

Removing barriers to solar on schools and local governments in Southwest VA.

Monday, April 20

Presenters:

- Tish Tablan (Generation 180),
- Hannah Coman (SELC),
- Chelsea Barnes (Appalachian Voices)
- Aaron Sutch (Solar United Neighbors)

Webinar: Help you understand the barriers to solar on schools and governments buildings and how you can help eliminate them

1. Solar basics and terminology
2. The benefits of solar on schools
3. Barriers to solar on schools in APCO territory
4. How you can take action

Zoom and basic housekeeping

Overview of Solar and Terminology

- **Solar Basics**
 - PV systems
 - Measured in KW
 - Grid tied
- **Net Metering**
 - Billing system: Full (retail) credit for energy produced but not used at the time
 - Surpluses work like 'roll over minutes'
 - A percent of annual energy production
- **99% of solar systems use net metering**
 - Nationwide and Virginia
 - Responsible for majority of Virginia's solar jobs **Solar Foundation*
 - Enables jobs and clean energy for local communities
- **Net metering expanded in legislation**



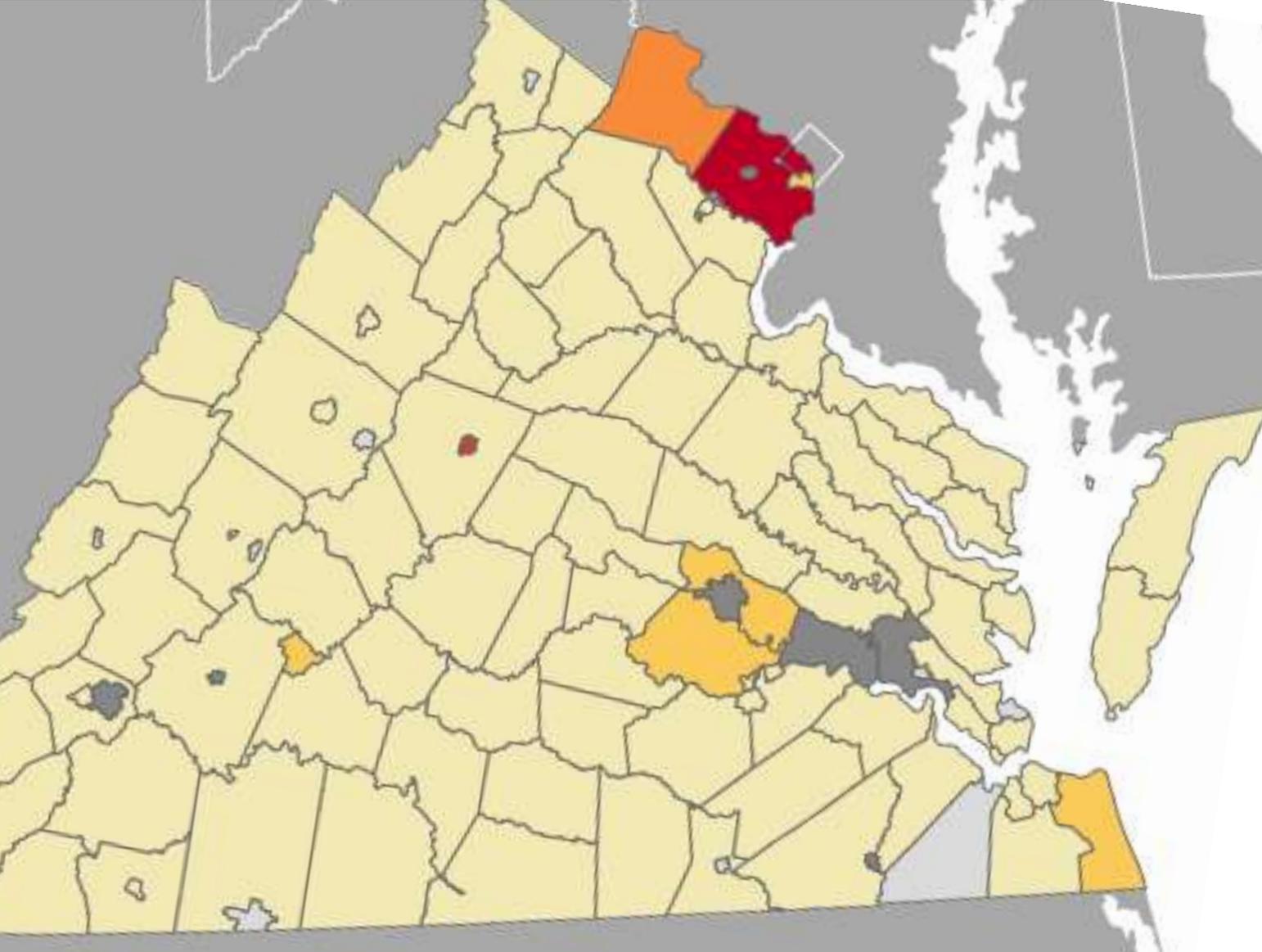
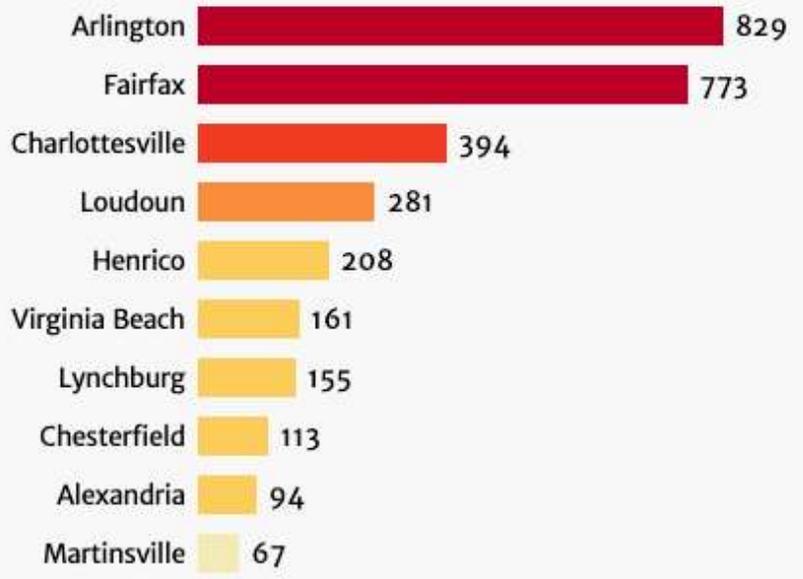
PPAs: Power Purchase Agreements

