



## **TODAY'S WEBINAR TOPIC**

**Utilizing Performance Contracting to Reduce Energy Consumption and Save Money – Fort Worth, Texas Profile**

**Speaker:**



Samuel Steele  
*Administrator of Sustainability Programs*  
City of Fort Worth, Texas



### **Stay Connected with Climate Communities**

Beginning August 4, Climate Communities' weekly training webinars will be limited to **members only**.

Contact Andrew Seth at [andy@climatecommunities.us](mailto:andy@climatecommunities.us) for membership details.

July 28, 2011

For more information: [www.climatecommunities.us](http://www.climatecommunities.us)



## **Urge Your Member of Congress to Co-Sponsor PACE Legislation**

On Wednesday, July 20th, Representatives Nan Hayworth (R-NY), Dan Lungren (R-CA) and Mike Thompson (D-CA) introduced the PACE Assessment Protection Act of 2011 (H.R. 2599) in the U.S. House of Representatives.

If enacted, this legislation would restore the right of states and local governments to establish Property Assessed Clean Energy (PACE) programs.

**Contact your Member of Congress (202.224.3121) and urge them to co-sponsor the bill.**



## Upcoming Webinars

*Climate Communities Members Only*

**Aug. 4:** DOT TIGER III Grant Program (\$527 million)

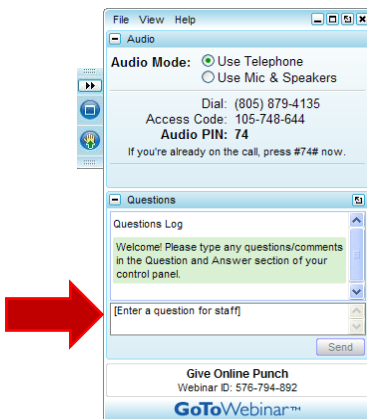
**Aug. 11:** HUD Sustainable Communities Challenge Grant Program (up to \$30 million)

New webinar access instructions will be sent to Climate Communities members tomorrow.

Email [andy@climatecommunities.us](mailto:andy@climatecommunities.us) for membership details.



## Asking questions



At any point during the presentation, you can type your question into the question text box and click send. All questions will be read aloud and answered at the end of the presentations, as long as time permits.



**Energy Savings Performance Contracting**  
**Utilizing ESCOs to Manage Consumption & Cost**

Presented to:

**Climate Communities**  
**The Ferguson Group**

Presented by:

**Samuel C. Steele, CEM®, LEED®A.P., City of Fort Worth, Texas**  
**Administrator of Sustainability Programs**

28 July 2011; Webinar



**Purpose of the Presentation**

- **City-Community Sketch**  
Demographics/Organization/Commerce
- **Energy Conservation Program**
  - ✓ Principal Drivers
  - ✓ City Response
  - ✓ Primary Objectives
  - ✓ Program Snapshot
- **Program Implementation**
  - ✓ Project Development
  - ✓ Funding Options
  - ✓ Construction Management
  - ✓ Performance Period
- **Next Steps, Discussion &.....**  
Our post-ARRA/EECBG Outlook



## City-Community Sketch 2010 Census, Chamber, & City Data

- Area Population – Current City Population of 746,290-persons
  - ✓ *Growth!* + 9.7%-United States; 21%-State of Texas; 39%-City of Fort Worth
  - ✓ 16<sup>th</sup> Largest City in the United States & Fastest-Growing Large City
  - ✓ Dallas-Fort Worth-Arlington MSA Population over 6.7-Million (12-County)
  - ✓ DFW is Largest Market in Southern U.S. & 4<sup>th</sup>-Largest in the U.S.
- Race/Ethnicity Diversity – Continuing as a *Minority-Population City*
  - ✓ 42%-White; 34%-Hispanic; 18%-African-American; 6%-Other
- City Government – At a Glance...
  - ✓ Incorporated in 1873; Council-Manager Charter in 1924
  - ✓ 9-Elected Officials – Mayor At-Large & 8-Single-Member Council Districts
  - ✓ City Manager’s Office – City Manager & 4-ACMs; Total of ~6,200 Staff
    - Infrastructure – Aviation, Planning & Dev’t, Transportation & Public Works, Water
    - Community Dev’t – Housing & Economic Dev’t, Library, Parks & CS, Public Events
    - Public Safety – Code Compliance, Fire, Municipal Courts, Police
    - Management – Equipment Services, Financial Management, Human Resources, IT



