



www.SolarizeAlexandria.org

An renewable energy initiative of the City of Alexandria,
nonprofit Local Energy Alliance Program (LEAP),
And the Northern Virginia Regional Commission





What is LEAP?

Founded in 2009, the mission of the Local Energy Alliance Program is to lead the effort to equip Virginia buildings with energy efficient and renewable technologies.

Our overarching goals include cost savings, local economic development, and energy sector decarbonization.



Come see us at 608 Ridge Street in downtown Charlottesville or in the Merrifield area of Fairfax County.

www.solarizenova.org





What is NVRC?

The Northern Virginia Regional Commission (NVRC) is a regional council of fourteen [member local governments](#) in the Northern Virginia suburbs of Washington DC. According to Virginia's Regional Cooperation Act, NVRC is a political subdivision (a government agency) within the Commonwealth.

www.novaregion.org



www.solarizenova.org





Local Partners

City/town/county staff and/or local advocates host events and help promote. Spring 2019 partners are:

- City of Alexandria
- City of Fairfax
- Fairfax County
- Falls Church
- Vienna



What is Solarize NOVA?

An clean energy initiative organized by the Northern Virginia Regional Commission (NVRC) and the Local Energy Alliance Program (LEAP).

Solarize NOVA is a one-stop-shop for community members to learn more about solar power options for their homes and facilitate the installation and financing of their own project.

Our 1000 rooftop challenge pushes us to educate, empower, and engage our community.





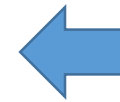
Why sign up for a Solarize program?

It's a good deal – and it's a lot easier than going it alone

- Vetted contractors - experience, certifications, warranties
- Discounted, fixed pricing (bulk-purchasing price, competitively bid)
- Turn-key, standardized package
- LEAP staff do the all the homework and support you through the process



Looks great
on a fancy
house





Solarize NOVA Results

As of the beginning of 2019, 263 contracts totaling more than 2MW of electricity and valued at over \$6.1 million have been signed.

In 2017, Solarize NOVA placed first in the Residential program category from the Virginia Energy Efficiency Council (VAEEC).



Looks great
on a modest
house



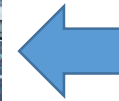


Who Can Sign Up?

- SolarizeNOVA, Spring 2019 is for residents, organizations, and businesses within the campaign area.
- If you live outside of this area, SolarizeNOVA can still serve you. Please contact info@solarizenova.org for more information.



Commercial and institutional properties too!



