Solar PV Presentation

Henderson – Vance Chamber of Commerce

August 8, 2012

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Agenda

- State of Solar in NC
- How PV Solar Works
- Third Party Owned PV System
- Progress Energy SunSense Program
- Case Study – Service Thread
- Third Party Owned Projects
- Vance County Opportunities
- Questions

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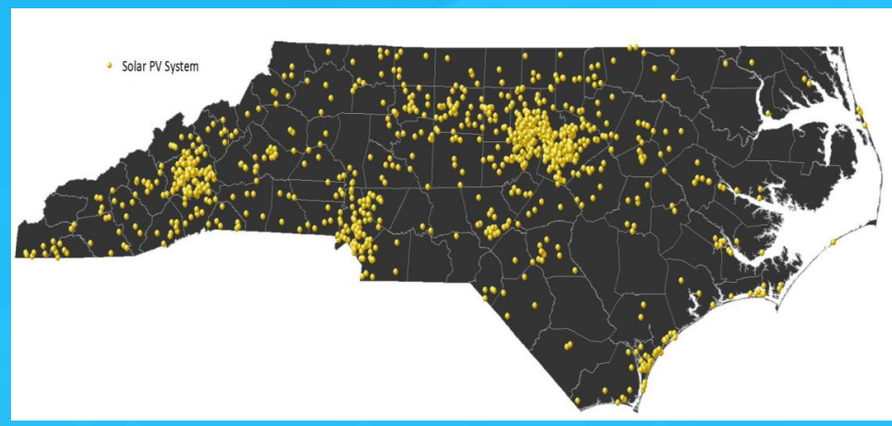
State of Solar in NC

- **1,142 Solar Photovoltaic (PV) Systems installed in NC 2006-2011**
- **128 MW of power registered with NC Utilities Commission**



- **Sept. 30th, 2011 NC ranked 8th in the U.S. for Solar PV installed**
- **Renewable Energy Portfolio Standards (RPSs) enacted Feb. 1, 2008 in North Carolina**
- **12.5% from Renewable Energy by 2021 for Utilities-Duke/Progress (.2% from Solar PV)**
- **Progress Energy Solar Program:**

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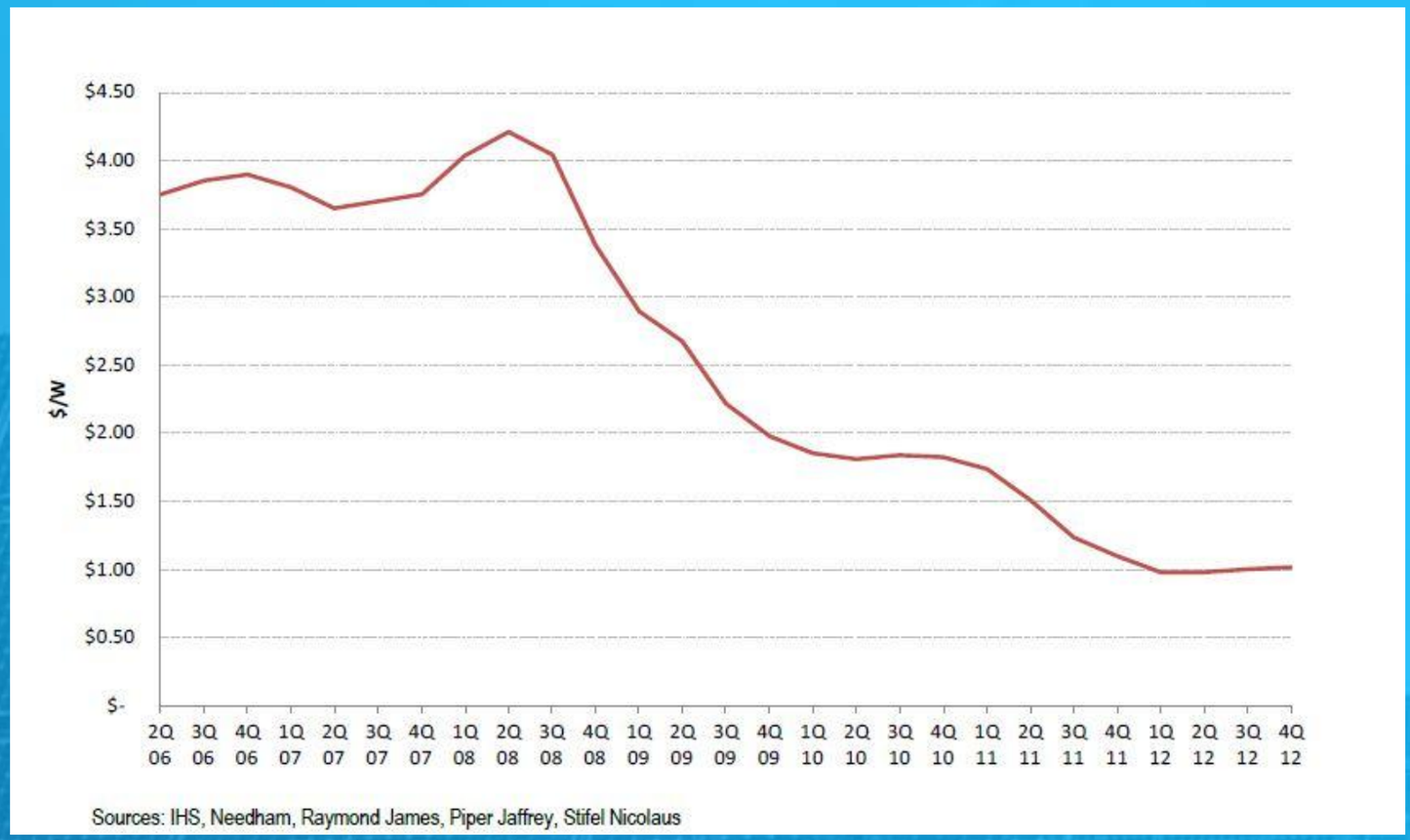
Cost and Incentives

