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The Landscape of Building Performance Standard Pathway Alternatives

REVIEW OF EXISTING ALTERNATIVE COMPLIANCE PATHWAYS AND RESOURCES TO SUPPORT STANDARDIZATION

REPORT

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Disclaimer

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As discussed in next steps, this report represents merely the beginning of our effort on this project, and we hope you will join us on our journey to make building performance policies work better for more people and places.

Executive Summary

Building performance standards (BPS) are an innovative and powerful policy tool requiring large existing buildings to meet energy or carbon performance targets by specified deadlines. To date, 15 state and local governments have adopted BPS. However, these policies must be designed and implemented in responsible and thoughtful ways to realize their full benefits, avoid adverse impacts on the community or building owners, and help improve compliance.

The most common compliance mechanism to provide flexibility in BPS policies is the Alternative Compliance Pathway (ACP). An ACP provides flexibility when meeting a short-term BPS target is infeasible, while still driving energy reductions and improvements. Current ACPs offered vary widely in structure, terminology, eligibility, enforceability, and effectiveness across jurisdictions. Moreover, most jurisdictions offer multiple ACPs, with different names. This creates confusion for owners and service providers, limits replicability, and increases administrative burden. For BPS to be successful—especially for both under-resourced buildings and very complex buildings—ACP standardization is essential.

With funding support from the U.S. Department of Energy, in 2025, the Institute for Market Transformation (IMT), Slipstream, the Building Energy Exchange (BE-Ex), and other local high-performance building hubs (hubs) and engineering firms launched the BPS Pathway Alternatives and Training Hubs (BPS PATH) project to meet this challenge. The project will develop a new model regulatory framework for alternative BPS pathways, along with training resources and software tools. This report serves as the first step in the project, covering the current state of existing BPS compliance and ACPs offered across the nation, identifying key challenges, and detailing decarbonization planning frameworks that could help standardize ACPs.

Compliance rates and barriers

To understand the scale of the challenge, we examined progress towards BPS compliance in the five U.S. jurisdictions furthest along in their initial BPS implementation cycle. We compared benchmarking data against published targets, and found that compliance varies significantly, with 30-70% of buildings already meeting their initial targets, and 14-23% of buildings already meeting their 2030 targets. The range reflects the varying stringencies of each city's targets and does not consider compliance through alternative pathways. These findings show there is substantial need for more retrofits. Through surveys and interviews with hub directors and a range of stakeholders, we sought to identify key implementation challenges. Hubs and local organizations expressed that common barriers are: the financial cost to comply; workforce available to support planning and retrofits; and general awareness and knowledge of policy requirements.

Alternative compliance pathways

To understand the differences among ACPs and draw out common themes, we surveyed 11 jurisdictions and developed a common taxonomy, with advice from Pacific Northwest National Laboratory (PNNL). Overall, we found that every pathway consists of four elements, as described below.

1. **Eligibility criteria:** Who can use this pathway? For example, affordable housing, owners of buildings with financial hardships or technical constraints, or building changes?
2. **The alternative:** What adjustments to the standards, timeline, and/or program structure are provided under the pathway?
3. **Compliance application**: How does a building owner apply for the pathway and become compliant under it? What sort of assessment is needed?
4. **Pathway implementation:** How does the jurisdiction verify a building is staying on the pathway over time, and what reporting is required?

This report details each of the options in a generalized form; Appendix C details ACPs offered in each of the surveyed jurisdictions.

Through the policy survey and feedback from governments, building owners, and other stakeholders, we also identified a number of key challenges for existing ACPs. For government staff, review and approval of ACPs can require significant technical knowledge and time. For building owners, it can be difficult to track the requirements of the policy and all alternative compliance paths available or find technical support or workforce to comply with an ACP, and it may require significant time to comply. Similarly, service providers face liability concerns, workforce shortages, and challenges in tracking varying requirements across jurisdictions and pathways.

In addition to these general barriers, the different pathways present their own concerns. For example, prescriptive pathways often do not deliver predictable energy savings, action plans are complex to administer, and portfolios can be difficult to define.

Existing frameworks

To standardize and simplify the ACP process for BPS, we reviewed existing resources offering guidance on building energy performance planning. ASHRAE and ISO standards, along with green building and energy efficiency certifications, could support ACP compliance, but none support a comprehensive framework. Moreover, some of the biggest pain points in ACPs—as well as the greatest opportunities for standardization and increased impact—are in compliance pathway *processes*.

A standardized performance planning process could address this—and we identified a high degree of alignment across various guides that have been developed since the first BPS were adopted. These guides aim to define a process to establish a long-term plan for deep carbon emissions reductions. This should move beyond short-term planning rooted in simple payback towards longer term retrofit plans that align with capital planning and thus deliver cost-effective deep energy and emissions savings. The frameworks generally have a series of three stages:

1. **Pre-planning** includes setting goals for the plan, developing a team, collecting information about existing energy use, building conditions, equipment age and condition, and key capital planning events, and creating business as usual (BAU) forecasts to use in comparison to decarbonization forecasts (both cost and carbon forecasts).
2. **Planning** is the creation of a long-term plan. Guides generally recommend hosting a charette to discuss options, incorporating flexibility into the plan in case items change, aligning energy efficiency and emission reduction measures with key capital planning events, completing a life cycle cost analysis that accounts for BAU replacement costs, and creating a capital plan to drive immediate implementation.
3. **Implementation:** This phase includes ongoing review and updates to the plan as needed, procurement and implementation of measures in the plan, and tracking of energy and carbon reductions over time.

Although the existing frameworks provide a good starting point for an ACP framework, there are several key questions to consider, including:

- Who needs a plan under building performance standards and how does the process work within existing policy landscapes?
- What elements are best practice but shouldn't be required? How much is needed in a plan? How should financial metrics be integrated into the plan?
- How do we simplify the process of creating a plan for under-resourced buildings?
- What commitments and tracking is needed to show compliance?
- How can the process be streamlined for easier review, approval, and ongoing tracking?
- How can plan training support implementation?

Next steps

To address these questions, the next steps are to build out a model regulatory framework and toolkit to standardize the alternative compliance pathway process. The framework will include a narrative on the recommended process, language to include in policies or regulations, and supporting tools and resources. The project team will create the framework through a working group process and solicit peer review and feedback before finalizing. The framework will also be tested through pilot projects in several partner jurisdictions over 2026-2027, and revised as needed from the learnings of the pilot. Training resources developed by IMT and the BPP network of hubs will support education and compliance.

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Introduction

Building performance standards (BPS) are an innovative and powerful policy tool that increasing numbers of jurisdictions in the U.S. and Canada are using to address the stubborn issue of energy waste in existing large buildings.[1] See the BPS 101 call-out box for more on the definition and structure of BPS. However, each building faces its own unique challenges and circumstances, which means policies need to provide flexibility and reduce financial hardship. This is especially important for capital- and capacity-constrained buildings like multifamily housing, public schools, condominiums, and houses of worship, which are particularly limited by available funding, and by legal & regulatory constraints. These challenges point to the need for a workable alternative pathway that reduces energy use and emissions, but avoids causing undue financial harm to building owners and managers.

Alternative Compliance Pathways (ACP), are a compliance mechanism designed to offer flexibility for buildings that cannot meet the standard performance target, while still driving energy reductions and improvements. As a result, almost all BPS policies in the U.S. offer multiple alternative compliance pathways.

However, current ACPs vary widely in structure, terminology, eligibility, enforceability, and effectiveness across jurisdictions. This inconsistency creates confusion for owners and service providers, limits replicability, and increases administrative burden. It also presents a barrier to property owners and managers, as well as service providers, financiers, and software developers trying to develop standard product offerings. Additionally, a few jurisdictions have not offered any flexible pathways due in part to concerns about potential workload and associated costs, which means the buildings described above may either struggle or fail to comply, rendering the policy less meaningful and limiting the benefits to only buildings with simpler fixes or greater resources.

