

# Solar Programs in Virginia

Jason Carter, Shenandoah Valley Electric Cooperative

Lindsey Watson, Rappahannock Electric Cooperative

Sam Brumberg, Virginia, Maryland & Delaware Association of Electric Cooperatives

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# Agenda

- ❑ Overview of electric cooperatives in Virginia
- ❑ Overview of electric generation, transmission, and distribution
- ❑ Solar in co-op service territories
- ❑ Net Energy Metering (NEM) at co-ops
- ❑ Small Agricultural Generation at co-ops
- ❑ Future expansion
- ❑ Project example



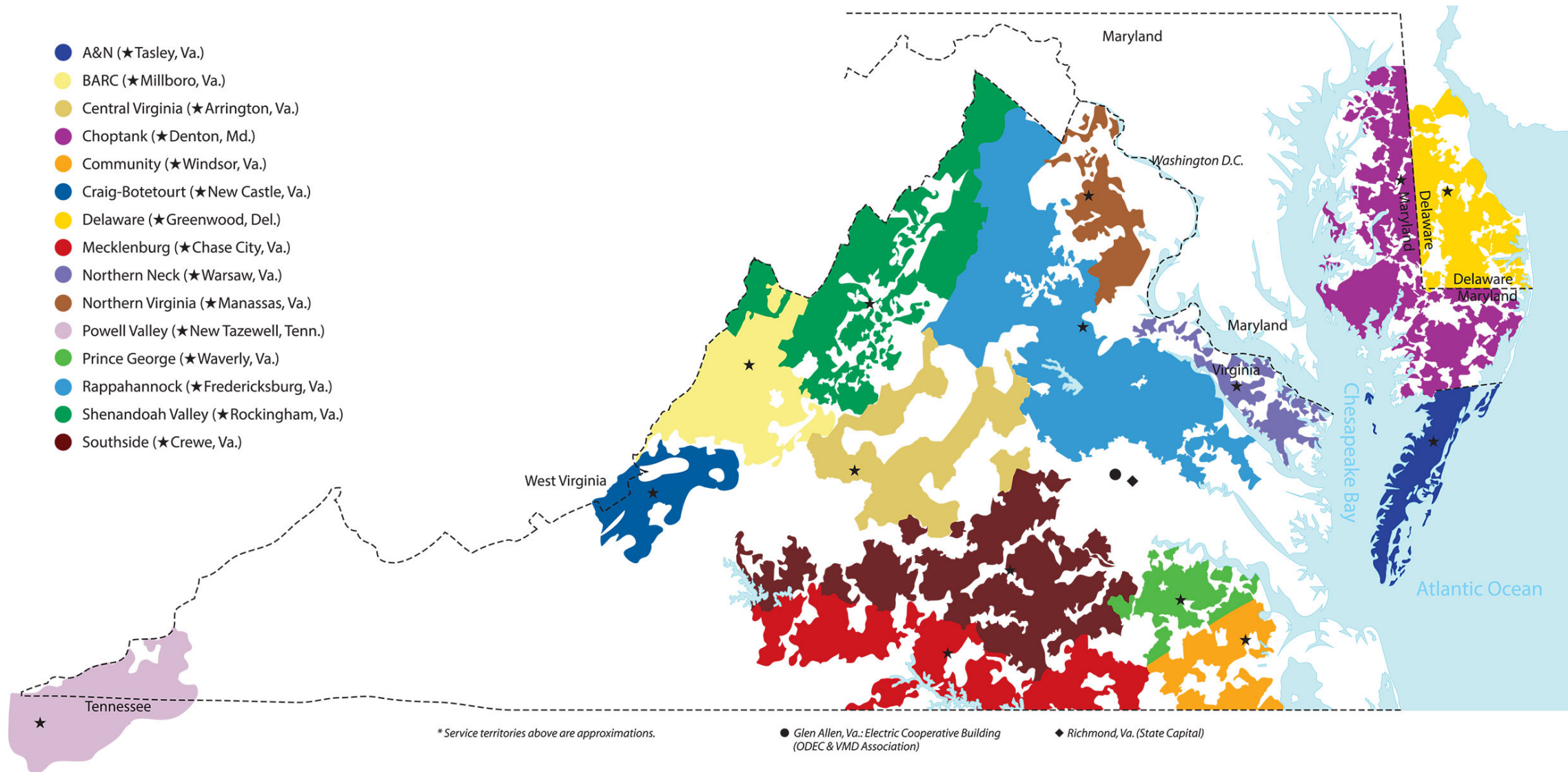


# **Electric Cooperatives in Virginia**



# Service Territories in Virginia

- A&N (★Tasley, Va.)
- BARC (★Millboro, Va.)
- Central Virginia (★Arrington, Va.)
- Choptank (★Denton, Md.)
- Community (★Windsor, Va.)
- Craig-Botetourt (★New Castle, Va.)
