PUBLIC UTILITIES BOARD - NEW BUSINESS ACTION ITEMS

	DATE REQUESTED	REQUESTOR	ITEM	DEPARTMENT	STATUS
1.	5/22/17	Russell	Update sale of Coal Plant	DME	Complete 6/16/17
2.	5/22/17	Russell	Update Transmission Line Installation off Loop 288.	DME	Complete 6/16/17
3.	8/14/17	Carroll	Report of existing solar rooftop installations and rate that he power is bought back.	DME	Memo attached 9/22/17
4.	8/14/17	Carroll	Our fee for pole attachments versus Senate Bill 1004	DME	Memo attached 9/22/17
5.	8/14/17	Carroll	Review Ordinance to change the rebate structure regarding batteries	DME	Memo attached 9/22/17
6.	9/11/17	Carroll	Cost regarding DEC	DME	Presentation to be provided by Enterprise Risk Consulting (ERC)
7.	9/11/17	Armintor	Staff Presentation regarding 2010-292 Ordinance right of entry	DME	Memo attached from previous City Council Informal Staff Report
8.	9/11/17	Armintor	DME rates discounts for larger users not residential	DME	Memo to be provided on 10/23/17
9.	9/25/17	Robinson	Recognize employees for their assistance in hurricane relief efforts in Texas and Florida	DME	Presentation on 10/9/17
10.	9/25/17	Carroll	Website data. How many views of the PUB Meeting during and after. How many downloads of the agenda before and after the meeting.	PIO	Memo attached 10/9/17
11.	9/25/17	Armintor	Timeline for consultants to come back to PUB added to the website	CMO	Future PUB agenda items included in ACM update
12.	9/25/17	Armintor	Consider having all proposed expenditures over $50k to be individual consideration agenda items.	CMO	Discussion for direction by the PUB at a future Board meeting

215 E. McKINNEY, DENTON, TEXAS 76201 • (940) 349-8307 • FAX (940) 349-8596
CITY MANAGER'S OFFICE

MEMORANDUM

DATE: **September 25, 2017**

TO: **Members of the Public Utilities Board**

FROM: **Mario Canizares, Assistant City Manager**

SUBJECT: **Public Utilities Board New Business Matrix**

Background:
There have been a few items that have been listed on the Public Utilities Board New Business Matrix since August 2017. The items listed below are responses provided by City staff.

Item #3: Report of existing solar rooftop installations and rate that the power if bought back. The items regarding rooftop installation were presented to the PUB on September 11, 2017 as part of the GreenSense Incentive Program. The City Council adopted the GreenSense Incentive Program at their meeting held on September 19, 2017. The staff memorandum from that meeting is attached as Exhibit's A and C.

Item #4: City of Denton fee for pole attachments versus Senate Bill 1004. The City Council adopted the DME rates for FY 2017/18 on September 19, 2017. The pole attachment fee for DME is $15.57 per attachment which is the same rate as was adopted in FY 2016/17. Therefore there has been no change as a result of Senate Bill 1004. The schedule of fees adopted by the PUB and City Council for DME are attached as Exhibit B. The rate comparison for pole attachments are listed on page 6 of 7.

Item #5: Review ordinance to change the rebate structure regarding batteries.
City staff presented the GreenSense Incentive Program to the PUB on September 11, 2017. The City Council adopted the GreenSense Incentive Program by resolution at their meeting held on September 19, 2017. The staff memorandum and supporting documentation from those meetings are attached as Exhibit's A and C.

EXHIBIT A

1659 Spencer Road, Denton, Texas 76205

Date: September 7, 2017

To: Chairman Robinson and Honorable Members of the Public Utilities Board
Todd Hileman, City Manager
Bryan Langley, Deputy City Manager/COO

From: Jessica Rogers, Energy Services Manager

Subject: Request for Information Regarding Solar Rebates

Executive Summary

DME's solar rebate program, a part of the City's larger GreenSense Incentive Program, provides cash rebates for customers who install photovoltaic ("solar") panels and systems at their residences or businesses. As recently detailed in a City of Denton press release, there are now over 100 systems interconnected to the Denton grid and producing enough energy to power 73 homes. Denton's solar rebate program is one of the top solar incentive programs in Texas and has distributed over $1 million in rebates resulting in over 1.7 megawatts of installed or planned capacity at a value of over $5 million in assets. Important components of Denton's program include an attractive rebate incentive and a rate structure that allows for the buy-back of excess generation. Additionally, Denton's program is the only program in Texas to offer graduated incentives for systems with battery storage equipment.

Program History and Current Rebate Program

The solar rebate program was initially developed and incorporated into the City's GreenSense Incentive Program in 2009. While the program started with only a $90,000 annual budget and a few small systems, it quickly grew in both scale and funding. From FY 2009 through FY 2016, 84 separate systems were installed with over $1 million in rebates being distributed.

In FY 2017, the program continued to grow and the annual budget was increased from $180,000 to $200,000. Of that, $127,119 has already been distributed, with the remaining funds committed to customers pending completion of their solar installations. In FY 2017 to date, DME has received 45 applications, with 32 systems having completed the interconnection and installation process.

See **TABLE 1** for additional data regarding the installed systems and value of installations.

The current program guidelines and rebate structure is provided to customers through the GreenSense Program Incentive Manual. The solar program provides cash rebates to participants for qualifying solar equipment. The rebates are offered in the following amounts:

- $0.75 per alternating current ("AC") watt up to $30,000, not to exceed 50% of the total install cost for any system *without* battery storage.
- $1.50 per AC watt up to $30,000, not to exceed 50% of the total install cost for any system *with* battery storage equipment.

The amount of the rebate is based on the cost of a solar installation, with staff recommending adjustments based on changes in system pricing and market trends. In previous years, the rebate has been set at $3.00 per watt and $1.50 per watt. However, as the cost of solar installations has come down, more customers have the ability to afford panels and realize the value of offsetting some of their energy costs. In order to accommodate the growing demand for solar installations, DME has lowered the rebate amounts to correspond to the decreasing price of solar panels. Overall, the cost of solar installations has decreased so significantly that DME continues to receive applications for system interconnections even though all rebate funds for FY 2017 have been exhausted. This indicates that systems are becoming increasingly affordable and accessible even without additional local incentives.

See **TABLE 2** for information on the rebates provided and the cost of solar installations in Denton.

How Does Denton Compare to Other Programs in the State?

Because there is no standard industry format for distributed generation rebate programs, each utility (municipal, cooperative, or investor-owned) can decide if they want to offer a rebate program and how that rebate will be calculated and distributed. As each program is unique, the available information is also specific to each utility. Many programs contain significant details and program parameters specific to that utility's terms of service or program manual. For any additional information regarding a specific program, please consult that utility's program handbook or website.

See **TABLE 3** for a sample of the rebates available from other utilities in Texas.

See **TABLE 4** for estimated calculations of the amounts of rebates sample systems would receive.

Rate Structure, Billing, and Distributed Generation Purchases

In addition to the cash rebate, participants are also incentivized by DME's rate structure, which provides credits for any generation up to their consumption, and an excess generation credit for any energy put back on the DME grid in excess of consumption.

For any generation delivered by the participant *up to* the amount of generation delivered by DME to the customer, the customer is credited for the generated energy as follows:

Generation Credit = [(kWh delivered from the Customer's approved system) X (Customer's base electric service rate)] + [(kWh delivered from the Customer's approved system) x (RCA rate)]

For example, if Customer A consumed 1,000 kWh and returned 500 kWh, Customer A would be billed for the 1,000 kWh at the regular residential rate and a credit would be calculated for the 500 kWh as noted above.

For all energy delivered by the participant's system to the DME system that ***exceeds*** the amount of energy delivered by DME to the customer, the customer is credited as follows:

Excess Generation Credit = (kWh delivered from the Customer's system) x RCA Rate

For example, if Customer B consumed 1,000 kWh and returned 1,500 kWh, Customer B would be billed for the 1,000 kWh. The first 1,000 kWh returned to the grid would be credited at the Generation Credit rate. The additional 500 kWh (the amount of kWh that *exceeds* the customer's consumption) would be credited at the Excess Generation Credit Rate.

In FY 2016, DME purchased 231 MWh from customers at a cost of $15,028 or $65.05 per MWh. To put that into perspective, DME purchased just over 1,500,000 MWh for all of FY 2016, making that 231 MWh equal to 0.02% of the total energy purchased. DME expects a similar value for FY 2017.