- **Finance structure making solar more accessible to non-profits**
- A tax-paying third-party developer finances, installs, owns and maintains system on host's property
- **Host purchases energy from the solar system**
 - Predetermined rate (flat or variable)
 - Term: Typically 20 years but can be between 10-25 years
- **Third party monetizes tax credits and incentives**
 - Federal tax credit, MACRS
- **Addresses principle barriers to solar**
- Upfront costs/bill savings from day one
 - More info: www.seia.org/research-resources/solar-power-purchase-agreements)



Solar Jobs in Virginia: 4,489

Top Ten Counties



Source: The Solar Foundation (2019)

An array of
benefits



Saving Taxpayer Dollars

- Local governments spend 40% of expenditures on secondary and elementary education. (Source: Urban Institute)
- Energy is the #2 highest expense for schools after personnel. (Source: U.S. Dept of Energy)



Augusta County Public Schools

Power Purchase Agreements (PPAs)

86% of solar capacity at VA K-12 schools was financed with a Power Purchase Agreement (PPA).

Benefits of a PPA:



ZERO

Up-front capital costs



ZERO

Maintenance costs



LOWER

Electricity rate

Middlesex County Public Schools

First 100% solar school district in VA

PV System Size:

1.9 MW

Energy Offset:

100% of all 3 school buildings

Cost Savings:

\$4 Million Over 25 Years



Photo: Sun Tribe Solar

Arlington Public Schools

Power Purchase Agreement:

- 2.5 MW on 5 Schools' Rooftops
- Cost Savings of \$4 Million Over 25 Years

New Construction (Bond):

- Net positive energy school built under budget
- 497 kW of solar
- Cost Savings of \$100,000/year



Discovery Elementary School

Explosion of Solar at K-12 Schools in VA

In the last two years...

