

# Alternative Energy

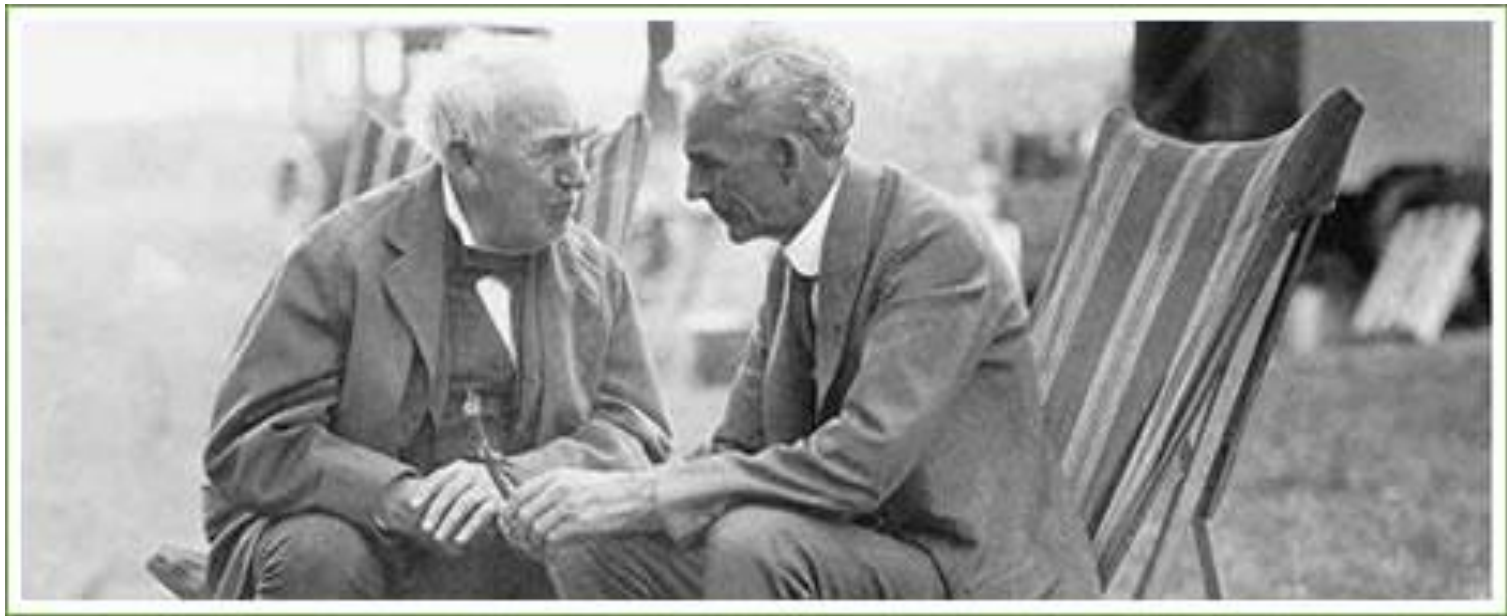
## *Made in Florida*

**Solar Power Plants for Commercial,  
Government, and Utility**



Lawrence Hefler

Carlos Gonzalez



*“I’d put my money on the sun and solar energy.  
What a source of power!  
I hope we don’t have to wait until oil and coal run out  
before we can tackle that.”*

Thomas Edison 1931

*“We put our money on the sun and solar energy”*

BlueChip Energy 2010

- About Us
- About Alternative Energy
- Vertical Integration and Value Chain
- Solar Panel Manufacturing Capability
- Project Development – Solar Farm
- Creating Green Jobs
- Solar is a Good Investment
- Value Added Services – The SPPA
- Questions and Comments

# Full Service Alternative Energy Provider



- Solar electricity
  - Residential
  - Commercial
  - Utility
- Delivering energy for less cost

# Alternative Energy



1500AD - Wood depletion transitioned to coal



1859 Whale oil transition to petroleum



1908 horseless carriage, petroleum remains cheap and abundant



1970's oil crisis switch to coal, petro prices plummet

- Coal as alternative to wood
- Petroleum as alternative to whale oil
- Alcohol as alternative to fossil fuels
- Coal gasification as alternative to expensive petroleum
- Renewable energy as alternative to non-renewable

# Pioneering the Florida Solar Industry

- First to integrated manufacturing, engineering, procurement, construction, installation, operations, monitoring, and maintenance
- First alternative energy utility provider with 80 MW capacity
- Developing first private 10 MW PV solar farm in Central Florida
- Only solar PV panel manufacturer in Florida

# What is a Full Service Solar Provider?

- Manufacturing & Wholesaling:** ASP modules and Fusion-brand
- Development:** Experience in solar and residential sectors
- E P C and O&M:** Electrical and mechanical engineers PE, NABCEP
- Financing:** BCE Finance Corp. - innovative PV financing solutions
- Equity:** License as small power production (qualifying facility)

