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A Letter From Our Executive Director

Dear Friends,

Last year was a big one for us. We welcomed Ohio and Florida to the Solar United Neighborhoods (SUN) family, helped more than 500 additional households go solar, and fought hard for better solar policies across the country. And, our members installed their 10,000th kilowatt of solar! We are very proud of our work, and thankful to all of you for supporting us.

Solar co-ops are vital in helping people go solar. More than just offering members a discount, co-ops provide the unbiased information and support that is essential to making a confident investment decision. Co-ops are one of the most effective ways to bring new people into the solar market, and we have seen that expanding the market is one of the best way to grow our political power.



The outcome of the 2016 Presidential election dramatically altered the outlook for national policy, but it does not change our strategy. In fact, we have seen a surge in interest in our work. An increasing number of individuals and community groups are reaching out to express interest in going solar and fighting for solar now. People see going solar as a way to participate meaningfully in the clean energy movement and stand up to monopoly utilities. More solar supporters than ever are motivated to be active in policy reform to protect the distributed solar market from political attacks.

We have big plans for 2017 and beyond. We would love you to be a part of it.

All the best,

Anya Schoolman Executive Director

Community Power Network

Introduction

Community Power Network (CPN) was founded in 2011 to help communities take control of where their energy comes from. We help people build renewable energy projects that provide tangible economic and social benefits in their community. And, we help communities advocate for their energy rights.

CPN is a dedicated to creating a clean, equitable, resilient energy system that benefits everyone.

Our Mission

CPN is a dedicated to creating a clean, equitable, resilient energy system that benefits everyone. We are building a vibrant and diverse clean energy movement by empowering people and communities to go solar, join together, and fight for their energy rights.



This year we hit an exciting milestone: 10,000 kW of solar capacity installed via our solar co-ops!

Our Work



All of CPN's projects educate, inform, and empower the local community to become active participants in the clean energy transition.

CPN has programs in six markets in the midst of energy transitions: Florida, Ohio, Maryland, Virginia, West Virginia, and Washington, D.C. These programs are transforming the state energy economy and creating thriving and democratic solar markets. All our programs share three overarching goals:

- Help communities build renewable energy projects with meaningful local economic and social benefits.
- Educate, empower, and mobilize the public to build support for policies that improve renewable energy access and affordability.
- Build a community of clean energy advocates that traverses political and social fault lines.

We work with on-the-ground partners in each community that want to make local renewable energy a reality. We provide technical assistance, organizing capacity, and strategic guidance. All of CPN's projects educate, inform, and empower the local community to become active participants in the clean energy transition.

CPN also serves as a clearinghouse for community members and nonprofit groups, providing technical assistance, strategic planning, and a variety of technical resources to support the energy transition. We have developed specialized expertise on many topics. This includes solar co-ops, community (shared) solar, low-income solar, net metering, and the ratepayer impacts of rapidly-changing energy regulation. We provide impartial consumer-facing resources and guidance not available anywhere else. This allows solar customers to make informed decisions about how best to participate in solar.



Maryland residents came together at the state's Solar Congress to discuss solar priorities for the next year.

In our decade of experience organizing solar co-ops, we have found solar adopters to be intensely interested in solar policy. They are eager to work to make solar more affordable, accessible, and equitable.



Our Theory of Change

We believe in a projects-to-power-to-policy approach. We build on-the-ground projects that have real impact on people's lives. We then equip and empower local communities to advocate for better local energy policies that guide their state's clean energy transition.

Solar co-ops, or solar bulk purchasing groups, have proven to be one of the most effective ways to convert solar "considerers" into solar "adopters," and to bring new people into the solar market. We believe that solar adopters are the best advocates for policy change. This community has a real stake in the outcomes of legislative and regulatory decisions governing the future of renewable energy markets. Importantly, these bodies recognize solar adopters a unique class of ratepayers. This gives our community a strong voice in policy discussions. In our decade of experience organizing solar co-ops, we have found solar adopters to be intensely interested in solar policy. They are eager to work to make solar more affordable, accessible, and equitable.

Our theory of change is a positive feedback loop. Solar adopters become solar advocates and improve policy to open solar up to new constituencies. This expands the pool of solar adopters, who become solar advocates, and on and on and on.

Reframing the Conversation

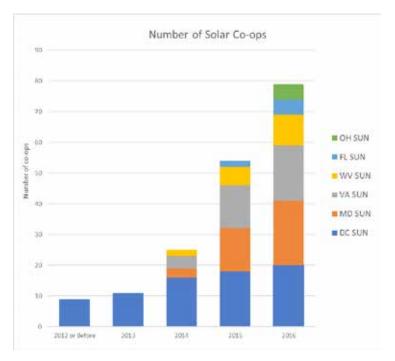
We are also reframing the conversation about solar, making it clear that solar is a practical investment for individuals and communities seeking economic growth. Too often, solar is seen as something marginal, expensive, or just for environmentalists. Our programs help communities save money by going solar, create local solar jobs, and lower costs for solar companies. This intervention stimulates the local solar market, sparking job creation and company growth. Our diverse network, representing economic growth as well as environmental interests, is making clean energy attractive to potential energy producers across the political spectrum.





Scaling Solar Deployment

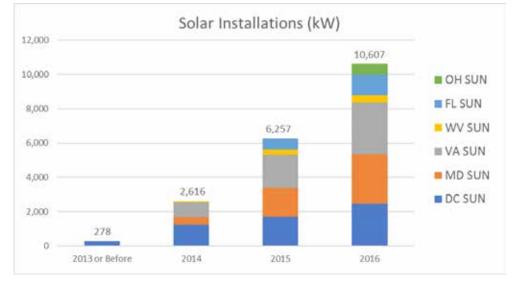
Since CPN began, we have expanded our reach from 45 households in Washington, D.C. to more than 10,000 households across six states. In 2016, we organized our 80th solar co-op, helped more than 1,640 homes, nonprofits, small businesses go solar. This resulted in more than 10.5 MW of new solar capacity, and reduced carbon emissions by more than 292 million pounds over the lifetime of these solar arrays.



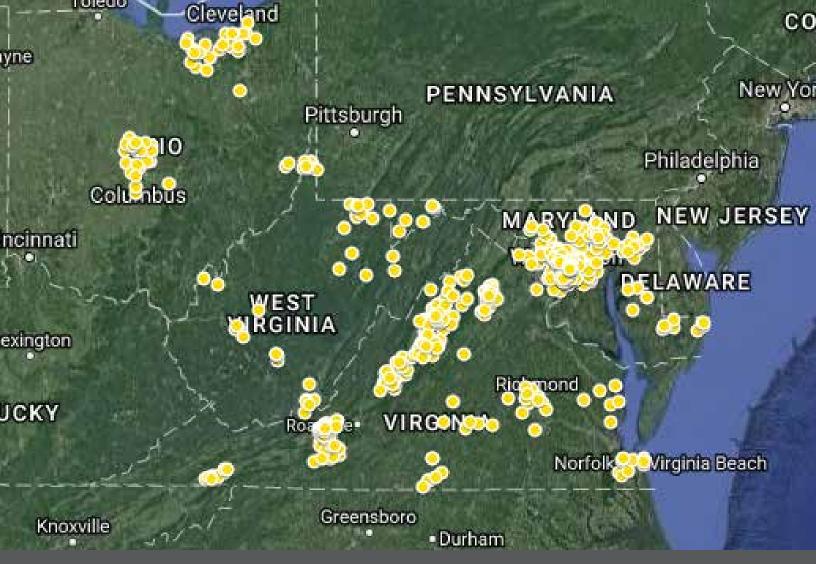
We are continuing to scale our solar co-op program to create a strong base of new grassroots solar advocates.



