

Appendix K – BEPS Overview to Maryland BEPS Cohort for Local Government

– July 17, 2024



Maryland
Department of
the Environment

Maryland's Building Energy Performance Standards (BEPS)

2024 Overview of Building Energy Performance
Standards Regulations

MD BEPS Cohort for Local Government

July 17th, 2024

*Sam Furio
Outreach Coordinator
MDE Building Decarbonization Team*



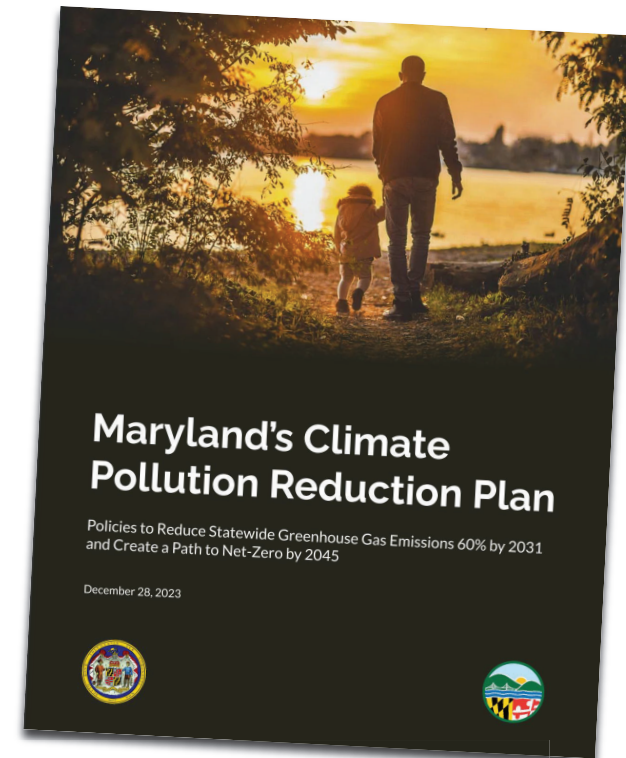
Agenda

- BEPS update
- BEPS policy overview
 - What buildings need to comply?
 - Where building owners are now: benchmarking
 - Where building owners need to go next: BEPS compliance



Maryland's BEPS Policy

- The Climate Solutions Now Act of 2022 (CSNA) requires the Maryland Department of the Environment to develop BEPS, a key part of fulfilling the state's required greenhouse gas (GHG) reduction goals
- Learn about BEPS and other proposed GHG reduction policies in Climate Pollution Reduction Plan
- **GOALS:** 60% statewide GHG reduction by 2031, and net-zero by 2045 (compared to 2006 levels)



Read the plan @ mde.maryland.gov



BEPS Policy Update



BEPS Policy Update

- MDE is withdrawing the December 2023 proposed BEPS regulation and advancing a revised BEPS regulation



BEPS Policy Update

- MDE is withdrawing the December 2023 proposed BEPS regulation and advancing a revised BEPS regulation
- What's changed between the two versions?



BEPS Policy Update

- MDE is withdrawing the December 2023 proposed BEPS regulation and advancing a revised BEPS regulation
- What's changed between the two versions?
 - Removal of Site Energy Use Intensity (Site EUI) Standards
 - Modification of select definitions and procedures
 - i. Agricultural building definition
 - ii. Manufacturing building definition
 - iii. Exemption procedure
 - iv. Public infrastructure property types
 - v. Consumer price index



BEPS Policy Update

- MDE is withdrawing the December 2023 proposed BEPS regulation and advancing a revised BEPS regulation
- What's changed between the two versions?
 - Removal of Site Energy Use Intensity (Site EUI) Standards
 - Modification of select definitions and procedures
- What stays the same between the two versions?



