

# STATUS UPDATE: ENERGY INITIATIVES

*Environmental Quality & Public Works Committee*

*May 5, 2020*



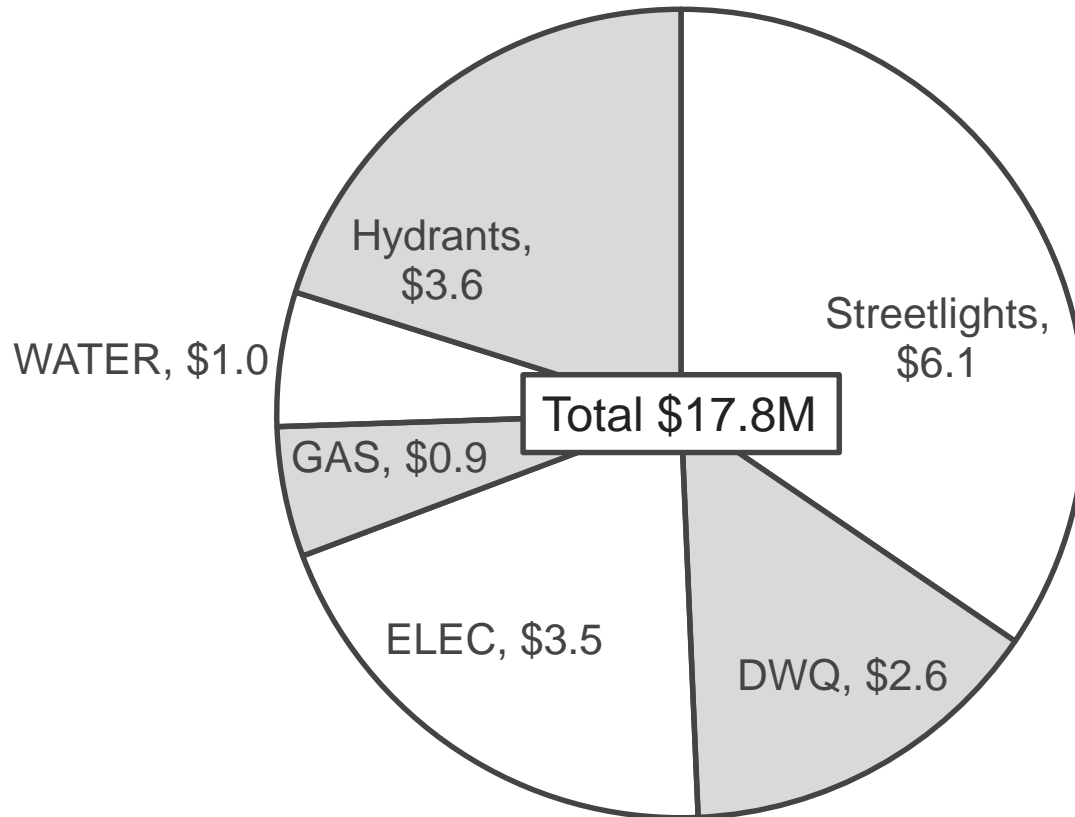
**LEXINGTON**



## **Presentation Outline**

- Utility Overview
- Energy Improvement Fund
  - FY19 Projects
  - EIF Financials
- Upcoming Projects
- Outlook & Observations

