



Metropolitan Washington Council of Governments

A White House Climate Action Champions Case Study

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Executive Summary

The Metropolitan Washington Council of Governments (COG) is an independent, nonprofit association bringing area leaders together to tackle the National Capital Region's (NCR) biggest challenges, including climate change. The region met its 2012 goal of 10 percent reduction in greenhouse gas (GHG) emissions below business as usual projections, bringing regional emission back down to 2005 levels.

The region has met and surpassed its 2016 goal of 5,000 grid-connected renewable energy systems in the region, with more than 7,300 systems currently operating. Bulk renewable energy procurement has helped the region surpass this goal with procurement processes and implementation underway for more than 31 **megawatts (MW)** of solar in the region.

Climate Action Champion

The Metropolitan Washington Council of Governments (COG) is an independent, nonprofit association bringing area leaders together to tackle the NCR's biggest challenges, including climate change. As the regional planning organization for the NCR, COG membership includes 22 local governments and more than 300 elected officials from the District of Columbia, suburban Maryland, and northern Virginia.

In 2008, the COG Board adopted the NCR Climate Change Report. The Report includes a 2005 baseline regional GHG inventory, examines potential climate change impacts, evaluates mitigation and adaptation strategies and establishes regional GHG emission reduction goals of: 10 percent below business as usual projections by 2012 (bringing regional emission back down to 2005 levels), 20 percent by 2020 and 80 percent by 2050 (below the 2005 baseline).

The Board also established the Climate, Energy and Environment Policy Committee (CEEPC) to move the region toward meeting the regional GHG emission reduction goals. CEEPC members have adopted high standards and stretch goals as part of the regional Climate and Energy Action Plan. Members implement innovative environmental policies and projects in their local communities that support the region meeting its climate and energy goals. Through the work of CEEPC and its members, there have been two major accomplishments announced as part of the 2015 Climate and Energy Progress Report:

- The region met its 2012 goal of 10 percent reduction in greenhouse gas (GHG) emissions below business as usual projections, bringing regional emission back down to 2005 levels.
- The region has met and surpassed CEEPC's 2016 goal of 5,000 grid-connected renewable energy systems in the region, with more than 7,300 systems currently operating with more than 79 MW of capacity.

In 2009, the region had fewer than 500 grid-connected renewable energy systems and under 4 MW of capacity, and CEEPC members anticipated that achieving the 5,000-system stretch goal would require major local and regional collaborative efforts. Over the past five years, stakeholders worked together within and across their local communities and agencies to surpass this goal. Bulk renewable energy

procurement has helped the region surpass this goal with procurement processes and implementation underway for more than 31 **MW** of solar in the region, including:

- Montgomery County, 5 MW
- City of Bowie, 4 MW
- District of Columbia, 11.4 MW
- Metro (mass transit system), 8 -13 MW
- Solar Coops, 3.2 MW

Project Spotlight 1 – Public Sector Bulk Solar Procurement

COG's Cooperative Procurement Program operates with the basic objective of reducing costs through economies of scale created through volume buying. The Program allows public and non-profit agencies across the Baltimore-Washington D.C. region to combine their purchasing power to cooperatively purchase goods and services and to ride each other's contracts using the COG Rider Clause.ⁱ Recognizing similarities between new federal clean energy goals and state and local government goals, the US Environmental Protection Agency (EPA) Green Power Partnership and COG opened up a dialogue with local representatives in 2010 to discuss opportunities for collaborative procurement of solar photovoltaic (PV) systems. The approach was based on the Silicon Valley Collaborative Renewable Energy Procurement (SV-REP) model, which jointly procured 70 solar PV installations spread across more than 40 locations with the potential to generate more than 14 MW.ⁱⁱ By replicating this concerted approach, the aim was to reduce up-front costs for local government and other regional entities by bundling a number of solar projects into streamlined group procurement.

Through the partnership with EPA, public agencies in the NCR received technical assistance from consulting firm Optony Inc., who performed on-site solar feasibility assessments at 170 sites. Seventy-five sites were determined feasible from a technical perspective; however, only 40 sites representing 15 MW of potential capacity were determined to be economically viable due to current policy and market conditions.ⁱⁱⁱ This assessment served as a springboard for additional research and assessments by Montgomery County, the District of Columbia and the Washington Metropolitan Area Transit Authority (Metro) which have led to solicitations and procurement for solar totaling more than 28 MW in the region.

