

# SOLARIZE

## Northern Indiana

### January 2018 Update

#### *Solarize Initiative Brings 74 New Solar Homes to Area in 2017*

Back in June, a team of volunteers from Goshen, South Bend, and Elkhart attended a training in Indianapolis to prepare to lead a local Solarize initiative in northern Indiana. Solarize is a community-powered model based on a group discount for solar panels and education.

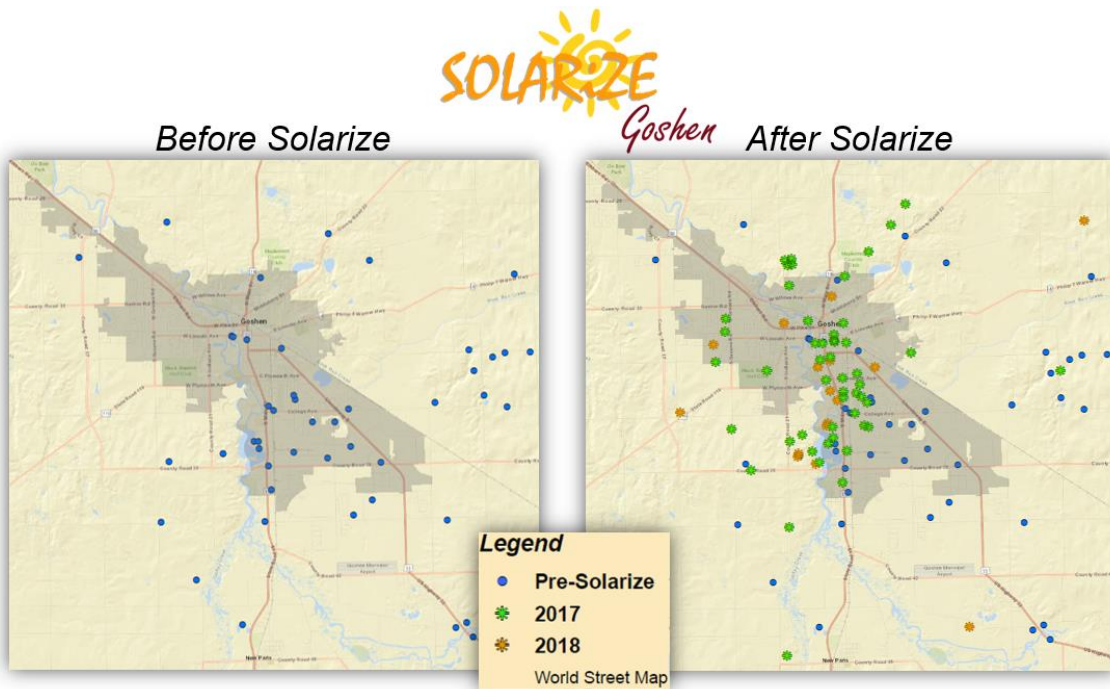
The 17-member Solarize team in northern Indiana included retired engineers, sustainability professionals, representatives of faith communities with solar energy, and solar homeowners - with input from the City of Goshen, City of South Bend Office of Sustainability, and the Michiana Area Council of Governments (MACOG).