## City-Community Sketch 2010 Census, Chamber, & City Data

- City is Home to Four Fortune 500 Company Headquarters
  - ✓ American Airlines, BNSF Railway, RadioShack, XTO Energy
- Largest Area Employers – based on 17-Top Employers & 134k-Jobs
  1. 24% in Healthcare Sector (4-Hospital Systems)
  2. 22% in Education Sector (3-Public ISDs & 1-State University)
  3. 19% in Manufacturing Sector (2-Aircraft, 1-Healthcare, 1-Electronics)
  4. 16% in Transportation Sector (1-International Airline)
  5. 16% in Public Administration Sector (1-City, 1-County, 1-Federal)
  6. 3% in Finance Sector (1-Investment House)
- An International Hub for Commerce
  - ✓ Airports – DFW International AP, Alliance MAP, Meacham MAP, & Spinks MAP
  - ✓ Railway – UP Centennial Rail Yard; Tower 55 (Busiest Intersection in US)
  - ✓ Roadway – Interstate Routes I-35W (N/S), I-20 & I-30 (E/W), I-820 (Loop)



## Energy Conservation Program

### Drivers, Response, Objectives

- Primary Drivers
  - ✓ State: *Texas Emissions Reduction Program* (TERP) Target  
(Senate Bills 5 & 12, 77<sup>th</sup>/2001 & 80<sup>th</sup>/2007 Legislatures)
  - ✓ City: Mayor & Council *Strategic Goals*  
(Public Safety, Mobility/Air Quality, Clean/Attractive City, Economic Base/Education/Quality Jobs, Orderly/Sustainable Development)
- City Response
  - ✓ Competitive Selection of an *Energy Services Company* (ESCO)
  - ✓ Authorize an *Energy Savings Performance Contract* (ESPC)
- Current Objective
  - ✓ TERP Goal/*State Energy Conservation Office* (SECO) Reporting  
(5%/yr Electricity Consumption Reduction or ~128M-kWh/yr, 2001-12)  
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## Energy Conservation Program

### Program Drivers - Secondary

- Facility Management Industry Best-Practice
  - ✓ APWA, BOMA, IFMA, ASHRAE, IESNA...
- Resource Cost Containment
  - ✓ Through Reducing Number of "Units" the City is Billed (kW, MCF, kgal)
  - ✓ Facility Upgrades paid through Operational Cost Avoidance (*Not* in CIP)
- Water Utility Rate Cost Containment
  - ✓ Reduce Upward Pressure on Customer Rates (FWWD)
- Operations Risk Management
  - ✓ Reduced Risk of Utility Outages (esp. Brown-outs & Black-outs)
- U. S. Conference of Mayors (Resolution No.3535-09-2007)
  - ✓ Signatory to *Climate Protection Agreement* (Over 1,044-signatories)
- Federal Government Contract Award (CSC.No39311)
  - ✓ *Energy Efficiency & Conservation Block Grant* (EECBG/ARRA/EISA)
- Federal Government Technical Assistance Program Selection (TAP)
  - ✓ *Community Energy Strategic Planning Academy* (CESPA/DOE/EEERE/NREL)



## Energy Conservation Program

### Primary Driver – Expanded

- Senate Bill 12 / 80<sup>th</sup> Texas Legislature (SB12/2007, superseding SB5/2001)
  - An Act relating to programs for the enhancement of air quality, including energy efficiency standards in state purchasing and energy consumption; providing penalties...*
  - Establish TX.H&S Code Amendments with following Rule Making Authorities:
    - ✓ TCEQ - *Texas Commission on Environmental Quality*
    - ✓ SECO - *State Energy Conservation Office*
    - ✓ PUCTx - *Public Utility Commission of Texas*
- Texas Statutes: Local Government Code (LGC.302)
  - Title 9 – *Public Bldgs. & Grounds*, Subtitle C – *Public Bldg. Provisions...*
  - Section 302 – *Energy Savings Performance Contracts for Local Governments*
    - ✓ Section 302.001 – Definitions
    - ✓ Section 302.002 – Energy Savings Performance Contracts
    - ✓ Section 302.003 – Payment & Performance Bond
    - ✓ Section 302.004 – Method of Financing; Terms of Contract
    - ✓ Section 302.005 – Bidding Procedures; Award of Contract
    - ✓ Section 302.006 – Meter Guarantees

