



**Maryland**  
Department of  
the Environment

# Maryland Building Energy Performance Standards (BEPS)

October 26, 2023

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# Background

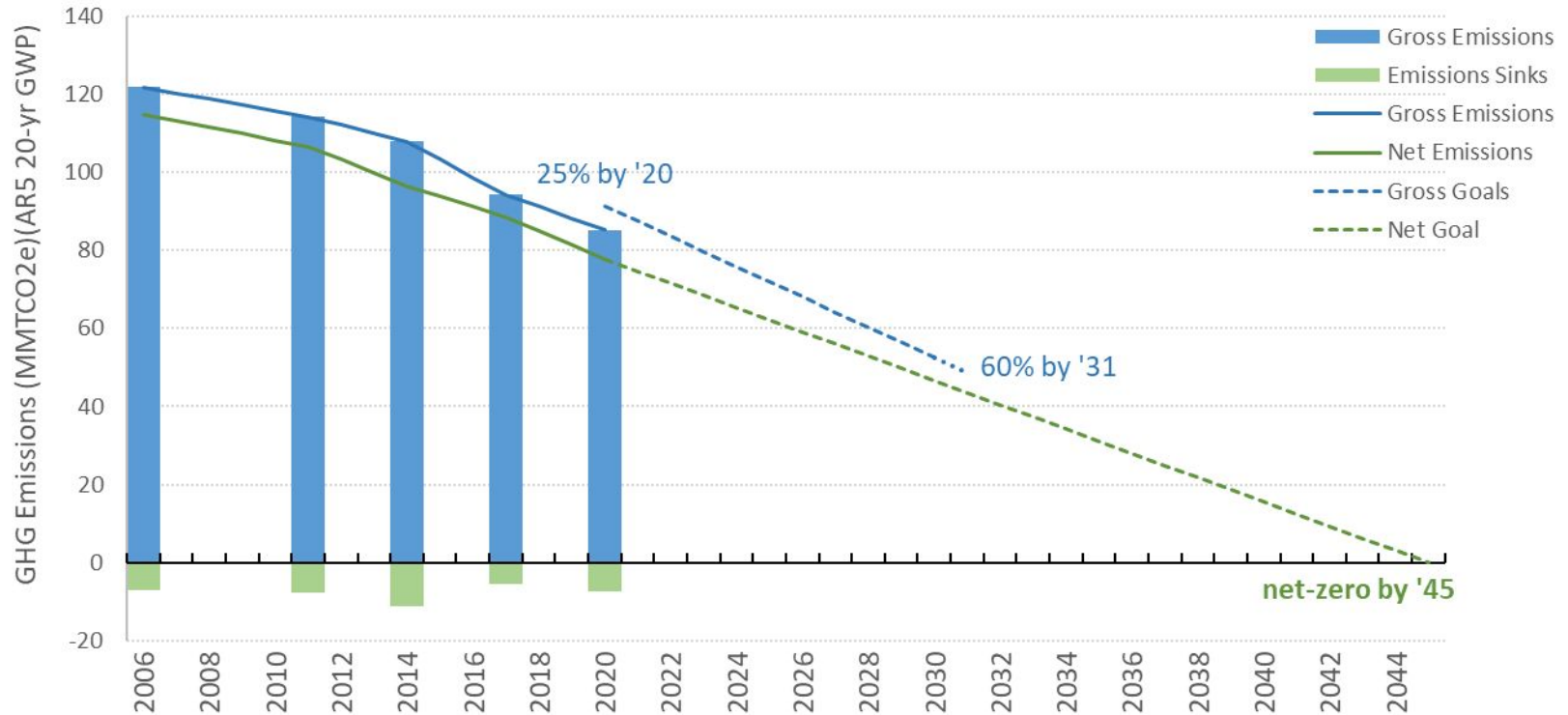
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- Building Energy Performance Standards (BEPS) and Building Performance Standards (BPS) are emerging in cities, counties, and states across the nation
- The typical goal of a BEPS/BPS is to guide large buildings to higher levels of energy efficiency and/or lower levels of greenhouse gas emissions
- The Climate Solutions Now Act of 2022 requires the Maryland Department of the Environment (MDE) to develop BEPS regulations that cover most large buildings in the state
- Decarbonizing large buildings is an important step toward achieving Maryland's greenhouse gas reduction goals