For BPS to be successful—especially for both under-resourced buildings and very complex buildings—ACP standardization is essential. With funding support from the U.S. Department of Energy, the Institute for Market Transformation (IMT), Slipstream, the Building Energy Exchange (BE-Ex), and other local high-performance building hubs[2] and engineering firms launched the BPS Pathway Alternatives and Training Hubs (BPS PATH) project to meet this challenge. The objectives of the project are to:

1. Provide a market survey of barriers and compliance issues for BPS, current alternative compliance pathways in building performance standards and existing decarbonization planning frameworks;
2. Address compliance challenges with building energy policies for existing commercial and multifamily buildings by developing and piloting a standardized and technically feasible model regulatory framework for alternative compliance pathways;
3. Develop a set of training and resources to address compliance with building performance standards and alternative compliance frameworks; and

[1] Steve Nadel and Adam Hinge, *Mandatory Building Performance Standards: A Key Policy for Achieving Climate Goals* (Washington, DC: ACEEE, 2023). https://www.aceee.org/sites/default/files/pdfs/B2303.pdf.

[2] "High-Performance Building Hubs," Institute for Market Transformation, last modified November 15, 2022, https://imt.org/business-practices/high-performance-building-hubs/.

4. Test the model regulatory framework through pilot projects in real buildings, and provide technical assistance to our jurisdictional partners.

This report completes the first BPS PATH objective. It includes an overview of the current state of compliance with BPS and barriers to compliance as well as a summary and analysis of existing ACPs across the nation. It also summarizes existing frameworks for decarbonization planning and how those could apply to BPS alternative compliance frameworks.

Working with our partner jurisdictions and hubs, IMT undertook the tasks below in February–June 2025. These tasks also comprise the major sections of the report.

1. **Compliance rate analysis**: IMT reviewed projected BPS compliance rates based on the latest available data (usually 2023 data reported in 2024) for the five jurisdictions that are well into implementation.
2. **Local surveys**: IMT conducted videoconference interviews with key stakeholders, and a digital survey of hub partners, to understand barriers to compliance and opportunities.
3. **ACP survey:** Building on past work from IMT and research by PNNL, we looked at ACPs across eleven jurisdictions to develop a common taxonomy and understand key challenges.
4. **Review of frameworks and standards**: To better support development of the model regulatory framework, IMT, with support from Slipstream, Ember Strategies, and Emergent Urban Concepts, reviewed major decarbonization frameworks and industry standards and programs that could inform ACP standardization.

This report's primary purpose is to inform DOE, our project partners, and participants in the BPS PATH working group. We expect it will also be of broader interest to policy experts, service providers, local and state governments.

The BPS PATH project has 12 jurisdictional partners, seven of whom have active BPS programs, with five of those also having active hubs.

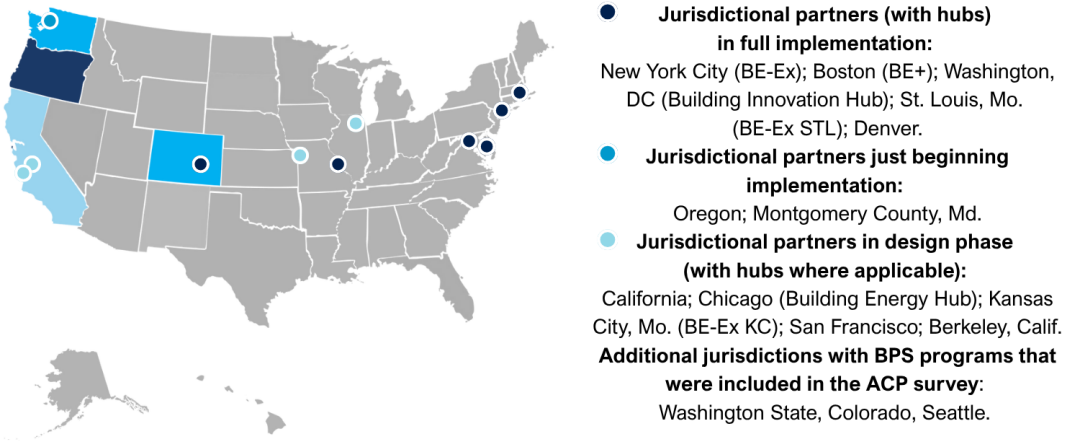

Figure 1. Map of Surveyed Jurisdictions

BPS 101

What is a BPS? Building performance standards (BPS) are an innovative policy approach for building efficiency and decarbonization. A BPS is an outcome-based policy that requires, by specific deadlines, existing buildings of specified sizes and types to achieve quantified standards of measured building performance across one or more metrics—such as energy use, water use, and/or greenhouse gas emissions. The policies often set long-term and interim targets to provide regulatory certainty and provide multiple compliance pathways to offer flexibility, especially for affordable housing or other priority building types.[3]

Where have BPS policies been adopted? As of June 2025, BPS policies have been adopted in fifteen U.S. jurisdictions (and two Canadian jurisdictions), and over thirty more have committed to advance them through the National BPS Coalition.[4]

How are BPS policies structured? BPS compliance rates, barriers, and pathway options depend in part on policy structures, so it is useful to outline the key BPS policy structures in place:

1. Recalculated: The oldest BPS policy structure, where performance targets are set only for the first compliance deadline based on a percentile performance by building type, and then set for the next cycle based on updated performance data. In theory, performance expectations will 'ratchet' over time but the degree of improvement is difficult to predict. This approach increases flexibility, but provides little long-term certainty either to owners needing to make longer-term capital plans, or to governments who need to know the final savings to expect.
   (Used in: Washington, DC, St. Louis, MO.; Oregon; Washington + ASHRAE 100-2024)
2. Fixed Limits: This BPS policy design sets fixed performance targets for both interim and final compliance, by building type, which decline in a stepwise fashion over time by building type, meaning every building of the same type must hit the exact same performance metric at the end of each compliance cycle. This approach is easier for owners to understand and to apply across a portfolio, but setting appropriate targets is quite complex and results in a more inflexible policy.
   (Used in: New York City, Boston, Seattle)
3. Trajectory Approach: In this method, a fixed target is set for each building type for the final compliance year, and then each building has its own straight-line trajectory to that target which determines its interim compliance targets. This approach provides long-term certainty, reduces the need for poor performing buildings to make deep abrupt retrofits, and more equitably distributes the level of effort required of building owners. However, it is more complex to understand and implement.
   (Used In: Denver, Montgomery County, MD + IMT's 2021 Model BPS Ordinance).

Why does this matter for alternative compliance? Alternative compliance pathways offer flexibility for buildings that cannot meet the standard performance target on the set timeline, and also offer a way to encourage cost-effective, strategic improvements that set buildings up for success. A lot of the models for ACPs and building performance planning discussed in this report are focused on long-term decarbonization towards final targets. However, this approach does not match as naturally with a recalculated BPS, where there *are* no long-term targets.

Current State of BPS Alternative Compliance

Building performance standards offer a key lever to reduce energy use and carbon emissions and meet carbon goals. Beyond the energy and carbon emission benefits, BPS can also improve building conditions to improve comfort and health of occupants, create job opportunities for local workers, and help building owners and tenants save energy on utility bills. Passing and implementing the policies offers opportunities for creating economic growth, improving the health and wealth of community members, and ensuring institutions are part of the solution for reducing carbon emissions and energy use.

