



Energy Assistance to Energy Waste Reduction Programs

Superior Watershed Partnership

SWP Energy & Climate Office Program Manager: Tonya Swenor
Energy Conservation Corps Coordinator: Jonathan Waltz

WHO WE ARE...

The Superior Watershed Partnership (SWP) is a local Great Lakes non-profit organization serving the Upper Peninsula of Michigan. The SWP implements a variety of conservation and public education projects.

The Superior Watersheds Partnership also provides technical, educational, and monitoring assistance on a variety of Great Lakes protection initiatives with emphasis on Lake Superior, Lake Michigan, and Lake Huron.

The SWP is focused on completing projects that provide documented, measurable results.

Recently celebrated 20th anniversary!

Employ 18 year-round employees

Employ 30 seasonal workers

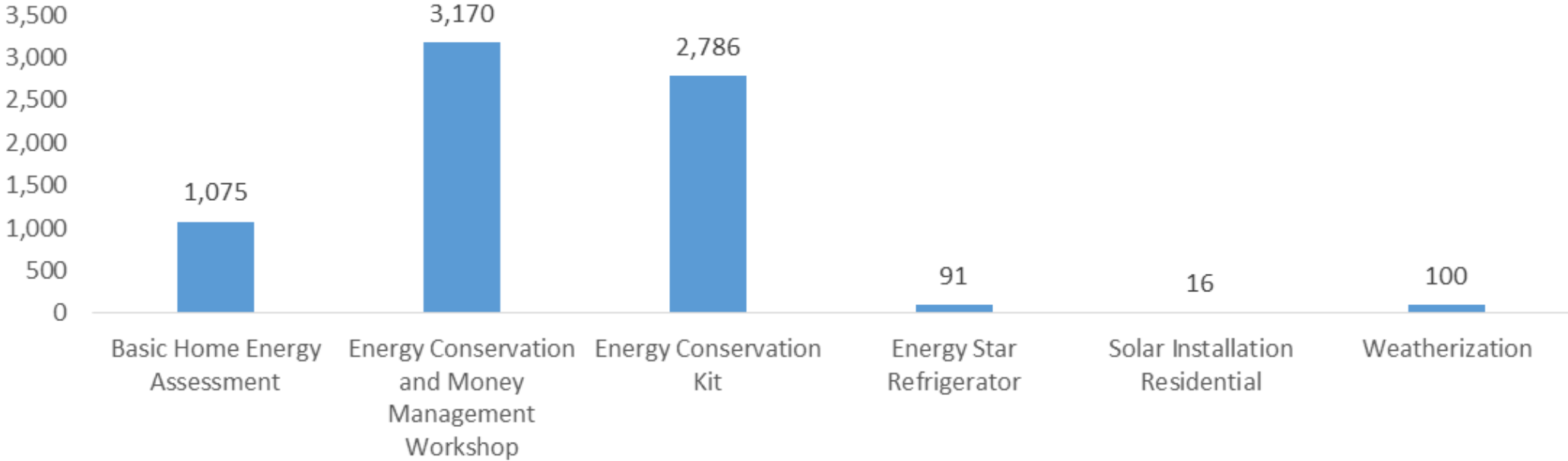
WHO WE ARE...

- Two offices in Marquette Michigan
 - Main Office – 30+ active conservation-related grants
 - Energy & Climate Office
 - Michigan Energy Assistance Program (MEAP)
 - Energy Conservation Program (ECC) & Energy Waste Reduction (EWR) Programs
- MEAP FY 2014 – FY 2021
 - 1,800 households served per year with energy assistance & energy conservation/money management programs
 - Up to 500 households served per year with EWR programs conducted by the ECC and funded by MEAP and our EWR partners

Conservation Services 2012 –2020 including MEAP, and other grant funders

Distinct Count of Household

Households Served by SWP Energy Conservation Services 2012 - 2020



MAP ▾

How does the SWP use MEAP funding to help people become more energy efficient?

MEAP Long-term Case Management = Energy & Money Savings!

1. A Michigan resident is eligible for MEAP direct energy assistance after they are State Emergency Relief (SER) approved, have completed the Self-Sufficiency Plan, Needs Assessment and Energy Conservation and Money Wise Workshop.
2. A SWP Case Worker is able to help the resident complete these requirements.
3. After the energy crisis has been resolved, the SWP Case Worker encourages the customer to have a Home Energy Score (HES).
4. During the HES, funded by MEAP or UPPCO EWR funds the customer is assessed for weatherization, solar and utility referrals. They also receive a \$50 energy kit and a recommendation report.
5. Weatherization and solar saves energy and reduces the household consumption, making the energy bills more affordable.
6. Weatherization and solar reduce the customer's dependency on state emergency relief and MEAP programs.

