



TO BEAT THE HEAT, JUST ADD SUN

Ivy Main

VA-SUN Solar Congress

November 12, 2016

Solar and Wind Just Passed Another Big Turning Point

It has never made less sense to build fossil fuel power plants.



Bloomberg

Markets

Tech

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Opinion

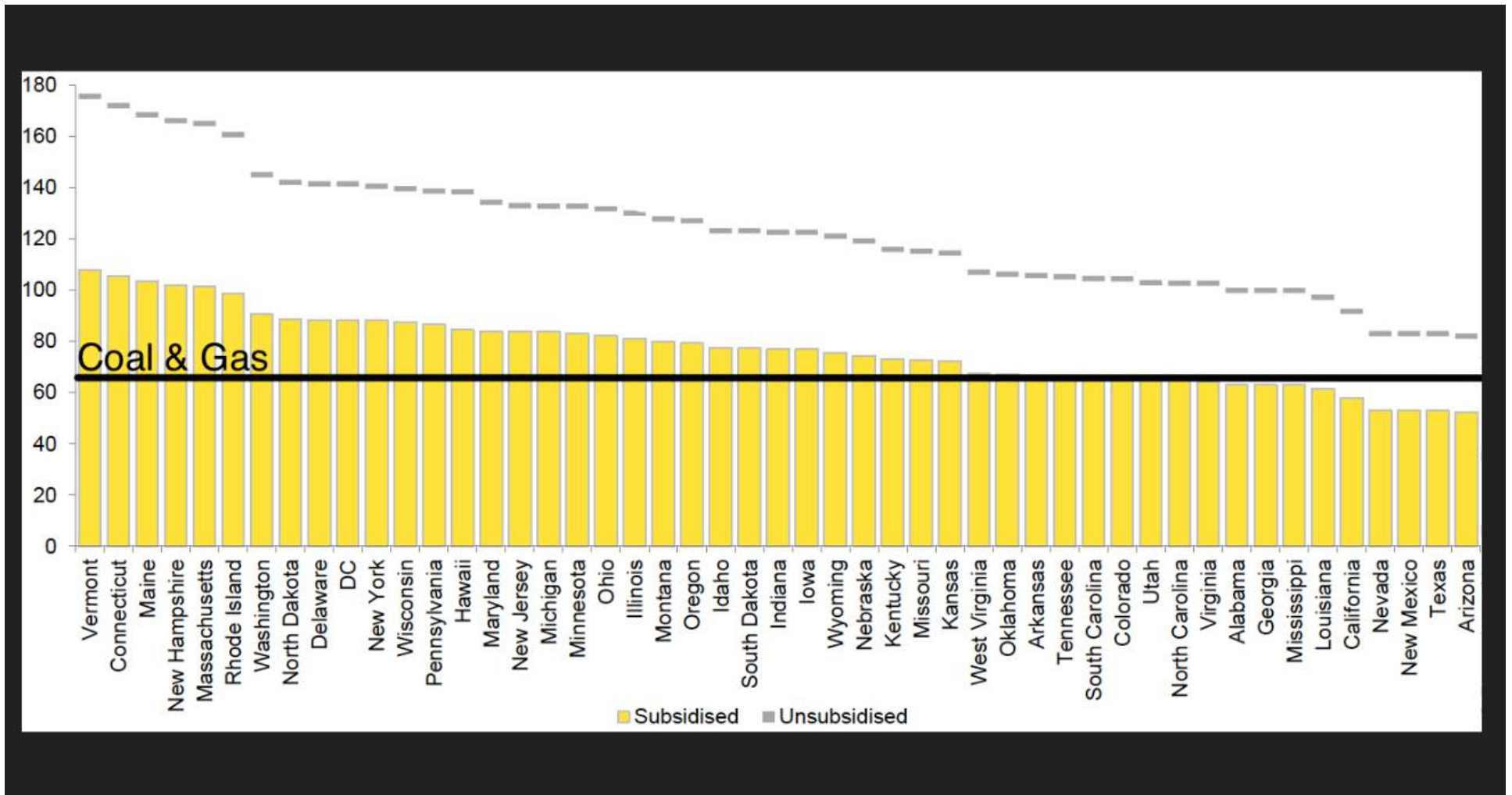
Businessweek

The World Nears Peak Fossil Fuels for Electricity

Coal and gas will begin their terminal decline in less than a decade, according to a new BNEF analysis.