Avoided Costs

One of the most valuable benefits of installing solar panels is what is called "avoided cost." This is the amount of energy costs that a customer avoids by generating energy and consuming energy at the same time. Another way to think of it is that avoided costs are the charges that a customer would have paid for that same energy if it had been bought from the City. However, because the customer generated that energy themselves, they aren't charged for that energy. Unlike a rebate or tax credit, the avoided costs continue throughout the life of a system and are a big portion of how customers realize a payback from their system.

Because solar systems are installed on the customer's side of the meter, any of the energy that is produced and used by the customer prior to reaching the meter is equivalent to reducing that customer's consumption, and thus the customer's bill, prior to any credits for generation. A challenge of residential solar installations is that the highest periods of production occur when most people are not home and not consuming a lot of energy. Battery storage helps customers increase that avoided cost component by storing the unused energy from the peak production period for use during a peak consumption period. Additionally, this type of "load reduction" helps DME maintain lower costs by reducing the energy demand during the most expensive hours of the day.

See **TABLE 5** for a breakdown of the metering and billing information for 7 sample home solar installations. These are the only 7 installed solar installations which provide DME with complete generation data from the system. For all other systems, DME only has access to the net kilowatt hours returned to the grid, as opposed to the total generated kilowatt hours. Because the data has been available for different amounts of time, data for each system is presented in aggregate for the number of months DME has had access to system data.

TABLE 1: Solar Installations in Denton and Value								
Fiscal Year	**Residential Installs**	**Average Residential Size (kW)**	**Total Residential kW Added**	**Total Residential Value ($)**	**Commercial Installs**	**Average Commercial Size (kW)**	**Total Commercial kW Added**	**Total Commercial Value**
2005	1	3.4	3.4	N/A	0	0	0	0
2006	0	0	0	N/A	0	0	0	0
2007	1	2.4	2.4	N/A	0	0	0	0
2008	0	0	0	N/A	0	0	0	0
2009	0	0	0	N/A	1	4.30	4.30	N/A
2010	4	3.1	12.3	73,097.23	1	5.00	5.00	$25,000.00
2011	4	4.6	18.4	101,885.03	3	11.72	35.16	$176,994.29
2012	9	4.4	39.2	183,524.75	2	4.80	9.60	$48,532.00
2013	20	4.1	82.9	407,054.41	1	1.98	1.98	$6,707.60
2014	10	4.8	47.9	235,247.52	3	8.33	24.98	$107,032.03
2015	6	5.3	31.9	163,500.63	4	19.49	77.94	$324,212.29
2016	15	7.3	109.0	448,380.89	1	20	20.00	$67,420.00
2017[1]	41	7.2	287.6	1,264,493.05	4	231.41	925.65	1,586,085.33
Total	**111**	**5.8 kW**	**635.0 kW**	**$2,877,183.51**	**20**	**55.23 kW**	**1,104.61 kW**	**$2,341,983.54**

[1] 2017 includes both installed and planned installations.

Fiscal Year	**Total System Installs**	**Total System kW Added**	**Total Value ($)**
2005	1	3.4	N/A
2006	0	0	N/A
2007	1	2.4	N/A
2008	0	0	N/A
2009	1	4.3	N/A
2010	5	17.3	98,097.23
2011	7	53.56	278,879.32
2012	11	48.8	232,056.75
2013	21	84.88	413,762.01
2014	13	72.88	342,279.55
2015	10	109.84	487,712.92
2016	16	129	515,800.89
2017[1]	45	1,213.25	2,850,578.38
Total	**131**	**1,739.61**	**$5,219,167.05**

TABLE 2: Comparison of Average Rebate to System Cost (Installed Systems Only)							
Fiscal Year	Total Residential Rebates ($)	Average Residential Rebate ($)	Average Residential System Cost ($)[2]	Total Commercial Rebates ($)	Average Commercial Rebate ($)	Average Commercial System Cost ($)	Average Cost Per kW_{AC} ($)[3]
2009	0	0	0	15,000	15,000	N/A	N/A
2010	33,848	8,462	24,366	15,000	15,000	25,000	23,241
2011	54,371	13,593	25,471	45,000	15,000	58,998	5,582
2012	118,389	13,154	20,391	29,685	14,843	24,266	4,706
2013	224,567	11,228	20,352	4,695	4,695	6,708	7,343
2014	100,767	12,596	28,062	44,612	14,871	35,677	4,924
2015	48,247	9,649	31,100	104,358	26,090	81,053	7,964
2016	143,127	11,010	30,895	30,000	30,000	67,420	4,115
2017[1]	113,884	5,423	31,031	13,325	6,617	29,673	4,498
Total	$852,200			$301,675			

TOTAL REBATES DISTRIBUTED: $1,138,875

[1] Only includes installed systems for which DME has final system and rebate information.
[2] Average system cost has grown over time, primarily due to an increase in the system sizes. The cost for a system installation can be affected by a number of things, including size of system, make/model of associated equipment, "make-ready" costs, time/labor of installation.
[3]Although the cost of residential systems has gone up, the average cost per kW has decreased over time. This has led to an increase in the average size of systems installed (TABLE 1) and in an increase in larger commercial installations.

TABLE 3: Solar Rebate Program Summaries				
Utility	**Type**	**Program Basics**	**Caps/Restrictions**	**Program Budget**
DME	MOU	• $0.75 per watt (without battery) • $1.50 per watt (with battery)	• Cap at $30,000 • Rebate cannot exceed 50% of project cost • No cap on system size	$200,000
Austin Energy	MOU	• Tiered rebate structure • $0.50 to $1.00 per watt	• System cannot produce more than 100% of on-site consumption • Incentive capped at first 10 kW_{AC} • Incentive cannot exceed 50% of invoiced costs • Battery storage costs cannot be included • Systems must carry warranty	$6,100,000
CPS	MOU	• Up to $0.70 per watt for locally manufactured components • $0.60 per watt base incentive • $0.08 per watt for local modules • $0.02 per watt for local inverters • $0.45 per watt for non-local installers (both commercial and residential)	• Cap at $25,000 for residential projects • Cap at $80,000 for commercial projects • Cap at 50% of project costs • Projects must be priced at $4.00 per watt or less	$15 million (total) Commercial: $6 million Residential: $9 million
GP&L	MOU	• Utility bill credit • $0.75 per watt	• Cap at $5,000 • Systems must carry warranty • Systems must be 4kW to qualify for credit	$70,000
New Braunfels	MOU	• $0.50 per watt	• Cap at $3,000 • System must carry warranty	Not available
San Marcos	MOU	• $2.00 per watt	• Cap at $5,000 • Rebate cannot exceed 50% of installation costs • Customer billed at pro-rate amounts if systems are removed • System must carry warranty • Rebate does not include battery storage	$43,000

TABLE 3: Solar Rebate Program Summaries (cont.)				
Bryan (BTU)	MOU	• No program	• No program	Not applicable
College Station	MOU	• No program	• No program	Not applicable
Georgetown (GUS)	MOU	• No program	• No program	Not applicable
Lubbock (LP&L)	MOU	• No program	• No program	Not applicable
Greenville	MOU	• No program	• No program	Not applicable
AEP North Texas	IOU	• Residential program: $0.80 per watt • Commercial program: $0.80 per watt (0-10 kW); $0.60 per watt (10-30 kW); $0.25 per watt (30-100 kW)	• Cap at 10 kW_{DC} system and $8,000 for residential • Cap at 100 kW_{DC} system and $37,500 for commercial	$162,900 (total) Residential: $90,000 Commercial: $72,900
AEP Texas Central	IOU	• Residential program: $0.80 per watt • Commercial program: $0.80 per watt (0-10 kW); $0.60 per watt (10-30 kW); $0.25 per watt (30-100 kW)	• Cap at 10 kW_{DC} system and $8,000 for residential • Cap at 100 kW_{DC} system and $37,500 for commercial	$360,000 (total) Residential: $180,000 Commercial: $180,000
Oncor	IOU	• One-time payment of $538.53 per kW $0.2519 per kWh	• Cap at 20% of most recent funding allocation • System must be 1 kW or larger • Maximum size is 15 kW • System cannot produce energy in excess of on-site consumption	$4,052,220 Residential: $1,479,380 Commercial: $2,572,840
Sharyland	IOU	• Residential: $278/kW reduction; $0.10/kWh saved • Hard to Reach: $477/kW reduction; $0.16/kWh saved	• Cap at 20% of the total budget of project • Qualifying panels must be tested and meet the label specifications	$216,388 (total) Residential: $158,569 Hard to Reach: $57,819
CoServ	Coop	• $350 per kW_{AC} rebate	• System must be 1 kW but not exceed 7.5 kW_{AC} • Application must be received within 90 days of interconnection	$450,000

