



# Flagler County Opportunity Assessment

*April 4, 2016*



**ESG** ENERGY SYSTEMS GROUP

## Agenda

- Understanding ESG
- Flagler County Objectives
- Evaluated Solutions
- Success Stories
- Process Timeline



# ENERGY SYSTEMS GROUP

MORE THAN \$2 BILLION IN ENERGY & INFRASTRUCTURE IMPROVEMENTS  
GREEN. SUSTAINABLE. ENERGY EFFICIENT SOLUTIONS.

- Tradition of excellence since 1994
- Leading Energy Services Provider
- Subsidiary of Vectren Corporation (NYSE: VVC)
- Accredited by the National Association of Energy Service Companies (NAESCO)
- More than \$2 billion in energy & infrastructure improvement projects for 340+ customers
- More than \$450 million of multi-phase, repeat customer projects
- Customer-centric | Trusted Partner
- Renewable Energy & Waste-to-Energy Expertise
- Turnkey Sustainable Infrastructure Solutions
- Product Independent / Fuel Neutrality
- Leading Utility Energy Service Contract Partner

Many Florida municipalities are implementing  
***Aggressive Sustainability Measures***  
to address Climate Change impacts





**Flagler County can become a  
*Leader in Sustainability***

## Objectives:

Flagler County Can Become  
a Leader in Sustainable  
Best Practices

- *Evaluate non-traditional conservation measures for Administration Building*
- *Determine savings potential*

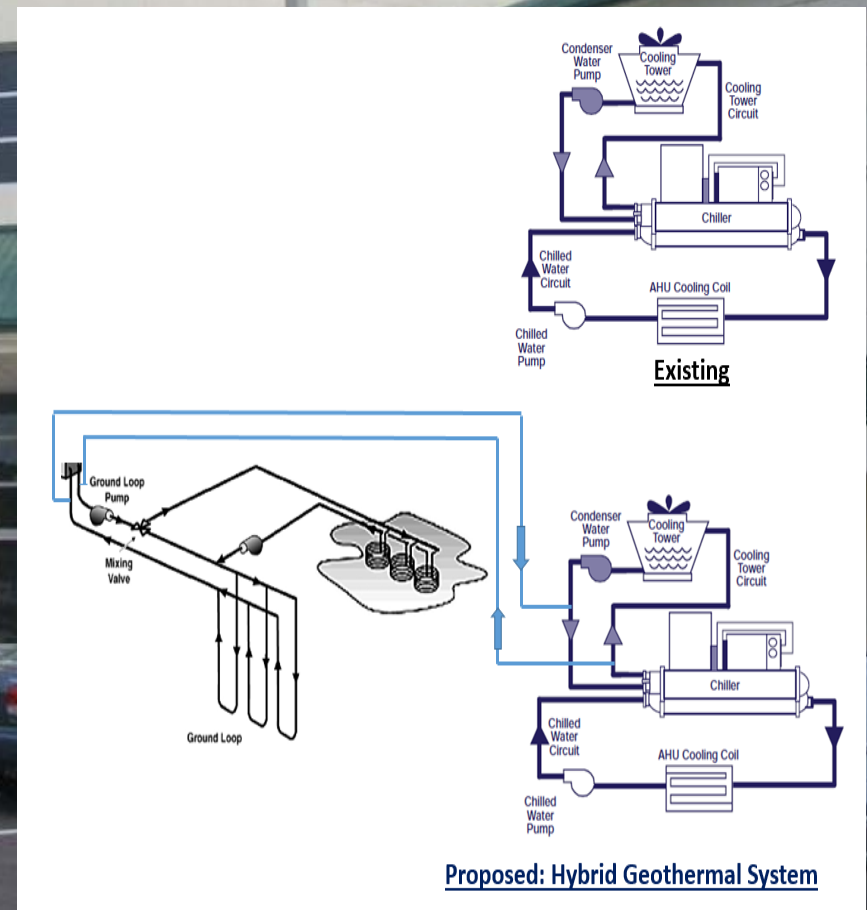


# Geothermal Conversion

(Government Center Complex)

## Benefits:

- Increases chiller energy efficiency by over 28%
- Decreased water usage by over 50% - 60%
- Extend life of cooling tower and delay replacement cost
- Water and electrical savings



# Ice Storage

*(Government Center Complex)*

## Benefits:

- Reduces Peak Demand Costs by over 20%
- Substantial Electrical Savings





## Demand Response

*(Government Center Complex and Other Facilities)*

### Benefits:

- Significant Reduced Rate from Utility



## Savings Potential

*(Geothermal, Ice Storage, & Demand Response Measures)*

Annual Energy & Operational Savings	\$175K
Savings can fund over \$3.5M for the improvements	\$3.5 Million
Term	15-20 Years

Guaranteed

Fully Funded



## Other Options: Solar Parking Canopy (Front of Administration Building)

### Benefits:

- Reduce electrical costs
- 23% of electric usage can be produced by solar
- Reduce demand
- Parking shade
- Could accommodate EV charging stations
- Renewable energy



## Solar Canopy Examples



# Energy Savings Performance Contracting

## Benefits:

- Comprehensive Approach to Facility and Infrastructure Upgrades
- Funded from Existing Utility and Operational Costs
- Savings are Guaranteed
- Governed by Statute fs489.145



## Florida Success Stories

- City of Hollywood
- US Naval Air Station Jacksonville
- City of Brooksville
- Leon County
- City of Inverness
- City of Ocala
- City of West Palm Beach
- City of Marathon



