



Solar Energy in DC: A Guide for Building Owners

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Benefits of Going Solar in the District

There are a variety of benefits for building owners who install solar, some of which are applicable anywhere but some specific to the District. Generally, building owners and businesses in DC go solar to:

- Contribute to a cleaner environment and mitigation of climate change
- Market their firm/building as an environmental, social, governance (ESG) leader with the goal of attracting/retaining the growing contingency of ESG-minded tenants, customers, and investors
- Save money on energy costs over the long term
- Generate operating or capital funds in the form of roof lease payments or SREC sales
- Meet and exceed DC Energy Conservation Codes in the built environment.

Climate benefits

A large, 100 kilowatt (kW) solar system in the District of Columbia can generate about 139,100 kilowatt hours of clean electricity per year.¹ Over twenty years, this is equivalent to about 1,972 metric tons of avoided carbon dioxide, equivalent to taking 425 gas-powered cars off the road for a year or planting 32,600 trees.²

Electricity bill savings

Through a Net Energy Metering (NEM) system they own, a building owner will directly offset their electricity use from the grid, reducing their electric use each month. Any electricity that is not used by the building flows out to the grid, and the utility credits the building owner for that amount of electricity on their bill. If the credit is unused, it will roll over to the following month. If a building owner does not wish to own the system or does not have the capital to finance one, a solar developer can install and own the system and provide benefits in the form of electricity savings pursuant to a Power Purchase Agreement (PPA). Under solar PPAs, businesses can lock in a

significantly reduced electricity price for the term of the agreement, which is typically 15-20 years. A building owner could also explore a solar lease option. Similar to a PPA, under a lease, the project developer installs, owns, and operates a solar system on the property, and the building gets all the electricity produced by the system. With a lease, the building owner makes scheduled (usually monthly) payments to the developer that are pre-determined, regardless of how much electricity the system generates.

Green building regulatory requirements

The District, along with several states, utilizes regulatory requirements to increase building efficiencies over time to meet decarbonization goals. The District of Columbia Energy Conservation Code requires new buildings, additions, and substantial renovations greater than 10,000 square feet comply with renewable energy codes. Alternative pathways to be energy code compliance include Appendix Z, Net-Zero Energy Rating Compliance Path, of the DC Energy Conservation Code, LEED Zero Carbon and Zero Energy, International Living Future Institute Living Building Challenge, Passive House Institute U.S. and Passive Haus. [The Clean Energy DC Building Code Amendment Act of 2022](#) will require new buildings to be built to a net zero standard beginning in 2027. On-site solar may help buildings achieve these requirements.

The District is also in the midst of the first cycle of its Building Energy Performance Standards (BEPS) Program, which began with the establishment of the first BEPS standards in 2021. The BEPS Program requires existing buildings to retrofit to meet increasing efficiency requirements over time. A NEM solar system can help property owners meet BEPS by providing onsite energy production, which is considered more efficient than grid electricity. For separately metered buildings that cannot install NEM solar systems, solar PPAs and/or leases can

1 See the NREL PVWatts Calculator, which uses a 15.9% capacity factor for Washington, DC: <https://pvwatts.nrel.gov/pvwatts.php>

2 See the EPA's Greenhouse Gas Equivalencies Calculator, available at: <https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator#results>



provide property owners with upfront capital that can finance HVAC upgrades, roof replacements, and other efficiency investments for the property.

Support for local economy and energy equity

Solar developers and other clean energy companies provide a wide range of high-quality jobs for the local community. According to [SEIA's website statistics](#), the solar market in DC currently supports close to 1,055 local jobs within 157 companies that function across many different verticals, including construction, finance, marketing and sales, operations and maintenance, asset management, and corporate operations. Local solar developers also often partner with nonprofit, schools, and religious institutions by donating to their causes, participating in charitable events, and teaching DC youth about solar energy.