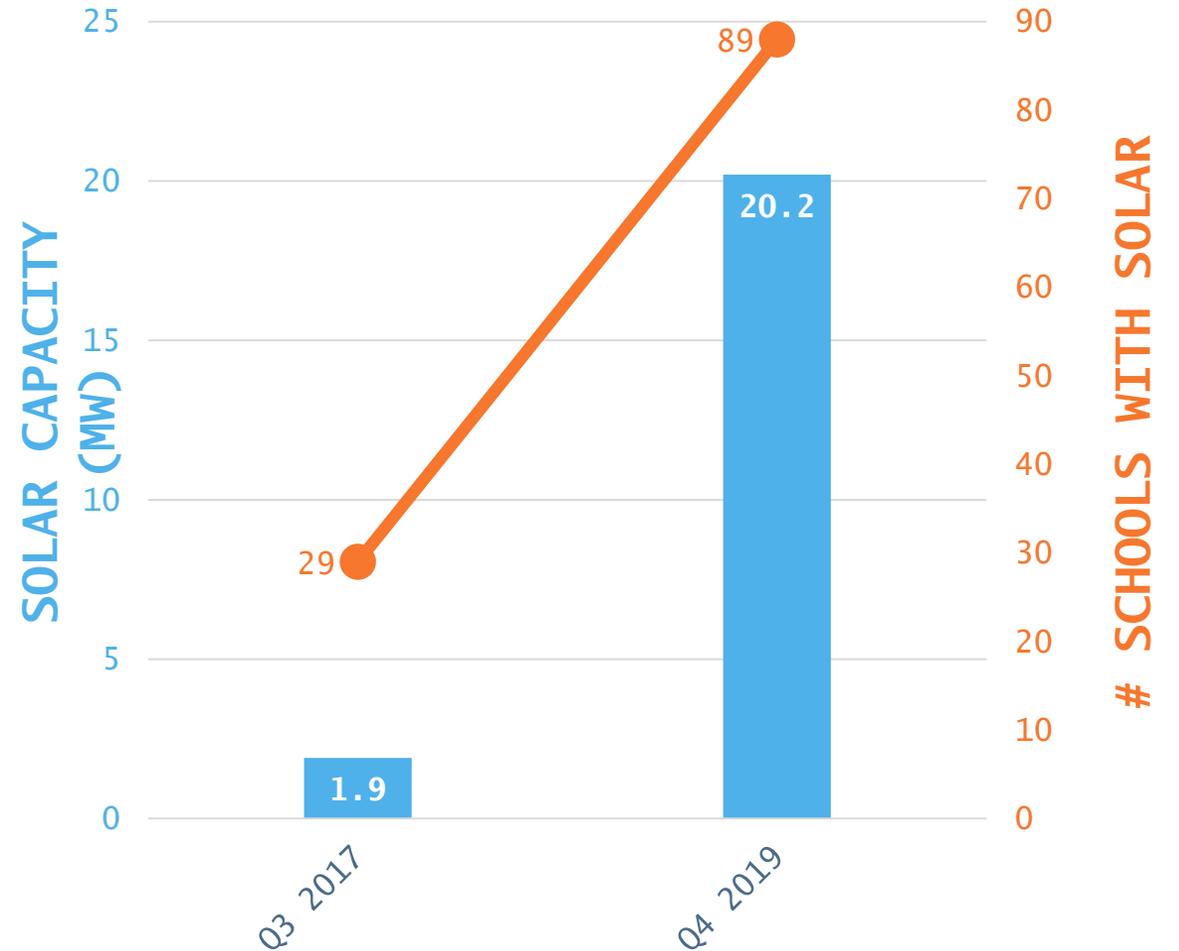
10x

growth in total installed solar capacity on schools

3x

growth in # of schools with solar

...but NOT in Appalachian Power territory



99.9%

OF SOLAR
CAPACITY

installed at Virginia
K-12 schools is **OUTSIDE OF**
Appalachian Power territory

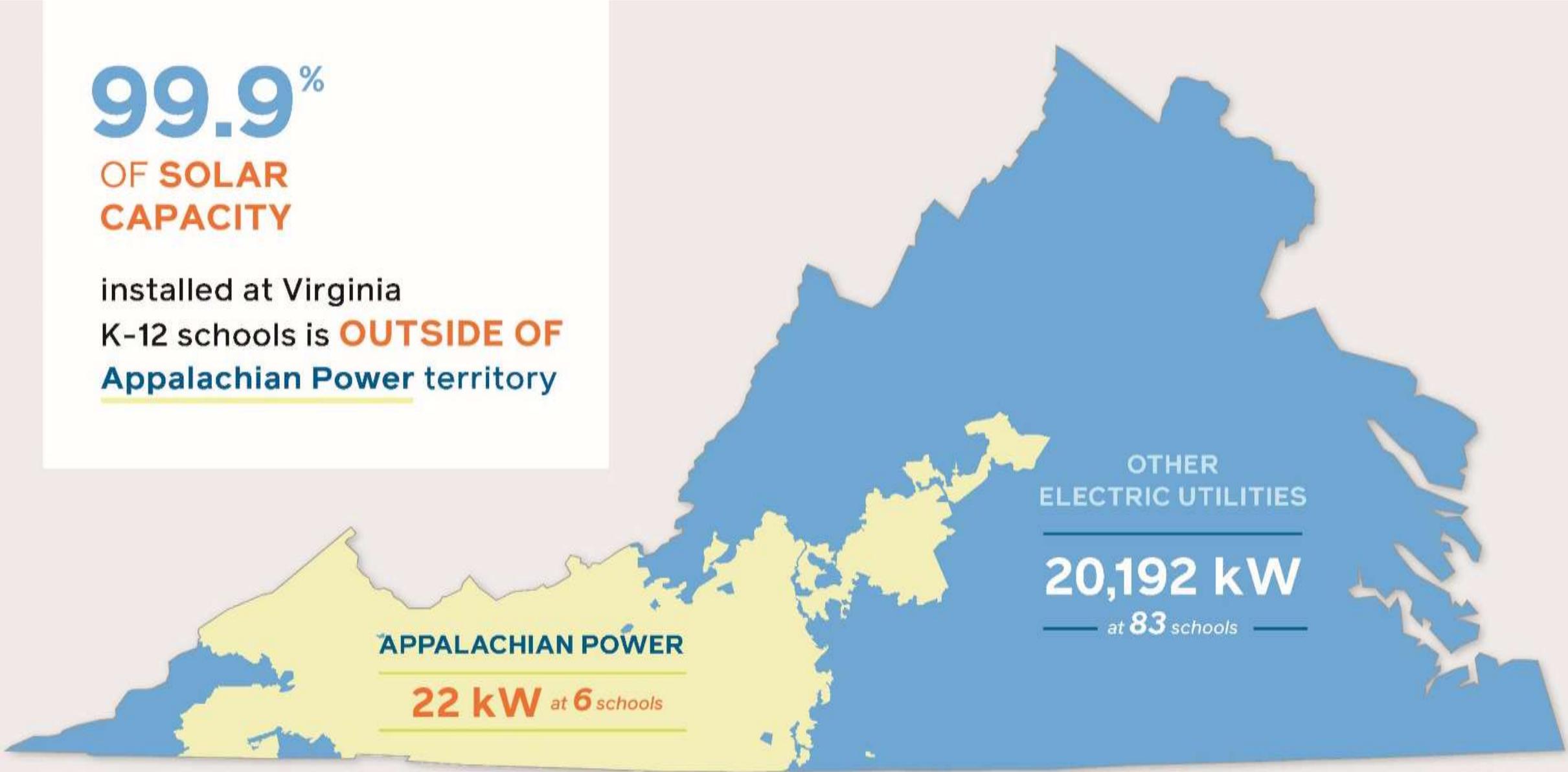
APPALACHIAN POWER

22 kW at 6 schools

OTHER
ELECTRIC UTILITIES

20,192 kW

at 83 schools

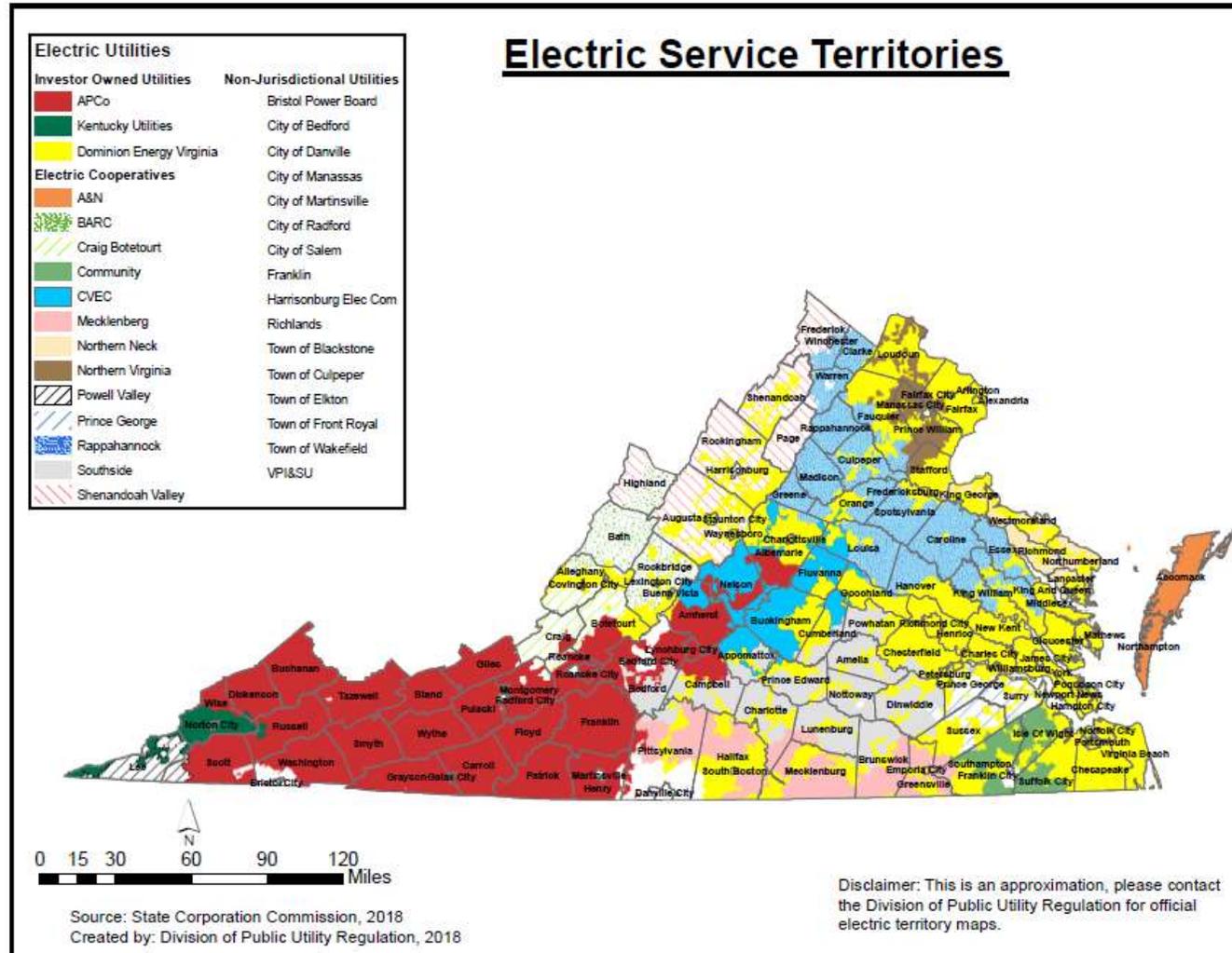




Southern
Environmental
Law Center



Appalachian Power Company Territory



2020 Virginia Legislation