Department of Energy (DOE) Home Energy Score (HES)



- *The Home Energy Score Report estimates home energy use, associated costs, and provides energy solutions to cost-effectively improve the home's efficiency. Each Home Energy Score is shown on a simple one-to-ten scale, where a ten represents the most efficient homes.*
- *The SWP Energy Conservation Corps (ECC) completes up to 400 HES's per grant term.*
- *After a HES, up to 100 income-eligible households are eligible for weatherization services (approximately \$500 per home)*
- *After a HES, up to 5 income-eligible households are eligible for residential solar.*

ENERGY WASTE REDUCTION (EWR) PARTNERS

- UPPER PENINSULA POWER COMPANY
- SEMCO ENERGY INC
- Slipstream Michigan Electric Cooperative Association (MECA)
 - UP Electric Cooperative's
 - Alger Delta
 - City of Escanaba
 - City of Stephenson
 - Cloverland
 - Daggett Electric
 - Marquette Board of Light and Power
 - Newberry Water & Light Board
 - Ontonagon REA
- Clear Result
 - WISC PUBLIC SER CORP
 - WISCONSIN ELECTRIC POWER COMPANY



ENERGY WASTE REDUCTION (EWR) Upper Peninsula Power Company FY 2020 – FY 2021 (Oct – Dec)

- UPPCO EWR has funded:
 1. 2 Residential Solar Array's
 - 1 more to be completed by December 2021
 2. 125 Home Energy Assessments and MEMD direct install measures
 1. 100 more to be completed by December 2021
 3. 42 Energy Star Refrigerators
 1. 18 more to be delivered by December 2021
- The SWP makes referrals to UPPCO after conducting a home energy score in a income-eligible customer's home.
- UPPCO agrees let the SWP know when an upgrade has been made so that the HES can be updated.



SLIPSTREAM (Michigan Electric Cooperative Association (MECA))

- The SWP makes referrals to these utilities after conducting a home energy score in a income-eligible customer's home.
- The SWP is reimbursed for direct install measures installed during the Home Energy Score (HES) and those dollars go right back into the program to purchase additional supplies.
- The utilities agree let the SWP know when an upgrade has been made so that the HES can be updated.



Village of Daggett,
Michigan (Utility Company)



SEMCO Energy Co, Wisconsin Public Service and WE Energies

The SWP makes referrals to these utilities after conducting a DOE Home Energy Score in a income-eligible customer's home. The utilities agree let the SWP know when an upgrade has been made so that the HES can be updated.



Weatherization HES change and BTU Savings

1. HES – Weatherization
2. HES – Residential Solar
3. HES – Weatherization – Residential Solar

Weatherization

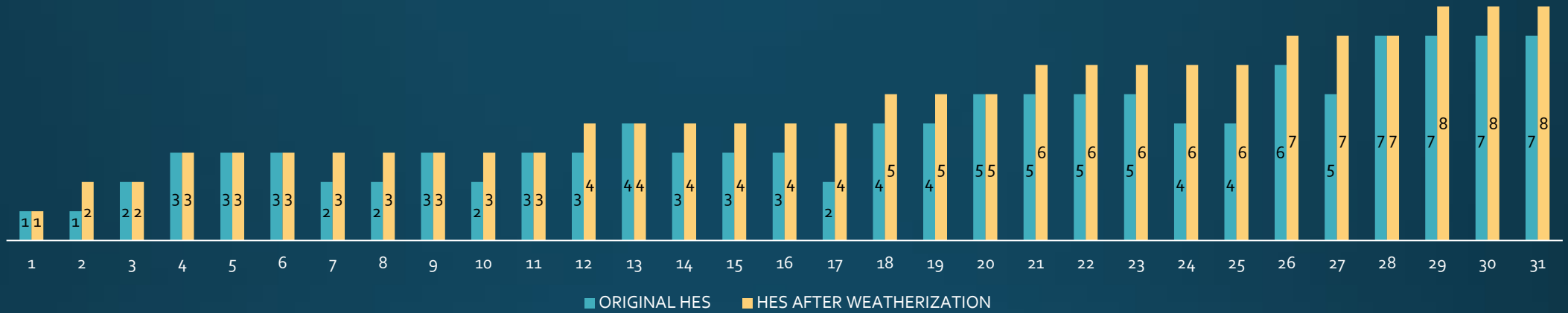
Each income-eligible households can receive up to \$500 or more in installation supplies:

- Guardian R-38 Unfaced Batt 24" x 48"- (64 sq. ft.)
- ATTIC_Guardian R-30 Unfaced Fiberglass Insulation Batt 24" x 48" (88 sq. ft.)
- ATTIC_Guardian R-19 Unfaced Fiberglass Insulation Batt 15.25" x 93" -(87.2 sq. ft.)
- BSMT/CRAWL_Guardian R-30 Kraft Faced Fiberglass Insulation Batt 16" x 48" (58.7 sq. ft.)
- BSMT/CRAWL_Guardian R-38 Kraft Faced Fiberglass Insulation Batt 16" x 48" (42.7 sq. ft.)
- BSMT/CRAWL_Guardian R-30 Kraft Faced Fiberglass Insulation Batt 24" x 48" (88 sq. ft.)
- Guardian R-38 Kraft faced Batt 24" x 48"- (64 sq. ft.)
- BSMT/CRALW_SPECIAL INSUALTION
- DUCT_Guardian R-6.9 Foil Faced Insulation 2" x 24" x 15' - (30 sq ft) DUCTS
- DUCT_Duck® Flexible Duct Foil Tape 1.88" x 120yd
- NAILS_Bostitch® 3/8" Leg x 27/64" Crown Heavy-Duty Staples - 1,500 Count
- Robinson Tech Insulation Support Wire 16"
- Robinson Tech Insulation Support Wire 24"

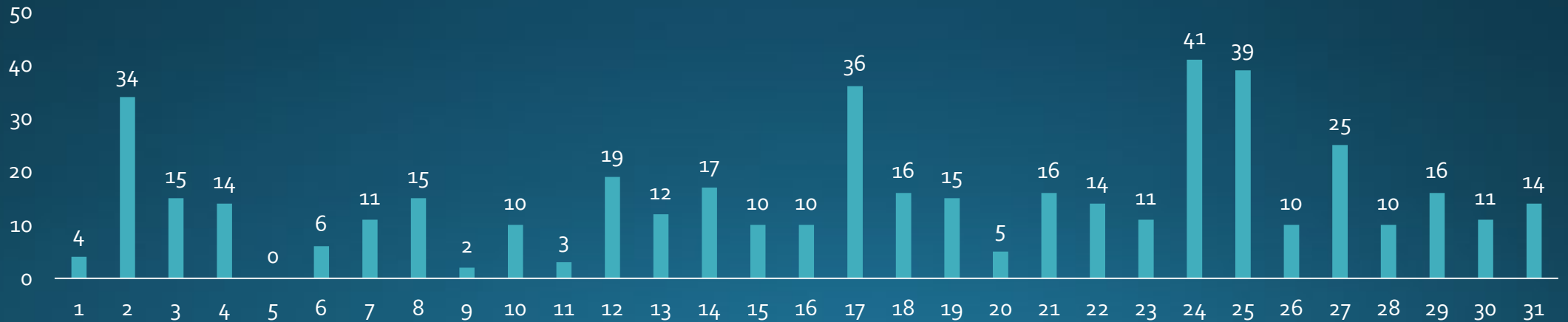
UPPCO and Slipstream are willing to review the HES report and possibly approve more work to be done in the home. This must occur during planning so that the job can be completed in one visit.