TABLE 4: Estimated Rebate Amounts (Residential PV System)								
Utility	**4.5 kW_{AC} System No Battery**		**4.5 kW_{AC} System With Battery**		**9.0 kW_{AC} System No Battery**		**9.0 kW_{AC} System With Battery**	
	Amount	**Rank**	**Amount**	**Rank**	**Amount**	**Rank**	**Amount**	**Rank**
DME	$3,375	3 (tied)	$6,750	1	$6,750	2 (tied)	$13,500	1
Austin Energy[1]	$2,700	4 (tied)	$2,700	5 (tied)	$5,400	3 (tied)	$5,400	4 (tied)
San Antonio (CPS)[2]	$2,700	4 (tied)	$2,700	5 (tied)	$5,400	3 (tied)	$5,400	4 (tied)
Garland (GP&L)	$3,375	3 (tied)	$3,375	4	$6,750	2 (tied)	$6,750	3
New Braunfels	$2,250	6	$2,250	7	$3,000	6	$3,000	7
San Marcos	$5,000	1	$5,000	2	$5,000	4	$5,000	5
Bryan (BTU)[3]	$0	N/A	$0	N/A	$0	N/A	$0	N/A
College Station[3]	$0	N/A	$0	N/A	$0	N/A	$0	N/A
Georgetown (GUS) [3]	$0	N/A	$0	N/A	$0	N/A	$0	N/A
Lubbock (LP&L) [3]	$0	N/A	$0	N/A	$0	N/A	$0	N/A
Greenville[3]	$0	N/A	$0	N/A	$0	N/A	$0	N/A
AEP North Texas	$3,600	2 (tied)	$3,600	3 (tied)	$7,200	1 (tied)	$7,200	2 (tied)
AEP Texas Central	$3,600	2 (tied)	$3,600	3 (tied)	$7,200	1 (tied)	$7,200	2 (tied)
Oncor	$2,429	5	$2,429	6	$4,858	5	$4,858	6
Sharyland	$1,251	8	$1,251	9	$2,502	8	$2,502	9
CoServ	$1,575	7	$1,575	8	$2,625	7	$2,625	8
DME RANK	**3rd Highest Available (tied)**		**Highest Available**		**2nd Highest Available (tied)**		**Highest Available**	

[1] Austin Energy calculation includes rebates at the $0.60 tier level.
[2] CPS calculation includes only base incentive level at $0.60 per watt.
[3] Bryan, College Station, Georgetown, Lubbock, and Greenville do not offer solar rebates or incentives at this time.

TABLE 5: Sample PV System Billing and Generation Data[1]							
	System Number						
System	**1**	**2**	**3**	**4**	**5**	**6**	**7**
Home Size	2,046 sf	3,748 sf	2,006 sf	1,910 sf	7,188 sf	2,559 sf	2,650 sf
System kW Size	8.58	7.95	3.7	5.3	15	9.54	3.5
System Cost	$26,684	$33,948	$13,319	$18,900	$48,916	$34,344	$15,300
DME Rebate	$11,942	$10,856	$5,066	$0	$18,000	$6,514	$2,533
Estimated Tax Credit	$8,005	$10,184	$3,996	$5,670	$14,675	$10,303	$4,590
Estimated Out of Pocket Cost	$6,737	$12,907	$4,257	$13,230	$16,241	$17,527	$8,177
Number of Months of System Data Available	12	10	10	8	8	5	4
Aggregate Billed kWh	10,633	8,524	3,655	7,161	17,413	2,946	2,200
Aggregate Return kWh	5,188	3,962	3,048	2,252	2,548	2,717	563
Aggregate Generation kWh	11,244	7,278	4,486	4,808	9,552	5,506	1,280
Aggregate Estimated Avoided Usage	6,056	3,316	1,438	2,556	7,004	2,789	717
Aggregate Billed Amount	$625	$504	$181	$541	$1,336	$140	$210
Aggregate Estimated Avoided Cost	$525	$602	$142	$218	$584	$310	$90

[1]See definitions on next page for additional information.

Definitions:

Home/Structure Size	The square footage of the home as reported to Denton Central Appraisal District.
System kW Size	The maximum kilowatt (kW) direct current (DC) the system can generate at any given point.
System Cost	The total cost of the system, including installation and equipment.
DME Rebate	The total solar rebate incentive provided to customer by DME.
Estimated Tax Credit	The estimated amount of federal tax credit that the customer can qualify for under the Solar Investment Tax Credit (ITC).
Estimated Out of Pocket Cost	Estimated remaining balance of customer cost after receiving the DME rebate and tax credit.
Number of Months of Data	The number of months DME has access to generation data on the example PV systems. All of the data presented in "aggregate" are summations of the data points for the number of months available for that customer.
Billed kWh	The kilowatt-hours (kWh) consumed by the customer during a billing cycle. This unit of measurement is recorded by the meter. The Aggregate Billed kWh represents total of the data available for that customer.
Return kWh	The kilowatt-hours (kWh) generated by the customer's system and put back on the grid during a billing cycle. This unit of measurement is recorded by the meter. The Aggregate Returned kWh represents total of the data available for that customer.
Generation kWh	The generated kilowatt-hours (kWh) generated by the customer's system. This measurement is **NOT** captured by the meter. DME must ask for this information. The Aggregate Generation kWh represents total of the data available for that customer.
Estimated Avoided Usage	The generated kilowatt-hours (kWh) consumed by the customer before it is measured at the meter. DME can estimate this number by subtracting the returned kWh from the generation kWh. The Aggregate Estimated Avoided Usage represents total of the data available for that customer.
Billed Amount	The total electric cost to be paid by the customer after billed kWh is charged and return kWh is credited. The Aggregate Billed Amount represents total of the data available for that customer.
Estimated Avoided Cost	The estimated cost of avoided usage had there been no generation kWh. The Aggregate Avoided Cost represents total of the data available for that customer.

EXHIBIT B

CITY OF DENTON ELECTRIC UTILITY
FISCAL YEAR RATE COMPARISON

Rate Schedule	2018 Rates	2017 Rates	% Increase
Residential Service - RES			
Facility Charge $ - Single Phase	8.67	8.67	0.00%
Facility Charge $ - Three Phase	17.33	17.33	0.00%
Usage Charge/cents per kWh:			
Tier 1: First 600 kWh (Winter)	6.84	6.84	0.00%
Tier 2: All Additional kWh (Winter)	4.55	4.55	0.00%
Tier 1: All kWh (Summer)	6.84	6.84	0.00%
Energy Cost Adjustment (ECA)	Variable	Variable	
Transmission Cost Recovery Factor (TCRF)	Variable	Variable	
Residental Renewable Energy Service Rider - RG			
Facility Charge $ - Single Phase	8.67	8.67	0.00%
Facility Charge $ - Three Phase	17.33	17.33	0.00%
Usage Charge/cents per kWh:			
Tier 1: First 600 kWh (Winter)	6.84	6.84	0.00%
Tier 2: All Additional kWh (Winter)	4.55	4.55	0.00%
Tier 1: All kWh (Summer)	6.84	6.84	0.00%
Renewable Cost Adjustment	Variable	Variable	
Transmission Cost Recovery Factor (TCRF)	Variable	Variable	
Residential Prepaid Service - RPP			
Facility Charge $ - Single Phase	16.02	16.02	0.00%
Facility Charge $ - Three Phase	23.64	23.64	0.00%
Usage Charge/cents per kWh:			
Tier 1: First 600 kWh (Winter)	6.84	6.84	0.00%
Tier 2: All Additional kWh (Winter)	4.55	4.55	0.00%
Tier 1: All kWh (Summer)	6.84	6.84	0.00%
Renewable Cost Adjustment	Variable	Variable	
Transmission Cost Recovery Factor (TCRF)	Variable	Variable	
Residential Time Of Use - RTOU			
Facility Charge $ - Single Phase	8.67	8.67	0.00%
Facility Charge $ - Three Phase	17.33	17.33	0.00%
Usage Charge/cents per kWh:			
Tier 1: First 600 kWh (Winter)	6.84	6.84	0.00%
Tier 2: All Additional kWh (Winter)	4.55	4.55	0.00%
Tier 1: All kWh (Summer)	6.84	6.84	0.00%
Energy Cost Adjustment (ECA)	Variable	Variable	
Transmission Cost Recovery Factor (TCRF)	Variable	Variable	
General Service Small - GSS			
Facility Charge $ - Single Phase	16.60	16.60	0.00%
Facility Charge $ - Three Phase	22.17	22.17	0.00%
Usage Charge/cents per kWh			
Tier 1: First 2,500 kWh	8.52	8.52	0.00%
Tier 2: All Aditional kWh	4.46	4.46	0.00%
Energy Cost Adjustment	Variable	Variable	
Transmission Cost Recovery Factor (TCRF)	Variable	Variable	

