

Creating Resilience

Building Performance Standards aim to reduce carbon emissions across the U.S.

VIEWPOINT

Local and state governments are setting measures to mitigate greenhouse gas emissions in existing commercial real estate buildings.

ECONOMETRIC ADVISORS
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Carbon emissions generated by buildings

Earlier this year CBRE Econometric Advisors (CBRE EA) published a [report](#) that focused on transition-related¹ climate risk and its impact on commercial real estate from a global perspective. In this viewpoint, we will focus on how the United States is tackling greenhouse gas (GHG) emissions from the built environment, especially focusing on mandatory regulations at the state and local government level.

Building Performance Standards (BPS) have been introduced to reduce GHG emissions in the real estate industry. BPS are outcome-based state and local benchmarking laws which require all commercial buildings that are over the size threshold (varies by city) to meet city or state/county-wide mandated carbon and energy performance improvement targets by a specific deadline. Each local entity customizes the requirements to fit its needs, but in general, a BPS policy contains:

A performance target	A timeframe by which all buildings must meet this target
<ul style="list-style-type: none">- A local jurisdiction may require buildings to meet a specific level of energy use on a per square foot basis and/or other level of performance.	<ul style="list-style-type: none">- A local jurisdiction may require all buildings to meet set goals in accordance with Paris Agreement targets by 2050, with interim goals in 2030 and 2040.

A BPS law can include multiple standards, each aimed to increase efficiency for a different aspect of a building

Energy efficiency	Electrification	Renewable energy	Water efficiency	GHG reductions
<ul style="list-style-type: none">- Leverage an occupancy-based HVAC system to increase efficiency- Building envelope retrofits- Scale rapidly with Efficiency-as-a-Service- Meters	<ul style="list-style-type: none">- Replacement of fossil fuel burning equipment with efficient electric- Heat pumps including chillers and ground source	<ul style="list-style-type: none">- Commercial solar- Solar thermal- On-site biomass and biogas- Thermal storage- Geoexchange- Wind- Biofuels	<ul style="list-style-type: none">- Water conservation- Water reduction- Water recycling- Reduction of fertilizer and pesticide use	<ul style="list-style-type: none">- Carbon offsets- Renewable energy certificates (RECs)- Carbon sequestration- Other emerging technologies

¹Transition risk is business-related risk that follows societal and economic shifts toward a low-carbon and more climate-friendly future. Examples include policy, regulation, technology or reputation.

Benefits of Building Performance Standards

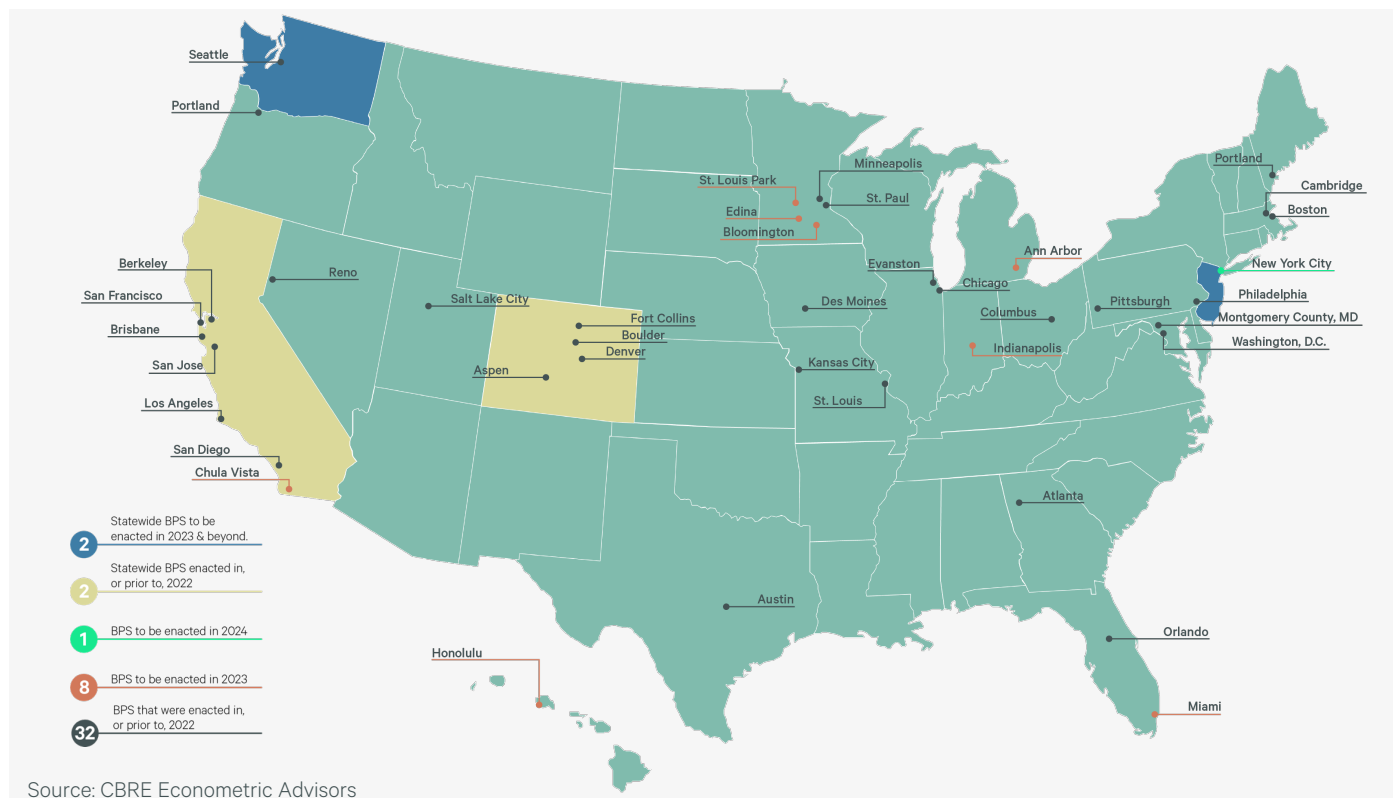
Navigating the commercial real estate sector to net zero—achieving a balance between the greenhouse gases put into the atmosphere and those taken out—by 2050 requires real action from local and state governments. Many cities and states have been slow to adopt BPS policies. However, those cities that have taken the lead to mandate benchmarking compliance have experienced:

