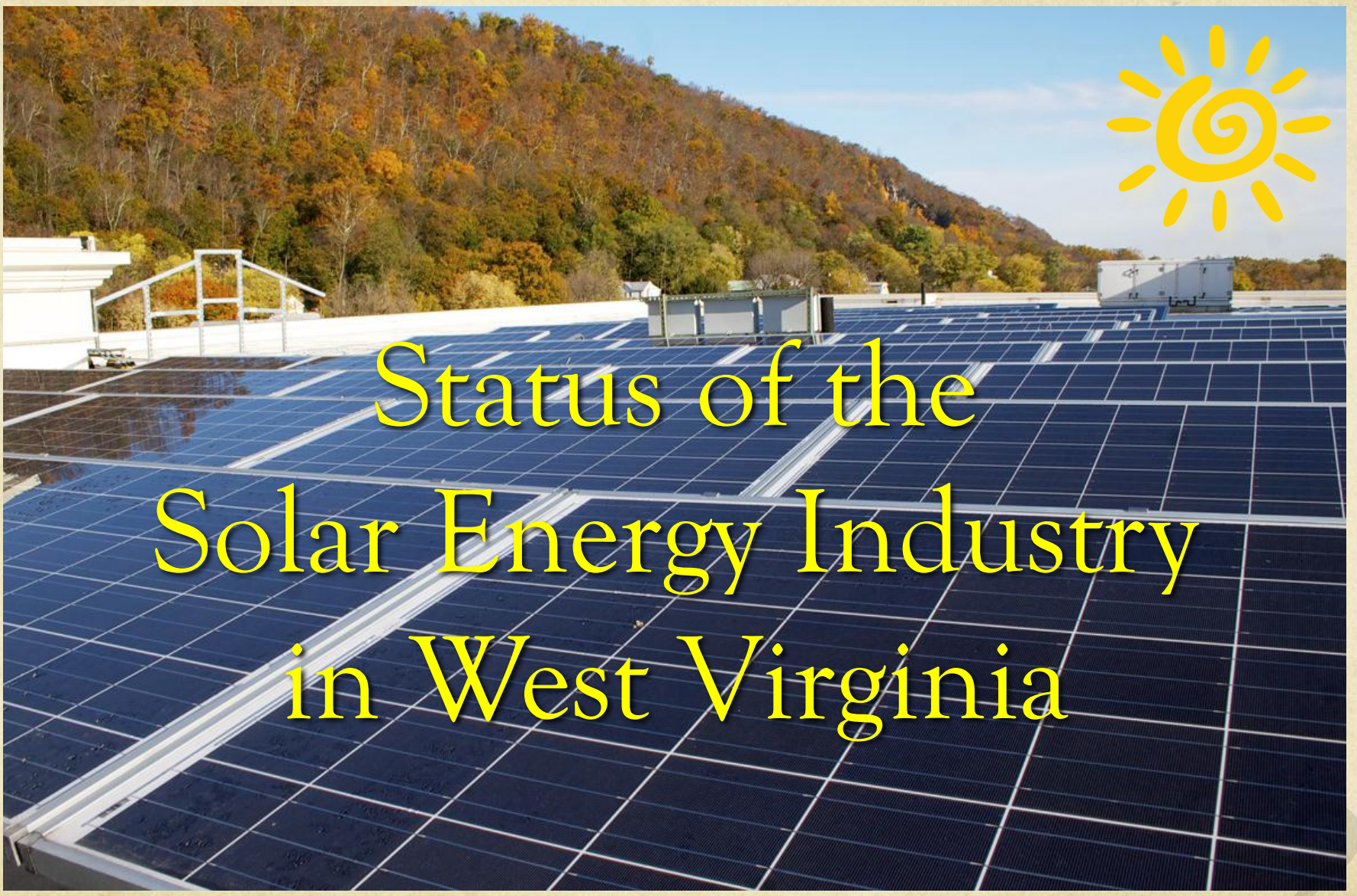

Energize WV
mtvSolar


Status of the
Solar Energy Industry
in West Virginia

WHY SOLAR POWER MAKES SENSE

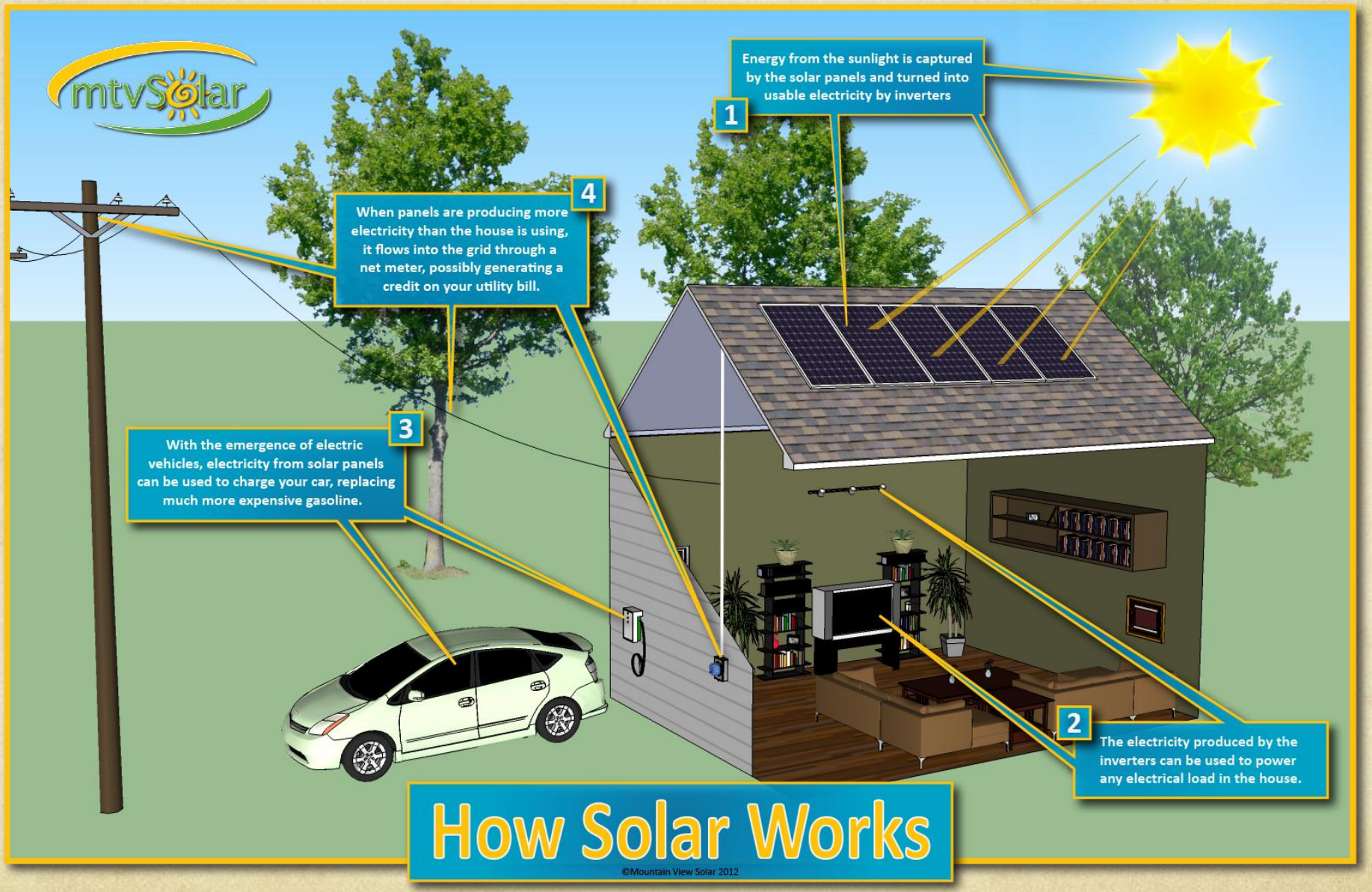
- Every hour enough solar radiation strikes the surface of the earth to satisfy global power demand for one full year. (NREL)
- Solar Power is distributed power (it is produced where you need it).
- Solar Power helps “flattens” the demand curve (it is normally produced when it’s needed most).
- It is a domestic power source!

