



# Property Management Department

## FACILITIES DIVISION/UTILITY & SUSTAINABILITY SECTION

**TO:** State Energy Conservation Office/Texas Emissions Reduction Plan  
**FROM:** Samuel C. Steele, CEM®, LEED®-AP, Sustainability Administrator   
**CC:** Steven Cooke, Director, Property Management Department  
Glenn Balog, PE, Assistant Director, Property Management/Facilities Division  
**DATE:** 15 September 2015  
**SUBJECT:** State of Texas Senate Bill 898 (82R) Annual Report for Year 3 (City FY2014)

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The following report is filed in accordance with attached City Resolution No. 4130-09-2012, *Establishing an Energy Conservation Goal in Compliance with State of Texas Legislative Action.*

In 2011, the 82<sup>nd</sup> Session of the Texas State Legislature passed Senate Bill 898 amending the Health and Safety Code 388.005 to require energy efficiency programs in political subdivisions, institutions of higher education, and state agency facilities located in non-attainment or near non-attainment counties in State of Texas (State.) The defined entities, including Tarrant County, and therefore the city of Fort Worth (City), are now required to:

1. to establish a goal to reduce electrical consumption by at least five-percent each year for 10-years, beginning September 1, 2011; and
2. to submit a report annually to the State Energy Conservation Office (SECO) regarding progress and efforts to meet the five-percent reduction goal.

Previously, the State had set similar goals during its legislative sessions of 2007 and 2001 – Senate Bills 12 (80R) and 5 (77R) respectively. The intent of SB 898 and these other legislative efforts continue to be reductions in local facility electricity consumption which subsequently affect electricity-generating power plant emission reductions.

These legislative efforts have beneficial impacts on utility system reliability, environmental air quality, and public entity budgets. At issue is then what local facility improvements can be implemented cost effectively; cost effectiveness of an Energy Conservation Measure (ECM) is defined by the State as having a return on investment that does not exceed 20-years.

The following page is the City's submission as part of its *Electrical Reduction Goal & Activity Narrative*. As required, this regards the progress and efforts to reduce City electricity consumption and a brief description of City planned or applied reduction activities. The City understands that this description will be included in SECO's annual report.

Finally, please note that a separate file is attached as *Additional Documentation* which includes background information on City programing associated with prior such State legislative efforts. Please contact me directly with any questions or concerns regarding this annual report to SECO.

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**Sustainability Administrator**

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[sam.steele@fortworthtexas.gov](mailto:sam.steele@fortworthtexas.gov)

***Describe Progress to Reduce Electrical Consumption*****Progress & Efforts**

1. **Buildings:** The City's Property Management Department has primary responsibility for operational efficiency improvements for most City buildings. Since 2002, all of the City's oldest and largest buildings, representing 5.1M- of a total 10M-square feet, have been audited and included in six-phases of a City energy savings performance contract; two buildings, totaling 250k-SF, have been deleted from the ESPC due to either building reconstruction or property sale.

Performance reporting for FY2014 indicates energy savings of 26M-kWh in electricity and 26k-Mcf in natural gas. Environmentally, this is equivalent to 19k-metric tons of CO<sub>2</sub>-e that were not released into the air due to the implementation of various ECMs. The energy efficiency of City facilities included in the program improved by 30% with respect to their baselines.

2. **Transportation:** The City's Transportation & Public Works Department has primary responsibility for operational efficiency improvements for City street- and traffic-lighting facilities. In FY2007, the City's traffic lighting systems, both vehicular and pedestrian, were retrofitted by contract from incandescent- to utilize light-emitting diode-lighting technology.

Performance reporting for FY2014 indicates energy savings of 5.8M-kWh in electricity and 0-Mcf in natural gas. Environmentally, this is equivalent to 4.0k-metric tons of CO<sub>2</sub>-e that were not released into the air due to the implementation of various ECMs. The energy efficiency of City facilities included in the program improved by 89% with respect to their baselines.

3. **Water:** The City's Water Department has primary responsibility for operational efficiency improvements for City potable- and waste-water facilities. In FY2010, the City's water reclamation facility began implementing three-phases of a City ESPC. While this included upgrades to their 299k-square feet of buildings, the majority of work involved improving existing wastewater treatment processes and installing new process system enhancements.

Performance reporting for FY2014 indicates energy savings of 21M-kWh in electricity and 0-Mcf in natural gas. Environmentally, this is equivalent to 15k-metric tons of CO<sub>2</sub>-e that were not released into the air due to the implementation of various ECMs. The energy efficiency of City facilities included in the program improved by 48% with respect to their baselines.

**Planned Activities**

1. **Buildings:** The Property Management Department's plans to complete construction of ESPC Phase 7 and review its approach to future such project implementation. Plans may also include a Preliminary Energy Assessment of some non-ESPC buildings as facilitated through SECO. New construction and renovation projects continue to incorporate energy efficiency improvements.
2. **Transportation:** The Transportation & Public Works Department plans to continue to evaluate the cost effectiveness of implementing an LED street lighting conversion project. LED street- and traffic-lighting projects continue to incorporate energy efficiency improvements.
3. **Water:** The Water Department plans to consider a Section 3 to ESPC Phase 5 project, as an expansion of previous energy improvements at the Village Creek Water Reclamation Facility. Plans may also include energy improvements at Water Production Division facilities. Process improvement projects continue to incorporate energy efficiency improvements.

