8	647.7
Actual Spent Per Year	\$19.4	\$31.8	\$47.5	\$64.1	\$65.2						\$228.0

DME CIP BUDGET & ACTUAL CIP EXPENDITURES BY FISCAL YEAR (In Millions)

Fiscal Year	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	Total
FY 2011-12	\$49.9	\$33.1	\$27.3	\$33.2	\$28.5						\$171.8
FY 2012-13		84.6	84.9	59.4	42.1	31.2					302.2
FY 2013-14			113.5	88.9	77.7	47.0	38.8				365.9
FY 2014-15				105.4	92.3	86.3	57.0	45.0			385.9
FY 2015-16					105.3	89.3	85.8	68.0	54.4		402.8
FY 2016-17						112.1	87.1	81.0	84.7	62.8	427.7
Actual Spent Per Year	\$19.4	\$31.8	\$47.5	\$64.1	\$65.2						\$228.0

For comparison purposes this slide excludes Denton Energy Center



FY 2012-2013 CIP

- Number of projects: 27
- 5 Year Transmission Forecast: \$171,525,000
- Major projects include:
 - Denton North Interchange
 - Arco Substation
 - Woodrow to Kings Row TM Line
 - TMPA TM Line upgrades
 - Hickory to Locust TM Line

New Substation	11
Station additions*	10
Station Replacement	15
Transmission Line	13

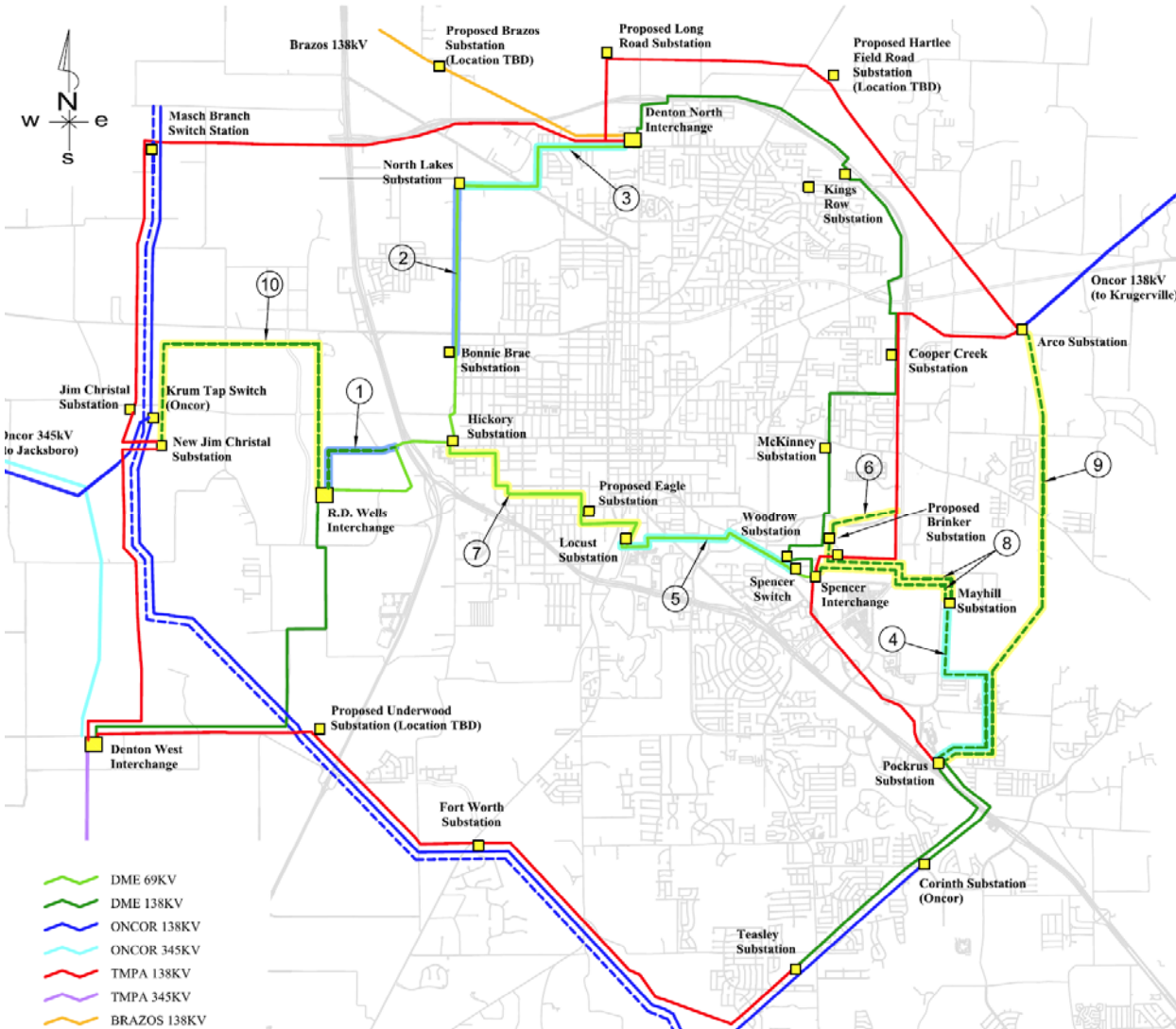
*equipment such as transformers and relays being added to an existing substation.

