

# POWERING A BRIGHTER FUTURE



**A Report on Solar Schools in Virginia**  
January 2020 Update

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*Cover Photo: St. Anne's Belfield School in Charlottesville, Virginia. Photo by Skyclad Aerial. Courtesy of Sun Tribe Solar.*

# Introduction

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If every school in the country went solar they would generate enough clean energy to power 6.2 million homes.

## Empowering Schools to Go Solar

Generation180 is a non-profit working to inspire and equip people to take action on clean energy. Generation180 is accelerating the arrival of a future in which our world is completely powered by clean energy. Solar schools can help lead the way to this future by modeling to their surrounding communities that generating local, clean energy is becoming the new normal for our society. Because of the potential impact that schools have both inside and outside the classrooms, we are empowering school leaders, parents, students, and community members to be catalysts for clean energy at their schools.

## Inspiring a Brighter Future

Based in Charlottesville, Virginia, Generation180 has been supporting the adoption of solar at schools in our home state. Our 2017 report, *Brighter Future: A Study on Solar in U.S. Schools*, ranked Virginia as the #20 state in the country for installed solar school capacity and the #28 state for number of solar schools. We are excited to document and share the remarkable progress that has been happening across the Commonwealth in recent years. This report highlights recent growth trends, showcases the benefits of going solar, shares the stories and successes of leading solar schools, and suggests actions we can take to build on their momentum.

While there has been exponential growth in solar adoption by schools in Virginia over the past five years, only 3% of schools in the state have switched to solar. We still have a long way to go and barriers to overcome in order to reach our goal of 100% clean energy. We have a tremendous opportunity to accelerate clean energy in Virginia, and we hope this report empowers you to take action to help all of Virginia's schools access the benefits of clean energy.



Huguenot High School in Richmond.  
Photo Credit: Secure Futures Solar

# Top Reasons Virginia Schools Are Going Solar

School districts around the Commonwealth are realizing that going solar is a win-win that cuts operating expenses and creates hands-on learning opportunities for students. These are the two primary drivers of solar adoption by Virginia's schools. Accordingly, the number of schools in the state with solar power has tripled and the amount of solar installed on schools has grown tenfold over the past two years.

## Solar Generates Cost Savings

Solar energy has become a much-needed solution for Virginia's school districts to manage their tight budgets. Virginia K-12 schools with solar are saving hundreds of thousands of dollars each year in energy costs.

**ARLINGTON PUBLIC SCHOOLS** was a trailblazer in building and operating the first net-positive-energy school in the Mid-Atlantic, and the district has been saving \$100,000 in energy costs per year just at Discovery Elementary. The county's second net-zero-energy school, Alice Fleet Elementary, opened its doors to students in Fall 2019. The new solar arrays on Alice Fleet Elementary and four more schools will save the district \$4 million over the next 25 years.

In 2019, **MIDDLESEX COUNTY PUBLIC SCHOOLS** became the first school district in the state to have all of its schools powered with 100% solar energy. The district estimates that these solar installations will save \$4.74 million in electricity costs over the next 25 years.

“Solar energy is enabling the district to save over \$4 million over 25 years. We can share those budgeted funds for teaching and learning opportunities.”

– Cathy Lin

*Energy Manager and Storm-water Program Administrator, at Arlington County Public Schools*

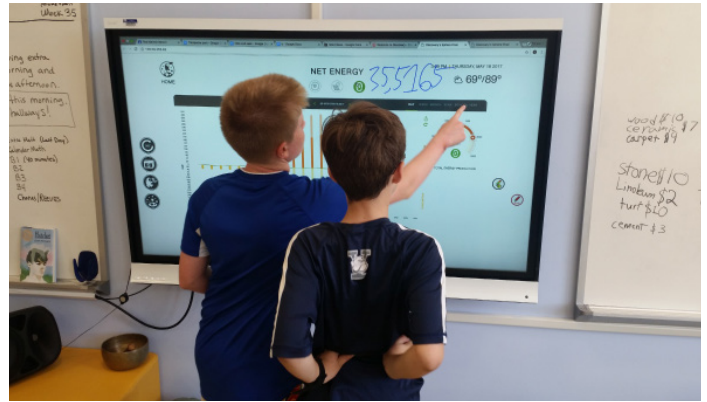


Discovery Elementary School in Arlington County. Photo Credit: VMDO

## Solar Sparks Educational Opportunities

Solar schools offer opportunities to enhance STEM (science, technology, engineering, and math) learning with hands-on, real-world tools and provide access to technology that can help prepare students for a future in the solar industry, which boasts the fastest-growing occupation in the nation.<sup>1</sup>

When RICHMOND PUBLIC SCHOOLS decided to install solar panels on the roofs of 10 of its schools, it created pathways to leverage the technology to enhance student learning. All 8th grade science teachers across the district received training on solar energy lessons to use in the classroom. With a generous grant from the Community Foundation of Richmond, the district invested in technology to track building-level energy consumption and hired a sustainability coordinator to engage staff and students. Two of the schools participated in a National Solar Tour that was open to the public and engaged the school community on the benefits of solar.



*Students at Discovery Elementary School in Arlington, Virginia use real-time solar panel production data. Photo Credit: Discovery Elementary*

The process of going solar has helped students in Virginia learn about civic engagement and develop leadership and organizational skills. In AUGUSTA COUNTY PUBLIC SCHOOLS and ALBEMARLE COUNTY PUBLIC SCHOOLS, it was high school students who initiated and led the effort to go solar. In early 2019, students, parents, and community members in Charlottesville and Albemarle County advocated for their school districts to increase adoption of clean energy and other climate protection measures. Students collected petition signatures and persuaded their school boards to pass resolutions that committed to further actions.



*Parent and student advocates in Albemarle County Public Schools*

**“I love environmental science, I love protecting the environment. I think it’s really good we got solar panels.”**

**– Nora**

*4th grader in Charlottesville, Virginia*

<sup>1</sup> U.S. Department of Labor, Bureau of Labor Statistics, *Occupational Outlook Handbook*, last modified September 4, 2019, <https://www.bls.gov/ooh/fastest-growing.htm>.