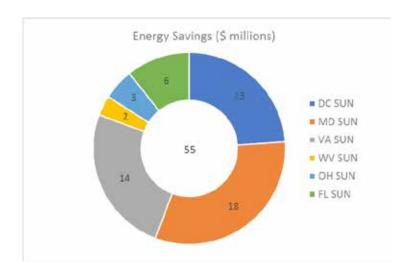
As of 2016 we had more than 10,000 solar supporters across our six state SUN programs.



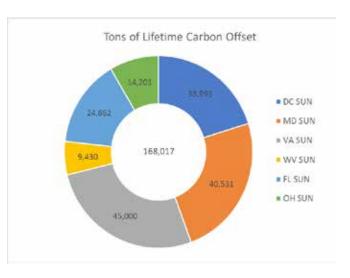
Solar deployment through co-ops continues to climb. For the past two years, we have roughly doubled the amount of solar our co-op members have installed.



We have helped more than 1,640 homeowners go solar, resulting in over \$27 million in local investments in solar by the end of 2016.



Together, our co-op members will save more than \$55 million on their energy bills over the lifetime of their solar systems.



Our co-op members will offset 168,017 tons of CO2 emissions over the next 25 years by producing their own solar energy.

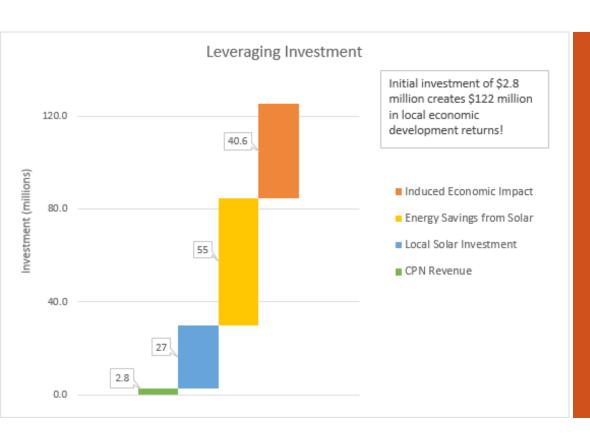
Growing Local Economies

Distributed solar strengthens local economies, creates jobs, and facilitates economic equity in addition to making the local energy system more affordable, resilient, and secure.

Our co-ops facilitate significant local investment. As coop members purchase systems from local installers and save money on their energy bills, they are injecting muchneeded wealth back into their communities. In total, our solar co-ops have facilitated more than \$27 million in local solar sales, which we estimate has created \$40.6 million in indirect economic benefit. These solar installations

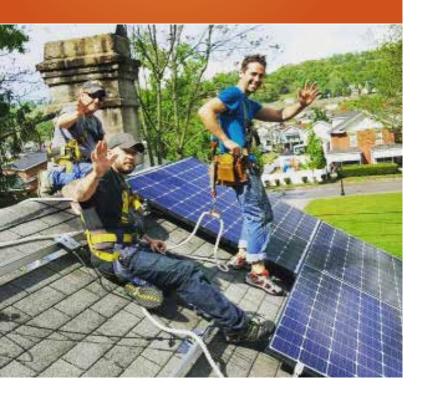


will save co-op members at least \$55 million in energy costs over the next two decades. Together, these impacts translate into more than \$122 million staying in local communities, rather than being exported to utility holding companies. This return also means for every \$1 of support we have received from foundations and the public, \$40 has been returned to local communities!



Our co-ops
have directly
facilitated
more than
\$120 million in
local economic
development.

Over the last eight years our co-ops have created almost 500 new solar jobs



Our co-ops also facilitate significant job growth. The solar industry is adding workers at a rate 12 times faster than the overall economy. The industry has grown 278% since 2010, and accounted for 2% of all jobs created in the U.S. in 2016. Our co-ops jumpstart solar job creation in states with less robust solar markets, particularly Virginia, West Virginia, and Ohio. Our co-ops provide companies with a dependable source of business and fundamentally shift the solar market by helping solar companies scale up.

We estimate that our co-ops have helped create almost 500 new solar jobs over the last eight years, including dozens in West Virginia, Southwestern Virginia, and the Appalachian Ohio region. We are working closely with partners on the ground in these areas to explore new job-creation opportunities and ensure we maximize the job-creation potential of solar co-ops.

Community Solar

Over the past year, community solar has become a much more prominent element of the renewable energy landscape. CPN has been working on community solar since 2010, and helped to establish some of the very first community solar projects in the country. With the growth in community solar's popularity, we are finding that the biggest challenge is ensuring that communities actually get to own, develop, and benefit from it! We are working diligently to ensure that community solar programs are inclusive, equitable, and responsibly administered.

CPN is working to become the consumer voice for community solar across the nation. This is a critical missing component of the market as it currently stands.



Community solar began with a simple idea. People should not have to put a solar panel on their own roof to benefit from the electricity it generates. Instead, community solar projects allow individuals, businesses, or organizations to purchase or lease a "share" of solar array. In this way, community solar allows everyone to access the benefits of solar energy, even if you live in an apartment building, under a pine tree, or do not have suitable roof space.

Community solar is currently only available statewide in a handful of places. In Washington, D.C. and Maryland, CPN was instrumental in getting laws passed to enable community solar, and is working to enable community solar in our other markets.

Once authorizing legislation is passed, our work has really just begun. The rulemaking process is a critical component of any community solar program, and can determine whether community solar benefits residents or just the monopoly utilities. DC SUN worked tirelessly for three years to ensure that community solar regulations fairly compensated participants, and succeeded! D.C.'s final rules were published this past December. MD SUN took on the same challenge in Maryland this past year, and succeeded. In Maryland, we worked hard to ensure that the program included capacity designated for low income residents. Now, both DC SUN and MD SUN are educating the public about community solar and working to ensure that community solar projects and providers protect consumer rights and interests.

Community solar's popularity has grown so much that investor-owned utilities have recognized it as a threat to their business model and are attempting to co-opt the term to their advantage. As reported in the Huffington Post, many utilities are trying to brand utility-scale, utility-owned solar projects as "community solar" to get eco-minded customers to pay a premium for "solar" energy.

Most utility offerings lack a key quality of true community solar: they do not provide a net financial benefit to subscribers. Instead, they look more like a traditional green power tariff. Utility-scale solar prices have fallen to around \$1/watt – making it cheaper than conventional fuels. Rooftop solar customers expect to see a return on their investment within 5-10 years; community solar subscribers should see one as well.

As community solar grows, more consumer protection issues will inevitably arise. People deserve to know how these projects and contracts stack up. CPN has developed a list of criteria to evaluate the quality of a community solar project (at left).

These criteria can be divided into three categories:

- 1) Is it a good deal for participants?
- 2) Is it customer friendly? and
- 3) Will it benefit the wider community?

Community benefits present particularly exciting possibilities for community solar. Good community solar projects can expand the market by removing solar's high upfront cost, enabling low-income communities, local non-profits, and churches to benefit. Energy costs are a significant strain for low-income families and community organizations. A typical low-income household spends more than 7% of its income on energy costs, more than twice that of higher-income homes. When done right, community solar can provide solar access to everyone.

Setting the Solar Agenda

Although co-ops are often what attracts people to their state SUN, they are only the beginning. Throughout the year, we connect solar co-op members to the broader solar community in their state, and provide opportunities to engage in education, advocacy, and other issues.