2016-17 CIP

- Number of projects: 42
- 5 Year Transmission Forecast: \$220,050,000
- Projects related to DEC:
 - Jim Christal Substation
 - Denton North to Arco TM Line
 - Total budget of the above projects is \$20.2 million.
- Note that both of the above projects are necessary for electric reliability and would be constructed regardless of the DEC. They were moved up in the queue as a result of the DEC. These projects are reimbursed through TCOS.

New Substation	21
*Station additions	17
Station Replacement	16
Transmission Line	29

*equipment such as transformers and relays being added to an existing substation.



CIP & Regulation

In addition to DME's governance structure, the utility is regulated by these state and federal agencies. FERC, NERC, and TRE ensure compliance of utilities (such as DME) that own and operate transmission systems. ERCOT and the PUCT are responsible for the integrity of the state-wide power grid.

- FERC – Federal Energy Regulatory Commission
 - Requires DME to conduct the 715 study, which helps directs DME's efforts related to the reliability of its transmission system.
- NERC – North American Electric Reliability Corporation
 - Responsible for the enforcement of reliability standards set by FERC.
- TRE – Texas Reliability Entity
 - Has delegated authority from NERC to monitor compliance with reliability standards.
- PUCT – Public Utility Commission of Texas
 - Has the authority to review and approve rate of return for transmission projects.
- ERCOT – Electric Reliability Council of Texas
 - Manages the flow of electric power to 24 million Texas customers representing approximately 90% of the state's electric load and about 75% of the Texas land area

Substation Spacing

The FERC 715 study is a valuable tool for understanding Denton's needs related to transmission reliability. It helps determine the distance between substations along with other factors, including:

- Density of electric load within a service territory.
- Location of existing transmission lines.
- Areas where load growth is anticipated.
- Availability and cost of real estate.
- The preference of nearby residents.
- The preference of land owners.

Capital Improvement Plan Budget by Fiscal Year (In Millions)

	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	Total
Distribution NEW	\$9.3	\$12.2	\$11.8	\$10.1	\$13.7	\$15.1	\$15.0	\$16.9	\$15.7	\$13.1	\$132.7
Distribution Replacement	\$18.9	\$17.0	\$32.7	\$36.8	\$39.8	\$39.0	\$28.8	\$25.1	\$22.2	\$16.9	\$277.2
Transmission NEW	\$4.9	\$11.0	\$14.3	\$18.8	\$25.8	\$39.4	\$27.5	\$20.6	\$32.2	\$19.3	\$213.8
Transmission Replacement	\$16.7	\$44.4	\$54.8	\$39.8	\$26.0	\$11.7	\$15.8	\$18.5	\$14.6	\$13.5	\$255.7
Denton Energy Center NEW	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$99.0	\$128.0	\$0.0	\$0.0	\$0.0	\$227.0
Distribution Total	\$28.2	\$29.2	\$44.5	\$46.8	\$53.5	\$54.0	\$43.7	\$42.0	\$37.9	\$30.0	\$410.0
Transmission Total	\$21.6	\$55.4	\$69.1	\$58.5	\$51.8	\$51.1	\$43.3	\$39.1	\$46.8	\$32.8	\$469.5
Denton Energy Center	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$99.0	\$128.0	\$0.0	\$0.0	\$0.0	\$227.0
Grand Total	\$49.9	\$84.6	\$113.5	\$105.4	\$105.3	\$204.1	\$215.1	\$81.0	\$84.7	\$62.8	\$1,106.4
NEW = projects that have not been in CIP in the past											
Replacement = projects that upgrade and/or reconfigure the electric system											