Source: Bloomberg

With ITC, solar is cost competitive with fossil fuels in Virginia



Source: Bloomberg New Energy Finance

Virginia has a lot of catching up to do

Virginia	Maryland	North Carolina
21	349	2,087

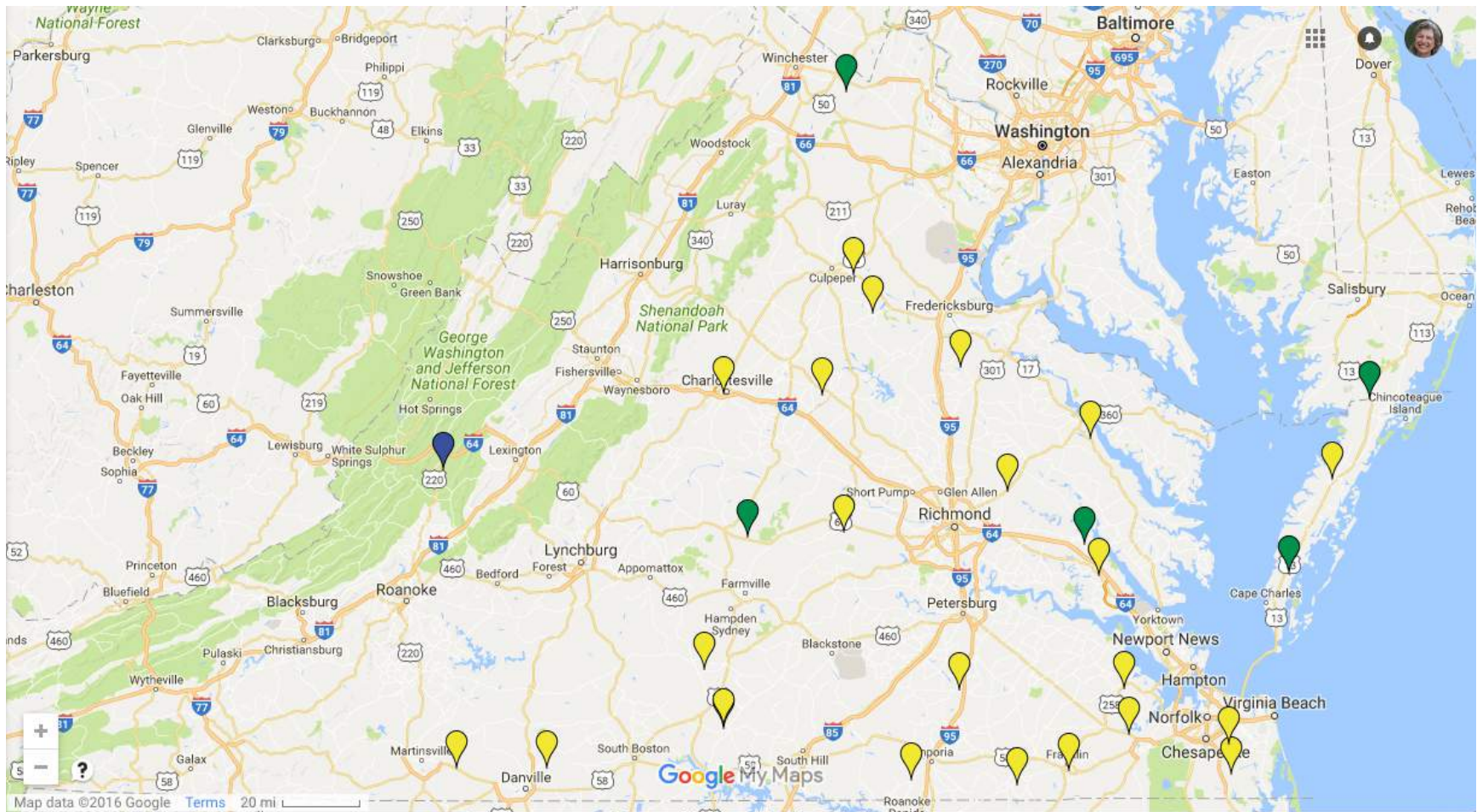
Total installed megawatts (MW) of solar as of December 31, 2015. Source: SEIA

