

A young person with dark hair, wearing a white lab coat and large clear safety goggles, is looking intently at something off-camera. They are holding a glass test tube with their gloved hand. The background is a blurred laboratory setting. The entire image has a warm, orange-toned overlay.

2020



CLEAN
ENERGY



DC

**PROGRESS
REPORT**

MAYOR’S LETTER

As Mayor, my job is to make sure every Washingtonian gets a fair shot in a growing and prosperous Washington, DC. As my administration works to make all our neighborhoods safer and healthier, we do so with a close eye on climate change, which is already impacting the city. We are experiencing warmer temperatures and more frequent and intensifying storms, heatwaves, and flooding events. As a global leader in climate and energy action, the District is committed to doing its part to reduce greenhouse gas (GHG) emissions and create a robust green economy.

That’s why my administration developed the Clean Energy DC Plan, a roadmap for reducing our contribution to climate change while creating new opportunities for our residents and businesses. The plan lays out 57 strategies to reduce our GHG emissions by 50% by 2032, addressing emissions from buildings, the energy supply, and transportation, all while ensuring that we do so equitably. The actions will generate new jobs in growing industries like solar, reduce the energy burden of at-risk residents, and create a healthier, safer DC.

Last year, only a few months after the Plan was published, I signed into law the Clean Energy DC Omnibus Amendment Act of 2018, which codifies many of the Plan’s most ambitious initiatives and confirms the District as the nation’s preeminent leader in clean energy and climate action. The law mandates 100% renewable electricity by the year 2032 and doubles the amount of solar energy deployed in the District. It creates a first-of-its-kind Building Energy Performance Standard, which is already being replicated by other cities around the country. It provides more funding for low-income bill assistance programs and workforce development. And, it begins a transition toward a future with only zero-emissions vehicles. Together, these policies put the District on a course to meet our carbon reduction targets.



Muriel Bowser
Mayor, District of Columbia

OUR INAUGURAL
PROGRESS REPORT

Since the Clean Energy DC (CEDC) Plan was adopted in August 2018, the Department of Energy and Environment has been working closely with our sister agencies, the environmental community, businesses and other stakeholders to implement the Plan’s recommendations. While we are still in the early days, and recognize the huge challenge ahead, a lot has been accomplished in this short time. The inaugural Progress Report highlights what we’ve achieved and provides a status update on the 57 action items.

HOW WE GOT HERE


- 2012 Sustainable DC sets citywide climate and energy goals
- 2016 DOEE begins stakeholder engagement and consultations for developing an energy and climate roadmap
- 2018 The CEDC Plan is adopted and published
- 2019 The CEDC Omnibus Amendment Act of 2018 is signed into law by Mayor Bowser
- 2020 CEDC implementation underway

CEDC ACT:
From Ideas to Action


LANDMARK CLEAN ENERGY LEGISLATION PASSED

The CEDC vision articulated in the Plan is one big step closer to reality thanks to the landmark CEDC Omnibus Amendment Act of 2018. The expansive new law provides an aggressive and meaningful set of clean energy policies and reinforces the District as a global leader in the fight against climate change.


PILLARS OF THE CEDC ACT




100% RENEWABLE ELECTRICITY BY 2032
The Act doubles the previous Renewable Energy Portfolio Standard requirements and establishes one of the strongest clean electricity standards in the nation.



A CLEAN, ELECTRIC VEHICLE TRANSITION
The Act supports a transition to clean, electric vehicles, mandating public buses and large private fleets go zero-emissions by 2045 and calling on 25% of registered vehicles to be zero-emissions by 2030.



THE NATION’S FIRST BUILDING ENERGY PERFORMANCE STANDARDS (BEPS)
The new energy efficiency standard for existing commercial and multifamily buildings gives the city its most potent tool for reducing GHG emissions from the building sector, which accounts for 75% of all city-wide emissions.



