

STATUS UPDATE: ENERGY INITIATIVES

Environmental Quality & Public Works Committee

January 24, 2017

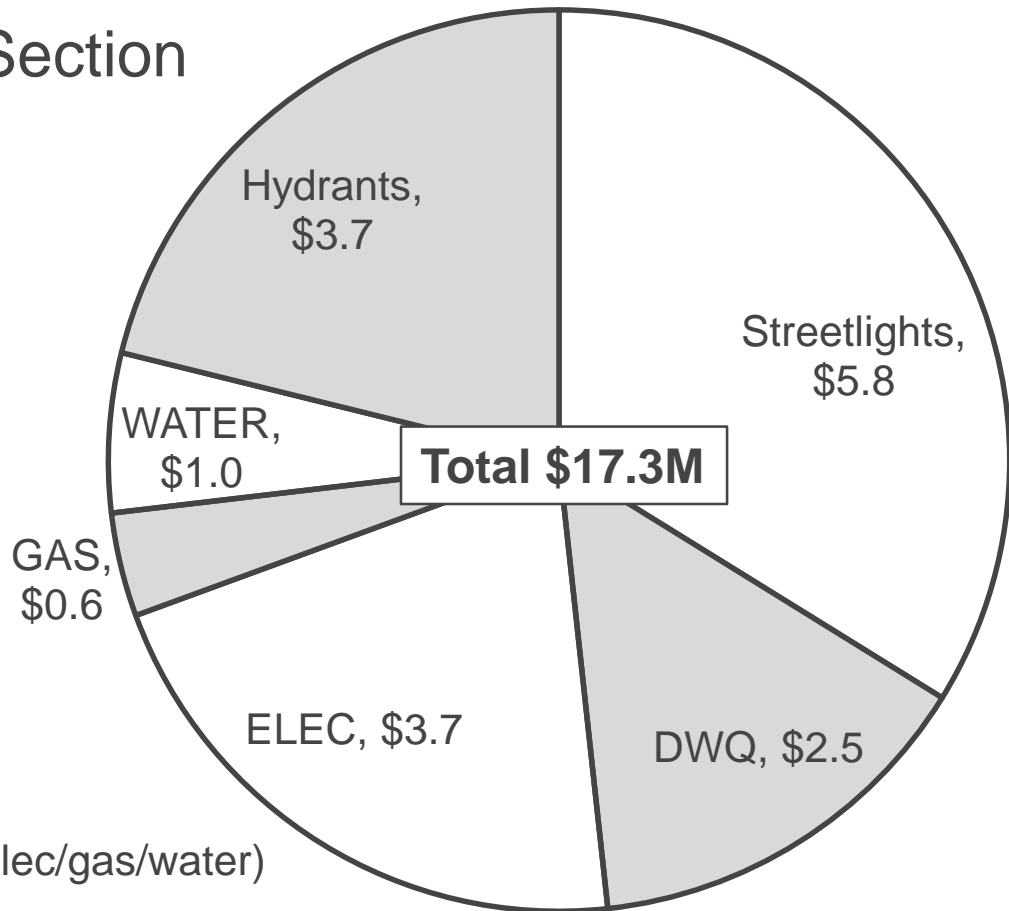


LEXINGTON



Organization

- Division of Environmental Services
- Energy Initiatives Section
- Three FTE's



FY16 Utilities (elec/gas/water)

