The background features a collage of images: a wind turbine on the left, a solar panel in the middle-left, and the dome of the US Capitol building in the center. The background is divided into horizontal bands of light green, yellow, orange, and blue. 

# DC Energy Benchmarking

Andrew Held  
June 25, 2019

★ ★ ★ DEPARTMENT  
OF ENERGY &  
ENVIRONMENT

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

# GOALS: 2032



ADAPT TO CLIMATE CHANGE

CLIMATE READY BUILDINGS

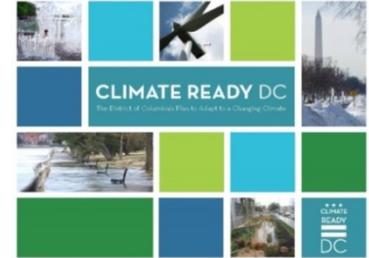
CUT ENERGY USE 50%

50% RENEWABLE ENERGY

NET ZERO NEW BUILDINGS

NET ZERO RETROFITS

CUT GHG EMISSIONS 50%



## Mayor Bowser Commitment to ZERO Carbon by 2050



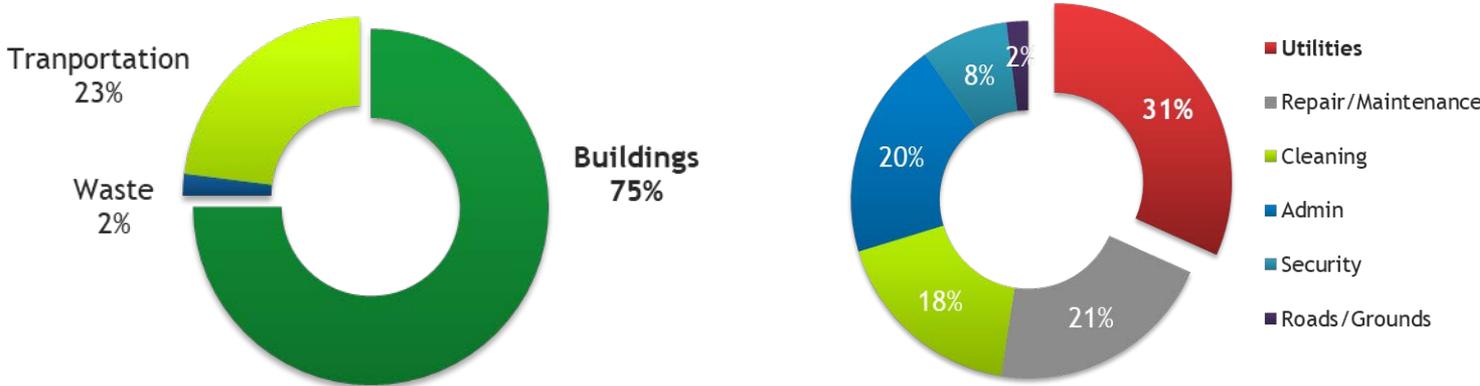
# Purposes of a Benchmarking Law

- ❑ Help Owners and Managers understand their energy use and compare it to peers
- ❑ Help Policymakers and DSM Program Administrators with analysis, planning, & program design
- ❑ Drive Market Transformation



# Building Energy Use in DC

- ❑ Buildings are DC's largest source of Greenhouse Gas Emissions:
- ❑ Utilities are the largest non-fixed expense for DC building owners