WEATHERIZATION HES AND BTU CHANGE

HES SCORE AFTER WEATHERIZATION

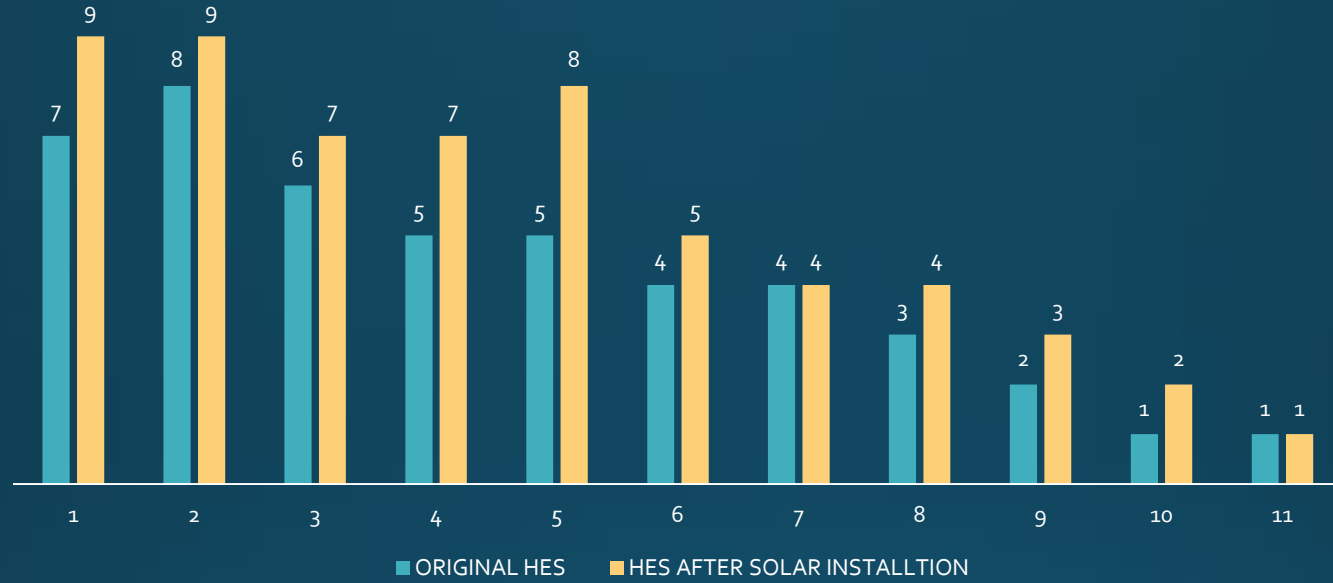


ANNUAL BTU SAVINGS AFTER WEATHERIZATION

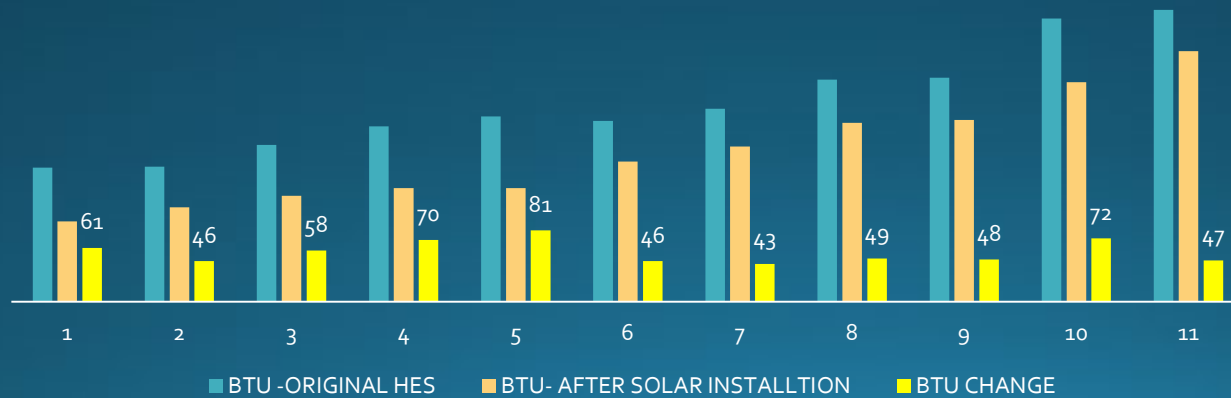


SOLAR HES AND BTU CHANGE

HES SCORE AFTER RESIDENTIAL SOLAR INSTALLATION

