

## Report on Meeting with Office of People's Counsel

January 14, 2011 11:00 a.m.

Four members of the leadership of the Mt. Pleasant Solar Coop, representing DC SUN (the consortium of DC neighborhood solar coops), met for approximately 90 minutes with 7 members of the staff of the Office of People's Counsel (OPC).

The topic was the proposed DC City Council Bill cited as the "Distributed Generation Amendment Act of 2011." This legislation will amend the Renewable Energy Portfolio Standard (RPS) to increase the amount of the Portfolio dedicated to solar energy and perhaps more importantly, enforce the provision that the generation facilities be located in DC.

The OPC's primary mission is to protect the consumers of the District in all matters dealing with public services including electricity, gas, telephone, etc. As such, it had asked the solar cooperative community to offer arguments in favor of the legislation, highlighting its benefits to consumers of energy in DC.

Coop representatives explained the recent volatility in the Solar Renewable Energy Credits (SREC) market which was due, in part, to the DC Public Services Commission's recent registering of a 10 megawatt utilities-scale renewable energy facility based in Illinois under the existing Portfolio standards. The legislation will require that the production facility be located in the district, thus protecting the SREC rights of DC homeowners.

The OPC was also given a preliminary analysis of the effects of the Bill on job creation, tax income, utility costs, etc. It was conceded that the initial impact of RE investment would push rates higher, but the long term effect would be a leveling off, and, in some cases--assuming effective regulatory monitoring--a reduction of rates as the technology continued to produce energy without consuming increasingly costly oil and/or coal.

Coop representatives also explained that the RPS and its accompanying SRECs market, together with DC's rebate program are necessary components of a renewable energy policy where the technology can be marketed to and accepted by lower income homeowners, public housing users and other disadvantaged groups who are OPC's primary focus. Residential solar is the only available choice to break the cycle of rising utility rates requiring rising public subsidies of low-income energy consumers. An adequate RPS is essential to establishing consistency and predictability so that residential solar for the disadvantaged can be financed without public subsidies over the long term.

In response to OPC questions about the economic analysis, coop reps offered to arrange for volunteer number crunchers to meet with OPC to answer their technical questions regarding the economic scenarios presented. They explained that some other jurisdictions had commissioned, and the District really needed, a comprehensive and complex modeling study using projected consumption data together with market and demographic projections to fully examine the potential impact of renewable options. This is an activity which would normally be undertaken by a monopoly utility like Pepco in DC,

as a part of its energy planning, especially in the fact of growing RPS requirements. However, Pepco has so far shown no interest in performing this task.

OPC agreed to study the proposed legislation and the Coop's documentation and advise us of any questions they might have. They will inform us of their position on the legislation prior to any hearing that will be called.

The discussion then turned to more general matters of interest to renewable energy support and other important upcoming policy issues. These included the solar gardens concept and its promotion to the city council, active dockets before the Public Service Commission such as dynamic pricing, the smart meter rollout and performance benchmarks for Pepco. Both Coop and OPC personnel cited numerous examples of existing and potential collaboration among themselves and with local universities and activist renewable energy groups in presently underserved wards of the city.

OPC expressed its appreciation of the efforts of the solar coops' outreach to all wards of the city, participation in the design and promotion of consumer oriented City Council legislation, and continuing cooperation with OPC in efforts to educate the public about renewable energy options. OPC also offered a number of strategy suggestions to be used in the solar coops' efforts with the City Council, DC Government and Pepco.

Various documents provided to OPC in the course of the meeting are attached.

