

An Introduction to Maryland BEPS



**Steven Winter
Associates, Inc.**



Since 1972, Steven Winter Associates, Inc. has been providing research, consulting, and advisory services to improve the built environment for private and public sector clients.

Our services include:

- Energy Conservation and Management
 - Decarbonization
 - Sustainability Consulting
 - Green Building Certification
 - Accessibility Consulting
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Our teams are based across four office locations:
New York, NY | Washington, DC | Norwalk, CT | Boston, MA

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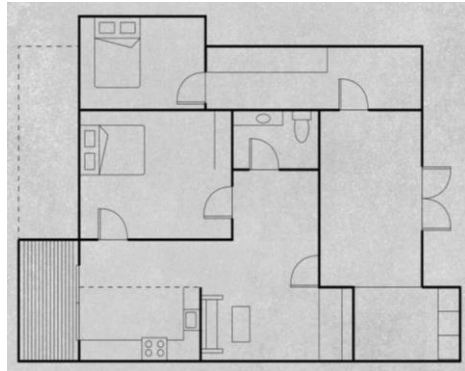


Core Components:

1: Benchmarking

2: Building Performance Standards

Benchmarking (super) Basics



MARYLAND
DEPARTMENT OF ASSESSMENTS
AND TAXATION

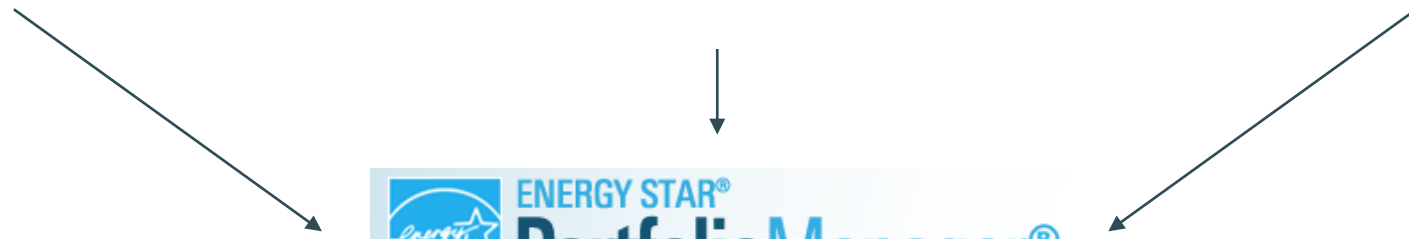
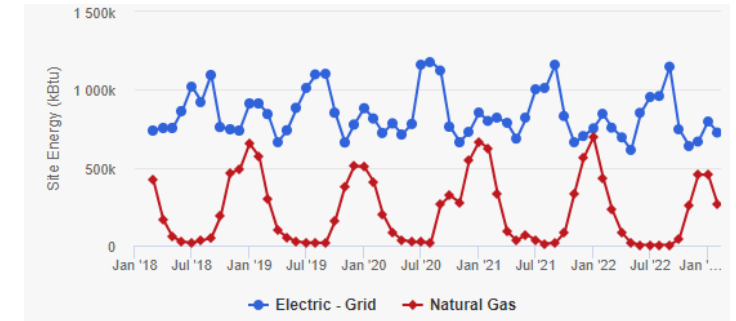
Real Property Data Search ()

