Building Performance Improvement Board

1/17/2024

Learn more at https://www.montgomerycountymd.gov/green/energy/beps.html

Agenda

- Admin Items
  - Ratify vote on public comment letter
- Review Proposed BEPS Regulations
- State level activity

Administrative Items

Actions

- Approve 11/8 meeting notes

Actions

- Ratify votes completed by email on approving public comment letter

Proposed BEPS Regulations

Process Overview

- ✓ Draft regulations appeared in the November register for a 30-day public comment period
- ✓ Staff reviewed comments received and revised regulations which went through additional review/approval by County Attorney. Changes made because of the comments were included in the transmittal memo to Council.
- ✓ County Executive issued Method (2) regulations to County Council on Jan 12
  - Transmittal packet now on the BEPS website
- OMB completing Fiscal Impact Statement which will be transmitted to Council this week
- For Method 2 Regulations – Approval is done by the County Council. In Method 2, it automatically becomes effective if Council has not acted on it within 60 days (Council may extend deadline).
- If the regulation is not approved, it may go back to the department for changes requested by the Council. If so, the amended regulation will require approval by the County Attorney and County Executive, and the final version will have an AM (amended) after the number.

Next Steps

- DEP briefing Councilmembers on regulations
- T&E Committee to hold BEPS listening sessions / hearings for different sectors:
  - Jan 24, 2:30 pm: Healthcare
  - Feb: Date/sector TBD
  - Mar: Date/sector TBD

Public Comments

- DEP received 46 public comments which often included:
  - Feedback on the final site energy use intensity standards (particularly for multifamily, older or class C commercial buildings, life sciences, hospitals, and where electrification is needed to meet the standards);
  - General cost and equity concerns (particularly for common ownership communities, but also commercial offices and other sectors);
  - Feedback on the building performance improvement plan process and parameters of economic infeasibility;
  - The renewable energy allowance (suggesting credit for offsite renewable energy);
  - Technical comments about adjustments for certain property uses.

Building Groups / Site EUI Targets

- Building groups listed as ENERGY STAR Portfolio Manager property types
- Targets set utilizing Zero-Net Carbon Compatible (ZNC) methodology
- Targets generally align with site EUI targets in MDE draft regulations
  - MDE may reassess targets following 2025 reporting
  - Multifamily EUI target is 37 vs 29 put forth by MDE
- Area-weighted targets for mixed-use buildings (a building that contains two or more property types) ~~using 3 largest property types~~
  - *Updated regs do not put a cap on the number of property types that will be included in area-weighted target setting*
  - *Benchmarking tool now providing data needed to enable area-weighting for all property type uses*

Target Adjustments for Parking

- Energy used in parking structures may be included in benchmarking data, despite Portfolio Manager not including parking GFA as part of building GFA. Updated regs provide a target adjustment for parking:
    - *Buildings with completely enclosed and/or partially enclosed parking are provided a parking adjustment of 6 kBtu per square foot of parking gross floor area*

Target Adjustments for Heated Swimming Pools

- Portfolio Manager does not provide the gross floor area of swimming pools, only the approximate size of the pool, making a kBtu/sq ft metric irrelevant:
  - *Buildings with heated swimming pools are provided a kBtu adjustment based on EPA Portfolio Manager Technical Reference: Swimming Pools and the ENERGY STAR Score in the United States and Canada*
  - *Aug 2023 EPA reference* -

Figure 3 – Indoor Pool Energy Adjustments

Country	Property Type	Recreational (20 yds x 15 yds) A_P = 2700 ft²	Short Course (25 yds x 20 yds) A_P = 4500 ft²	Olympic (50 m x 25 m) A_P = 13,456 ft²
United States	School	1,250,920 kBtu/yr	2,084,866 kBtu/yr	6,234,213 kBtu/yr
	Hotel	1,004,331 kBtu/yr	1,673,885 kBtu/yr	5,005,288 kBtu/yr
	All Other Property Types	847,601 kBtu/yr	1,412,668 kBtu/yr	4,224,191 kBtu/yr
	School and Ice / Curling Rink	1,313 GJ/yr (1,244,131 kBtu/yr)	2,188 GJ (2,073,551 kBtu/yr)	6,542 GJ/yr (6,200,379 kBtu/yr)