# DC Benchmarking Law

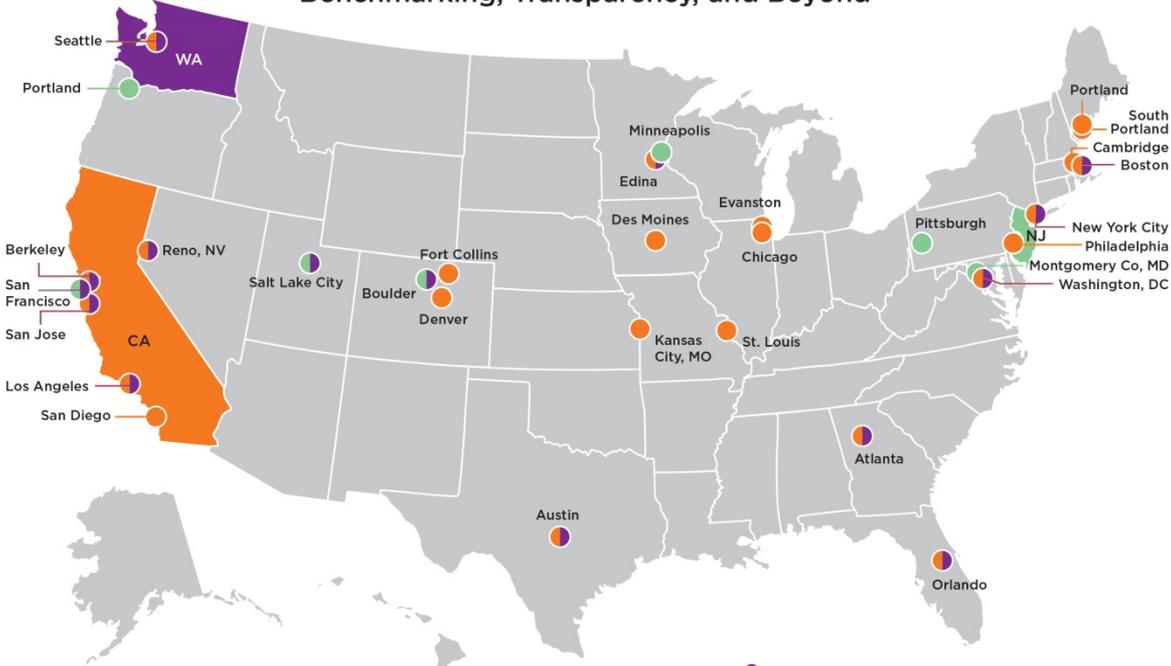
- ❑ **Green Building Act of 2006 & Clean and Affordable Energy Act of 2008.**  
**DC Official Code 6-1451.02, .03(c). Also 20 DCMR 3513.**
- ❑ All large existing buildings must annually benchmark energy and water usage in ENERGY STAR® Portfolio Manager® and report to DOEE by April 1st of each year
  - ❑ Private > 50k
  - ❑ Public > 10k
- ❑ Adopted in 2008, implemented 2013
- ❑ Benchmarking data disclosed beginning in 2nd year
- ❑ Large New Buildings must model and report projected energy use in ENERGY STAR® Target Finder™