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## Applied Reduction Activities

FY2013: City Council approved one project (ESPC Phase 7) with construction costs of \$11M and first-year savings totaling \$565k for a 19-year simple payback. The project includes the implementation of ECMs at 13-facilities, five new to the ESPC and eight included in previous ESPC phases. Areas of Improvement include the following:

- Building Envelope
- Equipment/Appliances
- Other: Power Factor Correction
- Controls/Sensors
- HVAC/Boilers
- Policy/Plan/Program
- Education/Training
- Lighting
- Water Conservation
- E-Measurement/Verification
- Maintenance/Operations

The Phase 7 project effectively combines some previous ESPC projects (Phases 1, 2, 3, 4, & 6b) into one project for the purposes of measurement & verification. Project funding is provided by operating budget cost avoidance through:

- a) the implementation of new work at 13-City facilities;
- b) the implementation of previous ESPC phases; and
- c) the refinancing to a lower interest rate of the lease agreement funding ESPC Phase 4.

ESPC Phase 7's total finance package of \$18M and annual savings of \$2.4M equate to a 7.6-year simple payback.

Performance reporting for FY2013 indicated energy savings of 52M-kWh in electricity and 37k-Mcf in natural gas. Environmentally, this is equivalent to 38k-metric tons of CO<sub>2</sub>-e that were not released into the air due to the implementation of various ECMs. The energy efficiency of City facilities included in the program improved by 40% with respect to their baselines.

Baseline: For the period FY2003 through FY2012, City Council approved nine Resource Conservation Program projects with construction costs totaling \$58M and first-year savings totaling \$5.9M for a 9.9-year net simple payback. Areas of Improvement included the following:

- Cogeneration/CHP
- HVAC/Boilers
- Renewable Generation
- Controls/Sensors
- Lighting
- Water/Wastewater
- Education/Training
- Maintenance/Operations
- Water Conservation
- E-Measurement/Verification
- Other: Power Factor Correction
- Water Heating
- Equipment/Appliances
- Policy/Plan/Program

Performance reporting for FY2012 indicated energy savings of 42M-kWh in electricity and 37k-Mcf in natural gas. Environmentally, this is equivalent to 31k-metric tons of CO<sub>2</sub>-e that were not released into the air due to the implementation of various ECMs. The energy efficiency of City facilities included in the program improved by 34% with respect to their baselines.

## Year 3 Electricity Consumption Data

\* See attached table comprising data for Years 1 through 10 (City FY2012 through FY2021)

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## ***Historical Context (2001-2014)***

### **Drivers & Direction**

With passage of SB 5 in FY2001, the City's then-Department of Environmental Management sought guidance from SECO regarding ways to meet its legislative intent (Currently, responsibility for City air quality programming with the Environmental Division of T/PW). Ultimately, City Management advised City Council to pursue an Energy Savings Performance Contract (ESPC) to implement conservation projects and achieve the intended electricity reductions at City facilities.

In FY2002, the City competitively selected Johnson Controls, Inc. as its Energy Services Company to assist the City in meeting the reduction goals established as part of the Texas Emissions Reduction Plan (TERP). Subsequently, the City entered into an ESPC with JCI to reduce its energy and water consumption and to provide guaranteed cost avoidance to the City. ESPC projects would be contracted in accordance with Texas Local Government Code Chapter 302 with implementation costs financed by a third-party and repaid with accruing ESCo-guaranteed utility cost avoidance.

Chapter 302, *Energy Savings Performance Contracts for Local Governments*, required that a measurement & verification (M&V) plan be included as part of an ESPC and that an ESPC be reviewed and approved by a qualified, independent, licensed professional engineer prior to execution. This represents the City Council-approved approach to meeting TERP's goal for City electricity reductions, and their subsequent extension through the passage of SB 12 in FY2007, and SB 898 in FY2011.

### **Programming & Process**

Originally, responsibility for City energy conservation efforts, including management of the ESPC, was the charge of a Conservation Specialist as supervised within the Environmental Management Department. In FY2004, that full-time position was transferred to T/PW's Facilities Management Division. In FY2010, the City's Sustainability Administrator position was created within Facilities to manage a federal stimulus grant and supervise Conservation Specialist activities serving TERP goals.

The Sustainability Administrator and Conservation Specialist positions are the only City staff dedicated to meeting the intent of State energy conservation initiatives. In FY2014, supervision and leadership for this team moved to the newly-formed Department of Property Management's Facilities Division as part of its Utility & Sustainability Section. Currently, City energy conservation efforts are the focus of what is now more broadly considered as sustainability programming.

Two City programs currently comprise the Facilities Division's sustainability efforts:

1. Resource Conservation Program, a local government-facing initiative of over a decade with a current goal to reduce electrical consumption by the City by at least five-percent each year for 10-years, beginning 01 September 2011 (SB 898); and
2. Better Buildings Program, a local community-facing initiative added in 2012 with a goal a) to improve City-facility energy intensity by at least 20-percent by 2020, and b) to establish an ally organization that encourages local community partners to achieve that same goal.

There are three periods that comprise the implementation process for City-facility projects – *development, construction, & performance*. This is the same process that the City generally recommends to the community through its Better Buildings Program as City partners seek to satisfy their goals, and coincidentally expand the City efforts in reaching TERP-goals.

