



CITY OF LAKE WORTH

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AGENDA
CITY OF LAKE WORTH
CITY COMMISSION WORK SESSION
TUESDAY, MAY 12, 2015 - 6:00 PM

1. **ROLL CALL:**
2. **PLEDGE OF ALLEGIANCE:** Led by Commissioner Ryan Maier
3. **UPDATES/FUTURE ACTION/DIRECTION:**
 - A. Siemens performance contracting project update
4. **ADJOURNMENT:**

If a person decides to appeal any decision made by the board, agency or commission with respect to any matter considered at such meeting or hearing, he or she will need a record of the proceedings, and that, for such purpose, he or she may need to ensure that a verbatim record of the proceedings is made, which record includes the testimony and evidence upon which the appeal is to be based. (F.S. 286.0105)

NOTE: ONE OR MORE MEMBERS OF ANY BOARD, AUTHORITY OR COMMISSION MAY ATTEND AND SPEAK AT ANY MEETING OF ANOTHER CITY BOARD, AUTHORITY OR COMMISSION.



SIEMENS



City Hall

Building Performance & Sustainability

May 12 2015

City of Lake Worth

Performance Contracting Project Update

Agenda



§ **City's Objectives**

§ Project Scope

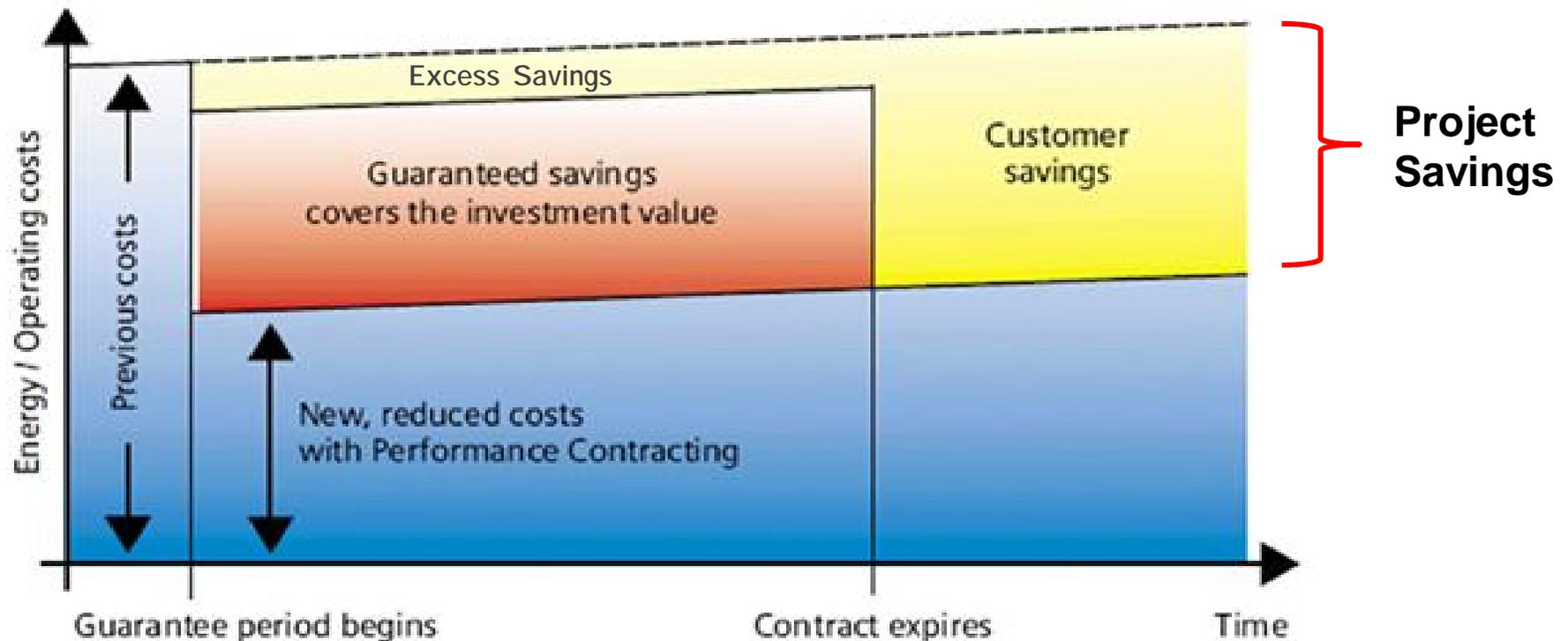
§ Cash Flows

§ Next Steps

§ Questions

City's Objectives – Financial Benefits

- § Capital Projects Funded from Existing Expenditures
- § Compliments Future Infrastructure Projects
- § Improved Operational Efficiencies without Additional Tax Dollars



City's Objectives – Technical Benefits

§ **Access to Private Sector Expertise & Resources**

§ **Improved Safety for Residents, Businesses & Law Enforcement**

§ LED Streetlights

§ **Improved Utility Customer Service**

§ Accurate meter reading, leak alerts, conservation, etc.

