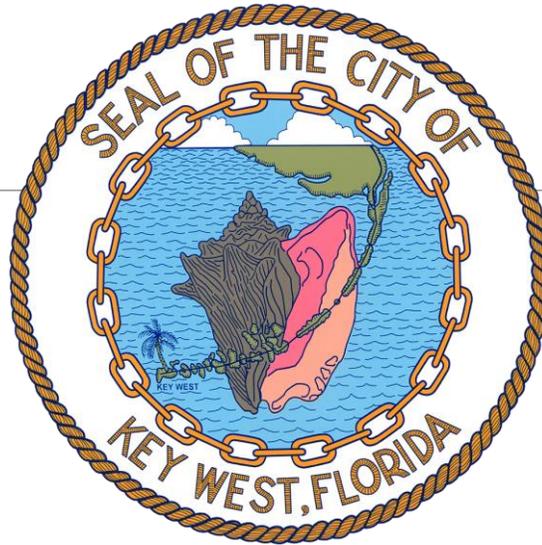


# Energy Manager Annual Update

JOHNNIE YONGUE PE CEM NOVEMBER 04, 2020



# Status of Energy Use for CoKW Facilities

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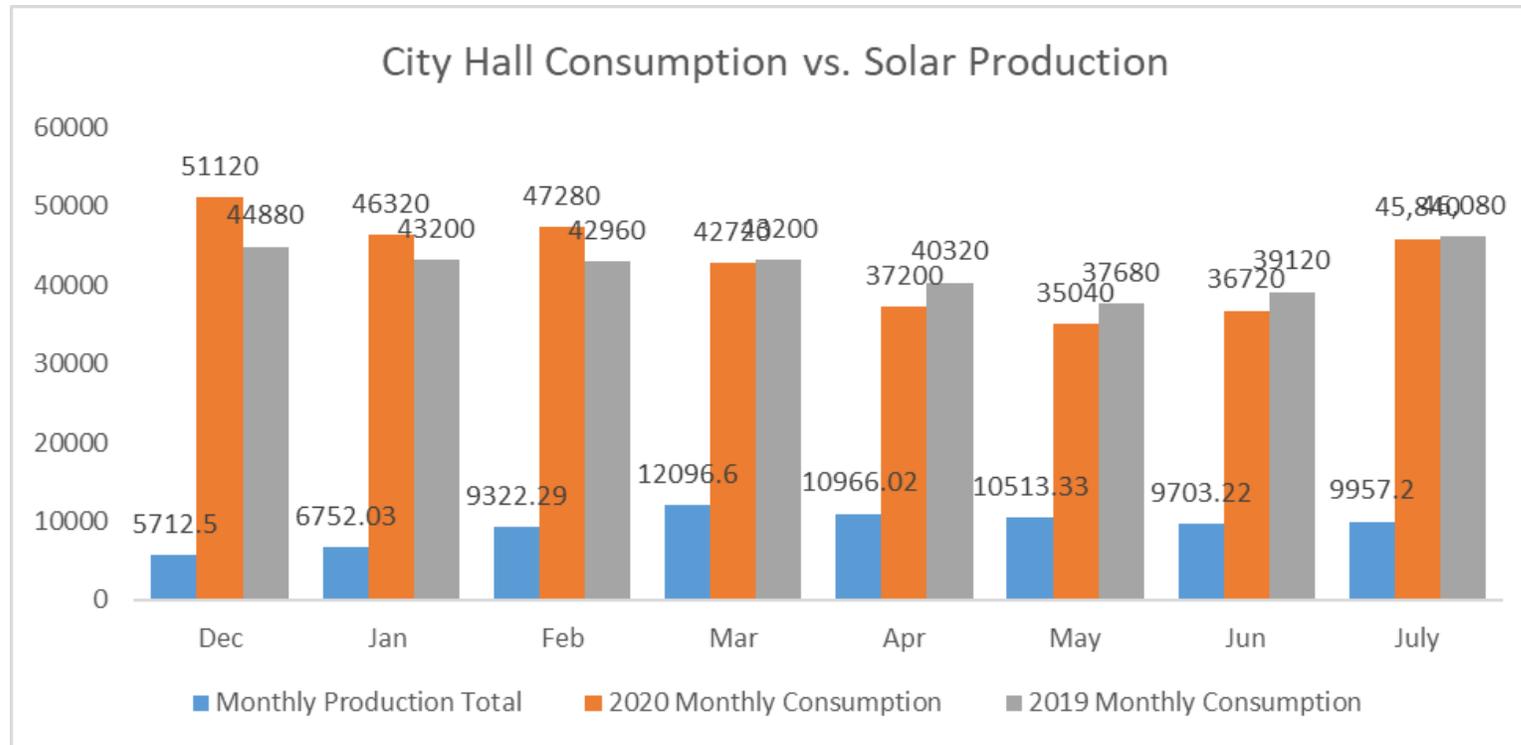
Overall energy cost for 2020 was approx. \$1.7mil for all city accounts.