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DEC Status

- To date, Council has approved execution of contractual obligations exceeding \$200 million.
- Engineering design, site prep, and engine fabrication are well underway.
- Over \$42 million have been paid out on the project.
- Engines are expected to ship this June.

Budgeted Items and Cost

EXHIBIT 1

Item	Status	Budgeted/Estimated Cost
Equipment and Construction of Facility	Contracts Executed	\$196,505,561
Land	Contract Executed	\$3,193,481
Jim Christal Substation Upgrade (TCOS)	Contracts Executed	\$7,000,000
Owner's Engineer	March 21, 2017	\$963,930
SCADA System	March 7, 2017	\$446,318
Fuel Supply Equipment Yard	Contract Executed	\$988,984
Phase 1 Water Line (Fire Protection)	Contract Executed	\$530,485
Phase 2 Water Line (Fire Protection)	Summer 2017	\$2,250,000
Wastewater Line	Summer 2017	\$1,500,000
IT/Communications Equipment	Spring 2017	\$1,053,682
Fuel Supply Infrastructure	Spring 2017	\$1,800,000
Landscape Buffer	Spring 2018	\$150,000
Contingency	N/A	\$10,617,559
Total		\$227,000,000

- After June 1, the City of Denton will have obligated \$155 million towards the Denton Energy Center.

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DME Debt (In Millions)

	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21
	Actual	Actual	Actual	Actual	Actual	Projected	Projected	Projected	Projected	Projected (1)
Beginning Outstanding Principal	\$ 182.7	\$ 192.3	\$ 219.8	\$ 275.1	\$ 327.5	\$ 359.9	\$ 625.8	\$ 661.8	\$ 694.4	\$ 723.7
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
New Issues	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
GO/CO Debt	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 65.0	\$ 54.0	\$ 55.0	\$ 62.0	\$ 46.0
Revenue Bond Debt - Denton Energy Center	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 214.9	\$ -	\$ -	\$ -	\$ -
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Principal Payoff	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
GO/CO Debt	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (14.0)	\$ (18.0)	\$ (22.4)	\$ (25.0)	\$ (27.1)
Revenue Bond Debt	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (7.6)	\$ (8.0)
Ending Outstanding Principal	\$ 182.7	\$ 192.3	\$ 219.8	\$ 275.1	\$ 327.5	\$ 625.8	\$ 661.8	\$ 694.4	\$ 723.8	\$ 734.7
Debt Service Payment										
Principal	\$ 9.6	\$ 10.9	\$ 12.7	\$ 13.8	\$ 15.1	\$ 13.8	\$ 17.5	\$ 22.3	\$ 33.4	\$ 36.4
Interest	\$ 7.8	\$ 8.3	\$ 9.3	\$ 11.8	\$ 14.0	\$ 15.8	\$ 18.2	\$ 29.4	\$ 32.2	\$ 33.9
Total	\$ 17.4	\$ 19.2	\$ 22.0	\$ 25.6	\$ 29.1	\$ 29.6	\$ 35.7	\$ 51.7	\$ 65.6	\$ 70.3

(1) For FY 2020-21, the City's annual debt service principal payment is projected to be approximately \$36,400,000. This payment is projected to be offset by approximately \$28,000,000 annually in Transmission Cost of Service Revenue. The current forecast estimates an additional \$60 Million reduction in purchase power cost.

