Bill 16-21: Building Energy Performance Standards

Overview

Learn more at https://www.montgomerycountymd.gov/green/energy/beps.html
Proposed Agenda for BEPS Work Sessions

• **Today:** Overview of Bill 16-21
• **Today:** Buildings Covered by BEPS
• **Today:** Performance Metric

• Future Work Session: Approach to Setting the BEPS Standards
• Future Work Session: Compliance with BEPS
• Future Work Session: Tools and Resources for Meeting BEPS
• Future Work Session: Regulations Preview
Bill 16-21 Highlights

- **Developed with stakeholder input**, BEPS sets long-term performance targets based on energy use within the owners’ control

- Covers the **largest buildings and biggest carbon emitters** in the County, but not all buildings will be covered or required to take action

- BEPS will create more resilient, **higher-value buildings**, increased economic activity and **local green jobs** from building upgrades, and better indoor air quality for tenants

- Tools and resources are **available now** to give building owners a head start, but additional technical and financial assistance will be needed, especially for affordable housing

- By passing Bill 16-21, **Montgomery County will become the first county to join a leading-edge group of jurisdictions** using BEPS to tackle climate impacts from buildings
Why Building Energy Performance Standards (BEPS)?

- Building codes only address newly constructed buildings or those doing major renovations.
- Per the [CAP](#), BEPS is one of the most powerful policy tools available to address emissions from existing commercial and multifamily buildings by improving performance through energy efficiency.
- Using electricity more efficiently “right-sizes” the amount of carbon-free energy needed to be supplied by the grid.
- Reducing and eventually eliminating fossil-fuel use from buildings via BEPS is the most direct way to achieve carbon neutrality for existing buildings.

![Emissions by Sector](chart.png)

- Residential Buildings: 24%
- Commercial Buildings: 26%
- Transportation: 42%
- Solid Waste Treatment: 2%
- Wastewater, Ag, Other: 6%

2018 total emissions: 10.54 million metric tons of CO₂e
General Approach on Bill 16-21

• Builds on the foundation of the Benchmarking Law
• Create framework to establish a building energy performance standard (BEPS)
• Similar to other jurisdictions with BEPS, numerical standards will be defined via regulation
• Incorporate stakeholder voices on policy recommendations
• Balance flexibility and certainty for building owners and immediate climate action

• Approach to Developing Legislation: Amends the Benchmarking Law to expand the number of buildings covered by the Benchmarking Law, add a performance requirement, and establish an Advisory Board for BEPS implementation.
BEPS Policy Overview

BEPS TRAJECTORY MODEL

- Building A
- Building B
- Building C

BUILDING ENERGY USE (SITE EUI)

TIME

BASELINE

INTERM STANDARD: COMPLIANCE YEAR 1

INTERM STANDARD: COMPLIANCE YEAR 2

FINAL STANDARD: COMPLIANCE DEADLINE
Building Performance Improvement Plans (BPIPs)

- **Baseline**
- **Interim Standard: Compliance Period 1**
- **Interim Standard: Compliance Period 2**
- **Final Standard: Compliance Deadline**

**NEED FOR IMPROVEMENT PLAN**

- **Building A target**
- **Building A performance**

**Building Energy Use (Site EUI)** vs. **Time**

- **Baseline**
- **Interim Standard: Compliance Period 1**
- **Interim Standard: Compliance Period 2**
- **Final Standard: Compliance Deadline**
Flexibility in Compliance Strategies

SAMPLE BEPS INTERIM & FINAL STANDARDS
VARIOUS OFFICE BUILDINGS

- **Investment needed, economically feasible projects implemented per BPIP**
- **Investment needed, capital available, owner reaps long-term benefit**
- **Minimal investment needed to reach target, improved O+M**
- **Below target, maintain high performance**

SITE ENERGY USE INTENSITY (KBTU/SF/YR)

BASELINE  INTERIM 1  INTERIM 2  FINAL
Bill 16-21: Building Energy Performance Standards

Buildings Coverage

Learn more at https://www.montgomerycountymd.gov/green/energy/beps.html
Benchmarking Amendments Covered Building Impacts

- **Currently covered**: 110M sq ft, 795 buildings, 40% of commercial floor area
- **Bill 16-21**: Increase covered buildings to ~220M sq ft, 1,900+ buildings, 80% of commercial floor area
# Comparison of BEPS Building Coverage

<table>
<thead>
<tr>
<th>Square Footage Threshold</th>
<th>Washington, DC</th>
<th>New York City</th>
<th>Boston</th>
<th>WA State</th>
<th>St. Louis, MO</th>
<th>Montgomery County</th>
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<tbody>
<tr>
<td>Commercial and multifamily &gt; 10K ft²</td>
<td>Commercial and multifamily &gt; 25K ft²</td>
<td>Commercial and multifamily &gt; 20K ft²</td>
<td>Commercial &gt; 50K ft²</td>
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| Affordable Housing | Yes | Prescriptive measures | Yes | No | Yes, 2 extra years | Yes |

| Houses of Worship | Yes | Prescriptive measures | Yes | Yes | Yes | Yes |

| Agricultural Use | Yes | Yes | Yes | No | Yes | Yes |

Updating Definition of a Covered Building

Current Covered Building Definition:
• Building, or any group of buildings that have the same parcel/property identification number, that meet the square footage threshold

Bill 16-21 Amended Covered Building Definition:
• Single building that can be individually metered and share no interior common area;
• A group of buildings that share an energy meter, have a common heating or cooling system, share interior common areas, or otherwise cannot attribute energy use to a single building.

Parcel: All buildings on tax parcel must benchmark

Building: Only single buildings 25k+ gsf must benchmark and are subject to BEPS
<table>
<thead>
<tr>
<th>Covered</th>
<th>Not Covered</th>
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</thead>
<tbody>
<tr>
<td>Highrise &amp; mid-rise apartments/ condos</td>
<td>Townhomes with no shared systems or interior area</td>
</tr>
<tr>
<td>Garden apartments where buildings with shared systems/space are &gt;25k gsf</td>
<td>Apartments where each building on the parcel is &lt;25k gsf</td>
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<tr>
<td>Retirement homes &amp; assisted living</td>
<td>Units with no shared systems or interior area</td>
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Building Coverage Examples: Retail

**Not Covered**
Individual tenants within strip malls with separate energy systems, no shared interior space, and <25k gsf

**Covered**
Individual tenants within strip malls with separate energy systems, no shared interior space, and >25k gsf

**Not Covered**
Individual tenants within strip malls with separate energy systems, no shared interior space, and <25k gsf