www.solarizenova.org



How it Works

Everyone

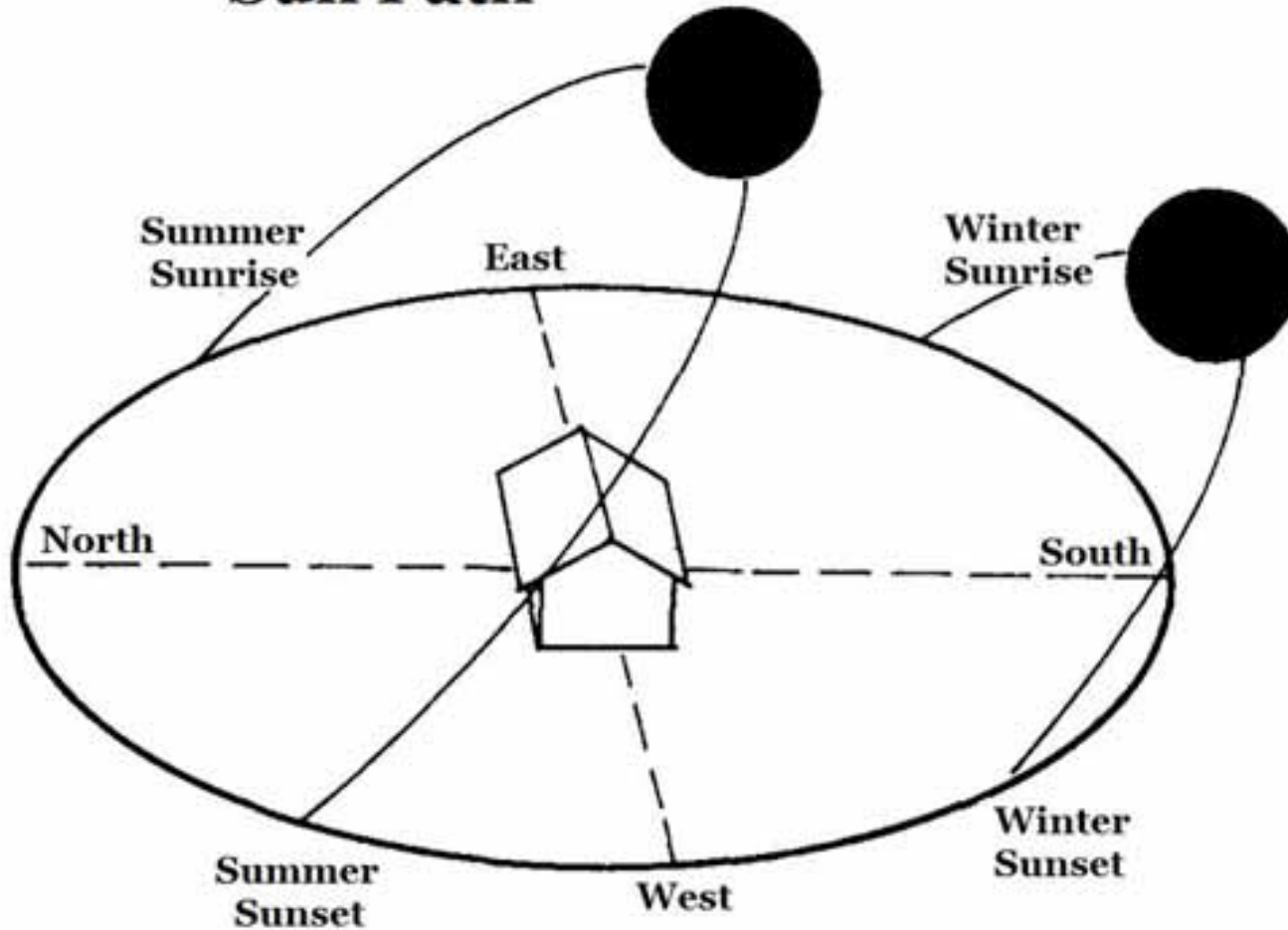
- **Step 1: Sign up at www.solarizealexandria.org or www.solarizenova.org**
- LEAP staff performs satellite assessment and contacts you with results
- Submit a recent electric bill
- Schedule an energy efficiency consultation (optional)
- Attend a Solarize program info session (optional)

Then, if your property is a good candidate

- Consultation by installer who will assess your site and develop a proposal
- Proposal approval: sign contract with installer
- Permits, installation, utility connection, inspections
- Enjoy watching your meter spin backwards!

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Sun Path





Solar Basics

- Panel installation generally takes 1-3 days, but the entire process (including system design, permitting, interconnection) takes 6-12 weeks.
- System Components:
 - Photovoltaic Panels
 - “Balance of System” equipment
 - Mounting hardware
 - Inverter
 - Cables
 - Meters
- Productive life of 25+ years with minimal maintenance
- Photo = Light; Voltaic = Electricity
 - When light strikes the silicon semiconductor, an electron is knocked loose.
 - The electrons then flow along a circuit and are directed to an inverter.