CITY OF DENTON ELECTRIC UTILITY
FISCAL YEAR RATE COMPARISON

Rate Schedule	2018 Rates	2017 Rates	% Increase
General Service Medium - GSM			
Facility Charge $ - Single Phase	16.60	16.60	0.00%
Facility Charge $ - Three Phase	22.17	22.17	0.00%
Demand Charge/$ per kW	4.78	4.78	0.00%
Usage Charge/cents per kWh:			
Secondary Service (GM1)			
Tier 1: First 6,000 kWh	5.23	5.23	0.00%
Tier 2: All Additional kWh	4.32	4.32	0.00%
For Primary Service (GM2)			
Tier 1: First 6,000 kWh	5.13	5.13	0.00%
Tier 2: All Additional kWh	4.22	4.22	0.00%
For Primary Service & Ownership (GM3)			
Tier 1: First 6,000 kWh	4.93	4.93	0.00%
Tier 2: All Additional kWh	4.02	4.02	0.00%
Energy Cost Adjustment	Variable	Variable	
Transmission Cost Recovery Factor (TCRF)	Variable	Variable	
General Service Large - GSL			
Facility Charge $	69.06	69.06	0.00%
Demand Charge/$ per kVA	10.80	10.80	0.00%
Usage Charge/cents per kWh:			
Secondary Service (GL1)			
Tier 1: First 200,000 kWh	2.45	2.45	0.00%
Tier 2: All Additional kWh	1.40	1.40	0.00%
For Primary Service (GL2)			
Tier 1: First 200,000 kWh	2.35	2.35	0.00%
Tier 2: All Additional kWh	1.30	1.30	0.00%
For Primary Service & Ownership (GL3)			
Tier 1: First 200,000 kWh	2.15	2.15	0.00%
Tier 2: All Additional kWh	1.10	1.10	0.00%
Energy Cost Adjustment	Variable	Variable	
Transmission Cost Recovery Factor (TCRF)	Variable	Variable	
General Service Time Of Use - TGS			
Facility Charge $	80.54	80.54	0.00%
Demand Charge/$ per kVA On-Peak	13.76	13.76	0.00%
Demand Charge/$ per kVA Off-Peak	2.72	2.72	0.00%
Usage Charge/cents per kWh:			
For Secondary Service (TG1)	0.82	0.82	0.00%
For Primary Service (TG2)	0.72	0.72	0.00%
For Primary Service & Ownership (TG3)	0.52	0.52	0.00%
Energy Cost Adjustment	Variable	Variable	
Transmission Cost Recovery Factor (TCRF)	Variable	Variable	
Local Government Service Small - G2			
Facility Charge $ - Single Phase	16.66	16.66	0.00%
Facility Charge $ - Three Phase	22.24	22.24	0.00%
Usage Charge/cents per kWh	7.79	7.79	0.00%
Energy Cost Adjustment	Variable	Variable	
Transmission Cost Recovery Factor (TCRF)	Variable	Variable	

CITY OF DENTON ELECTRIC UTILITY
FISCAL YEAR RATE COMPARISON

Rate Schedule	2018 Rates	2017 Rates	% Increase
Local Government Service - G1			
Facility Charge $ - Single Phase	16.61	16.61	0.00%
Facility Charge $ - Three Phase	22.19	22.19	0.00%
Demand Charge/$ per kW	8.18	8.18	0.00%
Usage Charge/cents per kWh	3.70	3.70	0.00%
Energy Cost Adjustment	Variable	Variable	
Transmission Cost Recovery Factor (TCRF)	Variable	Variable	
Weekend Service - WK			
Facility Charge $ - Single Phase	21.87	21.87	0.00%
Facility Charge $ - Three Phase	27.34	27.34	0.00%
Demand Charge/$ per kW (First 20 kW Not Billed)	7.66	7.66	0.00%
Usage Charge/cents per kWh:			
Tier 1: First 2,500 kWh	8.50	8.50	0.00%
Tier 2: 2,501 to 6,000 kWh	4.46	4.46	0.00%
Tier 3: All Additional kWh	3.28	3.28	0.00%
Energy Cost Adjustment	Variable	Variable	
Transmission Cost Recovery Factor (TCRF)	Variable	Variable	
Athletic Field - AF			
Facility Charge $ - Single Phase	22.75	22.75	0.00%
Facility Charge $ - Three Phase	34.11	34.11	0.00%
Demand Charge/$ per kW:			
October through May (Winter)	1.44	1.44	0.00%
June through September On-Peak (Summer)	6.06	6.06	0.00%
June through September Off-Peak (Summer)	1.44	1.44	0.00%
Usage Charge/cents per kWh:			
October through May (Winter)	4.89	4.89	0.00%
June through September On-Peak (Summer)	9.77	9.77	0.00%
June through September Off-Peak (Summer)	4.89	4.89	0.00%
Energy Cost Adjustment	Variable	Variable	
Transmission Cost Recovery Factor (TCRF)	Variable	Variable	

CITY OF DENTON ELECTRIC UTILITY
FISCAL YEAR RATE COMPARISON

Rate Schedule	2018 Rates	2017 Rates	% Increase
Street Lighting - LS			
Sodium:			
LSA 100 W Facility Charges	6.08	6.08	0.00%
LSB 250 W Facility Charges	8.62	8.62	0.00%
LSC 400 W Facility Charges	10.86	10.86	0.00%
LED:			
LSD 100 W Facility Charges	6.08	6.08	0.00%
LSE 250 W Facility Charges	8.62	8.62	0.00%
LSF 400 W Facility Charges	10.86	10.86	0.00%
ECA Charge = Monthly Bulb Wattage Factor x ECA	Variable	Variable	
Monthly Bulb Wattage Factors:			
Sodium:			
100 W	48 kWh	48 kWh	
250 W	105 kWh	105 kWh	
400 W	159 kWh	159 kWh	
LED:			
100 W	25 kWh	25 kWh	
250 W	96 kWh	96 kWh	
400 W	148 kWh	148 kWh	
Traffic Lighting - LT			
Usage Charge/cents per kWh	6.64	6.64	0.00%
Energy Cost Adjustment	Variable	Variable	
Transmission Cost Recovery Factor (TCRF)	Variable	Variable	
Unmetered School Zone/Crossing Flashers - UFL			
Usage Charge/cents per kWh	6.64	6.64	0.00%
Energy Cost Adjustment	Variable	Variable	
Transmission Cost Recovery Factor (TCRF)	Variable	Variable	
Unmetered Traffic Lighting - ULT			
Usage Charge/cents per kWh	6.64	6.64	0.00%
Energy Cost Adjustment	Variable	Variable	
Transmission Cost Recovery Factor (TCRF)	Variable	Variable	
Unmetered Security Camera - USC			
Facility Charge $	17.82	17.82	0.00%
Usage Charge/cents per kWh	6.64	6.64	0.00%
Energy Cost Adjustment	Variable	Variable	
Transmission Cost Recovery Factor (TCRF)	Variable	Variable	
Unmetered Wi-Fi Devices - UWF			
Facility Charge $	17.82	17.82	0.00%
Usage Charge/cents per kWh	6.64	6.64	0.00%
Energy Cost Adjustment	Variable	Variable	
Transmission Cost Recovery Factor (TCRF)	Variable	Variable	