# FY19 Utility Expenditures (millions)



Gas / Water / Elec

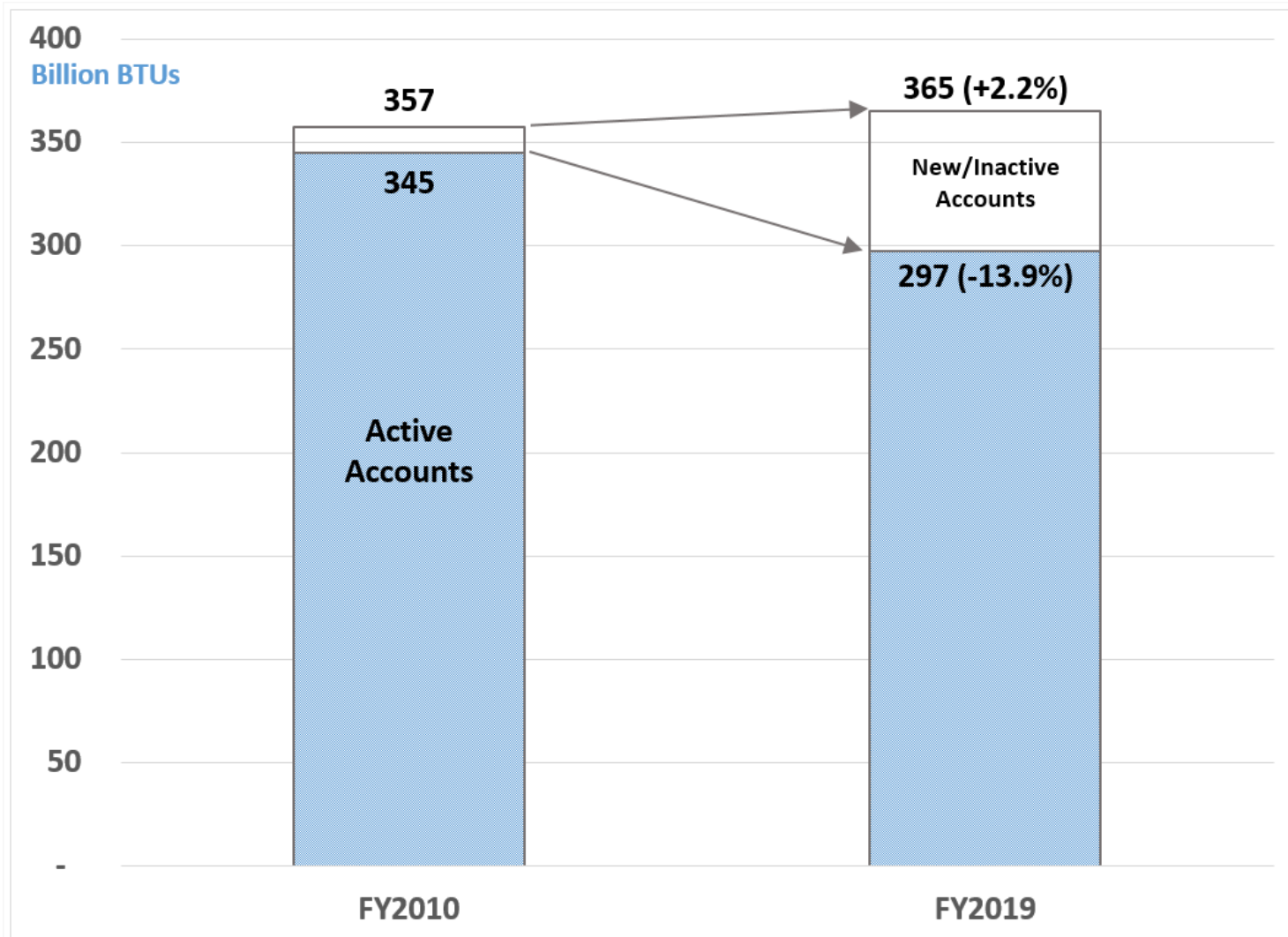
Prior Years	
FY16	\$17.3M
FY17	\$17.8M
FY18	\$18.5M
FY19	\$17.8M
FY20*	\$19.4M

\*trending estimate



# Energy Comparison

Electricity & Natural Gas, excluding streetlights





## Comments

- Energy = site based electricity & natural gas (CNG growth is shown; but not decrease in diesel)
- Absolute increase in energy +2.2%
- Decrease in “base” energy -13.9%  
i.e. accounts active throughout the decade
- FY2019 energy from new accounts 18.6%  
i.e. did not exist in FY2010 (CNG alone is 10.9%)
- Inactive: Wolf Run PS, KY Jobs Center, Old Courthouse, Old PSOC, Old Senior Center
- New: CNG Station, South Elkhorn PS, Lyric, Byrd Thurman PS, PSOC, North Elkhorn PS, Carnegie, Senior Center



## FY19 Lighting Retrofits

- Phoenix Building
- Waste Management
- Picadome Admin
- Town Branch (exterior)
- Police Technical
- Kenawood Walkway
- eWaste Dropoff
- Council Chambers
- Police Mounted Pavilion
- Lyric Multipurpose Room

