

# OpenBlue Net Zero Buildings

## Maryland's Building Emissions Performance Standard (BEPS)



### What the law is about

The law sets requirements for large buildings to reduce their energy use. It sets minimum standards of efficiency and emissions for each building type that must be achieved starting in 2030, with interim performance standards in 2035, and final performance standards being achieved by 2040.

BEPS covers a variety of properties in Maryland:

- Any building owned by the State of Maryland
- Non-residential buildings above 35,000 sq. ft.
- Residential multifamily buildings above 35,000 sq. ft.
- Two or more buildings with combined gross floor area above 35,000 sq. ft. that are served by the same electric or gas meter or served by the same heating or cooling system.

Covered buildings are required to meet final site energy use intensity (site EUI) and “net direct” greenhouse gas emission (GHG) performance standards based on their typology. “Net Direct” emissions are defined by Maryland as inclusive of on-site fuel combustion, as well as emissions from district energy systems, but also exclude energy use and emissions from commercial cooking and electric vehicle charging.

The final GHG performance standard is zero net direct emissions by 2040, with interim GHG standards in 2030 and 2035, and interim site EUI performance standards that are on a straight-line trajectory between the final performance standard and their baseline. The year of a building's baseline year is to be 2025, with interim performance standard and final site EUI performance standards to be developed development.

Draft final Site EUI standards and interim GHG standards were proposed by the Maryland Department of the Environment (MDE) in May 2023, but the standards have not been finalized.

## BEPS Trajectory Model

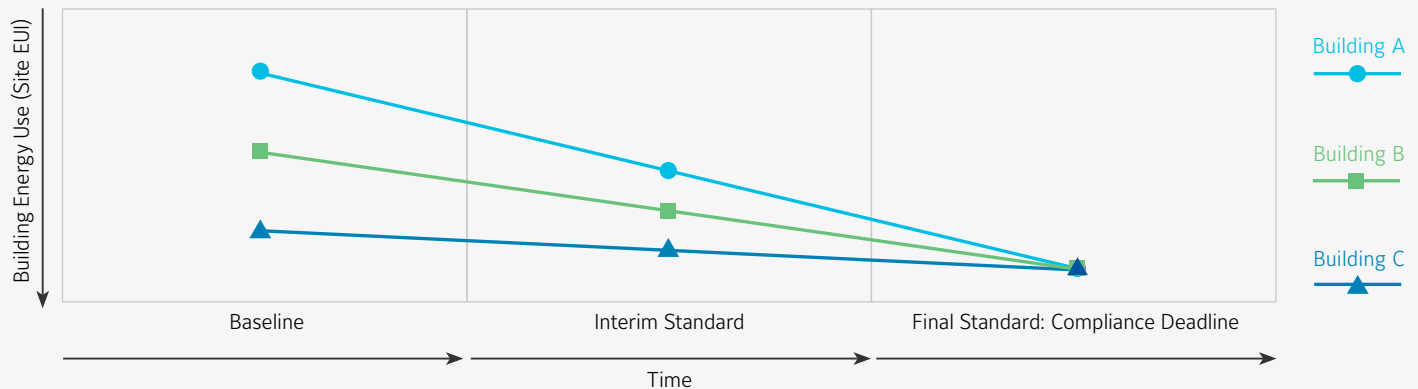


Figure 1: Example of Site EUI trajectory approach for buildings with varying EUIs

Building owners can implement any combination of energy conservation, efficiency, and electrification measures to meet the interim and final performance standards.



