

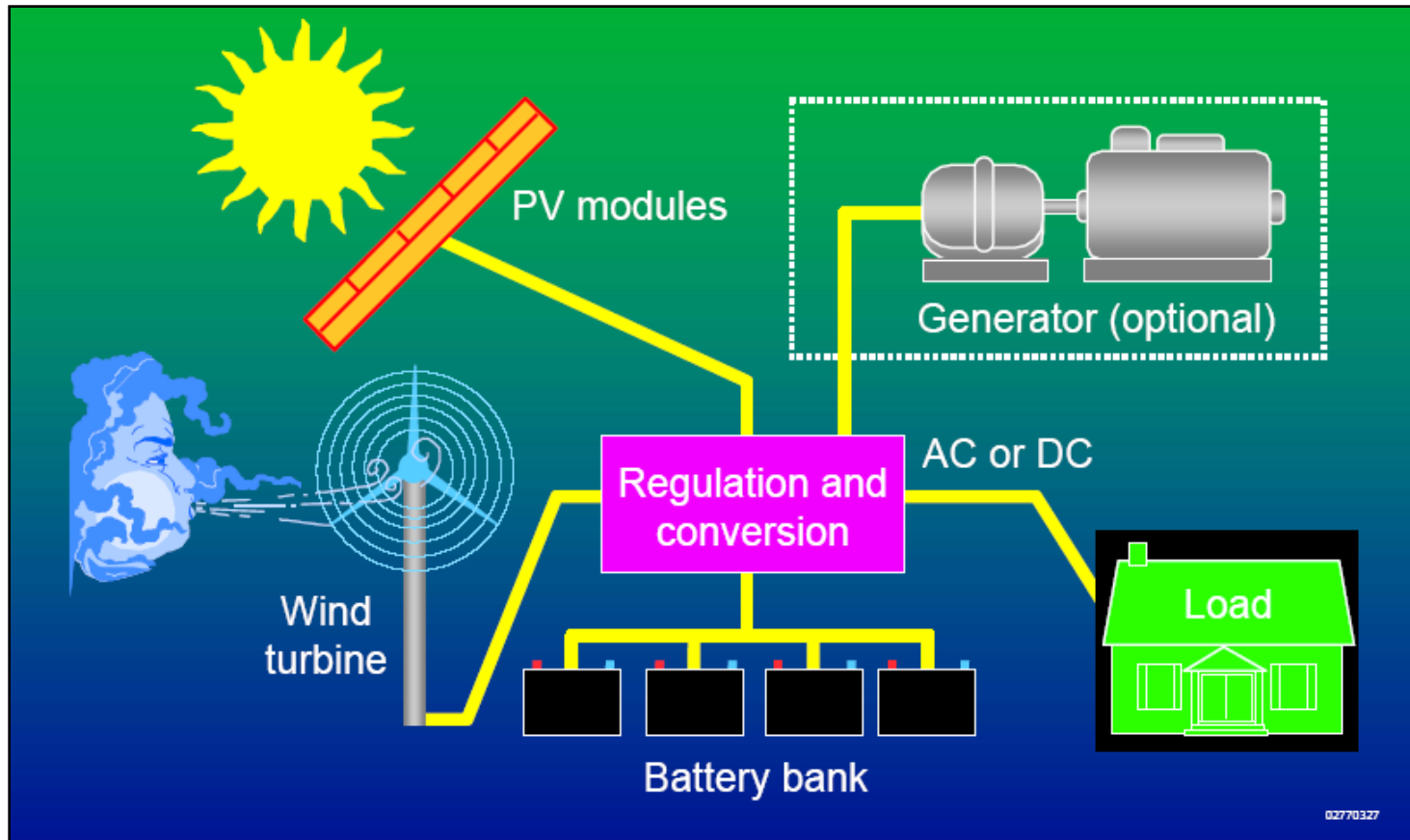
Solarize Meridian

Facilitated by

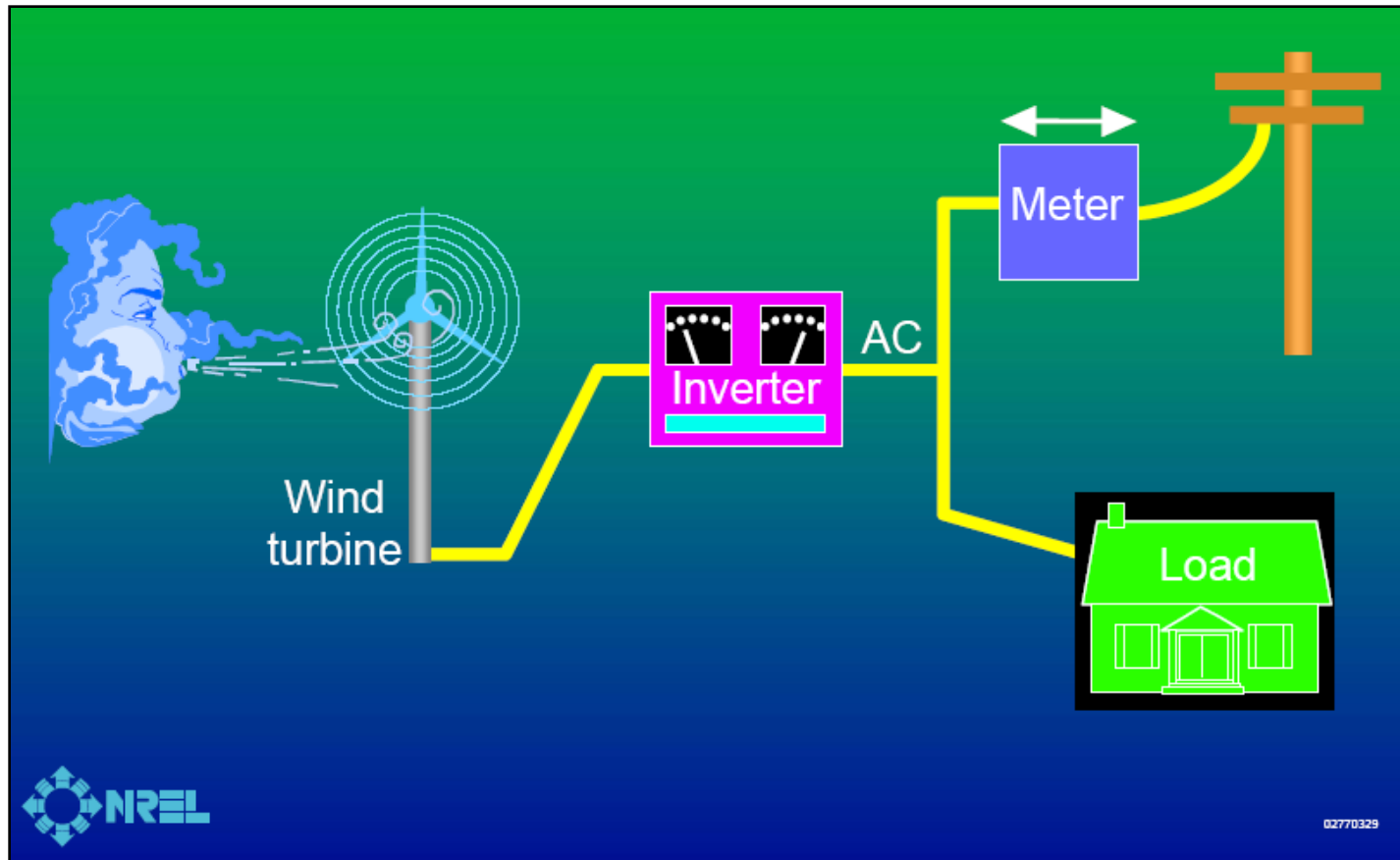
Meridian Energy Team

Lansing Area Solar Users Network

Off-Grid System



Grid-Tied System