# Benefits of Solar Schools in Virginia



## ENERGY SAVINGS

Schools can reduce and stabilize energy costs by switching to solar. Those savings can be reinvested back into student learning and enrichment opportunities. Middlesex County Public Schools expects to save \$4.74 million over 25 years.



## EDUCATIONAL OPPORTUNITIES

Access to solar technology provides real-world learning opportunities in STEM areas. Arlington County added outdoor learning labs at two schools for students to engage firsthand with solar technology. All of the 8th grade science teachers in Richmond Public Schools received training on solar energy lessons to use in the classroom.



## LOCAL JOB CREATION

On-site solar installations support local employment and create vocational training opportunities. In 2018, there were 3,890 solar jobs in Virginia,<sup>2</sup> up 9% from the previous year and 31% higher than the number of coal jobs.<sup>3</sup>



## COMMUNITY RESILIENCE

Particularly with rising sea levels and increasing storms in coastal Virginia, solar energy systems with on-site battery storage can provide backup power for schools that serve as emergency shelters after natural disasters or power outages.



## HEALTHY PEOPLE AND PLANET

Switching to solar reduces fossil fuel pollution and protects the health of people and the planet. If all K-12 schools in the state installed an average-sized solar energy system, it would eliminate the greenhouse gas emissions of over 150,000 passenger vehicles.



## ENERGY AWARENESS

Solar schools are models for staff, students, and their families to make clean energy choices at home. Solar installations increase the likelihood of further solar adoption in the same neighborhood.

<sup>2</sup> The Solar Foundation, *Virginia Solar Jobs Census 2018*, [www.thesolarfoundation.org/solar-jobs-census/factsheet-2018-va](http://www.thesolarfoundation.org/solar-jobs-census/factsheet-2018-va).

<sup>3</sup> Virginia Department of Mines, Minerals, and Energy, "Annual Production Data", [www.dmme.virginia.gov/DMM/miningdata.shtml](http://www.dmme.virginia.gov/DMM/miningdata.shtml).

# State of Solar Schools in Virginia 2019

Total Solar Capacity:

**20,214 kW**

Total Number of Schools with Solar:

**89**

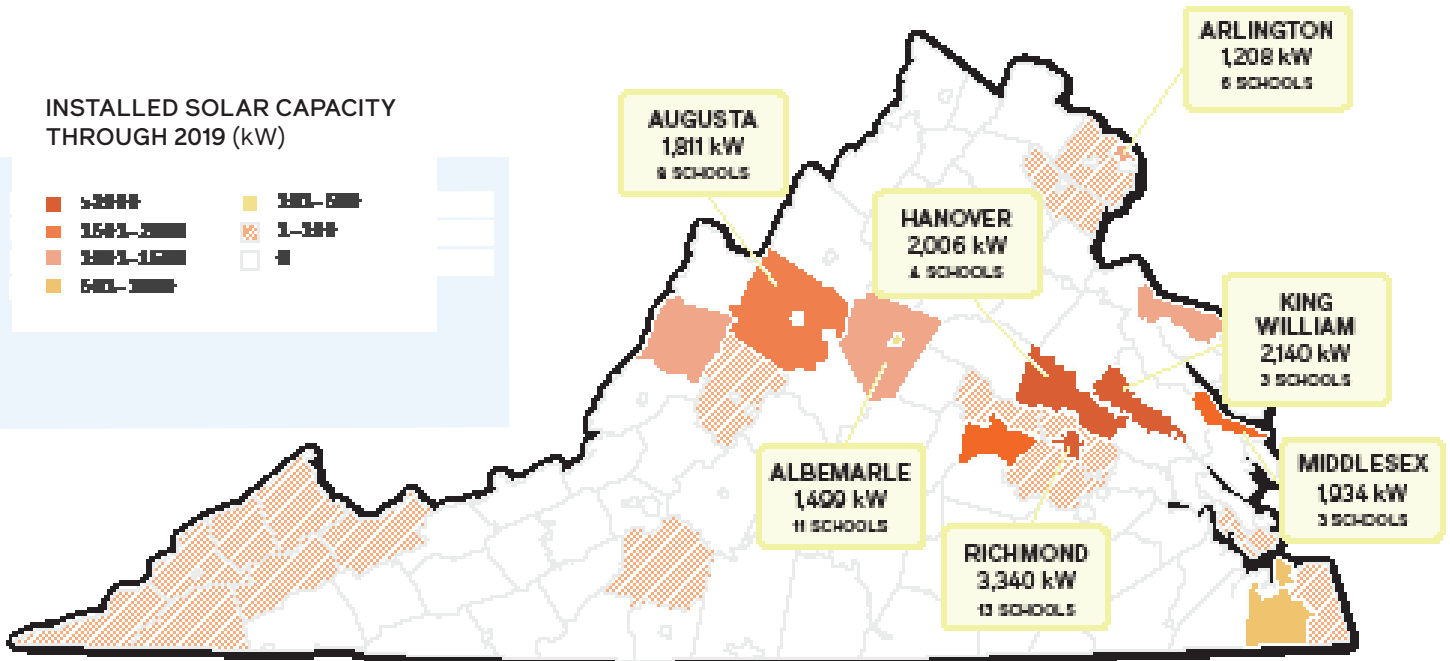
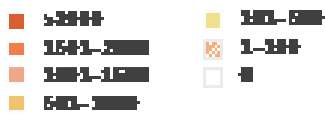
Average Solar Capacity per School:

**227 kW**

**3%**

of Virginia K-12 Schools

INSTALLED SOLAR CAPACITY THROUGH 2019 (kW)