§ **Electric Power Generation Diversity**

§ Renewable Energy – Solar

City's Objectives – Community Benefits

§ **Environmental Leadership in South Florida**

- § Renewable Energy
- § LED Streetlights
- § Dark Skies Compliance
- § Conservation of Natural Resources & Reduction of Greenhouse Gases

§ **Attractive to New Businesses**

- § Updated Infrastructure
- § Eliminating inefficiencies; investing in Leading-edge Technologies
- § Environmental Stewards

§ **Support the Commission & City Manager's Vision**

- § Building the City of Lake Worth "Brand"

Florida's ESPC Statute 489.145

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Go to Bill: Bill # 2015 Find Statutes: 2014 Search Term Chapter Search Site

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Home > Laws > 2012 Florida Statutes > Title XXXII > Chapter 489 > Section 145

2012 Florida Statutes

Title XXXII REGULATION OF PROFESSIONS AND OCCUPATIONS	Chapter 489 CONTRACTING Entire Chapter	SECTION 145 Guaranteed energy, water, and wastewater performance savings contracting.
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Quick Links

- [Preface to Florida Statutes \(2014\)](#) [PDF]
- [Table of Section Changes \(2014\)](#) [PDF]
- [General Laws Conversion Table \(2014\)](#) [PDF]
- [Table Tracing Session Laws to Florida Statutes](#) [PDF]
- [Statute Search Tips](#)
- [Archived Statutes \(Prior to 2010\)](#)

489.145 Guaranteed energy, water, and wastewater performance savings contracting.—

(1) SHORT TITLE.—This section may be cited as the “Guaranteed Energy, Water, and Wastewater Performance Savings Contracting Act.”

(2) LEGISLATIVE FINDINGS.—The Legislature finds that investment in energy, water, and wastewater efficiency and conservation measures in agency facilities can reduce the amount of energy and water consumed and wastewater produced and produce immediate and long-term savings. It is the policy of this state to encourage each agency to invest in energy, water, and wastewater efficiency and conservation measures to minimize energy and water consumption and wastewater production and maximize energy, water, and wastewater savings. It is further the policy of this state to encourage agencies to reinvest any savings resulting from energy, water, and wastewater efficiency and conservation measures in additional energy, water, and wastewater efficiency and conservation measures.

(3) DEFINITIONS.—As used in this section, the term:

(a) “Agency” means the state, a municipality, or a political subdivision.

(b) “Energy, water, and wastewater efficiency and conservation measure” means a training program incidental to the contract, facility alteration, or equipment purchase to be used in new construction, including an addition to existing facilities or infrastructure, which reduces energy or water consumption, wastewater production, or energy-related operating costs and includes, but is not limited to:

1. Insulation of the facility structure and systems within the facility.
2. Storm windows and doors, caulking or weatherstripping, multiglazed windows and doors, heat-absorbing, or heat-reflective, glazed and coated window and door systems, additional glazing, reductions in glass area, and other window and door system modifications that reduce energy consumption.
3. Automatic energy control systems.
4. Heating, ventilating, or air-conditioning system modifications or replacements.
5. Replacement or modifications of lighting fixtures to increase the energy efficiency of the lighting system, which, at a minimum, must conform to the applicable state or local building code.
6. Energy recovery systems.
7. Cogeneration systems that produce steam or forms of energy such as heat, as well as electricity, for use primarily within a facility or complex of facilities.
8. Energy conservation measures that reduce British thermal units (Btu), kilowatts (kW), or kilowatt hours (kWh) consumed or provide long-term operating cost reductions.
9. Renewable energy systems, such as solar, biomass, or wind systems.

Florida's ESPC Statute 489.145

Florida Statute 489.145

§ The Legislature finds that investments in energy, water, and wastewater efficiency and conservation measures in agency facilities can reduce the amount of energy and water consumed and wastewater produced and produce immediate and long-term savings.

