

# JACKSON, TN MEGAWATT

INSTALLED BY:



# EETN OVERVIEW

- ✘ Efficient Energy of Tennessee (EETN) provides solar and efficient energy technologies.
- ✘ Our approach to energy usage is to Evaluate, Reduce and then Produce.
- ✘ We help secure energy grant funding for our commercial clients.
- ✘ Our commercial solar technology systems are completely turnkey from initial site visit to final commissioning.

# PRODUCTS AND SERVICES

Residential and Commercial products and services include:

- ✘ Solar Energy – NABCEP Certified, design, installation and warranty
- ✘ Utility Scale Solar Photovoltaic (PV) systems
- ✘ Solar Thermal – design, installation and warranty
- ✘ HERS rating / Energy Audit
- ✘ Weatherization
- ✘ Power Factor
- ✘ Webinars and Seminars
- ✘ Grant Writing
- ✘ SHARP Solar Dealer (the only solar panel made in Tennessee!)
- ✘ CHyP Generator (electric generator fueled using cellulose material such as Switchgrass)

# NABCEP-CERTIFIED SOLAR PV INSTALLER



- ✘ NABCEP's goal is to develop voluntary national certification programs that will:
  - + Promote renewable energy;
  - + Provide value to practitioners;
  - + Promote worker safety and skill; and
  - + Promote consumer confidence

# 2010-11 ACCOMPLISHMENTS

- Installed the first 1 Megawatt (MW) solar PV system in the seven-state TVA Region, Knoxville, TN
- Assisted clients in receiving \$5 million in energy grant funding
- Installed 2.8 MW of solar photovoltaic panels in Tennessee
- Charter member of the Tennessee Solar Energy Industries Association (TenneSEIA)
- USDA Rural Development Honors award for the Rural Energy for America Program grant
- Installed the second 1 MW and **LARGEST** solar PV system in the seven-state TVA Region, *Jackson, TN*

# 1 MW AT AMERICAN DRIVE BUSINESS CENTER



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# SYSTEM PARTNERS

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- ✘ **System Owner:** Natural Energy Group, Knoxville, TN
- ✘ **Project Designer/Installer:** Efficient Energy of Tennessee, LLC, Powell, TN
- ✘ **Property Owner:** Jackson Industrial Holdings, LLC, Jackson, TN
- ✘ **Power Distributor/Utility:** Jackson Energy Authority
- ✘ **Power Provider:** Tennessee Valley Authority
- ✘ **Many more including:** Jackson Area Chamber of Commerce, Meridian Development Partners, etc.



# SYSTEM DETAILS

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- ✘ 1.05 MW solar PV system, consisting of 2 system types:
  - + 1 MW system ties directly into the Jackson Energy Authority grid and sells all of its clean, emissions-free electricity to the Tennessee Valley Authority (TVA) for a premium rate.
  - + 47 kilowatt (kW) system provides power directly to the American Drive Business Center to be consumed by the building occupant.

# SYSTEM DETAILS

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- Solar Panels:
  - 4704 Sharp ND-224UC1 Panels (1 MW)
  - 210 Sharp ND-224UC1 Panels (47 kW)
  - 4914 Sharp ND-224UC1 Panels Total
- Inverters:
  - 4 PVP-260LV-480 by PV Powered (1 MW)
  - 1 PVP50-208 by PV Powered (47 kW)
- Mounting:
  - Terrafix Solarpark Ground Mount

# PROJECT MILESTONES

Construction Began:  
November 22, 2010

Installed in 56 Days!