TOP VA CITIES / COUNTIES \*

for Solar Capacity

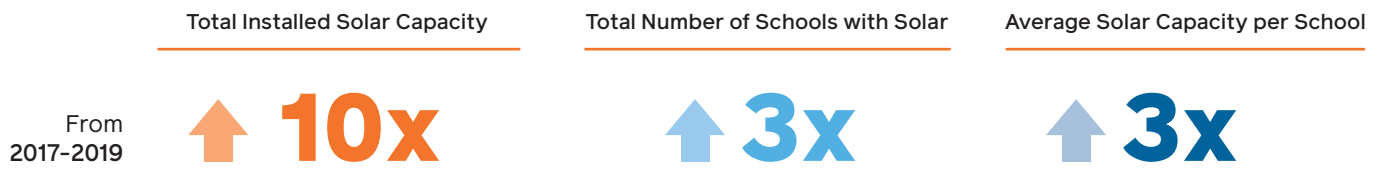
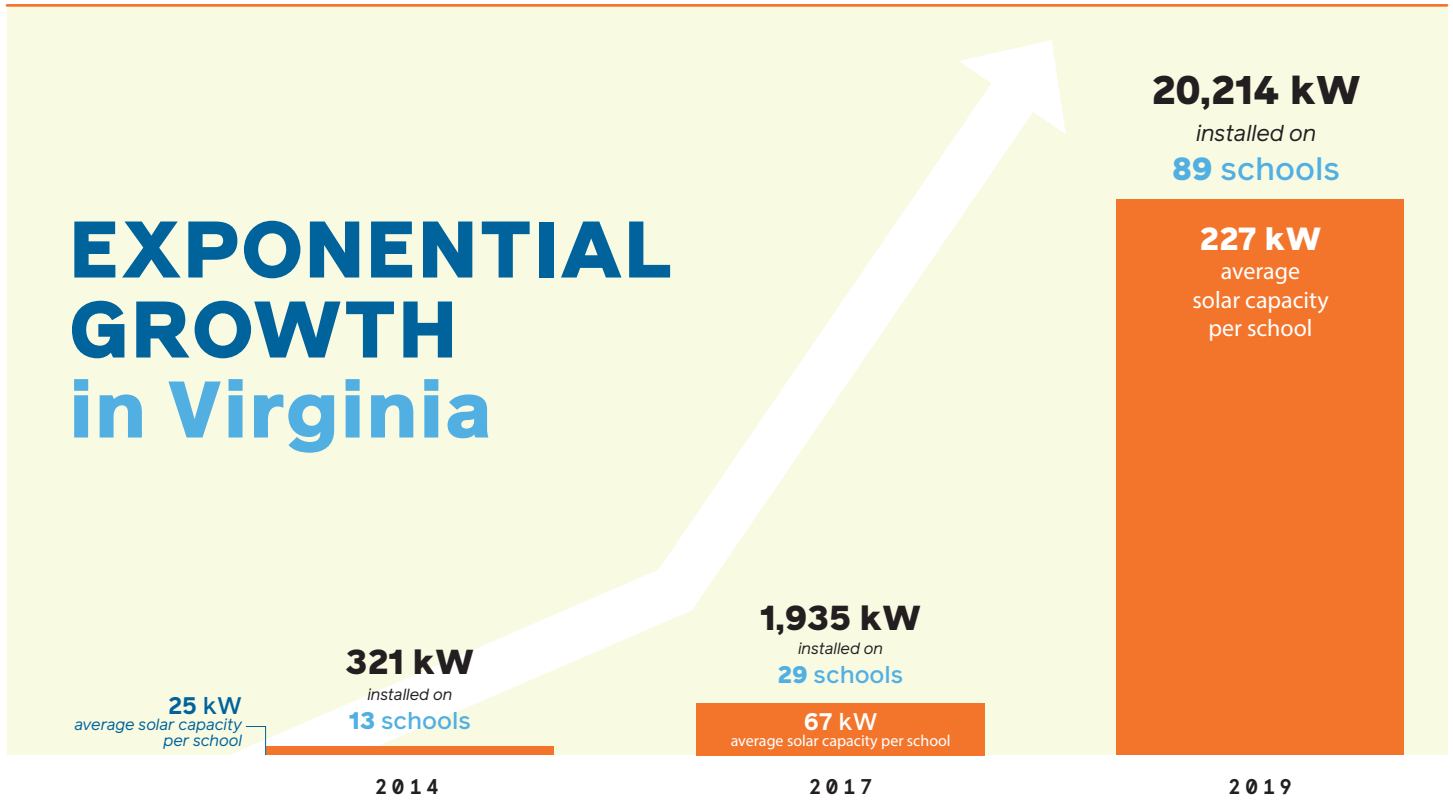
- 1 Richmond – 3,340 kW
- 2 King William County – 2,140 kW
- 3 Hanover County – 2,006 kW
- 4 Middlesex County – 1,934 kW
- 5 Augusta County – 1,811 kW
- 6 Powhatan County – 1,611 kW
- 7 Albemarle County – 1,499 kW
- 8 Westmoreland County – 1,448 kW
- 9 Arlington County – 1,207 kW
- 10 Bath County – 1,054 kW

for Number of Solar Schools

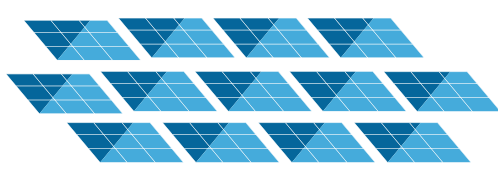
- 1 Richmond – 13
- 2 Albemarle County – 11
- 3 Augusta County – 8
- 4 Arlington County – 6
- 5 Charlottesville – 5
- 6 Fairfax County – 4
- 7 Hanover County – 4
- 8 Powhatan County – 4

\* Includes public and independent schools

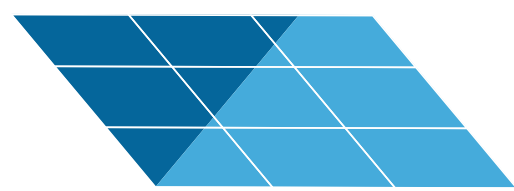
# Growth of Solar Schools in Virginia



Five years ago, the **TOTAL SOLAR CAPACITY** installed on all schools statewide was *less than* the **AVERAGE SOLAR CAPACITY** of just one school installed in 2019.



**321kW**  
Total of all schools in 2014



**408kW**  
Avg. of one school installed in 2019



# Access to Solar for All Virginia Schools

## How do schools in Virginia afford to go solar?

Power purchase agreements (PPAs) are the primary method Virginia schools use to finance solar installations. Nationwide, PPAs have accounted for nearly 90% of K-12 solar school installations since 2014.<sup>4</sup> Through a PPA, a third party purchases, owns, and maintains the solar panels, and the school or district agrees to buy the electricity produced by the system for the length of the agreement, often 25 or more years.

