

## The Solar Industry in Kentucky: A Brief Review

Prepared for the Interim Joint Committee on Local Government of the Kentucky Legislature

By Andy McDonald, Director, Kentucky Solar Partnership

The solar energy industry is a small but growing sector of Kentucky's economy. While the industry has experienced dramatic growth over the past decade in other states and countries, it has been slower to expand in the Commonwealth. The states that have experienced the greatest expansion of their solar industry are those that have established strong supportive policies. In the US, the key policy for driving the growth of the solar industry has been Renewable Portfolio Standards (RPS). In other nations, the primary policy is known as a "Feed In Tariff" or "Clean Contracts." Contrary to what one might assume, the largest US solar markets are not all in the desert Southwest – New Jersey has the second largest solar market in the country, and states such as Pennsylvania, New York, and Ohio also have growing industries.

### SOLAR WORKS IN KENTUCKY

There are now hundreds of solar installations across Kentucky which demonstrate that solar energy works in Kentucky. We have good solar resources, the technology is established and proven, and there are Kentucky-based businesses selling and installing solar energy systems. These small businesses can be found in Berea, Bowling Green, Burlington, Danville, Hart County, Lexington, Louisville, Owensboro, Paducah, and Somerset.

**AMERICA'S FIRST NET-ZERO-ENERGY SCHOOL IS IN KENTUCKY:** Richardsville Elementary in Bowling Green was designed to meet all of its annual energy needs with solar photovoltaics. Turkey Foot Elementary in Kenton County and Locust Trace AgriScience Farm in Fayette County were also built to achieve Net-Zero-Energy.

**SOLAR PHOTOVOLTAIC FACTORY OPENS IN DANVILLE:** Alternative Energies Kentucky, LLC began production in 2011, the first manufacturer of solar photovoltaic panels in Kentucky.

**KENTUCKY'S FIRST UTILITY-SCALE SOLAR PV FARM GOES ONLINE IN BOWLING GREEN:** Scotty's Warehouse installed a 2 MW PV power plant on their grounds in 2011 and is selling their power at a premium to TVA's Generation Partners Program.<sup>1</sup>

**SOLAR POWER IS USED ACROSS ALL SECTORS OF KENTUCKY'S ECONOMY.** Solar water heating and solar electric systems, along with daylighting and passive solar design, are now being widely used in homes, public schools, universities, Habitat for Humanity homes, low-income housing developments, the YMCA, fire stations, public housing, state government buildings, military bases, and commercial properties.

**THE BEREA SOLAR FARM ENABLES BEREA UTILITY CUSTOMERS TO BUY A SHARE IN THE SOLAR FARM AND RECEIVE REDUCTIONS IN THEIR UTILITY BILLS.**

**SOLAR PHOTOVOLTAIC POWER COSTS HAVE FALLEN BELOW 20 CENTS PER KWH.** When factored over 25 years – the standard warranty period for solar PV panels - the lifecycle cost for solar PV power, without any incentives, is approaching the cost for conventional power. This is the fixed cost for the power for the next 25-plus years.

**SOLAR WATER HEATING DELIVERS ENERGY IN THE RANGE OF \$0.06 - \$0.11/KWH,** when factored over the 25-year life of the equipment. This is the fixed cost for the power for the next 25 years.

**SOLAR ENERGY SYSTEMS ARE PROVEN TO PROVIDE EFFECTIVE SECURITY AGAINST RISING ENERGY COSTS.**

## BARRIERS TO GROWTH

Twenty nine states have Renewable Portfolio Standards driving the development of their renewable energy industries. **Kentucky has no such state policies.** The states with thriving solar energy industries have strong policies supporting renewable energy development.

Net metering enables electric customers to easily interconnect solar electric systems with the power grid. **Kentucky's net metering law limits the size of eligible systems to 30 KW, restricting the ability of**

**business, industry, and the public sector to install larger-scale solar electric systems.** Many states enable net metering up to 2,000 KW.

Limited financing options prevent many people from making the capital investment in solar technologies. **Easier access to capital and alternative financing options, such as Power Purchase Agreements and Solar Leases, would greatly support the expansion of Kentucky's solar industry.**

### SOLAR PROJECT PROFILE

**Richardsville Elementary**

**Warren County Public Schools, Bowling Green**

Opened August 2010.

72,285 square feet.

Designed to use **75% LESS ENERGY** than the average KY school.

First Net-Zero-Energy School in USA - will meet its annual electricity needs with Solar Photovoltaics.

Project Cost per Square Foot **LOWER THAN STATE LIMIT FOR NEW SCHOOL CONSTRUCTION INCLUDING COST OF SOLAR PHOTOVOLTAICS.**

Architect: Sherman Carter Barnhart



*The Kentucky Solar Partnership is a project of Appalachia – Science in the Public Interest, a 501(c)3 non-profit organization with offices in Mount Vernon and Frankfort, Kentucky. Working for healthy land and sustainable communities in Kentucky and Central Appalachia.*

Contact Information:

Andy McDonald, Director, Kentucky Solar Partnership

Email: [andyboeke@yahoo.com](mailto:andyboeke@yahoo.com) | Tel: 502-227-4562

Website: [www.kysolar.org](http://www.kysolar.org)