Although the benefits from BPS are vast, there is a need for thoughtful design and implementation to both avoid adverse impacts on the community or building owners and help improve compliance. The remainder of this section highlights current progress towards compliance in a few jurisdictions, and common barriers around compliance with BPS.

Estimated compliance rates

Building on research first done last year, we examined progress towards BPS compliance in the five U.S. jurisdictions furthest along in their initial implementation cycle: New York City, St. Louis, Denver, Boston, and Washington DC. By comparing the most recently reported energy or greenhouse gas intensities of buildings in public benchmarking data against the published building type targets for each city, we can estimate how many buildings have already reached the required BPS targets. This data does not reflect approved compliance, nor does it reflect buildings that will be in compliance via alternate pathways. It also is not looking at whether buildings have reduced usage since passage of the law, whether or not they are still above the target.

As shown in Table 1, progress towards compliance varies significantly by city, ranging from 30% of buildings in compliance with the initial target in Denver to 76% compliance in New York City. Boston is the furthest towards the 2030 targets at 23% compliance, to Denver's 20% and New York City's 14%. DC and St. Louis use the recalculated model and so have not established 2030 targets. Note that these ranges reflect the varying stringencies of each city's targets as much as they reflect implementation success.[5]

[5] For more discussion on this finding, and how the targets were set in each jurisdiction, see:

Marshall Duer-Balkind, et. al., "Lessons from the Ground: Implementing Building Performance Standards," in *Proceedings of the 2024 ACEEE Summer Study on Energy Efficiency in Buildings* (Washington, DC: American Council for an Energy-Efficient Economy, 2024), https://imt.org/resources/lessons-from-the-ground-implementing-building-performance-standards/.

Table 1. Progress Towards Compliance Targets
(estimated using the latest available benchmarking data)

	Washington, DC	New York City	St. Louis	Boston	Denver
Policy structure	Recalculated	Fixed Limit	Recalculated	Fixed Limit	Trajectory
Target year(s) and percentile used for target setting	2026: 50th	2024: 75th	Target year(s) and percentile used for target setting	2026: 50th	2024: 75th
Percentage of buildings meeting initial compliance target in latest available data	73%	76%	55%	48%	35%
Percentage of buildings meeting 2030 targets in latest available data	Only 2026 targets set	14%	Only 2024/2026 targets set	23%	22%
Metric type	ENERGY STAR Score / Source EUI	GHGI	Site EUI	GHGI	Site EUI

EUI=Energy Use Intensity
GHGI=Greenhouse Gas Intensity

For more details on our compliance findings, see Appendix B.

BPS implementation challenges

Although only initial estimates, the above data illustrates that there is still room for increased compliance across most cities before the first compliance cycle and definitely before 2030. Understanding compliance implementation challenges can inform what is needed from an alternative compliance pathway as well as what is needed for additional training and resources to support building owners. We collected common barriers for compliance from the hubs and local organizations in associated jurisdictions. We summarize the barriers below:

- **Challenges with financial cost to comply:** Costs to upgrade buildings can be significant. In addition, for many buildings, the compliance cycles do not align with capital or refinancing cycles, making it more difficult to comply within the set timelines.
- **Availability of incentives and financing options:** There is a general lack of incentives and financing options for buildings. Organizations identified as top needs resources that explain how to stack incentive or financing programs, and larger incentives for under-resourced buildings. In addition, one local organization shared that many affordable housing buildings will get rejected for loans because they cannot show that they are a strong financial investment.
- **Workforce available to support planning and retrofits:** It can be difficult to find professionals to support planning for retrofits, and implementing retrofits. A couple of organizations highlighted that there are energy efficiency scams or unqualified contractors bidding for work, meaning there is a need for help finding quality contractors.
- **Awareness and knowledge:** There remains limited awareness and understanding of BPS, including how to comply and on what timelines. Hubs highlighted this as a top obstacle, and cited a need for additional education and outreach as well as more resources to help building management/owners create plans to reach BPS targets.

In addition to barriers, there are concerns over how to best implement a BPS to ensure community members are receiving the benefits of the policy without adverse impacts. Two key implementation challenges are below:

- **Concerns over rent increases:** As BPS encourages improvements to buildings, there is a concern that landlords or property managers will use that as a reason to increase rents. Local organizations focused on multifamily housing highlighted pairing BPS with strong tenant and rent protection policies as a key need.
- **Knowledge and awareness for tenants of legal protections:** Several organizations highlighted that tenants must know of legal protections to leverage them. In New York City for example, there are tenant protection rules in place, but it is the responsibility of the tenants to recognize that rent is being increased illegally and reach out to report. Similarly, in Boston, there is a session for tenants each year and tenants can also petition to dissolve a flexibility measure. However, it requires that tenants are aware of these opportunities and can follow-up on landlord commitments.

Not all of these barriers are directly related to alternative compliance pathways and increased flexibility; however, adding options for additional time to comply or an adjusted target could help

address some of the financial and technical barriers noted above. The next section gives an overview of how existing policies currently approach offering alternative compliance pathways and some barriers or challenges with the current approaches.

Existing Alternative Compliance Pathways

Categorizing and defining compliance pathways

This section provides a high-level overview of the current structure of ACPs in existing policies and rules. Building on IMT's work with every jurisdiction that has a BPS in North America, and an ongoing study by PNNL, we surveyed ACPs across 10 local and state jurisdictions.[6] The jurisdictions include seven jurisdictions that are partners on the BPS PATH project (Boston; Denver; the District of Columbia; New York City; the State of Oregon; St. Louis, MO; Montgomery County, MD) along with three other BPS programs looked at by PNNL (the State of Colorado; Seattle; the State of Washington). For more information on individual ACPs offered in each of the 10 surveyed jurisdictions, see Appendix C.

The actual names given to ACPs are locally-determined, and can be a source of confusion for building owners and service providers working across different markets: jurisdictions call similar ACPs different things, or use the same names for fundamentally different pathways. Thus, we needed to provide a common categorization—which we developed based on initial work completed by PNNL staff.[7] Our teams found that every pathway is defined by four categories of elements, each of which has multiple options within them:

1. **Eligibility criteria:** Who can use this pathway?
2. **The alternative:** What adjustments to the standards, timeline, and/or program structure are provided under the pathway?
3. **Compliance application**: How does a building owner apply for the pathway and become compliant under it? What sort of assessment is needed?
4. **Pathway implementation:** How does the jurisdiction verify a building is staying on the pathway over time, and what reporting is required?

[6] Anna Brannon, "Alternative Pathways" (Virtual lecture, ASHRAE Standing Standard Project Committee 100 Working Group 4 Meeting, May 8, 2025).

[7] Brannon, "Alternative Pathways."

Common options and variants within these groups are described below, and summarized in Figure 2, below. Every pathway is defined by the combination of one or more options within each of the four elements.