- Virginia Clean Economy Act (Senate Bill 851/House Bill 1526)
- Solar Freedom Act (Senate Bill 710/House Bill 572)
- Shared Solar (Senate Bill 629/House Bill 1634)
- Distributed Renewable Energy; Sale of Electricity under Third-Party Sale Agreements (House Bill 1647)
- Clean Energy and Community Flood Preparedness Act (Senate Bill 1027/ House Bill 981)
- Virginia Energy Plan; Covenants Regarding Solar Power, Reasonable Restrictions (Senate Bill 504/ House Bill 414)
- Clean Energy Projects; Authorizes DMME to Sponsor a Statewide Financing Program (House Bill 654)
- Electric Cooperatives; On-Bill Tariff Programs (Senate Bill 754)



Southern
Environmental
Law Center

Legislative Changes to Net Metering and Power Purchase Agreements

- Net metering
 - Increased the cap on net-metered solar in all investor-owned utility territories from 1% to “6% percent, in the aggregate, 5% of which is available to all customers and 1% of which is available only to low-income utility customers of each electric distribution company’s adjusted Virginia peak-load forecast for the previous year.”
 - 6% of APCo’s peak load from the previous year (approximately 240 MW)
- Power Purchase Agreements
 - Increased the availability of power purchase agreements in all investor-owned utility territories
 - Dominion territory capped at 500 MW for Virginia jurisdictional customers and 500 MW for Virginia nonjurisdictional customers
 - APCo territory capped at 40 MW
 - ODP territory capped at 40 MW



Southern
Environmental
Law Center

What are Public Authorities?



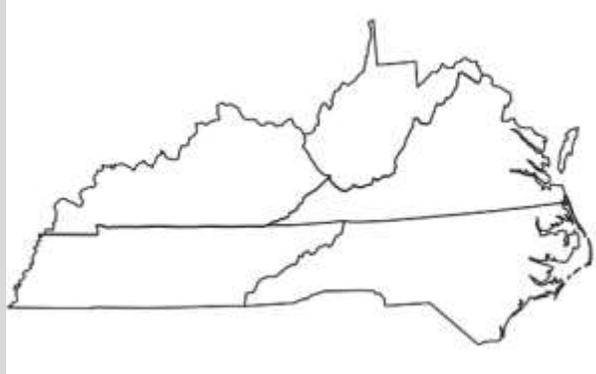
Current APCo Tariff with Public Authorities

- Net Metering
 - Limited to 3 MW in the aggregate.
- Power Purchase Agreements
 - States that net metering is available for customer who “own and operate an eligible renewable fuel generator”