Renewable Energy Allowance

- Onsite renewable energy system means a renewable energy system physically located on the covered building or covered building site that produces electricity for use in the building.
- The renewable energy allowance will credit all electricity ~~use~~ generated from onsite renewable energy systems.
    - *Modified text to clarify that all electricity generated from onsite renewable energy systems will be granted a renewable energy allowance.*

Building Performance Improvement Plan: Economic Infeasibility

- If a covered building owner cannot reasonably meet one or more of the applicable interim or final performance standards due to economic infeasibility or other circumstances beyond the owner's control, the owner may submit a proposed building performance improvement plan to the Department.
- *Updated regulations define economic infeasibility based on the simple payback period of the energy improvement measures that would be required to meet the interim or final standard:*
  - ***Under-resourced buildings**: Package of measures with a simple payback of **10 years** or more*
    - *Qualified affordable housing building*
    - *Common ownership community*
    - *Non-profit-owned building*
    - *Local, small-business-owned building*
  - ***All other buildings**: Package of measures with a simple payback of **25 years** or more*

Building Performance Improvement Plan: Circumstances Outside the Building Owner's Control

- Circumstances outside the owner's control may include characteristics inherent to the building or the building's operations, or involve timing events in the building's equipment lifecycles, occupancy, or financing cycles.

Building Performance Improvement Plan: Submission

- Include supporting documentation that demonstrates economic infeasibility or circumstances outside of the owner's control preventing the building from reaching the interim or final target
- Include the results of an energy audit performed not more than four years earlier, following ASHRAE Standard 211 level 2 procedures, containing engineering calculations of energy savings and a cost-benefit analysis of each potential energy improvement measure
- Contain an assessment that evaluates the initial cost and annual energy savings of potential energy upgrades of replacement options of existing equipment that is planned to remain in service past the final performance standard date; electrification feasibility for replacement of fossil fuel combustion equipment; and onsite renewable energy systems

Building Performance Improvement Plan: Submission

- Provide a retrofit plan *identifying the **cost-effective energy improvement measures** to be implemented in the building*, the calendar year during which such energy improvement measures will be made, and predicted annual energy savings resulting from implementing the energy improvement measures.
- The retrofit plan must also:
    1. Address all building systems, including envelope, heating, cooling, ventilation, domestic hot water, lighting and electrical, elevators, motors, and pumps;
    2. If applicable, address building systems located in tenant spaces owned and maintained by the owner;
    3. Detail energy improvement measures that include operational improvements, equipment retro-commissioning or recommissioning, and equipment replacement; and
    4. *Consist of a package of cost-effective energy improvement measures that maximize energy savings.*

- *Cost effective measures are those that provide a simple payback of 10-years (for under-resourced buildings) or 25-years (for all other buildings) or fewer*

Building Performance Improvement Plan: Recognized Energy Auditor

- The plan must be completed by a recognized energy auditor that possesses an active credential in good standing of one of the following:
  - A credentialing program approved by the U.S. Department of Energy Better Buildings Workforce Guidelines for Building Energy Auditors or Energy Managers;
  - A Professional Engineer license; or
  - Another professional license or building energy training program credential recognized by the Director.

BUILDING ENERGY AUDITOR

- ASHRAE, BEAP
  Certified Building Energy Assessment Professional
- Association of Energy Engineers, CEA®
  Certified Energy Auditor

ENERGY MANAGER

- Association of Energy Engineers, CEM®
  Certified Energy Manager
- Energy Management Association, EMP
  Energy Management Professional

Building Performance Improvement Plan: Evaluation

- The Director must evaluate a BPIP based on the completeness of materials submitted and the resulting energy savings, taking into consideration the factors of economic infeasibility and circumstances beyond the owner's control documented in the BPIP.
- The Director may require that additional measures be assessed, additional documentation be provided, or that additional energy performance improvements be included in the plan. The building owner may then submit an updated BPIP that addresses the Director's requirements for review.
- *If the Director does not approve the plan, the Director must provide the applicant with a written summary of the grounds for denying the building performance improvement plan and the covered building must satisfy the applicable interim or final standard or be considered noncompliant.*
    - Modified to require that the Director must provide the applicant with a written summary of the grounds for denying a submitted BPIP.