§ Requirements of the Law

- § ***Written guarantee*** that annual costs savings will meet or exceed the amortized cost of conservation measures.
- § ***The Company is liable for any shortfalls in savings***
- § ***Contract must stipulate that it does not constitute a debt, liability, or obligation...***
- § Annual reconciliation of the guaranteed savings.
- § Agreements may not exceed 20 years
- § Performed by state qualified Energy Services Company (Siemens)

U.S. Department of Energy Webcast: “Making the most of ESPCs”

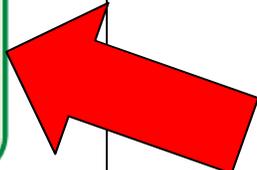
ESPCs

U.S. DEPARTMENT OF
ENERGY | Energy Efficiency &
Renewable Energy

“Appropriations should be requested in annual budget requests and prioritized for application in projects or measures that do not generate savings sufficient to support private sector financing or for application as cost share to ESPCs/UESCs so that larger, more comprehensive projects can be undertaken.”

- OMB Instructions to E.O. 13423

In other words: Exhaust private financing opportunities before using scarce appropriated funds; reserve appropriated funds for things that don't self-fund.

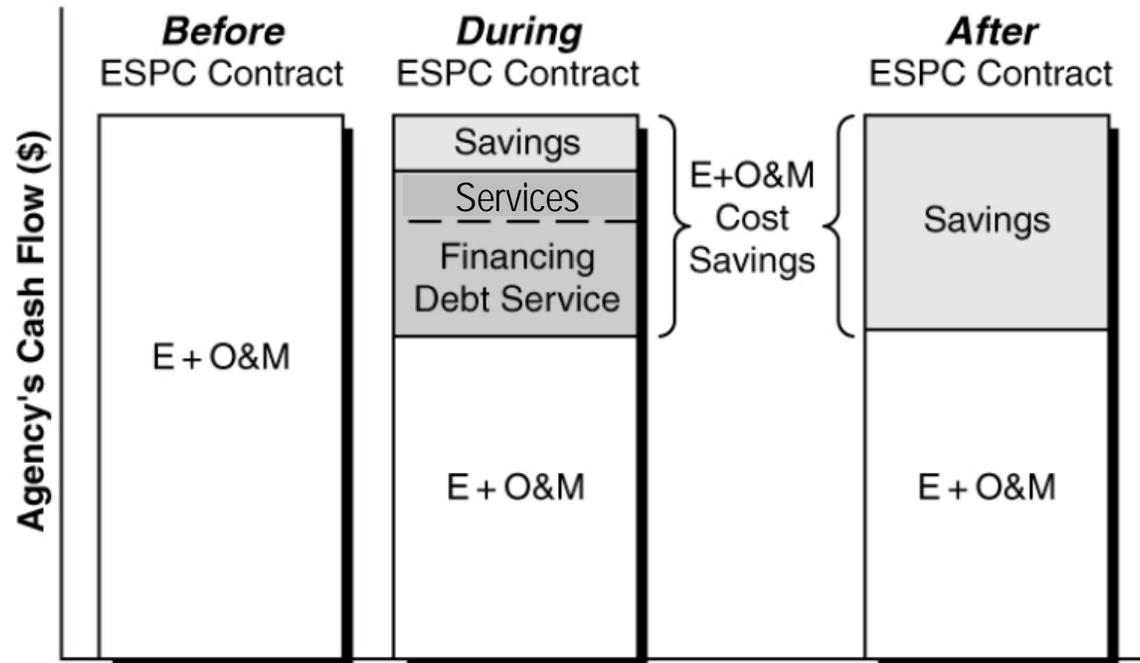
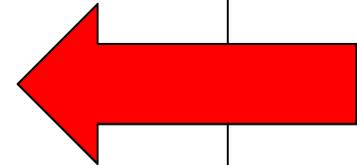


U.S. Department of Energy Webcast: "Making the most of ESPCs"

Reallocate Government's Utility Bill

U.S. DEPARTMENT OF ENERGY | Energy Efficiency & Renewable Energy

ü Stop paying for waste & pollution
ü Start paying for efficiency!