BEPS Policy Update

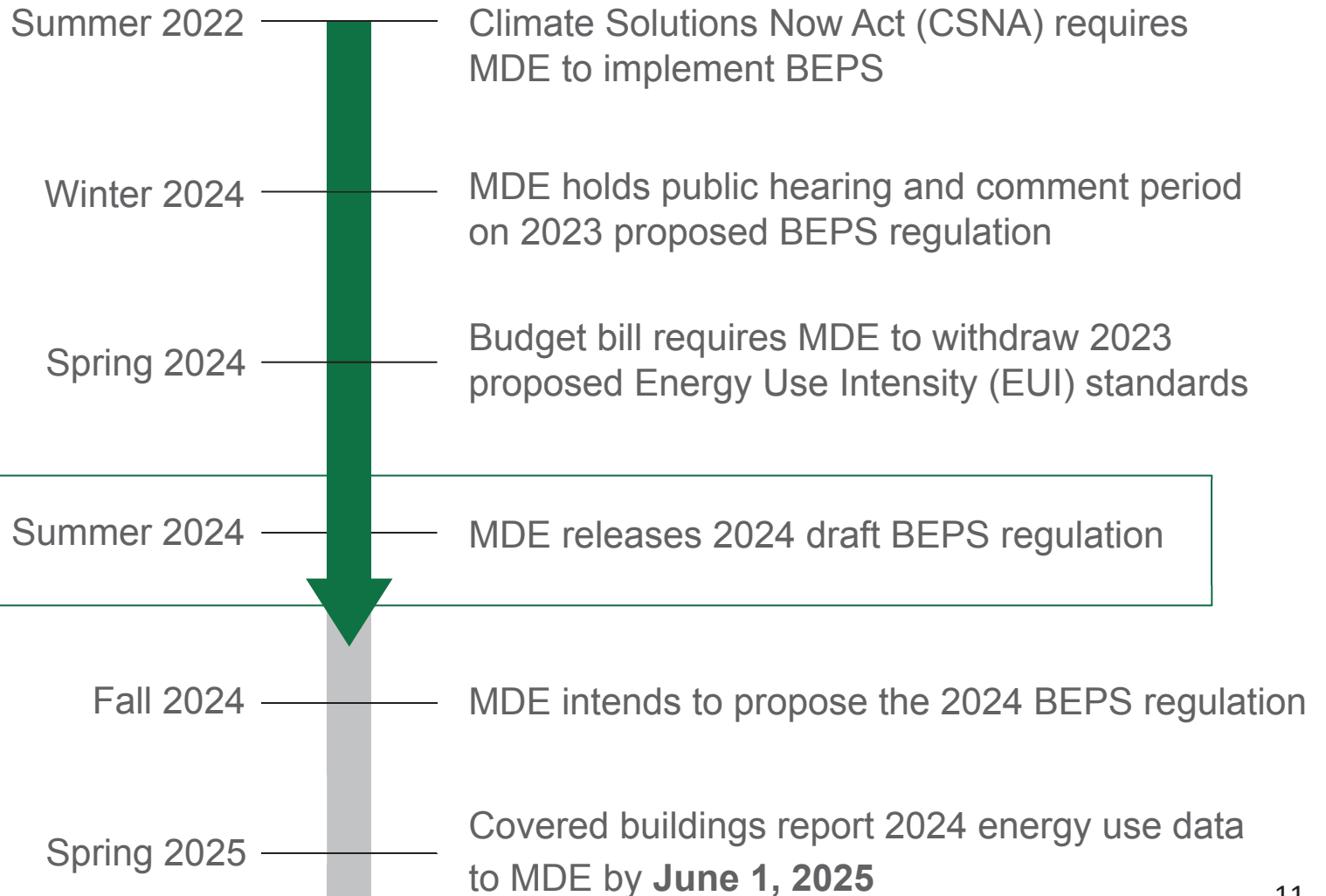
- MDE is withdrawing the December 2023 proposed BEPS regulation and advancing a revised BEPS regulation
- What's changed between the two versions?
 - Removal of Site Energy Use Intensity (Site EUI) Standards
 - Modification of select definitions and procedures
- What stays the same between the two versions?
 - All other requirements, which includes:
 - Reporting requirements, including the reporting of energy use and emissions data to MDE annually starting June 1, 2025
 - Net direct emissions standards



Looking Ahead for BEPS

- MDE intends to establish site EUI standards in 2027
 - After analysis and report submission to the Maryland Legislature of covered buildings' 2025 calendar year energy use data
- Building owners should refer to the site EUI standards [proposed](#) in December 2023 for directional guidance as they plan improvements to their buildings
- Building owners are advised not to install electric resistance heating equipment without considering how the use of such equipment would influence the site EUI

What's next for BEPS?