PPAs are popular with schools because they make it possible to install solar with little-to-no upfront investment or ongoing maintenance costs. In addition, the school or district typically pays a lower electricity rate than it previously paid the utility, resulting in immediate energy cost savings.

## Who has access to power purchase agreements?

*In Virginia, a school's ability to participate in a PPA depends on its electric utility.*

**DOMINION ENERGY** – The vast majority of solar schools in the state of Virginia are Dominion Energy customers. In 2013, VA Senate Bill 1023 established a renewable energy pilot program with a limit of 50 megawatts on third-party power purchase agreements (PPAs) for nonresidential customers served by Dominion. Over 80% of the installed capacity in the pilot program were solar installations at VA K-12 public schools.

As of January 2020, the pilot program was fully subscribed and the 50 megawatt cap had been reached. Currently, no additional PPAs will be allowed to be registered in Dominion Energy's service territory until the limit is raised or removed by new state legislation. Visit the State Corporation Commission website (<https://www.scc.virginia.gov/pages/Renewable-Energy-Pilot-Program>) to find a list of the projects included in the renewal energy pilot program.

INSTALLED  
SOLAR CAPACITY ON  
VIRGINIA SCHOOLS

has grown

**10x**

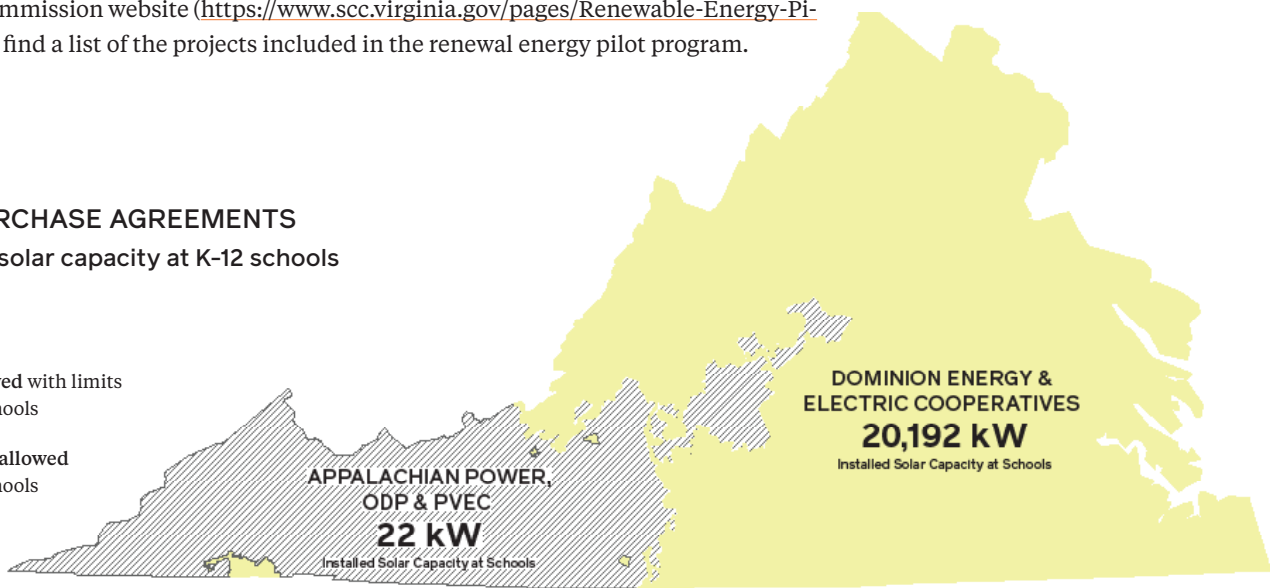
since 2017

**90%**

of that growth  
was financed with  
**POWER PURCHASE  
AGREEMENTS**

## POWER PURCHASE AGREEMENTS helped grow solar capacity at K-12 schools

- PPAs allowed with limits for K-12 schools
- PPAs NOT allowed for K-12 schools



Source: Generation180, Jan 2020

<sup>4</sup> Generation180, Solar Energy Industries Association, and The Solar Foundation, *Brighter Future: A Study on Solar in U.S. Schools*, 2017, [www.SolarForAllSchools.org](http://www.SolarForAllSchools.org).

**APPALACHIAN POWER** – Public schools in Appalachian Power’s service territory are denied the opportunity to use power purchase agreements to save on their electric bills. Because of that, only 22 kilowatts of solar capacity is installed on schools in its service area. Under House Bill 2390 of 2017, a renewable energy pilot program was established that allows only private, nonprofit higher education institutions to use PPAs in Appalachian Power’s service territory. The pilot program has a cap of 7 megawatts and expires in 2022. **As of November 2019 there were no participants in the renewable energy pilot program.** The State Corporation Commission website ([www.scc.virginia.gov/pur/pilot.aspx](http://www.scc.virginia.gov/pur/pilot.aspx)) maintains the current status of the pilot program.

**OLD DOMINION POWER** - Power purchase agreements are not allowed for any customers of Old Dominion Power Company (ODP). State legislation enabled Dominion Energy and Appalachian Power to create their renewable energy pilot programs, and a new state law is needed to enable power purchase agreements in ODP territory.

**ELECTRIC COOPERATIVES** – Schools that get their electricity through an electric cooperative can now use PPAs. In March 2019, VA House Bill 2547 enabled PPAs for tax-exempt customers of the state’s 13 electric cooperatives, including public and private schools. While there is not a specific cap for PPAs, there is a limit on net metering that restricts the amount of solar projects for nonprofits and localities to 2% of each cooperative’s system peak.