Understanding Performance Contracting

Savings Realized through ESPCs

U.S. DEPARTMENT OF
ENERGY | Energy Efficiency &
Renewable Energy

Internal Audits Show Projects *Exceeding* Guaranteed Cost Savings

- **Reported savings** average 107% of guaranteed savings
- **Based on a random sample** of 22 projects analyzed in 2007, cost savings based on actual rather than contract utility rates were 110% of reported savings
- **Assuming energy savings** are as reported, actual cost savings are about $(1.08 \times 1.10) = 119\%$ of guaranteed savings on average

**NOT included in
Cashflows**

Agenda



- § City's Objectives
- § **Project Scope**
- § Cash Flows
- § Next Steps
- § Questions

Facility Upgrades

HVAC Upgrades:

- § Department of Sustainability
- § 49 tons of cooling being replaced
- § 1991 & 1999 equipment

Interior & Exterior Lighting Upgrades

- § 12 Buildings
- § Upgrading approximately 2,000 fixtures
- § New LED, T8 and CFL technology

Water Conservation Upgrades

- § 130 fixtures to be installed at 12 Buildings
- § 6 Ice Machines
- § Faucets, Food Service Sinks, Urinals, Showers, other

Occupancy Sensors

- § 222 Light Sensors to be installed at 10 Buildings
- § Vending Machine sensors at 3 Buildings



LED Streetlights

- § **Converting over 4,000 Streetlights to LED**
- § **Color Temperature**
 - § **2700K Residential Areas**
 - § **4000K FDOT Roads**
- § **60% Reduced Energy Consumption**
- § **100,000 hour life (over 20 years)**
- § **Dark Skies Compliant**
- § **Ease of Maintenance & Inventory**
- § **Uniformity of Lighting Levels**
- § **Sample Lights to be Installed**



Renewable Energy (Solar)

- § **2 MW Solar Electric System**
- § **Leader in Renewable Energy**
- § **Located at City's Landfill**
- § **Great use of existing land**
- § **City-owned Renewable Energy**
- § **Scalable to over 10MW**
- § **Reduce Peak Demand (save \$\$)**



Advanced Metering Infrastructure (AMI)

Utility Customers



Meter Information & Data Only



Utility & Customer Service Office



Use Information & Data

AMI Enhancements

§ **Improve Operational Efficiencies**

- § Automated accurate meter reading (reduced truck rolls, fuel, labor, emissions, etc.)
- § Reduced Equipment and Maintenance Costs
- § Energy & Water loss detection (leaks, continuous flow & reverse flow)
- § Electric Meter – Remote Reconnect
- § Remote Network Diagnostics and Monitoring
- § Recover unaccounted for consumption & associated revenues
- § Reduce restoration times and Ability to trouble-shoot from the office

§ **Customer engagement**

- § Improved Customer Relationships & Enhanced Billing Accuracy
- § Efficient resolution of bill inquires (high bill complaints, etc.)
- § Access to timely and reliable usage information to consumers
- § Customer Information Portal: Education through information
- § Timely identification of customer water leaks

Customer Enhancements

§ Available Alerts

- § Daily balance
- § Low balance
- § Reconnect confirmation
- § Recharge of Pre-pay