In addition to promoting local jobs and the local economy, installing Community Renewable Energy Facilities (CREF) on a building can bring community benefits to the District through its nationally-recognized Solar for All program. Solar for All is an initiative created by the DC Council and Mayor Bowser to provide 100,000 low-to-moderate income families with the benefits of locally generated clean energy by 2032. The program installs solar on the houses of low-income homeowners, but serves

most households through subscriptions to CREFs subsidized by the program. Installing a Solar for All CREF helps to grow the program and its benefits for low-income residents across Washington, DC, ensuring we are providing some of the financial benefits of the clean energy transition to residents who may otherwise not be able to share in them due to high upfront costs. To install a Solar for All system, a building owner would need to partner with a solar installer to submit an application during the DC Sustainable Energy Utility's annual solicitation for Solar for All projects.³

Environmental, Social, and Governance (ESG)

The framework of ESG practices has grown in popularity as more companies set their goals to adhere to this framework.⁴ Solar systems can help companies achieve their ESG goals by partnering on a solar project that will continually contribute to a cleaner environment. While firms are able to market as an ESG leader, solar can also help attract and/or maintain the growing contingency of ESG-minded tenants, customers, partners, and investors. While reviewing the ESG goals put forth by an organization, solar developers can help develop a road map with building owners to achieve those goals.

Options for Going Solar In the District

Most large buildings in the District have two options for installing solar on their roofs or parking lots: NEM solar systems or CREF solar systems.

Onsite NEM solar

With a NEM system, solar panels installed on or around a building generate energy and supply it directly to the loads accumulated by the building. The energy produced is supplementary to the energy the building draws from the larger grid. During the daytime when the sun is out, the array will supply all the energy it generates to the building, and any other energy the building consumes will be drawn from the utility grid. At night, or any other time when the sun

is not shining, most or all of the energy consumed by the building will be from the grid. If the energy produced by the solar array ever exceeds the energy consumed by the building, the excess energy goes to the utility grid.

Due to current rules limiting the size of NEM solar systems based on the size of the building owner's electric bill, separately metered buildings—such as condos or apartment complexes—often cannot maximize NEM solar production on site. For these types of buildings, a building owner typically only pays for the electricity supplying the building's common areas, so their bill will not be large enough to allow a NEM system to be maximized based on the

³ See DCSEU's webpage for details about the program, available at: <https://www.dcseu.com/solar-for-all-cref>

⁴ See the NASDAQ ESG Reporting Guide 2.0, published May 2019: <https://www.nasdaq.com/docs/2019/11/26/2019-ESG-Reporting-Guide.pdf>



building site's available roof or other space. Luckily, CREF solar systems, described below, can allow a building owner of a separately metered building to maximize solar installation and production onsite, with the attendant climate benefits and substantially similar financial benefits.

Onsite Community Renewable Energy Facility (CREF) solar

A CREF or community solar system produces energy that is supplied to the utility grid and attributed to CREF subscribers rather than to the building owner's electricity bill. For these systems, an additional meter is installed to track the amount of energy produced by the system. The electric utility measures the output from the additional meter, and any District ratepayer can sign up as a subscriber to the solar energy produced from the system, typically at a lower

rate than the energy provided by the utility grid. Some CREF solar systems are Solar for All systems incentivized by the District to provide the electricity savings to low- to-moderate income households at no cost. Savings are significant, as the program guarantees Solar for All subscribers receive \$500 off their electric bills annually.

Offsite community solar subscriptions

As an alternative to installing a system on-site, a building owner could also consider subscribing to an off-site CREF. As a CREF subscriber, a portion of the CREF's energy production would be allocated to the building owner, likely at a lower cost than grid electricity. Resources are available on the [energysage website](#) for District building owners seeking to offset their electricity bills with a community solar subscription.

Incentives that Reduce the Pay-Back Period for Solar

A combination of federal and District incentives for solar energy can reduce the upfront costs and decrease the pay-back period for going solar in the District.

Federal incentives

The Federal Inflation Reduction Act of 2022 (IRA) recently extended the federal solar investment tax credit (ITC) through 2032 and added a new production tax credit (PTC) for renewable energy. The ITC lowers up-front costs and the PTC acts to lower long term costs, though one cannot take both credits and must elect one or the other. Most solar customers will likely elect to take the ITC, which for most District rooftop systems will amount to 30% of the installation costs. The IRA also makes solar installations in low-income communities and those meeting domestic content requirements eligible for additional credits, although guidance is still forthcoming on specific eligibility requirements for those incentives. The IRA also made solar tax credits refundable, allowing nonprofits and government entities to receive the incentive for the first time.