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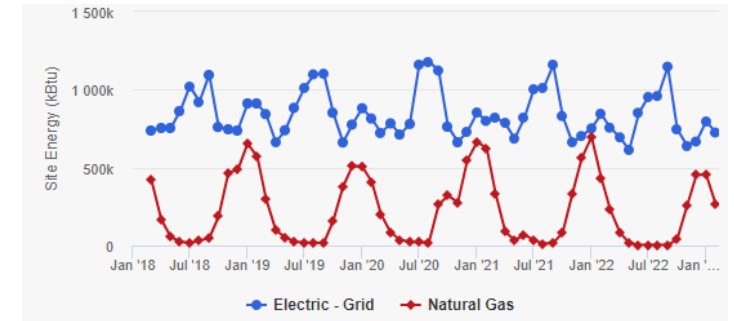
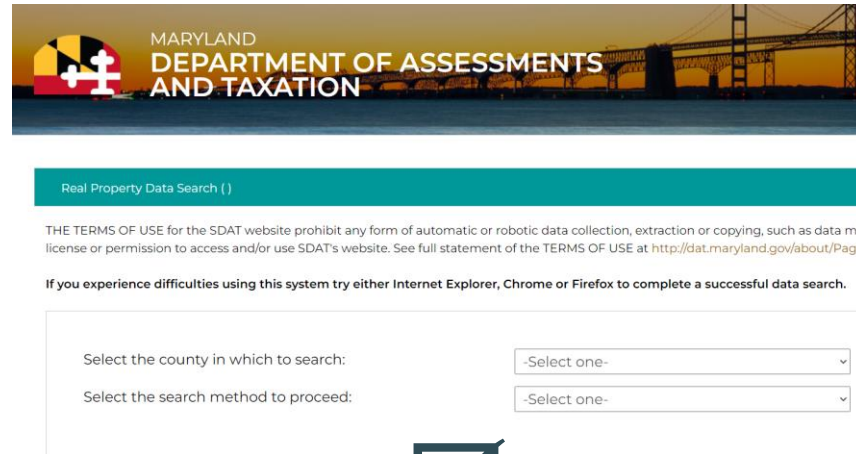
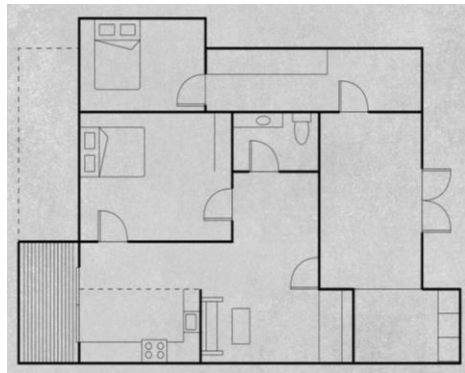
If you experience difficulties using this system try either Internet Explorer, Chrome or Firefox to complete a successful data search.

Select the county in which to search:

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Third-Party Verification



Benchmarking Exemptions (if separately metered!)