### What it means for you

- Covered buildings will need to start reporting their energy and emissions in 2026, for 2025 data.
- [Draft site EUI and GHG performance standards](#) are expected to be released for the covered building typologies in 2023, and finalized in 2024.
- Officially designated historic properties, elementary and secondary schools, manufacturing buildings, and agricultural buildings are exempt.
- Buildings on a campus, such as higher education, hospitals, or multifamily properties, may optionally benchmark as a campus and meet the standards at a blended campus level.
- A [Building Energy Transition Implementation Task Force](#) has been created to advise on the financial resources needed to support compliance. The state is also working to create a Hub to assist building owners with compliance.
- Alternative Compliance Payments will be based on the social cost of carbon, and rules have not been finalized in Maryland. The [Social Cost of Greenhouse Gases](#) in 2030 are estimate to average \$230 per metric ton of CO<sub>2</sub>e.
- You can learn more on [Maryland's BEPS Webpage](#).

## How we can help

Partner with Johnson Controls to develop an excellent sustainability and resiliency program to comply with Building Performance Standards laws. We'll build your business case to meet your needs, and we'll help balance the traditional conflict between cost savings and investment. We offer a wide assortment of building systems that can help you reduce your facility's emissions. We blend technical and operational expertise with our reputation for quality.

### Step 1: Assess your facility.

We look at current and anticipated use to understand present energy usage, plan for energy needs, and review indoor air quality. We also make sure all your systems are right sized for your facility, which is essential for efficient operation.

### Step 2: Help build your business case.

Our team develops models specific to your equipment and facility, giving you a clear picture of potential efficiency gains and lifecycle cost improvements. We draw on our industry know-how to incorporate additional opportunities to optimize performance.

### Step 3: Recommend next steps.

We lay out a step-by-step plan for you to modernize against your goals and budget. We give you a menu of options and recommendations that make sense for your facility, and we include a range of smart technologies, such as tools to support predictive maintenance.

### HVAC Equipment and Hydronic Systems

We offer the largest portfolio of HVAC equipment and controls in the world. With expertise in mechanical retrofitting existing systems, our team performs audits of the current equipment and identifies deficiencies that prevent you from meeting regulations and best practices in indoor air quality. From there our experts will design and recommend solutions to meet today's energy, decarbonization and healthy buildings initiatives.

### Building Automation Systems and Controls

Our next generation building automation systems make it possible to extend automated control to every building system from a single platform. We make everything from simple, configurable controls to highly programmable automation systems for entire facilities. Our systems allow you to improve control of your key systems and improve desired outcomes against your goals for indicators such as CO2, Energy Use Index (EUI), kWh, emissions intensity.

### Accessible Digital Tools

Our suite of tailored, AI-powered digital solutions optimize building performance through predictive maintenance, remote diagnostics, emission management, goal and targets, and more. Leverage our OpenBlue platform to integrate with Metasys and third-party BMS to deliver optimal building outcomes, ensuring compliance with building performance standards while also balancing comfort, air quality, costs and emissions.

### Water Usage Reduction

We supply the expertise and funding mechanisms to provide water and energy conservation solutions for businesses. By helping decrease water leakage and operational costs, we can reduce water consumption by up to 50 percent. Water heaters can be upgraded from fossil fuel fired to electric, or we can provide high efficiency or indirect options. Our experts are able to calculate the most effective ways to reduce water usage in sinks and toilets.

### Lighting

We partner with the world's premier lighting innovators to revolutionize interior and exterior lighting. Our experienced lighting engineers have designed and executed thousands of lighting projects around the world. By integrating the lighting systems to work in conjunction with existing building systems the result is a holistic system better suited for energy efficiency, convenience and security. From clinics to classrooms, these intelligent lighting systems provide advantages well beyond energy savings to help buildings run more efficiently.

## Your partner in sustainability and net zero

As leaders in sustainability and net zero, our approach brings together expertise with leading capability to deliver energy efficient outcomes through our building and infrastructure management services. Upon review of your goals and your facility, our team advises on all aspects of ESG and sustainability to provide a comprehensive roadmap of actions and solutions to meet the critical milestones.

## Ready to get started?

Contact your local Johnson Controls representative or visit [johnsoncontrols.com/BPS](https://johnsoncontrols.com/BPS)