District incentives

As discussed above, the District RPS creates an incentive payment for solar systems in the form of SREC sales. The District has one of the highest solar ACPs in the nation, and as long as SREC supply in the District remains lower than the solar carve out in the RPS, SREC prices tend to trade at \$100-75 less than the ACP. In November 2022, the SREC price was \$370.⁵ The SREC system has risks, though, in that an oversupply in the market could lead to a bottoming out of the SREC price, so returns are not guaranteed. Building owners who do not wish to take on this risk may be able to contract with a solar developer willing to finance, operate, and maintain a system on their roof.

With DC SREC prices around or above \$400, the combination of SREC payments, electricity savings, and federal tax credits can achieve pay back periods as low as 5 years for building owners, depending on the contract terms and type of system. After the system is paid off, it generates positive returns for the expected life of the system, through electricity bill savings and SREC sales.

5 The latest market prices are available at: https://www.srectrade.com/markets/rps/srec/district_of_columbia

Solar System Financing Options

There are two primary ways to finance a solar system: self-financing or leasing a roof/parking lot to a solar developer.

Self-financing

A building owner who wants to cover the cost of the system up-front should consider the following items:

- The amount of cash on hand needed to pay for the system installation—the average cost of solar per kW in DC fluctuates but was about \$3.49 as of November 2022.⁶ Larger systems will typically have slightly better costs per kW due to economies of scale.
- Tax appetite to hold the system on balance sheets and take full advantage of the tax incentives. This is particularly important for nonprofit organizations—although nonprofits may take advantage of the federal solar investment tax credit pursuant to the IRA, they will not be able to take advantage of the other federal tax advantages that come with owning the system, such as depreciation.
- Engagement of a trusted operations and maintenance provider—it is important to maintain solar systems properly to maximize output, which directly affects electricity bill savings and SREC production, as well as climate benefits.

- Capacity to manage the timely sale of SRECs—DC SRECs expire after five years and one can optimize when they are sold to maximize value. Alternatively, they can be sold upfront to compliance buyers or aggregators at a discount.

Developer financing

The second option for a building owner seeking to finance a solar system is to allow a solar developer to lease the building's rooftop, open parking lot, or vacant land around the building. Solar developers finance the upfront capital costs for new systems and can provide payment structures targeted to individual building owners' needs. This option will provide a defined monetary benefit to the building owner for a contractual length of time, typically 15-20 years, and provides that the developer will own, operate, and maintain the system, including any tax benefits, energy output, and associated SRECs, for that time period. Solar leases are options for both NEM and CREF systems. For buildings with significant electricity costs, NEM interconnections allow building owners to receive benefits through significantly reduced electricity pricing under a solar PPA for the electricity from the system. For separately metered building owners or other building owners who do not have significant electricity costs to offset, a developer can substitute electricity savings with an upfront or ongoing lease payment. Upfront payments are often utilized by building owners to pay for capital expenses, such as a new roof or any other expensive project. If a building owner prefers a recurring revenue stream, developers can structure ongoing annual payments for the duration of the lease term.

Solar Regulations and Permit Requirements

The District has several building, zoning, safety, and utility regulations that apply to solar installations. To install a solar system that is eligible for SRECs, a project owner will need:

- A solar permit from the Department of Buildings (DOB). This permit review encompasses a zoning review as well as fire, electrical, and structural reviews. A guide to the process can be found [on the District's website](#).

⁶ The EnergySage calculator is available at: <https://www.energysage.com/local-data/solar-panel-cost/dc>

- The zoning review will determine whether the project meets setback and height requirements. For example, the Federal Height Act limits solar systems to no more than four feet higher than the rooftop on buildings that are at the maximum height allowed under that Act.
- Electrical and structural reviews determine whether the system meets the District of Columbia’s Building Construction Codes.
- Authorization to Interconnect from the electric utility. This authorization is required prior to installing the system. Details about the process can be found in the [Small Generator Interconnection Application Checklist](#) for CREF systems, and the [Net Energy Metering and Small Generator Interconnection Application Checklist](#) for net metered systems. This permit is not required for projects that are not net metered or otherwise interconnected with the electric grid.