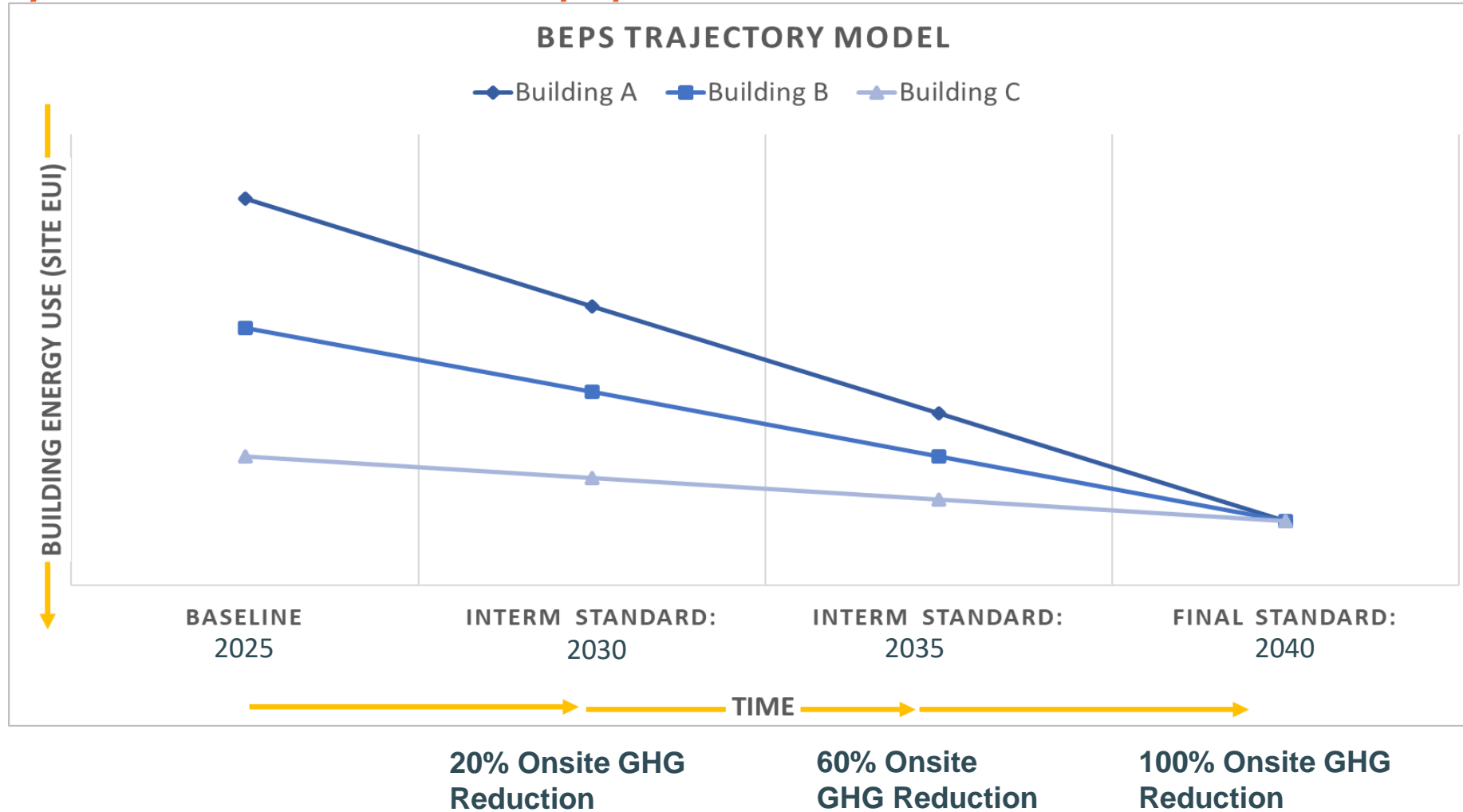


- Low occupancy
- Food services
- EV charging (if separately metered)
 - Utility data (electric, gas, and water) + Space use data

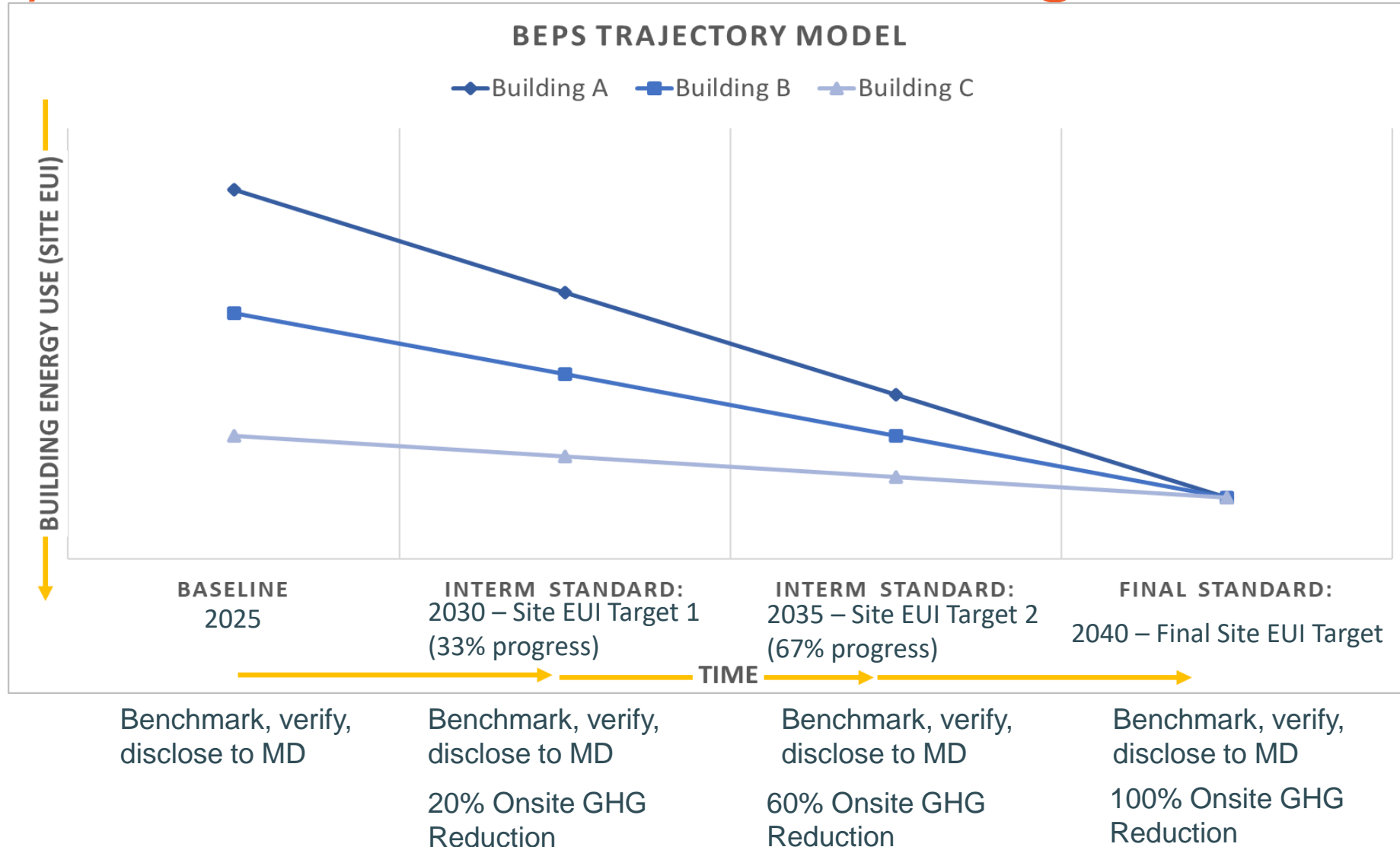


What are Building Performance Standards?