**EIF Investment:**

\$199,811

**Estimated Cost Avoidance:**

\$28,080 /yr

**Estimated Energy Avoidance:**

449,185 kWh/yr



## FY19 Cost-Share Projects

### Materials Recycling Facility (\$40,222)

- Lighting & Accessibility

### Downtown Arts Center (\$50,009)

- Theater Lighting & Controls

### Building Automation (\$35,553)

- Family Care Center
- Phoenix Cooling Tower

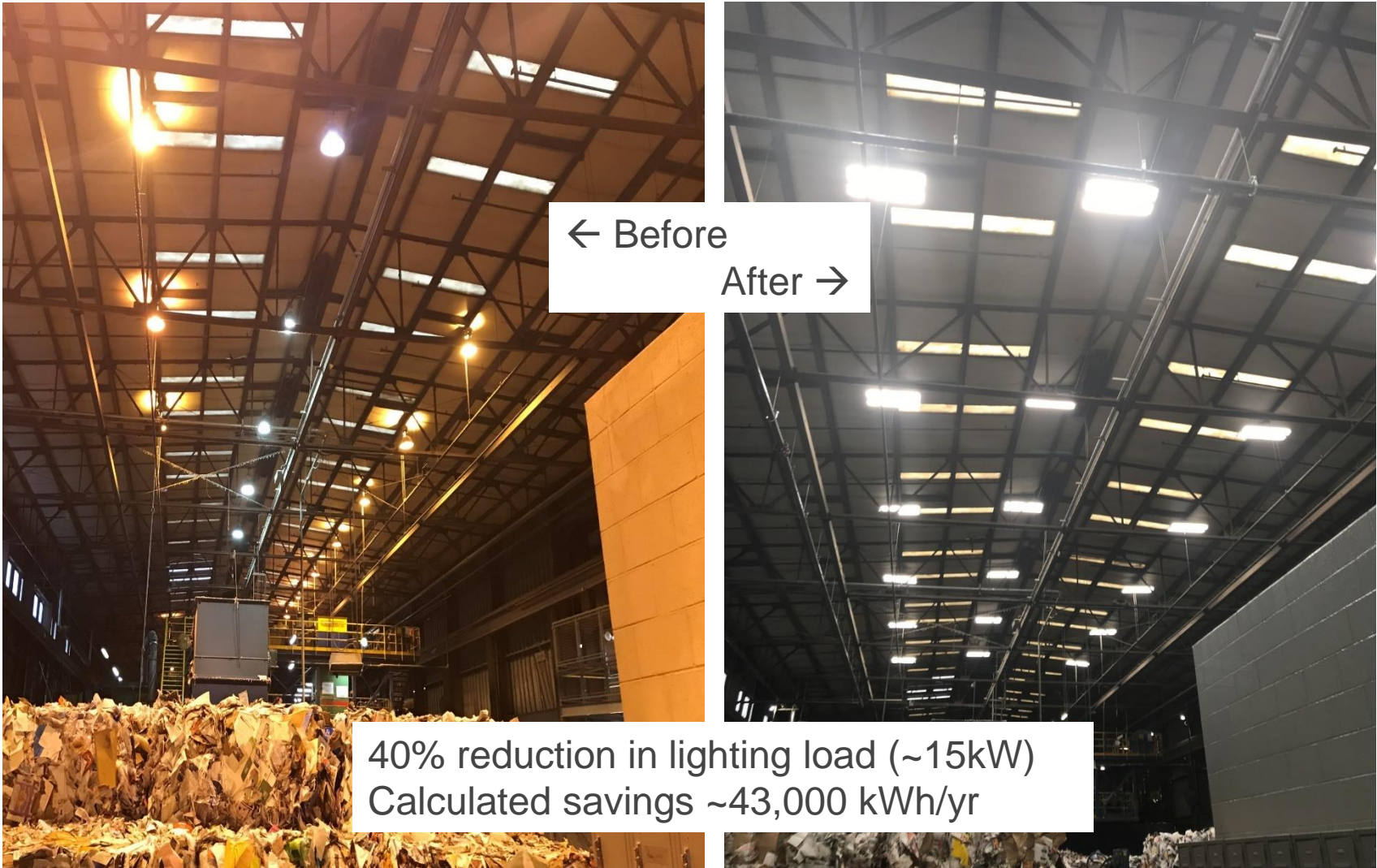
**EIF Investment:**

\$125,784

**Benefits:**

Deferred Maintenance  
Lighting Quality  
Digital Control  
Building Operations &  
Energy Savings

## MRF Thompson Road



# Phoenix Demand Side Management

Visual Smartmeter Audit – Daily/Weekly CH - 10

Place: [0032] Phoenix Building  
Meter: [0032\_E01] Phoenix TOD-S, PF adj / 572 Serial Number: 2850081  
Channel: DEMAND:KW:M:T:15