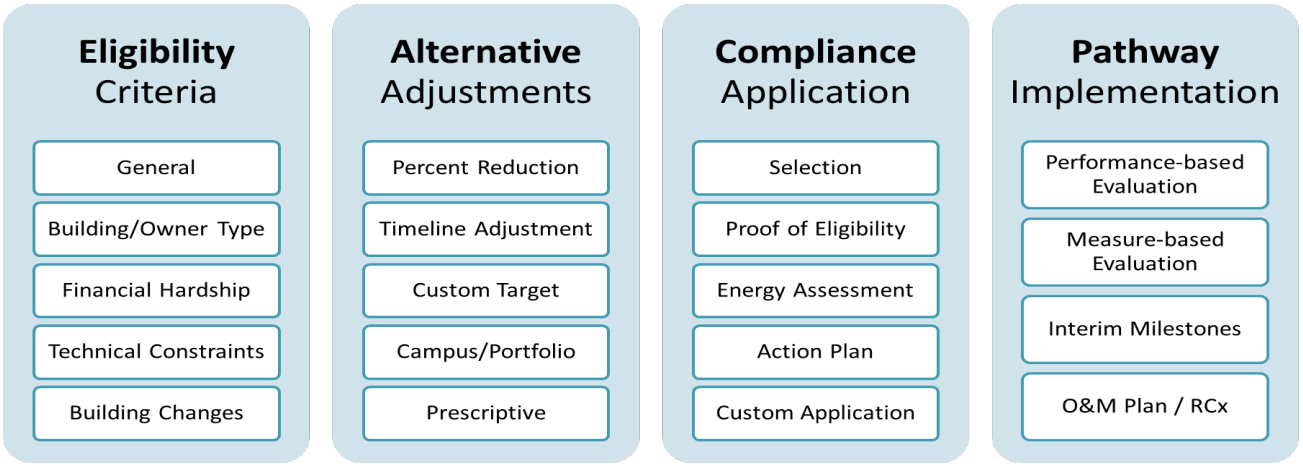

Figure 2. Common Categorization of ACPs

Eligibility criteria

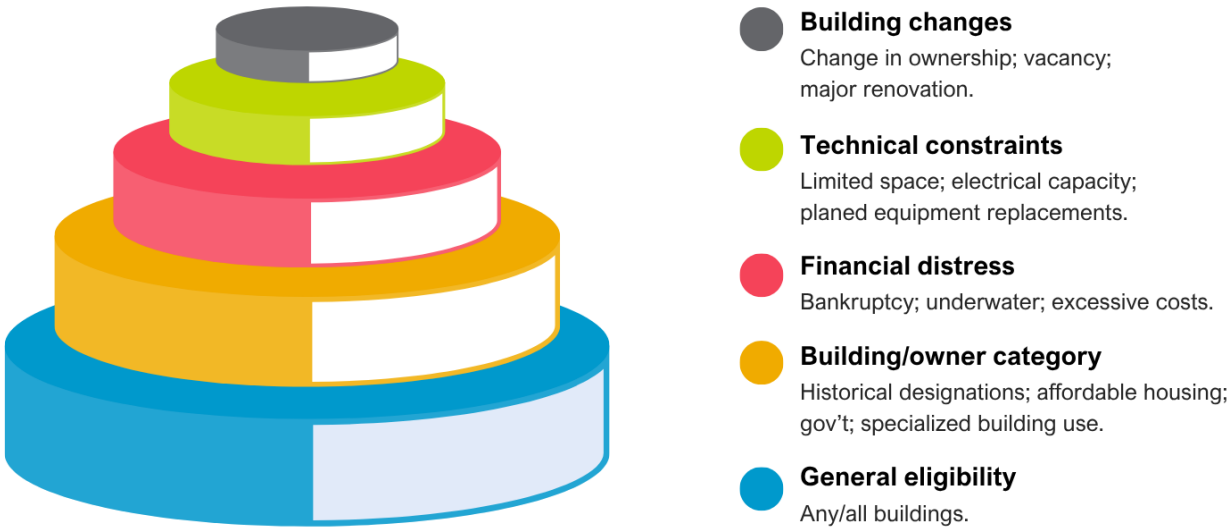

Figure 3. Eligibility Criteria

Under existing policies, building owners may pursue an ACP when specific circumstances make it challenging or impractical to meet the standard BPS requirements.
Eligibility for an ACP varies by jurisdiction, but common eligibility reasons include:

- **General eligibility:** Some jurisdictions make some pathways available to all buildings, to provide additional simplicity and flexibility, or to support alignment with capital improvements
- **Building/owner category:** Some ACPs apply if the building can verify that it meets certain building category definitions, including:
    - **Historical designations:** Historical buildings may be limited in what modifications can be made to them while still maintaining the historic status. Exemptions may be made to lower requirements to what can be made while still respecting historic preservation requirements.
    - **Affordable housing or under-resourced buildings**: In multiple policies, showing that the building is under-resourced or is an affordable housing provider qualifies the building for alternative pathways. This often overlaps with financial hardship.
    - **Specialized building use:** Buildings with unique operational needs, such as hospitals or aquariums, may have higher energy demand that cannot be easily reduced without compromising their functionality.
    - **Campus or portfolio:** Owners of multiple buildings can sometimes apply for a single standard to allow better coordination across properties. For example, Boston's BERDO offers a specific path for portfolios and DC offers a similar path for campuses.
    - **Government ownership:** Some jurisdictions offer alternative paths specific to government building portfolios.
- **Financial hardship**: Buildings in financial hardship or distress usually need additional flexibility to meet targets, and may also qualify for short-term exemptions.
- **Technical constraints:** Buildings with limited space or needs for significant electrical or energy service upgrades may benefit from alternative pathways. The lack of space may require more innovative approaches while an electrical or energy service upgrade may require more time before energy reductions can be made.
- **Substantial planned renovations or change of use, owner or occupancy:** Buildings that will be substantially changed following improvement projects may need to realign targets following completion of renovation. Similarly, if the building has low occupancy, a change in building type, or a change in owner, policies often offer the option for an extension request.

Alternative adjustments

The standard pathway in almost all BPS is based on meeting the performance standard; jurisdictions with multiple performance metrics either require meeting all the metrics, or allow the owner to select the metric. An Alternative Compliance Pathway, is thus most fundamentally

defined by what alternative adjustments are available under the pathway. The major types of adjustments are presented below:

- **Percent reduction**: Simplifies the standard for a building by just requiring a reduction in energy or emissions by a predefined percentage. This is sometimes referred to as a second option in the standard pathway—including in DC and Colorado.
- **Timeline adjustment**: Allow building owners to request an extension of the time to meet the standard, over varying time frames:
    - **Short-term extension:** An extension of one to three years, based on the recognition that building retrofits, like all construction projects, often face unforeseen delays.
    - **Longer-term timeline adjustment for equipment life:** A building seeking to align compliance with equipment end-of-life to avoid financial hardships may be able to adjust their compliance timeline.
    - **Longer-term extension for affordable housing**: The regulated affordable housing sector has unique capital constraints (for example, the 15-year finance cycle for LIHTC properties), and are often eligible for longer-term extensions until they can access new capital.
- **Custom target:** A tailored performance target that accounts for the building's specific circumstances. This ACP either involves the building owner proposing alternate targets, or proposing a list of measures, which effectively result in a new target. The customized target may be only for an interim compliance year, or for the final year BPS target. Custom targets can be created based on:
    - **Unique building types:** Customized interim and final targets for unique building types where there the standard targets may not make sense (e.g., an aquarium)
    - **Financial feasibility:** A custom target based on what measures pass a government-determined threshold for cost-effectiveness, according to an energy audit and lifecycle cost assessment. Some building types, like affordable housing, may have more generous thresholds; e.g., shorter payback periods.
    - **Technical feasibility:** In theory, a custom target could be based on technically feasible energy efficiency investments that can be made, but no jurisdiction currently offers such a path to all building types.
- **Campus/portfolio**: Allows portfolios of multiple buildings to comply as a group, offering flexibility to focus on largest impact interventions first while still working towards meeting the overall reduction goals.[8] Major variants include:

[8]All jurisdictions let building owners of mixed-use buildings benchmark with a blended mixed-use target. Similarly, all jurisdictions let owners of multiple buildings with shared systems benchmark as a single building/campus, in this case, a blended target is created just as with a mixed-use building. By itself, these are not ACPs.