- 40% drop panel prices in 2011
- Federal Tax Credit 30%
- State Tax Credit 35%
- Accelerated Deprecation (5 years)



Sources: IHS, Needham, Raymond James, Piper Jaffrey, Stifel Nicolaus

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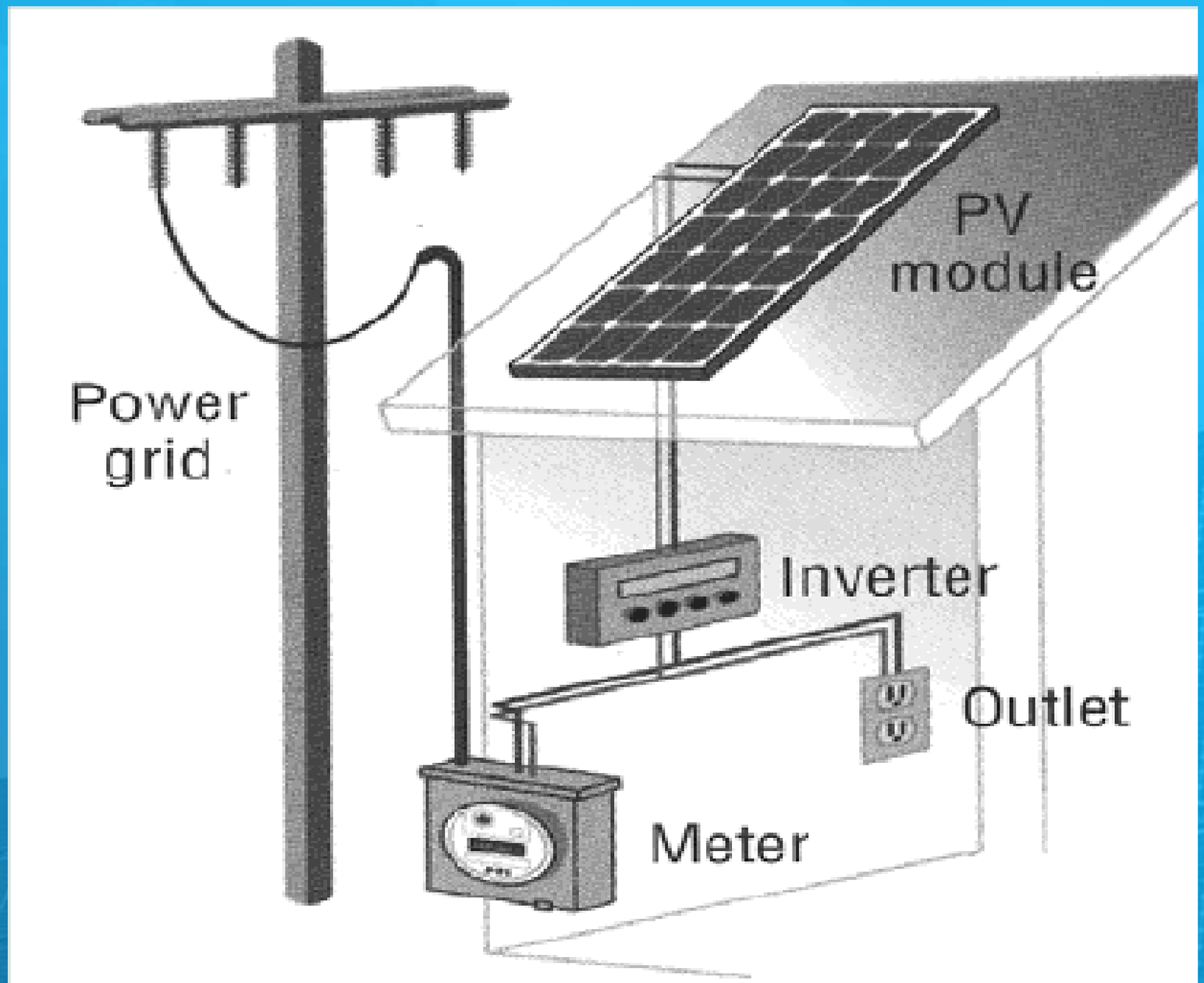
How Solar PV Works



