Solar Market Fundamentals: MWCOG Region

Solar Policies, Programs and Incentives in Washington DC, Maryland and Virginia

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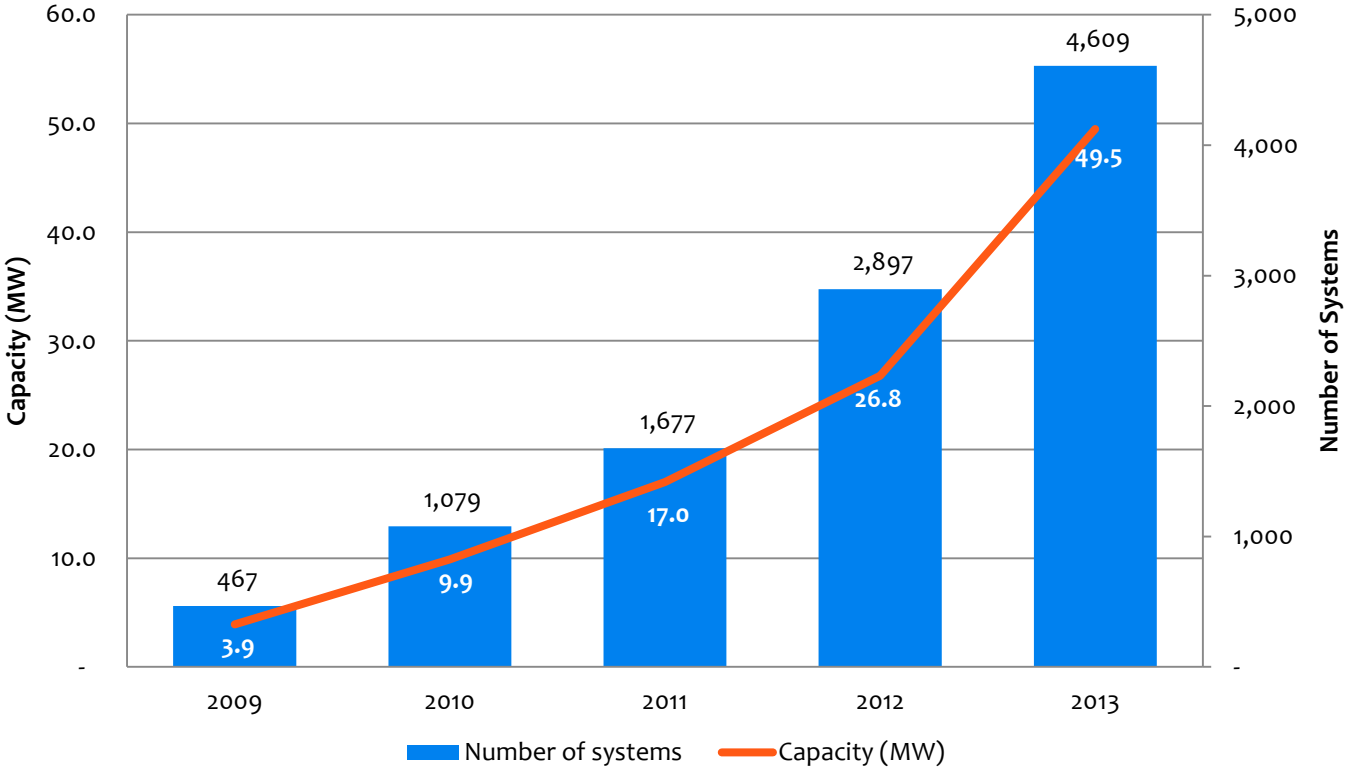
Renewable Deployment Trends in the Region