    - **Campus targets and plans**: Campus-specific options are offered by most jurisdictions; some jurisdictions limit the campus option to universities or medical centers; others simply require geographic continuity. Campuses often share district energy systems and have the greatest opportunities for efficiency at scale. Because changes to district systems take time, campuses with these systems must often conduct long-term decarbonization planning as part of the ACP.
    - **Portfolio-level compliance:** Allows the use of a single blended target for all buildings with a single owner. Very few jurisdictions offer this option, due to the complexity of ownership in real estate, and fairness concerns.
    - **Portfolio-level compliance (government only):** Some jurisdictions allow portfolio compliance for government buildings, either as government-wide emissions reductions, or per building type (e.g., all schools).
- **Prescriptive measures:** Require buildings to install a list of pre-defined measures rather than meet a standard.

Table 2 summarizes which of the ACP classifications each jurisdiction is using. As true portfolio options are rare, they have been split apart from campuses in the table. See Appendix C for more details on each jurisdiction (which often use different ACP names).

Table 2. Overview of Compliance Alternatives by Jurisdiction

	Percent Reduction	Timeline Adjustment	Custom Target	Campus Target	Portfolio Compliance	Prescriptive Measures
Boston		X	X	X	X	
Colorado	X[9]	X				
Denver	X[10]	X	X[11]	X		X[11]
Montgomery County, MD		X	X			
New York City		X	X		X[12]	X[13]
Oregon			X	X		
Seattle	X[10]	X	X	X	X	X
St. Louis, MO	X	X	X			
State of Washington			X	X		
Washington, DC	X[9]	X	X	X		X

[9] These policies treat the percent reduction pathway as another standard pathway, not an ACP.

[10] These are primarily available for manufacturing, agriculture, and industrial buildings; percent reduction is also used as the standard target for specialized building types where a target was more difficult to set.

[11] This is not considered an alternative compliance pathway for Denver but rather an adjustment.

[12] Eligibility limited to local government buildings.

[13] Used only for buildings not covered by GHGI limits (e.g., affordable and rent-controlled housing).

The Building Performance Action Plan

One of the most promising solutions for buildings facing real challenges in meeting the targets is a Building Performance Action Plan (BPAP). Per IMT's Model BPS Law and BPS Implementation Guide, BPAPs provide flexibility to owners facing challenges in meeting their designated interim or final performance standards, enabling owners to submit customized improvement plans for their buildings for consideration by the department overseeing BPS enforcement.[14]

BPAPs are intended to only be permitted in extenuating circumstances, and constitute a binding agreement between the owner and jurisdiction. BPAPs provide a better option than exemptions or fixed extensions by offering owners flexibility, while still advancing emissions and economic and social goals. BPAPs must include an energy audit report and proposed energy conservation measures or capital improvements along with a detailed implementation timeline. BPAPs can provide flexibility by extending compliance deadlines and/or adjusting the building's performance requirements. In exchange for these accommodations, the enforcement department may request that the owner commit to additional actions deemed beneficial to the community. An owner is deemed compliant with the BPS as long as they abide by the terms of the plan.[15]

IMT's model BPS law and guide treat the BPAP as a distinct ACP, but in practice, an BPAP ACP can involve any or all of the following:

1. A timeline adjustment, shifting interim and/or final standard dates
2. Adjusting what has to be done to meet the target–which effectively means creating a custom target
3. Changing how the BPS is enforced

BPAPs are also called a variety of things, including a Hardship Compliance Plan in Boston, a Building Performance Improvement Plan in Montgomery County, MD, a Decarbonization Compliance Plan in Seattle, and an Emissions Reduction Plan Report in New York.

In our research, we have found that BPAP implementation does face challenges, some unique, and some in common with outcome-based codes, as discussed below. Nonetheless, this planning process is important, and critical to standardizing how ACPs work in practice. The second part of this report focuses on resources that can help with that task.

[14] Institute for Market Transformation. Model Law for Building Performance Standards," Institute for Market Transformation, last modified January 21, 2021, https://imt.org/resources/model-ordinance-for-building-performance-standards/.

[15] Cliff Majersik and Zachary Hart, *Putting Policy in Action: Building Performance Standard Implementation Guide* (Washington, DC: Institute for Market Transformation, 2022), https://imt.org/resources/building-performance-standard-implementation-guide/.

Compliance application

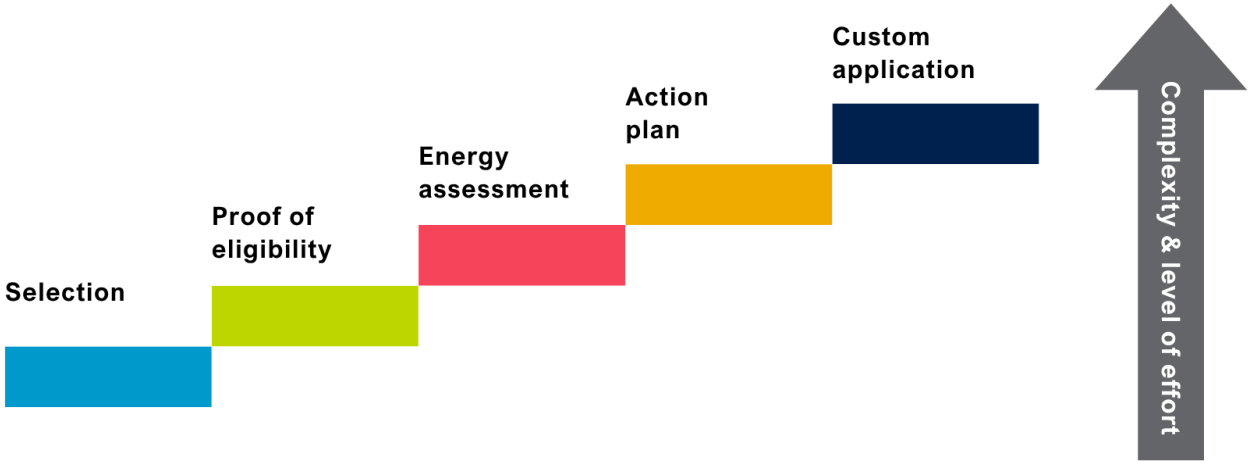

Figure 4. Compliance Application Process Options

To select an alternative pathway, buildings must take an action to select the pathway. Common options include the following, ordered by increasing complexity and preparation needed:

- **Selection:** Some ACP options that are open to all buildings, such as a percentage reduction, or a blended portfolio target, may only require that the building owner "select" that pathway for the building(s). In general, there is no 'application' or opportunity for rejection—though some jurisdictions set deadlines for selecting an alternative pathway, with jurisdictional approval needed to select that pathway thereafter.
- **Proof of eligibility:** ACPs with eligibility criteria, such as those for affordable housing, usually require the building owner to apply for the pathway and demonstrate they qualify. Shorter-term timeline adjustments, like temporary exemption applications, may require a justification on why the ACP is needed—sometimes including energy audit documentation.
- **Energy assessment:** Many pathways require an energy audit, typically an ASHRAE 211 Level II audit, along with cost analysis, as part of either documenting eligibility (e.g., hardship), or laying out the actions they will take on the pathway.
- **Action plan:** For many pathways, a more complete implementation plan must be undertaken, either a short-term action plan or longer term strategic retrofit plan. These sorts of plans, which often are similar to a BPAP, illustrate how the owner or manager will meet the spirit of the BPS even without hitting the standard target on the default timeline. The plan allows property owners to propose a custom improvement plan that outlines strategies and actions to reduce energy or emissions with performance levels and timing that differ from the requirements of one or more compliance targets. This is

often required for significant target adjustments, new timelines, or to cover portfolios or campuses. The jurisdiction usually has a process for reviewing the plan, and may request changes or even reject the proposed plan.

- **Custom application:** Some jurisdictions have processes for buildings to propose a custom ACP that meets the same performance goals as the standard compliance path, for the review and approval or rejection by the jurisdiction. Once approved, these custom plans may be available to other buildings in similar situations. The few approved custom ACPs that IMT is aware of all involve one or more of the adjustments listed above.