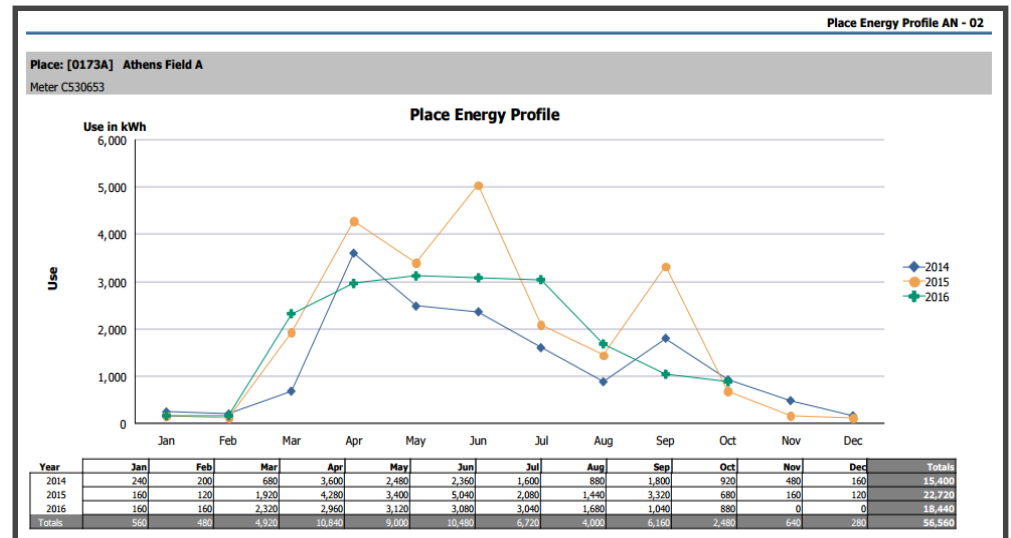


Responsibilities

- Utility Management - elec/gas/water
Outliers, rate analysis, budgets, tariffs
- Project Management
Bid spec, procurement, measure/verify
- Consultation
Building design, equipment selection, commissioning
- Building Automation Controls
Software maintenance, fault detection
- Energy Improvement Fund
Internal revolving loan for energy reductions

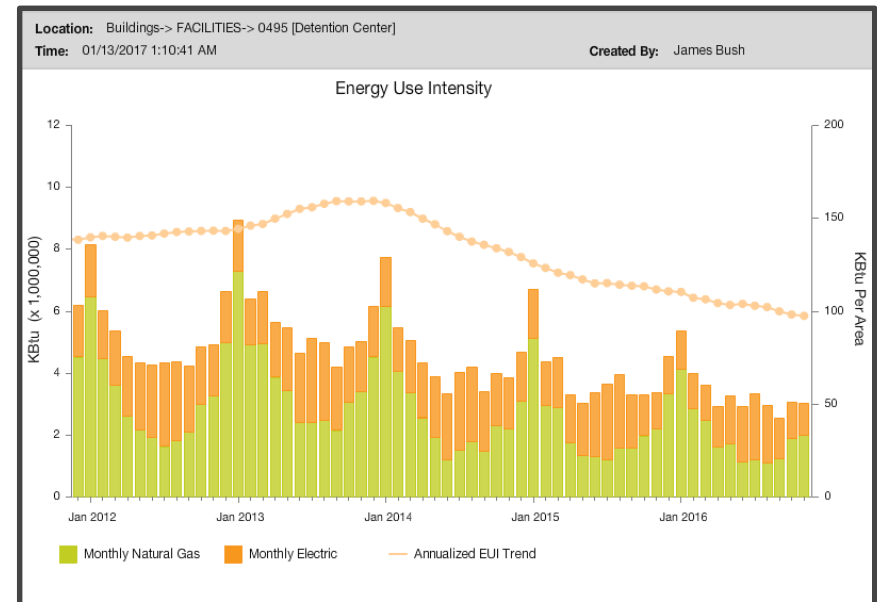
Deployment

- Monthly Energy Team meetings
(CAO Policy #39)
- Quarterly budget review meetings
- Monthly utility reports & meetings
Electronic data exchange
- Coordination w/ Divisions
Project consultation
- Committee/Council Briefings