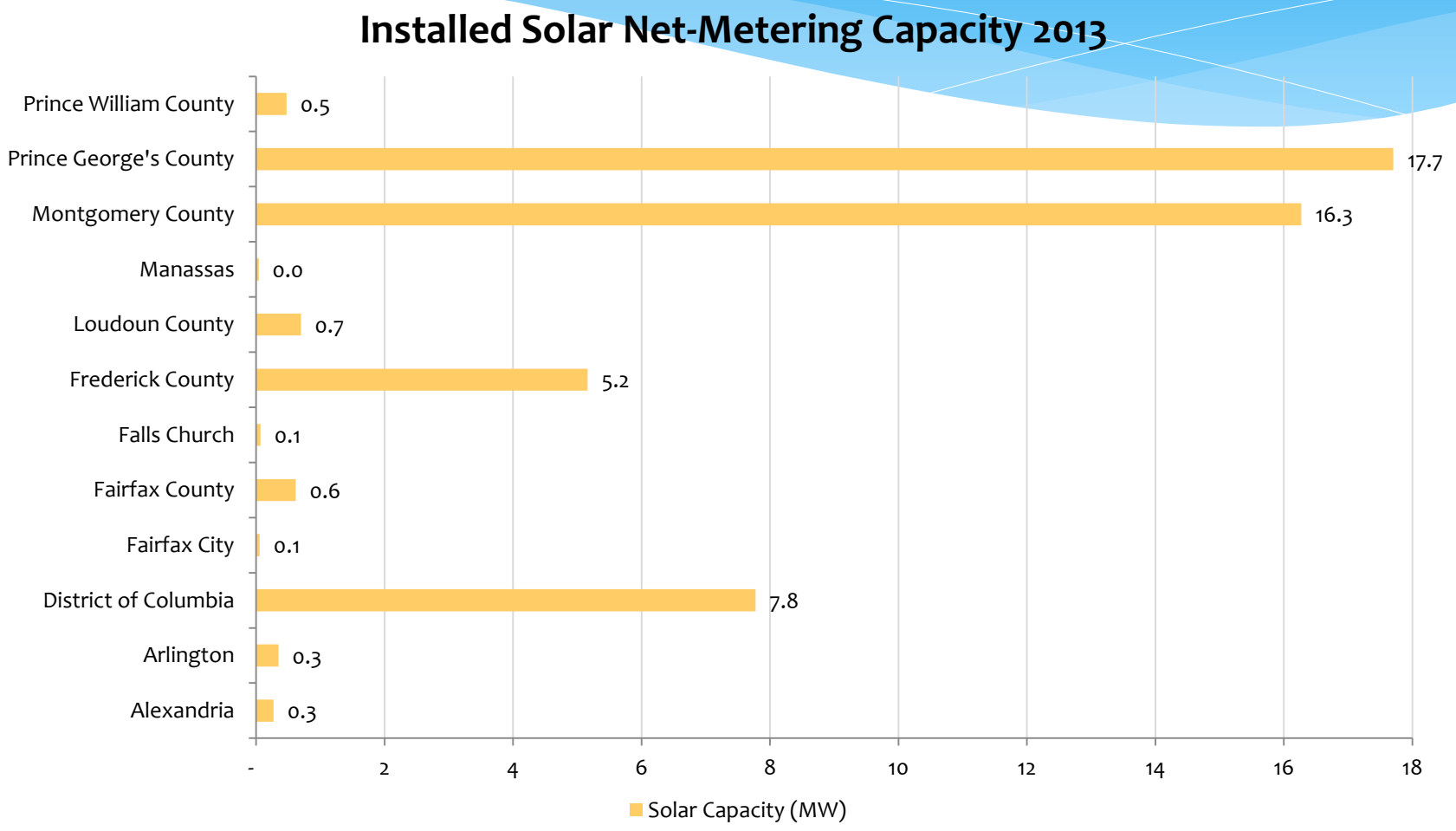
As of 2013:

4,600 net-metered systems

49.5 MW

(over 1000% growth since 2005)

Solar Deployment Across the Region



Local Policies & Programs that Impact the Solar Market

- **Renewable Portfolio Standard (RPS)**
  - Solar Carve Outs
  - REC prices
- **Net Metering**
  - System size cap; aggregate cap
  - Standby charges?
  - Virtual net metering? (who can participate?)
- **Rebates and Tax Credits (State and Local)**
- **Financing Options**
  - Leasing
  - Power Purchase Agreements (PPA)
  - Property Assessed Clean Energy (PACE) Financing

Renewable Portfolio Standards

	District of Columbia	Maryland	Virginia
RPS Goal	20% by 2020 Mandatory	20% by 2022 Mandatory	15% by 2025* Voluntary
Solar Carve Out	2.5% by 2023	2% by 2021	None
SREC Price	~$480/MWh	~$130/MWh	N/A
Alternative Compliance Payment	$500/MWh until 2016, then declining	$400/MWh until 2016, then declining	N/A