Roof Mounts



www.solarizenova.org





Panel Installation



www.solarizenova.org



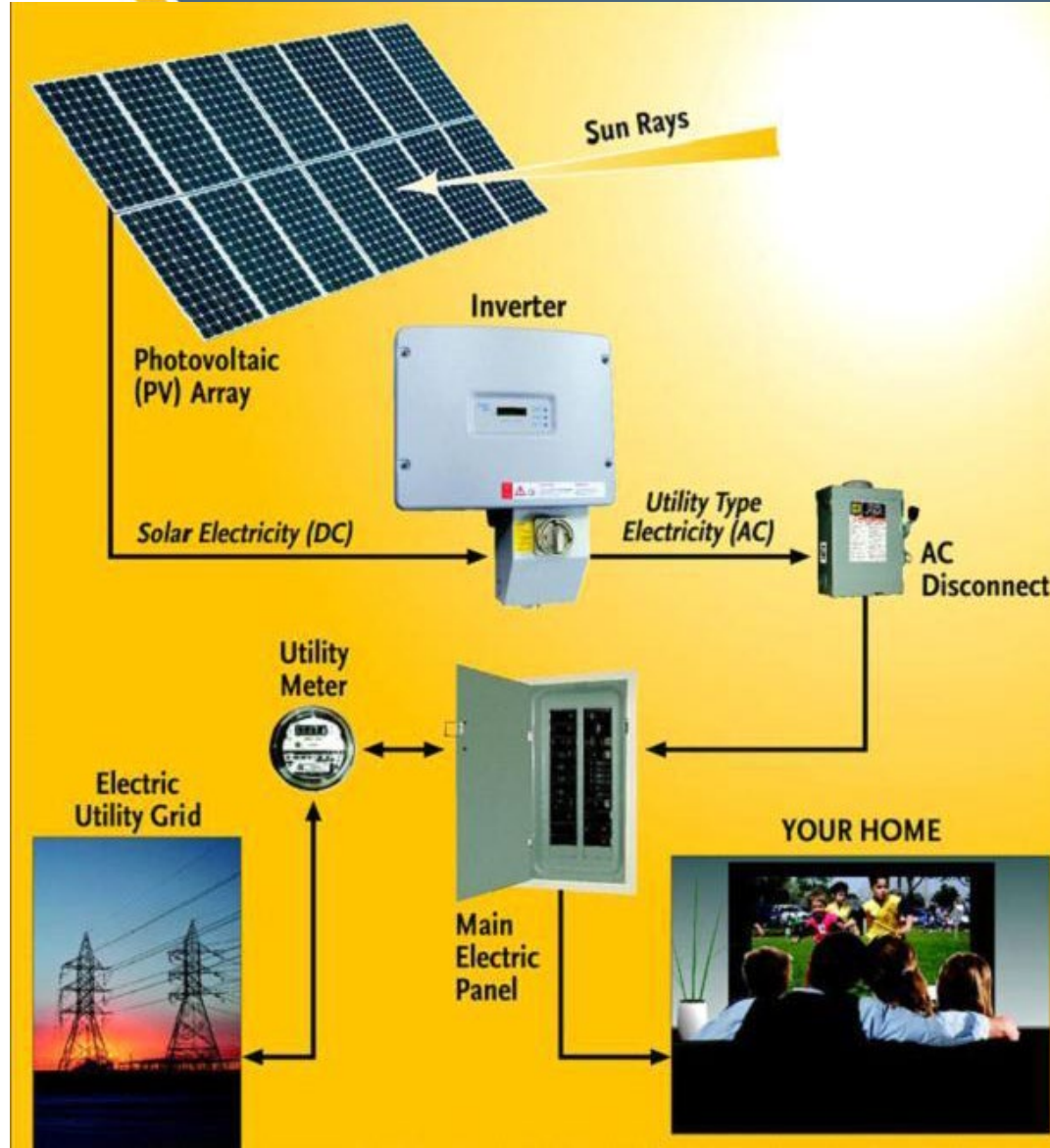
The Inverter



shown: String inverter

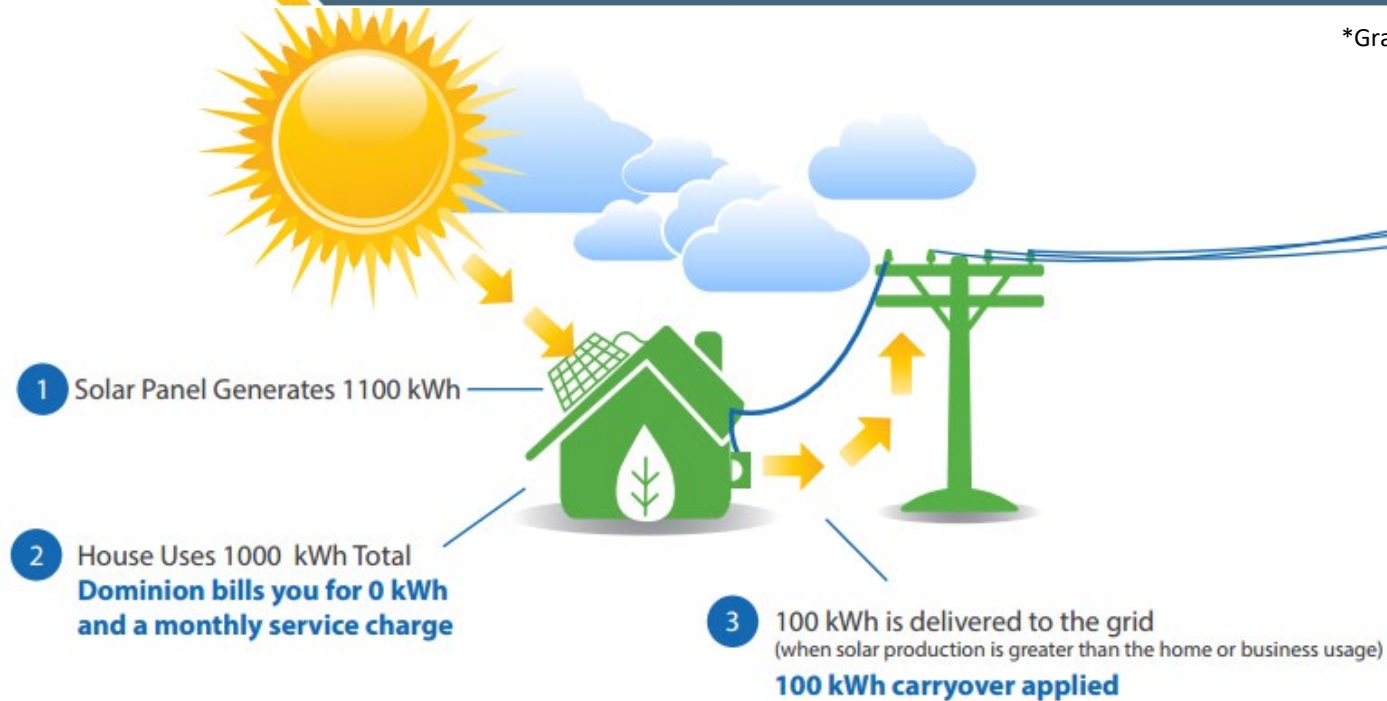
- Converts Direct Current (DC) electricity from solar panels into Alternating Current electricity, which powers your home.
- When shading conditions exist, installers may recommend microinverters or DC optimizers in lieu of central inverters, which allow arrays with some shading to increase energy production.

Put it all together...



Net Metering

*Graphic from Dominion Power



What is Net Metering? a metering and billing agreement between a utility and a customer that facilitates connecting PV systems to the power grid. A new meter is installed that measures two-way flow of electricity. The energy your system makes is first used on site. When your solar system is making more electricity than you are using at the time, the excess electricity is recorded by the meter as it flows back into the grid and is credited against future electricity use.