Solar Offers Unique Business Value

- Convert unused roof space into a recurring revenue asset
- Implement solar project without incurring capital expense
- Investment opportunity
- Solar Power Lease
- PR benefits from renewable energy

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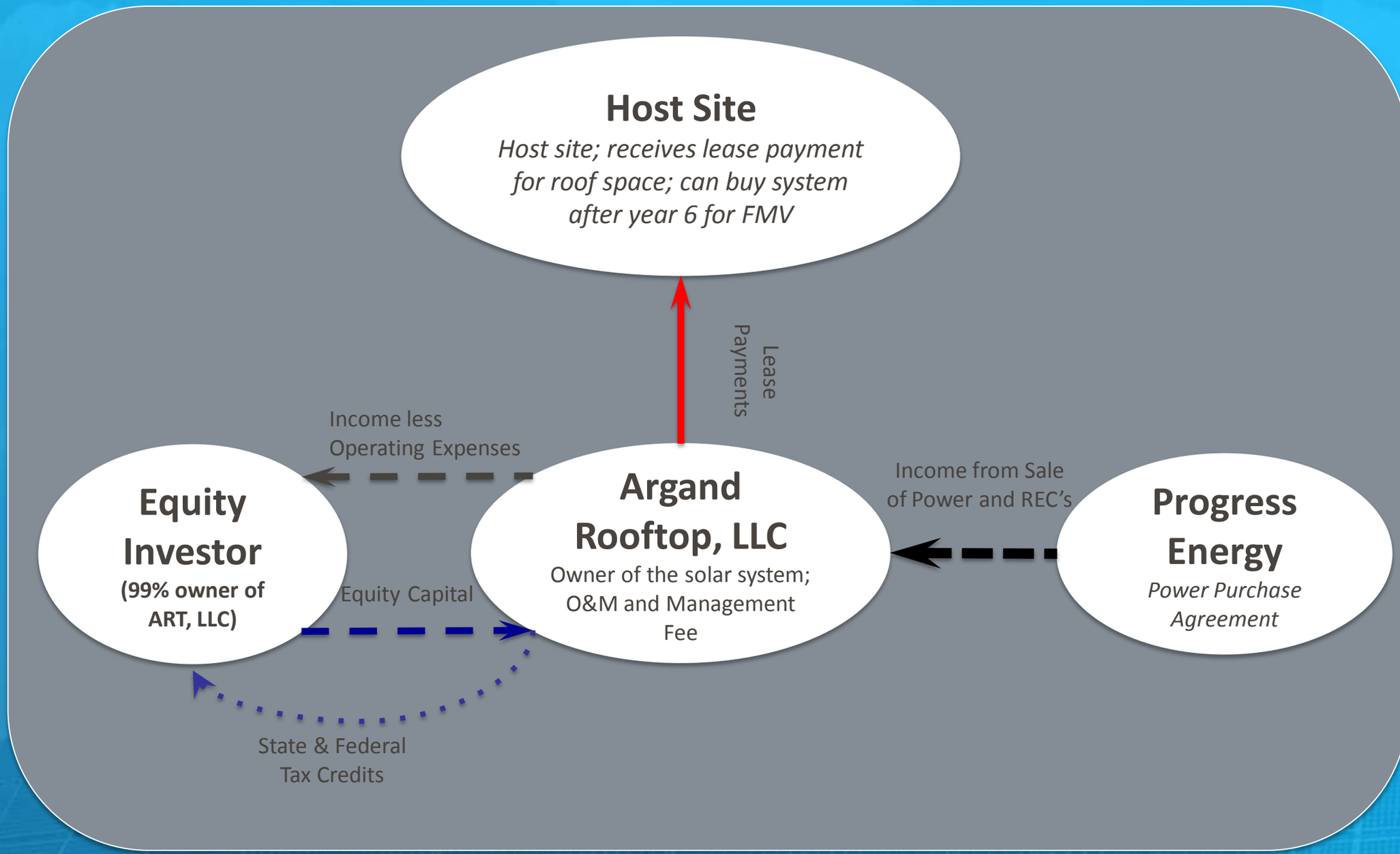
Third Party Owned PV System Model