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## Energy Conservation Program

### City Response - Expanded

- Selection of Energy Services Company (ESCo)
  - ✓ 2001 – IR.8359 ...*Proposed Performance Contracting Program*
  - ✓ 2002 – IR.8386 *Energy Savings Performance Contract (ESPC) Status...*
  - ✓ Competitive Selection through *Request for Qualifications* Process
  - ✓ Selection of ESCo as the Most Qualified of Seven RFQ Respondents to Conduct a *Preliminary Energy Audit* of Selected City Facilities (Downtown Municipal Complex & Meacham MAP Terminal) as Approved through a *Letter of Intent* performed at no charge
- Authorization of Detailed Energy Study
  - ✓ 2002 – M&C C-19369 with ESCo to Perform a *Detailed Energy Audit and Engineering Evaluation for Energy Savings Equipment Retrofit* based on its *Preliminary Energy Audit*
- Authorization of Energy Savings Performance Contract (ESPC)
  - ✓ 2003 – M&C C-19739 with ESCo Contract Allowances for Performance Contract Modifications (para.13) & Scope of Additional Work (para.16)



## Energy Conservation Program

### Current Objectives - Expanded

- Electricity Consumption Reduction Goal (TX.SBs 5&12, 2001-2012)
  - ✓ Approximately 128,500,000-kWh/year in Electricity Usage, or
  - ✓ Approximately \$10,600,000/year of Electricity Utility Cost, or
  - ✓ Nearly 83,100-tons/year Reduction of Green House Gases (CO<sub>2</sub>-e), or
  - ✓ CO<sub>2</sub>-e Emissions from Energy Use of 7,334-Homes for One Year, or
  - ✓ CO<sub>2</sub>-e Emissions from 15,219-Passenger Vehicles per year
- Typical Conservation Project Implementation Process
  - ✓ Development Period: 2- to 3-years (Preliminary Audit & Detailed Study)
  - ✓ Construction Period: 1- to 2-years (ESPC or other Delivery System)
  - ✓ Performance Period: NTE 20-years (Dependant on Cash Flow/Finance Term)  
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## Energy Conservation Program

### Project Snapshot: 2001 through 2012

- Completed Projects (through FY10)
  - ✓ ESPC Phase I: Sep04, 4.4M-kWh/yr.savings, 512k-sq.ft. Bldg. Area
  - ✓ ESPC Phase II: Apr07, 4.3M-kWh/yr.savings, 2.7M-sq.ft. Bldg. Area
  - ✓ LED Signals: Nov07, 5.7M-kWh/yr.savings, City-wide System
  - ✓ ESPC Phase III: Sep08, 8.4M-kWh/yr.savings, same facilities as Phase II
  - ✓ ESPC Phase IV: Apr10, 9.8M-kWh/yr.savings, 1.4M-sq.ft. Bldg. Area
- Projects In-Progress (through FY12)
  - ✓ ESPC Phase V/1: FY10/11, 11M-kWh/yr.savings, Water Facility Processes
  - ✓ ESPC Phase V/2: FY10/12, 19M-kWh/yr.savings, Water Facility Processes
  - ✓ ESPC Phase VI-a: FY10/11, 1.6M-kWh/yr.savings, EECBG for FWWD
  - ✓ ESPC Phase VI-b: FY10/12, 1.8M-kWh/yr.savings, EECBG for TPW
- Project Impacts (Total Program)
  - ✓ Analysis: 66M-kWh/yr. & \$5.9M/yr. savings, \$60M-cost, 10-year SPB
  - ✓ Reduction: 44k-tons/yr.GHG-e, or 3.9k-Homes/yr., or 8.1k-Vehicles/yr.