Case Studies: Examples of Solar in the District

Commercial building rooftop and parking canopies

[Robert Siegel Inc. \(Rooftop and Canopy\)](#): Robert Siegel Inc.’s property in Northeast DC features two different types of solar installations by New Columbia Solar, capitalizing on the best solar solutions for the available space. The first is a 70 kW rooftop project that is a net metered interconnection and feeds the energy produced directly into the building to serve its load. Through a power purchase agreement, the business sees approximately \$1,800 each year in energy savings.

The second project on the property is a parking canopy totaling 241 kW. This project, unlike the rooftop, is interconnected directly to the community solar grid. As a DCSEU Solar for All project, the canopy will provide all of its energy to over 50 low-to-moderate-income households, saving them an estimated 50% on their energy bills. In lieu of electricity savings, the property receives around \$22,000 in annual lease payments. The two projects were able to finance the cost of a new roof for the building, valued at \$90,000.

Robert Siegel Inc. (Rooftop and Canopy)



Commercial building rooftop with community solar installation

[V Street Rooftop](#): This rooftop solar installation by Greenscape Energy, a DC Certified Business Entity, is located on a commercial building located on the 900 Block of V St. NE. It is a ballasted system that totals 400 kW. Installed by [SolarWorks DC](#), it is a CREF project and participant in Solar for All that provides its electricity savings to low- and moderate-income families in the District. The solar developer retained ownership of the system, including operation and maintenance obligations, while the building owner receives monthly roof lease payments. The installation team was comprised of 90% District-based workers, helping to fuel the local economy.

Healthcare building garage with community solar installation

[The Children’s National Research & Innovation Campus](#): This 1,148 kW parking canopy structure installed by New Columbia Solar is a community renewable energy Solar for All project installed by New Columbia Solar located on the fifth floor of the parking garage at Children’s National Hospital’s Research and Innovation Campus. The solar construction was completed in concert with a larger renovation of the Walter Reed campus and was a logistical challenge. New Columbia Solar’s engineering team used large steel “railroad ties” to disburse the load across a larger surface area. This was reconstructed down the length of the garage as

construction progressed. The parking structure itself is a “long span” design using extra-heavy steel beams to allow the structure to span nearly 60 feet between foundations. This approach minimized the number of attachments to the parking structure and maintained open space for vehicular traffic and parking.

New Columbia Solar worked with the Children’s National team to create a unique 20-year lease agreement. The structure allowed Children’s National to incorporate other sustainability features at the facility, including electric vehicle charging stations, green roofs, and other stormwater management improvements. The project became operational in August 2020 and is owned and operated by New Columbia Solar. It provides its energy savings to low-and moderate-income Solar for All subscribers and provided both upfront and annual site lease payments to Children’s National.

Children’s National



Mixed installation type

Fairfax Village: Ranging across 35 acres in Ward 7, Fairfax Village is a diverse community of nearly 900 condos and townhomes. Flywheel Development, a local developer and Certified Business Enterprise, partnered with Fairfax Village to develop over 2,000 kW of solar systems on their buildings, parking lots, and land across several years. The solar systems are installed as part of the Solar for All community solar program, and income-qualified residents in the community are able to sign up for 50% electricity bill credits. In addition, the partnership splits revenues from the solar projects, transferring significant value to the constituent condo associations that make up the community.

Fairfax Village



Institutional installation

George Washington University: The George Washington University partnered with New Columbia Solar to develop solar facilities at five campus buildings totaling 579 kW. This rooftop system is installed at Charles E. Smith Center, Lisner Auditorium, Duquès and Fonger Hall, Monroe Hall and Hall of Government, and the Media and Public Affairs Building. The project features a PPA with the university and provides community benefits pursuant to a Solar for All Innovation Grant from the D.C. DOEE. The system is estimated to bring nearly \$100,000 per year for fifteen years in clean energy benefits to income-qualified D.C. residents and local nonprofit organizations that serve those residents.

In addition to the financial benefits, the solar panels will offset approximately 450 metric tons of carbon dioxide equivalent emitted by traditional electricity generation; each year the panels operate is roughly equal to removing 100 cars from the road.