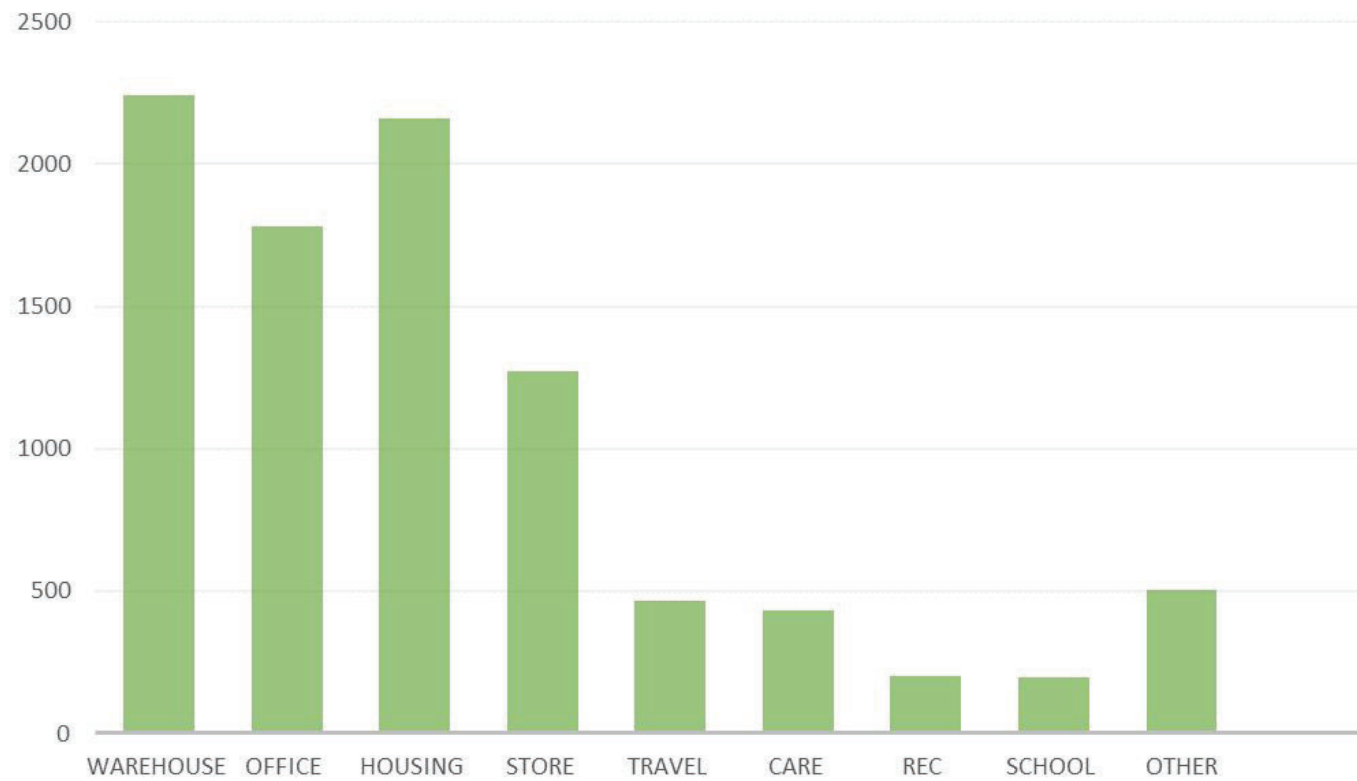


Covered Buildings

- 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:
 - Historic buildings (individually designated as historic property under law);
 - Public or nonpublic elementary and secondary school buildings;
 - Manufacturing buildings;
 - Agricultural buildings; and
 - Federally-owned buildings