CITY OF DENTON ELECTRIC UTILITY
FISCAL YEAR RATE COMPARISON

Rate Schedule	2018 Rates	2017 Rates	% Increase
Other Lighting - LO			
LOA (unmetered lighting)			
Usage Charge/cents per kWh	6.64	6.64	0.00%
where Usage Charge = kWh rate x Bulb Wattage/1000 x 333 hrs			
ECA Charge = Current ECA x Bulb Wattage/1000 x 333 hrs			
LOB (metered lighting)			
Usage Charge/cents per kWh	6.64	6.64	0.00%
Energy Cost Adjustment	Variable	Variable	
Security Lighting - DD			
Sodium:			
DSA 100 W Facility Charges $	9.61	9.61	0.00%
DSB 250 W Facility Charges $	12.71	12.71	0.00%
DSC 400 W Facility Charges $	15.32	15.32	0.00%
DHA 250W Metal Halide Facility Charges $	14.95	14.95	0.00%
DHB 400W Metal Halide Facility Charges $	17.82	17.82	0.00%
ECA Charge = Current ECA x Monthly Bulb Wattage Factor			
Monthly Bulb Wattage Factors:			
100 W	48 kWh	48 kWh	
250 W	105 kWh	105 kWh	
400 W	159 kWh	159 kWh	
Downtown Decorative Lighting - DDL			
Facility Charge $	4.78	4.78	0.00%
ECA Charge = Current ECA x 350 kWh per Customer			
Non-Standard Street Lighting - DSL			
Facility Charge $	9.18	9.18	0.00%
Usage Charge/cents per kWh:			
where Usage Charge = kWh rate x Bulb Wattage Factor			
DLSA 100 W Sodium Vapor	6.64	6.64	0.00%
DLSB 250 W Sodium Vapor	6.64	6.64	0.00%
DLSC 400 W Sodium Vapor	6.64	6.64	0.00%
DLHA 250 W Metal Halide	6.64	6.64	0.00%
DLHB 400 W Metal Halide	6.64	6.64	0.00%
ECA Charge = Current ECA x Monthly Bulb Wattage Factor			
Monthly Bulb Wattage Factors:			
100 W	48 kWh	48 kWh	
250 W	105 kWh	105 kWh	
400 W	159 kWh	159 kWh	
Labor/Equipment $ per Hour - Regular Time	Actual Costs	Actual Costs	
Labor/Equipment $ per Hour - Overtime	Actual Costs	Actual Costs	
Material/City's Warehouse cost plus 25%	25% Above Cost	25% Above Cost	
Administrative Fee	10% of Total Costs	10% of Total Costs	

CITY OF DENTON ELECTRIC UTILITY
FISCAL YEAR RATE COMPARISON

Rate Schedule	2018 Rates	2017 Rates	% Increase
Temporary Service - T1			
Facility Charge $ - Single Phase	16.61	16.61	0.00%
Facility Charge $ - Three Phase	22.19	22.19	0.00%
Usage Charge/cents per kWh	8.54	8.54	0.00%
Energy Cost Adjustment	Variable	Variable	
Transmission Cost Recovery Factor (TCRF)	Variable	Variable	
Labor/Equipment $ per Hour - Regular Time	Actual Costs	Actual Costs	
Labor/Equipment $ per Hour - Overtime	Actual Costs	Actual Costs	
Unsalvageable Material/City's Warehouse cost plus 25%	25% Above Cost	25% Above Cost	
Administrative Fee	10% of Total Costs	10% of Total Costs	
Economic Growth Rider - EGR			
Reduction to Monthly Load Demand:			
Year 1	50%	50%	
Year 2	40%	40%	
Year 3	30%	30%	
Year 4	20%	20%	
Year 5	10%	10%	
Independent Wholesale Generator - IWG			
Facility Charge	69.06	69.06	0.00%
Demand Charge/$ per kW	2.06	2.06	
Line Loss Charge	ECA Rate	ECA Rate	
Stand-By Service	GSL Rate	GSL Rate	
Service to Customer Structures/Facilities	Actual Costs	Actual Costs	
Dark Fiber - DFR			
Fiber Mileage Charge/per fiber pair/mile	400	400	
Building Presence Charge/per location	180	180	
Pole Attachment Fee - PAF			
Annual Pole Attachment/per attachment	15.57	15.57	
On-Pole Conduit Rate/per linear foot	15.57	15.57	
In-Ground Conduit Rate	Variable	Variable	
Riser Rate/per riser	160	160	
Miscellaneous Attachments/per misc attachment	100	100	
Application Filing Fee/per submittal	100	100	
Review & Inspection Fee/per pole	25	25	
Mileage Fee/per pole	5	5	
Miscellaneous Analysis Fee/per pole	225	225	
Unauthorized Attachment Penalty/per attachment per pole	1,000	1,000	
Undefined Work/Expense	Variable	Variable	
Banner Install Fee			
Over the Street Banner Install/per banner	100		
Pole One Time Banner Install/per banner	15		
Pole Seasonal Banner Install/per banner	27		

CITY OF DENTON ELECTRIC UTILITY
FISCAL YEAR RATE COMPARISON

Rate Schedule	2018 Rates	2017 Rates	% Increase
Wireless Node Attachments - WNA			
Facility Charge $	17.82		
Usage Charge/cents per kWh	6.64		
Energy Cost Adjustment	Variable		
Transmission Cost Recovery Factor (TCRF)	Variable		
Wireless Node Unmetered - WNU			
Facility Charge $	17.82		
Usage Charge/cents per kWh	6.64		
Energy Cost Adjustment	Variable		
Transmission Cost Recovery Factor (TCRF)	Variable		

DENTON MUNICIPAL ELECTRIC

GreenSense

Incentive Program

Manual

CITY OF DENTON

sustainable DENTON

October 1, 2017

Program Introduction

The objective of the GreenSense Incentive Program ("Program") is to reduce energy demand and consumption by promoting energy conservation, thereby reducing the utility bills of Denton Municipal Electric (DME) customers, reducing the peak load of DME's electric system, and reducing emissions in the state. The Program offers incentives, in the form of credits on the electric service bills of eligible DME retail customers. Cash incentives may be paid to eligible retail customers for photovoltaic (solar) installations.

In light of additional costs associated with the GreenSense Incentive Program and to mitigate potential risk to ratepayers, any participant in the Program must be, at the time this program is applied for and continuing while such program is in effect, a customer in good standing of all Denton Municipal Utilities, including Solid Waste services. Unless legal review procedures have been invoked in good faith regarding the obligation, a customer in good standing for the purpose of this Program is defined as a customer not owing any unpaid utility or solid waste debt obligation that is over forty-five (45) days past due to the City of Denton, Texas during the previous twelve (12) months.

Program applicants will be able to qualify for multiple incentives simultaneously, unless specified in the individual incentive guidelines. A separate application may be necessary for each incentive. The Program will be in effect each fiscal year beginning on October 1, until the allotted funding is depleted or until cancellation of the program by the City of Denton ("City"). At the time the funds are depleted, no additional applications for participation will be accepted until the next fiscal year.

Qualifying applicants must receive electric service from DME. The GreenSense Incentive Program Manual contains the guidelines for each rebate program. The guidelines and payments are subject to change by the City without prior notice. The City may, at any time, discontinue the Program without prior notice.

Application for Payment

In order for energy efficient upgrades to qualify under the program guidelines, an "Application for Payment" form must be completed and submitted within thirty (30) days of installation of the energy efficient upgrades. For the overall effects of the energy efficiency upgrades to be measurable and verifiable through the deemed standards approved by the Public Utility Commission of Texas (PUCT), the complete information must be recorded for each installation. Applications for payment, which must be accompanied by a copy of the invoice detailing work completed and efficiency measures installed as well as any technical data on the installed energy efficient upgrade, must be complete and submitted to the Conservation Program Coordinator.

Payment

Some energy efficiency upgrades must be permitted, inspected, and approved by the City's Building Inspection division before rebates will be processed. Incentives shall be in the form of a rebate credit to the electric utility accounts of DME customers that purchase the qualifying energy efficiency upgrades. After submitting a Request for Payment, customers can expect to receive the rebate credit in four (4) to ten (10) weeks. Incomplete or erroneous information can cause delays in payment.

Table of Contents

Energy Efficiency Rebates

Installers

The installer/contractor that performs the prescribed and approved energy efficient upgrades must be registered with the City at the time of the installation. To become a registered Program installer, submit a "GreenSense Rebate Installer Form" to the Conservation Program Coordinator. Do-It-Yourself installs by property owners qualify for energy efficiency rebates.

The City does not endorse any product, service, individual or company. Selection of a registered installer/contractor to perform work is at the sole decision of the program participant. Any list of registered installers/contractors represents those companies who have registered themselves with the City. There is no work guarantee or warranty, expressed or implied, as to the quality, cost or effectiveness of the work performed by the contractor, employees or subcontractors.

Program Requirements

- Applicants must be property owner
- All equipment must be new when purchased. No leased or lease-to-purchase equipment
- No rebate will be paid on a partial installation
- All installations must be for accounts served by Denton Municipal Electric (DME)
- All installations must meet all applicable national, local, and manufacturers' codes and specifications
- An itemized and dated invoice from the contractor or retailer along with application
- All application submissions are subject to lawful verification of identification and entitlement to the program credit by DME
- A pre and/or post inspection may be required
- Requests for payment must be received by Conservation Program Coordinator within thirty (30) days of installation

Note: Individual rebates are subject to fund availability. The City may change the program guidelines or payments, or discontinue the Program without prior notice.

