

# CITY OF KEY WEST

## MONTHLY ENERGY MANAGER (EM) REPORT

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Reporting for August—September 2017.

### Current vs. Baseline Energy Use for City-operated Facilities:

Summary - All City meters/accounts including street lights:

<u>August 1-31, 2017</u>	<u>August 1-31, 2016</u>
MWh used: 625	MWh used: 635
Energy cost: \$99,579	Energy cost: \$91,995
<u>September 1-30, 2017</u>	<u>September 1-30, 2016</u>
MWh used: 647	MWh used: 646
Energy cost: \$102,131	Energy cost: \$95,549

Keys Energy rates for Aug-Sept 2017 billing cycles have increased compared to Aug-Sept 2016 rates as follows:

Large Commercial accounts \$0.1052 per kWh raised from \$0.0777 a 35% increase.

Small Commercial accounts \$0.1254 per kWh raised from \$0.0979 a 28% increase.

### Current vs. Baseline Water Use for City-operated Facilities:

Summary - All City meters:

<u>August 1-31, 2017</u>	<u>August 1-31, 2016</u>
Gal used: 6.19M	Gal used: 5.48M
Water cost: \$61,653	Water cost: \$47,373
<u>September 1-30, 2017</u>	<u>September 1-30, 2016</u>
Gal used: 2.23M*	Gal used: 1.51M*
Water cost: \$21,651*	Water cost: \$9,885*

Note: Current water usage includes new irrigation and dust control associated with Truman Waterfront Park and Amphitheater construction.

\* FKA billing for September 2017 and September 2016 are both incomplete in addition to the reduced usage and availability due to Hurricane Irma impacts.

### Street Lighting:

- Keys Energy is currently conducting comprehensive assessment, inventory, and storm damage mitigation. Incidental requests are voluntarily suspended until that process is completed.

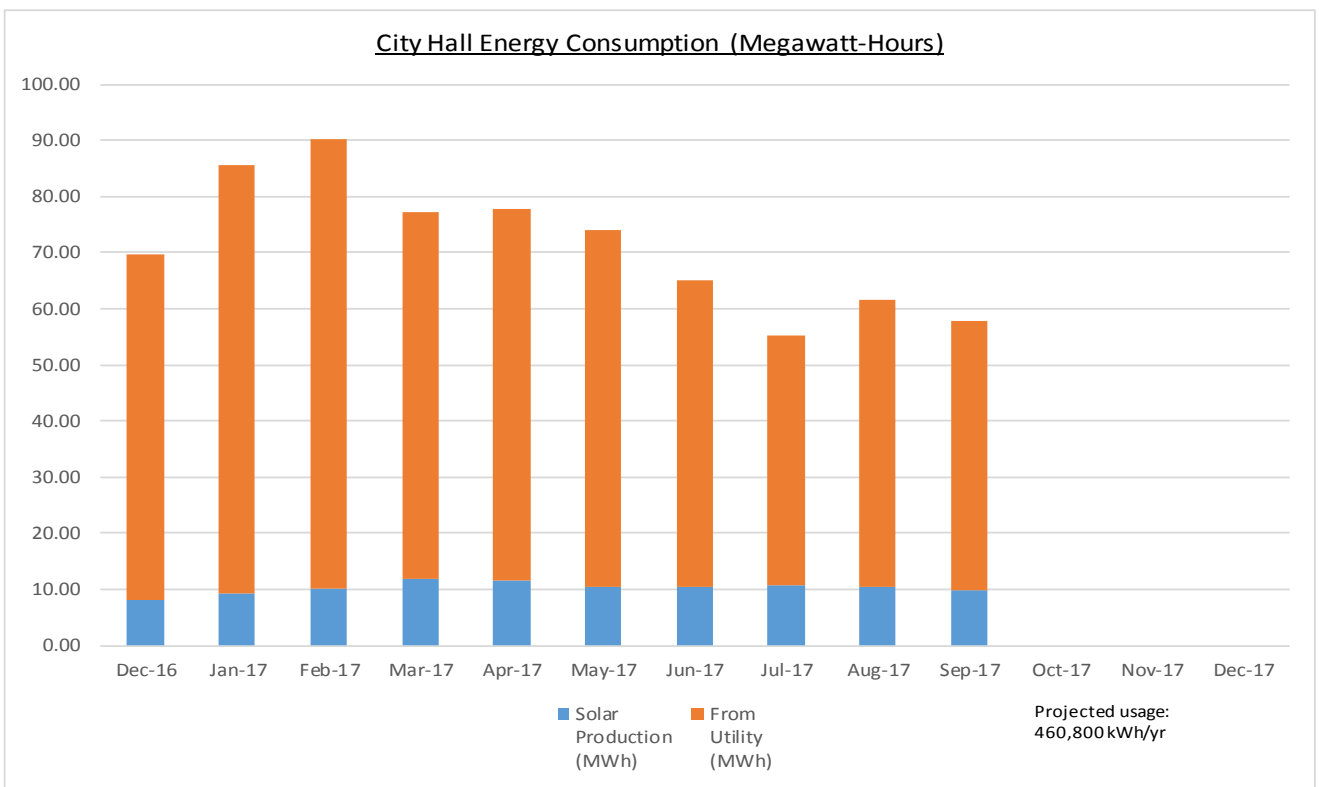
### Priority Assessments:

- City Hall Commissioning (HVAC, Lighting Controls).
- City Hall high demand – energy audit.

### City Hall at Glynn Archer:

- Monthly Water Usage for August: 212,029 gal. (\$2,127).
- Monthly Water Usage for September: 206,866 gal. (\$2,079).
- August electric usage (July 8 – August 7):
  - KEYS: 51,120 kWh    180kW Demand    Cost: \$7,171
  - Solar: 10,470 kWh    17% of total energy consumption (kWh).
  - Savings due to solar: \$1,101
- September electric usage (August 8 – September 7):
  - KEYS: 48,000 kWh    180kW Demand    Cost: \$6,834
  - Solar: 9,816 kWh    17% of total energy consumption (kWh).
  - Savings due to solar: \$1,033

*Note: Hurricane Irma impacts will be reflected in next billing cycle.*



- Total electrical consumption has been reduced from a peak of 90MWh in February to an average of 55MWh for July-September, a 39% overall reduction.
- Occupancy schedule for City Hall HVAC was adjusted to account for regular weekend staffing.

- Programming of the Lutron lighting control system has been partially implemented. Scheduled emergency lighting only during overnight periods. Additional refinements, added sensors and controls are planned.
- City Hall current concerns and target areas:
  - Demand billing remains high at a peak of 180kW. We believe the primary issue is with programmed HVAC control logic, particularly fan and pump motor start-ups. Energy monitoring equipment will be deployed to investigate further.
  - Consumption continues to steadily drop. Additional gains are anticipated through the refinement of motor controls and finally achieving control stability in the chiller plant.

**Action Items for October 2017:**

- City Hall (HVAC, lighting controls, energy audit).
- Catalog inventory of emergency power equipment both fixed and portable including fuel capacity and consumption, electrical configuration, connective capabilities, transfer switch, and service requirements. Generator issues identified during Hurricane Irma and subject to potential FEMA reimbursement included:
  1. Fire Station No. 1 - transfer switch;
  2. Transit Facility - Generator failure
  3. WWTP – New Backup Generator & power fluctuation across Trumbo grid

**Action Items for FY 2018**

- Implement a City-wide generator maintenance and testing contract. Include under Engineering 001-1906 budget.