BRIEFINGS
April 2009

Florida TaxWatch

Center for Competitive Florida
Florida Council of Economic Advisors at Florida TaxWatch

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This report was initially released electronically at www.FloridaTaxWatch.org

The Positive Economic Impact of Solar Energy on the Sunshine State

Background

Like the nation as a whole, Florida's appetite for energy appears insatiable. As one of the largest economies in the world, the energy required to fuel the state's economic engine is significant. At the same time, the U.S. solar industry is at an opportune crossroad and Florida is uniquely positioned to take advantage of public and governmental encouragement to reach beyond the historical dependency of the U.S. on fossil fuel. With 100 Megawatts (MW) currently under construction, and 11 MW breaking ground on May 27, 2009,[1] Florida will quickly become the second-largest producer of electricity from the sun in the nation (California is the largest). This is a once-in-a-generation opportunity to attract a new, clean-tech industry to the state, bringing with it new jobs, taxpayer advantages, and critical forward thinking energy policy.

Potential for the Solar Industry in Florida

Florida has several advantages for the development of the solar energy industry.[2]

First, Florida has a natural competitive advantage in solar power generation compared to almost any place on earth. The average number of days with sunshine in North Florida is 361 – and that number is even higher in the southern part of the state.

Second, Florida has a trained workforce that complements the solar industry. Most of the construction jobs needed for solar[3] facilities can be drawn from the residential and commercial construction industries – both sectors of which are currently very economically depressed. Also, with thoughtful planning for the future, Florida has a robust university system that can provide the developing industry with bright, new talent. An important contributor to growing and sustaining the necessary talent for the industry is the University of Central Florida's Solar Energy Center which houses the "Employ Florida Banner Center for Alternative Energy." This

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[1] A megawatt is a million watts, which is a measure of energy.
[2] Navigant Consulting, "Florida Renewable Energy Potential Assessment," Final Report for Florida Public Service Commission, Florida Governor's Energy Office, and Lawrence Berkeley National Laboratory, December 29, 2008.
[3] Photovaltics directly convert sunlight into electricity.

Center is a partnership of universities, community colleges, technical institutes, workforce agencies, and industries to present a statewide training program for the alternative energy technologies of photovoltaics and solar water heating. The goal of the Banner Center is to supply education, training and workforce placement in alternative energy technologies for students located throughout Florida. Another state university striving to contribute is the "Florida Institute for Sustainable Energy at the University of Florida." Their need statement captures the essence and urgency for continued exploration and expansion of solar energy in the state, "Our quality of life, standard of living and national security depend on energy. A strong, balanced energy research program, based on the most efficient use of our natural resources while minimizing our dependence on imported energy, is critical to Florida and the U.S.[4]

Third, many manufacturers – both national and international – now consider Florida to be one of, if not the most, attractive solar markets in the U.S. Unlike California, Florida is permitting and building new facilities. And, in contrast to Spain and Germany, where solar energy is not a relatively new entrant to their economies, the Florida market has so far been stable. Historically, the Florida Public Service Commission has been open to innovation and is widely respected, thereby resulting in a stable, predictable market that attracts investment.

Benefits of Solar to Florida

Expanding solar energy production will provide many benefits to Florida. A critical mass of installed solar energy production **will lead to permanent, high paying jobs in Florida**. The demand for so-called "green collar" jobs[5] has been driven by an expanding solar market, which supports 15-30 jobs per MW produced.[6] The National Renewable Energy Laboratory's economic data estimates that if Florida installed 1,500 MW up to 45,000 direct jobs and 50,000 indirect jobs would be created.[7] These stable, high paying jobs could be a necessity to an energy-driven state struggling in the current economic crisis.

In addition, building large scale projects will both lower prices and drive innovation. Larger projects will naturally experience economies of scale and spur innovation in products, manufacturing, construction techniques, etc. as companies strive to differentiate their products/services so they can compete for large contracts.

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[4] Florida Institute for Sustainable Energy, University of Florida, http://www.energy.ufl.edu/.

[5] Green-collar jobs are typically defined as well-paying jobs that reduce pollution and waste and benefit the environment. See Bryan Walsh , "What Is a Green-Collar Job, Exactly?" *Time*, May 26, 2008.

[6] Kammen, Daniel, University of California – Berkeley, "Testimony before the US Senate Hearing on Environment and Public Works," Sept. 25 2007; and Navigant Consulting, Inc., "Economic Impacts of Extending Federal Solar Tax Credits," Final Report, September 15, 2008.
Available at http://seia.org/galleries/pdf/Navigant%20Consulting%20Report%209.15.08.pdf.