ECONOMIC DEVELOPMENT BENEFITING ALL DISTRICT RESIDENTS
The Act raises new revenue for programs that help low-income communities through home weatherization improvements, utility bill assistance and workforce development while also creating programs to boost local business involvement in the green economy.



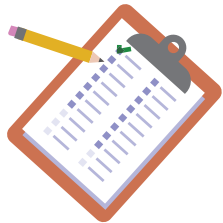


HOW WE MEET OUR GOALS







Make buildings more efficient. Buildings and homes account for 75% of GHG emissions in the District. Making buildings more efficient is the quickest, most cost-effective way to reduce emissions.

Green the energy supply. Most of our energy use still comes from fossil fuels. Rapid adoption of renewable energy sources is key to meeting the city's goals.

Drive less and electrify the rest. Transportation accounts for almost 25% of all carbon emissions in the District. CEDC envisions a mode shift toward transit, biking and walking, and in increase in electric buses and cars.



MEETING OUR 2032 GOAL OF REDUCING GREENHOUSE GAS EMISSIONS BY 50%

Targeted action areas	Impact on achieving 2032 GHG reduction goal
 Constructing net-zero buildings	10%
 Retrofitting existing buildings	20%
 Shifting to clean energy	35%
 Growing local solar	5%
 Electrifying transportation	20%
 Shifting transportation	10%

Source: CEDC Plan, p. xiv

THE CHALLENGE AHEAD

In 2018, the United Nations Intergovernmental Panel on Climate Change called on governments around the world to cut GHG emissions roughly in half by 2030 and reach zero emissions by around 2050 to mitigate the most serious impacts of climate change. The District, long a leader on climate and energy action, has set a course to meet this timeline.

The CEDC Plan provides a roadmap to cut greenhouse gas emissions by 50% by 2032 and puts the District on a path to meet the Mayor's commitment of carbon neutrality by 2050. Thanks to a combination of local clean energy efforts and a regional shift away from coal-burning power generation, the city has already reduced its emissions by 30% since 2006.

Yet, more work is ahead as the city accelerates its transition to a robust green economy. Most of the energy consumed in the District, for example, still

comes from non-renewable sources. And while energy use per capita has been trending downwards, the trend will need to accelerate quickly in the next decade to hit our goal. Implementing the CEDC Plan is critical to putting us on track to meet our ambitious goals to limit our contribution to climate change.



The District has **cut its citywide carbon footprint 30 percent** since 2006.
Source: Department of Energy and Environment



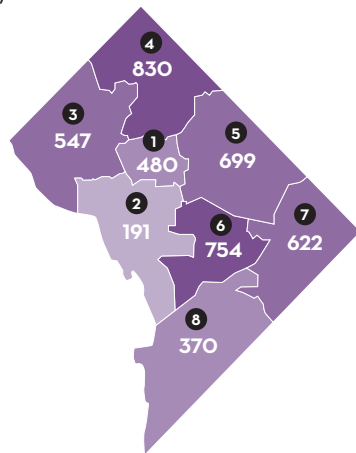


EQUITY

Clean Energy DC is designed to create new opportunities and give all Washingtonians a fair shot. The District Government implemented and expanded a number of energy programs in 2019 that aim to create new jobs, reduce household energy costs and invest in the community.

SOLAR BY WARD

Solar distribution in the city: The 4,502 District Renewable Energy Portfolio Standard-eligible solar energy systems.



Source: PSC's Report on the RPS for compliance year 2018

In FY 2019, **Solar for All** installed around 7 megawatts of solar energy, which helped approximately 8,600 low- to moderate-income households realize the benefits of solar energy. As of March 2020, 1,900 additional households have been signed up to receive credits on their electric bill that will cut their electric costs by around 50% or about \$500 annually.

The Weatherization Assistance Program delivered long-term energy savings for 360 households through energy efficiency improvements in 2019.