- Energy-saving benefits
- Job creations
- Carbon emission reductions
- Social benefits

The most immediate benefit of benchmarking is implementation and management of strategies to decrease energy use, which results in reduced carbon emissions. Data capture of energy usage allows landlords to plan and measure progress on reaching energy reduction goals. This in turn creates a competition-like environment through comparison with similar buildings which conform to local regulations. Such collaboration only maximizes the effectiveness if there is open and clear communication among involved parties. Energy retrofits are necessary to reduce energy consumption. Tenants of energy-efficient buildings benefit from healthier air quality and improved occupant well-being. From the investors' standpoint, there is potential for further business opportunities and compliance with strict BPS laws.

Building Performance Standards as of September 2022

BPS are the most widely used tools by state and local jurisdictions to reduce energy consumption in existing buildings. To date, 31 cities, one county and two states enacted the BPS prior to 2022, eight are on a pathway to do the same by the end of 2023, and New York City's [Local Law 97](#) will go into effect in 2024.



What are the penalties for non-compliance with BPS?

Policy compliance is a critical part of decarbonization efforts as governments and most property owners strive to reach net zero carbon emissions by 2050.

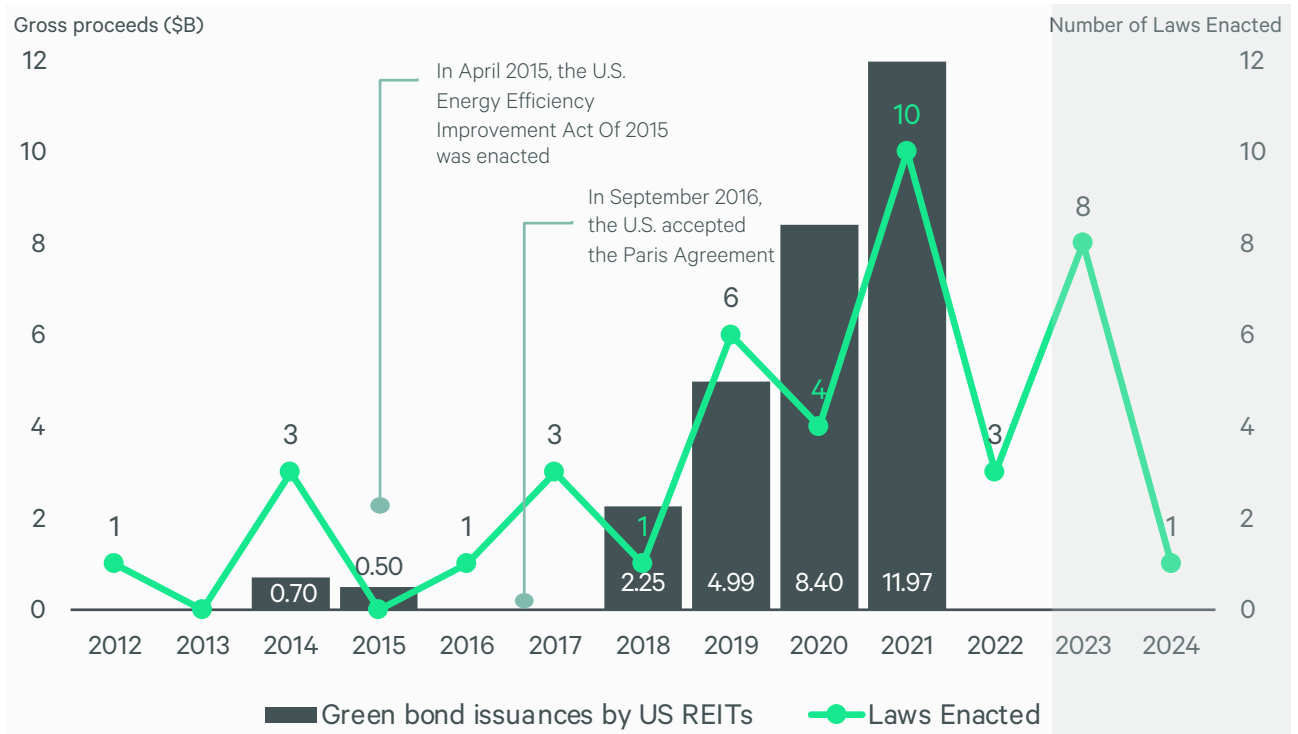
The property owner is required to benchmark and disclose the energy use of the building, which takes no more than two years, after which the regulatory entity (local or state government) defines the compliance standard that a building must meet. Based on the collected data, the local jurisdiction, which varies by state, gives building owners up to five years to make necessary retrofits to comply with the standards.