Building Performance Improvement Plan: Compliance

- Building owners must demonstrate fulfilment of the terms of the building performance improvement plan by reporting annually on June 1 of energy improvement measures implemented in the previous calendar
- *If, by the final performance target date, the building's EUI is below the EUI target, or the building has fulfilled all of the requirements of the approved building performance improvement plan, the building owner may submit to the Department a request to terminate the covenant recorded under Section 18A-42B(d) of the County Code for review and approval. If approved by the Department, the County will release the covenant.*
    - Revised to reflect that the building owner must submit a Certification of Completion (of the BPIP terms) to DEP for review and approval. If approved, the County will remove the covenant from the building record.

Extensions & Adjustments

- Law notes that Director can provide an extension or adjustment if:
  - A demolition permit has been issued or a demolition of the building is planned before the deadline to comply with the next interim performance standard;
  - The building is in financial distress;
  - The building is exempt from real property taxes and the owner is able to certify by the statement of a certified public accountant or by sworn affidavit that the owner's revenue less expenses for the previous 2 years was negative;
  - The Director determines that strict compliance with those standards would be economically infeasible, due to circumstances beyond the owner's control;
- Regulations provide additional extension/adjustment criteria:
  - On average, less than one full-time equivalent employee (employee or occupant) occupied the building during the calendar year being reported;
  - A change of building ownership where the new building owner cannot obtain necessary benchmarking data for the interim or final performance standard year;
  - Affordable housing refinancing timelines that do not align with interim or final performance standard dates;
  - Building is subject to historic preservation requirements.

State-Level Activity: BEPS

- MDE published proposed statewide building energy performance standard (BEPS) regulations the MD register for public comments through 1/18
- Public hearing on 1/18 at 10 am: https://meet.goto.com/696708285
- A number of supplemental documents appear on MDE's website, including:
  - Compliance Considerations for Site Energy Use Intensity Exceedance for Maryland Proposed Building Energy Performance Standards
  - Standard setting methodology under Appendix C: Maryland BEPS Impact Analysis Methodology
  - Appendix I: Preliminary Building Stock Analysis Highlights

State-Level Activity: Building Energy Transition Implementation Task Force

- The Climate Solutions Now Act of 2022 requires that MDE create the Building Energy Transition Implementation Task Force. The Task Force appointed members shall recommend programs, policies, and incentives aimed at reducing greenhouse gas emissions from the buildings sector.
- The Maryland Building Energy Transition Implementation Task Force held its final meeting on January 8, 2024. At that meeting, the Task Force completed its voting process to finalize its report to the Maryland General Assembly and Governor.
- The intent of that report is to provide recommendations re: incentives to support progress across the buildings sector.
- MDE has not yet published the final report, but will share with the BPIB once complete

State-Level Activity: MEA Clean Buildings Hub

- The Maryland Energy Administration (MEA) is launching the Maryland Clean Buildings Hub that will serve as a clearinghouse of relevant information and resources to help the building community achieve this outcome.
- Will initially focus on serving the needs of building's subject to BEPS
- MEA is seeking feedback from the building community - i.e. owners/operators representing buildings covered by the BEPS as well as those not covered by the BEPS - on the types of resources that will help them take action to reduce on-site energy use and GHG emissions.