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	A	B	C	D	E	F	G	
1	<b>Report</b>	<b>Total Electricity</b>	<b>Difference from</b>	<b>Building/Other</b>	<b>Difference from</b>	<b>Building Area</b>	<b>Difference from</b>	
2	<b>Year</b>	<b>Usage (kWh/yr)</b>	<b>Baseline (%)</b>	<b>Usage (kWh/yr)</b>	<b>Baseline (%)</b>	<b>(gross sq.ft.)</b>	<b>Baseline (%)</b>	
3	2012	272,385,710	Baseline	81,696,454	Baseline	8,645,971	Baseline	
4	2013	258,532,379	-5.1%	81,886,286	0.2%	9,396,833	8.7%	
5	2014	256,130,666	-6.0%	84,129,463	3.0%	10,147,694	17.4%	
6	2015	-	-100.0%	-	-100.0%	-	-100.0%	
7	2016	-	-100.0%	-	-100.0%	-	-100.0%	
8	2017	-	-100.0%	-	-100.0%	-	-100.0%	
9	2018	-	-100.0%	-	-100.0%	-	-100.0%	
10	2019	-	-100.0%	-	-100.0%	-	-100.0%	
11	2020	-	-100.0%	-	-100.0%	-	-100.0%	
12	2021	-	-100.0%	-	-100.0%	-	-100.0%	
13	<b>Report</b>	<b>Traffic Lights</b>	<b>Difference from</b>	<b>Street Lights</b>	<b>Difference from</b>	<b>Transportation</b>	<b>Difference from</b>	
14	<b>Year</b>	<b>Usage (kWh/yr)</b>	<b>Baseline (%)</b>	<b>Usage (kWh/yr)</b>	<b>Baseline (%)</b>	<b>Usage (kWh/yr)</b>	<b>Baseline (%)</b>	
15	2012	-	Baseline	-	Baseline	39,403,603	Baseline	
16	2013	-	#DIV/0!	-	#DIV/0!	40,012,406	1.5%	
17	2014	-	#DIV/0!	-	#DIV/0!	40,702,585	3.3%	
18	2015	-	#DIV/0!	-	#DIV/0!	-	-100.0%	
19	2016	-	#DIV/0!	-	#DIV/0!	-	-100.0%	
20	2017	-	#DIV/0!	-	#DIV/0!	-	-100.0%	
21	2018	-	#DIV/0!	-	#DIV/0!	-	-100.0%	
22	2019	-	#DIV/0!	-	#DIV/0!	-	-100.0%	
23	2020	-	#DIV/0!	-	#DIV/0!	-	-100.0%	
24	2021	-	#DIV/0!	-	#DIV/0!	-	-100.0%	
25	<b>Water Infrastructure</b>						<b>Potable Water (060)</b>	
26	<b>Report</b>	<b>Daily Capacity</b>	<b>Difference from</b>	<b>Volume Treated</b>	<b>Difference from</b>	<b>Consumption</b>	<b>Difference from</b>	
27	<b>Year</b>	<b>(M-gallons/day)</b>	<b>Baseline (%)</b>	<b>(gallons/yr)</b>	<b>Baseline (%)</b>	<b>(kWh/yr)</b>	<b>Baseline (%)</b>	
28	2012	497	Baseline	69,469,300,000	Baseline	115,355,723	Baseline	
29	2013	497	0.0%	67,929,100,000	-2.2%	111,930,479	-3.0%	
30	2014	497	0.0%	65,484,300,000	-5.7%	106,896,076	-7.3%	
31	2015	-	-100.0%	-	-100.0%	-	-100.0%	
32	2016	-	-100.0%	-	-100.0%	-	-100.0%	
33	2017	-	-100.0%	-	-100.0%	-	-100.0%	
34	2018	-	-100.0%	-	-100.0%	-	-100.0%	
35	2019	-	-100.0%	-	-100.0%	-	-100.0%	
36	2020	-	-100.0%	-	-100.0%	-	-100.0%	
37	2021	-	-100.0%	-	-100.0%	-	-100.0%	
38	<b>Water Infrastructure</b>						<b>Wastewater (070)</b>	
39	<b>Report</b>	<b>Daily Capacity</b>	<b>Difference from</b>	<b>Volume Treated</b>	<b>Difference from</b>	<b>Consumption</b>	<b>Difference from</b>	
40	<b>Year</b>	<b>(M-gallons/day)</b>	<b>Baseline (%)</b>	<b>(gallons/yr)</b>	<b>Baseline (%)</b>	<b>(kWh/yr)</b>	<b>Baseline (%)</b>	
41	2012	166	Baseline	40,874,695,164	Baseline	35,929,930	Baseline	
42	2013	166	0.0%	34,459,272,349	-16%	24,703,208	-31%	
43	2014	166	0.0%	34,553,525,000	-15%	24,402,542	-32%	
44	2015	-	-100.0%	-	-100%	-	-100%	
45	2016	-	-100.0%	-	-100%	-	-100%	
46	2017	-	-100.0%	-	-100%	-	-100%	
47	2018	-	-100.0%	-	-100%	-	-100%	
48	2019	-	-100.0%	-	-100%	-	-100%	
49	2020	-	-100.0%	-	-100%	-	-100%	
50	2021	-	-100.0%	-	-100%	-	-100%	