## Energy Conservation Program

### Scope: Project Facilities

- ESPC Phase I: TPW (City Hall, Public Safety Bldg., Monroe Street Annex)  
Aviation (Meacham MAP Terminal)
- ESPC Phase II/III: Events (FW Convention Center, WR Memorial Center)  
Library (Central Library)
- LED Traffic Signals: TPW (Vehicular & Pedestrian Signal Systems)
- ESPC Phase IV: ITS (Communications Bldg. C)  
TPW (10<sup>th</sup> & Taylor Garage Offices)  
Code (Administration, Animal Care & Control)  
FWPD (Admin./HQ, 4-Division HQs)  
FWFD (37-Fire Stations, Support Facilities)  
PaCS (21-Community Centers, Support Facilities)  
Library (2-Regional & 9-Branch Libraries)
- ESPC Phase V/1&2: FWWD (Water Reclamation Facility - Process Bldgs.)
- ESPC Phase VI-a: FWWD (Water Reclamation Facility - Admin. Bldgs. & Site)
- ESPC Phase VI-b: Previous ESPC Facilities (except FWWD) & Nature Center<sup>15</sup>



## Energy Conservation Program

### Scope: Project Measures

- ESPC Phase I: Lighting, HVAC, Controls, Water Conservation
- ESPC Phase II/III: Lighting, HVAC, Controls, PF Correction
- LED Traffic Signals: Vehicular Lamps, Pedestrian Signals
- ESPC Phase IV: Lighting, HVAC, Controls, Water Conservation, PF Correction
- ESPC Phase V/1&2: Aeration Diffusers, Turbine Waste-Heat Recovery, Anaerobic  
Co-Digestion, Digester Mixing, SCADA System, Aeration  
Anoxic Zones, Aeration Control, Pumps & Motors
- ESPC Phase VI-a: Lighting, HVAC, Power Factor Correction
- ESPC Phase VI-b: GHG Inventory, Facility Benchmarking, Sustainability Action  
Plan, EE Ops. Technician, *Revolving Loan Fund*, *BRIT*  
*Lighting*, LED Lighting, High-Performance Bldgs., Traffic  
Synchronization, Bicycle Commuting, Solar HW & PV-Power



## Energy Conservation Program Other Working Initiatives

- *Conservation Reserve Account (Utility Incentives)*
- *Administrative Regulations (i.e. Air Temperature Regulation, AR-F1)*
- *Municipal Energy Management Plan (MEMP)*
- *Leadership in Energy & Environmental Design (LEED®)*
- *Performance Benchmarking (Energy Star Portfolio Manager)*
- *Retro-/Continuous Commissioning (i.e. TAMU/ESL Program)*
- *Conservation Awareness Program (CAP)*
- *Purchasing Guidelines (e.g. Energy Star, WaterSense)*
- *GHG/Carbon Foot-printing (Facilities, Vehicles, & Processes)*
- *Enterprise Funds (Water, Muni.Golf, Aviation, Muni.Parking, Solid Waste)*
- *Internal Service Funds (Equipment Services, Information Systems)*

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## Energy Conservation Program Pictorial Scope of Work



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## Energy Conservation Program Project Approvals & Projections

Resource Conservation Program	Project Approval		Project Projections		
	Mayor & Council Communication (M&C)		Construction Cost	First Year Savings	Simple Payback
Project Name	Date	Ref. No.	\$	\$/Year	No. Years
ESPC Phase I	02-Sep-03	C-19739	\$ 3,063,090	\$ 397,247	7.7
ESPC Phase II	07-Feb-06	C-21289	\$ 2,395,659	\$ 342,854	7.0
ESPC Phase III	26-Sep-06	C-21737	\$ 5,198,937	\$ 711,324	7.3
LED Traffic Signals	17-Apr-07	C-22063	\$ 1,959,678	\$ 536,624	3.7
ESPC Phase IV	17-Jun-08	C-22868	\$ 9,248,307	\$ 944,814	9.8
ESPC Phase V, Sec.1	02-Feb-10	C-24070	\$ 13,577,350	\$ 949,275	14
ESPC Phase V, Sec.2	20-Jul-10	C-24360	\$ 17,889,397	\$ 1,643,221	11
ESPC Phase VI, Part A	17-Aug-10	C-24406	\$ 1,815,526	\$ 211,387	8.6
ESPC Phase VI, Part B	25-Jan-11	C-24718	\$ 3,363,841	\$ 173,793	19
<b>Totals</b>	<b>FY01 - FY11</b>	<b>Various</b>	<b>\$ 58,511,785</b>	<b>\$ 5,910,539</b>	<b>9.9</b>

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## Energy Conservation Program Project Funding & Financials