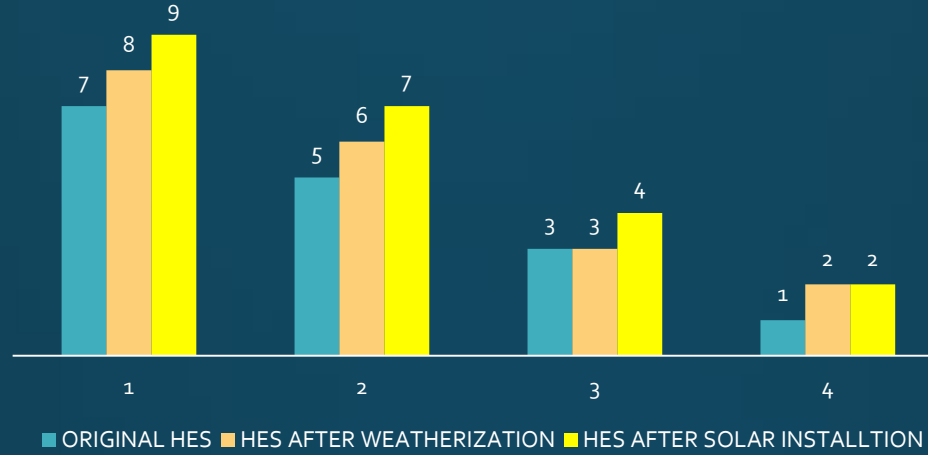


ANNUAL BTU SAVINGS AFTER RESIDENTIAL SOLAR INSTALLATION

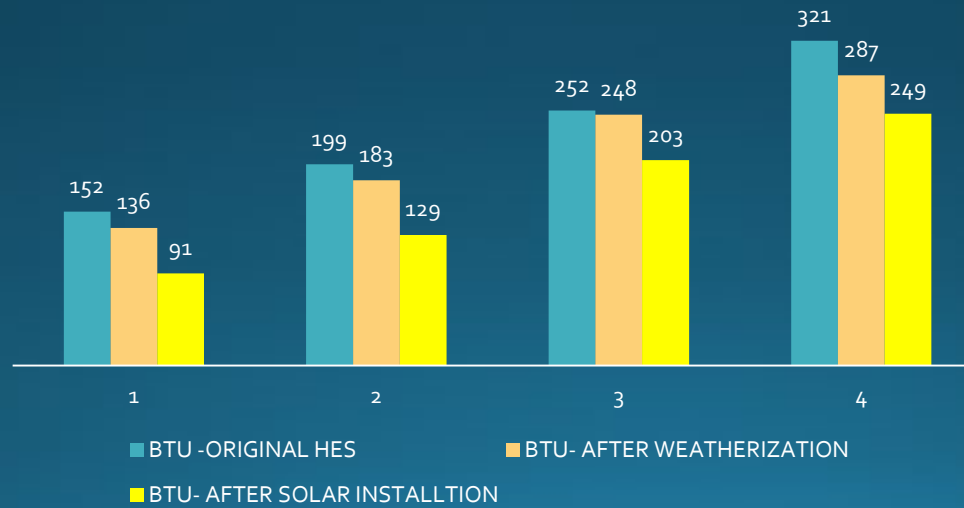


WEATHERIZATION & SOLAR HES AND BTU CHANGE

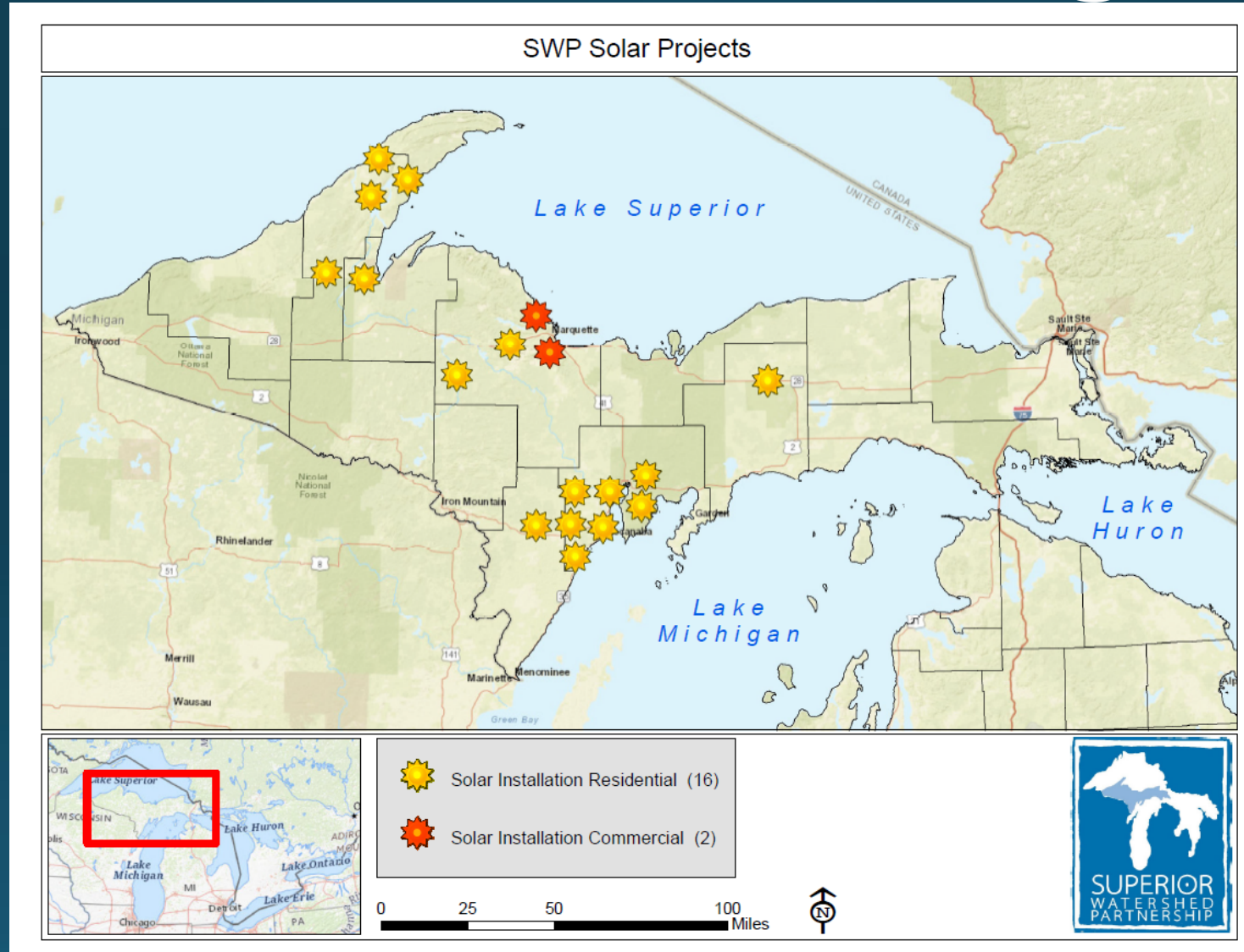
HES SCORE AFTER WEATHERIZATION AND RESIDENTIAL SOLAR