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1					Electricity					Natural Gas				
2	City Dept.	Project	City FY	Site	Baseline	SimActual	Savings	Units	Savings %	Baseline	SimActual	Savings	Units	Savings %
3	Property	ESPC Phase 7	FY14	020-T/PW	17,620,850	12,578,704	5,042,146	kWh	28.6%	28,985	18,324	10,661	MCF	36.8%
4	Property	ESPC Phase 7	FY14	023-Code	1,044,430	763,000	281,430	kWh	26.9%	3,972	3,317	655	MCF	16.5%
5	Property	ESPC Phase 7	FY14	025-Events	37,148,281	23,893,978	13,254,303	kWh	35.7%	42,697	32,716	9,981	MCF	23.4%
6	Property	ESPC Phase 7	FY14	035-Police	1,578,963	1,151,833	427,130	kWh	27.1%	811	755	56	MCF	6.9%
7	Property	ESPC Phase 7	FY14	036-Fire	4,554,056	4,111,217	442,839	kWh	9.7%	19,503	14,160	5,343	MCF	27.4%
8	Property	ESPC Phase 7	FY14	080-Parks	7,536,436	5,032,808	2,503,628	kWh	33.2%	15,196	15,724	(528)	MCF	-3.5%
9	Property	ESPC Phase 7	FY14	084-Library	8,639,240	4,342,540	4,296,700	kWh	49.7%	4,723	3,913	810	MCF	17.2%
10	Property	ESPC Phase 7	FY14	Sub-Total:	78,122,256	51,874,080	26,248,176	kWh	33.6%	115,887	88,909	26,978	MCF	23.3%
11	T/PW	LED Traffic Signals	FY14	020-T/PW	6,476,031	695,937	5,780,094	kWh	89.3%	0	0	0	MCF	#DIV/0!
12	Water	ESPC Phs.5 & 6b	FY14	070-Sewer	44,077,120	22,910,396	21,166,724	kWh	48.0%	0	0	0	MCF	#DIV/0!
13	FY14 Total:				128,675,407	75,480,413	53,194,994	kWh	41.3%	115,887	88,909	26,978	MCF	23.3%
14	Property	ESPC Phase 7	FY13	020-T/PW	17,384,186	12,957,524	4,426,662	kWh	25.5%	25,108	15,604	9,504	MCF	37.9%
15	Property	ESPC Phase 7	FY13	023-Code	1,048,756	811,800	236,956	kWh	22.6%	3,288	2,936	352	MCF	10.7%
16	Property	ESPC Phase 7	FY13	025-Events	37,235,073	24,418,318	12,816,755	kWh	34.4%	43,252	23,448	19,804	MCF	45.8%
17	Property	ESPC Phase 7	FY13	035-Police	1,555,476	1,219,518	335,958	kWh	21.6%	619	496	123	MCF	19.9%
18	Property	ESPC Phase 7	FY13	036-Fire	4,542,259	4,062,455	479,804	kWh	10.6%	15,613	10,056	5,557	MCF	35.6%
19	Property	ESPC Phase 7	FY13	080-Parks	7,510,202	4,982,857	2,527,345	kWh	33.7%	12,423	11,236	1,187	MCF	9.6%
20	Property	ESPC Phase 7	FY13	084-Library	8,612,802	4,148,878	4,463,924	kWh	51.8%	3,730	3,066	664	MCF	17.8%
21	Property	ESPC Phase 7	FY13	Sub-Total:	77,888,754	52,601,350	25,287,404	kWh	32.5%	104,033	66,842	37,191	MCF	35.7%
22	T/PW	LED Traffic Signals	FY13	020-T/PW	6,476,031	695,937	5,780,094	kWh	89.3%	0	0	0	MCF	#DIV/0!
23	Water	ESPC Phs.5 & 6b	FY13	070-Sewer	44,077,120	22,964,096	21,113,024	kWh	47.9%	0	0	0	MCF	#DIV/0!
24	FY13 Total:				128,441,905	76,261,383	52,180,522	kWh	40.6%	104,033	66,842	37,191	MCF	35.7%
25	Property	ESPC Phs.1-4 & 6b	FY12	020-T/PW	17,607,146	13,416,248	4,190,898	kWh	23.8%	23,991	15,758	8,233	MCF	34.3%
26	Property	ESPC Phs.1-4 & 6b	FY12	023-Code	1,073,907	826,450	247,457	kWh	23.0%	2,961	2,975	(14)	MCF	-0.5%
27	Property	ESPC Phs.1-4 & 6b	FY12	025-Events	38,174,345	23,948,263	14,226,082	kWh	37.3%	39,976	17,243	22,733	MCF	56.9%
28	Property	ESPC Phs.1-4 & 6b	FY12	035-Police	1,588,553	1,321,193	267,360	kWh	16.8%	563	482	81	MCF	14.4%
29	Property	ESPC Phs.1-4 & 6b	FY12	036-Fire	4,682,573	3,999,812	682,761	kWh	14.6%	14,182	9,762	4,420	MCF	31.2%
30	Property	ESPC Phs.1-4 & 6b	FY12	080-Parks	7,836,737	5,022,279	2,814,458	kWh	35.9%	11,256	10,479	777	MCF	6.9%
31	Property	ESPC Phs.1-4 & 6b	FY12	084-Library	8,709,407	4,217,610	4,491,797	kWh	51.6%	3,433	2,284	1,149	MCF	33.5%
32	Property	ESPC Phase 7	FY12	Sub-Total:	79,672,668	52,751,855	26,920,813	kWh	33.8%	96,362	58,983	37,379	MCF	38.8%
33	T/PW	LED Traffic Signals	FY12	020-T/PW	6,476,031	695,937	5,780,094	kWh	89.3%	0	0	0	MCF	#DIV/0!
34	Water	ESPC Phs.5 & 6b	FY12	070-Sewer	44,077,120	34,226,078	9,851,042	kWh	22.3%	0	0	0	MCF	#DIV/0!
35	FY12 Total:				130,225,819	87,673,870	42,551,949	kWh	32.7%	96,362	58,983	37,379	MCF	38.8%
36	Totals				387,343,131	239,415,666	147,927,465	kWh	38.2%	316,282	214,734	101,548	MCF	32.1%

# Senate Bill 898 (82R) Reporting Form State Fiscal Year 2014 / Year 3 Reporting Reports due: November 1, 2014



**Purpose of this Document:** In 2011, the Texas Legislature passed Senate Bill 898 amending the Health and Safety Code §388.005 to require each political subdivision, institution of higher education, or state agency to establish a goal to reduce electrical consumption by at least five percent each fiscal year for ten years beginning September 1, 2011. Each entity must report to the State Energy Conservation Office (SECO) regarding the entity's efforts to meet the goal, and progress the entity has made.