Maryland BEPS – Approach



Maryland BEPS – Standards & Targets



Maryland BEPS – Exemptions



- Commercial cooking
- Numerous building types, including industrial, schools, and commercial kitchens
- Buildings under 35,000 sq. ft.

Maryland BPS – Benchmark to the BPS



- Third-party verify 2025 energy data
- Weight targets based on space types
- Get your building-specific trajectory

Example (w/site EUI of 100, site GHG of 1 kg CO₂/SF)



Uniform Building Type

Property Type	Interim Onsite GHG Standard, 2030-2034 (kg CO ₂ /SF)	Interim OnsiteGHG Standard, 2035-2039 (kg CO ₂ /SF)	Final Onsite GHG Standard, 2040+ (kg CO ₂ /SF)	Interim Site EUI Standard, 2030-2034 (kBtu/SF)	Interim Site EUI Standard, 2035-2039 (kBtu/SF)	Final Site EUI Standard, 2040+ (kBtu/SF)
Office	0.22	0.11	0	85	70	55
Multifamily	0.82	0.41	0	76.6	52.4	29
Hotel	1.47	0.74	0	86.8	73.2	60
Retail Store	0.60	0.30	0	82.8	65.2	48
Medical Office	0.18	0.09	0	90	80	70

Example (w/site EUI of 100, site GHG of 1 kg CO₂/SF)



50% office, 50% multifamily

Property Type	Interim Onsite GHG Standard, 2030-2034 (kg CO ₂ /SF)	Interim Onsite GHG Standard, 2035-2039 (kg CO ₂ /SF)	Final Onsite GHG Standard, 2040+ (kg CO ₂ /SF)	Interim Site EUI Standard, 2030-2034 (kBtu/SF)	Interim Site EUI Standard, 2035-2039 (kBtu/SF)	Final Site EUI Standard, 2040+ (kBtu/SF)
Office	0.22	0.11	0	85	70	55
Multifamily	0.82	0.41	0	76.6	52.4	29
Weighted Average	0.52	0.26	0	80.8	61.2	42

Maryland State BEPS – Penalties



- GHG penalties based on social cost of carbon
 - Per metric ton of CO₂e, annual payments
- Site EUI penalties based on Air Quality civil penalties
 - Up to \$25,000/day
 - see here: <https://law.justia.com/codes/maryland/2022/environment/title-2/subtitle-6/section-2-610/>

The background of the slide is a light orange color with a faint, repeating pattern of architectural floor plans. A large, semi-transparent orange circle is positioned on the right side of the slide. In the top right corner, there is a small logo consisting of two overlapping red squares.

The BPS Approach for Buildings

The BEPS Process



- **Step 1:** Benchmark and Verify Portfolio Manager Entry
- **Step 2:** Develop Your Plan, Conduct Building Assessment
- **Step 3:** Implement Measures
- **Step 4:** Commission Measures
- **Step 5:** Track Performance

The BEPS Process



- **Step 1: Benchmark and Verify Portfolio Manager Entry**
 - Get building information into Portfolio Manager before 2026!
 - Third-party verification required in 2026

The BEPS Process



- **Step 2A: Develop Your Plan**
 - What's your building's Site EUI target?
 - How does this target align with renovation schedules?
 - Where do you use GHG onsite today?

The BEPS Process



- **Step 2B: Conduct Building Assessment**
 - Optimize what you have with what equipment life you have left
 - Plan for off-ramping from onsite GHG
 - What else is needed to hit site EUI targets?

Use the assessment to develop a plan of action

The BEPS Process



- **Step 3: Implement Measures**
- **Step 4: Commission Measures**
 - Train the operators
- **Step 5: Track Performance**
 - Necessary for meeting any BPS



Lessons Learned and Next Steps

Lessons Learned So Far



- Benchmarking verification is critical
 - Do it right the first time, save efforts in the future
- Long-term planning is critical—get a roadmap sooner rather than later
- Avoid new fossil fuel installations!
- Maintain patience (especially with utilities)!

Recommended Next Steps



- Get ready to benchmark—why not start in 2024 with 2023 data?
 - Do it right the first time, save efforts in the future
- Once you're benchmarked, get started with an assessment
 - Figure out your roadmap
- Avoid new fossil fuel installations!
- Anticipate regulatory changes (in the details)

How SWA Can Help with BEPS



- Benchmarking data verification
- BPS assistance
 - Building Assessments
 - Commissioning and Retro-Commissioning
 - Tracking and Performance Monitoring
- Building Operator Training
- Owner's Technical Representative

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