# A Full Service Solar Provider is...

## **Manufacturing & Wholesaling**

- Modules
- Inverters
- BOS (cables, mounts, etc)

## **Development**

- Site selection
- Site lease / purchase
- Permits
- Power Purchase Agreements

## **E P C**

- Plant design, architecture
- Electrical/civil engineering
- Procurement
- Construction
- Grid connection

## **Financing**

- Due diligence
- Financial engineering
- Sale to investors

## **Equity**

- Recurring income for LT owners

## **O&M**

- Monitoring
- Maintenance
- Insurance, taxes
- Accounting

# Vertically Integrated/Value Chain

## Manufacturing and Wholesaling

## Project Execution

## Electricity Sales

Value Chain Segment

Solar Panels, Components

Development

EPC

Financing

Equity

O&M

BCE Group Company



Complete Electric Contractors, Inc.

BCE Finance Corporation)

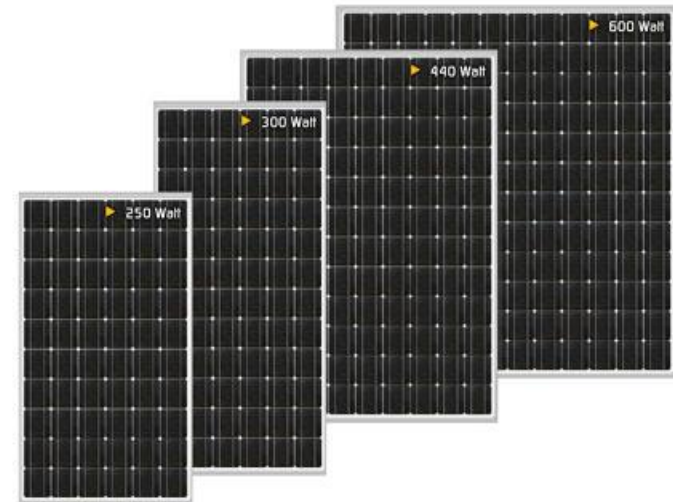
Partner Companies



Simply More Reliable Solar



- Solar module manufacturing
- Cutting edge technology
- Research and development
- High efficiency monocrystalline
- Meets *Buy American Act*
- Purchased factory equipment



# Rinehart Solar Farm, Lake Mary



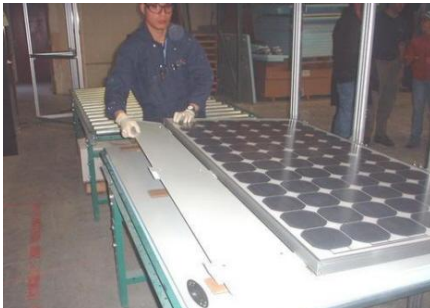
- 10MW - Rooftop (2), Ground (8)
- SPPA - Progress Energy Florida
- Annual Generation -

15 million kW hours

- Annual usage of 1100 homes
- Prevents 9200 metric tons CO<sub>2</sub>
- Equivalent 1700 cars off the road
- Creating up to 100 green jobs



# Creating Local Green Jobs



# Community Education



# Solar Is a Good Investment



- reduces long term energy costs
- renewable
- no fuel costs
- low maintenance

# Service: Providing a Solar Plant

## **BlueChip Energy**

- Financing
- Permitting
- Design
- Procurement
- Installation
- Own
- Operate
- Maintain

## **Rooftop or Land Owner**

- Power Purchase Agreement
- 20-25 year commitment
- Provides site
- Executes site lease
- Provides ongoing access
- Reduces energy costs
- Saves Money