**Note:** Current and previous SB898 report forms can be accessed online at <http://www.seco.cpa.state.tx.us/energy-reporting/non-attainment.php>

City of Fort Worth, Texas  
*Entity Name*

Public Entity Type (check one):  Municipality  County  State Agency  Higher Education  Other (please list type): \_\_\_\_\_

401 West 13th Street; Property Management/Facilities      Fort Worth      76102-4633  
*Street Address*      *City*      *Zip Code*

Tarrant  
*County*

Samuel C. Steele      Sustainability Administrator  
*Contact Name*      *Title*

sam.steele@fortworthtexas.gov      817.392.1276  
*Email Address*      *Phone Number*

## Reduction Goal

As mandated by Senate Bill 898 (82R), has your entity established a goal to reduce electrical consumption by at least five percent each year through August 31, 2021?  Yes  No

## Areas of Improvement

Please check the appropriate boxes below indicating the areas in which your entity has made efforts and progress toward meeting energy goals.

- |  |   |  |
|--|---|--|
| <input checked="" type="checkbox"/> Building Envelope                    | <input checked="" type="checkbox"/> Appliances/Equipment/Electronics      | <input checked="" type="checkbox"/> Policy/Plan/Program  |
| <input checked="" type="checkbox"/> Cogeneration/Combined Heat and Power | <input checked="" type="checkbox"/> HVAC                                  | <input checked="" type="checkbox"/> Renewable Generation |
| <input checked="" type="checkbox"/> Sensors/Controls                     | <input type="checkbox"/> Insulation/ Radiant Barrier                      | <input checked="" type="checkbox"/> Water/Wastewater     |
| <input type="checkbox"/> Cool Roof                                       | <input checked="" type="checkbox"/> Lighting                              | <input checked="" type="checkbox"/> Water Conservation   |
| <input checked="" type="checkbox"/> Education/Training                   | <input checked="" type="checkbox"/> Maintenance/Operation                 | <input checked="" type="checkbox"/> Water Heating        |
| <input checked="" type="checkbox"/> Measurement/Verification             | <input checked="" type="checkbox"/> Other: <u>Power Factor Correction</u> |  |

## Describe Progress

Provide a brief narrative regarding the progress and efforts indicated above to reduce electrical consumption and a brief description of planned or applied reduction activities. Your description will be included in SECO's annual report. Please attach additional pages if needed.

\*Please see attached

Check here if additional documentation is attached.

**Electricity Consumption Data**

Enter annual electrical usage in kWh for the State Fiscal Year 2014 (Year 3: 9/1/13 - 8/31/14) and gross baseline square footage of each building. Reporting total energy consumption is mandatory. A breakdown of energy consumption by building or infrastructure is optional.

Building / Infrastructure Type	Annual Consumption (kWh) (9/1/2013 - 8/31/2014)	Gross Baseline Square Footage (as of 9/1/2011)
Buildings	84,129,463	10,147,694
Traffic Lights	NA	NA
Street Lights	NA	NA
Other: <u>Transportation Lighting</u>	40,702,585	NA
Other: _____		
Other: _____		
<b>Totals:</b>	NaN kWh	NaN Sq Ft

Water Infrastructure	Capacity (MGD)	Year 3 Avg. MGD (9/1/13 - 8/31/14)	Year 3 Water-Related Consumption (kWh)	Year 3 Consumption Total
Water / Wastewater Facilities	=497+166 MGD	=65,484,300,000+34 MGD	=106,896,076+24,402,542 kWh	NaN kWh

**Exemption Request**

*In accordance with Senate Bill 898, a political subdivision, institution of higher education, or state agency that does not attain this goal must include justification that the entity has already implemented all available cost-effective measures. An entity that submits a report indicating that it has reviewed its available options, has determined that no additional measures are cost-effective, and that it has already implemented all available cost-effective measures is exempt from the annual reporting requirement if a subsequent report would indicate no change in status.*

If requesting an exemption to the mandates of SB 898 please check the boxes and provide additional documentation to serve as justification for this exemption request.

- The Entity listed above has reviewed its available options, has determined that no additional measures are cost-effective, and that it has already implemented all available cost-effective measures.
- The Entity has included a report to this effect.

I have read Senate Bill 898 (82R) regarding exemptions, and hereby certify that the said entity has met the exemption.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

Submit this form automatically by pressing the "Submit Form" button on the top right corner of this page (if present), or by saving a copy of the completed form on your computer, and then emailing a digital copy the completed report to:  
**SB898.Reporting@cpa.state.tx**

Reporting may also be submitted by sending a hard copy or fax to:

**State Energy Conservation Office**  
**Attn: SB898 Report**  
**111 E. 17th Street**  
**Austin, Texas 78711-1440**  
**Fax: 512-475-2569**

*This Area for SECO Use Only*  
 Received: \_\_\_\_\_  
 Entity ID: \_\_\_\_\_  
 PDF Saved: \_\_\_\_\_  
 Entered in DB: \_\_\_\_\_

# Senate Bill 898 (82R) Reporting Form State Fiscal Year 2013 / Year 2 Reporting Reports due: November 1, 2013

Form# 50-816



**Purpose of this Document:** In 2011, the Texas Legislature passed Senate Bill 898 amending the Health and Safety Code §388.005 to require each political subdivision, institution of higher education, or state agency to establish a goal to reduce electrical consumption by at least five percent each fiscal year for ten years beginning September 1, 2011. Each entity must report to the State Energy Conservation Office (SECO) regarding the entity's efforts to meet the goal, and progress the entity has made.

**Note:** Reports can be submitted using this form or online at [https://www3.cpa.state.tx.us/TEP\\_Reporting.nsf/Home?OpenForm](https://www3.cpa.state.tx.us/TEP_Reporting.nsf/Home?OpenForm)

City of Fort Worth, Texas  
Entity Name

Entity Type:  Municipality  County  State Agency  Higher Education  Other: \_\_\_\_\_

401 West 13th Street; Property Management Department, Facilities Division; Fort Worth, Texas 76102-4633  
Address

Tarrant  
County

Samuel C. Steele  
Contact Name

sam.steele@fortworthtexas.gov  
Email Address

Sustainability Administrator  
Title

817.392.1276  
Phone Number

## Reduction Goal

As mandated by Senate Bill 898 (82R), has your entity established a goal to reduce electrical consumption by at least five percent each year for ten years beginning September 1, 2011?  Yes  No

## Areas of Improvement

Please check the appropriate boxes below indicating the areas in which your entity has made efforts and progress toward meeting energy goals.