Third Party Owned PV System

- PV system funded completely by Argand sourced investor
- No out of pocket costs for Host Site
- Leasing 40,000 - 80,000 sq. ft. of rooftop space of Host Site building, 20 year lease agreement
- Recurring revenue stream through upfront lease payment and subsequent annual lease payments to Host Site
- Fair market buy out option starting in year 7
- Extensive public relations and news coverage supporting sustainability initiatives
- Operations and maintenance provided by Argand
- Installation time less than 90 days

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Progress Energy SunSense Program

- Guaranteed payment for solar energy and renewable energy credits (REC's)
- Twenty (20) year binding purchase agreement
- Transferable to Host Site
- Rate of $0.15 per kilowatt-hour (kWh)
- Rooftop PV system size from 11 kW to 500 kW (DC)

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Case Study - Service Thread PV System

- **Location:** Laurinburg, NC
- **Install Date:** June 2011
- **System Cost:** $1,162,00.00
- **System Size:** 251 kW , 1190 solar modules
- **Roof Size Required:** 40,000 sq. ft.
- **Annual Output:** 330,000 kWh
- **Annual Income:** $59,000.00
- **Host Site Impact:** 20 year Host Site Lease, $50,000.00 upfront lease payment, $3,000.00 annual payment starting in year 8, host site buy out option in year 7

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Case Study - Service Thread PV System

Investor Benefit:

System Cost	$1,162,000.00
30% Federal Tax Credit or Grant	-$348,600.00
MACRS Depreciation (cash benefit)	-$353,000.00
35% NC State Tax credit (year 1)	-$81,340.00
Total First Year Cost	**$379,060.00**
Annual Income from PPA	$59,000.00
Less: Annual Expenses	-$13,500.00
Net Annual Income	**$45,500.00**
Annual After Tax Rate of Return (IRR)	**12%**

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Glen Raven PV System - Norlina

- **Project:** Glen Raven Sunbrella Yarn Manufacturing Center
- **Location:** Norlina, NC
- **Install Date:** August 2011
- **System Size:** 500 kW DC
- **Project Impact:** Providing enough electricity to power 50 homes, power and SRECs being sold to the Progress Energy.
- **Yearly Output:** 678,000 kWh

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J&S Wholesale PV System - Asheboro

Project: J&S Wholesale & Rental

Location: Asheboro, NC

Install Date: January 2012

System Size: 497 kW DC

Project Impact: Providing enough electricity to power 50 homes, power and SRECs being sold to the Progress Energy.

Yearly Output: 653,000 kWh

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Dorcas Ministries PV System - Cary

Project: Dorcas Ministries

Location: Cary, NC

Install Date: April 2012

System Size: 238 kW PV

Project Impact: Providing enough electricity to power 30 homes, power and SRECs being sold to the Progress Energy.