DME's Percentage of Debt Paid Off (principal only)

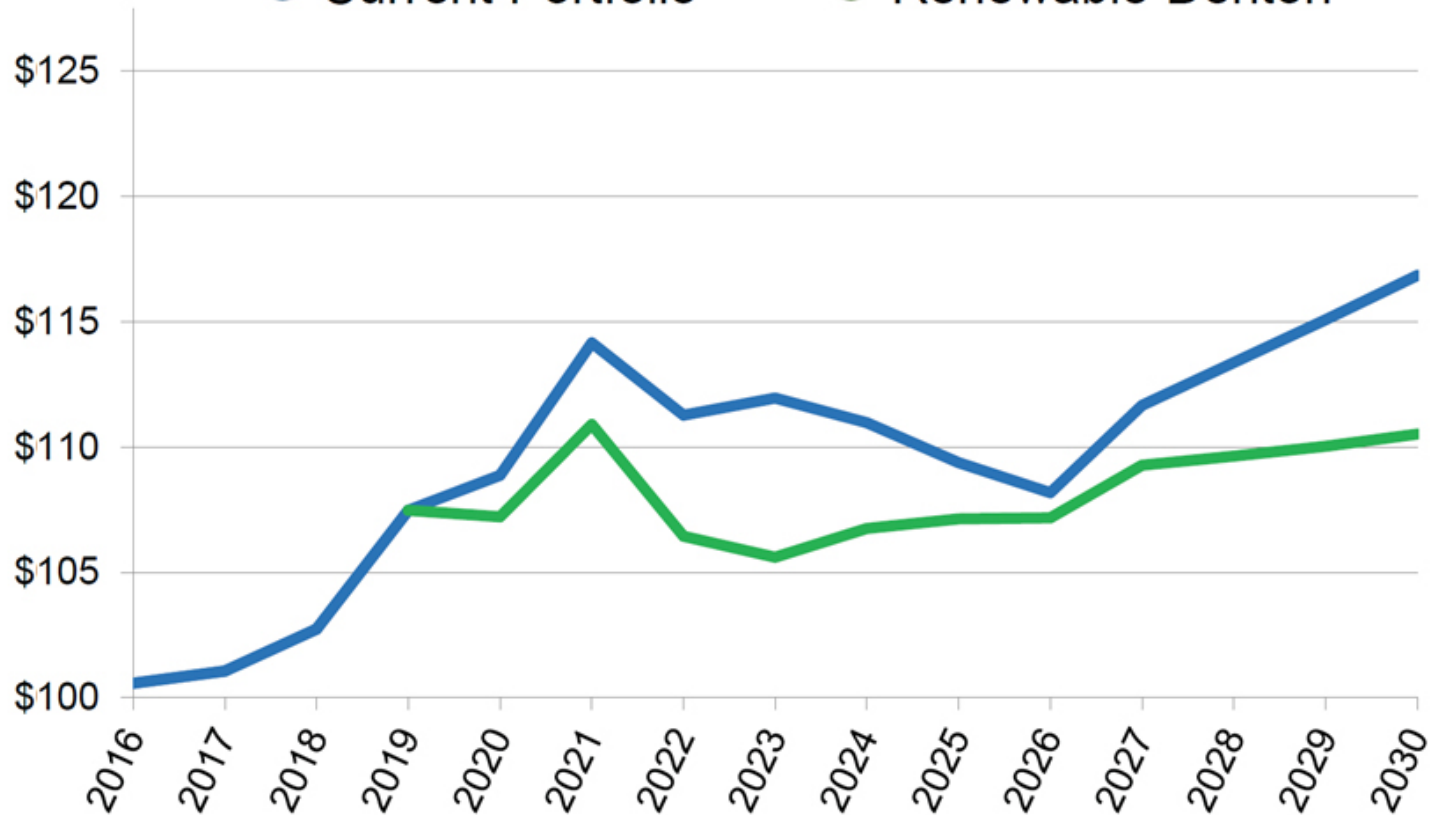
- In 5 years, 20% of the debt will be paid off.
- In 10 years, 42% of the debt will be paid off.
- In 15 years, 63% of the debt will be paid off.
- In 20 years, 84% of the debt will be paid off.
- In 25 years, 93% of the debt will be paid off.

