



# LIGHT EMITTING DIODE (LED) STREET LIGHTING



*Find Your Florida*

# Strategic Action Plan

Objective 3.2: Increase efficiency through enhanced operations and technological advancements

Strategy 3.2.1: Review existing operational procedures and policies

Strategy 3.2.2: Evaluate current technological opportunities to reduce operational cost

Objective 4.3: Evaluate current "Green" initiatives and targeted projects that are sustainable

Strategy 4.3.1: Reduce waste through sustainable practices

Strategy 4.3.2: Staying in the forefront of sustainable communities in the State of Florida

Strategy 4.3.3: Develop Alternative Energy Strategy

Strategy 4.3.4: Implement City-wide energy savings program

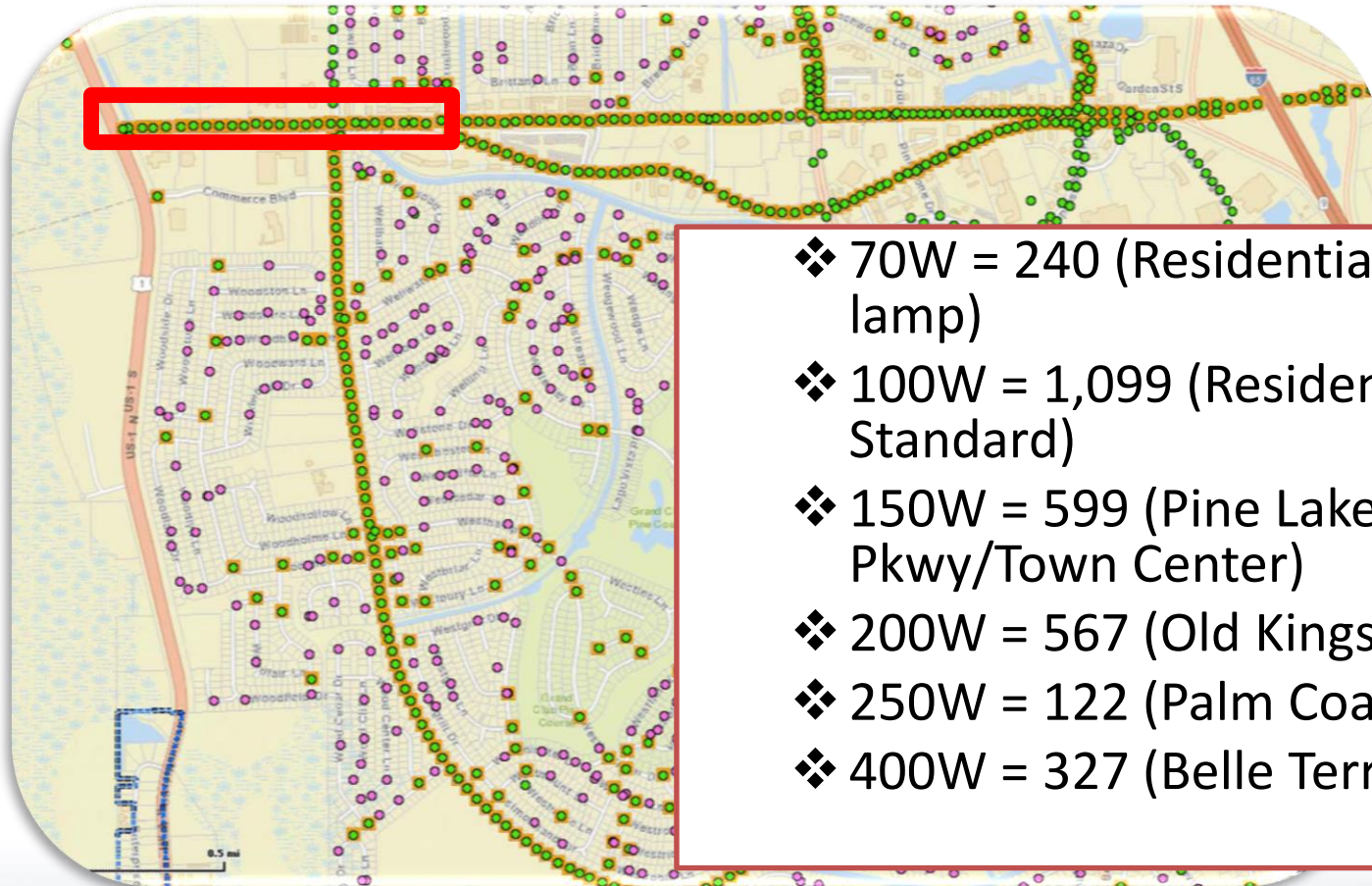
2014 & 2015 Performance Measures:

Tracking FP&L Pilot Project on Palm Coast Parkway and completing a phasing plan to implement LED street lighting in other areas of the City.



# Street light Mapping Application

*2,954 lights billed to the City*



# FP&L LED Pilot

*Study commencement – October 2012*



High  
Pressure  
Sodium  
Vapor (HPSV)

- Lower light color uniformity
- Lamps contain mercury

Light  
Emitting  
Diode (LED)

- Higher light color uniformity
- Lamps do not contain mercury

What did we learn about cost savings???

# Cost Analysis for New

## *What Have We Learned?*

<b>Watts</b>	<b>Installation cost</b>	<b>Estimated monthly savings</b>	<b>ROI (years)</b>
<b>100</b>	<b>\$500</b>	<b>\$6 **</b>	<b>7**</b>
<b>200</b>	<b>\$600</b>	<b>\$8</b>	<b>6</b>
<b>400</b>	<b>\$720</b>	<b>\$11</b>	<b>5</b>

**\*\* Estimated Figures**

# Cost Analysis for Retrofits

## *What Have We Learned?*

<b>Watts</b>	<b>Installation cost</b>	<b>Estimated monthly savings</b>	<b>ROI (years)</b>
<b>100</b>	<b>\$700</b>	<b>\$6 **</b>	<b>10**</b>
<b>200</b>	<b>\$876</b>	<b>\$8</b>	<b>9</b>
<b>400</b>	<b>\$993</b>	<b>\$11</b>	<b>8</b>

**\*\* Estimated Figures**

# Capital Improvements

## LED Pilot (Palm Coast Parkway-West End)

Description	# of lights	Project installation cost for HPSV	Project installation cost for LED	ROI (years)
LED Pilot	25	\$0	\$15,000	6

# Capital Improvements

## Palm Coast Parkway 6-Laning

Description	# of lights	Current project installation cost for MH	Project installation cost for LED	Monthly savings for LED
Palm Coast Parkway 6-Laning	70	\$509,009	\$482,996	\$455



# Capital Improvements

## Old Kings Road Extension

Description	# of lights	Project installation cost for LED	Monthly savings for LED	ROI (years)
Old Kings Road Extension	56	\$35,211	\$558	5

# Capital Improvements

## Residential Streetlights

Description (200 watt)	# of lights	Project installation cost for HPSV	Project installation cost for LED	ROI (years)
Residential Streetlights (New)	1	\$0	\$600	6
Residential Streetlights (Retro)	1	\$0	\$876	9

# Action Items

## Direction for Existing Projects

- LED Pilot Program ROI = 6 yrs.
- 5-yr. Capital Improvement Projects (New)
  - Old King Road Extension ROI = 5 yrs.
  - Palm Coast Parkway 6-Laning
    - Lower upfront cost and lower energy



## Future Project Evaluations

- Residential Street Lights
- Future Capital Projects
- Retro fitting of existing streetlights

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