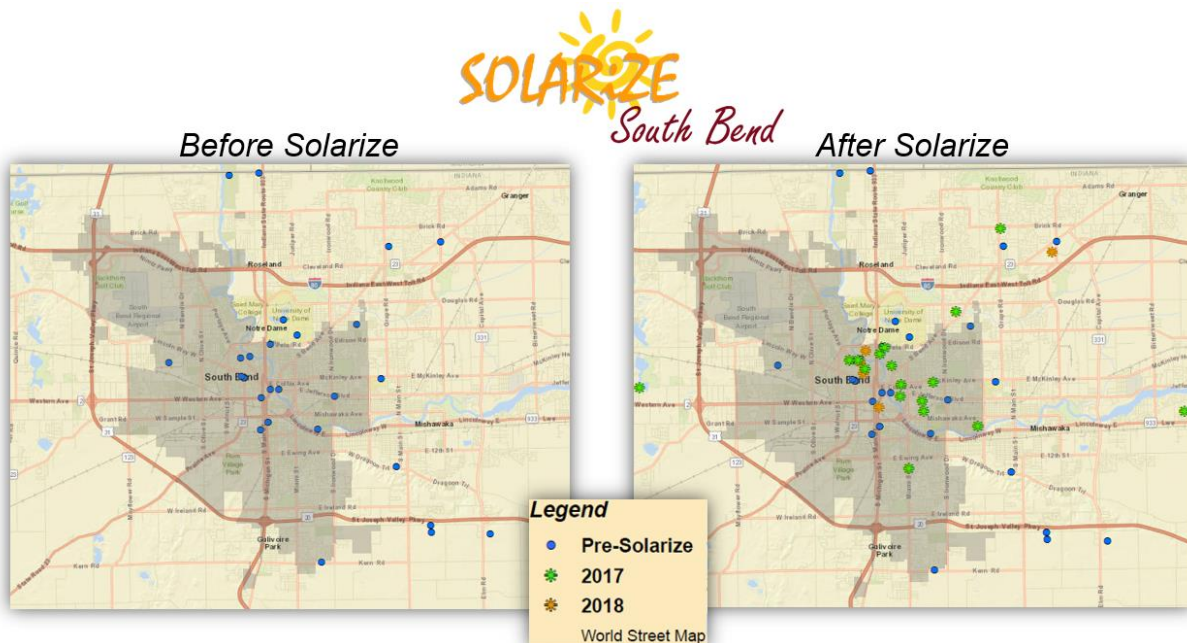
*Solarize team members from South Bend. Jerry Mohajeri, front left, helped the Islamic Society of Michiana install 20 kW of solar panels in 2016, which has now shaved \$4,300 from electricity bills. Several area churches were also able to install solar, thanks to Hoosier Interfaith Power and Light.*

This fall, more than 370 people attended workshops to learn about whether their home or business might be suitable and to identify barriers like shading, roof orientation, roof condition, cost, or extra approval steps required by Homeowners Associations or local Historic Districts.

Now over six months later, Solarize Northern Indiana has assisted 74 households, a church, and a local business in going solar, with 21 more installations scheduled for 2018. Most of the projects were concentrated around Goshen and South Bend, as shown in the maps below:



The number of residential solar projects within the City of Goshen limits quadrupled from 11 to 52.



The number of South Bend solar homes jumped from 6 to 22 (Maps exclude new non-Solarize projects).<sup>1</sup>

Glenn Gilbert, a team leader in Goshen, said “We achieved our goal of reaching a tipping point. It will no longer be unusual to drive by homes and churches with solar.” The success of the initiative may be due in part because people didn’t realize that costs had fallen dramatically over the last few years. “Back in 2010, I paid about \$9 per watt for a small 2 kW system.” Around

<sup>1</sup> The growing number of solar projects in Indiana can be found on the map maintained by the Solar Indiana Renewable Energy Network (SIREN) at [www.sirensolar.org](http://www.sirensolar.org). See a project missing? Contact [SIREN](#) or click [here](#).

then, the typical cost was between \$7 to over \$8 per watt (W).<sup>2</sup> By 2017, the average installation cost for a small residential system fell to \$2.80 per W, which includes all installation costs like labor and permitting. If you do the math (Hint: 1 kW = 1,000 W), for a 5 kW system that's now about \$14,000, rather than \$35,000 - \$40,000. The Solarize discount was \$2.53 for a basic 5 kW roof-mounted system with a post-program rebate bringing that down further.

Gilbert added, "I talked to many people that said they have wanted to install solar for years, but didn't know where to begin. This Solarize project gave them the encouragement and information to make the leap. We now have a much larger community of people with education and experience. They will be talking with their neighbors and hopefully the enthusiasm will continue to grow."

By encouraging candidates to request site visits only if they thought their home was a good candidate and by leveraging collective buying power, the Solarize team was able to secure the discount and rebate through a competitive bidding process. When the last panels are up this spring, 70% of site visits will have resulted in a new solar-powered home.

Brian Burkholder, President of Solar Energy Systems, said "Before, we'd have to spend a lot more time answering general questions before even talking about specifics of a site. And people wouldn't know what to expect in terms of cost and their electricity needs. With Solarize, people were well-informed and seriously considering solar by the time we got to their home."