How to Find a Local Solar Installer

There are several benefits to hiring a local solar contractor in addition to supporting the local community and economy. Local developers know the permitting processes. Another important benefit is a local contractor's close proximity to the system itself. Local providers will have better access to services to maintain and operate the solar system, allowing for quicker response times repairing the system when issues arise, allowing for a smooth operational period. Whether a building owner is working with a local developer or a local Operations & Maintenance (O&M) provider, it is important to find a company that can offer the following O&M services:

1. 24/7 professional monitoring
2. Remote diagnosis
3. Service scheduling and dispatch
4. Customer service & support
5. Monthly performance reporting
6. Live reporting dashboards
7. Preventative maintenance
8. System repairs (included or pay per use)
9. Panel washing (included or pay per use)
10. Vegetation management (included or pay per use)

DC-based installers that align with a building owner's personal and professional values can be found on the District's Certified Business Entity portal hosted by the Department of Small and Local Business

Development (DSLBD), called the [District Enterprise System](#). The CBE status portal designates points for each registered entity to determine which kind of business entity they are certified as—including small businesses, local business, women-owned businesses, veteran-owned businesses, businesses located in development zones, etc. Other resources include [DOEE's solar initiative webpage](#).

Another resource is the DC Sustainable Energy Utility's (DCSEU) [certified list of partners](#) approved for the Solar for All program. A building owner can use this list of vendors to narrow down a search for a solar installer, particularly if they are looking to install a community solar system, as DCSEU has a stringent application process and requires its partners to adhere to high standards for local benefits and quality, etc.

Frequently Asked Questions

1. Is it possible to install solar panels over a green roof? Yes, installing solar panels over a green roof is feasible although it can present a design challenge. [Specialty products for integrating solar PV with green roofs are offered by some companies](#), and building owners can work with developers to design a roof system that supports both uses. If possible, installation of both the green roof and the solar system should happen in tandem for cost efficiency in design, engineering, and construction. A green roof can act as a ballast support system for the solar system, as well as keep it operating more efficiently by cooling the air surrounding the equipment. Similarly, a solar system can be designed to help shade or capture water for plant life. The [DC Stormwater Management Guidebook](#) provides design standards for panel spacing to allow for “double counting” of Green Area Ratio measures.

2. Can solar help me comply with DOEE’s Building Energy Performance Standards (BEPS) Program requirements? Under the BEPS program framework, onsite energy production is assumed to be more efficient than grid electricity, so onsite solar can moderately help a building owner’s BEPS score. However, only NEM solar systems are considered onsite energy production under the BEPS framework, so energy from an onsite CREF solar system does not receive the same BEPS credit. Despite the lack of BEPS credit for the system’s energy production, upfront payments from a roof lease for a CREF system could still help reduce the capital costs of roof replacements and other energy efficient upgrades that may be necessary for a building subject to BEPS. Consult the [Hub’s BEPS resources](#) for more information.

3. What is the average ENERGY STAR Score improvement seen by going solar? DOEE has estimated that a NEM solar system on a typical commercial/multi-family building improves Energy Star scores by an average of 3 points.

4. What building permits are necessary to install a solar PV system? To install a solar system, the DC Department of Buildings requires a Solar

building permit. Most commercial solar installations require building reinforcement or other structural construction, which require building permits. The solar developer will manage the process of getting the requisite permits.

5. How do I connect to the electrical grid? The solar installer will need to obtain an authorization from Pepco to connect to the grid. The Pepco process can be lengthy, involving scheduling site visits and tests. It can sometimes also include paying for utility system upgrades, particularly for CREF systems. The solar developer will manage the process.

6. What preliminary documents are needed to evaluate my property for solar? To provide an initial design and proposal, developers will typically ask for a building owner’s three most recent utility bills, and any available roof or structural documentation about the property. Together these documents will help developers create an economic proposal that maximizes the benefits of solar while prioritizing the key uses for the building.