Utility scale solar is taking off, over 1,000 MW proposed

Project	MW	Owner	Buyer
Amazon	80	Dominion	Amazon
Remington	20	Dominion	State/Microsoft
Oceana	18	Dominion	State
3 RFP projects	56	Dominion	Ratepayers
Carroll County	13	PSI Int'l	County
> 20 Others	About 800	various	Not identified

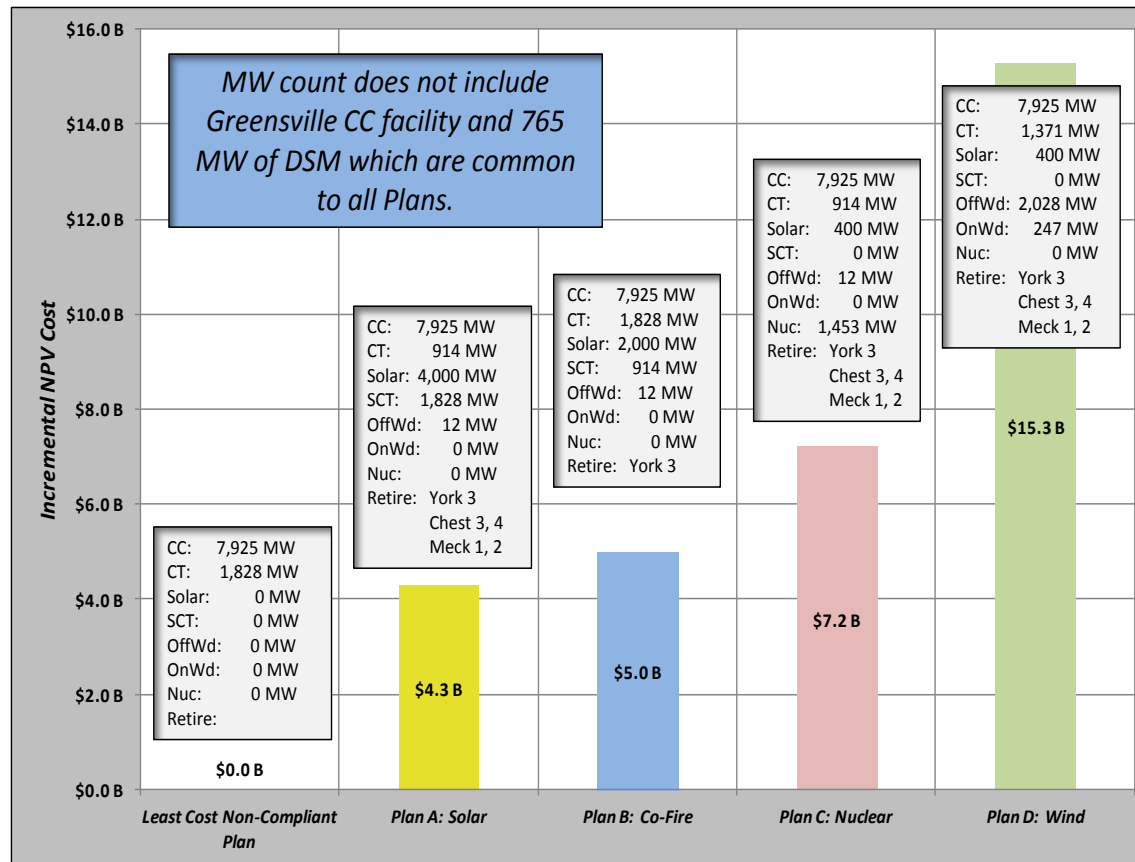
<http://www.deq.virginia.gov/Programs/RenewableEnergy/RenewableEnergyProjectsNoticesofIntent.aspx>