Resource Conservation Program	Cash Flow Financials				
	Project Funding Source	Finance &/or Services Term	Interest Rate(s)	Compound Payback	Return On Investment
Project Name	Type	No. Years	%	No. Years	%ROI
ESPC Phase I	State Loan, Competitive Lease	10	3.0% & 4.725%	8.9	7.7%
ESPC Phase II	State Loan Amendment	10	3.00%	9.2	8.5%
ESPC Phase III	State Loan	10	3.00%	8.9	12%
LED Traffic Signals	Competitive Lease	4	3.68%	3.5	15%
ESPC Phase IV	Competitive Lease	15	4.48%	15	0%
ESPC Phase V, Sec.1	Water Fund Reserves	13	0.00%	1.1	1069%
ESPC Phase V, Sec.2	Competitive Lease, Water Fund Res.	12	3.69% & 0.00%	10	16%
ESPC Phase VI, Part A	Federal Grant	9	0.00%	0.5	1856%
ESPC Phase VI, Part B	Federal Grant, City Fund Reserves	18	0.00%	TBD	TBD
<b>Totals</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>~8.1</b>	<b>~40%</b>

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## Energy Conservation Program Performance: Projects & Program

Resource Conservation Program	Project Performance				
	Guarantee Start Date	Current Guarantee	Guarantee To-Date	Actual To-Date	Difference
Project Name	mo-yr	Year/Quarter	Guarantee \$	Actual \$	Delta \$
ESPC Phase I	Oct-04	6 / 4 <sup>th</sup>	\$ 2,089,923	\$ 2,310,748	\$ 125,129
ESPC Phase II	Aug-08	2 / 4 <sup>th</sup>	\$ 2,110,780	\$ 3,690,101	\$ 1,579,321
ESPC Phase III					
ESPC Phase IV	Apr-10	Construction	\$ 415,740	\$ 392,728	\$ (23,012)
ESPC Phase V, Sec.1	Jan-12	Construction	TBD	TBD	TBD
ESPC Phase V, Sec.2	May-12	Construction	TBD	TBD	TBD
ESPC Phase VI, Part A	Sep-12	Construction	TBD	TBD	TBD
ESPC Phase VI, Part B	Sep-12	Construction	TBD	TBD	TBD
<b>Totals</b>	<b>NA</b>	<b>NA</b>	<b>\$ 4,616,443</b>	<b>\$ 6,393,577</b>	<b>\$ 1,777,134</b>

**NOTE:** Project Performance for the *LED Traffic Signal* project is not guaranteed; it is estimated that there is an additional \$2M in Actual To-Date Energy Operations and Maintenance Savings.

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## Recent Program Developments Movement toward "Sustainability"...

- City Sustainability & Green Building Task Force (Environmental Mgmt. Dept.)
  - ✓ 10Jul07 Mayor & Council Approve Resolution No.3501-07-2007
  - ✓ Membership included "Dev't Community, Construction Industry, Building Operations, Neighborhood, Local Green Bldg. Experts, & Municipal" Reps.
- U.S. Conference of Mayors' Climate Protection Agreement
  - ✓ 25Sep07 Mayor & Council Approve Resolution No.3535-09-2007
  - ✓ 50%-Fossil Fuel Reduction by 2010, Carbon-Neutral by 2030
- AIA's Sustainable Design Assessment Team (SDAT 2008)
  - ✓ 14Oct08 Mayor & Council Approve Communication No.C-23122
  - ✓ <http://www.aia.org/aiaucmp/groups/aia/documents/pdf/aiab080253.pdf>
- City Sustainable Development Task Force (Planning & Development Dept.)
  - ✓ 13Jan09 Mayor & Council Approve Resolution No.3706-11-2009
  - ✓ Membership includes "Public Agencies, Dev't Professionals, Business & Neighborhood Organizations" Representation
- U.S. DOE's Community Energy Strategic Planning Academy (CESPA 2011)
  - ✓ 21Jul11 Notice of Selection into this DOE's *Technical Assistance Program* (TAP)
  - ✓ DOE/EERE Program Administered by *National Renewable Energy Lab* (NREL)