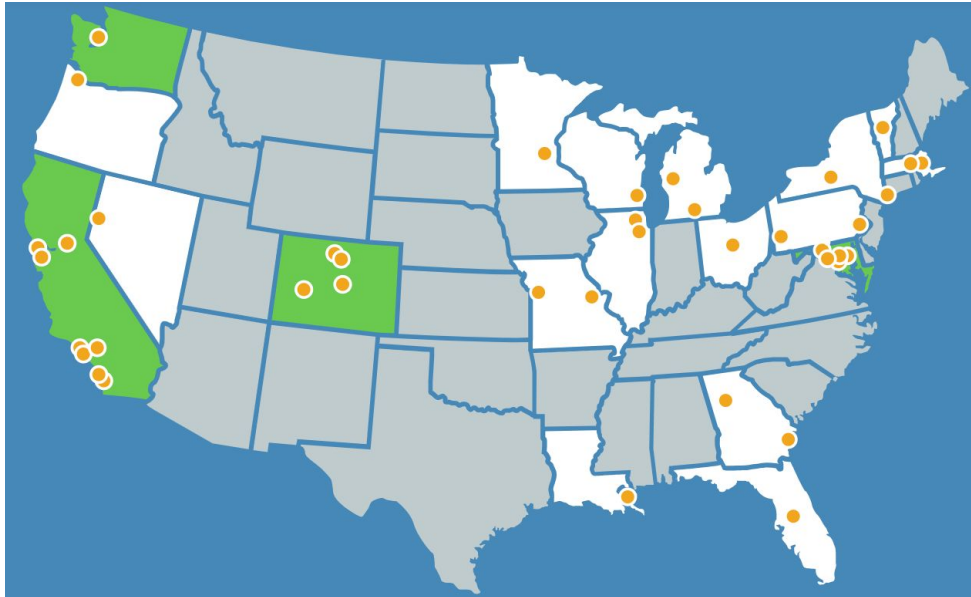
# Maryland's Greenhouse Gas Reduction Goals

Maryland GHG Emissions & Goals





# National BPS Coalition



- MD joined the White House National Building Performance Standards (BPS) Coalition in July 2023
- Other states include:
  - California
  - Colorado
  - Washington
- Local jurisdictions include:
  - Annapolis
  - Montgomery County
  - Prince George's County
  - Washington, D.C.



# Regulatory Development Partners

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## Technical assistance:

- U.S. Department of Energy (U.S. DOE)
- U.S. Environmental Protection Agency (U.S. EPA)
- Lawrence Berkeley National Laboratory (LBNL)
- Pacific Northwest National Laboratory (PNNL)
- Institute for Market Transformation (IMT)
- Northeast Energy Efficiency Partnerships (NEEP)

## Community/stakeholder engagement:

- Institute for Market Transformation (IMT)
- Interfaith Power and Light (IPL)
- CASA de Maryland (CASA)
- Action in Montgomery (AIM)



# MD Covered Buildings

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- A covered building is a building in Maryland that has a gross floor area of 35,000 square feet or more excluding the parking garage area
- Exempt buildings:
  - Buildings smaller than 35,000 square feet;
  - Historic buildings (individually designated as historic property under law);
  - Public or nonpublic elementary and secondary school buildings;
  - Manufacturing buildings; and
  - Agricultural buildings.