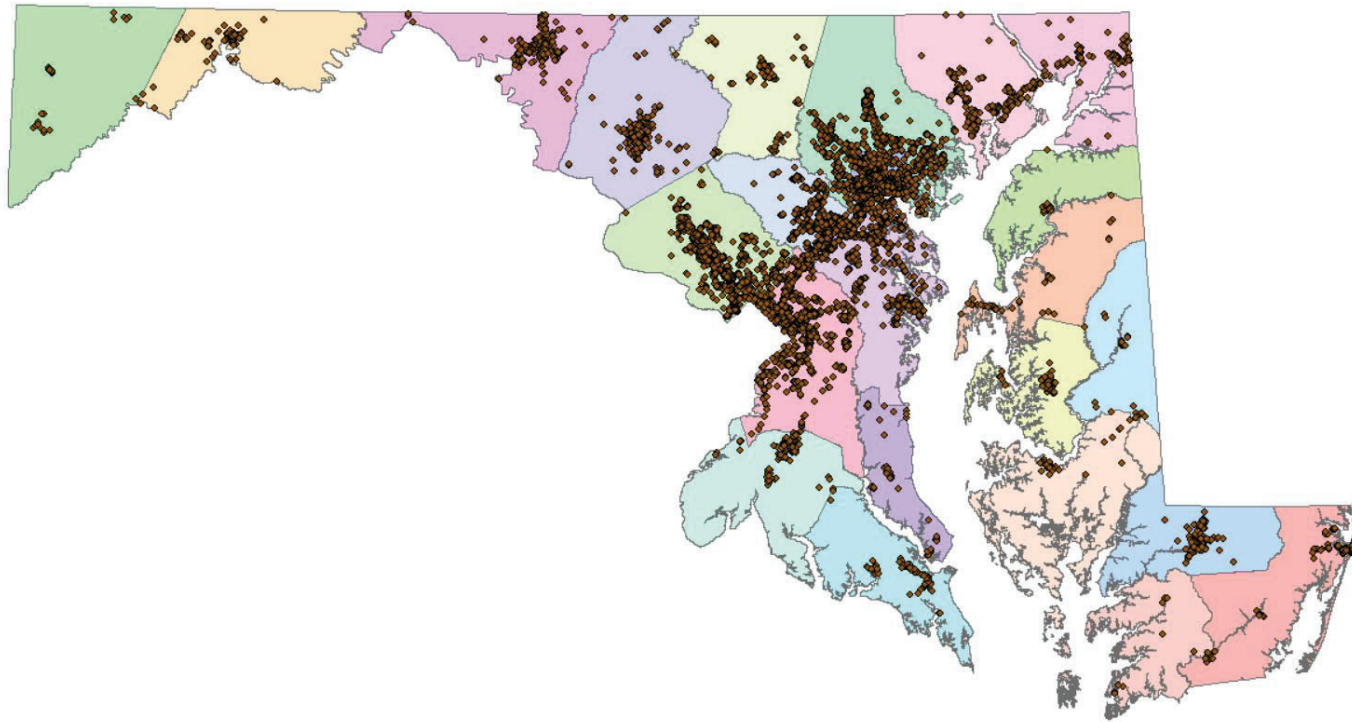
Covered Buildings in MD



Preliminary analysis



Location of Covered Buildings



Preliminary analysis



What Does a Building Owner Need to Do?

1. Determine if a building is covered under BEPS by calculating its square footage or evaluating exemption status
 - Building < 35,000 ft²: *No compliance necessary with State BEPS*
 - Building > 35,000 ft²: *Compliance with State BEPS is Required*
2. **Start benchmarking**
3. Assess whether the building is already achieving the proposed standards
4. If not meeting the standards, plan to make improvements and determine when it's preferable to pay the alternative compliance fee



Where Are Building Owners Now?

Benchmarking

**Annually,
starting in 2025**

Use ENERGY STAR
Portfolio Manager to
track annual energy
use and ghg emissions



What's Next for Building Owners?