## EECBG Program Development DOE Approved EECBG Activities (\$6.7M)

- 1a. Planning & Strategy – City-wide Greenhouse Gas Inventory (\$84k)
- 1b. Planning & Strategy – City Facility Benchmarking (\$193k)
- 1c. Planning & Strategy – City Sustainability Action Plan (\$95k)
2. Facility EE Operations Improvement – City Building Efficiency Specialist (\$180k)
3. Efficiency Incentive – City Revolving Loan Fund (\$477k)
- 4a. Lighting Improvement – BRIT Facility EE/RE Parking Lot Lighting (\$143k)
- 4b. Lighting Improvement – City Facility EE/RE Parking Lots & Garage Ltg. (\$919k)
5. High-Performance Building – “LEED® Greening” of Public Events Facilities (\$420k)
6. Water Utility Improvement – Water Reclamation Facility Building Systems (\$1.8M)
7. Transportation Improvement – City Traffic Synchronization Pilots (\$762k)
8. Transportation Improvement – City Bicycle Commuting Pilots (\$381k)
9. Renewable Energy – City Facility Solar Water-Heating & PV-Power Pilots (\$716k)
10. Administration – EECBG Contract Compliance & Conservation Specialists (\$551k)

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## EECBG Program Structure City Project Management

City Department	Department Division/Group	EECBG Activity	City Project Manager	City PM Staff Title
Transportation & Public Works	Facilities Management	EECBG Administration	Carol A. Phillips	Senior Contract Compliance Specialist
		Facility Benchmarking	James H. Masters, CEM®	Conservation Specialist
		Bldg. Efficiency Specialist		
		Light-Emitting Diode Lighting		
		High-Performance Buildings		
	Solar Hot-Water & PV-Power			
	Street & Traffic Services	Traffic Signal Synchronization	J. Mark Mathis, P.E.	Engineering Manager
Environmental Services	Green House Gas Inventory	Clarence W. Reed	Environmental Program Manager	
	<i>Revolving Loan Fund</i>	<i>Michael A. Gange</i>	<i>Assistant Director</i>	
Fort Worth Water (FWWD)	Planning & Fiscal Services	Water Utility Building Systems	Madelene L. Rafalko, P.E.	Senior Professional Engineer
Planning & Development	Development Services	Bicycle Commuting	Julia M. McCleary	Senior Planner
	Planning / Platting	Sustainability Action Plan	Allison M. Gray	Planning Manager

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## EECBG Project Activities ESPC Projects (Under Contract)

- Utilizing ESPC for 6- of 12-Approved EECBG Activities
  - ✓ Energy Savings 3.4M-kWh/year
  - ✓ Cost Avoidance \$ 385k/year
  - ✓ Project Cost \$ 5.18M
  - ✓ Simple Payback 13.4-years
  
- ESPC Project Benefits to both the City & the DOE
  - ✓ Faster Implementation (Existing Active ESPC)
  - ✓ Turn-key Project (Development, Construction, Performance)
  - ✓ Single Point-of-Contact (TPW/Facilities Management Group)
  - ✓ Guaranteed Performance (Technical & Financial)

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## EECBG Project Activities ESPC Project w/ FWWD

- ESPC Phase VI, Part A
  - ✓ Facility Village Creek Water Reclamation Facility (Enterprise Fund)
  - ✓ Scope 1-EECBG Activity (Energy Efficiency Retrofits)
    - Water Utility Bldg. Systems (Lighting, HVAC, & Power Factor Correction)
  - ✓ Approval August 2010 (ESPC Amendment No.6)
  - ✓ Completion planned for 2011 (*Performance Period* follows through FY20)
  - ✓ Analysis Savings of 1.6M-kWh/yr.; \$211k/yr. at \$1.8M-cost for a 8.6-yr. Simple Payback (SPB) – Utility Incentive NA
  - ✓ Reduction 1.0k-tons/yr.GHG-e or 91-Homes/yr. or 188-Vehicles/yr.
  - ✓ Funding U.S.DOE/EECBG (ARRA.2009-funded Grant)

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## EECBG Project Activities ESPC Project w/ TPW Dept.

- ESPC Phase VI, Part B
  - ✓ Facilities Select *General Fund* Facilities
  - ✓ Scope 5-EECBG Activities (Tech.Cons.Svcs., Bldgs. & Facilities, EE.Retrofits)
    - ❑ Facilities Benchmarking (98-*Energy Star Portfolio Manager*)
    - ❑ EE Operations Technician (98-*Building Efficiency Specialist*)
    - ❑ LED Lighting (25-Parking Lots & 1-Parking Garage)
    - ❑ High-Performance Buildings (*FW Convention Center & Central Library*)
    - ❑ Solar Renewable Energy (3-Water Heating & 5-PhotoVoltaic Power)
  - ✓ Approval January 2011 (ESPC Amendment No.7)
  - ✓ Completion planned for 2012 (*Performance Period* follows through FY27)
  - ✓ Analysis Savings of 1.8M-kWh/yr.; \$174k/yr. at \$3.4M-cost for a 19-yr. Simple Payback (SPB) w/o ~\$250k-UtilityIncentive
  - ✓ Reduction 1.2k-tons/yr.GHG-e or 110-Homes/yr. or 228-Vehicles/yr.
  - ✓ Funding *U.S.DOE/EECBG* (ARRA.2009-funded Grant)

