

STATUS UPDATE: ENERGY INITIATIVES

Environmental Quality & Public Works Committee

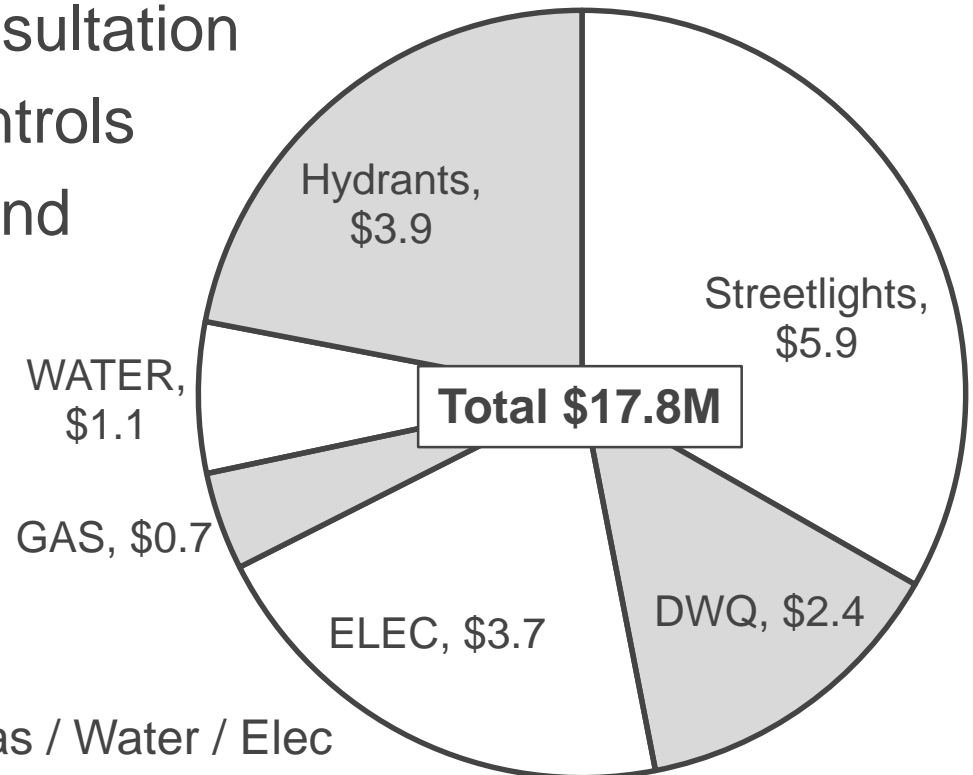
January 23, 2018



LEXINGTON

Environmental Services, Energy Section

- Utility Management
- Project Management
- Building/Equipment Consultation
- Building Automation Controls
- Energy Improvement Fund



FY17 Gas / Water / Elec



FY17 Projects

- Lighting retrofits
 - Fleet Services
 - Woodland Tennis Courts
 - Coroner Office
 - Day Treatment Gymnasium
 - Lakeside Maintenance Shop
 - Waste Management Parking
 - Fire Training Center
 - Government Center Garage
 - OAC Building

EIF Investment:

\$204,404

Estimated Cost Avoidance:

\$27,680 /yr

Estimated Energy Avoidance:

328,423 kWh /yr

Lakeside Example

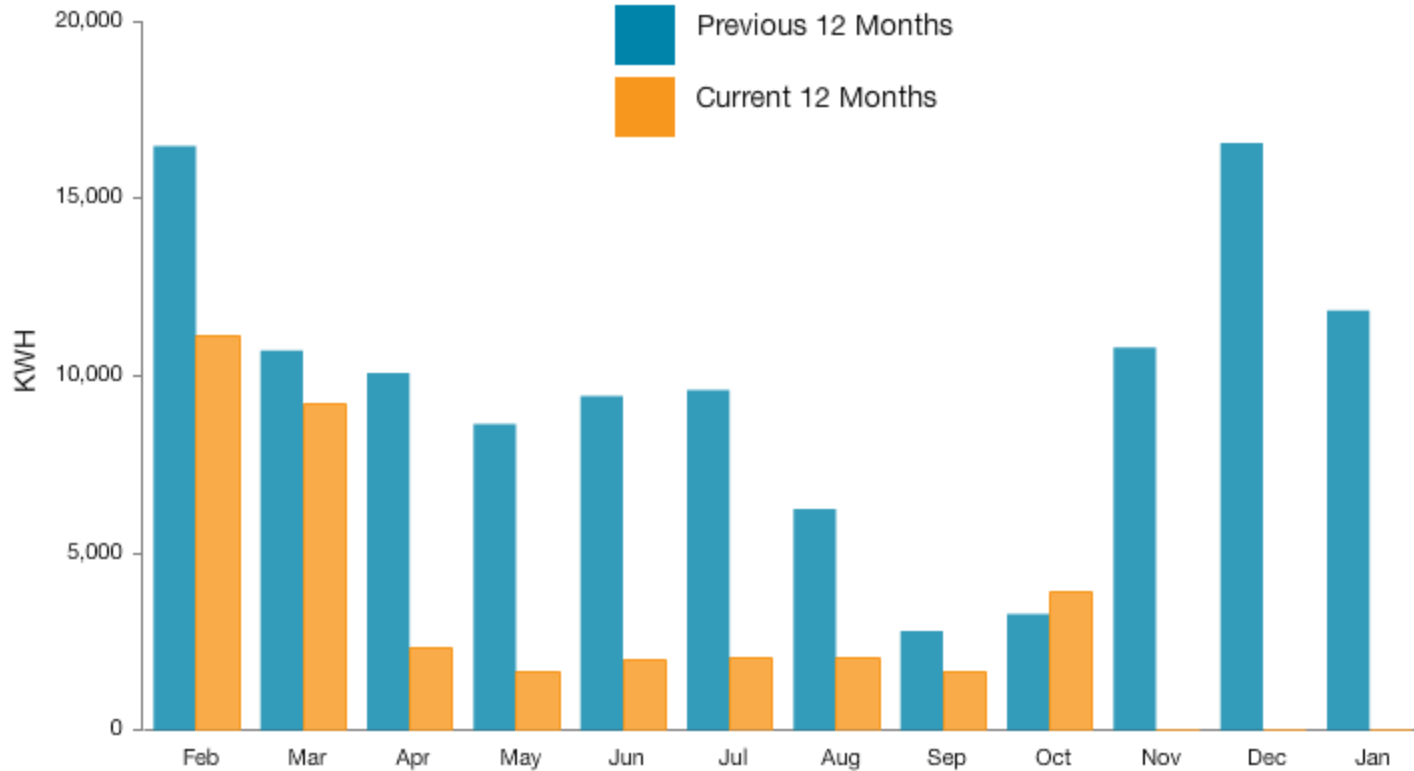
Location: Buildings-> FACILITIES-> Parks & Rec-> Lakeside Golf Course-> Lakeside Maintenance Shed-> 0221_E06
[Lakeside Maintenance Shed / 113]

Time: 01/12/2018 10:59:29 AM

Commodity: Electric

Created By: James Bush

Monthly Use





FY17 Projects

■ Biogas Utilization Study

- Present Use versus
- Waste Heat Power
- Generator
- Microturbine
- Bio-CNG
- Pipeline to FCDC

EIF Investment:

\$79,000

Estimated Cost Avoidance:

N/A

Estimated Energy Avoidance:

N/A

■ Conclusion

Present use, running digester boilers on biogas, is least cost option.

Alternates inhibited by low cost of electricity and natural gas.

e.g. \$4M generator avoids \$2M in electricity over 20 years



Balance by FUND

General Services (1101, 1105)	\$378,113
Urban Services (1115, 1116)	\$8,790
Sanitary Sewer (4002, 4003)	\$553,602

Looking Ahead...

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

Balance by FUND

General Services (1101, 1105)	\$378,113
Urban Services (1115, 1116)	\$8,790
Sanitary Sewer (4002, 4003)	\$553,602

Looking Ahead...

- Waste Management LED
- Granville LED

Balance by FUND

General Services (1101, 1105)	\$378,113
Urban Services (1115, 1116)	\$8,790
Sanitary Sewer (4002, 4003)	\$553,602

Looking Ahead...

- West Hickman Roadway LED
- Town Branch Aeration Blowers
- Town Branch Office LED



Lessons & Insights

- 10-year threshold for EIF projects is difficult
- Many projects require cost share from other budgets and/or internal labor
- Team effort w/ other Divisions
- Lighting price contract
 - Saving time/money
 - Providing consistency
- Lighting design is improving
 - Lumen levels, color & quality
 - Dimmers, occupancy sensors, bi-level control



Comments

- New employee = productivity
- Other workloads increasing
 - Building automation management
 - Coordination with utility companies
- Staffing capacity can support full allocation
 - Sanitary Sewer funds to compliment Master Plan
- Proceeding with projects in GC & Phoenix

Questions?