Benchmarking

**Annually,
starting in 2025**

Use ENERGY STAR
Portfolio Manager to
track annual energy
use and ghg emissions

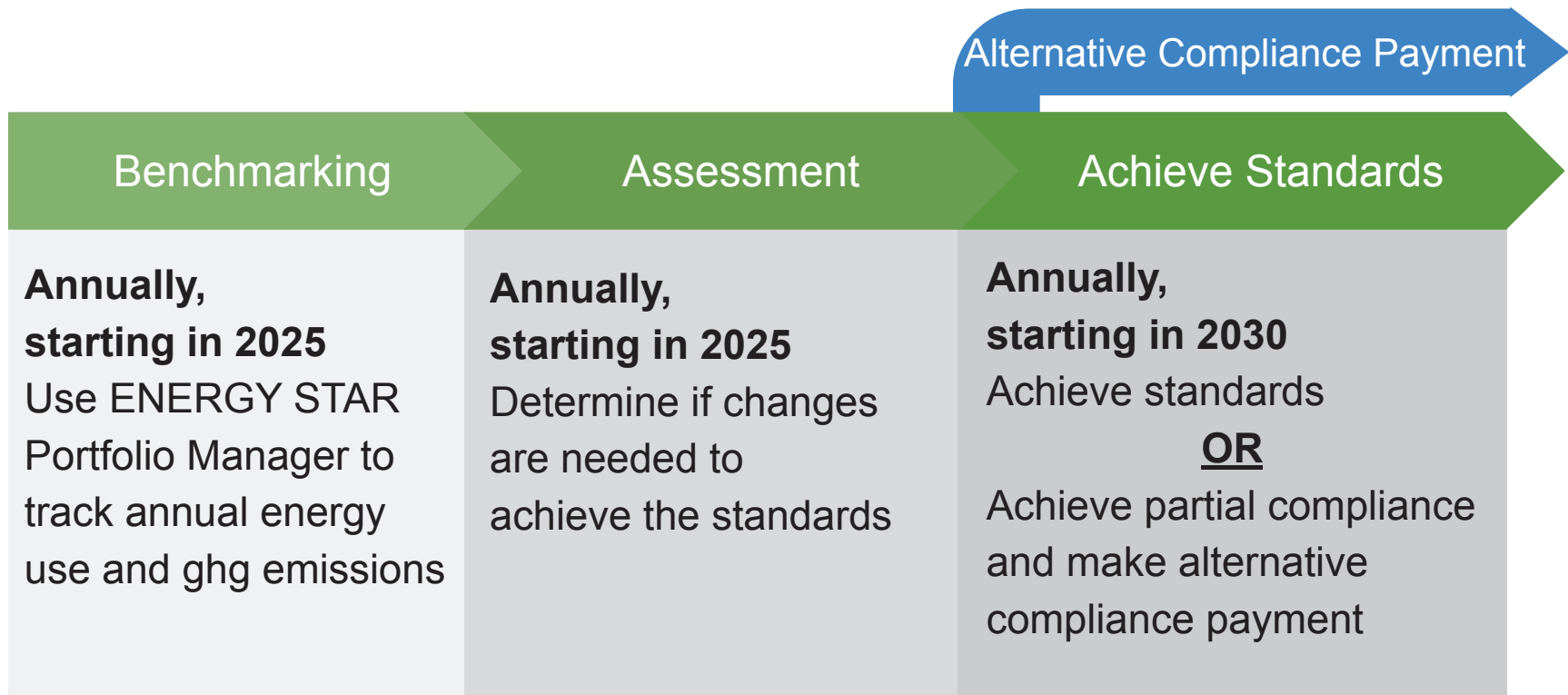
Assessment

**Annually,
starting in 2025**

Determine if changes
are needed to
achieve the standards



What's Next for Building Owners?





Alternative Compliance Pathway

Alternative compliance is available for the proposed net direct emissions standard in the form of payments set at the EPA's social cost of greenhouse gas

All figures are in 2020 dollars and will be adjusted for inflation to that year

Year	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2040+
Cost per metric ton of CO ₂ e Overage	\$230	\$234	\$238	\$242	\$246	\$250	\$254	\$258	\$262	\$266	\$270	\$270 + \$4/yr



Alternative Compliance Spectrum

Poor Financial Decision

Building owner is not currently meeting the standard and makes no improvements to their property. They opt to meet compliance by making an Alternative Compliance Payment for the difference between the standard and their total emissions