Once a year we bring each statewide SUN community together for a face-to-face Solar Congress. The Solar Congresses are a chance for people to learn about solar technology and policy, connect with each other, and set the agenda for the coming year. At the Congresses, we facilitate in-depth policy discussions to help identify the issues most pertinent to our members. Congress participants weigh in on what is important to them and how to best mobilize others around clean energy. At the end of the day, we emerge with a strong community of solar supporters and a strong commitment to continue to fight for energy rights.

Solar Congresses are a chance for citizens to learn about solar technology and policy, as well as shape the upcoming year's policy agenda. Congresses also create opportunities for citizens to step up as energy leaders, increasing the capacity of the movement.



A young attendee at the VA SUN Solar Congress.



CPN Executive Director Anya Schoolman leads the forum at the WV SUN Solar Congress.

DC SUN Co-op Coordinator Emma Rodvien testifies at the DC Council on the proposed RPS bill.

Fighting for Solar Rights

2016 brought many policy fights, and significant wins for solar rights across the country.

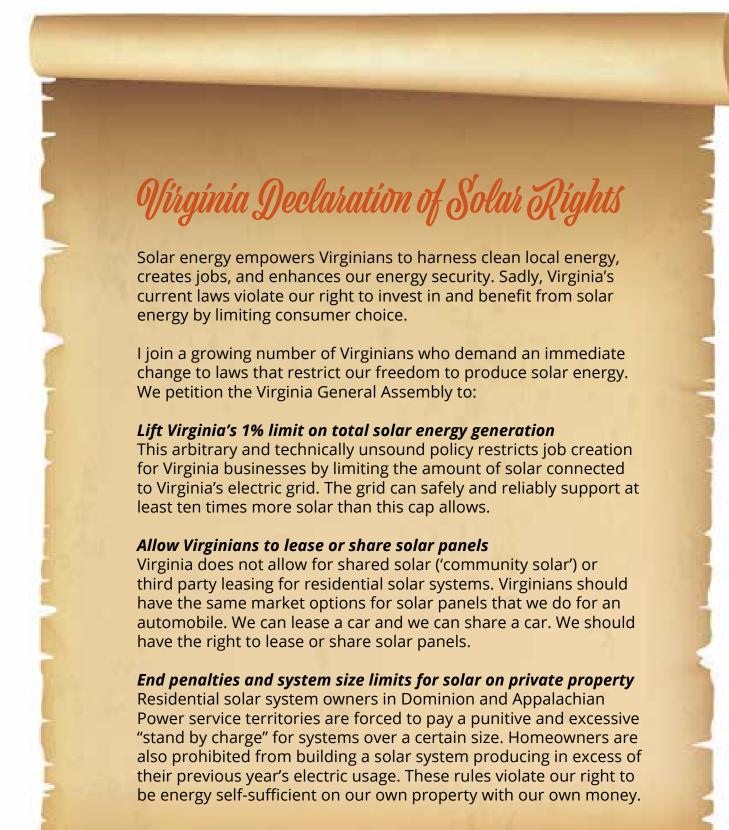
In D.C., we fought for a higher renewable portfolio standard (RPS), and won! We doubled the District's renewable energy requirement, including the solar carve-out. D.C. will now be 50% renewably-powered by 2032. We are now working with stakeholders across the city to implement a new program that will use solar to lower electric bills for 100,000 low-income households. If we are successful, the program will become a model for the rest of the country (and beyond).

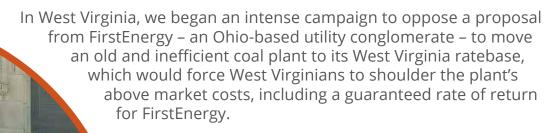
Additionally, in December 2016, the D.C. Public Service Commission finally published the final rules implementing the 2013 Community Renewable Energy Act. We have been working to get this across the finish line since 2011, and are glad to see it realized. We are already working with several community groups and nonprofits interested in pursuing community solar, and hope to see exciting projects underway in 2017.

In Maryland, we fought hard to pass community solar legislation. Since then, we have been working tirelessly to ensure the new program is accessible to all Marylanders and includes a carve-out for low-income participants. We are also working to ensure that the new Grid of the Future proceeding moves Maryland towards a cleaner, democratic, and affordable energy system.



MD SUN Director Corey Ramsden gives a presentation about the state's new community solar pilot program. In Virginia, we collected more than 1,800 signatures to our Virginia Declaration of Solar Rights (shown below), which is demonstrating to state lawmakers the broad support solar has among their constituents. We will continue to elevate solar voices at the local and state levels, and expect to play a much bigger role in the 2017 legislative session.





In Florida, we worked with renewable energy advocacy groups across the state to educate the public and protect solar through ballot initiatives in August and November. Through our solar co-op work we have built a grassroots base of informed and passionate solar advocates who are dedicated to ensuring solar remains viable in the Sunshine State, and successfully defeated Amendment 1 in November.

In Ohio, we are working with a broad group of renewable energy advocacy groups and community activists to defend the solar market and help it grow. Several of our co-op members testified at the Ohio General Assembly to urge state legislators not to extend the renewable portfolio standard (RPS) freeze. Because of their testimony, we convinced a key legislator to change her vote, which enabled Governor Kasich to overturn the RPS freeze and pave the way for a stronger solar market in the state.

Through all these policy fights, we are seeing a consistent trend toward expanding solar access. In several states where solar has been under severe attack, it now has the political legs to overcome utility lobbyists. In several cases, the benefits for jobs and economic development have played a large role in preserving distributed solar policy. In fact, solar is one of the brightest spots for economic growth over the last decade, and lawmakers are starting to pay attention.

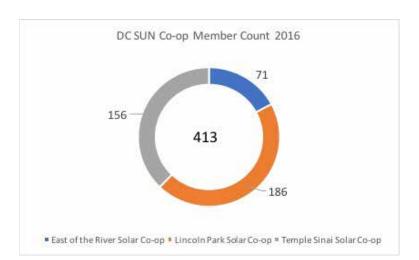




Solar Co-ops

In 2016, DC SUN implemented three solar coops: East of the River (Wards 7 and 8), Temple Sinai, and Lincoln Park. These co-ops had a total of 413 group members, 155 of whom went solar. This created 875 kW of new rooftop solar in the District.

With the success of three new co-ops in 2016, we have now completed 21 solar co-ops in D.C. We have engaged more than 1,600 people in the District and helped more than 480 homeowners go solar. This work has resulted in more than \$6.2 million in local investment, while saving DC SUN members over \$1.3 million on the cost of going solar, and \$13 million on energy costs over the lifetime of the solar arrays. We have organized co-ops in each of the city's eight wards and continue to work to increase the diversity of DC SUN's Advisory Board. We aim to make DC SUN a vibrant, inclusive, and immensely impactful organization that improves the lives of all District residents.





We are excited to welcome Jameka Hodnett as our new DC SUN Program Director! She is working closely with local activists to make solar more affordable and accessible to all DC residents.



Solar for All

In 2016, DC SUN members also fought for a higher renewable portfolio standard (RPS), and won! The District's renewable energy requirement doubled to 50% by 2032 and the solar carve out doubled from 2.5% to 5%. We were also successful in convincing the City Council to create a new low-income solar program with a dedicated funding source. This new program is called Solar for All. It aims to use solar to halve electric bills for 100,000 low-income households in DC by 2032. We have been working with the Department of Energy and Environment as well as members of the Solar for All Task DC SUN hosts a solar info session for low- and Force to develop recommendations for the program's implementation. If we are successful in implementation,



moderate-income neighbors.