Yearly Output: 342,811 kWh

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Warren County HS PV System - Warrenton

Completion Date: July 2012

PV System Size: 496.86 kW (DC)

Estimated Annual Energy Output: 713,988 kWh (AC)

Project Impact: Provides enough power for 50 – 60 homes

Carbon Offsets: 996,381 lbs of CO_2 saved per year

2010/2011 Warren County HS Annual Power Usage: 1,315,200 kWh

Power Usage Offset Percentage: Provides 54.3% of total annual power usage for Warren County HS

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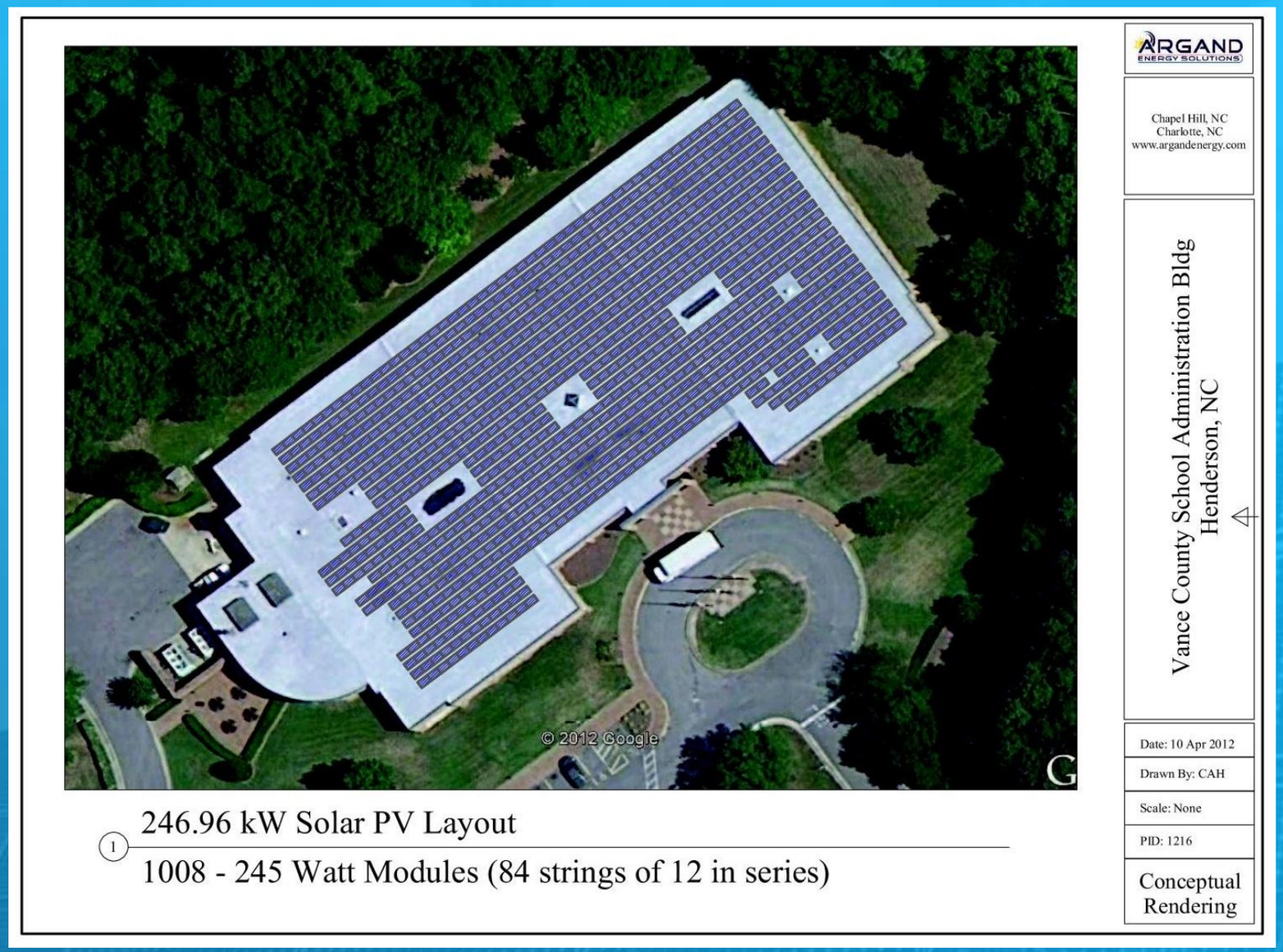
Vance County Opportunities