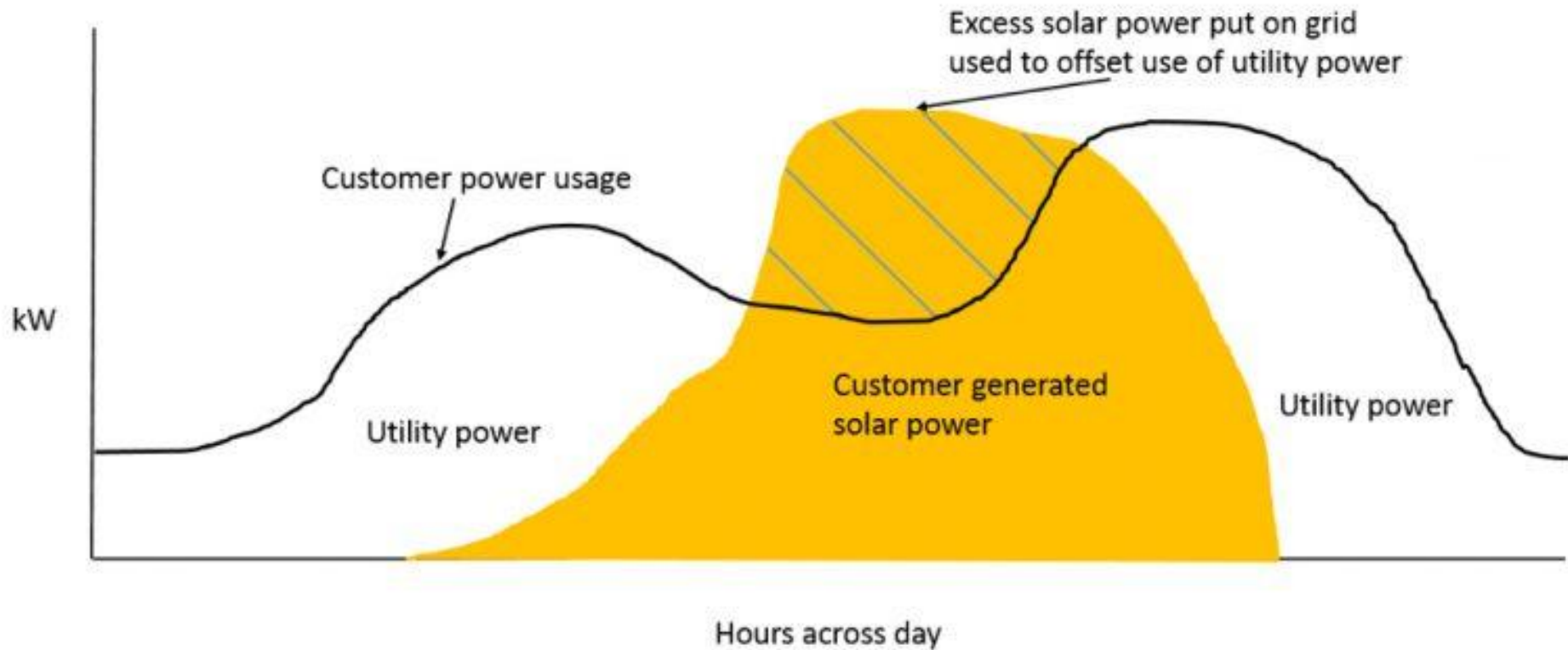
Rooftop or Ground Mount

- Southern Orientation
- Minimum or No Shading



Net Metering

- Excess electricity to utility
- Bill credit, no payment
- System sized to customer
- 20 kW or less – “true net metering”
- Up to 150 kW – “modified net metering”
- New Distributed Generation Tariff in 2019
- Inflow at retail rate, outflow around 10 cents
- Until new tariff grandfathered for 10 yrs