## TAKE ACTION

### to expand access to solar for all Virginia schools

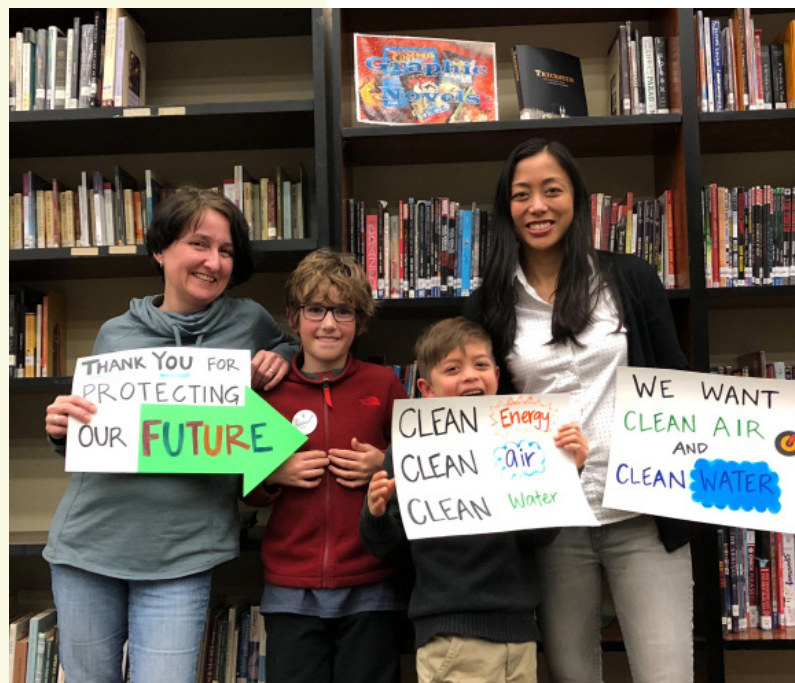
The number of schools in the Commonwealth that have gone solar tripled between 2017 and 2019. Virginia’s solar schools are saving hundreds of thousands of dollars per year in electricity costs, creating real-world STEM learning experiences, and introducing students to the industry with the fastest-growing occupation in the country. Legislative changes are needed now to ensure all Virginia schools have access to these financial and educational benefits.

### Parents, Students, Community Members

Let your state legislators know that you don’t want limits on your school’s potential to use clean energy, save electricity costs, and enhance student learning opportunities. Email your state delegate and state senator about supporting solar policies that help all of Virginia’s schools access solar energy fairly. Visit [SolarForAllSchools.org](http://SolarForAllSchools.org).

### School Districts

School districts can be powerful advocates for fair solar policies. Through the legislative agenda approved by the school board, districts can advocate for the removal of limits on cost-saving power purchase agreements and on how much of the grid capacity can be supplied by customer-generated clean energy. Customers of Appalachian Power should advocate for equal access to renewable energy PPAs that are enabling other schools in the Commonwealth to reduce their electricity bills and invest cost savings back into their students’ education.



## SUCCESS STORY

Middlesex County  
Public Schools

“All of us are . . .  
trying to deal  
with budgetary  
challenges. This  
is just such a  
no-brainer”

- Dr. Peter Gretz  
Superintendent,  
Middlesex County Public  
Schools, quoted in the  
*Washington Post* <sup>5</sup>

Photo Credit: Sun Tribe Solar

### About the Solar Project

**Solar Capacity:** 1.93 MW

**Structure:**

3 ground-mounted PV arrays

**Energy Offset:**

First school district in Virginia to  
offset 100% of all schools' energy  
consumption

**Financing:**

Power purchase agreement to  
purchase energy from Sun Tribe  
Solar

**Projected Savings:**

\$4.74 million over 25 years

**Developer:** Sun Tribe Solar

### About Middlesex County Public Schools

**Location:**

Coastal region of Virginia  
(Middle Peninsula)

**No. of Students:** 1,220

**No. of Schools:** 3

**Annual Budget (FY2018):**

\$16,006,935

**Contact:**

Greg Harrow, Director of  
Operations & Transportation,  
gharrow@mcps.k12.va.us

## Solar Skeptic Turned Solar Champion

MIDDLESEX COUNTY is a conservative, rural community in coastal Virginia in which 41% of the students are economically disadvantaged. No other school district in the region had installed solar panels before Middlesex County Public Schools (MCPS) did.

Greg Harrow, Director of Operations & Transportation, has worked at MCPS for 21 years. He admits he's not big on change and is reluctant to take on projects that will create more work for his small facilities team. Prior to this project, he was skeptical of solar and thought it would be too expensive.<sup>5</sup> Greg was influenced by John Koontz, member of the county's Board of Supervisors and solar industry veteran, and their tour of solar installations at Albemarle County Public Schools. **He changed his mind after he realized the huge cost savings that his district would see.**

Greg recognizes that the district wouldn't have been able to go solar without a power purchase agreement (PPA), but at first his team was concerned that the arrangement sounded too good to be true. Under the PPA, the solar developer purchases, owns, and maintains the solar panels with no upfront investment from the district. The district agrees to buy the energy produced by the panels at a discounted rate for 25 years, which will result in **cumulative savings of \$4.74 million.**


With 1.93 megawatts of solar photovoltaic panels installed on-site across its three schools, MCPS became the **first school district in Virginia to meet 100% of schools' electricity needs from solar energy.** Since the ground-mounted solar arrays were installed, the former solar skeptic has given dozens of tours to other school districts and brags about the energy savings and educational opportunities that the solar installation provides.

<sup>5</sup> Debbie Truong, "Virginia schools have seen the light, and it's solar," *Washington Post*, March 24, 2019

<sup>6</sup> Southern Environmental Law Center, Broken Ground Podcast, Episode 4: Riding the Solarcoaster, [brokengroundpodcast.org](http://brokengroundpodcast.org).

## SUCCESS STORY

Richmond Public  
Schools



“The big opportunity for us is that solar is a win, win, win—for our district’s budget, our students’ education, and our community’s transition to clean energy.”