Low Income Home Energy Assistance Program reduced energy burdens for over 20,000 households, reaching approximately 100,000 District residents.

The DC Sustainable Energy Utility invested \$4 million in energy efficiency for low-income communities and \$7.1 million with local Certified Business Enterprises.

The CEDC Act **raises new funds for low-income energy programs**, including weatherization and energy efficiency, utility bill assistance, and workforce development.

DOEE was awarded an equity grant from the Urban Sustainability Directors Network in partnership with Consumer Health Foundation to create and implement **a racial equity tool** as part of the Sustainable DC 2.0 Plan.

CASE STUDY

Solar Works: training the next generation of DC residents

Solar Works DC is the District's low-income solar installation and job training program spearheaded by DOEE and the Department of Employment Services (DOES). District residents participating in this program prepare to **enter careers in solar and related industries** while reducing energy costs for qualified low-income District homeowners by installing solar systems on their homes. In 2019, 70 job trainees graduated from the program, and 84 single-family solar installations were completed.



BUILDINGS

Recognizing that building energy use is the biggest driver of greenhouse gas emissions, the city has taken aggressive steps since the CEDC Plan was released to make buildings more energy efficient.

The CEDC Act established the **Building Energy Performance Standards (BEPS)**, a first-of-its-kind energy efficiency mandate for existing commercial and multifamily buildings.

Mayor Bowser awarded a \$400,000 grant to help launch the **High-Performance Building Hub** to support DC's real estate and building professionals in achieving the District's ambitious climate goals.

To catalyze **net-zero energy buildings**, the District created a new program to provide early design assistance for projects committed to pursuing net-zero energy, offering eight grants of up to \$20,000 each in 2019 and 2020.



DC PACE provided over \$5 million in financing in 2019 to support clean energy, energy efficiency and sustainability projects at buildings across the city.



Updated **building energy codes** are anticipated to significantly reduce energy use in new buildings.

The **DC Green Bank** was officially formed in 2019. The bank will accelerate energy efficiency improvements and the deployment of clean energy technology by leveraging private investment, removing upfront costs, and increasing the efficiency of public dollars.

CASE STUDY

DC Public Schools See a Net-Zero Energy Future

For over a decade, DC Public Schools (DCPS) and the Department of General Services have been local leaders in green construction, building and renovating schools across all wards that have received the environmentally-focused LEED certification. Now, these agencies are looking at a more ambitious target: net-zero energy (NZE) schools, which **produce as much clean energy onsite as they consume annually**. West Education Campus and Banneker High School, both expected to open in 2021, are the first DCPS buildings to seek this designation and demonstrate the city's commitment not only to the environment but to its youngest residents.





CLEAN ENERGY SUPPLY

To meet its clean energy supply goals, the District doubled down on its efforts to increase the amount of renewable energy generated and purchased in the city.

100% RENEWABLE ELECTRICITY BY 2032

In January 2019, Mayor Bowser signed into law a commitment for the city to rely on 100% renewable electricity by 2032. This set the District on a course to achieve 100% clean electricity sooner than any other state. The RPS also requires an increase in **local solar generation** to 10% of total electricity by 2041. In 2018, nearly 16% of electricity came from renewable sources, of which 0.6% was generated from local solar.

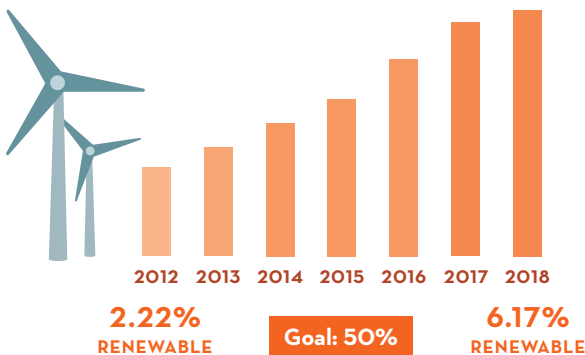
In 2019, the **Department of General Services** directly purchased 106,000 megawatt hours of wind power—enough energy to power 9,000 homes—and installed solar PV on 58 District Government sites.