[7] S. Grover, "Energy, Economic, and Environmental Benefits of the Solar America Initiative," August 2007, NREL/SR-640-41998. Economic multipliers calculated using IMPLAN regional economic modeling software.

Florida has recently started providing incentives for solar power projects. The 2008 Florida Energy Bill (HB 7135) directs the Florida Public Service Commission to give more weight to solar and wind projects. It also provided $5 million for the Solar Energy System Incentives Program with rebate amounts of up to $20,000 for residential applicants and $100,000 for commercial applicants. As a positive sign of growth and interest, a large volume of applicants has caused this fund to be quickly exhausted.[8]

Florida Governor Charlie Crist has publically supported a shift to renewable energy – such as solar. Florida's residents and businesses alike must be good stewards of both the environment and a globally competitive economic engine. Essentially, the state must ensure that we "go green without going into the red" by encouraging the green industries of tomorrow while promoting – not harming – Florida's economy. There is no time to waste when it comes to expanding a nascent industry during this severe economic contraction, promoting good stewardship of our state and the planet in our care, and exploring new potential sources of the energy that we all demand.

Problems of Delaying Solar in Florida

A delay in approving another round of solar projects would prove devastating to Florida. Opportunities to attract research and development (R&D) and manufacturing investment and the accompanying expansions in employment are presenting themselves but will be lost if we do not act quickly this year. States like Pennsylvania, Texas, Arizona, and Michigan are actively recruiting solar companies to locate to their states. (For example, a German company just announced plans to locate a manufacturing facility in Pennsylvania because of its solar energy friendliness). Tens of millions of dollars of new revenue for counties will be lost. Existing projects will be completed in 2009 and 2010, demobilization will occur, the workforce will disband, and manufacturers will turn their attention elsewhere. The opportunity to attract R&D centers, bolster our universities' research, and expand and recruit manufacturing will almost certainly be lost to other states where renewable energy incentives have been passed and the market is perceived to be more predictable and stable.

It is Florida's Opportunity to Lose

Without aggressive pursuit, Florida will lose the opportunity to be the nation's leader in the solar energy industry. Because of the current economic crisis, and all that comes with such times, including higher unemployment, subsequent efforts to restart solar building will result in higher pricing than what otherwise could have been achieved since workers will have to be rehired, new workers trained, and the economies of scale of buying panels, trackers, and other major equipment in bulk and continuously would have been lost.

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[8] http://www.dep.state.fl.us/energy/energyact/solar.htm.

Immediate action and assertive policy measures need to be taken in the state's interest so that Florida can encourage and expedite solar technology projects. The permitting and regulation process for quick responsiveness to a convergence of well-timed opportunities and needs must be streamlined. A major boon to Florida's taxpayers would be the development and implementation of a uniform state standard with a single permit and application per solar system to improve and encourage further growth in the solar market.[9] Money, time, and other valuable resources saved by policies making the construction of solar power systems more efficient would accelerate technological progress and promote faster utilization by Floridians of what is naturally and readily available in the "Sunshine State" – solar power.

This *Briefing* was produced by **David Macpherson, Ph.D.**, Senior Director of Research and Development and a member of Florida Council of Economic Advisors at Florida TaxWatch, and the Rod and Hope Brim Eminent Scholar Chair in Economics at Florida State University, with assistance from **Deborrah Harris**, Chief of Staff, Robert Weissert, Esq. Special Counsel to the President and CEO, **Stephen O. Morrell, Ph.D.,** Executive Director, Center for Competitive Florida and Chair of the Florida Council of Economic Advisors at Florida TaxWatch, **Edward Stierli**, Research Intern, under the direction of **Dominic M. Calabro, President and CEO**. **David A. Smith, Chairman; Dominic M. Calabro, President, Publisher, and Editor.**

Florida TaxWatch Research Institute, Inc.

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About Florida TaxWatch

Florida TaxWatch is a nonpartisan, nonprofit research institute that over its 30-year history has become widely recognized as the watchdog of citizens' hard-earned tax dollars. Its purpose is to provide the citizens of Florida and public officials with high quality, independent research and education on government revenues, expenditures, taxation, public policies and programs. The three-pronged mission of Florida TaxWatch is to improve taxpayer value, government accountability, and citizen understanding and constructive participation in their government.

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