Solar for All will be an exemplary model for the rest of the country (and beyond).

In December, the Public Service Commission (PSC) finally published the final rules implementing the 2013 Community Renewable Energy Act. This gives the green light to the District's community solar program. We have been working to get this law across the finish line since 2011, and are glad to see it realized. Community solar will be critical to the achieving the Solar for All goal of lowering bills for 100,000 low-income District households. We are already working with several community groups and nonprofits interested in pursuing community solar, and hope to see exciting projects underway in 2017.

Exelon-Pepco Merger

This past year saw a turning point in our multi-year fight to protect District ratepayers from Exelon's proposed takeover of our local utility, Pepco. In February, the PSC rejected the settlement developed by Exelon and the city government. In its place, the Commission proposed an alternative settlement that would be approved if all settling parties agreed. We worked with PowerDC, a diverse coalition opposed to the takeover, to submit more than 1,000 letters to the Mayor urging her to reject the settlement. We also sent letters and called the elected Attorney General and the Office of People's Counsel, asking them to publicly oppose the new settlement terms.



PowerDC and partners hold a press conference and rally to oppose the merger.



PowerDC members attend a hearing at the D.C. PSC

In March, all of the deal's major parties, aside from Exelon, rejected the PSC's proposed settlement. In a shocking move, the PSC went ahead and approved the takeover anyway, prolonging the fight further. DC SUN has joined Public Citizen as well as Mayor's Office, Attorney General, and Office of the Peoples Council to file a challenge to the decision in D.C. Circuit Court. The case will be heard in 2017.

In the summer, Pepco released an online "solar calculator" tool called WattPlan, which was intended to help potential solar customers understand the interplay between variables that can impact the decision, such as financial incentives, roof design, shading, energy costs, electricity usage, panel efficiency, and renewable energy credits. DC SUN carefully evaluated the calculator's inputs and methodology, and found that its cost estimates and projected savings were severely out of date: it used unrealistic dollar-per-watt cost estimates and did not factor SREC values into the savings calculations. DC SUN alerted Pepco to the tool's errors and met with Pepco representatives to discuss correcting the calculator.

Grid of the Future

Dramatic improvements and cost declines in distributed energy resources like solar, energy efficiency, energy storage, and others, could have a huge impact on the electric grid, energy markets, and consumers. D.C. ratepayers could significantly lower their electric bills through more efficient and better coordinated use of existing resources; drastically reduce their carbon impact through large scale integration of zero-emission technologies; improve reliability with the use of distributed storage and microgrids; and promote thousands of local jobs in the clean energy sector.



Solar installation, courtesy of Thomas Burnett.

In June 2015, the PSC opened case FC 1130 to examine how to modernize D.C.'s electric delivery system. The proceeding is also referred to as the "Grid of the Future" case because it examines how to integrate new technology, especially distributed zero-emission energy resources, into the grid.

In 2016, the PSC held a series of workshops on various "Grid of the Future" topics, inviting the D.C. Government, utilities, and commercial developers to give presentations. DC SUN participated as a stakeholder in these workshops and is being represented by Earthjustice as a formal intervenor in the case. We have requested that the PSC lay out clear objectives and a framework for the proceeding that would include and encourage input from regular ratepayers, not just industry and regulatory professionals.



Power lines, courtesy of NREL.

Rockstar Partners

DC SUN works closely with a variety partners to make solar accessible and affordable for all District residents.

































Sylvester Bush has been an amazing advocate for solar in Wards 7 and 8. He was instrumental in setting up and running the East of the River Co-op this year. DC SUN honored Sylvester for his contributions at our Holiday Party this year.

Kavitha Chetty-Ness is an active volunteer with DC SUN. She helped with outreach efforts for the Lincoln Park Solar Co-op and was instrumental in helping to plan and coordinate DC SUN's winter fundraiser.

Local Champions

The DC SUN community has many dedicated volunteers and activists that have been with us since the beginning – now almost a decade!





We are deeply grateful to Randy Speck, Cara Spencer, and their colleagues at Kaye Scholer for their thousands of hours of pro-bono legal counsel. Kaye Scholer was instrumental in getting community solar legislation passed and in our fight on the Exelon-Pepco merger. Their work advocating on behalf of all D.C. residents for fair energy laws is exceptional and inspiring.

Additionally, Cara is a phenomenal activist who helped spearhead the Lincoln Park solar co-op this year.

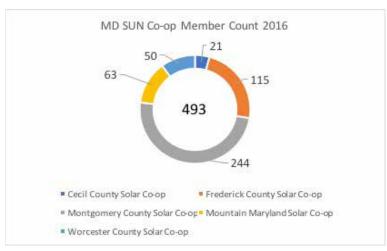
At our Holiday Party in December, we honored several amazing PowerDC volunteers who were so important to our fight against the Exelon-Pepco merger. Rob Robinson and Sherrill Berger were honored for their tireless efforts to stop the Exelon acquisition of Pepco, promote equitable grid rules, and protect low-income ratepayers.

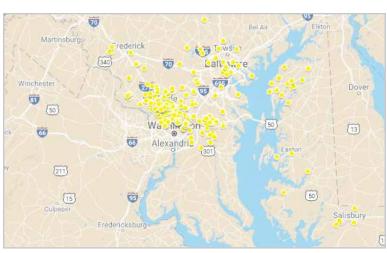
Other DC SUN and PowerDC members honored include: Ellen Agler, Amy Cocuzza, Richard Graves, Tim Judson, Synta Keeling, Larry Martin, Robyn Miller-Tarnoff, Graylin Presbury, and
Marchant Wentworth.



Solar Co-ops

In 2016, MD SUN organized eight solar coops, bringing our total to 23. In 2016 alone, we engaged nearly 1,000 people, and helped more than 150 homes go solar. In total, we have engaged over 2,500 people and helped 398 homeowners go solar. This has resulted in \$8.4 million in local investments in solar, while saving MD SUN members more than \$1.4M on the cost of going solar.







SPOTLIGHT ON THE EASTERN SHORE

For the past two years, we have focused on solar education and deployment on the Eastern Shore as part of a multi-year effort to create a broad network of solar advocates. In Chestertown, Easton, Salisbury, Dorchester County, Caroline County, Worcester County, and Cecil County we're building a grassroots base that strengthens our members' advocacy at the state legislature, Public Service Commission, and with utilities.

"I am one of the many who joined the City of Rockville co-op last year. I wanted to thank you for your support. Today my solar panel was successfully turned on. A few months ago you helped me communicate with [our installer] and through both you and [them] my questions and concerns were addressed. Without your intervention and support I probably would have cancelled my project. I am happy that I didn't cancel the project and I'm excited to start generating electricity."

— Anna Couvillon



From the Mountains to the Shore

2016 saw MD SUN launching co-ops with local partners from one end of the state to the other. In Worcester County, near the shore, we launched in the historic county seat of Snow Hill in June. On the other end of the state, individuals like Garrett County homeowner Linda Herdering and city partners in Frostburg, Allegany County, promoted the Mountain Maryland Solar co-op in their communities over the summer. From May through September, key municipal and community partners helped the Montgomery Solar Co-op grow to be the largest and most successful co-op in MD SUN history.

Smaller groups in Dorchester and Caroline joined forces with co-ops in nearby counties while neighbors in Cecil County, through the efforts of a single individual, George Kaplan, grew their group to critical mass through the fall. In Frederick, an excited core of solar ambassadors, working with the county, came to solar information sessions and provided a solar homeowner's personal perspective to the group's selection committee. The county also provided audio/visual services to record an information session that MD SUN can re-use in communities across the state.