- Delaware (★Greenwood, Del.)
- Mecklenburg (★Chase City, Va.)
- Northern Neck (★Warsaw, Va.)
- Northern Virginia (★Manassas, Va.)
- Powell Valley (★New Tazewell, Tenn.)
- Prince George (★Waverly, Va.)
- Rappahannock (★Fredericksburg, Va.)
- Shenandoah Valley (★Rockingham, Va.)
- Southside (★Crewe, Va.)



\* Service territories above are approximations.

● Glen Allen, Va.: Electric Cooperative Building (ODEC & VMD Association)

◆ Richmond, Va. (State Capital)

# ● Electric Cooperatives

## Co-ops are ...

- Owned by their members
- Locally governed by elected Boards of Directors
- Operate at cost of service
- Return excess margins to their members
- Regulated by the State Corporation Commission (SCC)



# ● How does electricity get to my house?

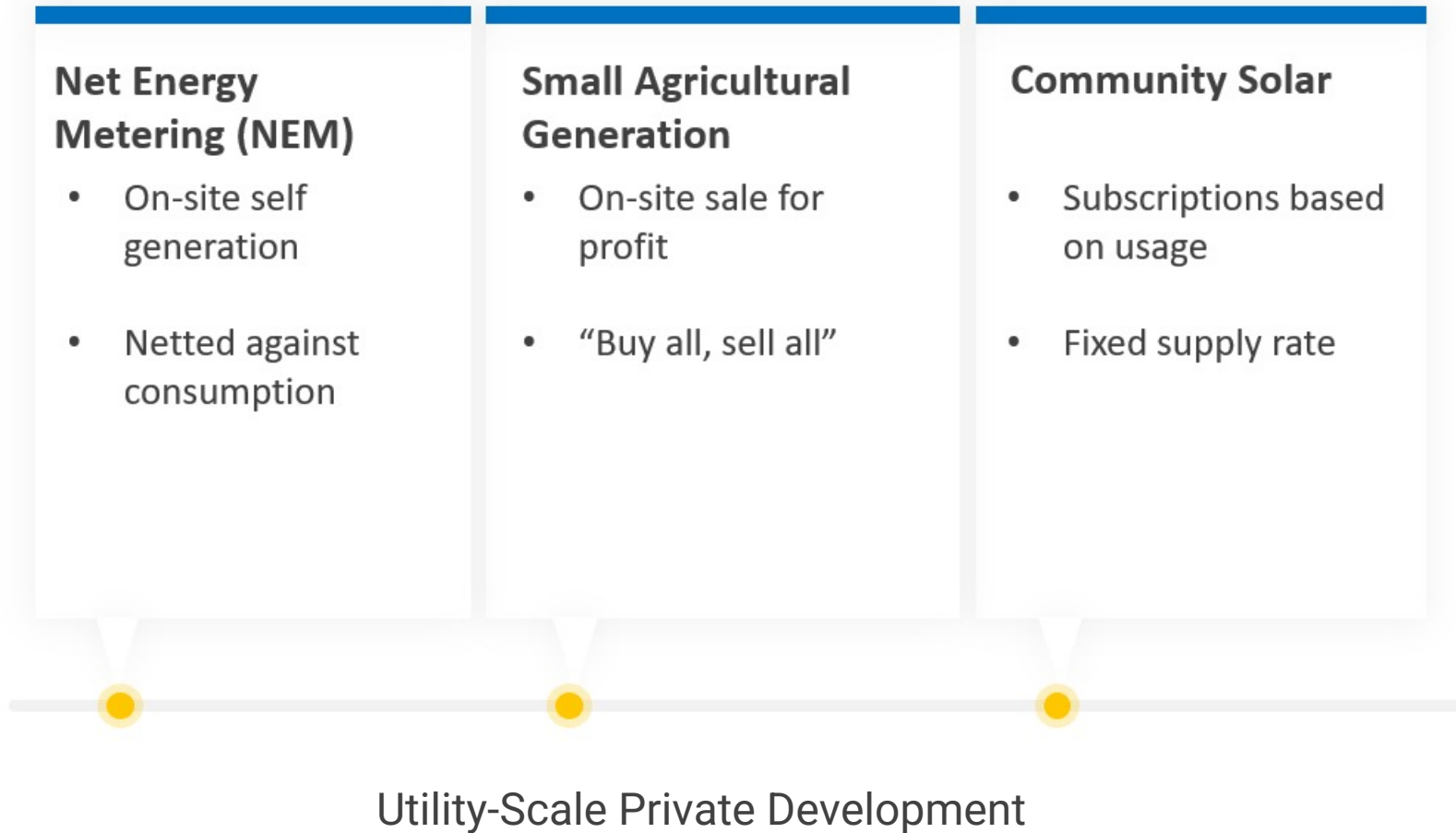
- **Generation**
- **Transmission**
- **Distribution**