# Metropolitan Nashville Airport



- Largest Geothermal Lake Plate Cooling System in North America
- Reduce electricity usage by 1.3 million kWh annually
- Reduce annual potable water consumption by 30 million gallons

# City of Brooksville, Florida

- \$5.1 Million Total Savings and Revenue Enhancement
- 2,225,480 kWh Saved -- Equivalent to 1,535 Metric Tons of CO<sup>2</sup>
- HVAC Replacements, Lighting Improvements, and Water Conservation Measures at City Facilities and in Parks
- AMR Water Meter Conversion



# Fort Detrick MRMC, Maryland

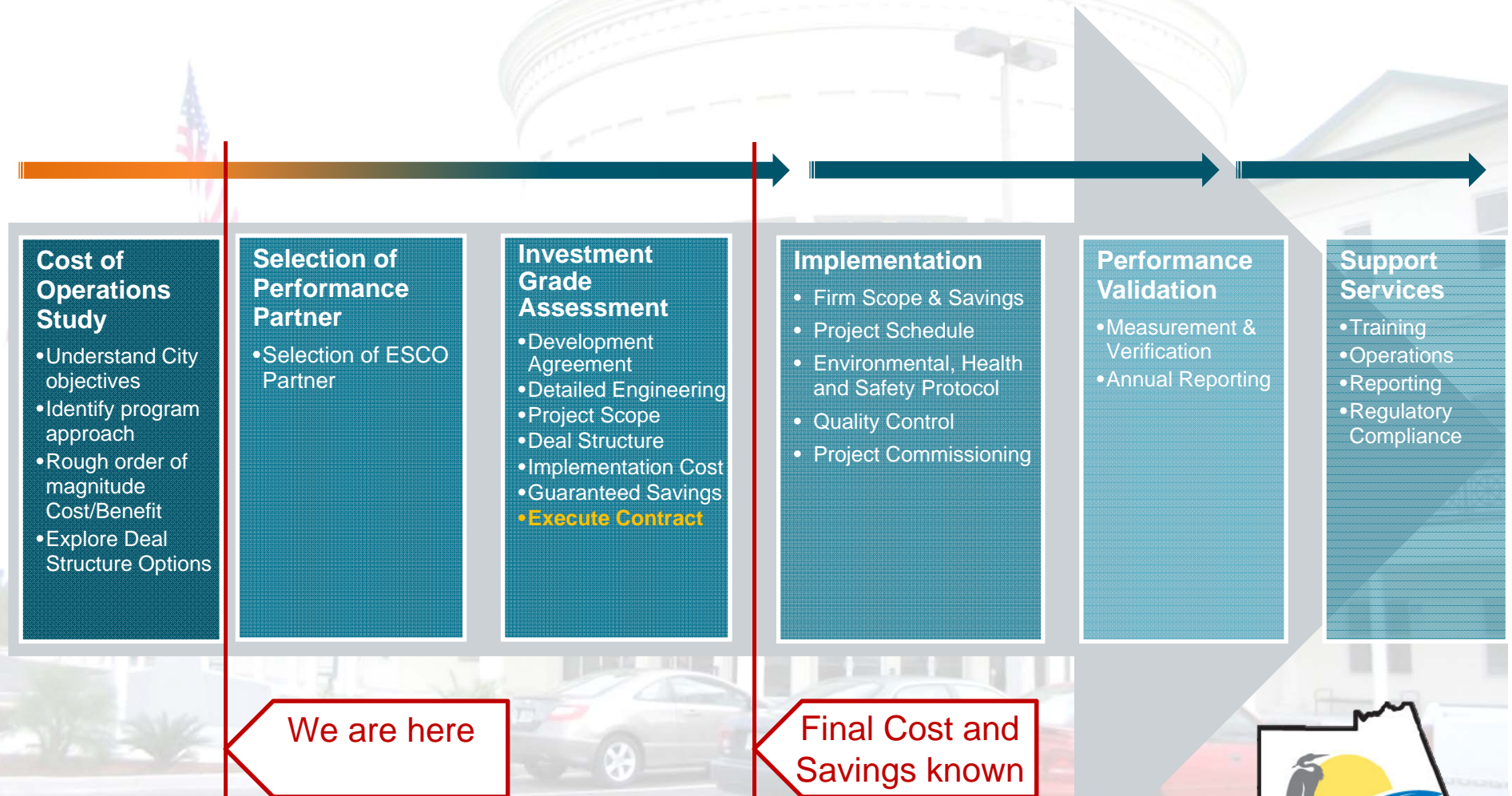
- ESG designed, built and now operates the National Interagency Biodefense Campus Central Utility Plant (CUP)
- The CUP produces and delivers steam and chilled water via a looped underground utility and power conditioning services and emergency power via underground duct banks



# City of Hollywood, Florida

- 140kW Solar Arrays at 4 City Facilities
- 5kW Wind Turbine
- Project Branding: "Green Sweep"
- Customized Website for Renewable Energy on City's Website

# Procurement Process



# Timeline

Date	Activity
5/1/16	Selection of Energy Company from State List
6/1/16	Audit Contract Signed – Audit Commences
10/1/16	Audit Completed
11/1/16	Review completed by Flagler County
12/1/16	Implementation Contract Signed
12/2/16	Construction and Implementation Commences



*Advanced Technical Design  
Cost Effective Installation  
Energy & Operational Savings  
Maximized Efficiency*

**Leader in Sustainable Best Practices**





**Thank You**

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