# THE DC SREC MARKET: DRIVING SUSTAINABLE INNOVATION & JOBS

## DISTRICT EMPLOYMENT

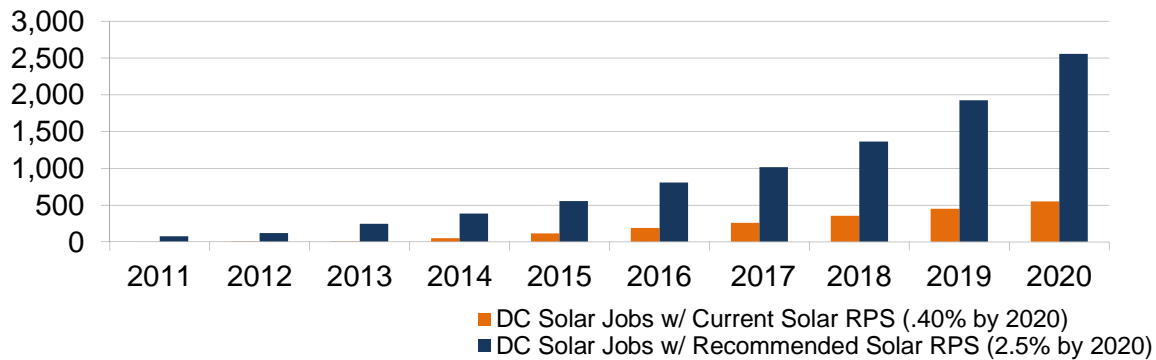


The solar industry represents over 20 companies within the District and currently consists of 608 FTE's, many within low income communities. Over the next 12 months, over 50% of solar firms expect to add jobs if business remains stable or gets better. Increasing DC's solar Renewable Portfolio Standard (RPS) requirements will create another 2,000 green jobs in the District over the next nine years.

The solar industry is a proven economic catalyst, and the local solar market has grown an astonishing 40% over the last 2 years, primarily due to DC's RPS. The national solar industry is growing 26%, while the rest of the economy has grown at 2%.

Between January 2009 and October 2010, 690kW of solar capacity was installed in the District, representing about 200 homes that have chosen to "go solar." Additionally, Catholic University's groundbreaking 294 kW system kicked off a trend of institutional solar investments, including American University's 27.5 kW PV system and George Washington's soon to be completed solar thermal system on 3 dormitories that will generate approximately 300 megawatt hours of solar energy a year. All of these systems were or will be installed, managed and maintained by local solar companies.

*Expanding the District's Solar RPS will increase the District's green collar jobs by 500% in the next 10 years*



## DISTRICT REVENUE

A healthy solar industry represents a significant recurring revenue stream for the city. Increasing the solar RPS to 2.5% alone will generate approximately \$50 Million in tax revenue over the next nine years. What's more is that the proliferation of solar across the city is achievable for less than a dollar a month - about \$0.37 per month per residential ratepayer in the District in 2011, increasing thereafter to no more than \$3.50 by 2020.

## DISTRICT LEADERSHIP

The District should lead the solar economy, and increasing the RPS is critical to this leadership. Maryland, Delaware and New Jersey, all leaders in the solar market, recently increased their solar RPS requirements by similar metrics and are also requiring more in-state generation as a means to maximize the benefits to both ratepayers and residents. An increase in solar capacity and ensuring the benefits of those systems are enjoyed by residents and businesses within the state is the current trend in Massachusetts, New York, and Pennsylvania, all of which are looking to increase their in-state solar markets.

## DISTRICT ENVIRONMENTAL STEWARDSHIP

Increasing the Solar RPS would have significant environmental benefits to DC by mitigating local pollution, such as CO<sub>2</sub>, NO<sub>x</sub>, and SO<sub>x</sub>. A solar RPS of 2.5% would reduce CO<sub>2</sub> emission by over 1 Million tons over the life of the RPS, the equivalent of removing about 200,000 cars from the streets of DC.

## DISTRICT COMMITMENT

The solar industry is committed to DC and ensuring that solar succeeds in the District. We live here, we grew up here, we went to school here, we work here, and we raise our families here. Our request is simple, let's increase the solar RPS and create a long-term sustainable solar economy that we can rely on, that we can finance, and that we can build jobs on.

# The Face of Solar

The District's Solar Community: Real Jobs and Real Benefits for the Local Economy



## A Strategic Renewable Energy Policy is Critical for the District

**A strategic renewable energy policy is good for ratepayers, and good for business.** Renewable energy resources provide the District and its residents and businesses a secure long-term hedge against spiking oil, gas and coal prices. It also ensures energy self sufficiency and helps develop grid reliability, which is key to the future of our energy infrastructure. Integrating renewable energy into the District's energy mix also lowers the future costs of complying with expected federal rules limiting carbon dioxide and addressing air pollution.

Finally, renewable energy significantly reduces the carbon footprint, mercury output, and environmental impact of the District's energy consumption. Approximately 50% of the electricity supplied into the District of Columbia is currently supplied from coal, and almost all of the energy is produced from energy generating facilities located outside of the city.