DOEE's **Solar for All** program installed 7 megawatts of new solar generation capacity in 2019 and now serves 8,600 low-income District households.

In 2020, the city's **largest community solar installation**—serving at least 750 households—is set to open at a DC-owned site near Oxon Run in Ward 8.

With \$300,000 in funding from a competitive U.S. Department of Energy grant, DOEE is developing a **strategic electrification roadmap** for transportation and buildings.

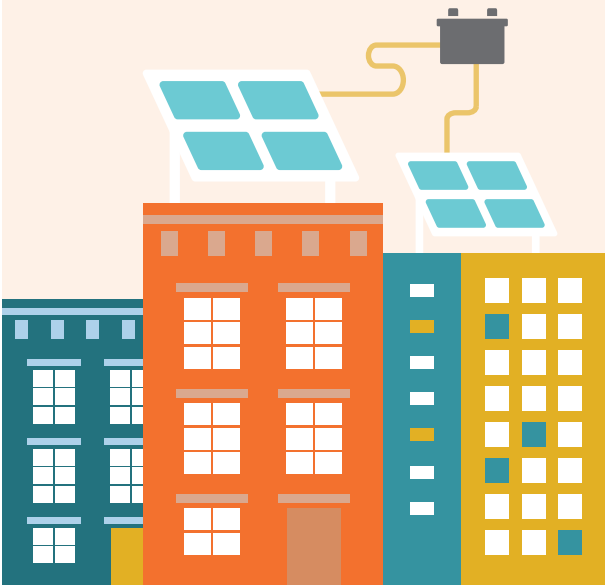


6.17 percent of annual power from **renewable sources**.
Source: Department of Energy and Environment

CASE STUDY

Jubilee Housing Solar for All Project

As part of the Solar for All program, Jubilee Housing, New Partners Community Solar, Pepco, and DOEE collaborated to launch a solar power system with battery storage at the Maycroft Apartments, an affordable housing property. The project is one of the first in the city to use battery storage, which makes the building more resilient to power outages. The batteries have the capacity **to provide power for up to three days without electricity from the grid**—providing refrigeration for medication and perishables, lighting, and outlets for a television and charging devices. Jubilee Housing's 100 income-eligible households will have the security of knowing that they can have power even during a blackout.



TRANSPORTATION

New clean vehicles mandates, an expansion of transportation options, and new initiatives from the District Government are targeting emissions from the transportation sector, which accounts for almost a 25% of citywide emissions.



19.5%
OF COMMUTER
TRIPS: BY BICYCLE
OR WALKING

Source: American Community Survey

The Act requires all public transportation and privately owned fleet vehicles to become **emissions-free by the year 2045**.

\$3 million has been budgeted by the Mayor for **electric vehicle charging infrastructure** in order to support the electrification of the DC Government fleet over the next 6 years.



The Circulator operates one of the largest public electric bus fleets on the East Coast with 14 electric vehicles.

The Department of Transportation (DDOT) created two **dedicated bus lanes** on H and I Streets NW to improve travel speeds and reliability for approximately 80,000 daily riders; 40% of all bus riders in DC ride these routes.



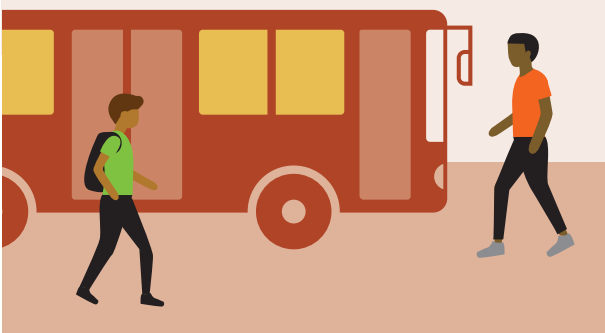
The CEDC Act increases the **excise tax** on the purchase of inefficient vehicles and **establishes new incentives** for electric vehicles charging infrastructure.