Information sessions are the backbone of our educational work in the state, as we teach Marylanders the basics of solar and how to take advantage of solar to lower their energy bills.

Bringing the Community Together

In October, MD SUN organized the first annual Maryland Solar Congress. On a sunny Saturday, more than fifty solar supporters, co-op members, and advocates gathered to discuss the growth of solar in Maryland. This conversation included expanding the state's Renewable Portfolio Standard, launching Community Solar, and the upcoming Public Service Commission proceedings which are intended to examine the future structure of our electricity system. Interest leading up to the conference included a radio interview recorded on the Marc Steiner Show.



Expanding Solar Access in Maryland

In 2015, we fought hard to pass community solar legislation in Maryland. Since then, we have been working tirelessly to ensure the new program is accessible to all Marylanders and includes a carveout for low-income participants. We participated extensively in the community solar rule-making process at the Public Service Commission to ensure the program fairly compensates community solar subscribers. We are providing technical support to municipalities interested in applying community solar to benefit their residents, and supporting pilot community solar projects, especially those that would benefit low-and moderate-income residents.



We have developed a suite of resources on community solar to help Marylanders navigate the new options before them.

Low-Income Solar: Piloting Innovative Project Models

In 2016, MD SUN completed a pilot project with the Fuel Fund of Maryland to explore the potential of a pre-paid PPA model for bringing solar to low-income families in Baltimore. The pre-paid PPA model allowed us to utilize the 30% Federal Tax Credit to decrease project costs, and to overcome low credit score issues of many of the participants. We found that the solar installations enabled participants to significantly reduce and stabilize their energy costs from day one.

Rockstar Partners

MD SUN works closely with nonprofit and government partners across the state. In 2016 some of our most amazing partners were the governments of Montgomery, Prince George's, and Frederick Counties. We worked with energy and environmental staff in these Counties to organize solar co-ops, and the County staff played an important role in spreading the word and offering institutional support to the co-ops. The Montgomery County co-op had 244 members and 88 installations, making it MD SUN's biggest ever!























































Jeanne Halpin was a Giving Tuesday Ambassador for MD SUN this year. Jeanne says she supports MD SUN because: "I believe in green, sustainable energy and MD SUN helps us join together to go solar and support our local economy."



Jacob Howley is a member of the MD SUN Advisory Board and was a Giving Tuesday Ambassador for MD SUN this year. Jacob says he supports MD SUN because: "I'm giving to MD SUN because it helps people take power into their own hands – literally!"

Local Champions

MD SUN's success is also the result of an incredibly dedicated base of solar supporters throughout the state. From leading co-ops to organizing policy efforts, solar citizens have been making things happen throughout the state!



Rachel Bonas volunteered to share her solar story with us and was photographed with her daughter and her solar array by our volunteer photographer Samir.

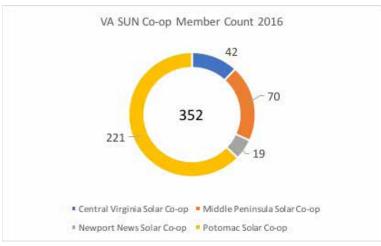
Mike and Ann Schenk also volunteered to share their solar story with us and had their solar array photographed by our volunteer photographer Elizabeth. They also provided a video testimonial about their experience going solar which was included in a student documentary film about Community Power Network.

25



Solar Co-ops

In 2016, VA SUN organized four solar co-ops, bringing the total to 18. We worked with 352 co-op members and helped 165 homes go solar, bringing our total to 3,100 members and 500 solar homes! This work has resulted in \$7.5 million in local investment, while saving VA SUN members more than \$1.5 million on the cost of going solar. In just three years, VA SUN has had a dramatic impact on the Virginia solar market. The level of public awareness and excitement about solar has grown significantly, and evergreater numbers of Virginia institutions are embracing solar.







Rockbridge Co-op celebration (top) and Rappahannock Co-op celebration (bottom).



SPOTLIGHT ON RURAL SOLAR

In 2016 we focused on expanding solar access in rural areas, launching co-ops in Central Virginia and the Middle Peninsula. We also celebrated the successful close of our Rappahannock co-op, with 39 solar installations.

This year, our co-ops spanned many different Virginia landscapes and community partnerships. We started in 'Virginia's heartland' with the Central Virginia Solar Co-op based in Farmville. We partnered with farmers, a local Kiwanis club, and local businesses to grow the group. We then moved northeast to densely populated northern Virginia, where we launched the Potomac Solar Co-op, our second partnership with Arlington County government.

We ended the year in the Chesapeake Bay/Tidewater region with the Middle Peninsula and Newport News Solar Co-ops. The Middle Peninsula group was energized by a new co-op partner, Maureen Fairbrother, as well as long-time partners Hampton Roads Solar Group and Sierra Club. Newport News co-op members enlisted Chesapeake Climate Action Network to build interest in the co-op and help educate the community about solar.



Virginia Solar Congress attendees.

"I think VA SUN is the most effective solar advocacy organization in Virginia"

— Tom Crockett, Hampton Roads Solar Group

Virginia Solar Congress

In November, VA SUN hosted its first ever Virginia Solar Congress. More than seventy solar advocates from across Virginia came together to discuss the status of solar in our state. The Solar Congress was an open, collaborative, and inspiring opportunity to connect with fellow solar enthusiasts from across Virginia. Solar Congress attendees participated in informational presentations on a wide range of solar topics. After light lunch refreshments, the afternoon was dedicated to an informal, participatory forum discussion about the development of Virginia's solar landscape.

Declaration of Solar Rights

In 2016, VA SUN launched a Declaration of Solar Rights and collected more than 1,800 signatures to the petition from across the state. The Declaration supports each resident's right to own and produce solar power on their own property, and to have access to an open and competitive solar market. This effort is demonstrating to state elected officials the strong support for solar among their constituents.

Creating Local Jobs

Over the last three years, Virginia-based solar installers have steadily seen higher customer demand because of co-ops. As a result, several companies have added staff and/or expanded their businesses. For example, Waynesboro-based Sigora Solar more than tripled its staff since 2013. After being selected by two solar co-ops, Bluemont-based Solar Solutions increased its staff and opened a new office near Harrisonburg. Richmond-based Shockoe Solar's selection by the Middle Peninsula Solar Co-op will enable the company to double the number of residential installations they can complete.



Solar Installation. (Courtesy of Shockoe Solar).

Rockstar Partners

VA SUN works closely with nonprofit and government partners across the state. In 2016 some of our most amazing partners included:















































Scott Sklar is a widely respected renewable energy professional, and former head of the national Solar Energy Industry Association. Scott was a Giving Tuesday Ambassador for VA SUN this year, saying he supports us because: "VA SUN does excellent work for solar in Virginia." We are incredibly grateful for his support!

Ruth Amundsen is a member of VA SUN's Advisory Board and was a Giving Tuesday Ambassador for us this year, saying she supports VA SUN because: "they are helping get more solar in Virginia!"

Local Champions

VA SUN is lucky to have many passionate community activists and volunteers.