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Comparison of Projected Rates

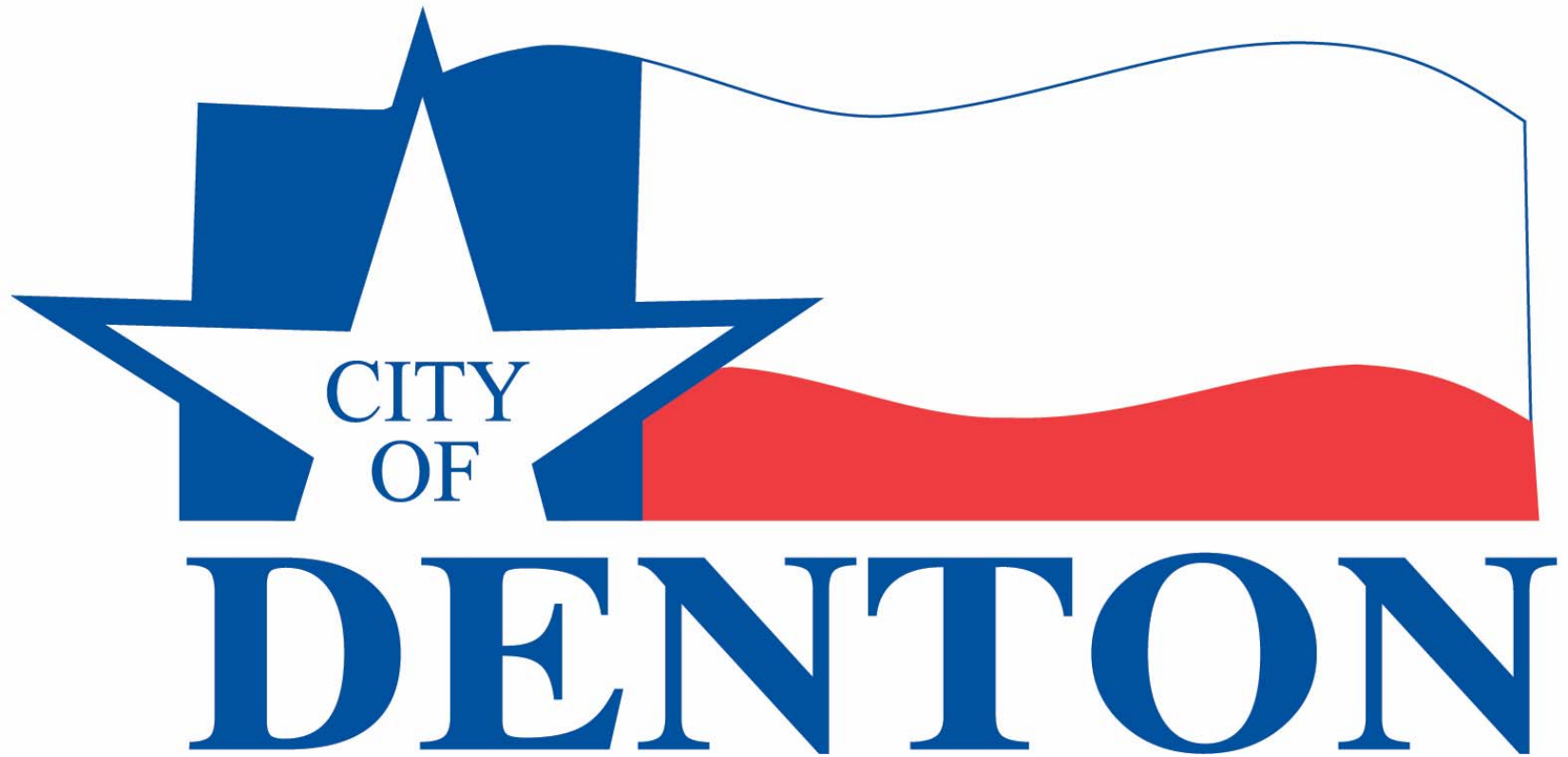
monthly bill for residential customer using 1,000 kWh per month

● Current Portfolio ● Renewable Denton



Key assumptions include:

- 20 year debt service for the DEC
- Natural Gas Futures Market (US Energy Information Administration)
- PPAs for Renewables (current and indicative pricing)
- ERCOT Market Projections (heat rate and market volatility)



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