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Tax Credits

Federal Tax Credit:

- 30% of total install cost - credited to your federal income tax bill
- Will be reduced to 26% in 2020 (a 13% reduction)
- This is a credit – not a rebate. You must owe federal income tax in order to be credited back.
- One's credit balance can rollover to subsequent years as long as credit is available.



www.solarizenova.org



Solarize Spring 2019 Pricing

	Roof-mounted system		Ground-mounted system	
	3-5kW	>5kW	5-10kW	>10kW
Standard panel + string inverter	\$2.52	\$2.41	\$2.75	\$2.55
Standard panel + DC optimizer/microinverter	\$2.52	\$2.41	\$2.75	\$2.55
'Buy America' panel + string inverter	\$2.52	\$2.41	\$2.75	\$2.55
'Buy America' panel + string inverter or DC optimizer/microinverter	\$2.52	\$2.41	\$2.75	\$2.55

Compare to state “average price of **\$2.90/watt.**”

<https://www.solarreviews.com/solar-panels/solar-panel-cost/cost-of-solar-panels-in-virginia>

www.solarizenova.org



Sample System Economics

System Size/panel	3kW Standard	6kW Standard
Installed cost	\$7,560	\$14,460
Cost after tax credit	\$5,292	\$10,122
Annual kWh produced, yr 1	3,896	7,680
Average monthly PV "income", yr. 1	\$34	\$69

Conservative assumptions for these projections:

- * All are roof-mounted systems
- * Installation orientation and angle are good – not perfect
- * current electricity price/kWh: \$0.11 with 2% annual inflation
- * SREC value: \$0

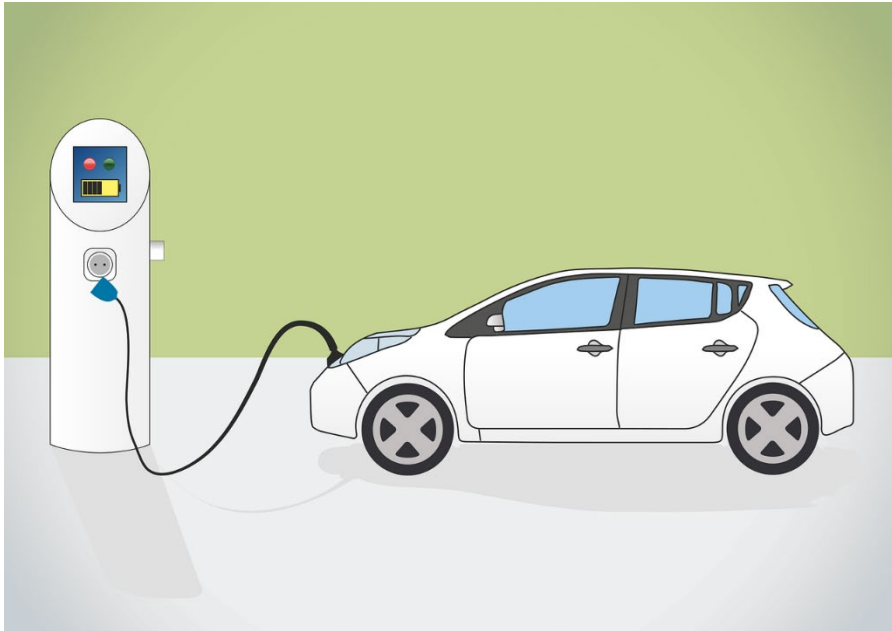
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New this year - EV Chargers

Electric Vehicle Chargers

- Level 2 EV Chargers
- Fixed pricing from participating contractors
- Pairs great with solar



Prices:

EV charger + solar: \$1,500

EV Charger only: \$1,750



Solarize Warranties

All Solarize customers receive a min. **10 year workmanship** warranty from participating solar installer.