- Liz Doerr

School Board Member,  
Richmond Public Schools

### About the Solar Project

**Solar Capacity:** 2.91 MW

The largest school district solar installation in VA to date

**Structure:**

Rooftop PV arrays on 10 schools

**Energy Offset:**

25% of the electricity consumed at the 10 schools

**Financing:**

Power purchase agreement with Secure Futures Solar

**Projected Savings:**

\$2 million over 20 years

**Developer:** Secure Futures Solar

**Installer:** Sun Tribe Solar

### About Richmond Public Schools

**Location:** Central Virginia

**No. of Students:** 25,212

**No. of Schools:** 44

**Annual Budget:** \$350 million

**Contact:**

Darrin Simmons

Chief of Operations

dsimmons2@rvaschools.net

## Solar Generates Learning Opportunities

WITH A TIGHT BUDGET AND AGING SCHOOL FACILITIES, Richmond Public Schools hadn’t really considered going solar until the Community Foundation of Richmond announced its RVA Solar Fund. The fund awarded the district with a \$100,000 grant and the opportunity to partner with Secure Futures Solar to install nearly 3 megawatts on 10 school district buildings. Generation180 was a supporting partner of RVA Solar Fund, which enabled Virginia’s largest school district solar installation to date. Through a power purchase agreement, the district will save more than \$2 million in energy costs over the next 20 years and will not incur any upfront capital costs or ongoing maintenance costs.

The fund created opportunities to maximize the educational impact of the solar project to students throughout the district. The grant funded the hire of a full-time sustainability coordinator to engage staff and students in using the solar technology. All 8th grade science teachers attended a professional development workshop by the National Energy Education Development Project to try out hands-on lessons about energy principles and solar power that can be used in their classes.

Real-time data generated by the solar installations enabled one high school class to participate in a collaborative research project with peers from Augusta County Public Schools, Secure Futures Solar, and the Science Museum of Virginia. The Throwing Solar Shade program has these young researchers using data from their schools’ roofs to investigate the urban heat island effect and how shading from solar panels affects energy demand in their school buildings.

The solar installations are also being used to educate the surrounding community about clean energy. In October 2019, two of Richmond’s new solar schools were featured in a national solar tour, allowing the school district to showcase its solar initiative to the public.

## SUCCESS STORY

### Norfolk Academy

"I can't tell you how proud my son and I felt once we stood on the roof and saw what we had accomplished."

- Ruth McElroy Amundsen

NASA engineer and involved parent

Photo credits: Stephen M. Katz, Virginia-Power.com, TNPS

#### About the Solar Project

Solar Capacity:

646 kW from 1,989 PV panels

Structure:

Rooftop PV arrays on 3 buildings

Energy Offset:

Powers the James B. Massey Jr. Leadership Center

Financing:

Power purchase agreement for seven years with parent-owned Sun Dogs, LLC (which made returns on its \$1 million investment)

Projected Savings:

Over \$80,000 annually after 7 years

Developer: Convert Solar

#### About Norfolk Academy

Location:

Southeast VA (Hampton Roads )

No. of Students: 1,200

Grades: 1-12

Contact:

Ruth McElroy Amundsen,  
Sun Dogs, LLC, rma@cox.net

## Parents Lead the Charge to Invest in \$1 Million Solar Array

NORFOLK ACADEMY had considered going solar in the past but couldn't make the numbers work until Ruth McElroy Amundsen, a NASA engineer and involved parent, presented the school with an opportunity to go solar with no upfront capital costs and save on electricity bills for decades to come.

With other parents at Norfolk Academy, Ruth started a new company, Sun Dogs LLC, that could raise money for the solar project, offer tax benefits to investors, and eventually donate the solar panels to the school. Sun Dogs raised \$1 million to buy and install a 646 kilowatt photovoltaic system, the largest on any independent school in Virginia. By leveraging the federal tax credit for solar and deductions for depreciation, partners in the company were able to recoup 60% of their investment in the first year and the rest within seven years. Instead of gifting money directly to the school to buy the solar panels, investing the funds through Sun Dogs enables the parents to donate solar panels to the school AND get all their money back.

Through a power purchase agreement with Sun Dogs, the school buys the energy produced by the solar installation for seven years at the same rate it had been paying the local utility. Once the investment is fully repaid, the panels will be donated to the school so it can realize more than \$80,000 annually in savings. In addition to lower energy bills, the school is reducing its carbon emissions by over 30% and generating enough clean energy on-site to power the James B. Massey Jr. Leadership Center.

The project has had a positive impact on students, staff, and the community. Three kiosks on campus provide real-time data on the solar production and enable teachers to integrate the technology into their classrooms. The 6th grade class uses a few portable solar panels to measure and analyze how different weather conditions, times of day, and seasons affect productivity. Inspired by the benefits gained by the school, some of the teachers have installed solar on their homes.

To help others in her area reap the benefits of solar, Ruth founded the Norfolk Qualified Opportunity Zone Fund ([www.NorfolkSolar.org](http://www.NorfolkSolar.org)), which enables businesses and nonprofits in economically distressed communities to benefit from free solar panels at no upfront cost.

# Conclusion

Solar schools have gained incredible momentum in Virginia. Just five years ago, the total solar capacity installed on all schools statewide was less than the average capacity of just one school's solar energy system installed in 2019. We have come a long way in a short while, and now is the time for the rest of Virginia's 2,000-plus schools to make the switch to clean, local energy.

The state of Virginia is already moving toward a 100% clean energy future. Governor Northam recently announced a statewide goal of producing at least 30% of Virginia's electricity from renewable sources by 2030 and 100% of its electricity from carbon-free sources by 2050. A wave of localities is leading the way—including Albemarle County, Arlington County, Blacksburg, Charlottesville, Fairfax County and Floyd County—by setting aggressive goals toward carbon neutrality.

Virginia's schools have an important role to play in reaching both local and statewide goals. Our schools not only have the potential to make an impactful contribution to our transition to 100% clean energy, but they will also play a leadership role in inspiring and galvanizing their communities to join in.

Let's get to work on sharing the benefits of solar for all schools in the Commonwealth.

