SOLAR YPSI.org

Help Build a 5 Megawatt Solar Power Plant on the Roofs of Ypsilanti, Michigan

Ypsilanti, Michigan, is a small post-industrial city seeking partners to help residents, non-profits, and businesses install 1,000 solar roofs averaging 5kW each. Combined, these individual solar rooftops will create a 5 MW Solar Power Plant. It is an exciting environmental and economic challenge, but the costs can be daunting. While solar photovoltaic power currently has a positive return on investment (ROI), the payback period may take 6 years or longer and requires a large initial investment. As a result, we are seeking $5 million to create 1,000 small grants for residents to reduce the cost of their solar installation by as much as a third in order to encourage more installations in Ypsilanti.

Why Ypsilanti?

Why solar power in Michigan? Not because it's easy, but because it's hard—both environmentally and economically. If we demonstrate the viability of solar power locally, it will prove that it will work for many other places too. Michigan is surrounded by the Great Lakes, which make the state one of the cloudiest in the nation. However, we are convinced that solar power can work in Ypsilanti because of our initial successes and motivated by Germany the leaders in solar power worldwide, which has even less solar exposure than Michigan. Why Ypsilanti, specifically? Our success rate in generating power in Ypsilanti so far is impressive with over 130kW installed so far. Our greatest difficulty may not be the local climate, but economics. The median income in Ypsilanti is about $30,000 and so the upfront cost of installation combined with the slow ROI is a significant barrier to overcome. Grants will be a necessary part of fostering the adoption of solar power locally.

Our dream is to make Ypsilanti a "**Solar Destination**," a center for solar practice and education. We are already off to a great start with significant solar installations already in place around the city. Over the past 9 years, SolarYpsi has been directly involved in raising over $200,000 for solar installations for local non-profit organizations. Our latest project received a $93,596 from an anonymous donor to install 5kW solar roofs on each of 6 local non-profit locations. In addition to our economic development gains, we have also been busy on the education development front reaching over 4,300 people in face-to-face solar presentations over the past 9 years. Google selected SolarYpsi for a "Search" ad campaign for a nationally televised ad that has also been viewed a quarter million times on YouTube. The founder of SolarYpsi, Dave Strenski, has presented solar power at TEDx, Ignite, iTunesU and many local organizations. He has also published articles on solar power in national magazines (See side bar for more details).

Why Now?

The time to act is now for several reasons. Climate change is accelerating, and we need to move quickly. The economics of renewable power are also about to change. While prices are falling, the main economic driver has been the Federal Renewable Energy Tax Credit which is due to expire in 2016. We need to build the volume of solar installations before it expires, so solar and all renewable energies can stand on their own without government subsidies. We have our local reasons as well: Last year with the help of SolarYpsi and Environment Michigan, the City Council passed a resolution supporting a goal of a 1,000 solar roofs by 2020. This demonstrates the City of Ypsilanti and the Ypsilanti community's commitment to solar power. It has also been shown that solar installations encourage neighbors to install solar, which multiplies every grant given out.

The Current Situation

A typical Michigan home consumes approximately 20 kWh of electricity per day. According to the National Renewable Energy Laboratory (NREL), Michigan gets 4.2 hours of "peak" sun per day. This means that the typical Michigan home needs 5,000 watts of solar panels on their home to be 100% solar powered.

A 5,000 watt solar installation currently costs a homeowner about $15,000 to install. The Federal Renewable Energy Tax Credit refunds 30% of this cost on their taxes, and the local utility company, DTE Energy, has a Solar Currents program that funds about 15% of the costs with an upfront payment and a production credit over 15 years. This makes the payback period for a solar installation in Michigan about 6 years. While this is a positive return on investment and the solar installation will last over 30 years, the ROI is long and the upfront payment is large, which still hinders the adoption of solar power.

The Plan

The plan is to establish a $5 million fund managed by the City of Ypsilanti. As home owners apply for their building permit to install solar on their home or business, they'll fill out a simple application for a city solar grant that pays $1 per installed watt up to a limit of $5,000 per project. When the system is installed and approved by the Building Inspector, the city releases the funds to the homeowner. By running the project through the City of Ypsilanti, there is little to no overhead. City staff would keep track of a small amount of additional information to implement this grant and could perform it as a part of their normal workload. This creates a program with near zero overhead or administration costs. **Every dollar in this program will go towards installing solar power.** Any overhead costs to advertise or administer the program will be covered by community volunteers.

SolarYpsi has already performed a roof survey and has identified over 1,800 residential roofs suitable for solar power. There are many, many more locations if vacant lots, businesses, and commercial buildings are included. The locations are stored in a database and homeowners will be encouraged via a letter campaign to explore solar for their homes.

The project can also be broken up into several performance driven stages. For example, an initial $1 million grant could launch the project with additional grants following as funds are consumed, with a hard deadline established to ensure the project has an endpoint.

The Gift that Keeps on Giving

The solar rooftop power plant project provides a chance to take a difficult challenge and turn it into a remarkable opportunity. Time is short, the climate is warming, and Ypsilanti residents are struggling to make ends meet. We see this as a chance to make a difference. We can reduce carbon emissions with renewable energy. This project will benefit our local economy by creating green collar jobs. This project will reduce energy costs to economically distressed homeowners. This project will encourage people from other states to visit and learn more about solar power. Will you help make it happen?

Contact

SolarYpsi is online at http://SolarYpsi.org. An electronic version of this letter can be found at http://SolarYpsi.org/5MW_project.pdf. View videos about solar installations in Ypsilanti on SolarYpsi YouTube Channel http://youtube.com/solarypsi. Dave Strenski, SolarYpsi Founder; 323 Oak Street, Ypsilanti, MI 48198; Dave@Strenski.com; 734-383-9077

SolarYpsi Timeline

2005 $6,000 for Ypsilanti Food Cooperative solar install.

2007 $1,050 from community for City Hall solar project.

2008 $35,980 for City Hall and Cooperative solar projects.

2008 $44,620 for River Street Bakery solar project.

2009/10 Approximately $10,000 in grant money from giving solar talks in the community.

2010 Concentrate Media makes video about SolarYpsi.

2010 Solar Energy Industries Association adds SolarYpsi to promotional video.

2011 Grant for solar panels on Adams Elementary School.

2011 Google makes video about SolarYpsi for "Search" commercial. Air on TV and receives ¼ million views on YouTube.

2012 Solar talk on iTunesU.

2013 Solar TEDx talk.

2013 Environment Michigan report on building a Solar Destination.

2013 1,000 solar roof project launched.

2014 $93,596 grant for six solar installs in Ypsilanti from anonymous donor.

2014 SolarYpsi published in Homepower Magazine.

2015 Ypsilanti featured as Clean Energy Community