*Solarize Workshop in Goshen*

Burkholder encourages other communities to look at the Solarize model. "This initiative was a success thanks to the Solarize team and the awesome participants. I'm proud of our crews who have been working long hours for months, even missing family vacations, to help as many people as possible beat the deadline. We geared up with new equipment and an expanded facility so that we were installing 3-4 homes a day in good weather by the end. We wish we could have helped everyone make it."

Leah Thill, who helped coordinate the volunteer team added, "The capacity of installers across the state couldn't meet the high demand in the face of this unprecedented deadline, even with companies from out-of-state coming into Indiana."

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<sup>2</sup> National cost estimates vary based on assumption, with high variation between local markets. See [National Renewable Energy Laboratory](#) quarterly and [Berkeley National Laboratory](#)'s annual reports.

This overwhelming local response may be due in part to the [City of Goshen](#) being one of the first 40 communities in the U.S. to earn recognition from the Department of Energy SolSmart program last summer for being solar-ready, with technical assistance offered through MACOG.



*Mayor Stutsman of Goshen accepting the DOE SolSmart Gold Award*

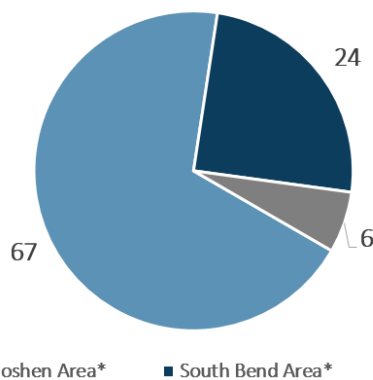
“The Solarize team thought we were optimistic with a goal of 60 installations, but we got a bigger response than we imagined particularly around Goshen,” Thill said.

The Solarize initiative’s other focus area was South Bend. Back in July, the South Bend Common Council unanimously approved [Resolution 4650-17](#) in support of the citizen-driven initiative.

Therese Dorau, Director of the [South Bend Office of Sustainability](#), said “The City works to lead by example by reducing the climate impacts of our own operations, but we also strive to foster a sustainability mindset among residents and businesses, and to empower South Benders to make smart choices that cut costs and protect our shared resources. It has been truly inspiring, then, to see this volunteer-driven grassroots effort experience such great success. The City is proud of our small role in the Solarize initiative - clarifying and streamlining the local permitting processes - but prouder still of the Solarize team and the South Bend residents that chose to install solar energy systems in 2017.”

### Solarize By the Numbers: 97 Projects (76 Installed in 2017)

Number of Installed Projects, by Location



Location	Total Capacity
Goshen Area	485.8 kW
South Bend Area	164.6 kW
Other: Osceola, Middlebury, New Paris, etc.	55.4
<b>Total</b>	<b>705.8 kW</b>

\*Based on Goshen and South Bend addresses (Goshen city limits = 44; South Bend city limits = 16).

**Context:** Average Home: 6 – 9 kW required

*76 projects were completed in 2017, with 21 more scheduled for 2018*

By spring, nearly 100 Solarize projects will have popped up in the Michiana area alone, with dozens more being installed through Solarize initiatives elsewhere in the state. In the local area, 535 kW out of 706 kW of solar is already installed as part of the 76 projects done in 2017. The total 706 kW of solar installed to be installed in northern Indiana would power about 78 typical Hoosier homes.

The average Hoosier household uses about 11,600 kWh, according to the U.S. Energy Information Administration. However, many newer and efficient homes use much less. Annually, this keeps 1.4 million pounds of carbon dioxide out of the atmosphere and replaces about 719,000 pounds of coal. This has the same impact as taking 140 cars off the road or planting 17,000 trees.<sup>3</sup>

The solar panels installed so far have generated \$1.4 million in private investment in clean energy, supporting middle class installation jobs in the local economy and increasing the self-sufficiency of area homes for decades to come.



*The Bombergers of Goshen were able to clip solar panels directly to their roof without drilling holes in the metal. In 25 years, the panels are guaranteed to produce at least 80% of their initial power output and the metal roof on their new home won't need to be replaced for decades, either.*

Although the initiative is officially over and not accepting additional projects, the team may re-assemble in the future to offer educational workshops for those curious about their neighbor's new solar system. People can still express interest at [www.SolarizeNI.org](http://www.SolarizeNI.org).