Nearly 10% of District Governments fleets are **electric vehicles or plug-in hybrids**, with the plan to prioritize electric options for new light duty fleet vehicles.

CASE STUDY

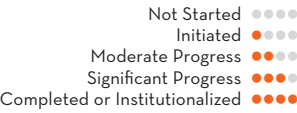
The Circulator Goes Electric

Electric vehicles are no longer a dream of the future in the District, but GHG-emitting vehicles will become a thing of the past with new mandates included in the CEDC Act. Leading by example, the District has already begun replacing old, polluting buses with modern, clean, electric ones. The Circulator, a public transportation bus system that provides almost five million trips a year, already supports a fleet of 14 fully electric vehicles, one of the largest on the East Coast. Leveraging a new Federal Transit Administration grant for \$2.6 million and funds from the District's Volkswagen settlement plan, **DDOT is purchasing 14 additional electric buses this year**. In addition to reduced GHG emissions, the electric buses reduce noise pollution, eliminate harmful exhaust, and have lower lifetime maintenance costs.



CLEAN ENERGY DC PLAN PROGRESS

This chart lists progress made on all actions in the Clean Energy DC Plan.
For more details on the ongoing progress, please visit sustainable.dc.gov/progress.



ACTION		PROGRESS
EQUITY		
EQ 1:	Build capacity to plan for equity in all energy actions and programs	●●●●
NEW CONSTRUCTION		
NC 1:	Establish a path to the phased adoption of net-zero codes between 2021 and 2026	●●●●
NC 2:	Provide a net-zero energy incentive package	●●●●
NC 3:	Issue a net-zero energy innovation request to the Federal Government and regional governments	●●●●
EXISTING BUILDINGS		
Energy Efficiency Incentives and Management		
EB 1:	Increase access to building energy performance data for energy efficiency programs	●●●●
EB 2:	Increase DCSEU flexibility	●●●●
EB 3:	Provide the incentives necessary to operate a District-wide deep energy retrofit program	●●●●
EB 4:	Coordinate and centrally track District efficiency and finance programs	●●●●
Policy and Program Recommendations		
EB 5:	Implement a Building Energy Performance Standard	●●●●
EB 6:	Drive energy efficiency at tenant build-out	●●●●
EB 7:	Encourage the adoption of green leases through education and training	●●●●
EB 8:	Develop a virtual energy audit program	●●●●
Action on District Government Buildings		
EB 9:	Lead by example in District Government operations	●●●●
EB 10:	Develop and implement a Strategic Energy Management Plan for District Government buildings	●●●●
CROSS-CUTTING BUILDING ACTIONS		
Increasing and Improving Access to Funding and Financing		
CCB 1:	Establish a Green Bank and increase other funding for energy efficiency and renewable energy projects in new and existing buildings	●●●●
CCB 2:	Enhance the District's Property Assessed Clean Energy financing program+B26:B28	●●●●
Policy and Program Recommendations		
CCB 3:	Ensure code compliance in all buildings through increased investment in robust code enforcement	●●●●
CCB 4:	Incentivize and require submetering	●●●●
CCB 5:	Develop a centralized online platform for residential energy efficiency programs	●●●●
Education and Training		
CCB 6:	Maintain an ongoing outreach program to foster and expand awareness, education, and opportunities for collaborating around high-performance buildings	●●●●
CCB 7:	Partner to support training and certification of building contractors and managers	●●●●
CCB 8:	Integrate energy performance information into residential transactions	●●●●
Leadership and Catalyzing Change		
CCB 9:	Create or Leverage Existing Mid-Atlantic government leadership groups to accelerate market transition	●●●●
CCB 10:	Build examples of breakthrough design in government and/or publicly-financed buildings	●●●●
CCB 11:	Recognize leadership with a catalog of best performing buildings and a cohort of local building energy leaders	●●●●
CCB 12:	Implement a high-performance energy media, outreach, and communications strategy	●●●●
CCB 13:	Create a coordinated green jobs and workforce development platform	●●●●