In 2014, Montgomery County issued a request for energy proposals (RFEP) for a third party to develop solar on County facilities through a Power Purchase Agreement (PPA). The County awarded SolarCity a contract to install 5 MW of solar photovoltaic systems across 14 sites and construction on several sites is underway. The County expects to add at least another 2 to 4 MW of projects in the next year.^{iv} Additionally, Garrett County and the Cities of Bowie and Rockville in Maryland are riding the Montgomery County's contract for their own solar installation.^v The cities of Greenbelt and Frederick, as well as Arlington County, Virginia and others are either planning to ride the contract or applying some of the lessons learned for their own procurements.

Also in 2014, the District of Columbia issued a solicitation for 10 MW of solar PV capacity at 50 municipal facilities, including 37 schools. Systems will include both rooftop systems and solar carports in parking lots. These sites were grouped into three bid bundles to achieve the best value pricing for the District and to create groupings that achieve broad competitive appeal.^{vi} On November 3, 2015, the DC Council approved an on-site power purchase agreement with Nextility for more than 11 MW.

On October 30, 2015, Metro released a request for proposal for an on-site solar PPA that would deliver 8 to 13 MW of solar electricity at nine different Metro locations. Eight of the nine locations identified are parking lots, where solar carports would provide customers with improved lighting and shelter from the elements. One location is a greenfield site. Metro expects that it can leverage solar investments to reduce operating costs. Performance-based contract structures such as PPAs require little to no upfront cost, and Metro anticipates that the proposed PPA rates (per kilowatt-hour) will be below current 'brown power' rates. This bulk solar procurement initiative for Metro facilities supports resource efficiency and regional sustainability targets set as part of Metro's Sustainability Initiative.^{vii}

Project Spotlight Subsection 2 – Residential Bulk Solar Cooperatives

Throughout the region, a growing number of citizens are coming together to form solar cooperatives. Based on the same principle as buying in bulk, solar co-ops allow groups of neighbors to go solar together and get a discount, making solar more accessible and affordable. By going solar as a group, each participant can save up to 20 percent on the cost of their system and gets support from their peers and solar experts as they go through the process. The co-op selects the contractor to install systems on all of the participating homes, but each participant owns his or her system and signs their own contract with the chosen installer.

In 2015, COG hired Community Power Network (CPN), a local non-profit solar co-op administrator, to scale up outreach, education and customer service across the region through COG's Solar Ready II project. Solar Ready II is an awardee under the U.S. Department of Energy SunShot Initiative Rooftop Solar Challenge II (RSCII). When complete, this initiative will support solar co-ops in a dozen communities in the NCR, including: Washington, D.C., the City of Bowie, the City of Rockville, Montgomery County, and Prince George's County in Maryland, and the Cities of Falls Church, Herndon and Vienna in Virginia.

In total, CPN has managed over 36 solar co-ops in Washington, D.C., Maryland and Virginia since 2014. Although some of the groups are still in progress, the co-ops have engaged over 3,000 citizens, helped facilitate 541 solar installations, and led to 3.2 MW in new solar capacity. Combined, the co-ops have resulted in over \$9.6 million in residential investments in solar in the region, and co-op members have saved an estimated \$3.2 million in system costs.^{viii}

RSCII supports the administration of solar co-ops, also called solarize programs, as a method to help reduce the costs of customer acquisition and education for installers. COG is a regional partner on the Solar Ready II team led by the National Association of Regional Councils and the Mid-America Regional

Council. The Solar Ready II team is working in ten regions around the country to foster market development, lower soft costs, and streamline governmental processes for solar deployment.

While deployment of solar co-ops helps to develop the market, COG has been simultaneously working with local jurisdictions and the local solar energy industry association (MDV-SEIA) to reduce soft costs and streamline the permitting process. To encourage consistency across jurisdictions, CEEPC adopted *National Capital Region Permitting Recommendation for Residential Solar PV Systems* in November 2014. In addition to permitting and inspection guidelines, the document includes templates for both permitting and inspections and a sample expedited process for qualified solar PV systems.^{ix}

Co-benefits

COG's central role in bringing together local, regional and national partners with extended networks and relationships proved valuable for increasing and aggregating demand for renewable energy in the District of Columbia, Maryland and Virginia. Its ability to leverage discussion forums and expert resources continues to be a catalyst for action by buildings on tangible connections between stakeholders to find crosscutting approaches to overcome challenges.