# **Solar in Co-op Service Territories**

# Solar Options





# ● Net Energy Metering (NEM)

**NEM is a billing practice that allows you to net the electricity you generate against what you consume at your home.**

- ❑ **Each co-op has a NEM tariff. NEM works differently at co-ops and Investor-Owned Utilities (IOUs)**
  - ❑ **Residential – up to 20 kW and 100% of load**
  - ❑ **Commercial – up to 1 MW and 100% of load**
- ❑ **Option to purchase Renewable Energy Certificates (RECs)**
- ❑ **Co-ops can work with you on interconnection/ physical aggregation**



# ● Net Metering

## Power Purchase Agreements (PPAs)

- ❑ Third-party PPAs are available to nonprofit and non-jurisdictional members
- ❑ Beginning on July 1<sup>st</sup> of this year, co-op boards can make this available to all members
- ❑ PPAs must be entered into with a registered provider



# ● Small Agricultural Generation (SAG)

Small Agricultural Generation, or SAG, is a “buy-all, sell-all” product.

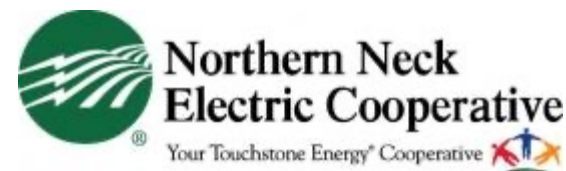
- ❑ Each co-op has a SAG tariff
- ❑ Co-ops must purchase up to the limits of the tariff
- ❑ Member receives payment for energy, capacity, and RECs




# Community Solar

Community solar is a subscription-based product.

- ❑ 6 co-ops offer Community Solar:
  - ❑ ANEC
  - ❑ BARC
  - ❑ CVEC
  - ❑ MEC
  - ❑ NNEC
  - ❑ REC
  
- ❑ SVEC will soon offer
  
- ❑ Subscriptions can help save money on electricity supply in the long-term.



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# **Future Solar Expansion**

# Future Expansion

Co-ops have been at the forefront of solar development and authorizing legislation.

Legislation passed this year will:

- ❑ Allow the authority for third-party PPAs for residential and commercial members
- ❑ Allow the authority for unlimited NEM caps in co-op territories



# ● Future Expansion – 2023 and Beyond

Co-ops are working on ...

- ❑ Virtualization and aggregation of metering
- ❑ Shared solar projects





# ● Small Farm Example

- 1 house
- 1 poultry house
- 1 well pump
- 1 barn
- Open field

## Options:

- NEM behind each structure/meter
- Physical interconnection of facilities
- SAG in open field
- Private utility-scale in open field



**Questions?**