7. What type of equipment does a rooftop solar installation need? How much space does that occupy? Aside from panels, there are a few different pieces of equipment that are needed for a solar installation. The items needed depend on the interconnection type and size of the system but the typical items are a disconnect, a meter (if it is a CREF system), AC Panelboard, inverters, and a monitoring box. If the system has telemetry required from Pepco, it will need a telemetry box. Most of these items do not need to be located in the electrical room but can be outside on an exterior wall or on the roof. If the existing electrical breaker box does not have room to allow for the interconnection, then an additional breaker box will need to be added. In total, these items do not take up much space.

8. Once I sign up for solar, how long until the project is built? Generally, solar projects will be fully operational within nine months after the signing of the Solar Site Control Agreement and/or PPA.

Developers assuming ownership of the system are incentivized to build the solar project as fast as possible as the local and federal solar incentives decline over time. Ultimately, the exact time it takes the project to become operational is dependent on the scope of the project, particularly regarding permitting and the interconnection process with the utility.

9. What are the maintenance obligations of a solar system? Unlike traditional energy systems, solar projects do not require daily maintenance and are remote operated. An operator typically visits a property 1-2 times per year to clean the panels or do annual preventive or corrective maintenance.

10. Can solar be integrated with other rooftop amenities? Yes, with creative design, solar can be installed [on top of or integrated with pergolas or other rooftop shade structures](#). Additionally, solar has become an option on some vertical surfaces as well.

11. Can related building improvements be offset by the federal solar investment tax credit?

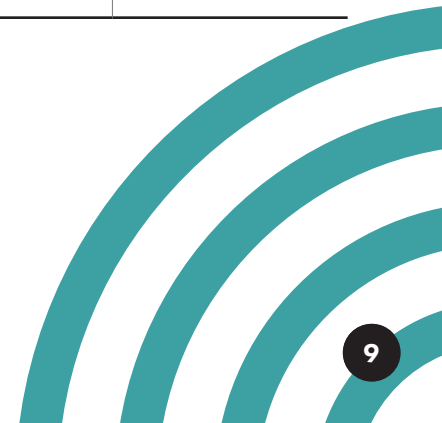
Building improvements necessary to support the solar system are sometimes eligible under the ITC. A roof lease financing structure can also provide a payment structure that helps a building owner finance improvements—whether an ongoing lease payment or an upfront payment that can be used to cover the cost of building improvements such as roof replacements, HVAC upgrades, etc.

12. What are renewable energy sources besides solar?

Though solar energy is one of the most popular and accessible sources of renewable energy due to the proximity to the source and its ability to be installed in a wide variety of locations, there are several other sources. These sources include wind, hydropower, geothermal, ocean energy, and bioenergy. The United Nations’ (UN) climate action team defines these as “generated from natural sources that are replenished at a higher rate than they are consumed.” To learn more about other renewable energy sources [read these overviews](#) published by the UN.

	Renewable Energy Portfolio Standard Act of 2004	Clean and Affordable Energy Am. Act of 2008	Distributed Generation Am. Act of 2011	Community Renewable Energy Act of 2013	Renewable Portfolio Standard Expansion Am. Act of 2016	CleanEnergy DC Omnibus Am. Act of 2018
General RPS Mandate	Established the RPS at 11% by 2022	Increased the RPS to 20% by 2022			Increased the RPS to 50% by 2032	<ul style="list-style-type: none"> Increased the RPS to 100% by 2032 Limited RE purchase to PJM
Locally Produced RPS Mandate (Distributed Generation Mandate)			Established a local distributed solar carve-out at 2.5% by 2023	Authorized CREFs allowing sub-metered buildings to install solar, and renters to receive its financial electricity benefits (PSC rules came in 2016)	<ul style="list-style-type: none"> Increased the solar carve out to 5% by 2032. Created the first Solar for All Program 	Increased the solar carve out to 10% by 2041

The history of the District’s Renewable Portfolio Standard (RPS).



Appendix: Background on Renewable Energy in the District

The District has adopted several renewable energy policies aimed at incentivizing building owners to install solar energy systems. The most impactful of these policies creates a credit market for annual local solar energy production that can be leveraged to help finance the upfront cost of systems. Combined with federal solar investment tax credits and electricity savings, the District's local solar energy credits significantly reduce the payback period for solar systems and can generate a positive return on investment for building owners over the long term. This guide will provide an overview and history of the District's renewable energy policies, outline the options and process for financing and installing a solar system in the District, and provide case-studies of various types of solar installations at sites around the District.