Solar Panel:

Minimum of 10 year manufacturer product warranty
25 year linear performance warranty

Inverters:

Minimum of 10 year manufacturer product warranty

Mounting System:

Minimum of 10 year manufacturer product warranty

EV Chargers:

3 year manufacturer product warranty



A Happy Solar Customer: Lazaro Home



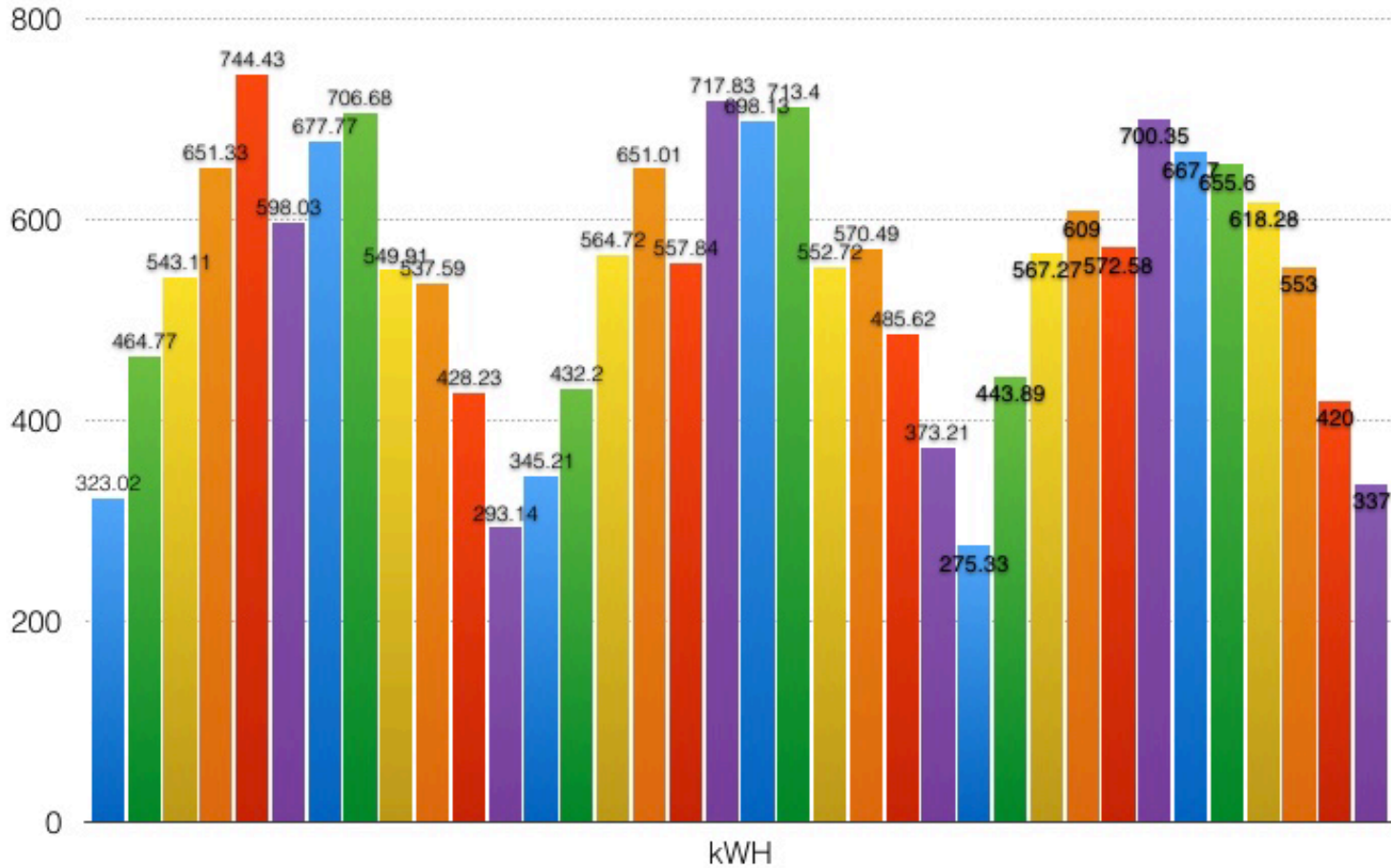
- 14 Sunpower Panels: 4.5kW system
- Paid \$3.74/Watt (Solarize Leesburg 2014)
- 6,535 kWh output = \$719 earned in 2015
- Installed for \$16,830: \$11,781 after rebate.
- 16 yr. payback: 6.25% average annual rate of return over 16 years.

