

# MWCOG Solar Energy Workshop

Solar in the Metropolitan Washington Region

October 6, 2011 Solar





*US Department of Energy Headquarters***Location:**

Washington, DC

**Type:**

Cash Purchase

**Deal Highlights:**

- First agency headquarters with roof-mounted solar system
- 205 kW supplies 8% of electricity during peak demand
- Largest solar array between DC and Florida when completed in September 2008

**System Performance at a Glance**

<b>System Size/Type</b>	205 kW
<b>Yearly Generation</b>	251 MWh
<b>Supporting Structure</b>	Ballasted Roof Mount
<b>Completed</b>	September 2008





**Location:**

Washington, D.C.

**Type:**

Power Purchase Agreement

**Deal Highlights:**

- Provided a complete, turn-key solar power facility, including design, engineering, financing and construction
- PPA contract provides client with no initial expenditure, predictable energy costs, and power at a discount to utility provided energy
- No operating or maintenance risk

**System Performance at a Glance**

<b>System Size/Type</b>	410 kW
<b>Yearly Generation</b>	492 MWh
<b>Supporting Structure</b>	Ballasted Roof Mount
<b>Modules</b>	1,532 Panels
<b>Completed Phase1 &amp; 2</b>	December 2009 March 2011



*\*Second project in process*



System Performance at a Glance	
<b>System Size/Type</b>	129kW
<b>Yearly Generation</b>	158 MWh/yr
<b>Supporting Structure</b>	Ballasted Roof top
<b>Modules</b>	670 Panels
<b>Current Phase Status</b>	July 2011



System Performance at a Glance	
<b>System Size/Type</b>	34.4kW
<b>Yearly Generation</b>	45 MWh/yr
<b>Supporting Structure</b>	Ballasted Roof top
<b>Modules</b>	150 Panels
<b>Current Phase Status</b>	March 2009





**Location:**

Rockville, MD

**Type:**

Power Purchase Agreement

**Deal Highlights:**

- During installation, represented the largest roof-mounted array in MD
- Standard Solar created the first ever “Third Party” PPA to meet the needs of all stakeholders in the project
- Community gathering area with 600,000 visitors each year provides a key location for solar power outreach program

**System Performance at a Glance**

<b>System Size/Type</b>	701 kW
<b>Yearly Generation</b>	865 MWh
<b>Supporting Structure</b>	Standing Seam Roof Mount
<b>Modules</b>	2,596 Panels
<b>Expected Completion</b>	November 17, 2010



**University of Maryland**  
*College Park, MD*



System Spec	System Production	Environmental Benefits	System Description		
631 kW	762 MW hours annually	661 fewer tons of carbon dioxide annually	2,632 solar panels	250 & 333 kW AC inverters	Ballasted roof mounted rack system



## 750 kW Solar Carport





## **Development Priorities in the Region**

- **Goal should be to support industry in its drive to achieve cost competitiveness with the grid**
  - **Promote the utilization of solar through the region**
    - » **While becoming more visible, most people and institutions still do not realize solar is now cost competitive in a variety of applications**
  - **Promote “Best Practices” to help reduce “soft costs” of installations – permitting and interconnection costs**
    - » **Solar installers must deal with varying permit and interconnection requirements in every jurisdiction**

## **Primary Solar Incentives in Region Are Set through 2016**

- **30% Federal ITC through 2016**
- **RPS with solar carve-out in DC and MD**
  - **SREC values vary in DC and MD**
  - **Varying residential solar grants in DC and MD**
- **Voluntary RPS in VA**
  - **No state-level incentives**
  - **Recent legislation allows Utility Demonstration programs**
- **Basic incentives are set through 2016, but legislation is needed to “tweak” incentives in DC (personal property tax) and MD (SREC contracts)**
- **If growth continues as projected, the solar industry should be at or near utility cost competitiveness by 2016**

## **ECONOMICS**

- **Continued recession is a drag on all market segments**
- **Residential Installations**
  - Existing incentives and financing programs are sufficient for continued growth of residential programs in DC and MD
  - While VA is a challenge, residential lease finance options will make the Commonwealth more viable as system costs drop
- **Commercial Installations**
  - Ability to structure Power Purchase Agreements (“PPAs”) is the key factor driving growth in DC and MD
  - Credit rating of the customer (“host”) and SREC contracts are the major factors in securing PPAs
    - » State and local governments, academic institutions and long-established businesses are the best PPA candidates

## UTILITY COOPERATION IN SOLAR PROJECTS

- **Varies widely from utility to utility**
- **Washington Gas and Constellation are active solar developers in DC and MD**
- **Dominion is beginning to get involved in northern VA**

## Recommendations for Solar Priorities

- **Help expand the market and accelerate industry growth by promoting the implementation of solar now**
  - Don't study it, just do it
- **Actively work to develop and promote uniform “Best Practices” for permitting and utility interconnection among area jurisdictions and utilities**
  - DC and northern VA have applied for DOE Project Sunshot grants

## Contact Information

**Tony Clifford, CEO**

**Phone:** (301) 944-5146

**E-Mail:** [tony.clifford@standardsolar.com](mailto:tony.clifford@standardsolar.com)