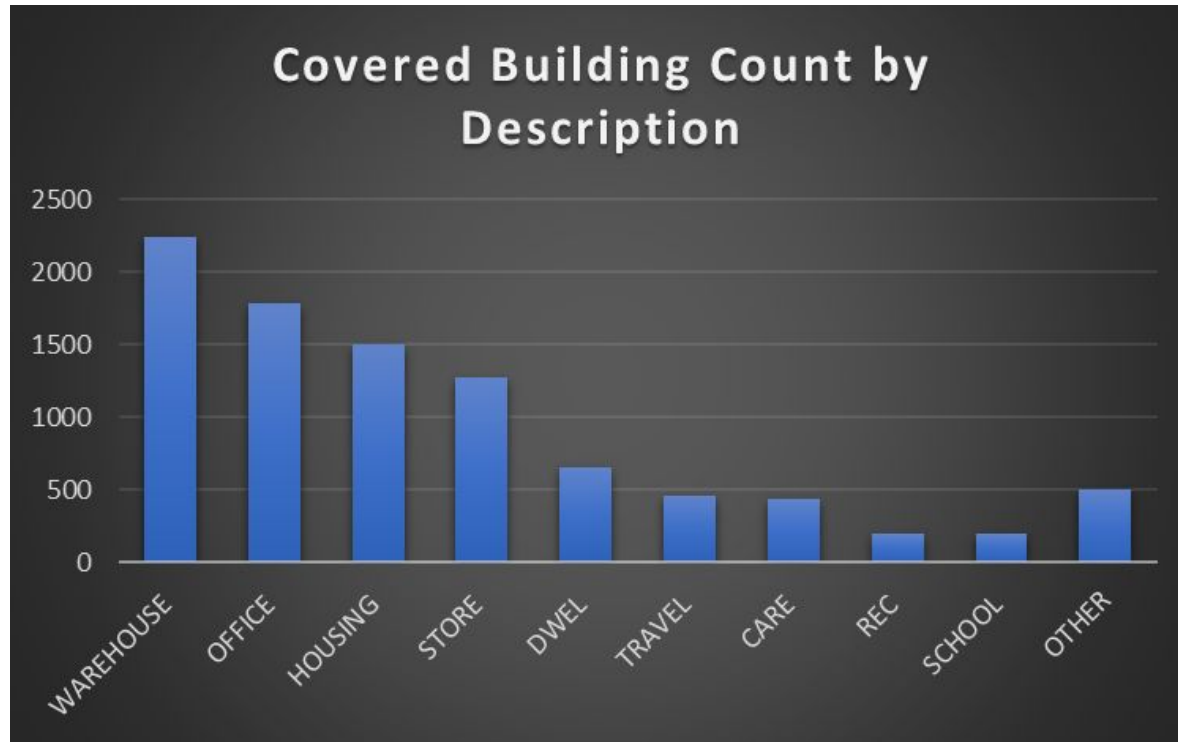


# Visualizing Building Size





# Distribution of Covered Building Types



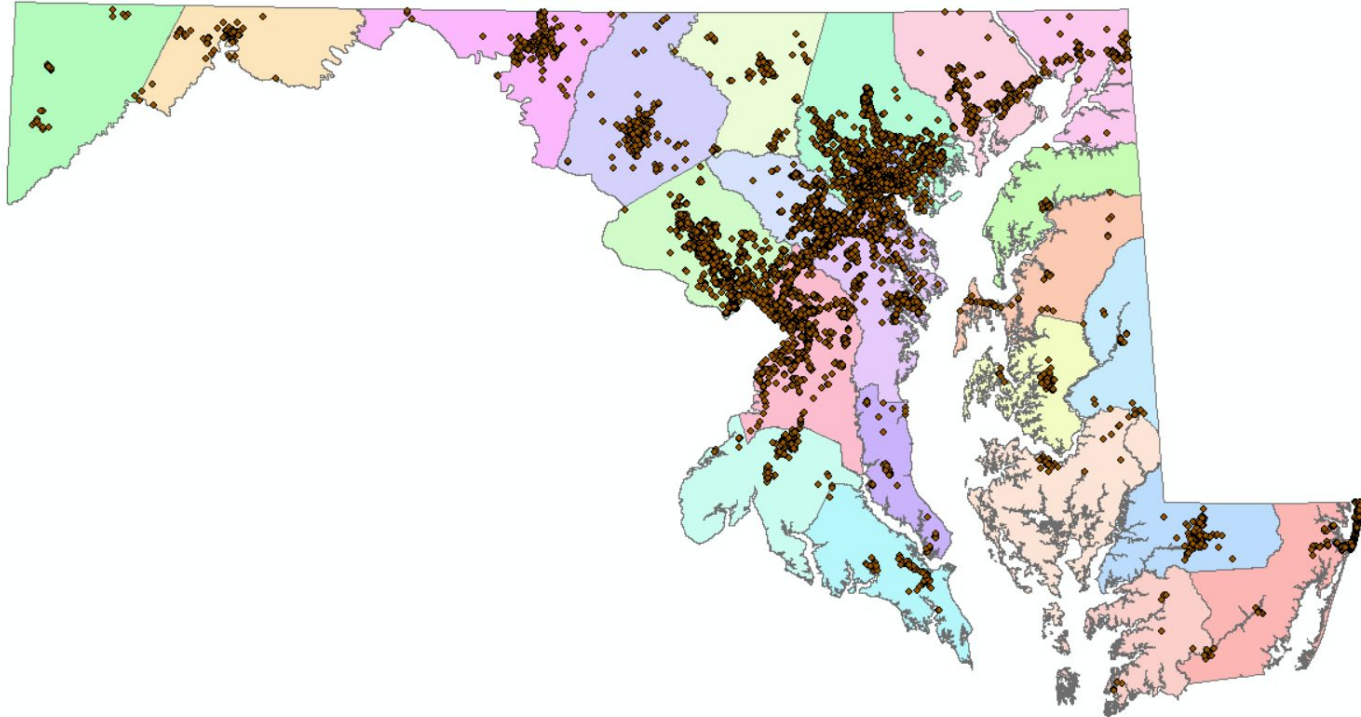
*Preliminary analysis*





# Location of Covered Buildings

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*Preliminary analysis*



# Process for a Covered Building Owner

## Benchmark

### Annually beginning in 2025

Use an online benchmarking tool (EPA's ENERGY STAR Portfolio Manager) to track annual energy use and greenhouse gas emissions.

## Assess

### Annually beginning in 2025

Determine if changes are needed to improve site energy use intensity (EUI) and/or reduce net direct greenhouse gas (GHG) emissions to achieve the standards.

## Alternative Compliance

## Achieve Standards

### Annually beginning in 2030


Achieve specified levels of site EUI and net direct GHG emissions. If the building does not achieve the standards, then the owner will owe a fee or penalty.



# Preparing for Benchmarking and BEPS

1. Visit the [website: https://portfoliomanager.energystar.gov/](https://portfoliomanager.energystar.gov/)
2. Create an EPA ENERGY STAR Portfolio Manager account
3. Begin to [access the catalog of how-to guides, pre-recorded and live online training](#)

Training



**ENERGY STAR® Portfolio Manager®**

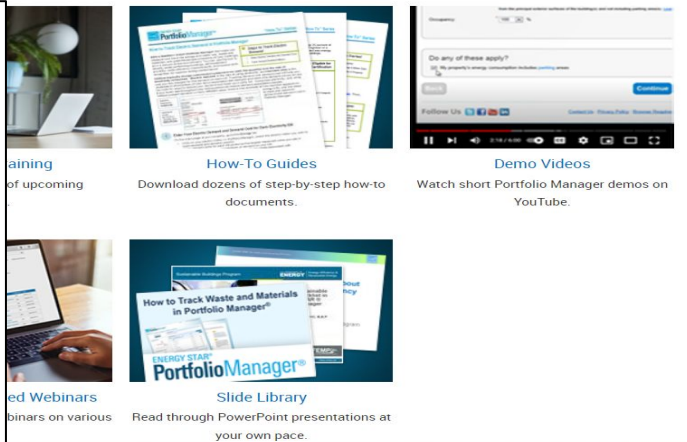
**“How To” Series**

**Portfolio Manager Quick Start Guide**

EPA’s ENERGY STAR Portfolio Manager tool helps you measure and track the energy and water use, waste and materials, and greenhouse gas emissions of your buildings, all in a secure online environment. You can use the