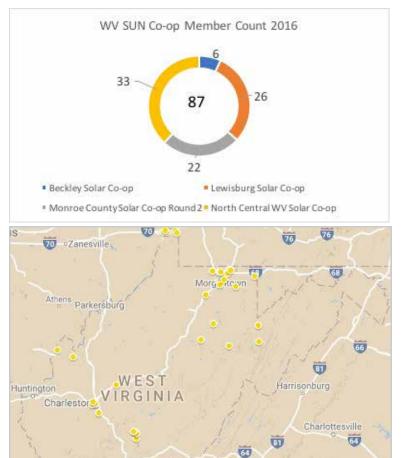
Ivy Main (left) and Maureen Fairbrother (center) are both passionate renewable energy advocates. Ivy runs the Virginia chapter of the Sierra Club, and writes a popular blog called "Power for the People. She also volunteered to give a presentation at the Virginia Solar Congress. Maureen Fairbrother helped organize the Middle Peninsula Solar Co-op and had special t-shirts made for her fellow co-op members.

Bob Biersack and Chris Wise of the Rockbridge Area Conservation Council (RACC) approached VA SUN to start a Rockbridge Solar Co-op after they learned about a solar co-op in nearby Augusta County. Several RACC members had previously considered solar but were deterred by complexity or cost. In total, more than 100 people signed up for the co-op, and 35 decided to install solar. Bob and Chris both shared their solar story on camera when they were featured in the student documentary about CPN.



Solar Co-ops

In 2016, WV SUN organized solar co-ops in Beckley, Lewisburg, North Central West Virginia, and Monroe County. We worked with 87 solar co-op members and helped 20 families go solar this year, bringing our for a total of 658 members and 66 solar installations statewide. This work has resulted in \$1.3 million in local investment, while saving WV SUN members more than \$210,000 on the cost of going solar. We see a real change in the way renewable energy is perceived in the state as s solar co-ops grow and public awareness about distributed solar expands. There is real momentum gathering toward a clean energy transition.





SPOTLIGHT ON JOB CREATION

This year, the Tucker/
Randolph Solar Co-op selected local company Praxis Electrical as its installer. Praxis' founder, Christopher Danz, got his start working for AAT Solar, an Ohio firm that was selected by the Fayette, Wheeling, and Kanawha County co-ops. Mr. Danz and his company now routinely bid on WV SUN co-ops, offering selection committees another great local choice for their solar installations.

Creating Local Jobs

Since 2014, we have seen a marked increase in demand for solar co-ops from communities, as well as an increasing number of local West Virginia installers bidding on co-op work. Many of the new West Virginia solar companies arose in response to solar co-ops. By accelerating demand for solar in this market, WV SUN's solar co-ops are injecting energy and investment into these small local companies. This allows them to scale their work and bring on additional staff.

Creating long-term local jobs requires sustainable and consistent market demand. This is what our solar co-ops create. Solar demand and solar installers grow together, synergistically, as one cannot exist without the other.

WEST VIRGINIANS FOR ENERGY
FREEDOM
No Bailout for FirstEnergy!
EnergyFreedomWV.org

"Solar power provides people jobs, clean energy when we need it the most, and independence for a country that was built on those values."

> Christopher Danz, Founder and CEO of Praxis Electrical

West Virginians for Energy Freedom

Our work in West Virginia isn't limited to growing the market for solar. We are also fighting to protect all West Virginia ratepayers by opposing Ohio-based utility FirstEnergy's proposal to move an old and inefficient coal plant to its West Virginia rate base. This proposed move would force West Virginians to shoulder the plant's costs, including a guaranteed percentage profit for FirstEnergy. WV SUN is being represented by Earthjustice in legal proceedings at the Public Service Commission to fight the transfer.

WV SUN is working closely with Energy Efficient WV to create a coalition of partners called West Virginians for Energy Freedom. So far, members include: American Friends Service Committee – West Virginia, Solar Holler, Classic Properties LLC, Eastern West Virginia Community Action Agency, West Virginia Alliance for Sustainable Families, West Virginia Center on Budget and Policy, West Virginia Citizen Action Group, West Virginia Council of Churches, WV Healthy Kids & Families Coalition, and others.

This coalition will educate and organize community members around the issue of the proposed plant transfer, and build a popular grassroots movement to oppose the transfer. Through this campaign we can show that the grid of the future can bring lower electric bills, more local jobs, and more solar power.

Member Engagement

In December, we held the first-ever West Virginia Solar Congress, which was a tremendous success. More than 75 attendees from around the state came to learn more about solar technology, policy developments, and the market. The Solar Congress also served as a venue for WV SUN members to meet each other and strengthen the community – something that is very important for sustaining an active and dynamic solar movement in the state. We also used the Solar Congress as an opportunity to gather feedback from WV SUN members and partners about our work and priorities and strategy going forward.



Rockstar Partners

WV SUN works closely with nonprofit and private sector partners across the state. In 2016 some of our most amazing partners were:

























Jamie Van Nostrand is a WV SUN Advisory Board Member and Director of the West Virginia University Center for Energy and Sustainable Development. Jamie played a huge role in making the West Virginia Solar Congress a success, by giving a presentation and partnering with us to host the event at WVU's College of Law.

"West Virginia is a challenging regulatory and policy environment for distributed solar. The work of WV SUN is essential for building the critical mass to enable distributed solar to overcome the institutional barriers, and for pursuing the policy changes necessary for solar to achieve its full potential in the state."

Autumn Crow is the Executive Director of the Lewisburg Green Team and a board member of the Greenbrier River Watershed Association. Autumn partnered with us on the Lewisburg Coop and was a huge help with co-op outreach and promotion.

"Harnessing energy from the sun is about as sustainable as you can get, so we are hopeful that more solar energy projects can be developed in our community."

Local Champions



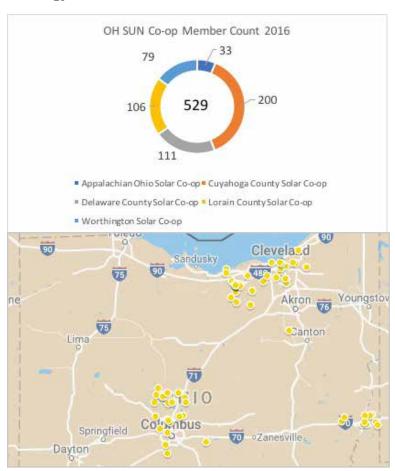
Cheryl and Corky Brown went solar with the Morgantown Solar Co-op. They volunteered to share their solar story with us and had their solar array photographed by our Director of Engagement, Carra.

Pam Cubberly and the Morgantown Municipal Green Team were amazing partners on the Morgantown Solar Co-op. Pam helped organize information sessions and publicized the co-op through the Green Team's social networks.



Solar Co-ops

In 2016, OH SUN organized five solar co-ops. We have engaged nearly 1,00 people, and helped 85 homes go solar. This work has resulted in more than \$1.7 million in local investment, while saving OH SUN members more than \$300,000 on the cost of going solar. As the Ohio program grows, we are receiving more interest from communities who want to start solar co-ops and learn more about solar power. As public awareness about distributed solar and the jobs it brings grows, we are seeing real changes in the way renewable energy is perceived in Ohio, and momentum gathering toward a clean energy transition.





SPOTLIGHT ON THE WORTHINGTON SOLAR CO-OP

Worthington Girl Scout Olivia Engel started the Worthington Solar Co-op as part of her Gold Award project. The Gold Award is the highest honor a Girl Scout can receive, earned by completing a project with a lasting impact on her community. Olivia developed an interest in solar energy and the environment through Girl Scouts, and now is using that passion to help members of her community go solar.

