

City of Tucson Energy Management

A brief history and future outlook

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5/24/2017



Last Time – 5/12/2016

- Changing Utility Environment
- FY 15 City Utility Baseline
- Mayoral Push to Set Goals
- Tucson Utility Management System
- Foundation & Next Steps (will review)



City Energy Management Highlights

1995 – 2013

- Green Lights – Capture Savings for Program
- Natural Gas Purchasing
- Rate Audits
- LED Traffic Signals (Collaborative Project)
- Solar
- Internal Performance Contracting Pilot
- Many, many other projects
- Millions in annually avoided costs



3rd City Energy Manager

Dec 30, 2013 – Jason Laros

Overarching goals:

- Energy/water awareness & responsibility at all levels of the City organization
- Integrated, programmatic Energy Management
- City as self reliant as possible



Vision & Mission

Vision

An efficient City Government that harvests at least as much water and energy from local renewable resources as it consumes.

Mission

The Energy Office (EO) strives to provide City Departments with comprehensive utility and energy management best practices while promoting responsible energy and water purchasing to reduce expenditures and the City government's environmental impacts.



Three-tiered Approach

1. Plug Leaks (stop waste)
2. Build Awareness (culture change)
3. Build Self Reliance (smart investment)



The Foundation

- FY17 consolidation of General Fund utility budgets
- Developing unique Energy Performance Contract
- Building depth in Energy Office – training Utilities Specialist
- Tucson Utility Management System (TUMS)
 - Transparency
 - Tracking & Reporting
 - Audits
 - Benchmarking