results to identify under-performing buildings, set investment priorities, verify efficiency improvements, and receive EPA recognition for superior energy performance. Follow the steps in this guide to get started using the new Portfolio Manager to benchmark your properties, assess performance, and view results.

**1 Add a Property**

To get started, log in to Portfolio Manager at [www.energystar.gov/portfoliomanager](http://www.energystar.gov/portfoliomanager). Then, follow these instructions to create a property and to enter property information.



**How-To Guides**  
Download dozens of step-by-step how-to documents.

**Demo Videos**  
Watch short Portfolio Manager demos on YouTube.

**Slide Library**  
Read through PowerPoint presentations at your own pace.



# Performance Standards

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The Maryland BEPS has two types of performance standards:

- Net Direct Greenhouse Gas Emissions Standards (“emissions standards”):
  - By 2030, achieve a 20% reduction as compared with 2025 levels for average buildings of similar construction
  - By 2035, achieve a 60% reduction as compared with 2025 levels for average buildings of similar construction
  - By 2040, achieve net-zero direct greenhouse gas emissions
- Site Energy Use Intensity Standards (“site EUI standards”):
  - By 2030, achieve progress on a straight line trajectory between the covered building’s baseline and final standards
  - By 2035, achieve additional progress on a straight line trajectory between the covered building’s baseline and final standards
  - By 2040, achieve the final standard