For more information contact:	Conservation Program Coordinator
Office Number	(940) 349 – 7733
Email Address	Rebates@CityofDenton.com
Mailing Address	Conservation Program Coordinator 215 E. McKinney Street Denton, TX 76201

Heating Ventilation Air Conditioning System (HVAC)

DME is offering a rebate up to $400 for the purchase and installation of high-efficiency central air conditioners with gas heat, electric heat pumps, and geothermal heat pumps for existing residential and commercial facilities. No new construction applications will be accepted.

Rebate Amounts:	1.0 to 2.5 Ton Units	$200
	3.0 to 5.0 Ton Units	$400

HVAC Requirements

- Equipment must have a minimum of sixteen (16) SEER rating
- Both condensing unit and evaporator coil must be replaced
- Installations must be made by a licensed contractor
- Installation must be permitted, inspected and approved by the City of Denton's Building Inspections Department
- All applications must meet requirements on page four (4) of this manual

Smart Thermostat

DME is offering a rebate of fifty percent (50%) of the invoice amount, not to exceed $50.00 for the installation of a smart thermostat. No new construction applications will be accepted.

Smart Thermostat Requirements

- Thermostat must offer internet connectivity for remote management
- All applications must meet requirements on page four (4) of this manual

Attic Reflective Radiant Barrier

DME is offering a rebate of twenty percent (20%) of the invoice amount, not to exceed $300.00 per structure for the installation of eighty percent (80%) or more reflective radiant barrier in accessible attic space on existing structures. No new construction applications will be accepted.

Radiant Barrier Requirements

- Installations must be on rafters or under decking
- Reflectivity and square footage must be included on invoice and application
- All applications must meet requirements on page four (4) of this manual

Attic Insulation

DME is offering a rebate of 50 percent (50%) of the invoice amount, not to exceed $400.00 for the installation of attic insulation of at least R-49. No new construction applications will be accepted.

Attic Insulation Requirements

- Insulation must be installed between conditioned and unconditioned areas
- Garages and other non-conditioned areas do not qualify
- The current insulation level of each home must be determined and documented
- Square footage of installation area must be included on invoice and application
- All applications must meet requirements on page four (4) of this manual

Air Duct

DME is offering a rebate of 30 percent (30%) of the invoice amount, not to exceed $200.00 for the replacement or repair of an air duct systems located in unconditioned space. No new construction applications will be accepted.

Air Duct Requirements

- Materials used should be long-lasting materials (mastics, foil tape, aerosol-based sealants)
- The current air loss level of each system shall be determined and documented by the installer
- Materials used shall be documented on invoice (i.e. insulation, mastics, tape, aerosol, etc.)
- Invoice must specify whether home has slab or crawlspace and number of stories
- All applications must meet requirements on page four (4) of this manual

Solar Screens

DME is offering a rebate of 30 percent (30%) of the invoice amount, not to exceed $200.00 per structure for the installation of solar screens on windows in conditioned space.

Solar Screens Requirements

- Solar screens must block at least ninety percent (90%) of solar heat gain
- Structures will only qualify for this rebate once per twelve (12) month period
- Reflectivity and square footage must be included on invoice and application
- All applications must meet requirements on page four (4) of this manual

Windows

DME is offering a rebate of 30 percent (30%) of the invoice amount, not to exceed $500.00 per structure for the installation of energy efficient windows in conditioned space.

Windows Requirements

- Windows must have a U-Factor of 0.29 or less AND a Solar Heat Gain Coefficient (SHGC) of 0.22 or less
- Structures will only qualify for this rebate once per twelve (12) month period
- Window sticker and square footage must be included on invoice and application
- All applications must meet requirements on page four (4) of this manual

---

Solar Water Heater

DME is offering a rebate of 30 percent (30%) of the invoice amount, not to exceed $300.00 per structure for the installation of a solar water heater.

Solar Water Heater Requirements

- Solar water heater must be sized to accommodate a family of four (4), at minimum
- Solar water heater must preheat water for an electric water heater that is permanently installed at the structure
- Solar water heater must have permanently installed electric backup
- Structures will only qualify for this rebate once per twelve (12) month period
- All applications must meet requirements on page four (4) of this manual

---

Electric Vehicle

DME is offering a rebate of $300 for the purchase of a Plug-In Electric Vehicle.

Electric Vehicle Requirements

- Hybrid vehicles do not qualify for a rebate
- Separate application (see page 10) to be submitted with:
  - Proof of Purchase
  - Proof of Registration
  - Registration address must be within DME service territory and served by DME

Multifamily Incentive

DME is offering rebates for the purchase and installation of energy efficient upgrades for any existing multifamily complex located on one property. No new construction applications will be accepted.

Requirements

- Applications must be completed and approved PRIOR to installation due to the limited availability of funds
- All requirements for upgrades listed below are the same as the individual incentives detailed in pages four (4) to seven (7) of this manual

Upgrade	Incentive	Cap (not to exceed)
Central HVAC	$400.00 each	$2,400
Smart Thermostats	$10.00 each	$200
Attic Insulation	$0.30 per square foot	$1,200
Air Ducts	30% of total cost	$600
Solar Screens	$3.00 per square foot	$800
Windows	$2.00 per square foot	$1,500

This application is only for individual energy efficiency rebates.
Fill in all fields applicable to your upgrade. Attach copy of invoice / receipt for all items.
Submit completed application to the address provided below.

GreenSense Incentive Program

Energy Efficiency Rebate Application

FOR CITY USE

Date Received:

Approved:

Deemed Savings kW Deemed Savings kWh

Applicant Name:	**DME Account Number:**	
Installation Address:	**Zip Code:**	Phone Number:
If the landlord, please add mailing address here:	Applicant (circle one): Resident Homeowner Tenant Landlord	
Square Footage of Property:	Type of Construction(circle) : Residential Commercial	Existing Heat System (circle): Gas Electric Heat Pump

Qualifying Equipment

HVAC	Type: □ Heat Pump □ Geo Thermal □ AC		**AIR DUCT**		
Installation Date:	Permit Number:	SEER (min SEER 16):	Upgrade Date:		
Tonnage:	AC Serial Number:		Material Type:		
Cost:	Evaporator Coil Serial Number:		Upgrade Type: Replacement Repair		Cost:
RADIANT BARRIER			**INSULATION**		
Installation Date:	Reflective Value: (min 80%):	Square Footage Installed*:	Installation Date:	Beginning R-Value:	Square Footage Installed*:
Cost:	Type:	Brand:	Cost:	Ending R-Value (min R-49):	
SOLAR SCREENS		New Construction (Y/N)	**SMART THERMOSTAT**		
Installation Date:	Percent radiation block (min 90%):	Square Footage Installed*:	Installation Date:	E-mail address:	
Cost:	Type:	Brand:	Cost: *Include separate from HVAC if installed together*		Internet Connectivity? Yes No
WINDOWS (Window stickers must be attached.)		New Construction (Y/N)	**SOLAR WATER HEATER**		New Construction (Y/N)
Installation Date:	Number of Windows:	Square Footage Installed*:	Installation Date:	Tank Capacity:	Tank Location and Orientation:
Cost:	U-Factor (max .29):	Solar Heat Gain Coefficient (max .22):	Cost:	Model:	

*Square Footage Installed - the area of efficiency improvement, ***not the square footage of the structure.*** For example, a 3' X 4' window= 12 ft^2

PROPERTY OWNER SIGNATURE: **DATE:**

Complete form and mail to: Sustainable Denton (Attn: Conservation Program Coordinator), 215 E. McKinney St., Denton, TX 76201

Electric Vehicle Application

Applicant Name: **DME Account:**

Phone Number: **Email:**

Vehicle Registration Address:

Plug-In Vehicle Make, Model, & Year:

Plug-In Vehicle Trim Level (i.e. Nissan Leaf S, SV, or SL)

Plug-In Vehicle VIN:

Battery can be charged at (check all that apply):

☐ Level 1 (120 volts) ☐ Level 2 (240 volts) ☐ DC Fast Charge

I hereby certify that the information I provided above are true and correct to the best of my knowledge. I understand that any false information may disqualify me from receiving the Electric Vehicle Rebate. I agree to charge my electric vehicle during the off-peak hours of 10:00 PM to 7:00 AM.