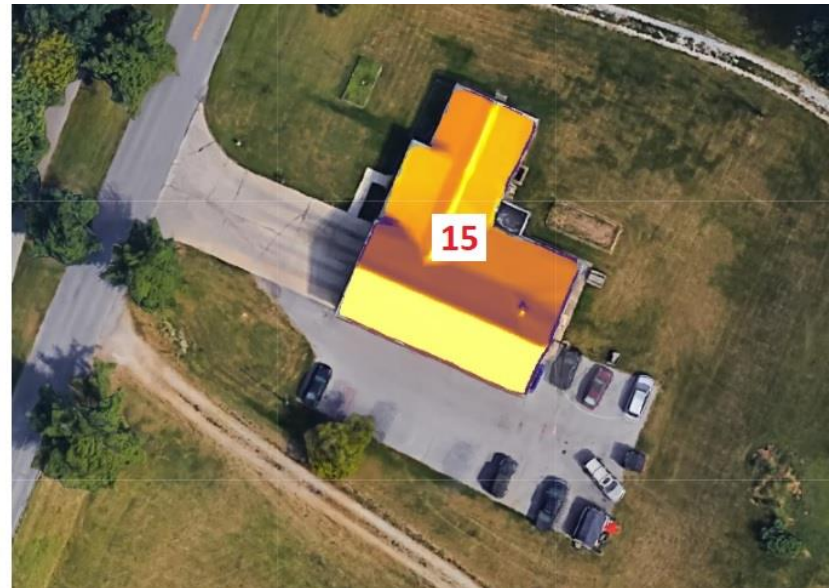
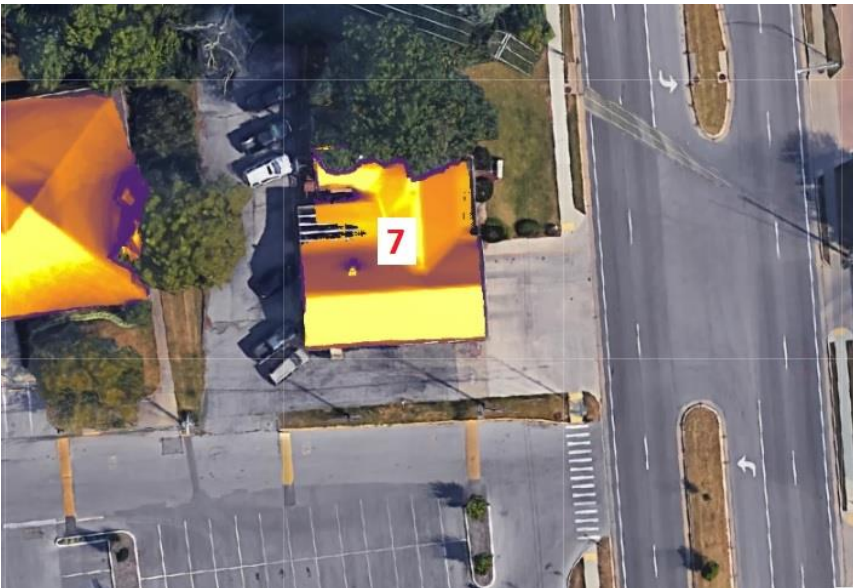
## Energy Improvement Fund Balance (as of 4/27/2020)

General Services (1101, 1105)	\$309,650
Urban Services (1115, 1116)	\$2,930
Sanitary Sewer (4002, 4003)	\$739,190

- BA transfers to capital accounts are in process
- EIF-1101 spending is below target for FY20  
Projects in queue (next slide)  
\$172,110 encumbered to offset COVID impact  
Not funded in the FY21 Mayor's Proposed Budget
- EIF-4002 anticipating drawdown in FY20 / FY21  
Town Branch aeration blower replacements  
Preliminary savings estimate \$140,000/yr

## Upcoming Projects

- Police HQ LED Lighting Retrofit
  - Whole building retrofit (750+ fixtures)
  - Potential 12% energy reduction (~200,000 kWh/yr)
- Solar PV @ Fire Stations #7, #15
  - Break Even Year 11. Payback Year 20
  - Buildings 20-25% solar (~10% production exported)





## Outlook & Observations

- RethinkLex
  - More occupancy sensors
  - Security/Janitorial illumination
  
- Natural Gas Procurement
  - CNG transfer to new rate (w/ savings)
  - CHOICE contract renewals
  
- LED Retrofit Opportunities
  - 67% of building portfolio converted (by area)
  - Move area lighting behind-the-meter  
i.e. reduce leased lights by utility companies



## Outlook & Observations (cont.)

- Building Automation
  - Versailles Road Offices, Police HQ
  - New front-end option added in 2019
  
- Transition from Hardware to Software
  - Digital control as important as new equipment
  - Energy meter integrations
  
- EIF Appropriations
  - Review program objectives
  - Report in fall 2020, prior to FY2022 request

# Questions?