BPAPs and other custom compliance pathways often rely on a "binding agreement," wherein what the building owner commits to is linked to the property deed such that the requirements transfer if the property is sold. However, since lawyers in several jurisdictions have determined that a 'binding agreement', named as such, could trigger contracting rules, often a "notice letter" or "decision letter" is issued.[16]

Pathway implementation and verification

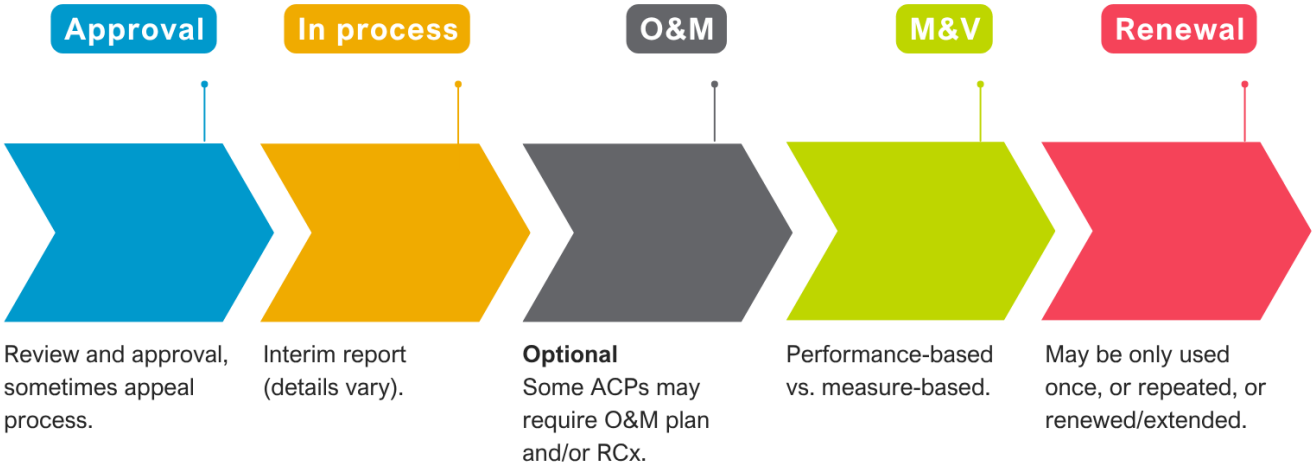

Figure 5. Common Steps in the Pathway Implementation and Verification Process

In general, verification at the end of the pathway is based on one of two things:

- **Benchmarking and supplemental reporting:** Pathways that change the target—such as a percent reduction, portfolio-level compliance, or some custom target paths—may rely on benchmarking data verified by a third-party to demonstrate that the required performance improvements were achieved. Often, supplemental reporting is needed on actions taken, or in the case of campus/portfolio approaches, the buildings included.

[16] Duer-Balkind et al., "Lessons from the Ground."

- **Measure-based compliance**: While a BPAP may involve the creation of a customized target or timeline, tracking ongoing compliance under a BPAP often ends up looking more like a customized prescriptive measure list. Compliance may be measured according to completion of the measures outlined in the BPAP based on annual reporting; so long as the work is done, the building is still in compliance, regardless of whether the actual savings match what was predicted in the engineer's study

In addition, pathway implementation may involve:

- **Interim milestones:** Most complex ACPs require regular reporting, and milestone check-ins, to demonstrate performance improvements to date, what measures have been implemented to date, and any changes that might be anticipated.
- **Operations and maintenance plan/retrocommissioning:** Some compliance pathways include a requirement for an operations and maintenance plan, and may require the completion of recommissioning, retrocommissioning, or re-tuning.
- **Renewal:** Depending on jurisdiction rules and eligibility criteria, some ACPs may be able to be repeated or renewed; in other cases, they may only be selected once.

When an ACP is not an ACP

There are additional forms of compliance flexibility not discussed above because they do not represent alternative *pathways*. Confusingly, some jurisdictions do classify these scenarios as alternative compliance pathways, in part because their authority to offer this flexibility often rests in their more general authority to create custom ACP options.

The 'other P': alternative compliance payments

Some jurisdictions also allow for payments in lieu of compliance or as consequence of non-compliance. While there are a few jurisdictions that have both penalties/fines *and* payments in their BPS regulations, in most cases, the term "payments" is used in place of more punitive terms for a few strategic reasons:

- **Alignment of incentives between landlords and tenants:** under most commercial leases, "fines" or "penalties" cannot be passed through to tenants, but fees can be. By instead using terms like "fee" or "payment," under most leases, landlords can pass through to commercial tenants an appropriate portion of costs proportional to tenants' contribution to building performance.[17]
- **Reduce legal risks:** the provision of a fee-based compliance path allows building owners to choose to comply without upgrades, which can be helpful for reducing legal challenges.

[17] Majersik and Hart, *Building Performance Standard Implementation Guide*, 56.

- **Fund programs:** Many jurisdictions have elected to use the money collected from non-compliance payments to create a special fund to be used to support owners in complying with BPS, especially targeted at affordable housing or other property types that face additional barriers to compliance. City charters are more likely to allow the placement of fees than fines into such funds.

Despite these benefits, alternative compliance *payments* are not considered an alternative *pathway* for the purposes of this report because they do not result in any energy or GHG emissions savings.

Standard adjustments to targets

The Environmental Protection Agency (EPA) has produced standardized target adjustments for specialized use cases like swimming pools and data centers, as well as non-standard occupancy hours, based on factors derived from the ENERGY STAR® Score models.[18] ASHRAE 100 also includes tables with target multipliers for buildings with non-standard operating hours–though the approach primarily helps buildings that operate 24/7, which are eligible for a 30% to 110% increase in EUI targets, depending on building type.[19]

Baseline adjustments

Jurisdictions with BPS structures or compliance pathways that rely on comparison to a baseline often offer an option to adjust that baseline under certain circumstances. For example, DC offers 'baseline adjustments' for buildings whose energy use shifted due to persistent higher ventilation loads initially adopted in response to the Covid-19 pandemic.[20]

Alternative metrics

Some BPS policies offer more than one metric for compliance. If buildings must meet multiple metrics, that is just the standard process in that jurisdiction. If a building has the option to pick between two different metrics (for example, EUI *or* GHGI), the alternative could be considered an ACP–though if every other aspect of compliance is unchanged, it may not constitute a new pathway. Regardless, this is presently very uncommon, and we have not focused on it in this report.

New construction

Jurisdictions that use baselines for compliance must also define procedures for measuring compliance for newly constructed buildings. While some assign distinct targets or pathways that

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[18] ENERGY STAR, *EPA Recommended Metrics and Normalization Methods for Use in State and Local Building Performance Standards* (Washington, DC: U.S. Environmental Protection Agency, 2022), https://www.energystar.gov/sites/default/files/tools/BPS-Metrics_Recommendations_v7.pdf.

[19] ASHRAE, *ANSI/ASHRAE/IES Standard 100-2024: Energy and Emissions Building Performance Standard for Efficiency in Existing Buildings* (Peachtree Corners, GA: ASHRAE, 2024).

[20] District of Columbia Department of Energy and Environment (DOEE), *Building Energy Performance Standards (BEPS) Compliance and Enforcement Guidebook for Compliance Cycle 1*, version 1.1 (Washington, DC: Government of the District of Columbia, 2023), https://dc.beam-portal.org/helpdesk/kb/BEPS_Guidebook/.

resemble ACPs, these are typically developed through separate code or policy processes. Despite the fact that all new buildings become existing buildings upon completion, often the interaction of BPS and energy codes is not well considered before adoption. This may lead to mis-alignment.[21] New construction pathways are not a focus of this memo but may be revisited as part of future BPS–code alignment efforts.

