

Summary of the Florida TaxWatch April 2011 Briefing “Benefits of the Sunshine State’s Investment in the Solar Renewable Energy Sector”

As Florida experiences budget deficits and historic unemployment rates, decision-makers must look toward market trends, identify Florida’s strategic advantages, and position the State to capitalize on its resources to achieve sustainable growth and prosperity. During these difficult fiscal and economic times, the solar renewable energy sector continues to exhibit strong steady growth in an expanding market. **The Sunshine State is poised to create a strong market for this renewable energy sector due to its strong solar resources that would create new jobs and economic growth.**

Market Trends and Opportunity

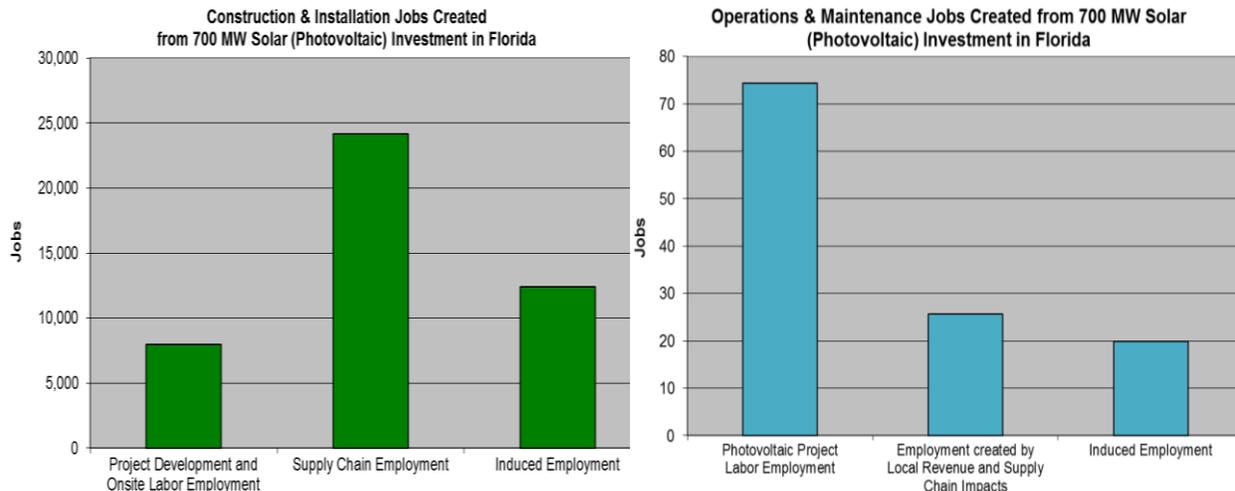
Currently, the solar energy sector exhibits unrivaled growth nationally and globally. In the U.S. alone, solar panel installations increased by 61 percent in 2007 and 84 percent in 2008. Even with the effects of the Great Recession beginning in the final months of 2008, U.S. solar installations increased by another 40 percent in 2009. Private-sector investors have taken notice of this flourishing nascent market. From 2009 to 2010, the U.S. solar market grew from \$3.6 billion to \$6.0 billion – a 40 percent increase in investment in a year.

The opportunity for the solar energy industry to create jobs is significant. As of August 2010, 50 percent of all U.S. solar companies were offering new job openings and planned to continue to actively hire over the next 12 months. Only 2 percent of solar companies are planning on cutting staff.

Florida Job Creation

Investment in 700 MW of solar energy (photovoltaic modules) would send a strong market signal, to attract this high growth sector and manufacturing base to Florida. According to the U.S. Department of Energy’s *Jobs and Economic Development Impact (JEDI) Model*, **an investment in Florida of 700 megawatts of solar energy (photovoltaic modules) over a three year period would generate thousands of new jobs in the state.**

An investment of this scale and magnitude has a high probability of stimulating a new energy economy in Florida with strong growth potential. A new energy economy would localize supply and value chains in Florida to meet this new demand, which would generate jobs and stimulate economic growth. **The construction, installation labor, and installation labor related services for 700 MW would create 8,000 new jobs alone.** Even after installation, the impact of such an investment in Florida could create new manufacturing activity and jobs in the production of solar panels (including photovoltaic wafer, cells, and modules).