# Performance Standards (cont)

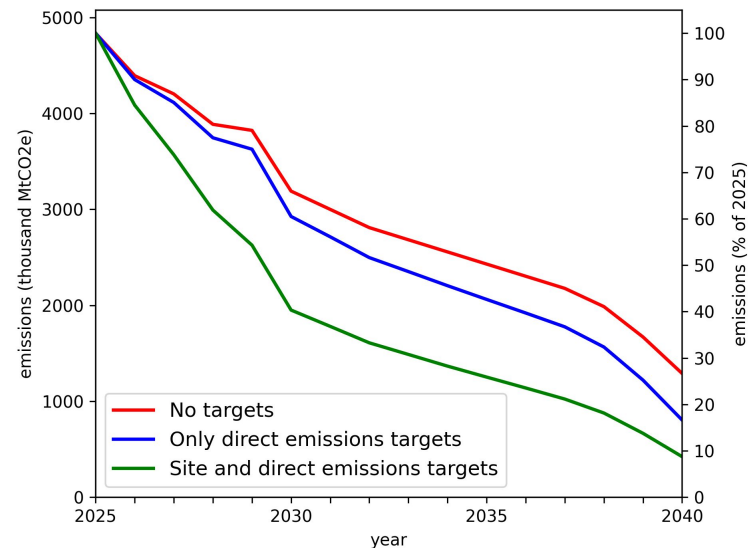
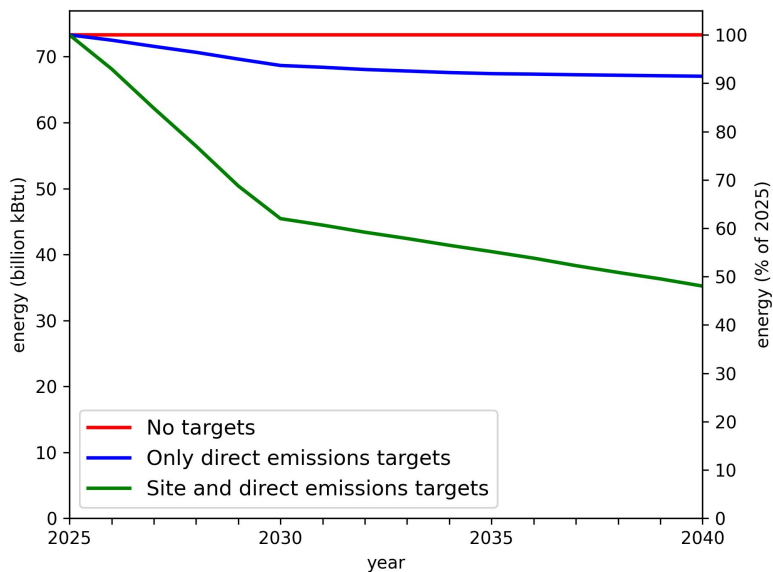
Property Type	Net Direct Emissions Standards kg CO2e per square foot			Site EUI Standards kBTU per square foot
	Interim Standard for 2030-2034	Interim Standard for 2035-2039	Final Standard for 2040 and beyond	Final Standard for 2040 and beyond

Benchmark your buildings' performance and assess if and when changes are needed using <https://portfoliomanager.energystar.gov/>

Learn about EPA ENERGY STAR Portfolio Manager property types and find yours on the [Portfolio Manager website](#)

# MDE - Energy and Emissions Reductions

- BEPS is modeled to reduce GHG emissions by 18 million metric tons by 2050 and cut energy consumption in half by 2040



# State-wide Results: 2025 – 2050\*

- ◆ Total Building Area Covered: ~990MM SqFt
- ◆ Baseline Energy Costs: \$68.9B
- ◆ BAU System Replacement Costs: \$0.9B
- ◆ Total Efficiency Investments: \$8.8B
- ◆ Total Electrification Investments: \$6.4B
- ◆ Total Energy Cost Savings from Baseline: \$22.3B
- ◆ **Net Cost Savings of All Investments: \$4.5B**

\*All metrics shown aggregated over 2025-2050 time period  
Does not include any energy efficiency/electrification incentives