State-Level Activity: 2024-2026 EmPOWER Maryland Programs

- The Maryland Public Service Commission has published its decisions regarding the EmPOWER Maryland programs proposed by the utilities and DHCD for the 2024-26 program cycle.
- Useful short summaries within the Order. Highlights from the PSC's Order on EmPOWER include:
  - Utilities generally directed to implement the least ambitious (and least costly) of the three program scenarios they each submitted. This still represents a significant increase in overall energy savings relative to the previous program cycle due to certain measures no longer counting toward program savings, coupled with more stringent baseline energy savings goals required by statute. Program impact and associated costs will grow a bit, but neither by orders of magnitude.
  - The utilities' electrification programs were denied, with the option to re-file those programs in August 2024.
  - Utilities approved to continue to offer incentives for gas equipment in 2024, as the Commission felt it premature to consider ending these incentives. The PSC intends to revisit this in fall 2024.
  - DHCD's proposed changes to raise per-project caps and otherwise improve its low-income programs were all approved, as we supported.
  - The utilities' proposed separate low-income programs were all denied out of concern over competition with DHCD, market confusion, and that participating customers would receive less benefit than if they were instead sent to DHCD-administered programs.
  - Potomac Edison's financing program was approved and interest in a statewide financing offering was expressed, as we supported.

State-Level Activity: Electrification Study

- The Maryland Public Service Commission was directed to complete a study by the Climate Solutions Now Act of 2022 to assess the capacity of Maryland's gas and electric utilities to serve customers under a managed transition to a highly electrified building sector.
- PSC has released the report: "An Assessment of Electrification Impacts on the Maryland Electric Grid" developed for the Commission by the Brattle Group (link to the PSC press release).
- According to the PSC, "The study results show that peak load growth through 2031 with high electrification of the building sector will be comparable to or less than the growth rate the Maryland system has seen over the past 40 years. High electrification would also reduce building sector gas demand by about 31-32% by 2031."
- Utilities will still need to make investments to address local constraints and modernize the grid.

State-Level Activity: Climate Pollution Reduction Plan

- The Maryland Department of the Environment (MDE) released its Climate Pollution Reduction Plan in late December. This plan, which was required by the Climate Solutions Now Act of 2022, outlines policy actions required to reach the State's goals of reducing greenhouse gas emissions by 60 percent from 2006 levels by 2031, and net zero emissions by 2045.
- As a plan, it outlines a lot of suggested policy moves and investments, but doesn't itself impose those actions.
- Highlights include:
  - A Zero-Emission Heating Standard that would require gas furnaces and water heaters to be replaced only with zero-emission heat pump technologies at time of natural equipment replacement.
  - Description of new incentives that MEA plans to offer starting in 2024 for home energy improvements.

Next Meeting

- February 21

Appendix

Helpful Links

- Benchmarking and Performance Standards Law
- Benchmarking Website
- BEPS Website
- Building Performance Improvement Board Website (will include agendas, notes, and presentations)
- BEPS Stakeholder workgroup + report – completed before bill was introduced to gather stakeholder input on BEPS policy elements
- BEPS Technical Report – outlines options for site EUI targets by building type group and assesses feasibility and costs in representative case study buildings
    - Presentation of BEPS Technical Report to Council Transportation & Environment Committee
- Allowance for Renewable Energy Technical Report and Recommendations - provides information on determining how a renewable energy allowance should be defined and implemented within BEPS regulations
- On weather and business normalization:
    - EPA technical reference guide on weather normalized energy use
    - EPA's Recommended Metrics and Normalization Methods for Use in State and Local Building Performance Standards document

Helpful Links (continued)

- Maryland Clean Energy Center 10/25 Webinar, Solutions to Achieve Building Energy Performance Standards recording
- Maryland Department of Environment BEPS page

Questions?

Emily Curley
Building Energy Performance Programs Manager
Emily.Curley@MontgomeryCountyMD.gov
240-777-7707

BPIB Webpage
https://www.montgomerycountymd.gov/green/energy/bpib.html

Stay Informed
Check BEPS website for real-time updates:
https://www.montgomerycountymd.gov/green/energy/beps.html

Sign up for Commercial Energy Newsletter

DEPARTMENT OF ENVIRONMENTAL PROTECTION