

# DC: Toward 100% Carbon-Free Electricity

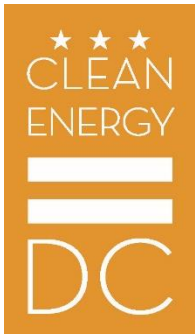
PJM CAPSTF

Alex Fisher, DOEE, July 28<sup>th</sup>, 2022

**DEPARTMENT OF ENERGY AND ENVIRONMENT**  
ENERGY ADMINISTRATION



**GOVERNMENT OF THE DISTRICT OF COLUMBIA**  
**MURIEL BOWSER, MAYOR**



# AGENDA

1. Overview of DC'S Climate Mandates
2. Proposed Reforms
3. Why DC Needs a Regional Policy Attributes Market
4. Product and Market Features Needed for DC

# OVERVIEW OF DC'S CLIMATE MANDATES



ADAPT TO CLIMATE CHANGE

CLIMATE READY BUILDINGS

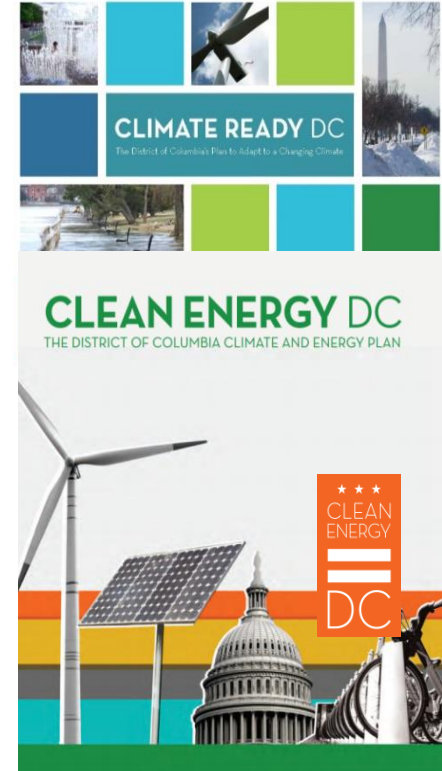
CUT ENERGY USE 50%

50% RENEWABLE ENERGY

100% RENEWABLE ELECTRICITY

NET ZERO BUILDINGS

CUT GHG EMISSIONS 50%



**CLIMATE GOAL BY 2050: CARBON NEUTRALITY**

# PROPOSED REFORMS

## Opportunities to Support Clean Energy Transition

### Driving Investments and Operations Toward Cost-Effective Decarbonization

- **Expand greenhouse gas data reporting** to inform DC policy structures, contracting, and scope 2 emissions accounting
- **Implement a regional clean energy or clean capacity market** through which DC can express its decarbonization policies
- **Enable energy market carbon pricing** to eliminate carbon “leakage” and achieve low-cost greenhouse gas reductions in power deliveries to DC consumers
- **Develop the next generation of renewable energy credit (REC) products** to address shortcomings and drive more greenhouse gas reductions

### Enabling Emerging Technologies' Contribution to Grid Transition

- **Fully enable all emerging technologies** including bulk and distributed renewables, storage, DR, and DER
- **Update retail structures** to ensure customers' and distributed resources' access to wholesale market opportunities as they are made available

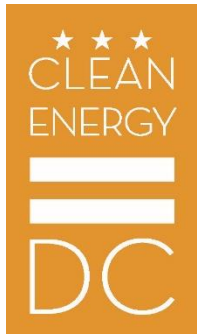
### Maintaining Reliability in the Transition to a 100% Clean Energy Grid

- **Refine and expand ancillary services markets** to reflect changing needs through grid transition
- **Enhance energy and ancillary price formation** to reflect the predominant role of non-emitting resources
- **Improve accuracy of capacity supply and demand accounting**
- **Assess the need for flexible capacity requirements**
- **Assess the benefits of a seasonal capacity market design**



# NEED FOR A REGIONAL POLICY ATTRIBUTES MARKET

- Traditional approaches are not working to align with the need for a reliable and affordable 100% clean supply mix
- Need for innovative products that match policy requirements
- Need for transparency in pricing and competition
- Need for competitive solutions that enable emerging technologies



## PRODUCT AND MARKET FEATURES

- Robust GHG tracking in the energy market, so deliveries are fully documented
- Clean capacity products to avoid fossil resource serving DC's capacity needs
- Better-defined RECs that align with delivered GHG abatement. 100% RECs does not equate to 100% GHG abatement for DC.
- DERs fully qualified for all products



# PRODUCT AND MARKET FEATURES

## Opportunities to Support Clean Energy Transition

- **Marginal and Total Embedded Emissions Data:** Utilize PJM’s granular data of grid operations to address information gaps identified in the Clean Energy DC plan, and provide the District with the high-quality data needed to support policymaking, contracting, GHG accounting, and other market design enhancements
- **Regional Clean Energy or Capacity Market:** Introduce a broad PJM-wide marketplace for the procurement of clean energy attributes on behalf of governments, companies, and consumers
- **Carbon Pricing:** Review opportunities to achieve carbon reductions through enhanced carbon pricing, such as by addressing carbon “leakage” from the RGGI market, enabling non-RGGI jurisdictions such as DC to express a carbon price (even if there are no local fossil plants), and/or by introducing a PJM-wide carbon pricing mechanism
- **Enhanced Clean Attribute Products:** Examine the limitations that the Clean Energy DC plan has identified with the traditional REC product definition, using these as the basis to develop the next generation of REC products that improve accountability and incentives relative to GHG objectives



# PRODUCT AND MARKET FEATURES

## Opportunities to Support Clean Energy Transition

- **Fully Enable All Emerging Technologies:** Utilize needs-based, technology-neutral product definitions for all electricity markets. Ensure that all resource types that notionally could provide a certain type of grid service are able to do so, are able to participate in price formation/dispatch, and face the minimum possible barriers to entry. Ensure that control room operators have the opportunity to gain experience relying on each emerging resource type to provide essential grid services (even if they are not yet commercially viable)
- **Retail Structures:** Even if wholesale markets fully enable distributed resources, additional reforms may be needed in retail rates and retail access rules before a comprehensive suite of resource types and business models could be accommodated



# Questions?

[Alexandra.fisher@dc.gov](mailto:Alexandra.fisher@dc.gov)