ENERGY STAR®  
**PortfolioManager®**

ENERGY STAR®  
**TargetFinder™**

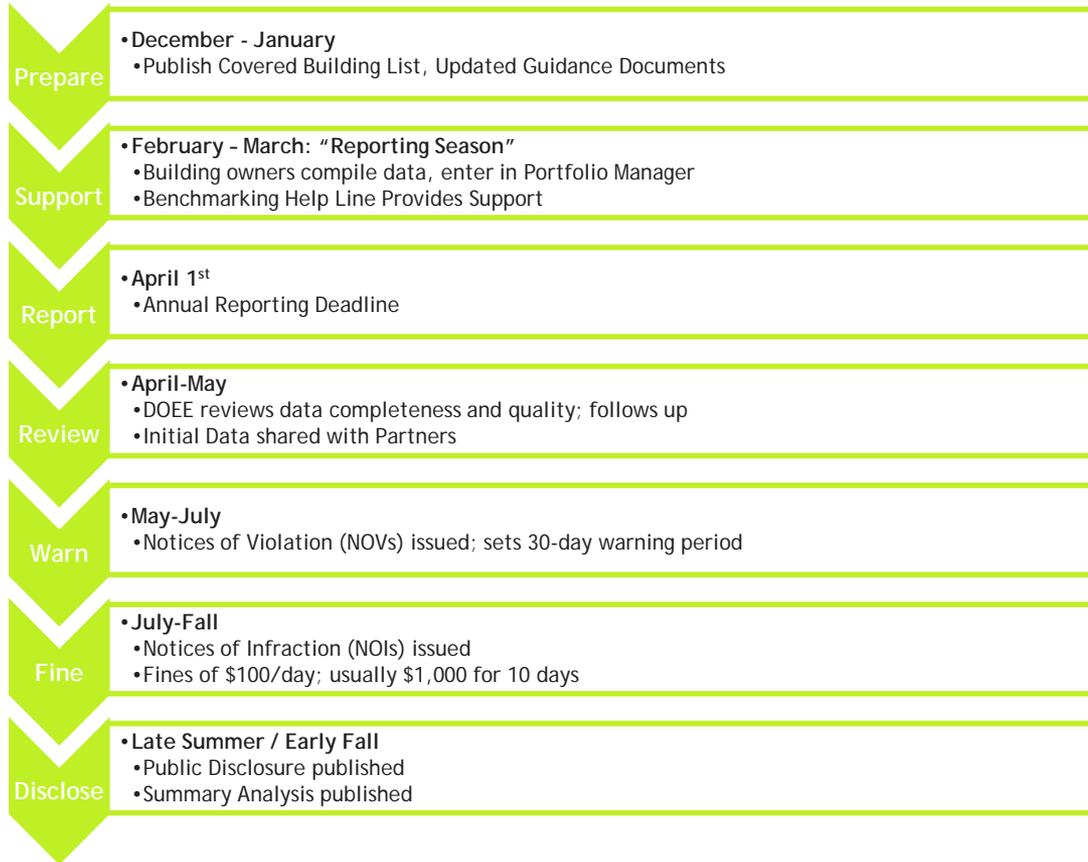
# Benchmarking in the US

## U.S. City, County, and State Policies for Existing Buildings: Benchmarking, Transparency, and Beyond



- Requirements of achieving performance targets or completing additional actions
- Benchmarking policy for public, commercial, and multifamily buildings adopted
- Benchmarking policy for public and commercial buildings adopted

# Enforcement Cycle





# Clean Energy DC Omnibus Act of 2018



CLEAN ENERGY DC OMNIBUS ACT OF 2018

## Transportation

**Zero Emission Fleets** by 2045

## 100% Renewable Electricity

Require **100% renewable electricity** by 2032, and **10% from local solar** by 2041

## Existing Buildings

Improve the performance of existing buildings by implementing a **Building Energy Performance Standard**



# Benchmarking Changes

Third Party Verification  
Now Required Every  
Three Years

2009

Benchmarking  
DC-owned  
> 10K sf

2013

Benchmarking  
private-owned  
> 50K sf

2018

Clean Energy DC  
Omnibus Bill  
Passed

2021

Benchmarking  
private-owned  
drops to 25K sf

2024

Benchmarking  
private-owned  
drops to 10K sf

# Building Energy Performance Standard

- ❑ DOEE must establish a minimum threshold for energy performance – will be “at least” the local median ENERGY STAR score by building type (or equivalent)
- ❑ 5-year compliance cycles - 1st cycle begins 2021
- ❑ Compliance paths for bldgs. below minimum:
  - ❑ Performance: Reduce energy usage 20%
  - ❑ Prescriptive: Implement cost-effective energy efficiency measures
  - ❑ Other as determined by DOEE
- ❑ Create BEPS Task Force for implementation plan, recommend amendments and complementary programs/policies
- ❑ Develop Strategic Energy Management Plan for District-owned bldgs.