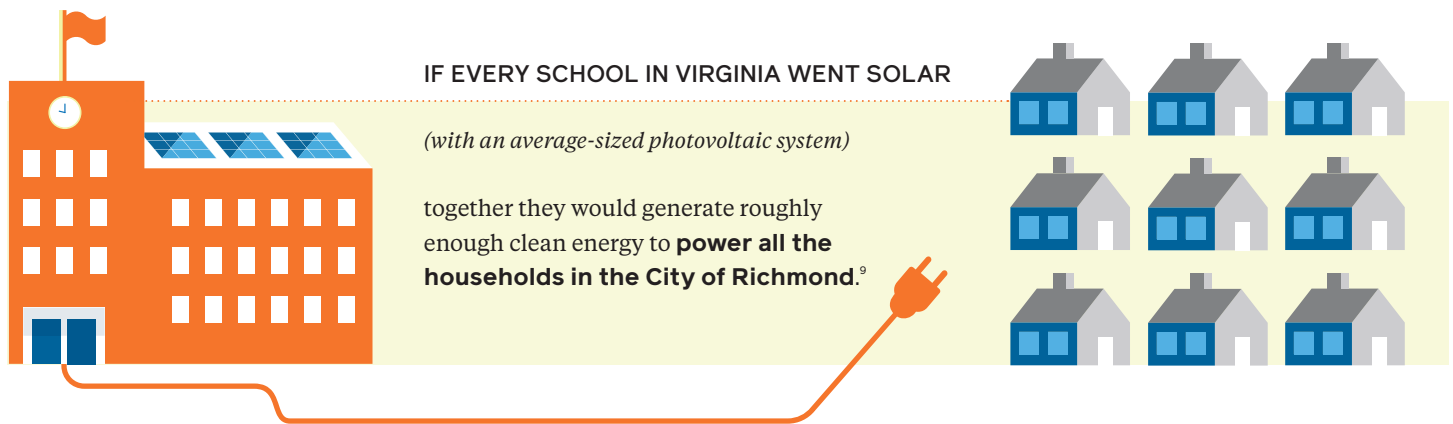
## Together, we can do this.

### IMAGINE IF ALL VIRGINIA SCHOOLS WERE COMPLETELY POWERED BY SOLAR ENERGY:

Our school districts could have **millions more dollars** from long-term energy savings to invest in our teachers and students.

Nearly 1.3 million students in the state<sup>7</sup> would have **access to authentic STEM learning** and career and technical education (CTE) opportunities.

We would all **breathe cleaner air and avoid greenhouse gas emissions** equivalent to removing more than 175,000 passenger vehicles from the roads each year.<sup>8</sup>



<sup>7</sup> Virginia Department of Education, Enrollment & Demographics, Fall Membership Reports, [http://www.doe.virginia.gov/statistics\\_reports/enrollment/index.shtml](http://www.doe.virginia.gov/statistics_reports/enrollment/index.shtml).

<sup>8</sup> U.S. Energy Information Administration (EIA), "Table C10. Energy Consumption Estimates by End-Use Sector, Ranked by State, 2017," in *State Energy Data 2017: Consumption*, [https://www.eia.gov/state/seds/sep\\_sum/html/pdf/rank\\_use.pdf](https://www.eia.gov/state/seds/sep_sum/html/pdf/rank_use.pdf); EIA, "Table PBA3. Sum of Major Fuel Consumption Totals and Gross Energy Intensities by Building Activity Subcategories, 2012," in *Commercial Buildings Energy Consumption Survey (CBECS)*, December 2016, <https://www.eia.gov/consumption/commercial/data/2012/c&e/cfm/pba3.php>; EIA, "U.S. Energy-Related Carbon Dioxide Emissions, 2018," <https://www.eia.gov/environment/emissions/carbon/>; U.S. Environmental Protection Agency, Greenhouse Gas Equivalencies Calculator, <https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>.

<sup>9</sup> U.S. Census Bureau, Quick Facts, <https://www.census.gov/quickfacts/>; Solar Energy Industries Association, "What is in a Megawatt?," <https://www.seia.org/initiatives/whats-megawatt>; U.S. Department of Energy, "A Consumer's Guide: Get Your Power From the Sun," <https://www.nrel.gov/docs/fy04osti/35297.pdf>.

# Virginia Solar Schools 2019

| School District   | School Name   | Installed Solar Capacity (kW) | Year Installed |
|---|---|-------------------------------|----------------|
| Albemarle County Public Schools   | Albemarle High School                                     | 124                           | 2016           |
| Albemarle County Public Schools   | Baker-Butler Elementary School                            | 224                           | 2016           |
| Albemarle County Public Schools   | Brownsville Elementary School                             | 183                           | 2016           |
| Albemarle County Public Schools   | Crozet Elementary School                                  | 183                           | 2016           |
| Albemarle County Public Schools   | Joseph T. Henley Middle School                            | 42                            | 2012           |
| Albemarle County Public Schools   | Mary Carr Greer Elementary School                         | 75                            | 2016           |
| Albemarle County Public Schools   | Monticello High School                                    | 267                           | 2016           |
| Albemarle County Public Schools   | Mortimer Y. Sutherland Middle School                      | 279                           | 2016           |
| Albemarle County Public Schools, Charlottesville City Schools   | Charlottesville-Albemarle Technical Education Center      | 1                             | 2017           |
| Arlington County Public Schools   | Alice West Fleet Elementary School                        | 582                           | 2019           |
| Arlington County Public Schools   | Discovery Elementary School                               | 497                           | 2015           |
| Arlington County Public Schools   | Glebe Elementary School                                   | 1                             | 2011           |
| Arlington County Public Schools   | Kenmore Middle School                                     | 1                             | 2017           |
| Arlington County Public Schools   | Tuckahoe Elementary School - Arlington                    | 37                            | 2019           |
| Arlington County Public Schools   | Wakefield High School                                     | 89                            | 2014           |
| Augusta County Public Schools   | Cassell Elementary School                                 | 189                           | 2018           |
| Augusta County Public Schools   | Edward G. Clymore Elementary School                       | 460                           | 2018           |
| Augusta County Public Schools   | Fort Defiance High School                                 | 119                           | 2018           |
| Augusta County Public Schools   | Riverheads Elementary School                              | 294                           | 2019           |
| Augusta County Public Schools   | Riverheads High School                                    | 109                           | 2019           |
| Augusta County Public Schools   | Wilson Elementary School                                  | 352                           | 2019           |
| Augusta County Public Schools   | Wilson Middle School                                      | 288                           | 2019           |
| Augusta County Public Schools, Staunton City Schools, Waynesboro Public Schools   | Shenandoah Valley Governor's School                       | 1                             | 2016           |
| Bath County Public Schools  | Bath County High School                                   | 252                           | 2017           |
| Bath County Public Schools  | Millboro Elementary School                                | 180                           | 2017           |
| Bath County Public Schools  | Valley Elementary School                                  | 622                           | 2017           |
| Buchanan County Public Schools  | Grundy High School  | 1                             | 2018           |
| Charlottesville City Schools  | Charlottesville High School                               | 100                           | 2012           |
| Charlottesville City Schools  | Lugo-Mcginness Academy                                    | 9                             | 2014           |
| Chesapeake Public Schools   | Western Branch High School                                | 800                           | 2016           |
| Chesterfield County Public Schools  | James River High School                                   | 1                             | 2011           |
| Colonial Heights Public Schools, Dinwiddie County Public Schools, Hopewell City Public Schools, King William County Public Schools, Petersburg City Public Schools, Prince George County Public Schools | MathScience Innovation Center                             | 1                             | 2017           |
| Dickenson County Public Schools   | Ridgeview High School                                     | 1                             | 2018           |
| Fairfax County Public Schools   | Franklin Sherman Elementary School                        | 5                             | 2018           |
| Fairfax County Public Schools   | Frost Middle School                                       | 1                             | 2015           |
| Fairfax County Public Schools   | Rachel Carson Middle School                               | 3                             | 2011           |
| Fairfax County Public Schools   | Thomas Jefferson High School                              | 4                             | 2009           |
| Fauquier County Public Schools  | Kettle Run High School                                    | 1                             | 2016           |
| Franklin County Public Schools  | Gereau Center For Applied Technology & Career Exploration | 16                            | 2011           |
| Goochland County Public Schools   | Goochland High School                                     | 1                             | 2016           |
| Hampton City Schools  | Hampton High School                                       | 1                             | 2017           |
| Hanover County Public Schools   | Cool Spring Elementary School                             | 288                           | 2019           |