Challenges and considerations

Although ACPs are useful and necessary tools to achieve the goals of a BPS, they also have the potential to compound the complexity of a BPS. ACPs may require thoughtful planning to alleviate administrative burden, challenges related to education and awareness, and issues with compliance and enforcement.

Challenges by stakeholder group

Government agencies

- Increased flexibility can result in a more complex application, and may require additional support from the BPS administrative agent to facilitate completion. The more pathways available, the greater the administrative burden may be.
- ACPs are meant to be flexible, but in practice they may be more challenging due to misalignment among staff in terms of how to implement a pathway.
- Agency staff may lack the technical skills and experience needed to properly evaluate documentation submitted as part of ACP application, including energy audits and BPAPs.
- Conversely, staff may apply excessive rigor in evaluating audits and other documentation, resulting in premature rejections of applications.
- Aligning documentation requirements with industry standards, such as ASHRAE Standard 211, can theoretically standardize reporting requirements.[22] However, in practice, many energy auditors work off their internal procedures and the ASHRAE green book, which may not always align perfectly with the letter of ASHRAE Standard 211-2018.[23] Standardized reporting tools, like PNNL's Audit Template, can also help reduce administrative effort.[24]

[21] Amy Boyce, Kim Cheslak, and Jim Edelson, "The New Challenge for New Construction: The Intersection of Energy Codes and Building Performance Standards," in *Proceedings of the 2022 ACEEE Summer Study on Energy Efficiency in Buildings* (Washington, DC: ACEE, 2022), 9: 347-355.

[22] ASHRAE, *ANSI/ASHRAE/IES Standard 100-2018: Energy Efficiency in Existing Buildings* (Peachtree Corners, GA: ASHRAE, 2018).

[23] ASHRAE, *Procedures for Commercial Building Energy Audits*, 2nd ed. (Peachtree Corners, GA: ASHRAE, 2011).

[24] U.S. Department of Energy, *Audit Template: A Tool for Streamlining Compliance in Building Performance Standard* (Washington, DC: U.S. Department of Energy, 2023), https://www.energycodes.gov/sites/default/files/bps/2023-11/BPS_and_Audit_Template_Tool_Guide.pdf.

Building owners

- BPS laws are new and not well understood, and this is even more true for ACPs. This increases the need for outreach and education materials to improve awareness and knowledge of how to use ACPs.
- There are few ACPs success stories for building owners to reference, so it may be difficult to understand the steps to creating and getting a plan approved.
- Specialized knowledge, or the use of a consultant, may be necessary for building owners to complete applications that require detailed technical information.
- The complexity of ACPs means many building owners need significant time and resources to understand how to comply.
- ACP rules, documentation requirements, and compliance timelines vary widely across cities and states, making it harder for organizations working across jurisdictions to understand and effectively comply.

Service providers

- In a 2024 survey of service providers across five major markets, IMT found that the top BPS concern involved workforce constraints, such as the ability to hire enough staff to meet anticipated demand; liability concerns were the second highest concern.[25]
- As building owners are required to do audits, there is often a 'race to the bottom' with auditors producing inexpensive audits that fail to meet proper standards, accurately reflect the building baseline, or recommend proper EEMs.
- In both Denver and Montgomery County, Md., service providers have commented that a Custom Target ACP represents a liability risk, as it was essentially basing a building's compliance determination on a professional engineer's educated opinion of what was achievable. The results of the audit or plans for retrofitting are estimates governed by best engineering practices, but the ultimate outcome of the operations of the building or the contractor's implementation of the energy efficiency measures is out of the engineer's control in many cases; yet if the building does not achieve the final target that the PE set, the building owner could nonetheless potentially sue the engineer. This feedback from engineers led Denver to initially not offer a 'custom target.'[26] However, in response to direction from leadership and stakeholder pressure, in February 2025, Denver introduced a custom target option that will be enforced based on measured performance, with the option to review the custom target itself to assess if it needs to be adjusted before enforcement would happen.
- In addition to adjusting expectations on both sides, there may be a role for liability insurance providers as BPS policy implementation matures.

[25] Duer-Balkind et al., "Lessons from the Ground."

[26] Duer-Balkind et al., "Lessons from the Ground."

Challenges with pathway designs

Percent reduction: cumulative impact, and counter-productive actions

One obvious challenge with a percent reduction approach is that successive percent reductions may not deliver either the savings or flexibility desired. On the savings front, a building that successfully reduces its energy use 20% every five years for 15 years does not reduce energy use by 60%, but only 49%. But this is still no light lift. Achieving that level of savings may require a level of effort equivalent to deep energy retrofit, defined by DOE as a 40%+ reduction in EUI.[27] The trend of reduced savings over time, along with the inherent 'regression towards the mean' phenomenon inherent in any recalculated BPS model, can be seen in modeling of projected BPS impact in Washington, DC. The model showed that savings tapered off over multiple percent reduction cycles.[28] In short, while a percent reduction ACP offers good short-term flexibility, offering it to all buildings in perpetuity may undercut jurisdictional climate goals.

An additional risk of a percentage reduction pathway is the risk of counter-productive actions that do not support long-term compliance. St. Louis offers a "narrow the gap" pathway for the initial cycles, but this merely defers action, and the building will need to meet the full EUI target in subsequent cycles–yet not all building owners truly understand this, and may be lulled into a false sense of security. Moreover, when offering any sort of percentage-based approach, jurisdictions need to make sure that the building owner is not making short-term changes that will make long-term compliance more challenging. For example, putting in a high-efficiency condensing gas furnace may reduce energy consultation and emissions now relative to baseline, but it may make future decarbonization less cost-effective by locking in higher-emitting technologies.

Prescriptive paths, timeline adjustments and custom targets: reduced energy savings

To allay industry concerns about risk and provide paths to assured compliance, several early BPS laws, including, DC, NYC, and Denver, included prescriptive pathways. But the building owners aren't the only ones who want certainty; policy-makers need certainty too. Balancing these needs has been a challenge. Unfortunately, in practice, the amount of energy a given measure will save varies widely among buildings—especially for poor-performing buildings. New York City's Local Law 97 provides a prescriptive pathway only available to affordable housing buildings with more than 35% rent-stabilized units. The prescriptive pathway requires completion of certain measures specified in the law itself, and further defined in regulations, but neither requires nor provides any assurance of energy savings. In contrast, Denver's

[27] Federal Energy Management Program, "Deep Energy Retrofits," U.S. Department of Energy, accessed June 6, 2025, https://www.energy.gov/femp/deep-energy-retrofits.

[28] Katie Bergfeld et al., "Making Data-Driven Policy Decisions for the Nation's First Building Energy Performance Standards," in *Proceedings of the 2020 ACEEE Summer Study on Energy-Efficiency in Buildings* (Washington, DC: ACEEE, 2020), 9:63-78.

prescriptive options are based on complete electrification of certain systems, and thus deliver more reliable GHG reductions.[29]

Timeline adjustments and custom targets have similar issues, to a lesser extent. A timeline adjustment ensures that overall emissions or energy goals will be met eventually. The custom target and percent reduction make adjustments to account for individual building characteristics and thus reduce savings but still guarantee a significant reduction in energy or emissions.