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Lazarro Family Savings

2015 through 2017 Solar



- Jan 2015
- February
- March
- April
- May
- June
- July
- August
- September
- October
- November
- December
- Jan 2016
- February
- March
- April
- May
- June
- July
- August
- September
- October
- November
- December



Continuous On-Line Monitoring



Choose a site (insert at least 3 letters to search):

Grigsby Solar

Overview

Current Power 4.04 kW	Energy today 6.2 kWh	Energy this month 589.53 kWh	Lifetime energy 957.32 kWh
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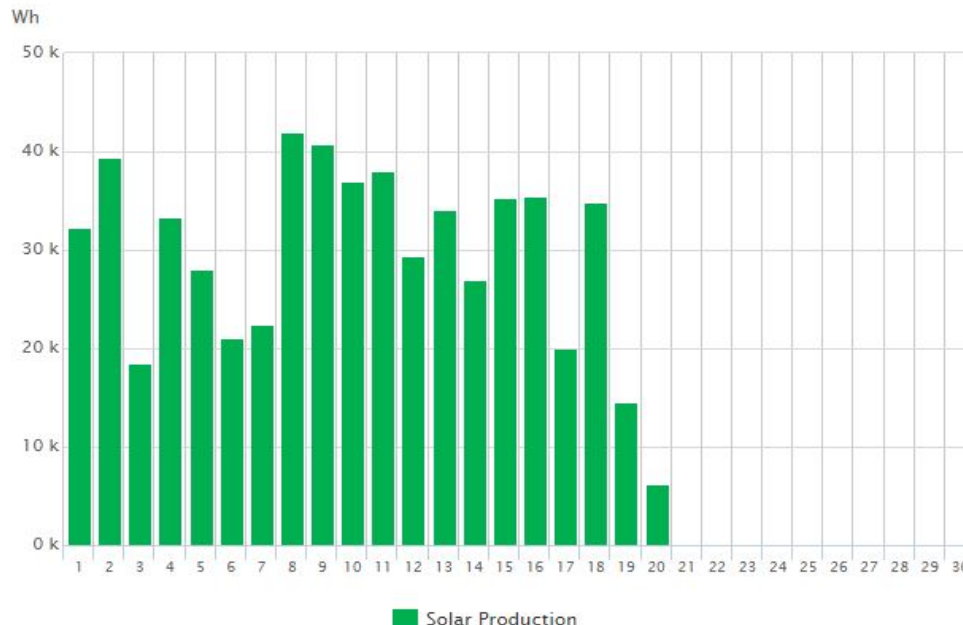


Power and Energy

Week Month Year

04/01/2017 - 04/30/2017

System Production: **589.53 kWh**



Site summary

Site status:

Id	433556
Name	Grigsby Solar
Country	United States
State	Virginia
City	Richmond
Address	Forest Hill Avenue 3152
Installed	03/16/2017
Last updated	04/20/2017 10:56
Peak power	6.08 kWp

Weather

Partly Cloudy
67 °F
Feels like 67 °F
Wind SW, 3 MPH
Humidity 79 %
Sunrise at 06:28
Sunset at 19:51

Thursday 84 - 68 °F Partly Cloudy	Friday 84 - 63 °F 30% Chance of Rain	Saturday 70 - 57 °F Mostly Cloudy
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2019 Campaign Installers