System Commissioned:  
January 18, 2011



# SUCCESSES FOR LOCAL COMMUNITY



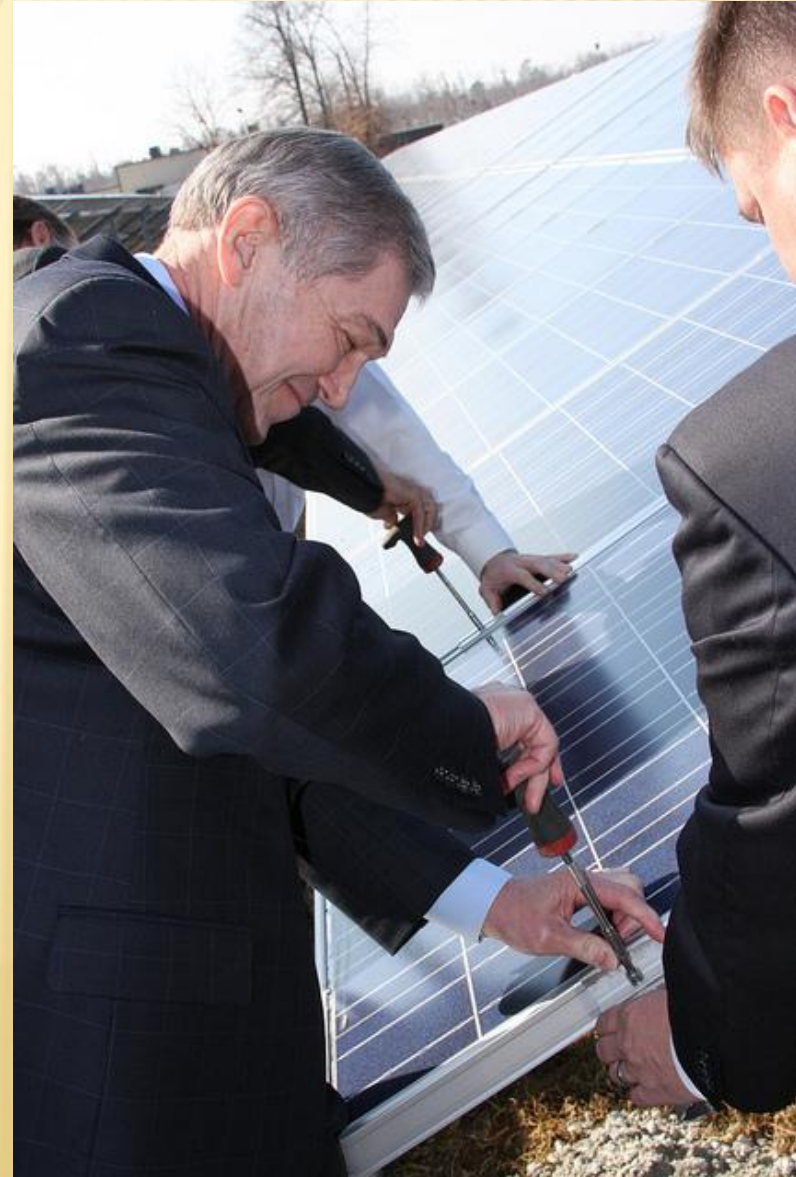
Tennessee Technology Center Newbern students visiting the Jackson MW in March 2011

- Jobs
- Large Private investment & Federal funding coming to Jackson
- Local Tax Revenue
- Solar Training opportunities
- Clean, emissions-free energy
- Reduction in building tenant/owner's vulnerability to rising utility costs

# SUCCESS FOR STATE/TVA



Governor Bill Haslam and  
President & CEO of TVA,  
Tom Kilgore, installed the last  
panel for the Jackson MW system  
on January 27, 2011



# MULTIPLE ECONOMIC COMPONENTS

The American Drive Business Center 1 MW solar farm's economic component has multiple elements:

- ✘ a recovered asset, *resurrecting an essentially abandoned "Brownfield" into a useful "Green" industrial facility*
- ✘ Opens doors for new types of manufacturing
- ✘ Innovation, uses non-traditional energy source to power building
- ✘ System will provide enough electricity to power approximately 200 average-sized homes in the area
- ✘ System uses products manufactured in-state

# SOLAR VALUE CHAIN



Creating jobs up and down the TN solar value chain

# CREATING JOBS IN TENNESSEE

- ✘ Sharp Solar's Memphis factory increased its workforce by 50% over the past year.
- ✘ The factory's solar production capacity has increased eightfold since 2003.
- ✘ Sharp now employs more than 450 union members in the production of solar modules in Memphis, up from 230 at the end of 2007.
- ✘ Sharp holds second-largest market share in North America.

# CREATING JOBS IN TENNESSEE

- ✘ AGC is the global leader in glass manufacturing.
- ✘ AGC Kingsport is the only 100% dedicated solar pattern glass manufacturing plant in North America.
- ✘ AGC Kingsport currently has around 60% market share in North America. The glass that is made in Kingsport, is shipped all over the world.
- ✘ AGC Kingsport has 350 dedicated solar jobs and is currently making energy improvements and installing new production equipment to the facility.

# CREATING JOBS IN U.S.

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- ✘ PV Powered Inverters manufactured in Bend, Oregon
- ✘ Terrafix Solarpark racking and rails are manufactured in the U.S. (CA & NY)

# CREATING JOBS IN TENNESSEE – FUTURE

- ✘ Hemlock Semiconductor, Clarksville, TN
  - + On-site construction workforce expected to peak at approximately 1,500 workers by mid-2011
  - + \$1.2 billion facility to manufacture polysilicon, the cornerstone material for solar cells
  - + 500 full-time workers
- ✘ Wacker Chemie, Bradley County, TN
  - + \$1.5 billion plant investment
  - + 650 new jobs

# SUMMARY

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- ✘ Largest solar PV system in 7-state TVA region
- ✘ Installed on a 5.5 acre portion of the 55 acre site that comprises the American Drive Business Center.
- ✘ Consists of a 1 MW PV array that is grid tied to Jackson Energy Authority under the TVA Generation Partner's Program as well as a 47 kW PV array that is tied directly into the facilities utility infrastructure.
- ✘ 1 MW array will provide enough electricity to power approximately 200 average sized homes in the area.
- ✘ Project created jobs up and down the solar value chain.

# FOR MORE INFORMATION, CONTACT:

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