ANNUAL BTU SAVINGS AFTER WEATHERIZATION AND RESIDENTIAL SOLAR



Residential Solar Program



Superior Watershed Partnership (SWP) Low-Income Michigan Energy Assistance Program (MEAP) Residential Solar Program Data Analysis 2018-2019

A residential solar panel installation delivers approximately 26% of household energy based on 12-month data from six households with 6 – 10 solar panels (Figure 1). The installation of residential solar panels can offset an electric bill approximately \$1,053 per year (Figure 2-3). For billing, the data was analyzed by averaging 5 households - household 4 was removed as an outlier because the occupant was not in the home for most of the 12 months before the installation (Table 1).

Superior Watershed Partnership (SWP) Low-Income Michigan Energy Assistance Program (MEAP) Residential Solar Program Data Analysis 2018-2019

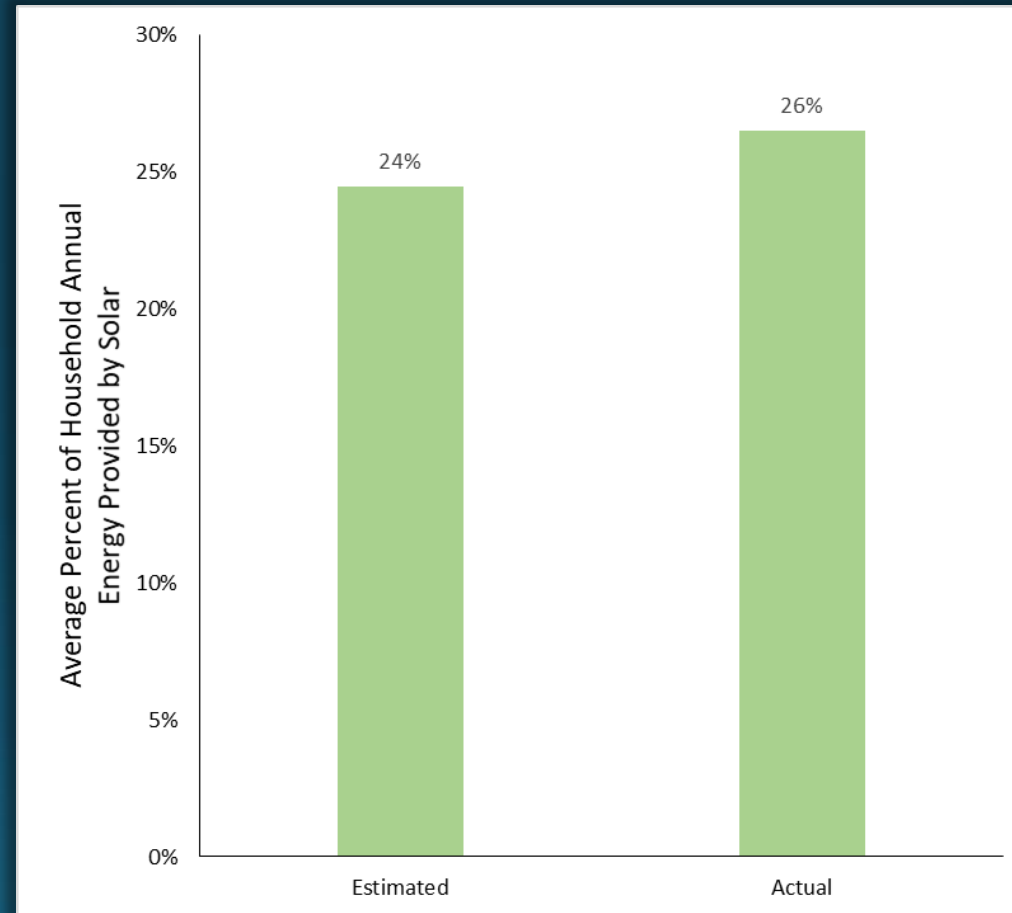


Figure 1 Annual energy provided by residential solar

Superior Watershed Partnership (SWP) Low-Income Michigan Energy Assistance Program (MEAP) Residential Solar Program Data Analysis 2018-2019