Date: **Signature:**

Solar Photovoltaic Incentive

All City of Denton requirements for Distributed Generation, including documents for this rebate, are located in the Distributed Generation Manual.

Those interested in participating in the Solar Photovoltaic Incentive (SPI) must either have a DME electric account or own the property that has, or will have, a DME electric account where the photovoltaic system is to be installed. The photovoltaic system must be owned by the SPI participant. Only DME customers in good standing will be eligible to receive the rebate. All customers must have insurance for their property.

The incentive for qualifying photovoltaic system equipment is $0.75 per AC Watt up to $30,000, not to exceed fifty percent (50%) of the total installation cost. The incentive for qualifying photovoltaic systems with battery storage equipment is $1.50 per AC Watt up to $30,000, not to exceed fifty percent (50%) of the total installation cost.

DME neither expressly nor implicitly warrants any work performed by a contractor, employees, or subcontractor. DME does not endorse any product, service, individual or company. Selection of an installer/contractor to perform work is the sole decision of the program participant. DME makes no warranties whatsoever that participant will realize any energy savings as a result of any installs of the program. In no event shall DME be responsible for any direct, special, incidental, consequential, punitive, exemplary or indirect damages in tort, contract, warranty, negligence, strict liability or under any indemnity provision or otherwise related to any installs or the SPI. Customer assumes the risk of any loss or damage(s) that the customer may suffer in connection with its participation in the SPI.

Customers requesting interconnection and parallel operation of Distributed Generation must complete the DME approved Application for Interconnection and receive approval from DME prior to installing. Any connection to the distribution or transmission system without proper prior approval will result in the immediate disconnection of service. Service will not be restored until any required studies are completed, the installation has been inspected and approved by DME, and an interconnection agreement has been executed.

All City of Denton requirements for Distributed Generation, including documents for this rebate, are located in the Distributed Generation Manual.

For more information contact:	**Program Administrator**
Office Number	(940) 349 – 7529
Email Address	solar@cityofdenton.com
Mailing Address	Energy Programs 1659 Spencer Road Denton, TX 76205

Standard Offer Incentive

Program Participant

DME offers incentives for customers with a peak demand of 200 kW or more that are interested in making energy efficiency upgrades to their facility. Standard Offer Incentive (SOI) participants must have a DME General Service Medium (GSM), General Service Large (GSL) and/or General Service Time of Use (TGS) electric account at the location where the upgrades are to be completed. The peak demand reduction must be a minimum of 50 kW.

Upgrades must be pre-approved, in order to qualify for the rebate. Participants must submit written permission for DME to discuss their account and energy consumption with the installer. Only DME customers in good standing will be eligible to receive the rebate.

DME does not endorse any product, service, individual or company. Selection of a registered installer/contractor to perform work is the sole decision of the program participant. Any list of registered installers/contractors represents those companies who have registered themselves with DME. There is no work guarantee or warranty, expressed or implied, as to the quality, cost or effectiveness of the work performed by the contractor, employees or subcontractors.

Denton Municipal Electric makes no financial commitment to applicants until an application is accepted and a Letter of Intent (LOI) is issued. The LOI is valid for ninety (90) days for upgrades to be installed. Under extenuating circumstances, applicants may request extensions to their LOI. Requests for LOI extension must be submitted prior to LOI expiration, in writing, accompanied by a detailed explanation of the reason for the delay. Contractor must demonstrate that the cause of the delay is out of their control along with substantial progress toward project completion. Extensions will be granted at the sole discretion of DME. PSI participants forfeit their incentive reservation once the LOI has expired.

Acceptable projects may include: Lighting retrofit; HVAC upgrade; Motor replacement
Unacceptable projects include those that: Rely on customer behavior; Involve cogeneration and demand management including generation from renewable; Have a negative impact on the environment; Have no capital investment; Plug loads

Installers

The installer/contractor that performs the prescribed and approved energy efficient upgrades does not need to be registered as a DME Authorized Installer. Installers must submit the application along with the estimated cost, estimated demand savings, and method of kW savings calculations. Installers must also submit detailed information for each project including scope of work, specific equipment being removed and installed. DME will review the application and supporting documents for acceptance.

Standard Offer Incentive 50 - 100

DME is offering commercial customers $100.00 per kilowatt (kW) saved, less than or equal to 100 kW, over the minimum set by city, state, and federal energy efficiency standards, not to exceed fifty percent (50%) of total project cost.

- Customer must have a minimum peak demand of 200 kW
- The demand reduction must be a minimum of 50 kW
- Replaced equipment must be disposed of and cannot be put back into service
- The energy efficiency upgrade must be in service for at least ten (10) years
- Equipment must meet all codes and permitting requirements
- Lighting incentive will not count for more than sixty-five percent (65%) of total project

Application Process

- The following must be submitted to the Program Administrator for evaluation and acceptance:
  - Standard Offer Incentive Form
  - Proposal showing estimated cost, estimated demand savings, and method of kW savings calculation
- Customer will receive confirmation that the application was received via e-mail
- DME will review the application to determine if the project will be accepted
- Customer will receive a LOI if the project has been accepted
- Customer will be contacted to schedule an initial inspection
- Within thirty (30) days of the completion of the project, the customer will contact the Energy Programs Coordinator to schedule a final inspection. This inspection is strictly for the purpose of qualifying for the rebate, not to take the place of Building Inspections or internal quality control
- Following final inspection, demand reduction will be verified

For more information contact:	Program Administrator
Office Number	(940) 349 – 7529
Mailing Address	Energy Programs 1659 Spencer Road Denton, TX 76205

Standard Offer Incentive 100 +

DME is offering commercial customers $125.00 per kilowatt (kW) saved, more than 100 kW, over the minimum set by city, state, and federal energy efficiency standards, not to exceed fifty percent (50%) of total project cost.

- Customer must have a minimum peak demand of 200 kW
- The demand reduction must be a minimum of 101 kW
- Replaced equipment must be disposed of and cannot be put back into service
- The energy efficiency upgrade must be in service for at least ten (10) years
- Equipment must meet all codes and permitting requirements
- Lighting incentive will not count for more than sixty-five percent (65%) of the total project

Application Process

- The following must be submitted to the Program Administrator for evaluation and acceptance:
  - Standard Offer Incentive Form
  - Proposal showing estimated cost, estimated demand savings, and method of kW savings calculation
- Customer will receive confirmation that the application was received via e-mail
- DME will review the application
- Customer will receive a LOI if the project has been accepted
- Customer will be contacted to schedule an initial inspection
- Within thirty (30) days of the completion of the project, the customer will contact the Program Administrator to schedule a final inspection
  - This inspection is strictly for the purpose of qualifying for the rebate, not to take the place of Building Inspections or internal quality control
- Following final inspection, demand reduction will be verified

For more information contact:	Program Administrator
Office Number	(940) 349 – 7529
Mailing Address	Energy Programs 1659 Spencer Road Denton, TX 76205

Standard Offer Incentive Form

(To be completed by DME Customer Representative.)

Received Date		Submitted Ck Req	
Received By		Amount Paid	

CUSTOMER INFORMATION		
Company Name		Account No
Contact Person	Title	Telephone No
Email Address		
Site Address		
Description of Study:		

CONSULTANT INFORMATION		
Company Name		
Contact Person	Title	Telephone No
Email address		
Company Address		

By signing below, you agree that you are duly authorized by the Customer to make decisions on their behalf and you represent to DME that you have read, understand and agree to abide by the terms, conditions, and requirements written in the SOI section of the GreenSense Incentive Program Manual. You are also granting release of historical usage information to be sent to the consultant to be used in the demand reduction analysis.

Print Name Signature Date

Engineering Audit

Program Participant

Those interested in participating in the Engineering Audit (Audit) must have a DME General Service Large (GSL) and/or General Service Time of Use (TGS) electric account where the Audit is to be performed. Only DME customers in good standing will be eligible to receive the rebate. Each customer site is eligible for one detailed audit every three (3) years.

DME neither expressly nor implicitly warrants any part of the audits. Customer understands that, while DME may provide a program to encourage energy efficiency, DME is not liable or responsible in any way for the performance or results of the audits or the Program. DME makes no warranties whatsoever that customer will realize any energy savings as a result of the audits or the program. In no event shall DME be responsible for any direct, special, incidental, consequential, punitive, exemplary or indirect damages in tort, contract, warranty, negligence, strict liability or under any indemnity provision or otherwise related to the audits or the Program. Customer assumes the risk of any loss or damage(s) that the customer may suffer in connection with its participation in the audits or the Program.