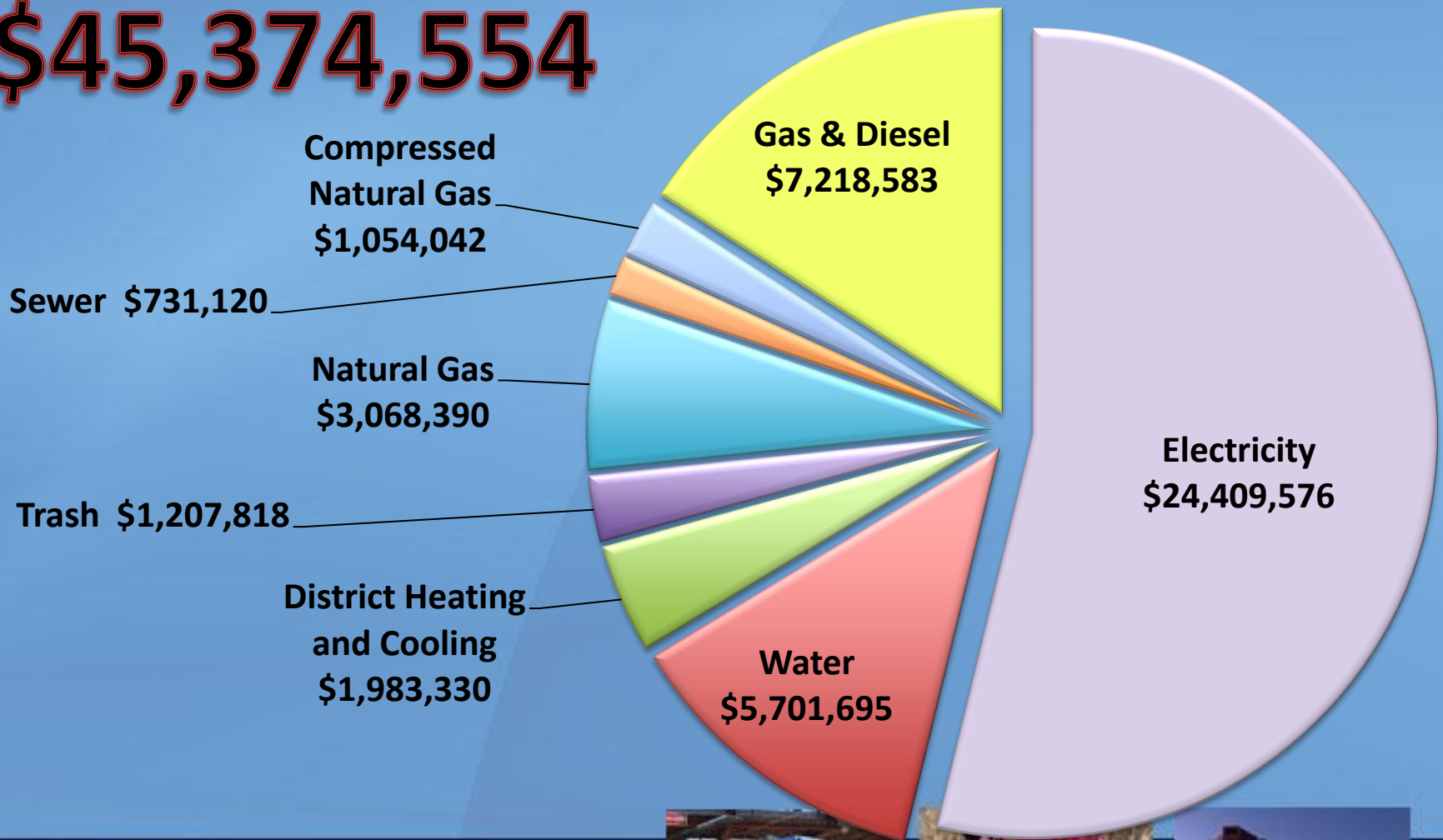
Next Steps

- Continued focus on energy and water efficiency
- Create environment:
 - where compliance is expected
 - of individual engagement
 - of mutual responsibility/accountability
 - of active monitoring – progress compared to baseline
 - where there are centralized points of contact in City departments



FY 15 Energy and Utility Expenditures:

\$45,374,554



Our Progress Towards Goals

- FY 15: \$45,500,000
- FY 16: \$42,500,000 – Down 7%
- FY17 YTD: \$33,500,000
- FY17 Crystal ball: \$39M – Down 14%

“I’d love to take the credit, but.....”

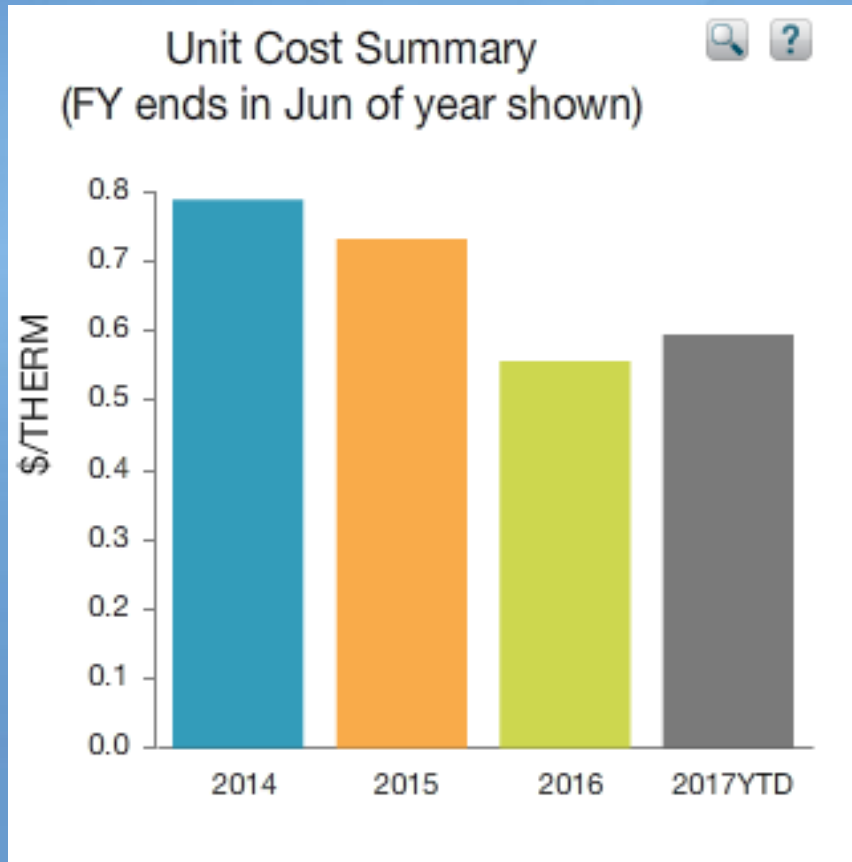


Fuel's Cheaper

- FY15 Fuel Dispensed = 2,326,994.38 gallons; departments billed \$6,184,183.34.
- FY16 Fuel Dispensed = 2,183,776.76 gallons; departments billed \$4,188,230.05.
 - 33% Reduction in Cost/Unit
- July 2016 to March 2017 Fuel Dispensed = 1,573,962.08; departments billed \$3,328,864.08.