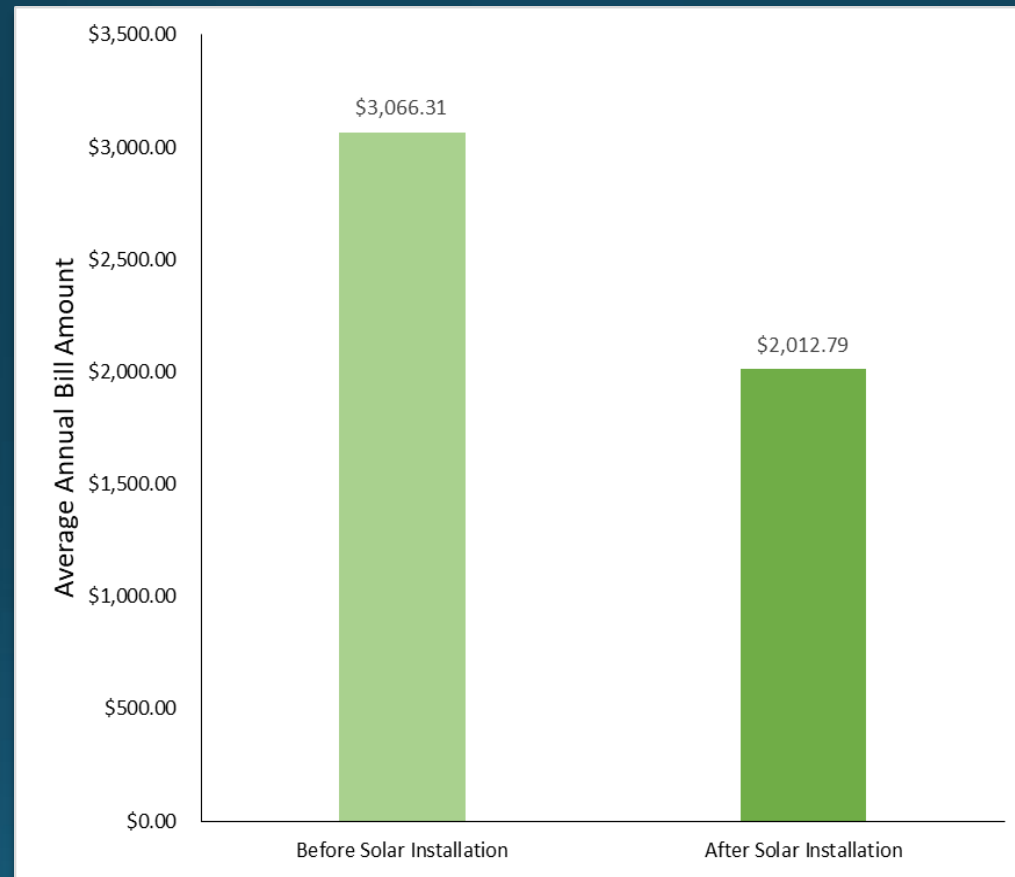


Figure 2 Average annual bill amount 12 months before & 12 months after - all homes

Superior Watershed Partnership (SWP) Low-Income Michigan Energy Assistance Program (MEAP) Residential Solar Program Data Analysis 2018-2019



Figure 3 Annual bill amount 12 months before & 12 months after - individual homes

SolarEdge Monitoring App

The logo for SolarEdge, featuring the word "solar" in black and "edge" in white, with the "edge" portion set against a red, slanted rectangular background.

solaredge

SolarEdge Monitoring App

The mySolarEdge app has several other benefits including:

- ✔ Gain real-time visibility into your energy use and production
- ✔ Compare today's production to past measurements
- ✔ Track your system's performance with mobile-optimised features
- ✔ Control home appliances remotely
- ✔ Set smart schedules to maximise your energy savings
- ✔ Manage your EV charging from anywhere

SolarEdge Monitoring App

Long Warranties

SolarEdge products are field proven and built for long-term performance:

- ! 25-year power optimizer warranty
- ! 12-year inverter warranty
- ! Monitoring free for 25-years

Affordable extended inverter warranties of up to 25 years are also available, with low cost out-of-warranty inverter replacement. Refer to the [SolarEdge website](#) for more details on warranty extensions.