There are currently only two large-scale electricity generating facilities in the District: the Benning and Buzzard Point power plants. Both are over 35 years old and are scheduled to be shut down in the next 2 years. They are fueled by distillate fuel oil and are used predominately for peak generation. They pollute heavily.

### DC Focus: Mt. Pleasant Solar Coop



The Mt. Pleasant Solar Cooperative was founded by Anya Schoolman and her son in 2008. It has become the largest solar cooperative in the nation, with hundreds of members, and partner coops throughout the District in almost every ward. More than 100 homes have gone solar through the Mt. Pleasant Solar Cooperative.

### DC Focus: Sol Systems



Sol Systems is a solar finance company founded in 2008 and based in Chinatown. It has 8 full time employees. The company has helped over 1500 customers (including around 200 in the District) finance their solar systems throughout the United States, and has helped facilitate over \$50 million in solar development.

The integration of renewable energy provides a key opportunity to develop energy generation resources within the city, complement traditional fuel sources, and reduce our environmental impact. Renewable energy does not require purchased fuel, and operating costs over time are highly predictable, unlike fossil fuel. Renewable energy also reduces the demand for non-renewable resources, especially during peak pricing, easing the demand for, and prices of, traditional fossil fuel energy resources.

## Solar Is Our Best Bet to Strengthen the Local Economy

**Solar energy is currently the only type of renewable energy that can be broadly developed in the District.**

There is no easy way to develop four hundred foot wind turbines, a hydroelectric dam, or biomass generators in the District. In contrast, buildings like the White House, schools,

and universities can easily host a solar energy system. Photovoltaic technologies and solar hot water heating technologies can be integrated seamlessly into preexisting energy infrastructure, and provide a less centralized more consumer interactive energy market. Furthermore, as we move towards integrating solar, we take a significant step towards grid modernity and distributed generation that uses small-scale power generation technologies located close to the energy load being served. These changes will lower transmission costs, improve reliability, reduce emissions and expand energy options for consumers.

**The solar industry is also a proven economic catalyst. The local solar market has grown an astonishing 40% over the last 2 years.** The national solar industry is growing at 26% year over year, while the rest of the economy has grown at 2%. The solar industry represents over

20 companies within the District and currently consists of hundreds of FTE's in almost every ward in the city. Over the next 12 months, over 50% of solar firms expect to add jobs if business remains stable or gets better.

Solar is also becoming increasingly affordable. Currently, the federal government pays for 30 percent of the cost of a solar system through the federal investment tax credit. Without state grants, the remainder of the system is usually covered through the monetization of solar renewable energy credits (SRECs) and energy savings. Costs are decreasing by approximately 10 percent annually. Photovoltaic energy systems are expected to fall from around \$6/watt currently to \$4/watt in the next five years.

#### DC Focus: Volt Energy



Volt Energy is a full service renewable energy and energy efficiency company that develops, builds, operates and manages state-of-the-art energy projects. Volt Energy is developing a 10 kW system to be located at the Florida Ave. Baptist Church. Both of its founders attended Howard

### The Face of Solar: Schools, Churches, Non-Profits, Businesses and Homes

**The development of the District's solar facilities has brought over \$7 million of direct investment into the city in the last 24 months, hundreds of full time employees living and working within the District, and a job growth rate of around 50%. Solar development has occurred in almost every single ward, on schools, churches, colleges, homes, and businesses throughout our city.**

#### DC Focus: Bread for the City



The mission of Bread for the City is to provide vulnerable residents of Washington, DC, with comprehensive services, including food, clothing, medical care, and legal and social services, in an atmosphere of dignity and respect. In addition to a green roof, they are exploring solar panels to bring down their annual energy costs and allow them to devote more funds to their programs.

Between January 2009 and January 2010, over 800 kW of solar capacity was installed in the District, representing about 200 homes that have chosen to "go solar." Additionally, Catholic University's groundbreaking 294 kW solar system kicked off a trend of institutional solar investments, including American University's 27.5 kW PV system and George Washington's soon to be completed solar thermal system on 3 dormitories that will generate approximately 300 megawatt hours of solar energy a year. Churches, like the Florida

Avenue Baptist Church, and schools and organizations like Bread for the City and Sidwell Friends, are also investing in solar. All of these systems were or will be installed, managed, and maintained by local solar companies.