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## Other Current ESPC Projects FWWD Projects

- ESPC Phase V, Sections 1 & 2
  - ✓ Facility Village Creek Water Reclamation Facility
  - ✓ Scope Plant Process Infrastructure Improvements
    - ❑ Aeration Basins (Anoxic Zones, Diffusers, Dissolved Oxygen (DO) Controls)
    - ❑ Anaerobic Digesters (Mixing, Co-Digestion)
    - ❑ Bio-Gas Turbines (Heat Recovery Steam Generation (HRSG))
    - ❑ Aeration Blowers (Electricity- to Steam-Drive Conversion)
    - ❑ Pumps & Motors (Primary Effluent System)
    - ❑ Control System (Supervisory Control and Data Acquisition (SCADA))
  - ✓ Approvals February & July 2010 (ESPC Amendment Nos.4 & 5)
  - ✓ Completion planned for 2012 (*Performance Period* follows through FY23)
  - ✓ Analysis Savings of 30M-kWh/yr.; \$2.59M/yr. at \$31.5M-cost for a 12-yr. Simple Payback (SPB) w/o ~\$1.0M-UtilityIncentive
  - ✓ Reduction 19k-tons/yr.GHG-e or 1.7k-Homes/yr. or 3.6k-Vehicles/yr.
  - ✓ Funding Water Fund Reserves & Competitive MELP

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## Energy Conservation Program

### Next Steps, Discussion &...

- Shorter-Term Priorities (Through 2011)
  1. Achieve 50%-Spend of EECBG Funds (Summer)
  2. Finalize EECBG Fund Allocation of (Autumn)
  3. Participate in CESP Academy with DOE/TAP/NREL
- Longer-Term Priorities (2012 Forward)
  1. Track Development, Construction, & Performance
  2. Fund & Manage Conservation Reserve Account
  3. Consider New ESCo/ESPC Request for Qualifications
- Further Information/Contact

Samuel C. Steele, *Administrator of Sustainability Programs*  
(817.392.1276, sam.steele@fortworthgov.org)

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## Sustainability Programming

### Future Funding Opportunities

- 3rd-Party Grants (~8%)
  1. Federal Government (DOE, EPA, FTA, HUD...)
  2. State Government (SECO, TWDB State Revolving Fund...?)
- City Budgets (~26%)
  1. General Fund (Operating Budget – Annual Cycle)
  2. Enterprise Fund (Water, Aviation, Muni. Golf, Muni. Parking)
  3. Internal Service Fund (Equipment Services, IT Solutions)
  4. Special Trust Fund (Conservation Reserve Account...)
- Utility Incentives (~1%)
  1. Local Distribution Company/Transmission-Distribution Service Provider
- 3rd-Party Finance (~66%)
  1. Municipal or Other Bond (CIP Budget Cycle, CREB, QECB...)
  2. Specialty or Other Loan (SECO Loan Saving Taxes & Resources – LoanSTAR...)
  3. Equipment Lease (Municipal Equip. Lease-Purchase Agreement – MELP...)

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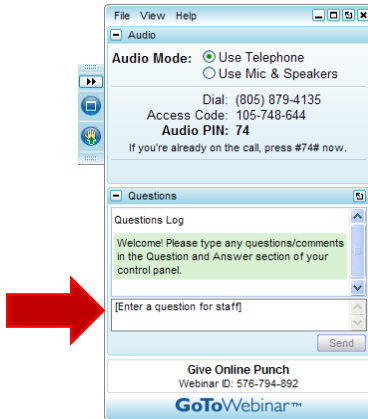


# Questions?

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## Upcoming Webinars

*Climate Communities Members Only*

**Aug. 4:** DOT TIGER III Grant Program

**Aug. 11:** HUD Sustainable Communities Challenge Grant Program



**Energy Block  
Grants Work!**  
CAMPAIGN TO SAVE EECBG



SUSTAINABLE CITY  
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- Get strategic guidance on grant opportunities
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