# Sample 2 MW PV System

## Energy Cost Analysis - 20 Year PPA Agreement

### ***Current Electricity Conditions***

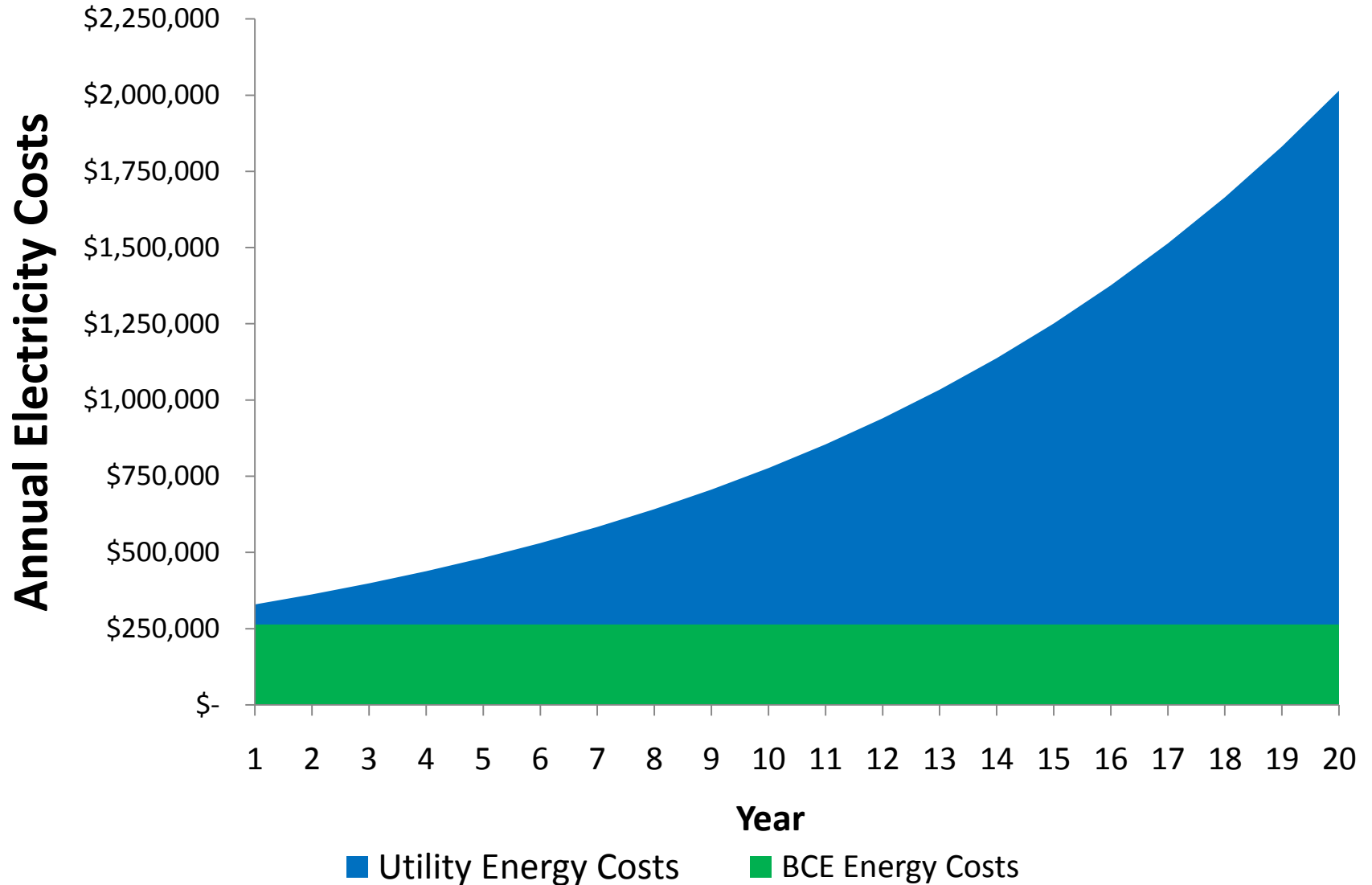
Annual Electricity Demand (kWh):	3,294,267
Current Utility Rate (\$/kWh):	0.1
Annual Current Electricity Costs:	\$329,427

### ***2 MW Solar System Production***

Annual 2 MW Solar Energy Production (kWh):	3,294,267
Estimated Utility Rate for Solar Energy (\$/kWh):	0.08
Solar Energy Costs:	\$263,541

***First Year Savings w/ Solar: \$65,885***

# 2 MW Solar Power Savings – 20 Year Lifetime



With a 10% annual utility rate increase, savings rise to \$1.8 million in Year 20

<b>Year</b>	<b>Savings \$/kWh</b>	<b>Annual Savings</b>	<b>Cumulative Savings</b>
1	\$ 0.02	\$ 65,885	\$ 65,885
2	\$ 0.03	\$ 98,828	\$ 164,713
3	\$ 0.04	\$ 135,065	\$ 299,778
4	\$ 0.05	\$ 174,926	\$ 474,704
5	\$ 0.07	\$ 218,772	\$ 693,476
6	\$ 0.08	\$ 267,004	\$ 960,480
7	\$ 0.10	\$ 320,058	\$ 1,280,538
8	\$ 0.11	\$ 378,418	\$ 1,658,956
9	\$ 0.13	\$ 442,614	\$ 2,101,570
10	\$ 0.16	\$ 513,230	\$ 2,614,800
11	\$ 0.18	\$ 590,907	\$ 3,205,706
12	\$ 0.21	\$ 676,351	\$ 3,882,058
13	\$ 0.23	\$ 770,341	\$ 4,652,398
14	\$ 0.27	\$ 873,729	\$ 5,526,127
15	\$ 0.30	\$ 987,456	\$ 6,513,583
16	\$ 0.34	\$ 1,112,556	\$ 7,626,139
17	\$ 0.38	\$ 1,250,165	\$ 8,876,305
18	\$ 0.43	\$ 1,401,536	\$ 10,277,841
19	\$ 0.48	\$ 1,568,044	\$ 11,845,885
<b>20</b>	<b>\$ 0.53</b>	<b>\$ 1,751,202</b>	<b>\$ 13,597,087</b>

# *Invitation to Visit*



**WELCOME TO THE FUTURE**

*Sustainably Yours,*

**LHefler@bluechipenergy.org**

**CGonzalez@bluechipenergy.org**

# Questions and Comments