2019 Total energy consumption for all City facilities was 7,498 MWh; aka 7.5 Gigawatt hours

2020 Energy consumption so far is 5,084 MWh. Total energy use is 8% less that this time last year.

# Solar Productivity

Solar Array produced an 20% of City Hall's monthly consumption at the peak of the shutdown in June.



# Ten Year Energy Plan

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## Main goals of 10 Year Plan

- Increase resiliency
- Lower costs
- Increase awareness and education

Draft Presentation in October 2020 for National Energy Month

Final plan to be refined and adopted in 2021.

Set energy reduction goal; 25% reduction overall by 2030

All City buildings Gold Star rated in 10 years(2030)

Set renewable portfolio goal

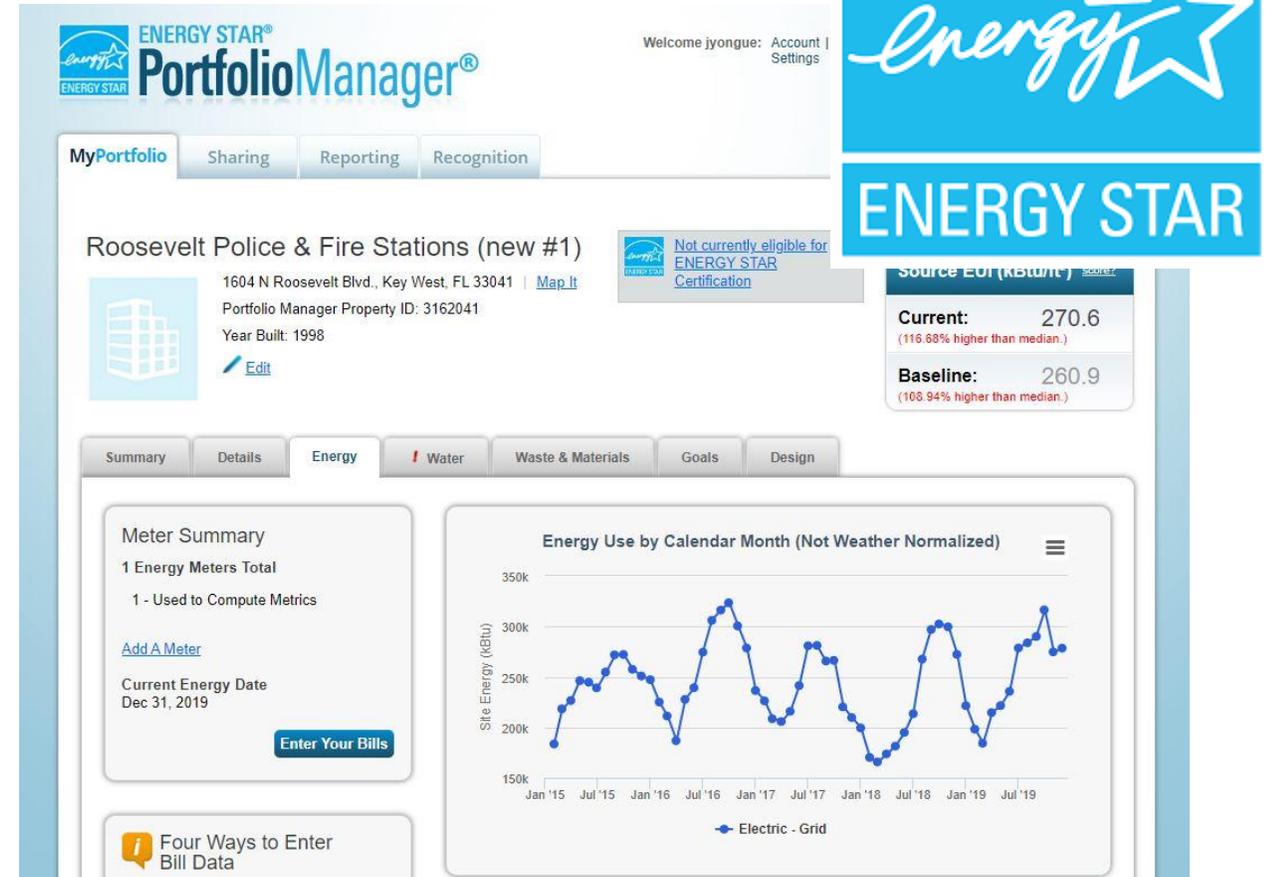
# Year 1

Create funding for Energy Management through savings created by Energy reducing projects.

- First year 75% of savings goes to Energy Management
- Second year 50% of Savings goes to Energy Management
- Third Year 25% Savings goes to Energy Management

Enter all City Buildings into Energy Star Portfolio Manager

Make all new Buildings Energy Star Certified



# Year 1 Capital Projects

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## LED Light Retrofit for Police Station

- \$8,000 to change all T8 Fluorescent Bulbs to LED.
- 27 months to return on Investment

## LED Street Light Replacement

- Cost to Replace remaining Sodium vapor lights paid for by monthly Energy Savings



4 ft. T8 LED Tube - 1800 Lumens - 15W - 5000 Kelvin

Can be used with Existing Ballast or Without - Hybrid T8 LED Tube - 120-277V - Case of 25 - TCP 88LT800024

★★★★★ (0) [Write a review](#) [Ask a question](#)



Enjoy the benefits of both plug-and-play and ballast bypass operation with these versatile TCP LED T8 hybrid tubes that can fit into the existing systems you have without hassle. By eliminating the need to replace your existing fixtures or fixture sockets, these tubes save costs on maintenance, replacements, and energy over a longer period of time and continue to work even after ballasts have died.

- Light is evenly diffused end-to-end without glare through a frosted lens
- Turns on to full brightness without flickering or delay
- Compatible with non-shunted sockets
- Can be used within enclosed fixtures

See Ballast Compatibility List Prior to installation. These lamps are not for use with dimmers.

[View Specs & Details](#)