Background: The District of Columbia's climate and clean energy commitments and goals

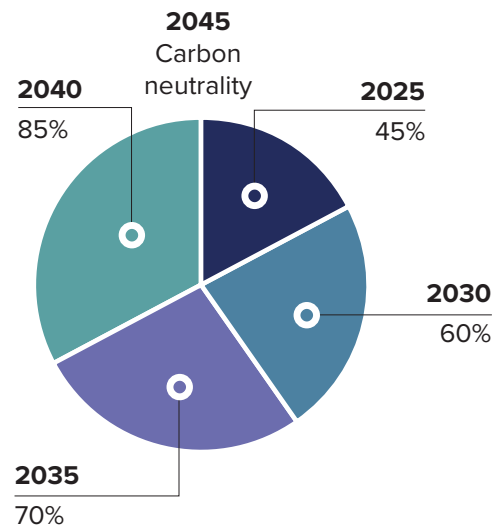
In early 2013, Mayor Vincent Gray released the District's first [Sustainable DC Plan](#) (Plan). In it, he committed the District to achieving 50% greenhouse gas (GHG) emissions reductions city-wide by 2032, retrofitting 100% of commercial and multifamily buildings to net zero by 2032 and cutting citywide electricity use in half by 2032, among other things. The Plan also committed the District to building 1,000 more renewable energy projects within its borders, promoting legislation authorizing community solar systems and establishing minimum performance standards for large buildings in the city.

When she took office in 2016, Mayor Muriel Bowser adopted and committed to the goals of the Plan. In 2017, she took a step further by making a [commitment to achieving carbon neutrality and climate resilience by 2050](#). In 2018, her administration issued an updated version of the Plan, called the [Sustainable DC. 2.0](#), which included the new carbon neutrality goal. Since the issuance of the first Sustainable DC Plan, the District has made

significant progress toward ensuring our purchased electricity is increasingly renewable, increasing local renewable energy production and resilience, and implementing building efficiency programs. Additionally, the District is implementing programs aimed at ensuring equity in the energy transition, including the nationally-recognized [Solar for All Program](#)—the first of its kind in the nation, which is committed to providing the financial benefits of solar energy to 100,000 low-income households by 2032.

Recognizing the progress made on climate programs, as well as the increasing pace and urgency of climate change, the Council of the District of Columbia recently accelerated the District's carbon neutrality goal from 2050 to 2045, adding interim goals to the [Climate Commitment Amendment Act of 2022](#).

GHG Reduction Goal
(relative to 2006 GHG emissions)



The Renewable Portfolio Standard (RPS)

The main way in which the District has made progress toward its clean energy goals is through its Renewable Portfolio Standard (RPS), which was first established by the DC Council in 2006. RPS policies work by requiring that electricity suppliers purchase renewable energy credits (RECs)⁷ from renewable energy systems to cover a minimum percentage of the electricity supplied in a jurisdiction. If the minimum percentage is not met, the supplier must pay an alternative compliance payment (ACP) per kilowatt-hour of shortfall. In practice, the statutorily set ACP acts as a ceiling on the price of RECs. As a

⁷ One REC is equal to one megawatt-hour of electricity produced by an eligible renewable energy facility.

policy mechanism, this is intended to protect ratepayers from extremely high market prices for RECs, as most RPS laws, including the District’s, allow suppliers to recover compliance costs from ratepayers.

At the time the District’s RPS was established in 2006, it incentivized renewable electricity production inside and outside of the District equally. This changed in 2011, when the [Distributed Energy Amendment Act](#) was passed, creating a carve out in the RPS for locally produced solar renewable energy credits (SRECS) and establishing a separate, higher ACP for failure to meet the carve out. This **policy**, along with the establishment of a community solar program and a reduction in permitting delays, contributed to the success of the District’s solar program. Since its establishment in 2006, the RPS has been expanded or accelerated four times in response to District climate goals and local SREC market conditions.