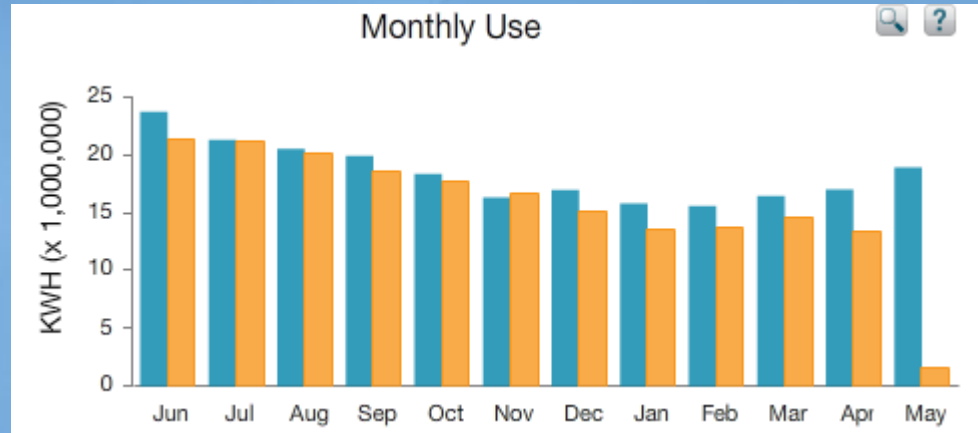


Natural Gas is Cheaper

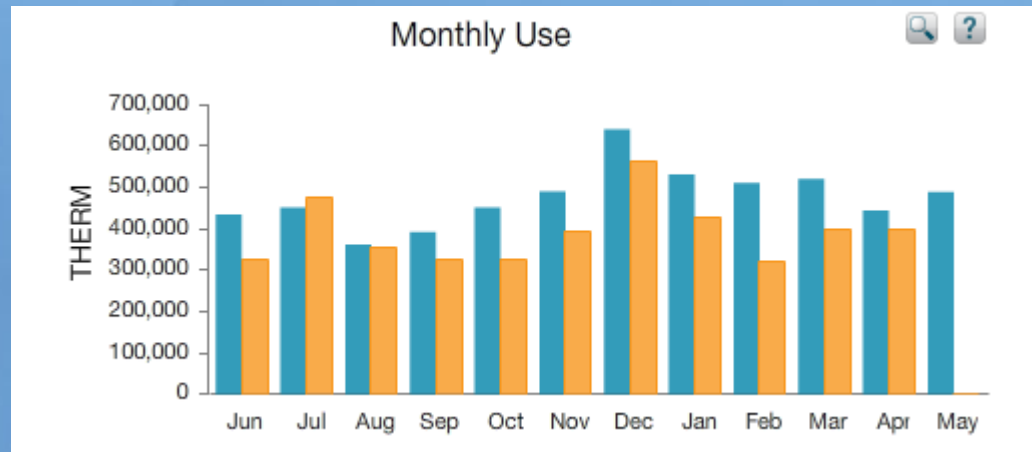
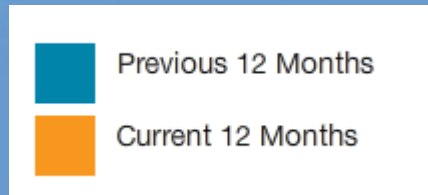


We Used Fewer Resources

- Electricity



- Natural Gas



Why?

- Shrinking Organization
- LED Streetlight Project
- Growing Awareness???
- Milder Winter



The Near and Mid-Term Future

Continue working the plan:

- Use Energy Performance Contract to replace old infrastructure
- Use Savings to Continue Reinvestment in Facilities
- Downtown District Energy
- Renewable Natural Gas (RNG)
- Smart Cities Planning

Where are we headed? (My Take)

- 2030 – 30%+ Efficiency (Electrification) and 50% Renewables
- 2050 – ***A thriving, smart (“learning”) Tucson that neither imports water nor energy***

A Self Reliant, Resilient Old Pueblo



Thank you!

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