WHY SOLAR IS GROWING IN WV

- Solar is a way to lower your electric bill forever
- 30% Federal tax credit help to offset initial cost
- Solar can be a source of back up power when the grid is down
- Solar is installed by building and electrical contractors and is a good job creator in WV
- Grid tied Solar doesn't work without a baseline fuel source

Industry Growth 2009-2016

- 2009 less than 50kW PV installed state-wide, mostly residential
- 2010 WV residential solar state tax credit enacted. That credit expired in 2013.
- Over 4.2 Megawatts of solar currently in WV at 575 locations.
- 1 megawatt creates enough energy to power 100 homes per year, for over 40 years.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1
Energy from the sunlight is captured by the solar panels and turned into usable electricity by inverters
2
The electricity produced by the inverters can be used to power any electrical load in the house.
3
With the emergence of electric vehicles, electricity from solar panels can be used to charge your car, replacing much more expensive gasoline.
4
When panels are producing more electricity than the house is using, it flows into the grid through a net meter, possibly generating a credit on your utility bill.
How Solar Works
©Mountain View Solar 2012


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Net metering – interconnecting

- West Virginia Utilities allow solar to be interconnected via Net-Metering utilizing Bi-directional meters.
- This allows home owners and businesses to install solar equipment and produce some of the electricity they consume.
- Net metered, or solar behind the meter, represents the majority of roof top solar installations nation-wide.
- In West Virginian, utility scale projects require approval from the PSC.


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Morgan County Courthouse
25.38kW 108 Panel

Installed capacity as of May 2015

- **First Energy Numbers- Mon Power**

- Installations: 127
- DC nameplate rating: 705.15kW
- Estimated Annual kWh generation: 846,180kWh
- PV estimates are base on 1200kWh annualized per kW installed

Information provided by WVDOE

Installed capacity as of May 2015

- **First Energy Numbers- Potomac Power**

- Installations: 246
- DC nameplate rating: 1,867.45kW
- Estimated Annual kWh generation: 2,240,940kWh
- PV estimates are base on 1200kWh annualized per kW installed

Information provided by WVDOE

Installed capacity as of May 2015

- **Appalachain Power Company**

- Installations: 84
- DC nameplate rating: 570.2kW
- Estimated Annual kWh generation: 684,240kWh
- PV estimates are base on 1200kWh annualized per kW installed

Information provided by WVDOE

Installed capacity as of May 2015

- **Wheeling Power Company**

- Installations: 17
- DC nameplate rating: 159.2kW
- Estimated Annual kWh generation: 191,040kWh
- PV estimates are base on 1200kWh annualized per kW installed

Information provided by WVDOE

Additional capacity Installed

- **Installed by Mountain View Solar between May 2015 and September 2016**

- Installations: 101
- DC nameplate rating: 729.450kW
- Estimated Annual kWh generation: 875,340kWh
- PV estimates are base on 1200kWh annualized per kW installed


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Solar Co-ops

- Community Power network and WVSun have help spur the growth of solar in West Virginia and surrounding states by organizing group buys and assisting interested groups in choosing contractors.
- Total installs: 58
- Charleston, Fayette County, Monroe Co, Morgantown, Tucker /Randolph & Wheeling
- Total kW installed: 386kW

Department of Environmental Protection
25.38kW 108 Panel


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- There are currently more than **15 solar companies** at work throughout the value chain in West Virginia, **employing 350.**

- These companies provide a wide variety of solar products and services ranging from solar system installations to the manufacturing of components used in photovoltaic panels.

- Solar firms in this state can be broken down across the following categories: 4 manufacturers, 8 contractor/installers, 1 distributor and 2 engaged in other solar activities including financing, engineering and legal support.

Information provided by SEIA

790 kilowatts (kW) of solar capacity were installed in West Virginia in 2015, a 61% increase over 2014.

Of the solar capacity installed in West Virginia in 2015, **693 kW were residential** and **93 kW were commercial**.

The **4.2 MW of solar energy currently installed** in West Virginia ranks the state 42nd in the country in installed solar capacity. There is enough solar energy installed in the state to power 300 homes for 40 years or more.

In **2015, $3 million was invested** on solar installations in West Virginia.