Volume buying works to the advantage of the jurisdictions and their taxpayers. COG's Cooperative Procurement Program combines the buying power of public agencies, school boards, authorities, and commissions, resulting in larger volume and better unit pricing. They save additional dollars on administrative expenses by substantially reducing the paperwork associated with competitive procurement. The Program promotes exchanging management and technical information among area officials, and encourages continuing education throughout the region.^x

Green Power offers a variety of benefits in addition to reducing environmental impacts and helping organization meet environmental goals. Green power can hedge against financial risks such as electricity price volatility and fuel supply disruptions. It also demonstrates civic leadership and can generate positive publicity. Large volumes can help stimulate economies, reduce infrastructure vulnerabilities by increasing distributed generation, and create economies of scale.

A solar PPA is a financing tool that makes bulk solar procurement a cost-effective solution for public agencies. It lowers the upfront capital investment needed for on-site renewable generation by allowing a third-party to build and maintain the on-site system. The public agency only needs to purchase the power and, typically, operating costs of the solar system are lower than traditional fossil fuel generation.^{xi}

Ongoing challenges and lessons learned

A collaborative effort across the NCR entails cooperation across three states (District of Columbia, Maryland, and Virginia). Each state has different laws and regulations, distinct priorities and timelines, and varying levels of enabling authority given to local jurisdictions. These factors present challenges for solar permitting and deployment.

Permit streamlining has been challenging for a number of reasons. When staff capacity and resources are limited, it may not be feasible or desirable to develop a new permitting process. Further, solar companies may not wish to learn a new system. This especially true if the jurisdiction does not have a high volume of solar permit applications. The NCR's approach to this overcoming this challenge has been to (a) focus on elements of streamlining that would improve the process for local government officials; and (b) clearly communicate that streamlining will not compromise safety, and in many cases will improve it.

In Virginia, there is an added challenge in that local government staff and solar industry representatives alike see financing as the main barrier to solar deployment in Virginia. With limited state financial incentives, it is difficult to scale the market regardless of permitting practices. To address this challenge, Northern Virginia localities are instead focusing on outreach, education, and promotion, especially through solarize programs. This shift in focus has been an effective approach to increasing market demand for solar PV and raising awareness of policy barriers in the state.

Furthermore, COG has also held several stakeholder engagement sessions to identify ways to advance commercial-scale solar deployment in the region, a sector that is currently under-represented in the market. These workshops have been teasing out needs and challenges for commercial-scale systems, including barriers specific to various buildings profiles, ownership structures and lease models, and the need for alignment of financial incentives to market conditions.

Resources/Learning More

1. [National Capital Climate Change Report](#)
2. [Regional Climate and Energy Action Plan and Resource Guide](#)
3. [Portraits of Progress: 2015 Climate and Energy Progress Report](#)
4. [COG Cooperative Procurement Resources](#)
5. [NCR Permitting & Inspections Recommendations for Residential Solar PV](#)
6. [COG Solar Roadmap](#)
7. [Solar Ready Regions – MWCOG](#)
8. [Community Power Network's "Renewable Energy Co-ops" Webpage](#)
9. [EnergySage National Capital Region Webpage](#)
10. [US DOE Rooftop Solar Challenge II Webpage](#)

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Project Facts – Solar Ready II

Project Duration

- October 2013 – March 2016 (Q4 2015 - Q1 2016)

Project Funding

- \$125,000 through two grants from the U.S. Department of Energy SunShot Initiative Rooftop Solar Challenge II (RSCII): \$35,000 as part of the American Solar Transformation Initiative (ASTI), \$90,000 as part of the Solar Ready II project

Project Staff Required

- Two MWCOG staff worked on the RSCII project at 20-50% of their time. The project also required staff time and resources from approximately 25 local government staff, 3 state government staff, 3 solar industry staff, 6 nonprofit staff, in addition to 5 staff from RSCII awardee consultant teams Optony USA and Meister Consultants Group (MCG).

Population Served

- 4.2 million (11 jurisdictions participating in SRII)

Community Type

- Regional planning commission. Participating jurisdictions include counties, cities, and towns, including urban, suburban and rural areas.
- Partners - EPA Green Power Partnership, Optony USA, Maryland-DC-Virginia Solar Energy Industry Association, National Association of Regional Councils, Mid-America Regional Council, Meister Consultants Group, DC Department of Energy and Environment, Maryland Energy Administration, Maryland Clean Energy Center, Northern Virginia Regional Commission, Community Power Network (and local chapters DCSUN, MDSUN, VASUN), and EnergySage.

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- ^{iv} Montgomery County Department of General Services. (2014, January 23). Request for Energy Proposal. Retrieved from <http://www.montgomerycountymd.gov/DGS-OES/Resources/Files/RFEP-Final-20140123.pdf>
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- ^x Metropolitan Council of Governments. (n.d.). Cooperative Purchasing. Retrieved from <http://www.mwcog.org/purchasing/>
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