SolarEnergyWorld
Because Tomorrow Matters

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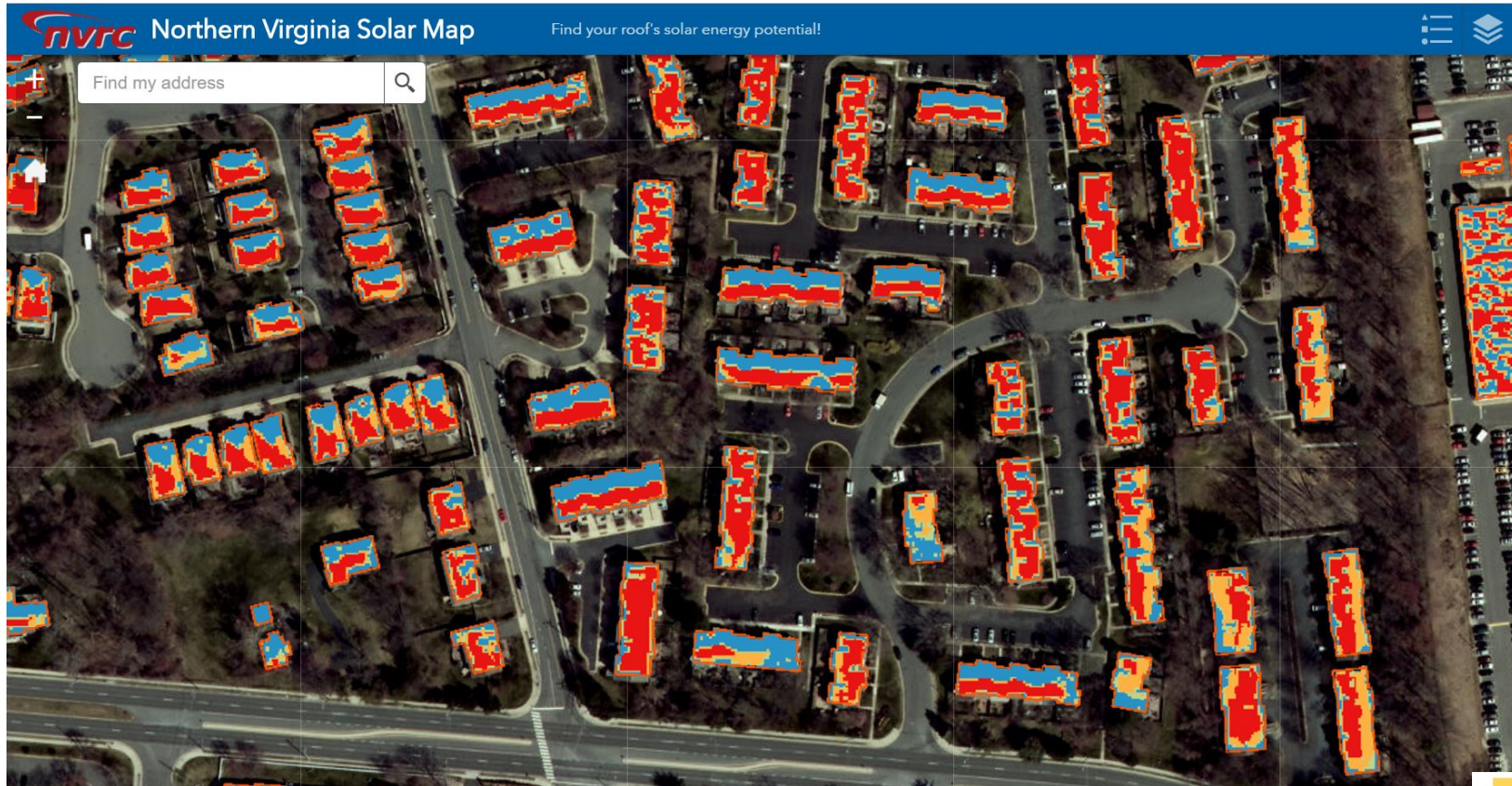




The NOVASolar Map

www.novasolarmap.com

A free new resource from NVRC: see your rooftop's potential right now....



www.solarizenova.org





Sign up: www.SolarizeAlexandria.org

Contact: info@solarizenova.org

Thank you!

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