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<sup>3</sup> Tools: [PV Watts - National Renewable Energy Laboratory \(NREL\)](#), [Greenhouse Gas Equivalencies Calculator](#), [Environmental Protection Agency \(EPA\)](#).

## *New State Law Creates Local Rush to Go Solar*

Despite a snowy December, the local “Solarize” initiative also helped dozens of local homeowners gear up to beat the deadline imposed by the controversial solar law which was passed in 2017. Starting in 2018, the law is phasing out something called net metering which affects how excess electricity flowing onto the grid is accounted for by the utility. While new solar projects can still get net metering until mid-2032 as long as they install by mid-2022, many hoped to be grandfathered in for 30 years by installing in 2017.



*Larry Cadwell's online monitoring system shows the increase in the power generated just after clearing December snow from his new ground-mounted panels, installed before the Dec 31<sup>st</sup> deadline.*

However, not everyone got their system fully installed in time. Kathy Schuth of South Bend said, “Due to the tremendous interest in solar and late-2017 lake effect snow, unfortunately I was one of a few homeowners that were not able to get solar panels up by the deadline. It just wasn’t safe to get the panels up with the ice and pitch of my roof, even though the wiring and other components to connect to the grid were done.”



*The Haas-Wheeler household from South Bend had their panels installed the last week in December, despite the snow. Homes with less insulated attics had more problems with ice accumulation, as heat escaping through the roof melts and refreezes the snow.*

But the matter is not yet settled. A tweak to the new state law has just been proposed through House Bill 1069, which would grandfather schools and municipalities into net metering for 19.5 years instead of 14.5 years, by extending the termination of net metering from 2032 to 2037.

If the proposed bill does make it more favorable for cities to go solar, Mayor Jeremy Stutsman of Goshen may take another look at solar, “Goshen was just starting to look at various ways to benefit from solar when the new state law was passed. Instead, last year the city leased marginal land by the [wastewater plant](#) to a solar developer, which will become a revenue stream and was a low risk way to gain experience with the technology.”

Mayor Stutsman added, “We may want to look again at whether a city-owned project could save the city money and provide protection from increases in electricity rates. My administration will continue to find existing and new creative ways to make our community greener.”

Solarize participant Michael Dickens of Goshen said, “I would hope that lawmakers would consider a small exception for anyone like me [a homeowner] who was not to blame for missing the deadline, due to the weather and unprecedented load on local contractors. We signed the required applications and agreements with the utility months ago and have already invested thousands in down payments and re-roofing.”

Regardless of what happens to state policy Phil Sakimoto, who works for Notre Dame, still plans to go solar in 2018. “Of course I’d love 30 years of net metering, but 14.5 is enough to pay off the cost of the system. By that time, I may well no longer be living in this house anyway, but that doesn’t matter. What does matter is that whoever is living here will have a greatly reduced carbon footprint.”



*The Magatti family’s solar panels will generate about 100% of the electricity they use in a year, replacing grid electricity that primarily comes from coal (66%) and natural gas (20%) from [NIPSCO](#).*

Meanwhile [LaCasa](#), a nonprofit housing agency, continues to raise money for energy efficiency upgrades or solar panels if the fundraiser is successful enough. Cutting down rising electricity costs will help keep rent affordable. Since an apartment building is always using a lot of electricity, changes to net metering won’t impact a solar project. LaCasa doesn’t expect to send electricity to the grid even on the sunniest day of the year.

LaCasa has already raised about \$1,800 just from donations that Solarize participants, which were contributed as a way to “pay-it-forward” to benefit lower income families. Supporters of Solarize near South Bend have been contributing to the [Near Northwest Neighborhood, Inc.](#)

Thill, who coordinated the volunteer team recalled, “It was important for us to recognize that this initiative primarily benefits homeowners. Even then, homeowners need the credit score or cash to make the upfront investment required to benefit from lower electric bills. We hope others in the community will be inspired to support solar projects that benefit lower income folks.”

***Note:** [Rep. Dave Ober](#) drafted HB 1069 referenced above. He previously stated in Committee that the intent would be to give municipalities and schools more time to install larger projects and recoup higher savings over a longer period. Rep. Ober was quoted recently in the [Indy Star](#).*