- |  |   |  |
|--|---|--|
| <input checked="" type="checkbox"/> Building Envelope                    | <input checked="" type="checkbox"/> Appliances/Equipment/Electronics      | <input checked="" type="checkbox"/> Policy/Plan/Program  |
| <input checked="" type="checkbox"/> Cogeneration/Combined Heat and Power | <input checked="" type="checkbox"/> HVAC                                  | <input checked="" type="checkbox"/> Renewable Generation |
| <input checked="" type="checkbox"/> Sensors/Controls                     | <input type="checkbox"/> Insulation/ Radiant Barrier                      | <input checked="" type="checkbox"/> Water/Wastewater     |
| <input type="checkbox"/> Cool Roof                                       | <input checked="" type="checkbox"/> Lighting                              | <input checked="" type="checkbox"/> Water Conservation   |
| <input checked="" type="checkbox"/> Education/Training                   | <input checked="" type="checkbox"/> Maintenance/Operation                 | <input checked="" type="checkbox"/> Water Heating        |
| <input checked="" type="checkbox"/> Measurement/Verification             | <input checked="" type="checkbox"/> Other: <u>Power Factor Correction</u> |  |

## Describe Progress

Provide a brief narrative regarding the progress and efforts indicated above to reduce electrical consumption and a brief description of planned or applied reduction activities. Your description will be included in SECO's annual report. Please attach additional pages if needed.

\*Please see attached

Check here if additional documentation is attached.

## Energy Consumption Data

Enter annual electrical usage in kWh for the State Fiscal Year 2013 and gross baseline square footage of each building. Reporting total energy consumption is mandatory. A breakdown of energy consumption by building or infrastructure is optional.

Infrastructure or Facility Type	Annual Consumption in kWh (9/1/2012 – 8/31/2013)	Gross Baseline Square Footage (as of 9/1/2012)
Building	81,886,286	8,626,223
Water (pumps)	111,930,479	471,496
Wastewater	24,703,208	299,114
Traffic Lighting	NA	NA
Street Lighting	NA	NA
Other: <u>Transportation Lighting</u>	40,012,406	NA
Other: _____		
Other: _____		
<b>Totals:</b>	<b>258,532,379</b>	<b>9,396,833</b>

### Exemption Request

*In accordance with Senate Bill 898, a political subdivision, institution of higher education, or state agency that does not attain this goal must include justification that the entity has already implemented all available cost-effective measures. An entity that submits a report indicating that it has reviewed its available options, has determined that no additional measures are cost-effective, and that it has already implemented all available cost-effective measures is exempt from the annual reporting requirement if a subsequent report would indicate no change in status.*

**If requesting an exemption to the mandates of SB 898 please check the boxes and provide additional documentation to serve as justification for this exemption request.**

- The Entity listed above has reviewed its available options, has determined that no additional measures are cost-effective, and that it has already implemented all available cost-effective measures.
- The Entity has included a report to this effect.

**I have read Senate Bill 898 (82R) regarding exemptions, and hereby certify that the said entity has met the exemption.**

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

Email completed reports to SECO at [SB898.Reporting@cpa.state.tx.us](mailto:SB898.Reporting@cpa.state.tx.us)



# SENATE BILL 898 (82<sup>nd</sup> R)

## Year 1 / Baseline Jurisdictional Reporting Form (SFY 2012)

<b>Date Submitted:</b> 09 / 15 / 2015	<b>Report Year</b>	SFY 2012	<b>Consumption Reporting Range</b>	<b>Report Due Date</b>
	Year 1	SFY 2012	9/1/11 – 8/31/12	10/1/12

**Entity Name:** City of Fort Worth, Texas      **County of Origin:** Tarrant

**Entity Type (Check One):**  Municipality     County     State Agency     Higher Education     Other: \_\_\_\_\_

**Contact Name:** Samuel C. Steele      **Title:** Sustainability Administrator

**Physical Address:** 401 West 13th Street; Property Management Department, Facilities Division

**City:** Fort Worth      **Zip Code:** 76102-4633

**Email Address:** sam.steele@fortworthtexas.gov    **Phone:** 817.392.1276    **Fax:** 817.392.8488

**Senate Bill 898 Mandates:**

**Establish a goal to reduce electrical consumption by the entity by at least 5 (five) percent each year for 10 (ten) years, beginning September 1, 2011.**  
 Has your entity established a goal?  Yes     No

**Please describe the efforts and progress your entity has made towards meeting the annual 5% reduction goal?**  
 (Provide a statement regarding the progress and efforts to meet the annual 5% goal to reduce electrical consumption and a brief description of planned or applied reduction activities. Examples may include but are not limited to: retrofit or replacement of equipment, energy assessments/management/controls/contract/education/staff, and renewable energy applications. Your description will be included in SECO's annual report. Please attach additional pages as needed.)