Utility-scale renewable energy projects in Virginia (excludes DVP)



Dominion admits solar is cheapest way to meet Clean Power Plan, but still plans massive increases in natural gas

Incremental Cost of Compliant Plans vs. Least Cost Non-Compliant Plan – *As Filed July 1 Under Proposed Rules* (2016 through 2040 – the “Study Period”)



Distributed solar is part of the solution



- Uses private investment dollars
- Produces energy at/near point of consumption
- Important for community emergency preparedness (first responders, hospitals, shelters)
- Security benefits: protection from physical/cyber attacks and weather events that disable grid

How Virginia discriminates against private investment in solar

- Tight limits on third-party ownership (PPAs)
- Limits on system sizes for net metering
- Punitive “standby” charges for larger home systems
- Cap on total net-metered installations
- No provisions for shared (community) solar
- No green tariffs

Third-party ownership

- Dominion territory: pilot program
 - legal only for non-profits, commercial >50 kW
 - Onsite only (e.g., rooftop)
 - No residential
 - U. of Richmond, Albermarle and Lexington schools
- Appalachian Power
 - APCo says illegal, state law appears to make legal
 - Both onsite and offsite
 - SCC declined opportunity to rule
 - Advocates seeking another SCC forum



Net metering limits



- Residential limit 20 kW
- High “standby” charges for 10-20 kW systems
 - Average household electricity = 10 kW
 - Electric car = 2-3 kW
- Size can’t exceed demand over previous 12 months
- 1% cap on total net metered systems

No sunny roof, no luck



- Utility green power programs offer out-of-state wind, hydro RECs. No Virginia solar!
- APCo's proposed RE tariff repackages existing out-of-state wind, hydro, landfill gas.
- No community solar programs (except BARC)



Ray of hope?

Dominion in negotiations with solar industry to offer solar option to customers

- Labeled “community solar,” but utility-owned
- Details **murky**

Some 2016 bills

- [HB 1286](#) (Minchew) omnibus solar bill: PPAs, community solar, removal of limits
- [SB 140](#) (Edwards) removes standby charges
- [HB 618](#) (Krizek) solar gardens (community solar)
- [HB 480](#) (Sullivan) tax credits for renewable energy
- [HB 351](#) (Villanueva), [SB 571](#) (McEachin) Virginia to join RGGI, sale of carbon allowances would fund EE and RE as well as adaptation
- [SB 761](#) (McEachin) mandatory RPS

New subcommittee formed to look at 2016 bills

- Almost all renewable energy bills and some efficiency bills
- Chairs said they want compromise bills for 2017
- Held 1 meeting
- Seem to be waiting for utility/solar industry working group to propose changes

The legislators whose votes count: Commerce and Labor members

Senate	House	
Wagner, Chair—Chair	Terry Kilgore—Chair ^{1,2}	McClellan
Saslaw	Byron ¹	Ward
Norment	Ware ^{1,2}	Tyler ¹
Newman	Hugo ^{1,2}	Spruill ¹
Obenshain	Marshall, D.W. ¹	Keam ^{1,2}
Stuart	Cline ¹	Filler-Korn
Stanley	Miller ^{1,2}	Kory
Alexander	Loupassi ¹	
Cosgrove	Bell, R.B.	¹ Special sub. on energy
Chafin	Habeeb ¹	² Sub. to study cont'd
Dance	Villanueva ¹	legislation relating to
Lucas	Farrell	electric energy
McDougle	O'Quinn	
Black	Yancey	
Sturtevant	Ransone ²	

What can you do?

- Meet (often) with your delegate and senator
- Find a friend in the district of a C&L legislator to get you in the door
- Be like Earle: write LTEs
- Volunteer for solar tours
- Work with VA-SUN, LEAP, Sierra Club, VCN, App. Voices to hold workshops (invite your delegate)
- Sign VA-SUN Declaration of Solar Rights
- Follow PowerforthepeopleVA.com