# Planned Stakeholder Support

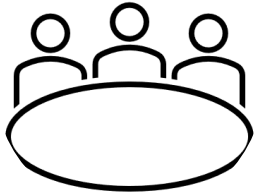
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- 2024 Planned Stakeholder Working Group Processes:
  - Benchmarking and report submission
  - Third party verification
  - Electric and gas company reporting requirements
  - District energy systems
  - Campus compliance
  - Affordable housing providers
  - Unique building types
- Outcomes will include publication of materials to support BEPS implementation
- 2024-2025, the Department will conduct outreach to covered building owners and provide training and support to assist them in meeting the first benchmarking requirement





# Regulatory Schedule – Tentative Key Dates



Propose Regulation  
and Present to AQCAC



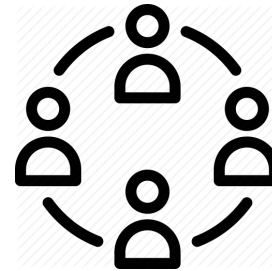
**September  
2023**



Signatures for  
Adoption Process,  
AELR Review



**Oct - Nov  
2023**



Proposed  
Regulation



**December  
2023**



Public Hearing and  
Final Adoption



**Jan - May  
2024**





# Assistance for Local Governments

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- **Vendors for Building Decarbonization Planning:**
  - DGS will pre-qualify vendors for building decarbonization planning. DGS is reviewing proposals in response to a State RFP to prequalify up to three vendor(s) for building decarbonization planning and these vendors will also be available for local governments and nonprofits to hire as well on separate task orders.
- **MDE Technical Support:**
  - MDE is finalizing the technical support documentation associated with the BEPS regulation which will include the preliminary building analysis of potentially covered buildings and will share these documents publicly.
  - MDE will conduct outreach to covered building owners and provide training and support to assist them in meeting the first benchmarking requirement
- **Maryland Energy Administration (MEA) Building Decarbonization Hub:**
  - MEA developing clearinghouse of information and resources for covered buildings



# Assistance for Local Governments (cont)

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- **Federal Technical Assistance for Local Jurisdictions to Prepare for BEPS**
  - MDE is working with the EPA, DOE, and National Labs to identify technical assistance available for Maryland's jurisdictions to prepare for BEPS.

## Currently Open DOE and National Lab Technical Assistance Opportunities

- **Clean Energy to Communities (C2C) Program: Peer-Learning Cohorts: (Applications due, October 31, 2023)**
  - Peer-learning cohorts. Lab experts provide a cohort of up to 15 communities with education, case studies, analysis and modeling tools, templates, trainings, and facilitated collaboration to enable accelerated clean energy progress including: Evaluating and Prioritizing Municipal Buildings for Energy Efficiency and Decarbonization Investment.
- **C2C Program: Expert Match: (Rolling Applications)**
  - Expert Match is most suitable for communities that could benefit from assistance to inform time-sensitive decisions and identify and understand the range of options for achieving clean energy goals. The Expert Match technical assistance timeframe is 40–60 hours over 1–2 months.
- **Communities LEAP (Local Energy Action Program) Cohort 2: (Applications due, December 14, 2023)**
  - This opportunity is specifically open to low-income, energy-burdened communities that are also experiencing either direct environmental justice impacts, or direct economic impacts from a shift away from historical reliance on fossil fuels.



# Coordination on Federal Funding

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- **Governor Moore's Federal Investment Team**
  - Centralized structure for pursuing federal investment opportunities
  - Collaboration between agencies
  - Single point of contact in the Governor's Office
- **Federal Funding Tracking**
  - Climate Program Portal: <https://climateprogramportal.org/>
  - MWCOG:  
<https://www.mwcog.org/newsroom/2023/06/14/new-searchable-databases-highlight-infra-structure-funding-opportunities/>
- **Climate Pollution Reduction Grant:**
  - Maryland State Planning Grant:  
<https://mde.maryland.gov/programs/air/ClimateChange/Pages/Climate-Pollution-Reduction-Grant-Program.aspx>
  - Washington-Arlington-Alexandria MSA Planning Grant led by MWCOG



## Contact

MDE BEPS website: <https://mde.maryland.gov/programs/air/ClimateChange/Pages/BEPS.aspx>

MDE BEPS email: [BEPS.MDE@maryland.gov](mailto:BEPS.MDE@maryland.gov)