2020
CLEAN ENERGY
DC
PROGRESS REPORT
MA YOR’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

CE CDC 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.

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.

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.

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.
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.

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%

<table>
<thead>
<tr>
<th>Targeted action areas</th>
<th>Impact on achieving 2032 GHG reduction goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constructing net-zero buildings</td>
<td>10%</td>
</tr>
<tr>
<td>Retrofitting existing buildings</td>
<td>20%</td>
</tr>
<tr>
<td>Shifting to clean energy</td>
<td>35%</td>
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<tr>
<td>Growing local solar</td>
<td>5%</td>
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<tr>
<td>Electrifying transportation</td>
<td>20%</td>
</tr>
<tr>
<td>Shifting transportation</td>
<td>10%</td>
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Source: CEDC Plan, p. xiv

The District has cut its citywide carbon footprint 30 percent since 2006.

Source: Department of Energy and Environment
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.

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.

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.

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.

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.

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.

19.5% OF COMMUTER TRIPS: BY BICYCLE OR WALKING

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.

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For more details on the ongoing progress, please visit sustainable.dc.gov/progress.

CLEAN ENERGY DC PLAN PROGRESS

This chart lists progress made on all actions in the Clean Energy DC Plan.

For a detailed action plan, please visit sustainable.dc.gov/progress.

**ACTION PROGRESS**

- Significant Progress
- Moderately Significant Progress
- Initiated
- Not Started
- Adjusted

**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**

EB 1: Increase access to building energy performance data for energy efficiency programs
EB 2: Increase OITCEU 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**

PC 1: Implement a Building Energy Performance Standard
PC 2: Drive energy efficiency at tenant build-out
PC 3: Encourage the adoption of green leases through education and training
PC 4: Develop a virtual energy audit program
PC 5: Address on-District Government buildings
PC 6: Lead by example in District Government operations
PC 7: Develop and implement a Strategic Energy Management Plan for District Government buildings

**CROSS-CUTTING BUILDING ACTIONS**

CB 1: Establish a Green Bank and increase other funding for energy efficiency projects in new and existing buildings
CB 2: Enhance the District’s Property-Assessed Clean Energy financing program (B2B, B2R)
CB 3: Ensure code compliance in all buildings through increased investment in robust code enforcement
CB 4: Incentivize and require submetering
CB 5: Develop a centralized online platform for residential energy efficiency programs

**EDUCATION AND TRAINING**

ET 1: Maintain an ongoing outreach program to foster and expand awareness, education, and opportunities for collaborating around high-performance buildings
ET 2: Partner to support training and certification of building contractors and managers
ET 3: Integrate energy performance information into residential transactions

**LEADERSHIP AND CATALYZING CHANGE**

LC 1: Establish a Green Bank and increase other funding for energy efficiency projects in new and existing buildings
LC 2: Enhance the District’s Property-Assessed Clean Energy financing program (B2B, B2R)
LC 3: Ensure code compliance in all buildings through increased investment in robust code enforcement
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LC 5: Develop a centralized online platform for residential energy efficiency programs

**RENEWABLE AND CLEAN ENERGY SUPPLY**

RE 1: Design and manage the RPS to drive renewable energy generation and GHG reductions
RE 2: Provide the Standard Offer Service through aggregated power purchase agreements
RE 3: Enact legislation that sets a maximum GHG intensity for electricity supplied to the District

**ENERGY SYSTEM MODERNIZATION**

EM 1: Define a vision of the future grid and characterize the stages of grid modernization
EM 2: Adopt a framework for ranking distributed energy resources costs and benefits
EM 3: Support the collaborative development of an integrated distribution plan
EM 4: Intervene in Public Service Commission proceedings related to grid modernization

**ELECTRIC VEHICLES**

EV 1: Adopt an EV-ready building code
EV 2: Adopt an EV-ready parking lot requirement
EV 3: Implement an EV supply chain Code
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
EV 7: Establish Zero Emissions Transit Vehicles
EV 8: Pursue funding options to subsidize electric transit buses, and electric charging infrastructure
EV 9: Utilizing Electric Autonomous Vehicles
EV 10: Provide financial incentives encouraging shared autonomous vehicle travel
EV 11: Adjust approaches to managing curb space

**PLANNING AND COORDINATION**

PC 1: Adopt an EV-ready building code
PC 2: Implement an EV supply chain Code
PC 3: Establish an EV Showcase and Purchase Center
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PC 5: Pursue an EV-only car sharing fleet
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PC 7: Set target for reducing transit bus emissions 65% per vehicle mile by 2032
PC 8: Pursue funding options to subsidize electric transit buses, and electric charging infrastructure
PC 9: Utilizing Electric Autonomous Vehicles
PC 10: Provide financial incentives encouraging shared autonomous vehicle travel
PC 11: Adjust approaches to managing curb space

**IMMEDIATE ‘NO-REGRETS’ ACTIONS AND PROOF OF CONCEPT PROJECTS**

IP 1: Establish an EV Showcase and Purchase Center
IP 2: Provide an EV purchase incentive
IP 3: Pursue an EV-only car sharing fleet
IP 4: Establish Zero Emissions Transit Vehicles
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**ENERGY PERFORMANCE INFORMATION INTO RESIDENTIAL TRANSACTIONS**

ET 1: Develop and implement a Strategic Energy Management Plan for District Government buildings

**ACTION PROGRESS**

- Significant Progress
- Moderately Significant Progress
- Initiated
- Not Started
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