Homeowner Value

Protect the homeowners' investment by offering reliable, field proven products, backed up by long-term warranties for their peace of mind.



Power Optimizer



Monitoring Platform



Inverter

SolarEdge Monitoring App

Site Overview: The site overview area shows accumulated energy and revenue for the site.

Powerflow: The Power Flow diagram shows real-time system behavior – from solar production to site consumption, and grid import or export.

Power & Energy: If a consumption meter is installed, a consumption bar is displayed*. The consumption reading represents your solar energy consumption:

Comparative Energy: The comparative energy chart compares the energy produced at the site during corresponding periods in previous years.

Environmental Benefits: The environmental benefits area shows the accumulated impact that non-renewable energy producing methods would have had on the environment had they have been used to produce the amount of energy generated by this site.



2020 UPPCO Solar Recipient

"The SWP has really done a lot to help me and I'm really excited to get panels all heated up!"



Laurium, MI

2020 MEAP Solar Recipients

“Can’t wait to see how my bills change with having a new meter and 12 new roof-mounted solar panels. Thank you guys for doing a great job!”



Rapid River, MI

“I’m totally flabbergasted to have the Solar panels installed by the SWP, My birthday is thirteen days away! Best birthday present I’ve ever had. I’m totally blown away, and I am hoping that the roof-mounted 12-panel solar system with help offset my electricity bill so some months I will only have a meter charge, that would be the dream”



Escanaba, MI

2020 MEAP Solar Recipients

"I'm looking forward to reducing my utility bill cost! Thank you guys so much! You guys are great! This roof-mounted 12-panel solar system is awesome!!! This is the best day ever! And I'm excited to be able to check on my solar system through the convenience of an app on my phone!"



Escanaba, MI

"After having the home energy score I was very eager to hear from the SWP if I would be selected as a candidate for the solar program, and now here I am. You guys are hard workers!!! I am grateful for everyone at the SWP to be able to help me out and provide this free 10-panel ground-mounted solar system. This will help me reduce my electricity bill so I can't thank you all enough!"



Wilson, MI

2020 MEAP Solar Recipients

"I am appreciative of the SWP being able to offer this free roof mounted solar system, I am interested in seeing how much I save on my electricity bills going forward!"



Escanaba, MI

"I am excited to have an efficient ground mount 10 panel solar system installed to help offset my current electric bills."



Rapid River, MI

2020 MEAP Solar Recipients

"I was very excited to be selected for the solar program and even more happy to see them up on the roof. I am also looking forward to learning how to be able to view the solar app to see the status of my panels without getting on the roof. The guys were very polite and just thank you SWP for all your help!"



Calumet, MI

"I am very thankful to be chosen for the solar program, We love our new ground mount solar system, and I will really love it when it helps reduce my utility costs. It makes us feel good to know that we are contributing to renewable energy."



Baraga, MI

2020 MEAP Solar Recipients

I am very thankful for the extra assistance with the additional attic insulation & solar panels. It can be tough living on a farm so anything helps."



Houghton, MI

"Wow can't wait to be reducing our electricity & gas bills for the future. Thank you SWP for selecting us for this solar & weatherization programs. The turkeys and all of us will be very happy with the new ground mount solar system. Thank you!"



Pelkie, MI

Weatherization Testimonials

- ◆ *I can't say thank you enough for the extra help keeping the house warm. I am excited to see my gas bills go down and have warm feet! Not to mention it looks very warm in those suits, very hard working group of gentlemen.*
- ◆ *I loved having you guys over.*
- ◆ *I never thought this was ever going to get done for my basement, thanks!*
- ◆ *I'm looking forward to hopefully reducing my utility cost in the future. Thank you for all the help!*
- ◆ *It's always great having you guys around.*
- ◆ *Oh thanks a bunch, I'm sure it will help some.*
- ◆ *Thank you for helping us insulate our basement! You guys did a great job!*
- ◆ *Thank you guys very much, This insulation will be extremely useful. You guys are hard workers and did a great job!*
- ◆ *Thank you very much this will definitely help keep my family warm*
- ◆ *The floor feels warmer already.*
- ◆ *The lord has blessed me with kind + Helpful folks like yourselves*
- ◆ *This will really help keep me warm, Thank you!*
- ◆ *Was not home when we finished.*
- ◆ *You guys are awesome, thanks!*
- ◆ *You guys are the best!*
- ◆ *You were very professional & did a great job :)*