Customers requesting an engineering audit must fill out an Audit application and submit it to the Program Administrator. The Program Administrator will review the application and if approved, the customer will be notified and the detailed audit shall be completed by a professional engineer within ninety (90) days of approval by DME.

For more information contact:	Program Administrator
Office Number	(940) 349 – 7529
Mailing Address	Energy Programs 1659 Spencer Road Denton, TX 76205

Auditor

Audit participants are encouraged to receive several quotes before entering into a contract with an engineering firm. Engineering firms must have written permission from DME's customer in order to exchange energy information with DME.

Engineers are required to submit completed audit reports and a copy of the invoice to the Program Administrator within thirty (30) days after audit is done.

Minimum Scope of Work:

Once approved, the engineering audit shall include the following components:

- Schedule of the customer site visit
- Identify the current status of any customer plans for equipment purchase, vendors under consideration, vendor bids, plans for new construction/expansion, and/or other changes
- Identify the customer's schedule requirements (budget cycle, equipment lead-time issues, construction schedules, planned plant shutdowns, etc.)
- Identify what the customer needs to have to get an energy efficiency measure (EEM) implemented (financial criteria, maximum budget, etc.)
- Energy Use Baseline: Estimate the baseline energy use for all existing major electric equipment related to facility operations (i.e. refrigeration, air compressors, lighting, motors, etc.) based on historical usage provided to you by DME.
- EEMs
    - Clearly and concisely describe EEMs and EEM alternatives, and describe the source of energy savings
    - Identify the customer's business reasons (i.e. maintenance, energy efficiency, safety, end-of-life, production increase) for wanting a detailed audit done at the facility
    - Create a sketch to fully illustrate the current system. This sketch may include distances, controls, piping and instrumentation diagram (P&ID), process flow and any other pertinent information that affects the current or future function of the system
    - Make an assessment of the potential project costs and energy and cost savings for the EEMs
    - Include a description of your calculation methodology and how costs were estimated
    - Include current Power Factor (PF), proposed PF, savings, and cost estimate
    - An executive summary will be included in the report with a summary table of measures showing the description, current kilowatt and kilowatt-hours per year (kW & kWh/yr), proposed kW & kWh/yr, kW & kWh/yr savings, cost estimate, potential DME incentive, simple payback before incentive, and simple payback after incentive

Incentive

The incentive for qualifying audits is up to fifty percent (50%) of the total audit cost, not to exceed $5,000 for DME participation.

Applying for the Engineering Audit Program does not disqualify eligible customers from applying for other DME incentives. Any customer's costs, including maintenance, in-house labor, overhead, direct or indirect, are not included in the cost of the audits and are not part of the reimbursement to be paid by DME.

Denton Municipal Electric makes no financial commitment to applicants until an application is accepted and a Letter of Intent (LOI) is issued by DME. The LOI is valid for ninety (90) days for a detailed audit to be performed. Under extenuating circumstances, applicants may request extensions to their LOI. Requests for LOI extensions must be submitted prior to LOI expiration, in writing, accompanied by a detailed explanation of the reason for the delay. Extensions shall be granted at the sole discretion of DME. Program participants forfeit their incentive reservation once the LOI has expired.

Incentives are given in the form of a check to the program participant. Customers do not have the option to have a rebate sent directly to the contractor. Incentive payment will be issued within four (4) weeks after DME has reviewed the final audit report.

Any application for which funding is not available will be returned to the applicant. DME does not have a waiting list or queue.

[See Detailed Audit Application on following page.]

Detailed Audit Application

(To be completed by DME Customer Representative.)

Received Date		Submitted Ck Req	
Received By		Amount Paid	

CUSTOMER INFORMATION		
Company Name		Account No
Contact Person	Title	Telephone No
Email Address		
Site Address		
Description of Study:		

CONSULTANT INFORMATION		
Company Name		
Contact Person	Title	Telephone No
Email address		
Company Address		

By signing below, you agree that you are duly authorized by the Customer to make decisions on their behalf and you represent to DME that you have read, understand and agree to abide by the terms, conditions, and requirements written in the Engineering Audit section of the GreenSense Incentive Program Manual. You are also granting release of historical usage information to be sent to the consultant to be used in the energy audit analysis.

Print Name Signature Date

ERCOT Emergency Response Service

The objective of the Emergency Response Service ("ERS") is to decrease energy demand on the Electric Reliability Council of Texas ("ERCOT") grid by reducing the electric demand of Denton Municipal Electric's ("DME") electric system, during times of ERCOT system emergencies, thereby lessening the likelihood of the need for firm load shedding (a.k.a, "rolling blackouts").

The Service offers incentives, through ERCOT, to qualified DME customers that make themselves available for deployment in an electric grid emergency. Customers may shed load or start backup generators to fulfill their obligations. Those interested in participating in this program will be able to choose between a ten (10) minute (ERS-10) and thirty (30) minute (ERS-30) deployment.

Customers will be able to choose from six (6) time periods:

Time Period 1	Hours Ending 0600 – 0800 (5:00:00a.m. to 8:00:00a.m.) Monday through Friday except ERCOT Holidays
Time Period 2	Hours Ending 0900 - 1300 (8:00:00a.m. to 1:00:00p.m.) Monday through Friday except ERCOT Holidays.
Time Period 3	Hours Ending 1400 - 1600 (1:00:00p.m. to 4:00:00p.m.) Monday through Friday except ERCOT Holidays.
Time Period 4	Hours Ending 1700 - 1900 (4:00:00p.m. to 7:00:00p.m.) Monday through Friday except ERCOT Holidays.
Time Period 5	Hours Ending 2000 - 2200 (7:00:00p.m. to 10:00:00p.m.) Monday through Friday except ERCOT Holidays.
Time Period 6	All other hours

DME's Energy Management Organization (EMO), on behalf of ERS Resources, will submit offers for one or more ERS Time Periods. Time Periods are given within a four (4) month Contract Period: October through January, February through May, and June through September. Customers bid for specific Time Periods and ERCOT awards contacts based on price and location. This Service will be in effect each fiscal year beginning on October 1, until program cancellation by ERCOT.

The ERS service will not be activated until the total anticipated reduction amount enrolled exceeds 2,000 kW.

To qualify for this service, applicants must receive electric service from DME. Program guidelines and payments are subject to change by ERCOT without prior notice.

For more information contact:	
Office Number	(940) 349 – 7137
Mailing Address	Energy Program 1659 Spencer Road Denton, TX 76205

Program Participant

This program is only for General Service Medium (GSM), General Service Large (GSL) and General Service Time of Use (TGS) customers who voluntarily enroll in the Service and have an interval data recorder or smart meter. To be considered for this service, customers must have a historic peak demand of at least 200 kW. DME retains the sole right to determine eligibility for ERS.

Customers must successfully complete unannounced testing requirements that consist of an approximately thirty (30) minute curtailment. Participants must have a system in place that allows them to drop committed load within eight (8) or twenty five (25) minutes.

The ERS program states a customer shall be obligated for a maximum deployment time of eight (8) cumulative hours during a contract period which can be spread over two events. In addition there is a one (1) hour test that can be called on an unannounced basis by ERCOT. While the ERS program states a customer is obligated for up to eight (8) hours of deployment, ERCOT also reserves the right to maintain ERS response service an additional four (4) hours if necessary. This can result in an ERS provider ultimately providing up to twelve (12) hours of total response service during a contract period. Upon completion of a deployment event, customers shall return to a condition that will allow them to meet their contracted obligations within ten (10) hours.

Determination of an Event

ERCOT will deploy ERS-10 only during Energy Emergency Alerts (EEA) level 2 or 3 and may deploy ERS-30 only during EEA levels 1, 2 or 3.

EEA Level 1 – Power Watch: < 2,300 MW of on-line reserves
EEA Level 2 – Power Warning: < 1,750 MW of on-line reserves
EEA Level 3 – Power Emergency: On-line reserves continue to decline

Compensation

Participants are paid the Market Clearing Price if their ERS offer is accepted by ERCOT. ERCOT pays based on the availability and performance of the committed customer. All payments are made to the EMO by ERCOT seventy (70) days after the end of the contract period. Compensation shall be based on actual hours in each Time Period.

The penalties for non-compliance may be a reduction or elimination in capacity payments and possible suspension from ERS.

ERCOT communicates directly with DME's EMO as a QSE. To participate in ERS, a customer must have a contract with DME EMO, which will provide all the administration of ERS. EMO service fees will be twenty-five percent (25%) of awarded Market Clearing price.

Award = Clearing Price x MW Committed x Number of Hours