# Year 2

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Approve and proceed with 5 projects that have the highest return on investment.

Evaluate and establish data for energy use in all City owned and operated buildings.

Educational focus: Keys Energy home audits and Monroe County Weatherization Program(WAP).



# Year 2 Capital Projects

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## New Fire Station 3

- Solar initiative
- Possible Green Roof
- Energy Star Rating

## Frederick Douglass Gym Expansion

- Solar Initiative
- Energy Star Rating



# Year 3

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Evaluation of 20 City owned and leased facilities

Educational focus on low income housing – top ten energy savings tips, weatherization, YGreen, PACE, and Solar United initiatives.

Provide energy use map from Keys Energy Services to identify biggest users to help find energy reductions for residential and commercial.

Policy will focus on more renewable energy considerations, electric vehicle charging stations and hardening.

# Year 4

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Evaluate and complete energy reduction projects at remaining City facilities to reduce consumption.

Perform commercial grade audits on 5 buildings, partner with tenants in City leased buildings to provide energy reductions.

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**Year 5** – Revisit 10 year plan for updates to consider changing technology, reorientation of goals and objectives. Training for commercial managers on green and Energy Star rating.

**Year 6** – Commercial audits should be done on 5 City buildings. Focus on solar and electric vehicle initiatives.

**Year 7** – Focus on weatherization and home audits, rebate program and top ten energy savings measures for residents.

**Year 8** – Education opportunities for residents that have high utility bills for solar initiatives (Solar United , Ygreen, PACE).

**Year 9** - Focus on weatherization and home audits, rebate program and top ten energy savings measures for residents.

**Year 10** – Development of a new 10 year energy plan

## IN CLOSING

Staff continues to seek out energy savings potential and new reasonable initiatives to harden and maintain City infrastructure.

Energy Manager will present a more detailed plan to the commission and City Management to establish goals for the Energy Manager.

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THANK YOU

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