Penalties for non-compliance vary among jurisdictions and can be in the form of daily fines or written notices. As of late 2022, Boulder, CO, is the only jurisdiction that assesses fines of \$0.0025 on a per sq. ft. basis. New York City's Local Law 97 will also assess penalties of \$0.50 on a per sq. ft. basis starting in 2024. Each jurisdiction has its own minimum building thresholds ranging from 10,000 to 75,000 sq. ft., below which penalties will not apply.

Financing the Transition

The federal Bipartisan Infrastructure Law provides more than \$1.8 billion to support building sector policies, while the federal Inflation Reduction Act of 2022 (IRA) provides additional funding of \$115 million. Moreover, many cities and states implemented rebate programs, incentives, and low-interest loans.

In September 2016, the U.S. accepted the Paris Agreement and soon after witnessed a spike in Green Bond issuances by U.S. REITs and an increased number of BPS policies across the nation.



Source: S&P Global, CBRE Econometric Advisors

Are there enough local regulations to decarbonize the U.S. commercial real estate sector?

Across the U.S., numerous cities have established BPS to meet carbon reduction goals by 2050 or sooner. According to the Carbon Risk in Real Estate Monitor (CRREM) and the Global Real Estate Sustainability Benchmark (GRESB), only 15% of global assets are aligned with the 1.5°C decarbonization pathway within the Paris Agreement. To align with the Paris Agreement, which aims to limit global warming to between 1.5°C and 2.0°C, 37% of global buildings will need to be decarbonized by 2030.

BPS have been growing in popularity across the U.S. for years. BPS help to benchmark and ultimately cut GHG emissions, thus making a significant contribution to climate change. However, the policies to date are insufficient to lower emissions meaningfully. State and local governments need to combine efforts for the U.S. to reach its Paris Climate Agreement goals of reducing GHG emissions by 50-52% by 2030.

Moreover, if jurisdictions want to make their policies more ambitious, they must have strict enforcement mechanisms in place. Strict penalties will help boost accountability and discourage non-compliance with the BPS targets. The prime examples of this would be Washington, D.C., Cambridge, MA, and Boulder, CO, where non-compliance penalties range from \$50 to \$300 per day and can significantly impact a building owner and their net operating income. These top three jurisdictions were among the early adopters of the policies and are leading decarbonization pathways in terms of ESG reporting and sustainability in the U.S.

Are there any key barriers to overcome?

Decarbonizing the building sector requires aggressive policies, timelines to meet significant performance goals, a change in mindset and strong financial incentives aimed toward increasing the sustainability of building operations. A collaborative effort between governments and business would lead to collective success. However, there are several key barriers, including insufficient budgeting at the state and local levels or, in some cases, the lack of budgeting entirely, lack of financial incentives for adopting energy efficiency measures, and a lack of effective monitoring tailored to meet building owner/operator performance goals and local regulatory compliance. Combined, these barriers create a gap between government entities and investors.

Several states have managed to at least partly overcome these barriers. California is leading the way in building energy codes that promote green buildings and decarbonization. Utility savings continue to add up in Colorado due to the aggressive efficiency goals set by the state's largest public utility. Washington, D.C., Colorado and Massachusetts are leading in imposing significant fines for non-compliance with BPS.

The next steps

Many cities, counties and states across the country already play a key role in implementing energy efficiency measures. But there is a limit to what local authorities alone can achieve. The national government should take the buildings sector's decarbonization efforts to the next level, and thus provide, at a minimum, a clear regulatory framework reflecting the latest internationally accepted scientific methods. Sufficient governmental financial resources are also needed to supplement and leverage local resources. At CBRE EA, we will continue to monitor the BPS development and its impact on long-term outcomes as we aim to identify the risks for both investors and occupiers.

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