\*Please see attached

**Entity consumption data:**

**Instructions:** (1) Enter your entity's total annual electrical usage (in kWh) for the State Fiscal Year 2012 (September 1, 2011 to August 31, 2012); (2) Provide building square footage in place as of September 1, 2011; (3) Save document; (4) Submit to SECO using the instructions below:

		Infrastructure or Facility Type	Annual Consumption in kWh (09/01/2011 – 8/31/2012)	Gross Square Footage (as of 09/01/2011)
<b>Optional Consumption Reporting Data</b>	Buildings		81,696,454	8,645,971
	Water (pumps)		115,355,723	
	Wastewater		35,929,930	
	Traffic Lighting		NA	
	Street Lighting		NA	
	Other (please list type)		39,403,603 (Transportation Lighting)	
	Other (please list type)			
<b>Mandatory Reporting</b>	Total		<b>272,385,710</b>	<b>8,645,971</b>

**Notes:** This report form reflects the *baseline* Senate Bill 898 reporting cycle. In order to accurately compare this baseline SB898 report to subsequent SB898 reports, entities should only report the consumption data associated with facility and infrastructure square footage in place as of September 1, 2011. Please provide in the table above the total electricity consumption and square footage for all facilities combined, or add fields for differing infrastructure types as needed for more detailed reporting.

**Exemption Request Certification:** If requesting an exemption to the mandates of SB 898 please check the box and appropriate line(s) in the following section and provide separate documentation to serve as justification for this exemption request. Adequate documentation is required in order to support your request.

**Exemption Request – Exemption to SB 898 Reporting allowed if:**

\_\_\_ The Entity has reviewed available options to reduce electrical consumption and determines that no additional measures are cost effective and that the entity has implemented all cost-effective energy efficiency measures to reduce electrical consumption;

\_\_\_ The Entity has included a report to this effect.

*I have read Senate Bill 898 (82<sup>nd</sup> R) regarding exemptions, and hereby signify that said entity has met the exemption criteria listed above and in the Senate Bill 898.*

Signed: \_\_\_\_\_ Title: \_\_\_\_\_ Date: \_\_\_\_\_

**Report Submittal:**

Reports can be submitted to SECO by email, fax, mail or by using SECO's online reporting website\*, which is located at the following web link:

[https://www3.cpa.state.tx.us/TEP\\_Reporting.nsf/Home?OpenForm](https://www3.cpa.state.tx.us/TEP_Reporting.nsf/Home?OpenForm)

\*Use of online reporting requires the signing up online for a <USER NAME> and <PASSWORD>

Online Submittal: [https://www3.cpa.state.tx.us/TEP\\_Reporting.nsf/Home?OpenForm](https://www3.cpa.state.tx.us/TEP_Reporting.nsf/Home?OpenForm)  
 Texas Energy Partnership ♦ State Energy Conservation Office ♦ Texas Comptroller of Public Accounts ♦  
 111 East 17<sup>th</sup> St. Room 1118 ♦ Austin ♦ TX ♦ 78774 ♦ Office: (800) 531-5441 ♦ Fax: (512) 475-2569  
 Email: [stephen.ross@cpa.state.tx.us](mailto:stephen.ross@cpa.state.tx.us)

## What you need to know about Texas Senate Bill 898 (82<sup>nd</sup> R)

### Background:

The passage of Senate Bill 898 (SB 898) by the 82<sup>nd</sup> Texas Legislature signified the continuance of Senate Bill 12 (SB 12) of the 80<sup>th</sup> Texas Legislature and of Senate Bill 5 (SB5) of the 77<sup>th</sup> Texas Legislature, which was enacted in 2001 to help to improve air quality by reducing ambient air emissions and to encourage energy efficiency in Texas public entities. Senate Bill 898 was enacted on September 1, 2011 to assist the state and its political jurisdictions to conform to the Ambient Air Quality standards set forth in the Federal Clean Air Act.

### Mandated Entities:

SB 898 applies to each political subdivision, institute of higher education and state agency facility that is located in the 41 non-attainment or near non-attainment counties in Texas. Each of these entities is mandated to do the following:

- *Establish a goal to reduce entity electrical consumption by at least 5 (five) percent each year for 10 (ten) years, beginning September 1, 2011.*
- *Submit a report to SECO annually regarding the entity's progress and efforts to meet the 5% goal to reduce electrical consumption.*

### What counties are affected?

All political jurisdictions located in the following  
Non-attainment and affected counties:

Bastrop Bexar Brazoria Caldwell Chambers Collin Comal Dallas Denton  
El Paso Ellis Fort Bend Galveston Gregg Guadalupe Hardin Harris  
Harrison Hays Henderson Hood Hunt Jefferson Johnson Kaufman Liberty  
Montgomery Nueces Orange Parker Rockwall Rusk San Patricio Smith  
Tarrant Travis Upshur Victoria Waller Williamson Wilson

- *A political subdivision, institute of higher education or state agency that does not attain the goals established must provide justification in the SB898 report that the entity has already implemented all cost-effective measures. (Cost effectiveness of an Energy Conservation Measure is defined as having a 20 year (or less) return on investment.)*

### Exemptions:

An exemption to the reporting of SB 898 may be allowed if: 1) The entity has reviewed available cost-effective measures to reduce electrical consumption and determines that no additional measures are cost effective; 2) The entity has implemented all cost-effective energy efficiency measures to reduce electrical consumption; and 3) The Entity has included a report to this effect. If seeking an exemption, please submit adequate documentation to support your request.

