

WORKSHOP

Energy Efficiency & Sustainability

Fresno City Council Presentation

September 26, 2019



ENERGY EFFICIENCY and the path to sustainability



- ☐ Division Goals and Vision
- ☐ Reducing usage as the first step
- ☐ The cost to generate power
- ☐ Benchmarking energy usage
- ☐ Analyzing our Energy Bills – 5yr savings \$5.3m
- ☐ Industry & Stakeholder Partnerships



Current Efficiency Success

- ❑ LED Streetlight Conversion:
 - 9.9 million kWh hours annual savings
 - \$1.6 million annual savings on electric bill
- ❑ Urban Water Supply System:
 - 17 million kWh hours annual savings
 - \$2.8 million in annual bill savings (\$1.6 mil in PG&E Rebates)
- ❑ 3 City Parking Garage LED light retrofit:
 - 413,750 kWh hours annual savings
 - \$160,000 annual savings on electric bill (\$31,665 in PG&E Rebates)
- ❑ Fresno Yosemite International Airport – VFD Central Plant:
 - 163,472 kWh hours annual savings
 - \$39,243 in annual bill savings (\$23,000 in PG&E Incentives)
- ❑ Selland Arena & Convention Center Upgrades:
 - 975,000 kWh hours annual savings
 - \$95,000 annual savings on electric bill (\$63,000 in PG&E rebates)

\$4.7 million total annual savings on electric bill



Environmental Attributes

*What does more than
28 million annual kWh
saved really mean?*

Equivalent to
Emissions Saved



4,272

Passenger vehicles
driven for one year
(49 million miles driven)



2,409

Homes' energy use
for one year



2.2 million

Gallons of gasoline
consumed

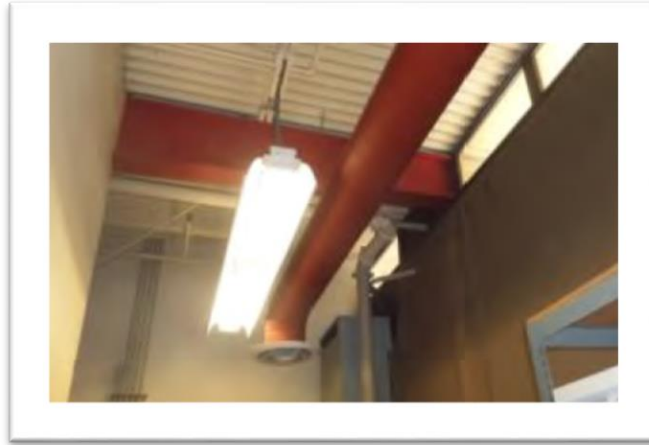


2.6 billion

Smartphones
charged

Current Status and Conditions

- Deferred Maintenance
- Fluorescent Lighting
- Individually Controlled Thermostats



- Deteriorating Roofs
- HVAC Units Past Useful Life
- Obsolete Solar Panels



Energy Efficiency Plans and Opportunities

Cost Neutrality
Performance
Guarantees

- LED Lighting Upgrades
- HVAC Upgrades
- Controls Upgrades
- Roof Replacement
- Solar Photovoltaic
- EV Charging Stations



The Path Forward

Assess

Evaluate

And Action!

- ❑ Upgrades to City Hall & MSC - 2019
- ❑ Future projects in development stage
 - ❑ Police & Fire - 2020 (Energy Efficiency Upgrades & Microgrids)
 - ❑ PARCS - 2020 (Energy Efficiency Upgrades & Watering Controls)
 - ❑ DPU - 2020 (Energy Efficiency Upgrades & Solar Generation)
- ❑ Lighting upgrades (LED), HVAC & Evaporative Cooler upgrades, Lighting & HVAC Controls, Reroofing & Weatherization, and Solar Generation
- ❑ Prepare and Issue an RFQ
- ❑ Identify best companies to implement projects
- ❑ The benefits of Energy Savings Performance Contracts
 - ❑ Cost neutral to the City
 - ❑ Requirements of guarantees for savings performance
 - ❑ Require warranties and maintenance contracts
- ❑ Upgrades mean savings of future spending on maintenance



Next Up: City Hall & MSC

- LED Lighting Upgrades (20) Buildings –Interior & Exterior
- HVAC Upgrades (5) Buildings
- (15) Units with Central Plant Upgrades
- Controls Upgrades (19) Buildings
- Roof Replacement (2) Buildings
- Deck Coating (2) Buildings
- Solar generation (2) locations



- ❑ Total Project Cost - \$5.5 million
- ❑ Total Project Savings \$10.5 million

Questions Feedback