Average installed residential and commercial photovoltaic system **prices have dropped steadily across the nation–** by 6% from last year and 48% from 2010.

Information provided by SEIA

APUS 407kW system- 1600 panels
West Virginia's largest solar array


JLG
260MRT
United Rentals
995733


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Maryland Solar Statistics

- There are currently more than **194 solar companies**[1] at work throughout the value chain in Maryland, **employing 4,269 people**[2].
- In 2015, Maryland **installed 167 MW of solar electric capacity**, ranking it 11th nationally. Installed solar capacity in Maryland has grown by 109% over the last year[3].
- In 2015, **$410 million was invested** on solar installations in Maryland. This represents a 86% increase over the previous year, and is expected to grow again this year.
- The **465 MW of solar energy** currently installed in Maryland ranks the state 11th in the country in installed solar capacity. There is enough solar energy installed in the state to **power 50,000 homes**.

Information provided by SEIA

(East) Virginia Solar Statistics

- There are currently more than **187 solar companies**[1] at work throughout the value chain in Virginia, **employing 1,963 people**[2].
- In 2015, Virginia **installed 10 MW of solar electric capacity**, ranking it 30th nationally. Installed solar capacity in Virginia has grown by 72% over the last year[3].
- In 2015, **$28 million was invested** on solar installations in Virginia. This represents a 86% increase over the previous year, and is expected to grow again this year.
- The **22 MW of solar energy currently installed** in Virginia ranks the state 32nd in the country in installed solar capacity. There is enough solar energy installed in the state to **power 2,200 homes**.

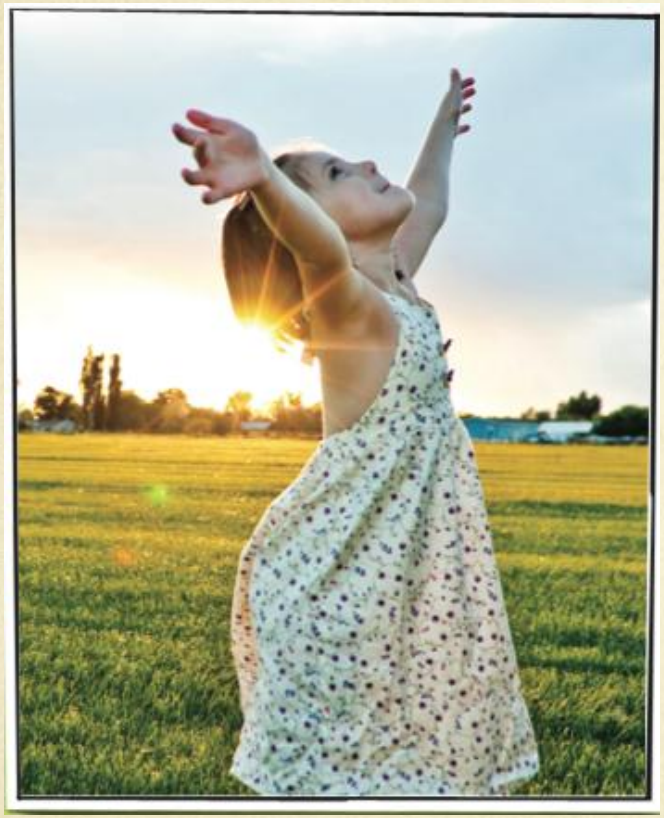
Information provided by SEIA

Key differences

- Third Party Financing – Power Purchase Agreements (PPAs)
- In surrounding state PPAs are allowable. This tools enables school districts, municipalities and qualifying non-profits, to have solar installed, without large capital expenditures.
- Many large utilities like Duke Power have begun financing and owning these energy generation assets.
- By allowing this type of ownership, surrounding states have seen much greater solar industry growth in their states than we have seen here in West Virginia.

Increasing Jobs in West Virginia

- Keep net metering rules as they are.
- By allowing Power Purchase Agreements, third party financing will bring large scale solar projects to our state.
- Solar jobs are contracted trades, electrical and mechanical, that can't be outsourced.
- There is plenty of sunshine in the Mountain State. The future of the Solar industry is bright.



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