Source: solarpowerrocks.com/wp-content/uploads/2015/07/netmeter.png

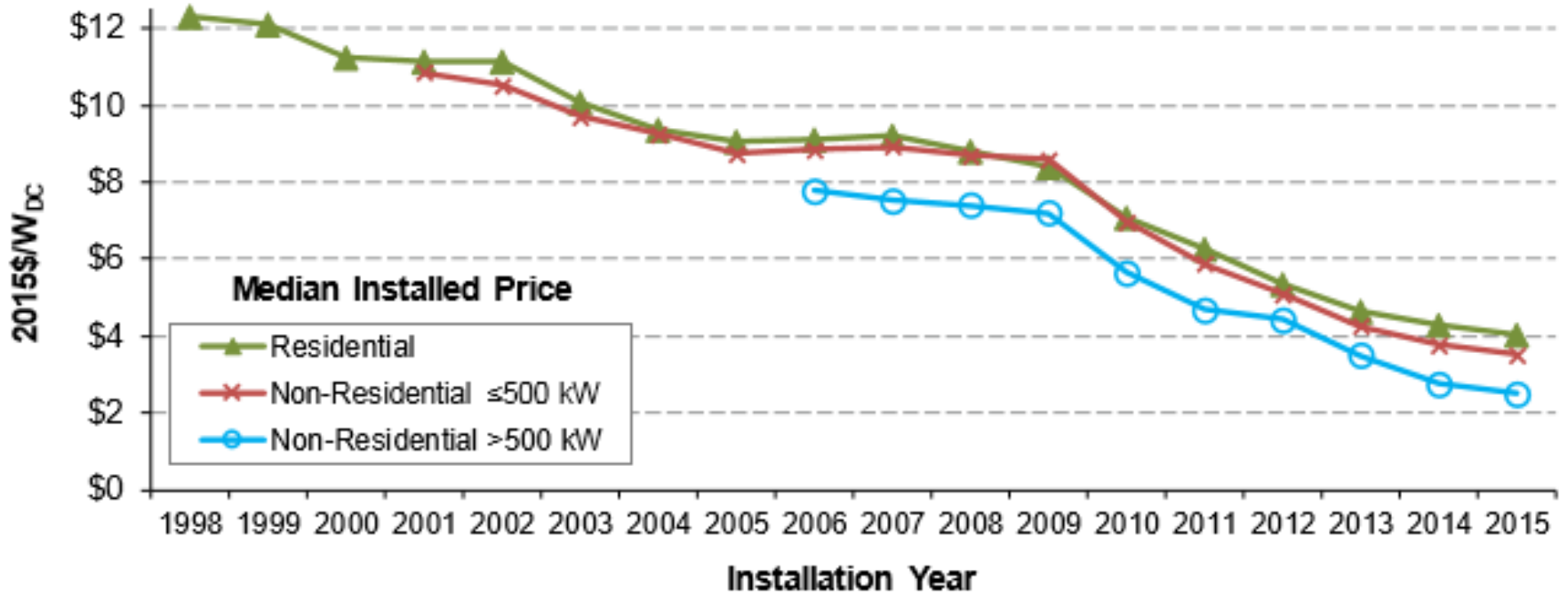
30% Federal Tax Credit

- 2017 to 2019 – 30%
- 2020 – 26%
- 2021 – 22%
- Beginning in 2022
- 10% for commercial and third party-owned residential
- 0% for host-owned residential

PV is Good Investment

- Lawrence Berkeley National Lab report shows PV adds value
- 22,822 homes in 8 states studied
- Average PV sales premiums is \$4/watt
- If you move, get your money back at sale

Solar Prices Down



Source: National Renewable Energy Lab

PVWatts

- Software to estimate kW's and kWh's
- Monthly kWh's
- Cost savings

RESULTS

23,048 kWh per Year

Month	Solar Radiation (kWh / m ² / day)	AC Energy (kWh)	Energy Value (\$)
January	2.56	1,312	125
February	3.48	1,635	156
March	4.35	2,149	205
April	4.79	2,188	209
May	5.41	2,473	236
June	5.57	2,369	226
July	5.48	2,408	230
August	5.19	2,320	221
September	5.12	2,261	216
October	3.59	1,695	162
November	2.62	1,228	117
December	2.02	1,011	96
Annual	4.18	23,048	\$ 2,198



Solarize Meridian

- Meridian Energy Team has developed Climate Sustainability Plan that has been adopted by Township Board & includes renewable energy commitments:
- Obtain 50% of Township government electricity from renewable energy by 2025 and 100% by 2035.
- Obtain 25% of total community electric use from renewable energy by 2025.
- Encourage homeowners, businesses, & churches to install a solar electric system

Solar Installer List

- Interested in participating in project
- Provide standard, grid-tied, rooftop PV system at competitive price - \$3/watt or less, e.g. \$12,000 or less for 4,000 watt system, \$8,400 or less after 30% federal credit
- Authorized Michigan Saves contractor
- List indicates if particular interest – residential, commercial, rooftop, ground mount

Payback & Savings

$4,000 \text{ w} \times \$2.8/\text{w} = \$11,200$

– 30% federal tax credit = \$7,840

Energy savings is 5,232 kWh's/year

Annual cost savings is $$.15 \times 5,232 = \785

Simple payback 10 yrs

\$3/watt 11 yrs

2% annual rate increase 9 yrs

Solarize Steps

- Attend workshop and/or open house
- Contact one or more solar installers on list
- Receive proposals from solar installers & select installer
- Installer obtains permits from township
- Homeowner may apply for Michigan Saves financing
- Homeowner with installer help applies to utility for interconnection & net metering
- Solar installation completed
- Homeowner takes 30% federal tax credit

Why Now is a Good Time

- Competitive price from 12 installers
- 30% federal tax credit
- Net metering still in place
- Solar tariff hasn't effected prices yet
- Why not start saving now