Solar Policy Wins

We are grateful to work with a broad group of renewable energy advocacy groups and community activists to defend the solar market and help it grow. Ohio was the only state to roll back its renewable portfolio standard (RPS). The RPS has been a critical support for growing renewable energy sources, like solar, in states across the country. Nearly a dozen of our co-op members testified at the Ohio General Assembly to urge legislators not to extend the renewable portfolio standard freeze. While the legislature did vote to continue the RPS freeze, it did not pass with a veto-proof majority. We were heartened to see Governor Kasich veto the bill, noting that advanced industry jobs, including those in renewable energy industries, are incredibly important for growing Ohio's economy.



OH SUN members testify at the General Assembly.

Rockstar Partners

Ohioans are hungry for solar, and we have worked to create partnerships from the shores of Lake Erie to the hills of Appalachia. Our first partnership was in Lorain County where we able to help a motivated community go from dreaming about expanding solar to making it happen. Through hard work and the co-op, Lorain County doubled the number of arrays in the county last year. It now ranks in the top ten statewide.

Our second co-op was in Delaware County where a retired school teacher turned his passion into a movement. More than 100 people crammed into a YMCA to attend the first meeting. From that meeting came the Worthington Co-op which was the result of a local Girl Scout wanting to bring a co-op to her community as her Gold Award Project. She knocked on 600 doors to invite people to the meeting.

More recently, partners in southeastern Ohio have worked with us to bring the program to Appalachian Ohio. We had more than 40 people attend a meeting in an entire county only had seven solar arrays. A reporter from the local paper stayed for two hours to learn about solar.







Oberlin
Peoples
Energy
Coalition















Members of the Lorain County Solar Co-op regularly tabled at local events to recruit their neighbors to join the group. The co-op doubled the number of arrays in the county, and the county now ranks in the top ten in Ohio.

Cuyahoga County employees participated in the Cuyahoga County Solar Co-op, which was offered to County employees as an employee benefit. More than 200 qualified roofs were identified through the project.

Local Champions

Several OH SUN members have become active spokespeople for distributed solar energy. Nearly a dozen co-op members testified in front of the House Public Utilities Committee and the Energy and Natural Resources Committee at the Ohio General Assembly, urging their representatives to let the renewable portfolio standard come back into effect in 2017. Ohio's first solar co-op members, Lorain County, were invaluable as they shared their collective voices and turned their Senator from undecided to against the freeze extension. This extra vote helped secure the Governor a veto override-proof margin.. Thanks primarily to the co-operative, Lorain County doubled the number of arrays in the county last year and now ranks top ten in the state.



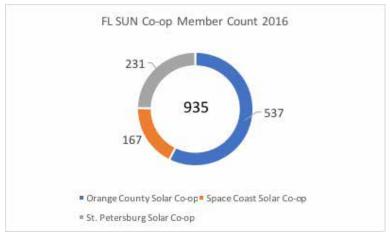
Many businesses went solar through co-ops this year, including a veterinary clinic, an insurance agency, restaurants, and a professional painter.

Retired science teacher David Carpenter has had solar for ten years. He wanted to help his neighbors go solar and worked with OH SUN to form the Delaware County Solar Co-op. More than 100 people attended the first info session. 38



Solar Co-ops

FL SUN has broken all of Community Power Network's records for solar co-op participation and solar deployment in its first year. FL SUN organized six solar co-ops in 2016, engaging more than 1,600 Florida residents, and helping 120 homes go solar. The Orange County solar co-op alone has 540 members, making it more than twice as large as the next-biggest co-op. Together, these co-ops have created \$2.4 million in local investment, while saving co-op members more than \$565,000 on the cost of going solar.







We are very excited to welcome our new FL SUN Director, Angela DeMonbreun. She brings deep experience in organizing and advocacy to our program, and has already run our biggest solar co-ops ever!

Solar Policy Wins

We have built a grassroots base of informed and passionate solar advocates through our solar co-op work. They are dedicated to ensuring solar remains viable in the Sunshine State. In 2016, FL SUN worked with renewable energy advocacy groups across the state and political spectrum to educate the public and defend against anti-solar initiatives at the ballot box. FL SUN members were actively engaged in making sure the public understood the proposed ballot amendments and their impact on the solar market during both the Primary and General Elections. Both votes upheld the right of Floridians to own and produce their own solar power, demonstrating the strong support for solar in the Sunshine State.





Ready for 100%

The Suncoast Sierra Club and Ready for 100 hosted a celebration in December atop the roof of the Station House in downtown St. Petersburg. The St. Pete co-op and FL SUN were recognized for their leadership in bringing solar energy systems to St. Petersburg and encouraging so many homeowners to sign up for the St. Pete Solar co-op.

Rockstar Partners

FL SUN was started with the partnership of the Florida League of Women Voters, who have been instrumental to our success. The League provides deep roots in the state, expertise in public relations, and incredibly passionate volunteers that have helped FL SUN grow tremendously in just one year.

FL SUN is also partnering with several municipal governments that are interested in supporting local distributed solar power. The governments of Orange County, Broward County, and St. Petersburg are supporting solar co-ops in their communities, with participation by several officials, including the Mayors of St. Petersburg and Orange County.































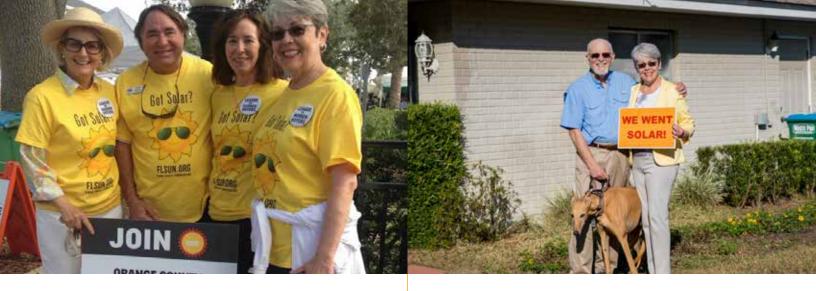












Deirdre Macnab went solar with the Orlando-Winter Park Solar Co-op and is now a member of FL SUN's Advisory Committee. Diedre is the Natural Resource Chair for the Florida League of Women Voters, and has been instrumental in setting up the partnership between Community Power Network and the League that created FL SUN.

Mary Dipboye went solar with the Orlando-Winter Park Solar Co-op and is now a member of FL SUN's Advisory Committee. Mary was the top Giving Tuesday donor this year, and generously served as a Giving Tuesday Ambassador for FL SUN, saying she supports our work "because of future generations." Mary also volunteered to share her solar story with us and was photographed with her solar array by our volunteer photographer, Michael.

Local Champions

FL SUN has been very lucky to have a number of incredibly passionate volunteers who help expand our capacity and bring our program to new audiences.



Michael Cohen went solar with the Orlando-Winter Park Solar Co-op, and is now a member of FL SUN's Advisory Committee. Michael helps FL SUN get the word out about new solar co-ops by running information sessions and giving educational presentations. Michael was most recently recognized at the Orange County Community Conference for his tireless work growing solar.

Lori Cunniff is the Deputy Director of the Orange County Department of Community, Environmental & Development Services. She has been a tremendous asset in establishing our partnership with Orange County and in running the Orange County Solar Co-op.



Teresa Jacobs, the Mayor of Orange County, is a member of the Orange County co-op. Her communications department has been a tremendous help getting the word out and bringing attention to the co-op.

Derek Grozio went solar with the West Orange Solar Co-op. He now volunteers to help with solar education in his community. Here, Derek is presenting information about the Central Florida co-op to a Tesla owners group.

Local Champions

FL SUN has been very lucky to have a number of incredibly passionate volunteers who help expand our capacity and bring our program to new audiences.