### Reporting Timelines:

The recommended timeline for entities reporting under SB 898 should be consistent and conform to the State Fiscal Year (SFY) timeline cycle, which results in the following reporting cycles:

SB 898 Reporting Timeline and Due Dates:			
Report Year	SFY Year	Consumption Reporting Range	Report Due Date
Year 1	SFY 2012	9/1/11 – 8/31/12	10/1/12
Year 2	SFY 2013	9/1/12 – 8/31/13	10/1/13
Year 3	SFY 2014	9/1/13 – 8/31/14	10/1/14
Year 4	SFY 2015	9/1/14 – 8/31/15	10/1/15
Year 5	SFY 2016	9/1/15 – 8/31/16	10/1/16
Year 6	SFY 2017	9/1/16 – 8/31/17	10/1/17
Year 7	SFY 2018	9/1/17 – 8/31/18	10/1/18
Year 8	SFY 2019	9/1/18 – 8/31/19	10/1/19
Year 9	SFY 2020	9/1/19 – 8/31/20	10/1/20
Year 10	SFY 2021	9/1/20 – 8/31/21	10/1/21

### Report Submittal:

Reports can be submitted digitally in PDF or MS Word format via email, or via SECO's online reporting website which is located at the following web link:

[https://www3.cpa.state.tx.us/TEP\\_Reporting.nsf/Home?OpenForm](https://www3.cpa.state.tx.us/TEP_Reporting.nsf/Home?OpenForm)

*Please note that if utilizing the online reporting website for the first time, you will need to create a <login> and <password>.*

### How do you define energy-efficiency measures?

**Energy-efficiency measures are defined as any facility modifications or changes in operations that reduce energy consumption. Energy-efficiency is a strategy that has the potential to conserve resources, save money\*\* and better the quality of our air. Examples of energy-efficiency measures might include:**

- installation of insulation and high-efficiency windows and doors
- modifications or replacement of HVAC systems, lighting fixtures and electrical systems
- installation of automatic energy control systems
- installation of energy recovery systems or renewable energy generation equipment
- building commissioning
- development of energy efficient procurement specifications
- employee awareness campaigns

Please submit this form online at: [https://www3.cpa.state.tx.us/TEP\\_Reporting.nsf/Home?OpenForm](https://www3.cpa.state.tx.us/TEP_Reporting.nsf/Home?OpenForm)  
Texas Energy Partnership ♦ State Energy Conservation Office ♦ Texas Comptroller of Public Accounts ♦  
111 East 17<sup>th</sup> St. Room 1114 ♦ Austin ♦ TX ♦ 78774 ♦ Office: (800) 531-5441 ♦ Fax: (512) 475-2569

# A Resolution

NO. 4130-09-2012

## ESTABLISHING AN ENERGY CONSERVATION GOAL IN COMPLIANCE WITH STATE OF TEXAS LEGISLATIVE ACTION

**WHEREAS** Senate Bill 898 of the 82nd Legislative Session of 2011 amends the Texas Health and Safety Code § 388.005, to require political subdivisions in nonattainment areas of federal Clean Air Act standards to establish a goal to reduce electricity consumption by at least five percent each state fiscal year for ten years beginning September 1, 2011; and

**WHEREAS** the City of Fort Worth, Texas ("City") is a political subdivision located in Tarrant County, a nonattainment area not otherwise exempted from having to establish an energy conservation goal; and

**WHEREAS** Senate Bill 898 requires the City to file an annual report of energy conservation efforts with the State Energy Conservation Office of Texas ("SECO") on a form to be provided by SECO; and

**WHEREAS** a reduction in consumption of electricity at City electricity accounts will reduce electricity generation requirements, which will in turn have a beneficial impact on Electric Reliability Council of Texas ("ERCOT") system reliability, air quality, and the City's budget;

### NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF FORT WORTH, TEXAS, THAT:

1. The City Council hereby establishes a goal that its electricity consumption be reduced by five percent each fiscal year for ten years, beginning September 1, 2011; and
2. The City Council agrees to file an annual energy consumption goal compliance report with SECO on a form provided by SECO.

Adopted this 18<sup>th</sup> day of September, 2012.

ATTEST:

By: \_\_\_\_\_

Mary Kayser, City Secretary

A stylized graphic of the Fort Worth skyline, showing various building silhouettes of different heights and shapes.

FORT WORTH

# A Resolution

NO. 4089-05-2012

## AUTHORIZING THE CITY MANAGER TO ENTER INTO A COMMUNITY PARTNERSHIP AGREEMENT WITH THE U.S. DEPARTMENT OF ENERGY FOR THEIR BETTER BUILDINGS CHALLENGE

**WHEREAS**, the City of Fort Worth has adopted a Sustainability Action Plan as recommended by its Sustainability Task Force; and

**WHEREAS**, pursuant to that plan, the City's Energy Conservation Program is completing over \$58 million in improvements to municipal facilities, which will result in annual cost avoidance of over \$5.9 million and the removal of over 40,000 tons of greenhouse gases from the atmosphere; and

**WHEREAS**, 62 public, private, and non-profit organizations are currently working together nationally on the President's Better Buildings Initiative to make buildings more energy efficient and better places in which to live and work; and

**WHEREAS**, the City of Fort Worth now has the opportunity to join the cities of Atlanta, Denver, Houston, Los Angeles, Sacramento, Seattle, and Washington, D.C., as Community Partners in the U.S. Department of Energy's Better Buildings Challenge; and

**WHEREAS**, under the attached Community Partnership Agreement, the City of Fort Worth would commit to assigning leadership, pledging a goal to improve facility energy intensity by at least 20 percent by 2020, and working with local organizations to develop an organization-wide plan to achieve the goal;

**NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF FORT WORTH, TEXAS, THAT:**

1. The City Council authorizes the City Manager to enter into the attached Community Partnership Agreement with the U.S. Department of Energy for their Better Buildings Challenge; and

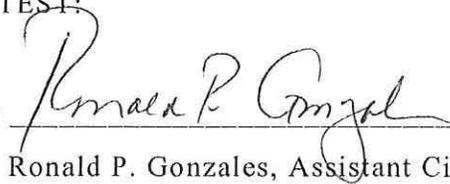


2. The City Council encourages local businesses, universities, and other organizations to join the City in making Fort Worth municipal, commercial, and industrial buildings 20 percent more energy-efficient by the year 2020.

Adopted this 15<sup>th</sup> day of May, 2012.

ATTEST:

By: \_\_\_\_\_



Ronald P. Gonzales, Assistant City Secretary