# Virginia Solar Schools 2019 [continued]

| School District                            | School Name                            | Installed Solar Capacity (kW) | Year Installed |
|--|--|-------------------------------|----------------|
| Hanover County Public Schools              | Hanover High School                    | 600                           | 2019           |
| Hanover County Public Schools              | Laurel Meadow Elementary School        | 325                           | 2019           |
| Independent School in Albemarle County     | Free Union Country School              | 100                           | 2016           |
| Independent School in Albemarle County     | Peabody School                         | 20                            | 2019           |
| Independent School in Charlottesville City | Charlottesville Day School             | 23                            | 2019           |
| Independent School in Charlottesville City | St. Anne's-Belfield School             | 331                           | 2018           |
| Independent School in Charlottesville City | Village School                         | 2                             | 2010           |
| Independent School in Henrico County       | Collegiate School - Mooreland Campus   | 30                            | 2018           |
| Independent School in Henrico County       | Collegiate School - Robins Campus      | 68                            | 2018           |
| Independent School in Norfolk City         | Norfolk Academy                        | 660                           | 2018           |
| Independent School in Richmond City        | St. Catherine's School                 | 50                            | 2013           |
| Independent School in Richmond City        | Trinity Episcopal School               | 379                           | 2018           |
| King William County Public Schools         | Acquinton Elementary School            | 858                           | 2019           |
| King William County Public Schools         | Cool Spring Primary School             | 684                           | 2019           |
| King William County Public Schools         | Hamilton Holmes Middle School          | 598                           | 2019           |
| Lee County Public Schools                  | Lee County Career & Technical Center   | 1                             | 2018           |
| Lexington City Schools                     | Lylburn Downing Middle School          | 84                            | 2017           |
| Middlesex County Public Schools            | Middlesex Elementary School            | 466                           | 2018           |
| Middlesex County Public Schools            | St. Clare Walker Middle School         | 617                           | 2019           |
| Middlesex County Public Schools            | Middlesex High School                  | 850                           | 2019           |
| Newport News City Public Schools           | Deer Park Elementary School            | 1                             | 2017           |
| Norton City Public Schools                 | John I. Burton High School             | 1                             | 2018           |
| Powhatan County Public Schools             | Flat Rock Elementary School            | 325                           | 2019           |
| Powhatan County Public Schools             | Pocahontas Elementary School           | 375                           | 2019           |
| Powhatan County Public Schools             | Powhatan Elementary School             | 424                           | 2019           |
| Powhatan County Public Schools             | Powhatan Middle School                 | 488                           | 2019           |
| Prince William County Schools              | T. Clay Wood Elementary School         | 1                             | 2018           |
| Richmond Public Schools                    | Blackwell Elementary School            | 200                           | 2019           |
| Richmond Public Schools                    | Broad Rock Elementary School           | 194                           | 2019           |
| Richmond Public Schools                    | G.H. Reid Elementary School            | 187                           | 2019           |
| Richmond Public Schools                    | Huguenot High School                   | 665                           | 2019           |
| Richmond Public Schools                    | J.B. Fisher Elementary School          | 131                           | 2019           |
| Richmond Public Schools                    | Linwood Holton Elementary School       | 166                           | 2019           |
| Richmond Public Schools                    | Lucille M. Brown Middle School         | 450                           | 2019           |
| Richmond Public Schools                    | Martin Luther King Jr. Middle School   | 585                           | 2019           |
| Richmond Public Schools                    | Mary Munford Elementary School         | 1                             | 2009           |
| Richmond Public Schools                    | Miles Jones Elementary School          | 152                           | 2019           |
| Richmond Public Schools                    | Oak Grove-Bellemeade Elementary School | 180                           | 2019           |
| Russell County Public Schools              | Honaker Elementary School              | 1                             | 2018           |
| Scott County Public Schools                | Duffield-Pattonsville Primary School   | 9                             | 2001           |
| Scott County Public Schools                | Twin Springs High School               | 1                             | 2018           |
| Tazewell County Public Schools             | Tazewell High School                   | 1                             | 2018           |
| Virginia Beach City Public Schools         | Landstown High School                  | 1                             | 2016           |
| Westmoreland County Public Schools         | Cople Elementary School                | 788                           | 2019           |
| Westmoreland County Public Schools         | Washington District Elementary School  | 660                           | 2019           |
| Wise County Public Schools                 | Union Primary School                   | 1                             | 2018           |