Matt Conrad is a proud member of the West Orange Solar Co-op. His family went solar in 2016, and generously offered to be Giving Tuesday Ambassadors for FL SUN.

Other Highlights

Grid Edge Projects

In 2016, CPN completed an evaluation of the feasibility of solar paired with battery storage in the Hampton Roads area of Virginia. Solar plus storage can be an effective way to increase resilience during severe weather events, an important goal in this low-lying coastal area. Solar plus storage is also becoming more and more cost-effective, and the number of storage options available is dramatically increasing. Our report concluded that there are many opportunities for practical implementation of such measures.

Several of our state SUN programs began to add electric vehicles (EVs) to their portfolio this year which would save members even more on long-term energy costs and help achieve rapid decarbonization goals by using solar as transportation fuel. In 2016, VA SUN established partnerships with Drive Electric RV and Virginia Clean Cities to begin implementing and evaluating solar plus EV co-ops.



FL SUN co-op members show off their solar-powered EV!

Deepening Engagement With Members

In 2016, CPN brought on an Engagement Director, Carra Cheslin, to develop and run a comprehensive engagement program for co-op members and our network of solar supporters in each of our states.

CPN and our state programs have always relied on support from dedicated volunteers who help spread the word about co-ops and win policy fights. However, we had not had a dedicated staff member to support these volunteers and coordinate a cohesive volunteer program until this year.

Just three months into the job, Carra has already reached out to hundreds of our coop members, connected with volunteers, and mobilized them on new initiatives. One of the first projects she took on was developing a body of high-resolution photographs of coop members and their solar systems. Carra formed and managed a team of volunteer photographers across our six states and trained them to photograph homeowners and their families with their solar arrays. This project has provided CPN and our state SUN programs with great new photos that capture the faces of our solar movement, while offering valuable photography experiences for our volunteer photographers, some of whom are amateur photographers and graduate students.



We are excited to welcome Carra Cheslin as CPN's new Engagement Director. Carra brings tremendous energy and creativity to her work, and has already made our community of solar supporters stronger and more active.





Bobby Ross is a professional photographer and has volunteered his time to support DC SUN. Bobby has photographed several coop members and their families with their solar systems. He also photographed a solar information session and the DC SUN Winter Fundraiser.

Elizabeth Herzfeldt-Kamprath is a graduate film student at American University. Elizabeth has been working with CPN to produce a film about solar co-ops for her capstone project. As part of the project, Elizabeth interviewed co-op members in D.C., Maryland, and Virginia, and is helping to tell the story of community-grown solar through her film and through homeowner testimonial videos that she created for CPN. Elizabeth also volunteered to photograph a solar information session, the Maryland Solar Congress, and several co-op members with their solar systems.

Our Photographers



Samir Qadir and his family went solar with the Rockville Solar Co-op through MD SUN. Samir volunteered to take photographs of fellow co-op members in Maryland, and was kind enough to share his family's own solar story! Michael Huneke is an Environmental Planner for Broward County, FL. Michael has generously volunteered his time to take photos and video of FL SUN's work, including info sessions, press conferences, and co-op members and their families with their solar installations.

Toolkits for Volunteer Engagement

Carra also began creating engagement toolkits to provide co-op members all the tools they need to share their solar story or organize an event. For example, the Share Your Solar Story toolkit equips co-op members to write testimonials about their experience going solar, take photos of their family with their solar panels, and film a short video testimonial. This has provided an amazing opportunity to get back in touch with co-op members who went solar with us several years ago, and capture their valuable insights. We are sharing these stories on our website, newsletters, and social media to help future co-op members become more familiar and comfortable with the process.

Solar Congresses

Carra also played an integral role in planning the Maryland, Virginia, and West Virginia Solar Congresses this year. Solar Congress events bring together solar supporters, co-op members, and advocates from across the state to learn more about solar and discuss priorities for moving the state forward.



The 2016 Maryland Solar Congress was held at the Annapolis Friends Meeting House, and brought together more than 50 solar supporters from across the state. Presentations on grid of the future, community solar, and Maryland's renewable portfolio standard were led by experts from across the state, including MD SUN Director Corey Ramsden.



The 2016 Virginia Solar Congress was held in Richmond and brought together a diverse group of 70 solar homeowners, advocates, and industry representatives. Presentations and workshops during the day focused on Virginia's solar policy priorities, battery storage, and electric vehicles.

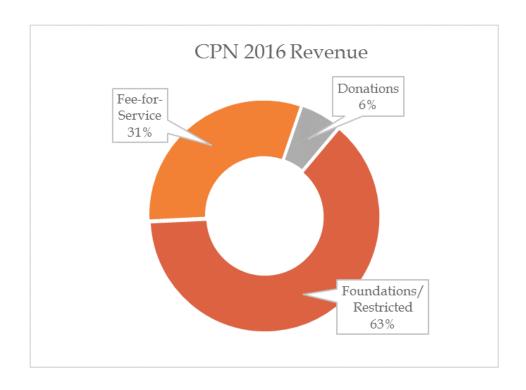


The 2016 West Virginia Solar Congress brought more than 70 solar supporters together at the West Virginia University College of Law in Morgantown. Attendees ranged from co-op members and solar advocates, to policymakers and homeowners who were completely new to solar. A wide variety of topics were presented on, including the value of solar, renewable portfolio standards, citizen lobbying, and local energy efficiency partnerships.

Financial Resources

CPN receives financial support from foundations, individual donors, and earned income from solar co-ops. These diverse revenue sources help us grow our programs and ensure we continue to be financially secure. In particular, our solar co-op work generates a reliable, scalable earned-income stream that allows us to fill in funding gaps, invest in organizational capacity needs, and keep our programs strong.

In 2016, we focused on increasing our fee-for-service revenue. We performed a detailed economic analysis of our solar co-op programs to identify their net revenue impact and evaluate several strategies for improving revenue. We raised our rate per installation slightly, though we still save installers thousands on the cost of acquiring each customer. We also set in motion a series of strategies to increase the number of people that ultimately go solar within each co-op, including an integrated solar loan option and enhanced customer service. It will be exciting to see if and how these investments pay off in 2017.



Conclusion

Community Power Network is on the move. This year we proved to ourselves that our model really works, is highly cost effective, and can scale. In 2016, we invested in organizational capacity that positions us to take on the challenges ahead including staff capacity, data collection and analysis, and program management infrastructure. As we hit 10,000 kW of residential solar, we realized we could easily grow the solar capacity, job creation, and economic development impacts of our work many times over.

Meanwhile, the demand for solar continues to grow and the value proposition of solar continues to improve across the country. The only thing stopping the clean energy revolution is the entrenchment of vested economic interests that stand to lose from distributed renewable power. This is precisely why the people who have (or want) solar need a strong voice to represent their interests. Our work this coming year will be dedicated to filling that role.

We have always worked to empower people of all backgrounds, political persuasions, and income levels to gain access to locally-owned solar energy. Representing solar owners is a natural outgrowth of this work, and will serve to further unify distributed solar interests across political, demographic, and economic lines.

We are fighting for equity and access in clean energy markets that are changing and emerging faster than anyone thought possible. As the grid of the future becomes a reality, the interplay of solar, electric vehicles, storage, demand management, and other technologies will create new opportunities for distributed, locally-owned clean energy. We are working to strategically integrate these new offerings into our work.

As we dive into 2017, we are honored to represent solar constituents across the country, motivated to help every American fight for their energy rights, and eager to show that solar citizens can transform the way the country thinks about energy.