# BEPS Compliance Cycles

2018

Clean Energy DC  
Omnibus Bill  
Passed

2021

1<sup>st</sup> BEPS  
Compliance  
Cycle Begins  
for 50K+ sf

2023

1<sup>st</sup> BEPS  
Compliance  
Cycle Begins  
for 25-50K sf

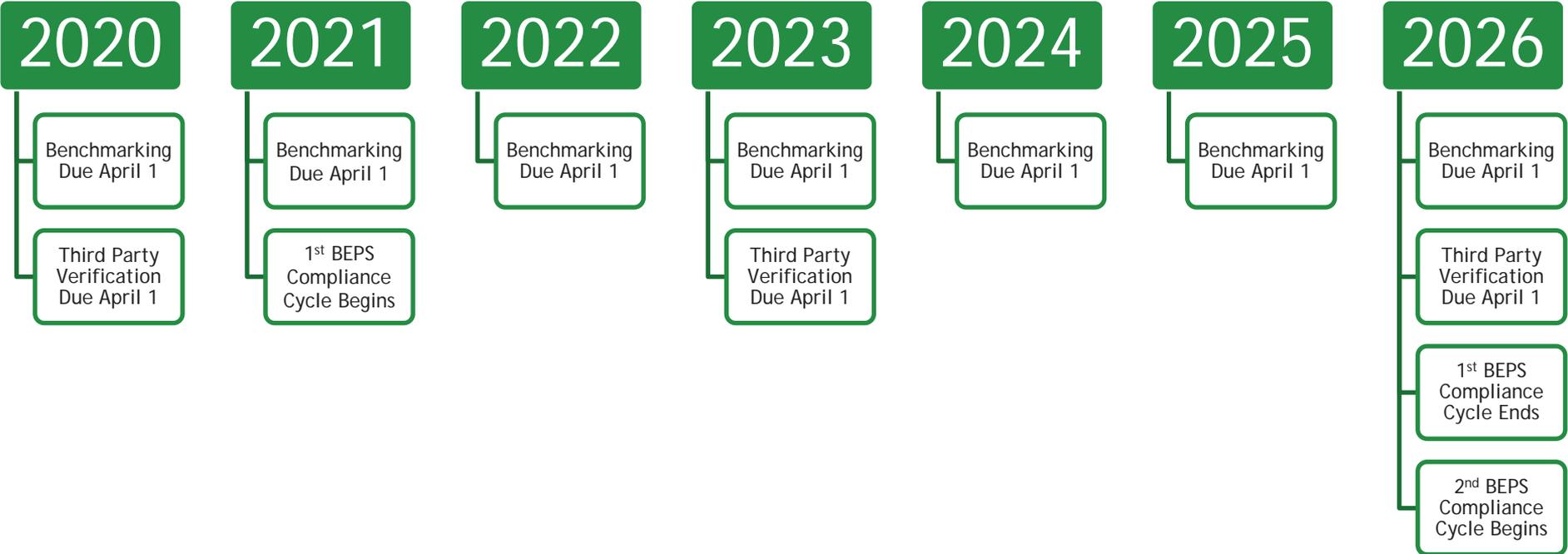
2026

1<sup>st</sup> BEPS  
Compliance  
Cycle ENDS  
for 50K+ sf

2<sup>nd</sup> BEPS  
Compliance  
Cycle Begins  
for 50K+ sf

1<sup>st</sup> BEPS  
Compliance  
Cycle Begins for  
10-25K sf

# Example Timeline: >50K sf Private-Owned Building



# High Performance Building Hub

DOEE is designing a hub to support YOU through this transition by creating a platform for collaboration, innovation, capacity building, training, and technical assistance.

More than 2,700 buildings impacted by BEPS!

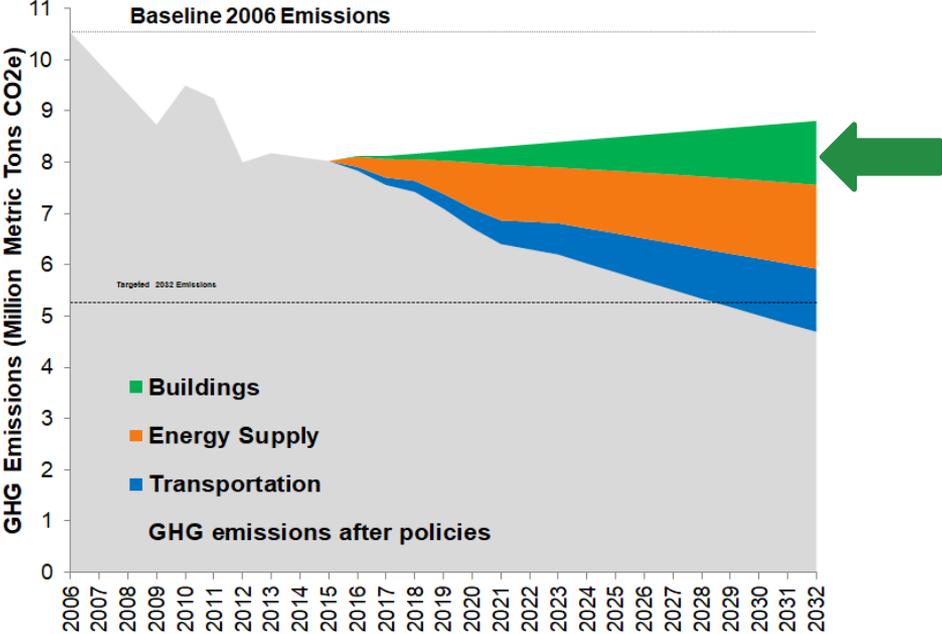
- 916 buildings over 50k sf
- 561 buildings 25-50k sf
- 1,269 buildings 10-25k sf

- Training in high-performance building design and construction techniques
- Support for high efficiency projects
- Direct technical assistance
- Targeted research and resource development
- Market support and development
- Opportunities for knowledge exchange and collaboration
- Business development support for local clean energy entrepreneurs
- Recognition of market leaders and exemplary projects



# BEPS Energy Reduction Goals

## ESTIMATED GHG SAVINGS: 56%



21% reduction in source energy if all buildings meet the standard for their type and size subgroup.

- 18.7% from buildings over 50K sf
- 1.4% from 25K-50K sf buildings
- 1% from 10K-25K sf buildings

**ANNUAL GHG EMISSIONS SAVINGS: 1.05 million tons of CO2e!!**

<https://doee.dc.gov/energybenchmarking>

<https://doee.dc.gov/service/beps>

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Energy Administration

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