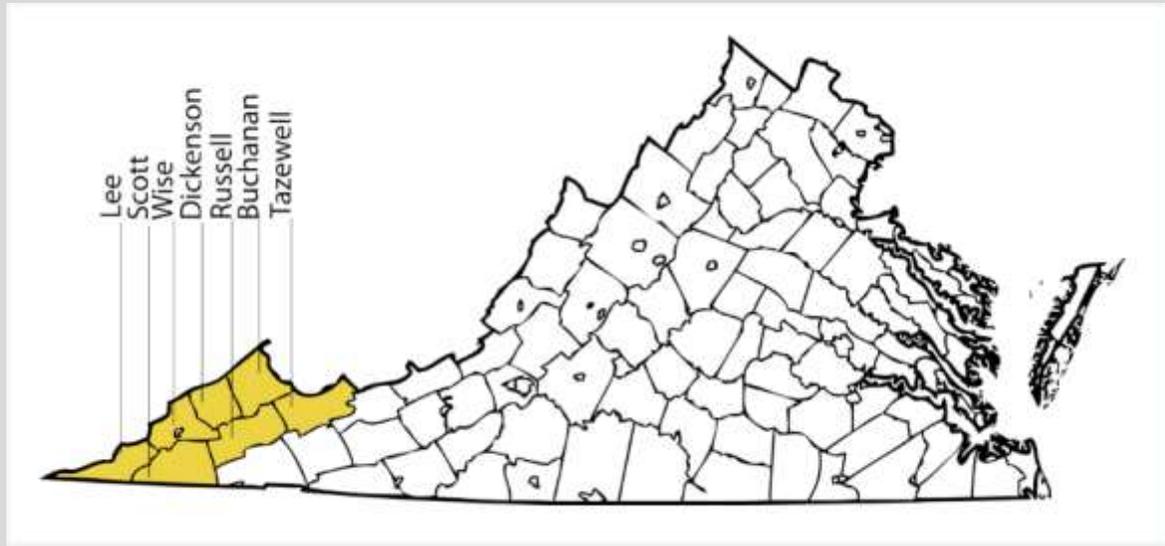


Southern
Environmental
Law Center

Appalachian Voices



Solar Workgroup of SWVA



Appalachian
Voices



Opportunity for Change

- The Virginia Municipal League and the Virginia Association of Counties are now in negotiations with Appalachian Power to revise the tariffs
 - Representatives from local governments can participate in the negotiations
 - Timeline is over the next 12 months
 - **Appalachian Power could remove restrictions on PPAs and net metering at any time**



Opportunity for Action

- **Local government officials, school board members**
 - Find out if you have a representative on the VML/VACO steering committee
 - Coordinate with other members of your local government to contact the steering committee
 - Join the steering committee
 - Talk to other steering committee members from local governments
- **Specific Recommendations for contract changes**
 - Allow for PPAs by allowing for customers to contract with other entities to own and operate the system, or explicitly state that PPAs are allowed.
 - Remove the 3 MW cap on net metering



Opportunity for Action

- **Everyone else**
 - Call or write your school board members, county boards, city council members, town managers, and mayors
 - Sign the petition
 - Spread the word
- **Specific Recommendations for contract changes**
 - Allow for PPAs by allowing for customers to contract with other entities to own and operate the system, or explicitly state that PPAs are allowed.
 - Remove the 3 MW cap on net metering



Opportunity for Action: Everyone

- Sign up with the:
 - Solar Workgroup of Southwest Virginia (swvasolar.org)
 - Solar United Neighbors
 - Appalachian Voices
 - Generation 180



Questions and Discussion



<https://www.solarunitedneighbors.org/virginia/take-action>

Current Steering Committee members

- Chairman, C. James Ervin, Manager, **Town of Rocky Mount**;
- Robert Bengtson, Director of Public Works, **City of Roanoke**;
- Laura Carini, Deputy City Attorney, **City of Roanoke**;
- Rob Light, Director of General Services, County of Roanoke
- Barry W. Thompson, **Town of Vinton**;
- Sarah Carter, **Town of Amherst**;
- Dean Lynch, Executive Director, **Virginia Association of Counties**;
- Scott Shirley, **Western Virginia Water Authority**;
- Chris Whitlow, **Franklin County**;
- John Clark, **Town of Chilhowie**;
- Scott Woodrum, Director of Environmental Services, **Montgomery County**
- Michelle Gowdy, Executive Director, **Virginia Municipal League**;
- Sandra Harrington, Government Relations Associate, **Virginia Municipal League**
- Phyllis Errico, General Counsel, **Virginia Association of Counties**
- Robert D. Perrow and John L. Walker, III, legal counsel for the Steering Committee

APCo Counties

Albemarle	Craig	Lynchburg	Russell
Amherst	Dickenson	Montgomery	Scott
Bedford	Floyd	Nelson	Smyth
Bland	Franklin	Patrick	Tazewell
Botetourt	Galax City	Pittsylvania	Washington
Buchanan	Giles	Pulaski	Wise
Campbell	Grayson	Roanoke	Wythe
Carroll	Henry	Roanoke City	