Expected

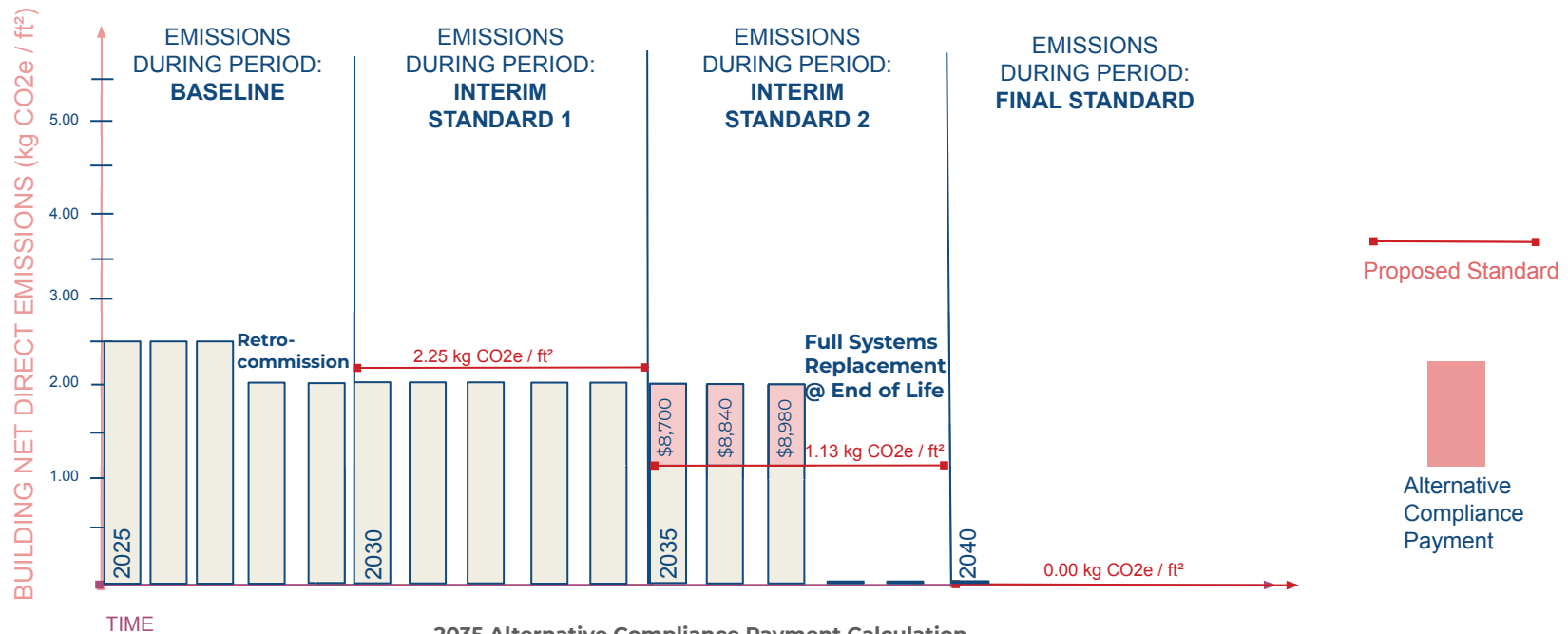
Building owner is already nearly in compliance and/or opts to make improvements to their property until they deem it is more cost-effective to make an Alternative Compliance Payment on remaining emissions over the proposed standard

Ideal

Building owner is already meeting or makes improvements to meet the standard



Alternative Compliance Payment 40k Square Foot Case Study



2035 Alternative Compliance Payment Calculation
 Emissions over standard: $2.00 - 1.13 \text{ kg CO}_2\text{e/ft}^2 = 0.87 \text{ kg CO}_2\text{e/ft}^2$
 $0.87 \text{ kg CO}_2\text{e/ft}^2 * 40,000 \text{ ft}^2 / 1000 \text{ kg/ton} = 34.8 \text{ tons CO}_2\text{e}$
 $34.8 \text{ tons CO}_2\text{e} * \$250/\text{ton CO}_2\text{e in 2035} = \mathbf{\$8,700}$
 $\mathbf{8700/12 = \$725/month}$



Resources and Financial Support



Utility incentives: staff O&M training, building tune ups, equipment



Financing and technical assistance



Maryland
Energy
Administration

Clean Buildings Hub, grants, loans, rebates



Federal Incentives

Tax credits/ deductions (179-D, ITC, etc.)





Questions?

Building Decarbonization Team



beps.mde@maryland.gov



410-537-3183

BEPS Website



BEPS Email List