§ Available delivery methods

- § Home, work or cell phone number
- § Email
- § Text message



Agenda



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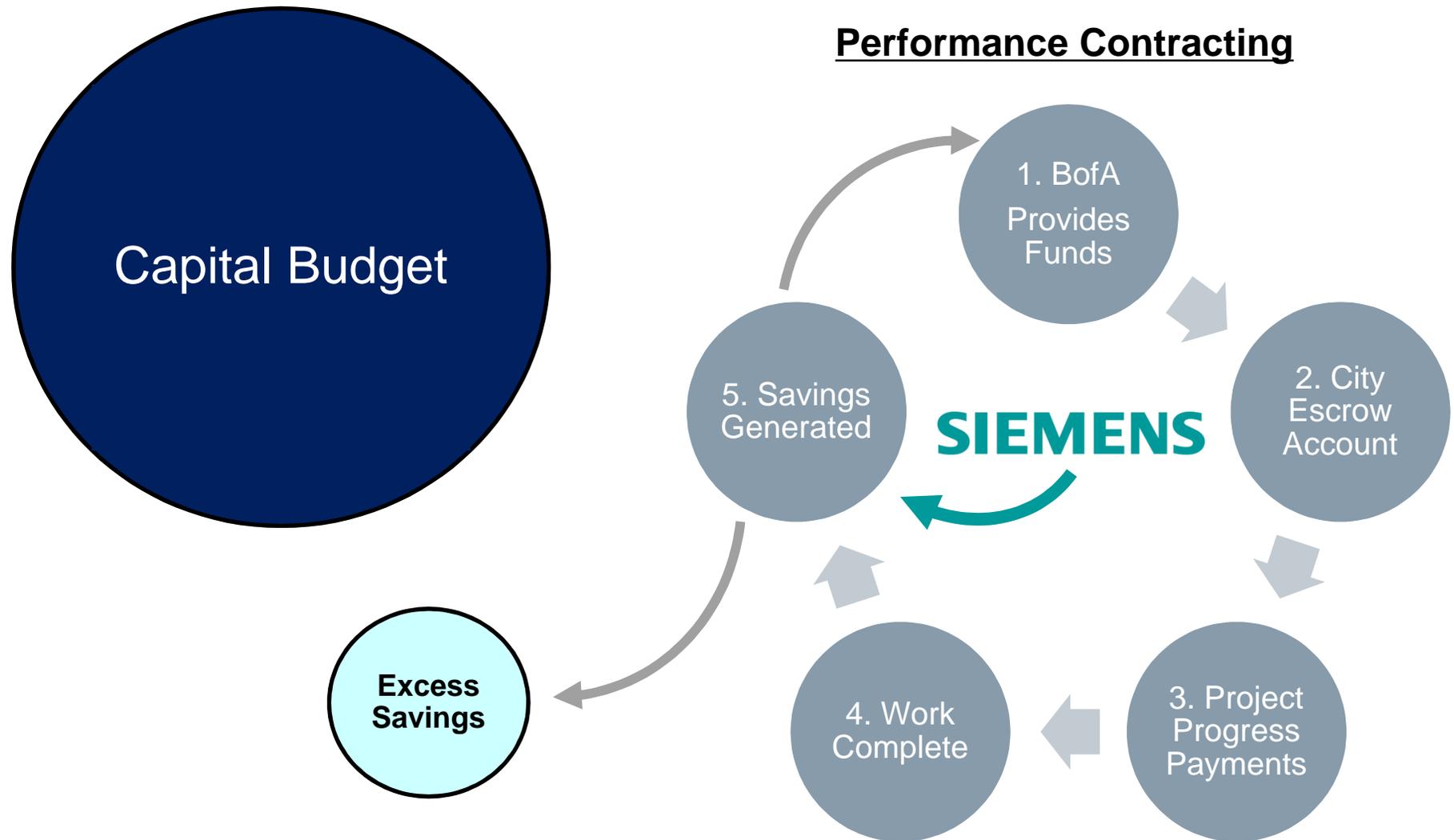
§ **Cash Flows**

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Project is Neutral to City's Capital Budget

Performance Contracting



Cash Flows – Base Case

Tax-exempt Municipal Lease Purchase

Project Improvements		Year 1 Savings	Project Cost	Simple Payback
1	Facilities	\$ 105,099	\$ 893,358	8.5
2	AMI	\$ 1,257,884	\$ 12,611,476	10.0
3	Street Lights	\$ 257,257	\$ 2,823,905	11.0
4	Solar	\$ 408,919	\$ 5,548,843	13.6
SUB - TOTALS ==>		\$ 2,029,159	\$ 21,877,582	10.8
Streetlight Owners Contingency		TBD	\$ 1,000,000	TBD*
PROJECT TOTALS ==>		TBD	\$ 22,877,582	11.3**

* Simple Payback for Owners Contingency will be driven by the total energy and O&M savings created by these funds.

** This is the "worst case scenario" if ALL Contingency used & ZERO energy and O&M savings are generated by Owners Contingency