ACTION		PROGRESS
CLEAN AND RENEWABLE ENERGY SUPPLY		
Renewable Electricity Supply From Outside the District		
CRE 1:	Design and manage the RPS to drive renewable energy generation and GHG reductions	●●●●
CRE 2:	Provide the Standard Offer Service through aggregated power purchase agreements	●●●●
CRE 3:	Enact legislation that sets a maximum GHG intensity for electricity supplied to the District	●●●●
Renewable Electricity Supply within the District		
CRE 4:	Develop a centralized solar information and commerce platform	●●●●
CRE 5:	Continue to refine and implement the targeted solar proliferation strategy	●●●●
CRE 6:	Adopt solar-ready and renewable energy generation building code requirements	●●●●
Thermal Energy Supply and Distributed Energy Resource Integration within the District		
CRE 7:	Undertake a built environment thermal decarbonization study	●●●●
CRE 8:	Develop a neighborhood-scale energy strategy	●●●●
ENERGY SYSTEM MODERNIZATION		
Planning and Coordination		
ESM 1:	Define a vision of the future grid and characterize the stages of grid modernization	●●●●
ESM 2:	Adopt a framework for valuing distributed energy resource costs and benefits	●●●●
ESM 3:	Support the collaborative development of an integrated distribution plan	●●●●
ESM 4:	Intervene in Public Service Commission proceedings related to grid modernization	●●●●
Analysis of the Electricity System Needs and Capabilities		
ESM 5:	Outline a path to overcome legislative and regulatory barriers to grid modernization	●●●●
ESM 6:	Conduct a hosting capacity study of the District's distribution grid	●●●●
ESM 7:	Develop a location-based profile of energy use and GHG emissions	●●●●
Immediate "No-Regrets" Actions and Proof of Concept Projects		
ESM 8:	Generate, evaluate, and prioritize a list of actions that the can be taken immediately	●●●●
ESM 9:	Leverage existing advanced metering infrastructure data	●●●●
ESM 10:	Identify near-term projects that should be coordinated with grid modernization activities	●●●●
ESM 11:	Pursue pilot projects related to key modernization capabilities and technologies	●●●●
ELECTRIC VEHICLES		
Electric Vehicle Readiness		
EV 1:	Adopt an EV-ready building code	●●●●
EV 2:	Adopt an EV-ready parking lot requirement	●●●●
Electric Vehicle Adoption		
EV 3:	Implement an EV bulk buy program	●●●●
EV 4:	Establish an EV Showcase and Purchase Center	●●●●
EV 5:	Provide an EV purchase incentive	●●●●
EV 6:	Pursue an EV-only car sharing fleet	●●●●
Shifting to Zero Emission Transit Vehicles		
EV 7:	Set target for reducing transit bus emissions 65% per vehicle mile by 2032	●●●●
EV 8:	Pursue funding options to subsidize electric transit buses, and electric charging infrastructure	●●●●
Anticipating Electric Autonomous Ride-hailing Vehicles		
EV 9:	Prepare for reduced parking demand near activity centers	●●●●
EV 10:	Provide financial incentives encouraging shared autonomous vehicle travel	●●●●
EV 11:	Adjust approaches to managing curb space	●●●●

Follow us on Twitter and Instagram
@DOEE_DC hashtag #CleanEnergyDC

www.doe.dc.gov/cleanenergydc

CleanEnergyDC@dc.gov



WE ARE WASHINGTON GOVERNMENT OF THE
DISTRICT OF COLUMBIA
DC MURIEL BOWSER, MAYOR