Vance County Schools Administrative Service Building



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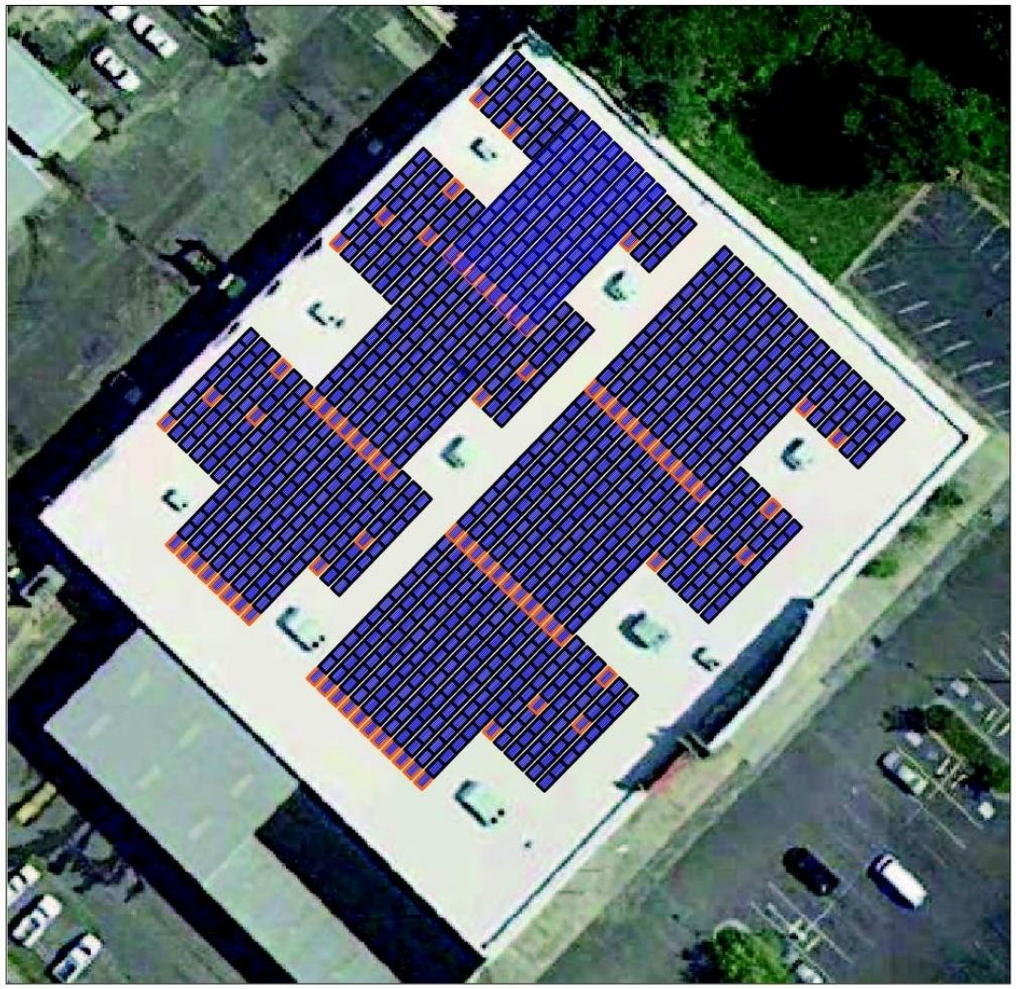
Vance County Opportunities

City of Henderson Operations Center



Solar PV Layout - 241.08 kW DC

1

984 - 245 Watt Modules (82 strings of 12 in series)