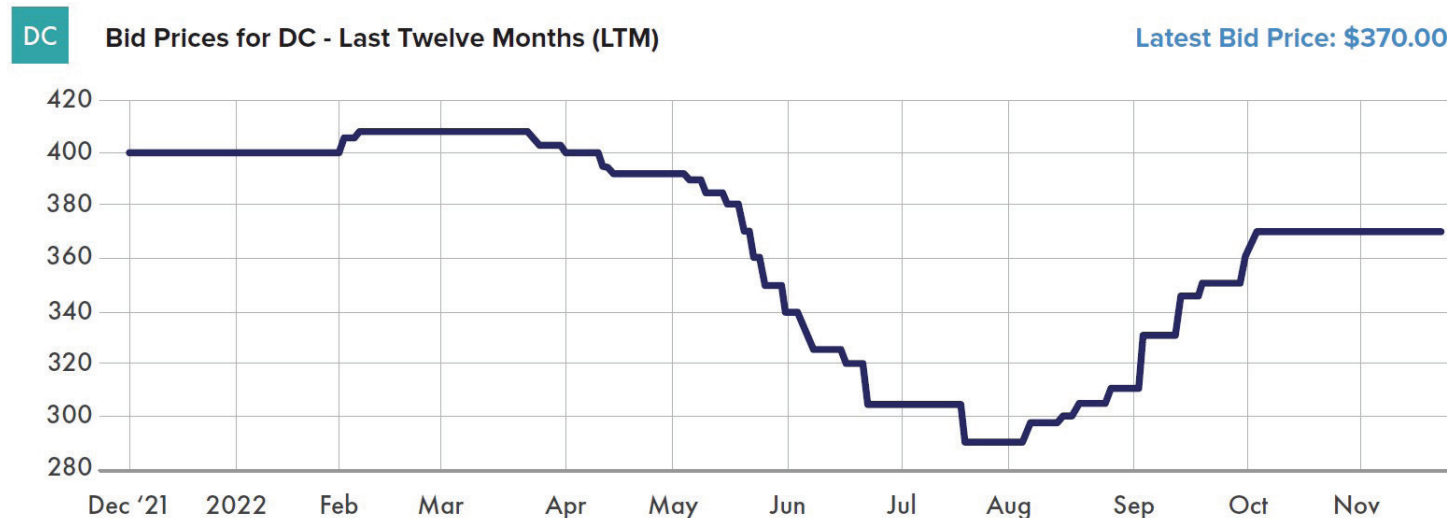
Solar energy in the District relies on the city’s local RPS policy to succeed, and the DC Council has shown itself willing to revise the RPS to respond to new market concerns when they arise. However, there is a significant risk in relying on a statutorily created market for solar energy production incentives to drive local solar installation. A price cap that is set too low or declines too fast can lead to policy failure, with SREC prices too low to stimulate growth in local renewable energy production, leading to large alternative compliance payments by suppliers. The District’s local RPS policy can also lead to significant market volatility as it does not establish a price floor, only a ceiling. This means that if local renewable energy production is higher than the RPS requirement, the price of an SREC can fall extremely low.

Progress assessment: Is the District meeting its goals?

The District has consistently met its non-local RPS goals, with suppliers paying little total ACP for that requirement each year. The District did not begin to

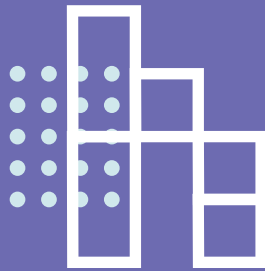
meet the local solar carve-out goal until recently, however. This resulted in some large payments of ACP to the District’s [Renewable Energy Development Fund](#) in 2016-2020 as the gap between total installed solar and the RPS solar carve out requirement remained wide. In 2021, however, the District caught up to its local solar RPS for the first time. Publication of this fact in the [District’s Public Service Commission \(PSC\) annual RPS report](#) in May 2022⁸ led to a drop in spot market DC SREC prices—they fell from an average of \$400 to \$290. Prices only began to tick up again after the DC Council introduced the Local Solar Expansion Amendment Act of 2022 in July 2022 and, as of the time of publication, they remain depressed at about \$370.

Below is an image from SRETrade, Inc., illustrating this price dip:



8 See page ii of the report

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