Project Examples

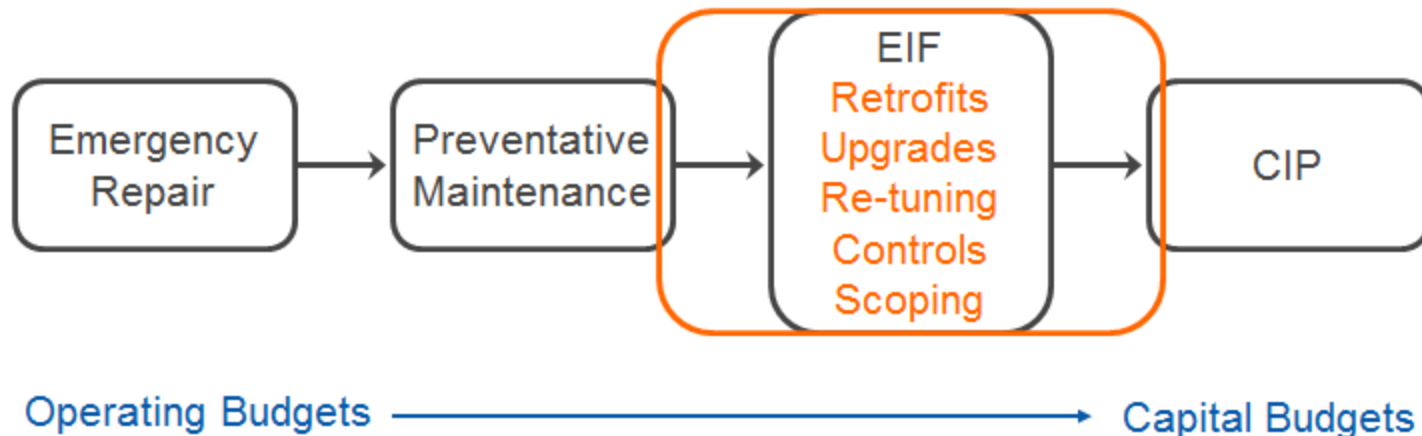
- LED Lighting Retrofits
- County Clerk HVAC Controls
- Downtown Arts Center HVAC Controls
- Detention Center ESPC
- Coroner HVAC & Lighting
- New Senior Center
- Public Safety Operations Center
- Fire Stations #2, #24





Energy Improvement Fund (EIF)

- Internal revolving loan (Res. 219-2010)
- Savings from energy management activities fund the next project
- Seed funding from “Stimulus” Recovery Act
- Fills gap between general repair/maintenance and CIP
- Focus: proactive initiatives and improvements





Key Points

- Projects reviewed by Energy Team
- Expenses approved by Council / Purchasing
- Annual allocations of verified savings
Transfers from operating → capital budgets
- 10-year limitation on savings
- “Pooled” resource by FUND number
 - GS, Urban, Sewer (active)
 - PFC, Landfill (dropped)



Funding

- Significant savings from rate analysis (“right-sizing” accounts / contracts)
- Annual savings greater than \$700,000
- Half became annual allocation of \$350,000
- Re-calculated all active accounts in 2016: Annual savings now \$1M per year
- Not including:
 - Funds 4022 (PFC) and 4121 (Landfill)
 - Savings from retrofit projects, Granvilles, bill corrections, etc.
- Bottom line: allocation ~25% of impact

Balance Sheet

- Cumulative Since FY11

Allocations	\$2,019,309
Rebates	\$66,841
SUBTOTAL	\$2,086,150
Project Expenses	(\$1,018,364)
Released Funds	(\$103,992)
BALANCE	\$963,794

EIF = Section Code 3099

Balance by FUND

General Services (1101, 1105)	\$514,852
Urban Services (1115, 1116)	\$5,860
Sanitary Sewer (4002, 4003)	\$443,082

General Services

- LED lighting retrofits
- Solar PV demonstrations
- Building Automation / Adv Metering

Balance by FUND

General Services (1101, 1105)	\$514,852
Urban Services (1115, 1116)	\$5,860
Sanitary Sewer (4002, 4003)	\$443,082

Urban Services

- (Purchase of Granville Street Lights)
- Solid Waste LED parking lot lights
- Granville LED retrofits

Balance by FUND

General Services (1101, 1105)	\$514,852
Urban Services (1115, 1116)	\$5,860
Sanitary Sewer (4002, 4003)	\$443,082

Sanitary Sewers

- Biogas Utilization Study
- Pump Station Power Factor Correction



Lessons & Insights

- Personnel limitation → hired new employee
- Bid-by-bid procurement → unit price contract
- Construction budgets → life cycle costing + EIF
e.g. geothermal & LED at Fire Station #2
- Scale and cost can be significant:
 - Granvilles: \$475,000 saving ~\$200,000/yr
 - Detention ESPC: \$3M saving ~\$220,000/yr
 - Biogas Utilization: under investigation
- But typical project savings < \$5,000/yr → time



Comments

- New government center impacting projects at “Main Street” buildings
- (Proceeding with Phoenix Penthouse BAS)
- Projects approached on a cost basis. No firm energy targets for either design or operation.
- No budget incentives to design/build “beyond code”, renewable goals, net-zero, etc.

Questions?