Durham, NC
Charlotte, NC
www.argandenergy.com

City of Henderson Operations Building
900 S. Beckford Drive, Henderson, NC 27536

Date: 24 May 2012

Drawn By: RBL

Scale: None

PID: 1225

Conceptual Rendering

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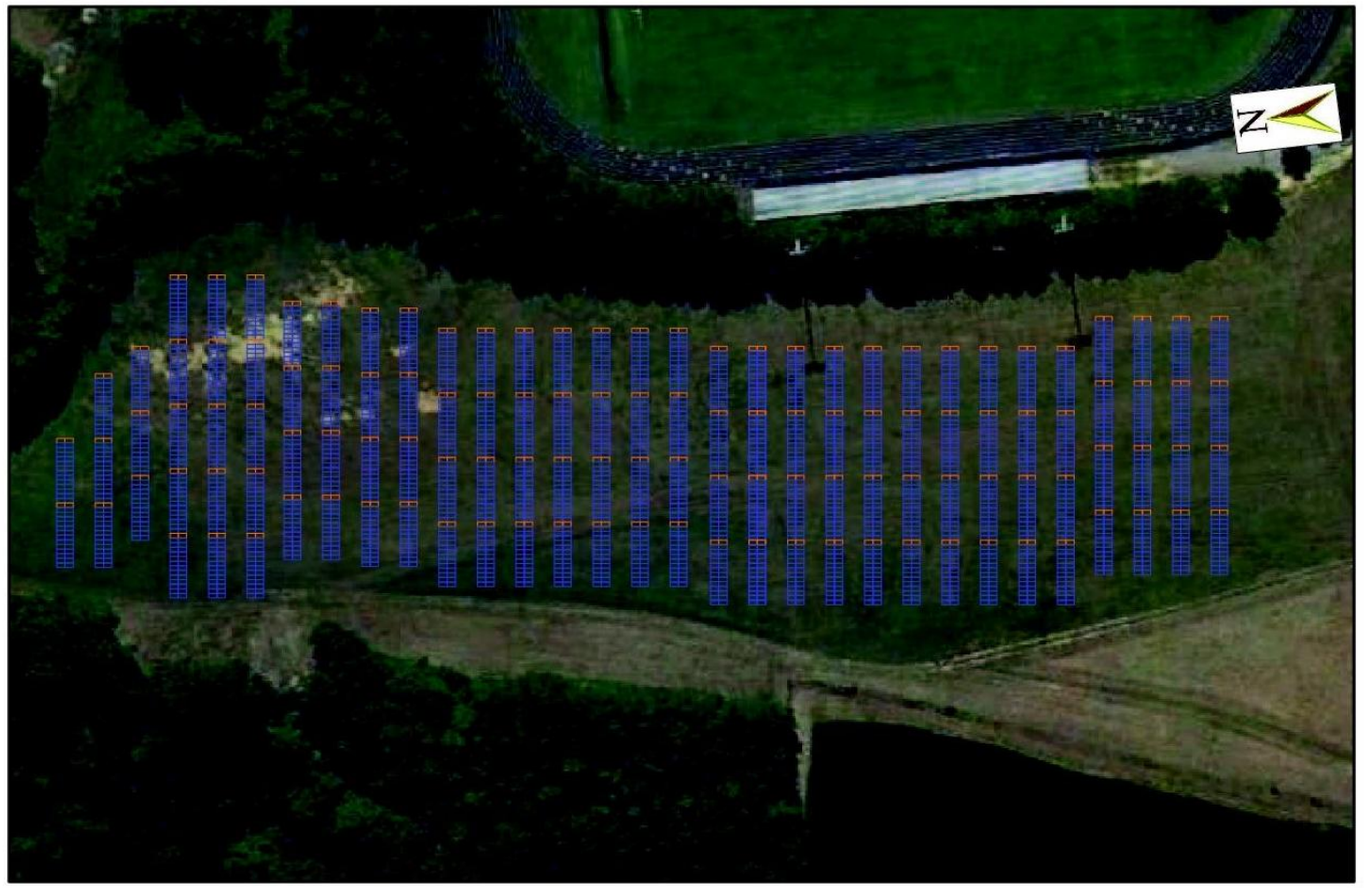
Vance County Opportunities

Southern Vance High School Land



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Chapel Hill, NC
Charlotte, NC
www.argandenergy.com

Vance HS
Stadium Solar

Date: 6 June 2012

Drawn By: CAH

Scale: None

PID:

Conceptual Rendering

850.64 kW Solar PV Layout

3472 - 245 Watt Modules (248 strings of 14 in series)

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