The District's residents have begun to organize themselves into solar cooperatives to secure economies of scale and help educate members about solar. Right now, there are around ten individual solar cooperatives in DC, composed of hundreds of homeowners interested in going solar. The cooperatives exist in almost every ward. Given the right incentive structure, thousands of homes could go solar over the next ten years.

**All of this development produces jobs, and solar energy jobs are good jobs. The average employee usually earns between \$50,000 and \$100,000 annually.** In the last two years alone, a number of new solar energy firms have sprung up in the District, employing hundreds of District residents. Companies like Solar Solution, Skyline Innovations, Distributed

#### DC Focus: Rob Robinson & Sherrill Berger



Sherrill Berger and Rob Robinson joined the Mt. Pleasant Solar Coop in 2009, in pursuit of Sherrill's dream of living in a solar home. That dream came true later that year. The dream doubled six months later, when they discovered they'd saved \$1000 on their electricity bill.

#### DC Focus: Standard Solar



Standard Solar is one of the largest installer and developers in the area, developing the largest photovoltaic array in the District of Columbia on Catholic University. Standard now employs hundreds of employees in the area, and has developed dozens of residential and commercial systems,

Sun, Sol Systems, and others are based in DC, and employ DC residents at significant wages. It is estimated that these companies currently pay well over \$1 million annually in taxes, typically around \$2-6,000 per employee in payroll taxes plus sales taxes on their equipment.

#### The Future of Solar in the District

The District has the opportunity to lead the nation as the solar capital of the country. Given the broad constituent support for the integration of the technology, significant energy costs, and preexisting housing and commercial building stock, this is an ideal location. Stakeholders support this development and with the appropriate fine-tuning of policy instruments, the future looks bright.

Neighborhoods will go solar collaboratively, with thousands of homes integrating small solar arrays that help offset their energy needs, particularly during the hot summer months. Organizations like Sol Systems and Solar Solution now lease solar systems to homeowners, with no up-front costs. Others will join quickly. Developers are working on solar gardens composed of commercial buildings with large solar arrays that are virtually metered, so that individuals can purchase solar without putting it on their own roof. Schools, churches, and government buildings are developing solar, and integrating this into their community outreach and employment creation efforts.

**The passage of the proposed renewable portfolio standard will produce thousands of jobs in the District to, employing more than 2,000 full time employees by 2020, and providing millions in payroll taxes and sales tax to the District.** Organizations like Green DMV and Volt Energy will continue to help train individuals to install and develop solar systems. Already, the University of the District of Columbia has begun teaching classes on solar installation.

#### Let's Build an Industry for the Future

Solar energy promises to transform the District of Columbia and its economy. We, as a city, are poised to lead the nation technologically. The solar community is committed to ensuring this change. We live here, we grew up here, we went to school here, we work here, and we raise our families here. Let us create a sophisticated industry, let us create jobs; let us create a future in solar.

#### DC Focus: Skyline Innovations



Skyline Innovations is a solar thermal developer located in Adam's Morgan, and founded in 2009. Skyline is one of the largest solar thermal developers in the nation, and employs 10 full time employees. The company is developing one of the nation's largest solar thermal systems on George Washington University.

# Frequently Asked Questions: Distributed Generation Amendment Act of 2011

## **What does the *Distributed Generation Amendment Act of 2011* do?**

This bill will guarantee that District ratepayers and residents receive the greatest amount of benefits from the District of Columbia's solar energy goals by requiring that the solar generators eligible to meet those goals are located on the District's distribution grid. These solar resources will provide significant grid stability, price hedge, and environmental benefits to the city.

Additionally this bill seeks to increase the District's Renewable Energy Portfolio Standard solar carve-out from a goal of 0.4% by 2020 to 2.5% by 2020. This is comparable to the goals set in Maryland, Delaware, and New Jersey.

## **Why is solar beneficial to the District of Columbia?**

Distributed solar generation can provide significant local benefits, especially for the District of Columbia, which currently imports almost 100% of all of its energy supply. These benefits include increasing the stability and reliability of the local distribution grid and diversifying the District's fuel sources to decrease the price vulnerability District rate-payers incur by relying solely upon fossil fuel sources, which have significant variable costs. Additionally, solar generators will have a positive impact on the city's environment, especially as it relates to local pollutants such as NOx and SOx, and in reducing the heat-islanding affects found in DC.