City Facilities

City of Lake Worth Projected Cash Flows

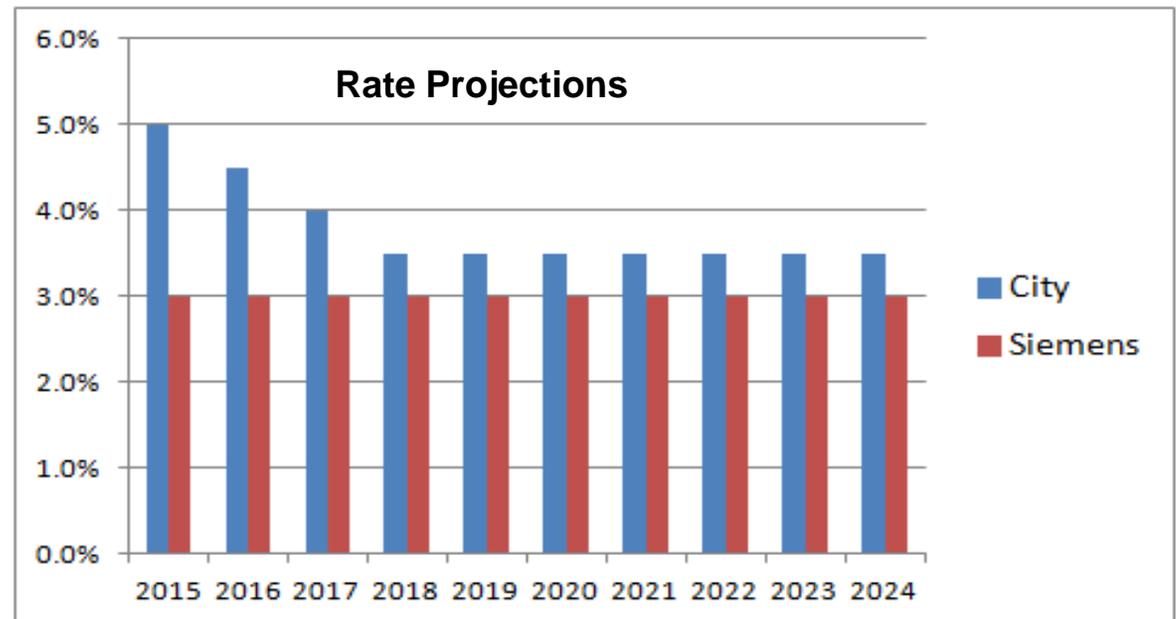
Year	1	5	10	15	20	Total
Annual Gross Savings	\$ 2,029,158	\$ 2,318,125	\$ 2,573,738	\$ 2,779,569	\$ 2,578,389	\$ 49,013,552
Annual Gross Costs	\$ 1,818,591	\$ 2,107,558	\$ 2,363,170	\$ 2,569,001	\$ -	\$ 33,626,696
Annual Net Cash Flow	\$ 210,566	\$ 210,567	\$ 210,568	\$ 210,568	\$ 2,578,389	\$ 15,386,856
15 Year Culmulative Savings ==>				\$ 3,158,490		

Cashflow Period	15
Project Cost	\$ 22,964,694
Down Payment	\$ 470,000
Amount Financed	\$ 22,494,694

Additional Savings & Revenues

Financial Benefits NOT Included in Cash Flows

- § Savings generated during Construction
- § Commercial Water Meter Revenues (meters > 2")
- § Early Deployment of Water Meters (additional \$3.2M - In Utility Budget)
- § Savings tied to Streetlight Contingency
- § Working for lower interest rate (cash flows @ 3%)
- § Projected Rate increases



Cash Flows – Base Case

Tax-exempt Municipal Lease Purchase

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SUB - TOTALS ==>		\$ 2,029,159	\$ 21,877,582	10.8
City's Streetlight Contingency		TBD	\$ 1,000,000	TBD*
5	CNG Development	NA	\$ 87,111	NA
PROJECT TOTALS ==>		TBD	\$ 22,964,693	11.3**

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Compressed Natural Gas (CNG) Development

§ Phase II Project

- § Audit Funded through Project's Excess Savings
- § Same Audit Process: Report to Commission & Staff for review
- § Commission workshops and follow-on Commission Action , as required

§ Approach:

- § Assess options to modify FGU Contract to provide for City-owned CNG Station
- § Quantify City's Fleet Savings
- § Seek Outside Revenue Potential (from other local governments & private industry)
- § Quantify electric revenues to City

§ Financial Benefits

- § **Offset cost – over \$600K per year**
- § Pipeline distribution revenues
- § Outside revenues (government & private)
- § New electric commercial customer
- § Reduce City's fleet costs



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§ City's Objectives

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Next Steps

§ In Progress:

- § Contract & Financing Agreements in development
- § Streetlight Samples

- § **May 12th:** **Commission Workshop**
- § **June 2nd:** **Commission Action**
- § **June/July:** **Groundbreaking Ceremony & Construction Kick-off**
- § **July:** **Begin Construction (savings begin)**
- § **Oct 2016:** **Construction Complete (100% Savings)**