Source: U.S. Department of Energy Jobs and Economic Development Model (JEDI) Photovoltaics (PVI.10.03), 2011.

Florida’s manufacturing industry is also significantly boosted with investment in solar energy. As demand has grown in this sector, new solar energy companies have raised production levels for solar panels while existing companies have entered into and begun producing within this market. Where this has occurred, the area’s manufacturing sector has

been bolstered significantly. **Nationally, manufacturing in the upstream production of solar photovoltaic components increased dramatically in 2010** due to strong global demand, the doubling of domestic demand, and increases in manufacturing production and capacity. Nations and U.S. states that have promoted this industry are able to use solar energy as an alternative technology sector that expands and strengthens their manufacturing base.

Solar manufacturing facilities also stimulate additional production of equipment and materials, such as rails, clamps, fittings, connectors, breakers, laminates, and inverters. The localization of the upstream supply chain for manufacturing of solar energy in Florida would also grow the downstream supply chain of distribution and installation. The downstream effects facilitate the growth of Florida's small businesses, such as solar installers, electricians, wholesale trade firms, and specialized roofers. Furthermore, solar energy plants require an extensive network of suppliers for its equipment and materials. These suppliers can create new business clusters in Florida, spurring additional manufacturing of products such as glass, physical vapor deposition machines, and advanced wire saws.

Florida's Current Position: Advantages and Investment Opportunity

There are over 2,000 companies in the U.S. that exist in the solar supply chain. In addition, 39 facilities are actively manufacturing solar photovoltaic components (polysilicon, wafers, cells, modules and inverters). While its strategic advantages are significant, Florida does not have one solar manufacturing facility and lacks a strong clean energy economy like other states such as Texas and Arizona. Solar Energy facilities have principally located in California, Arizona, and Oregon. However, solar manufacturing facilities are on the move and looking to penetrate new markets. For example, while the Midwest has historically been dormant in solar production, recent plant announcements show a new shift toward the region.

Florida has several advantages to attract a high growth solar energy market. One of the most apparent advantages is Florida's strong solar resource, which is of great importance because it affects the level of electricity generated from solar technologies, which directly impacts an investor's return on investment. The Sunshine State's strong solar resource allows the state to cost-effectively deploy solar technologies and creates the potential for a strong local market.

Furthermore, Florida has an established mature solar installation market, which reflects the state's availability of skilled labor that can produce and deliver these products with quality control. This is a key indicator that solar manufacturers assess when selecting a location for production. Florida also has a highly trained workforce suitable for this industry. For example, with the termination of the U.S. space program, its employees will need to transition to highly skilled jobs, such as solar development.

Florida has ports that serve as international hubs that readily export and import materials and product, which lower transportation costs – one of the most important decisions of a manufacturer when deciding to relocate. Furthermore, Florida is also advantageously positioned to serve emerging economies in South America where solar technology is a cost-effective alternative.

A Sunsetting Opportunity

While competition and growth opportunities in distribution and installation markets will exist far into the future, the opportunities to establish solar manufacturing and renewable energy manufacturing and business clusters within Florida are closing. As manufacturers begin to open, move, and relocate, the opportunity to attract them will not be long-lasting as manufacturers have large fixed assets and are not transient. **If Florida does not attract these industries now, companies will establish their facilities and networks in other states – creating new jobs and economic prosperity at the expense of Florida's competitiveness. In order to take advantage of this opportunity before it vanishes, manufacturers will need a greater commitment by Florida that the Sunshine State is taking substantial steps to become a leader in this new dynamic, high growth market.**

Overall, a strong solar renewable energy sector in Florida would create thousands of new jobs – approximately 45,000 for 700 megawatts – and significant activity in a key economic sector like manufacturing. The potential for high-technology clusters also exists within the solar renewable energy sector in Florida, which would bolster strong, sustainable economic growth that would benefit suppliers, business, and Floridians alike.