The solar industry has also created over 600 jobs in the District of Columbia and this bill forges the foundation necessary for sustainable industry growth for years to come, creating many more local green collar jobs. Increased solar jobs and distributed solar installations also represent a significant revenue stream for the city through increased tax revenues.

## **How much energy can the District generate from distributed solar energy?**

The District of Columbia has ample space for solar generation and can therefore accommodate a significant amount of solar installations. It is anticipated that through a combination of solar technologies the District can likely offset its residential load entirely with solar energy. That said, currently most of the District's solar energy goals are being met by systems that are located outside of the District of Columbia, some as far away as North Carolina and Illinois which provides zero benefits to the ratepayers, residents, and businesses of our city; this bill will modify this practice so that the District meets its solar energy goals with solar systems generating energy locally, providing the benefits right here in our community.

## **How reliable is solar energy?**

Solar generation is extremely reliable and predictable; historically the District of Columbia receives approximately the same amount of solar radiation annually. Solar energy is particularly impactful on peak load as the District's peak consumption times correlate with solar systems' peak generation time. Because solar is such a reliable resource, Germany is currently able to rely upon solar generation for 2% of total electric load and expects that solar will account for 10% of the country's total electric load in 2020, and 25% in 2050.

## **How does the *Distributed Generation Amendment Act of 2011* affect the budget?**

This bill is budget neutral and is not expected to have an impact on the budget.

## **How does the *Distributed Generation Amendment Act of 2011* impact District residents who are interested in going solar?**

The Distributed Generation Act of 2011 provides homeowners and business that are interested in going solar with a significant economic incentive to do so. The legislation creates a long-term and sustainable market for solar renewable energy credits (SRECs) which solar system owners can sell to utilities. SRECs are the single most important component to ensuring that solar energy is affordable by aligning the high up-front costs of the technology with its long-term benefits. The legislation ensures that the market for SRECs will remain stable and strong into the future, which will spur solar development and investment in the District.

## **How does the *Distributed Generation Amendment Act of 2011* impact District residents who are not planning on going solar?**

First and foremost, this bill, in combination with the successful solar policies the Council has implemented to-date, will make solar energy accessible for residents and businesses in all wards of the city so those who may not be planning on going solar today may be able to go solar tomorrow.

This bill will generate extensive societal benefits across the city whether a resident or business has a solar energy generator on their roof or not. These benefits include increasing the stability and reliability of the local distribution grid while diversifying the District's fuel sources to decrease the price vulnerability District rate-payers incur by solely relying upon fossil fuel sources, which have significant variable costs. Additionally, solar generators will have a positive impact on the city's environment, especially as it relates to local pollutants such as NOx and SOx, and in reducing the heat-islanding affects found in DC.

## **Does the *Distributed Generation Amendment Act of 2011* significantly impact residential electricity rates?**

No, this bill is expected to increase residential rates in the near term by less than one dollar per month and no more than five dollars per month in latter years - that is an incredible investment in the District's energy future for less than one dollar per residential ratepayer! Commercial ratepayers will pay slightly more because of their higher volumetric demand, but this increase will be just as low proportionately.

## **Why is it important to pass this legislation now?**

The Distributed Generation Act of 2011 ensures that the market for solar energy in the District, increasingly unstable, stabilizes and flourishes in the next decade. Without the near-term implementation of this legislation, the solar market will collapse, and the District's solar industry will begin to collapse as well. This legislation ensures the continued growth of the solar industry, and the creation of hundreds of green collar jobs in the next decade.

The District's solar renewable portfolio standard, dictates the percentage of solar energy required to be delivered into the District each year. This creates a market for solar energy and this market is currently at capacity because the rules in place do not specify where this solar energy must come from. This legislation provides two technical fixes to the District's Renewable Portfolio Standard: (1) it increases the requirements so that they align with those in Maryland, New Jersey, Delaware and other states and (2) ensures that solar energy be created in the District. The legislation will ensure that solar energy generators will continue to be built right here in the District and to continue the extensive growth the local solar industry has seen in recent years.

The District of Columbia has a unique opportunity to build an industry that will be a perpetual revenue engine for the city, will create a more stable and reliable grid, and will generate a significant number of jobs for years to come; all while reducing our reliance, and price vulnerability, on fossil fuel energy sources. However, if we do not act quickly, the chances of realizing this opportunity will diminish. Let us build a solar future for the District.