*Of sales in base year 2007

Net Metering Policies

	District of Columbia	Maryland	Virginia
Per System Cap	1 MW	2 MW	20 kW (residential) 500 kW (non-res)
Aggregate Cap	None	1,500MW (~8% peak demand)	1% peak demand
Standby Charge	None	None	$4.19/ kWh (systems 10–20kW)
Virtual Net Metering	Yes, 5 MW system cap	Agricultural, non-profit and municipal customers	Agricultural customers only

Rebates & Tax Credits

	District of Columbia	Maryland	Virginia
State Rebate	$0.50/W ($3/W for low income) Expired in 2013	$1,000 per system (res.) $0.30-$0.60/kW (comm.)	None
Utility Rebate	None	None	Dominion: $0.15/kWh residential <20 kW non-res. <50 kW 3 MW program cap
State Sales Tax Exemption	None	100% exemption for equipment & residential electricity sales	100% exemption <20 MW Beginning in 2015
Local Property Tax Credits	100% exemption	Local Option: Prince George's: 50% credit Montgomery: 50% credit /$5,000	100% exemption <20 MW Beginning in 2015

Financing Models

	District of Columbia	Maryland	Virginia
Leasing	Allowed	Allowed	Dominion Solar Partnership Program Pilot Systems up to 2 MW (20 MW total cap by 2015)
Power Purchase Agreements (PPA)	Allowed	Allowed	Dominion pilot: systems up to 1 MW (50 MW total cap)
Commercial PACE Financing	Active program 20 year term $250,000 loan minimum	Locally determined Programs can start 10/1/14	Locally determined by ordinance

Virtual Net Metering

	District of Columbia	Maryland	Virginia
Policy Name	Community Solar or Virtual Net Metering	Aggregate or Virtual Net Metering	Aggregate Net Metering or Totalization
Legal Authority	DC Community Renewables Act, 2013	Code of Maryland Regulations 20.50.10, 2011	HB 1695, 2013
Eligible Parties	All customers	Agricultural, non-profit and municipal customers	Agricultural customers; adjoining properties only
System Cap	5 MW (2 subscriber min)	2 MW	500 kW (utility can approve a higher capacity)

Solar Bulk Purchasing

also called "Aggregate Solar Purchasing" and "Solar Cooperative Purchasing"

Benefits:

- Typically save 20-30% on system cost
- Encourages more people to install solar, and quickly
- Technical assistance for assessing installers & bids
- Can include multiple financing options, and discounts on other energy improvements

Models:

Solarize

- Municipality develops RFP, pricing tiers and chooses installer
- Installer, municipality & community do outreach

Community Power Network

- CPN & community members do outreach and identify project leaders
- Community project leaders develop RFP, pricing tiers and choose installer with assistance from CPN

How much does it cost to put solar on your house?

Cost Comparison for Hypothetical 5 kW system			
	DC	**MD**	**VA**
Cost Before Incentives	**$22,500**	**$22,500**	**$22,500**
Bulk Purchase Discount (~ 1/3 of system cost)	$7,500	$7,500	$7,500
*Solar Renewable Energy Credit Upfront Payment	$6,000	$1,500	0
Initial Upfront Cost	**$9,000**	**$13,500**	**$15,000**
Federal tax credit (30% of system cost before SRECs)	$4,500	$4,500	$4,500
State Grants	Expired	$1,000	0
Estimated electricity savings in one year	$775	$775	$510
Total Cost (after one year)	**$3,725**	**$7,225**	**$9,990**
Estimated Payback (after first year) *Total cost/electricity savings at current electric rates*	4.8 years	9.3 years	19.5 years

Note: Does not include local property tax or sales tax credits.
Credit: Anya Schoolman, Community Power Network

*SREC payment based on Sol Systems February 2014 pricing.
Updated July 2014

For More Information

Regulations, Policies, Incentives:
Database of State Renewable Energy Incentives (DSIRE): www.dsireusa.org

Bulk Purchasing/Community Solar:
NREL Solarize Guidebook: www.nrel.gov/docs/fy12osti/54738.pdf
NREL Community Solar Guidebook: www.nrel.gov/docs/fy11osti/49930.pdf
Community Power Network: communitypowernetwork.com

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