Customized prescriptive paths and BPAPs: complexity

One way to address the uncertainty around prescriptive pathways is to customize the measures based on building-specific savings. The law that created the first BPS, in Washington, DC, charged the implementing agency with creating a "prescriptive pathway for buildings to achieve compliance by implementing cost-effective energy efficiency measures with savings comparable to the performance pathway." A local Building Energy Performance Standard Task Force meets to provide feedback on the policy. During these meetings, building owner stakeholders strongly argued for the simplicity of a "menu" of options, each with a median savings percentage, that would add up to the 20% site energy savings required by the performance pathway.[30] However, as noted above, no menu-based approach can actually work if the goal is to meet a given performance target for an individual building. NYC's prescriptive path, in contrast, provides a list but does not guarantee or claim any given level of savings. As DC's law required meeting a savings target, DC adopted a path wherein a building owner conducts a Level II energy audit and develops an action plan which selects measures that add up to 25% savings (to provide headroom), but where compliance is then measured based on verified implementation–a process that bears more resemblance to a BPAP.[31]

In general, the pathway was intentionally designed to hold the hand of the owner every step of the way. Unfortunately, less than 30 buildings initially selected the pathway (out of over 800 eligible) and within two years, all had fallen off the prescriptive pathway through failure to submit proper documentation. As a result, as part of a suite of amendments, DC eliminated the prescriptive pathway from future BEPS cycles in 2025.[32] There are important lessons here on the learning curve for the industry and needs for training to ensure proper level of rigor. It is too early to know if the BPAP concept will face the similar challenges with complexity, but it is possible, and this will be a key consideration for the next phase of this project.

Portfolio-level compliance: bounding and fairness

Portfolio-level compliance pathways face practical challenges in defining a portfolio and creating an equal playing field. In corporate real estate, many office, retail, and market-rate multifamily

[29] Nadel and Hinge, *Mandatory Building Performance Standards*.

[30] DOEE. *Building Energy Performance Standards Task Force Recommendations for Rulemaking* (Washington, DC: Government of the District of Columbia, 2020), https://doee.dc.gov/publication/beps-task-force-report

[31] DOEE, *Compliance and Enforcement Guidebook*, referenced in Duer-Balkind et al., "Lessons from the Ground."

[32] DC Law 25-307 (2024), https://code.dccouncil.gov/us/dc/council/laws/25-307.

buildings are owned by an LLC whose only asset is that building, and that LLC is in turn owned by the property's true owner. Sometimes, ownership is even securitized, making determining a single owner and decision-maker impossible. How, then, does the jurisdiction determine a "portfolio?" They can let owners self-identify or they can require the portfolio to have a common owner as listed on the tax record, and thus effectively limit the portfolio to institutional nonprofit owners. The second challenge is one of fairness. By definition, a portfolio approach provides flexibility to large, well-resourced organizations that smaller organizations cannot match. It my also allow owners to continue to invest heavily in commercial centers and wealthy neighborhoods while neglecting buildings in other parts of the city. For both of these reasons, while most jurisdictions offer a campus-level compliance pathway, very few jurisdictions offer pathways for geographically-distinct portfolios.

Existing Frameworks with Lessons for BPS Alternative Compliance

Outside of BPS regulations, a number of resources around building energy performance planning exist and offer a guide for how to standardize and simplify the ACP process for BPS. The bulk of this section focuses on strategic retrofit frameworks that aim to move beyond energy audits and short-term improvements into a long-term building planning process, including major items to consider for creation of model ACP framework. First, however, we review relevant industry standards and certifications.

Industry standards and certifications

A number of BPS policies and pathways reference ASHRAE standards. In response to stakeholder feedback, we also looked at the role of certification programs.

ASHRAE 100

While it began life as a voluntary system for building owners to manage and reduce energy use in existing building portfolios, in 2024 ASHRAE updated the title, purpose, and scope of ASHRAE Standard 100 to focus on BPS. The default structure of ASHRAE 100 creates a loop where a building that does not meet the standard must undertake energy efficiency measures and emission reduction measures, and if the resulting savings are insufficient to meet the standard, they do so again. This approach makes sense for a voluntary program; it is more challenging when non-compliance has consequences. While Washington and Oregon's implementation of Standard 100 does an off-ramp via compliance option where buildings do not need to commit to measures that do not meet financial investment criteria, the payback window is only five years (these policies do not present this option as an ACP, but if does functionally fit within the "custom target" alternative). The Standard 100 committee (formally Standing Standard Project Committee (SSPC) 100) has convened internal working groups to examine adding more compliance pathways, and to continue to iterate on targets.

ASHRAE 211

As noted above, many ACPs include an ASHRAE Level II energy audit, compliant with ASHRAE 211-2018, as part of the compliance path. Some emerging implementation challenges are discussed in the Challenges section above—most notably an apparent disconnect between the rigor of Standard 211-2018 and common audit industry practices. SSPC 211 is working on the standard to build out a decarbonization assessment, which will bring substantial additional value—though as discussed below, as assessment is not the same as a full decarbonization planning exercise.

ISO 50001

ISO 50001 is a global standard for energy management systems—defined as not just a software tool, but a process for integrating energy management and savings pursuit into business operations, systems and plans. As such, it might appear superficially similar to the original use of ASHRAE 100 and have similar applicability to BPS. However, in practice, the value of ISO 50001 is the focus on continuous optimization of organizational operations to ensure targets are met, versus guidance to set building-specific targets. DOE developed the ISO 50001-ready program to help make the framework more accessible, which we discuss more below in relation to performance planning implementation.[33]

Green building certifications

Green building certifications (GBCs) for existing buildings—such as LEED O+M, EnerPHIT, or Enterprise Green Communities—are notably absent from all existing BPS ACPs. There are a few reasons for this. First, jurisdictions generally prefer to maintain control of the process and not outsource compliance to a certification. Second, certifications would need to have comparable outcome-based requirements. In practice, most GBCs usually require higher levels of energy/emissions performance than existing BPS, handle renewable energy differently, and may use different metrics entirely. Some jurisdictions do see potential value in net-zero energy certifications as a backstop, but have not yet tied regulations to them.[34]

ENERGY STAR Recognition Programs

While all BPS programs rely on ENERGY STAR Portfolio Manager for reporting and tracking performance, no ACP currently leverages ENERGY STAR certifications. Washington, DC was the first jurisdiction to adopt a BPS, and is the only BPS that uses the ENERGY STAR score for its performance metric–a 1-100 score representing how a building performs relative to comparable buildings based on regularly updated datasets; buildings with a score of 75 or above are eligible for certification. ENERGY STAR scores models are regularly updated to ensure they make fair and appropriate adjustments for how the building is occupied and used.[35] As a result, the ENERGY STAR Score maximizes flexibility, at the cost of reduced certainty of what future score targets will be. However, when it comes to BPS policies, there has been increasing recognition that long-term certainty is far more important. All BPS policies other than Washington, DC use EUI and/or GHGI, and EPA recommended the same in 2022 guidance.[36]

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[33] Better Buildings Challenge."50001 Ready Program," U.S. Department of Energy, accessed June 9, 2025, https://betterbuildingssolutioncenter.energy.gov/iso-50001/50001Ready.

[34] For discussion on how DC's BEPS Task Force evaluated green building certifications, see DOEE, *Task Force Recommendations*, 2020.

[35] ENERGY STAR, "Portfolio Manager Technical Reference: The ENERGY STAR Score," last modified August 24, 2018, https://www.energystar.gov/buildings/tools-and-resources/portfolio-manager-technical-reference-energy-star-score.

[36] ENERGY STAR, *EPA Recommended Metrics and Normalization Methods for Use in State and Local Building Performance Standards*.

In 2024, EPA launched the ENERGY STAR NextGen™ as an optional higher-tier certification to recognize energy efficient low-emissions buildings. To qualify, a building must 1) achieve an ENERGY STAR score of 75, 2) use renewable energy for at least 30% of total energy, and 3) meet an onsite (direct) emissions target. NextGen is a strong addition to the market, but to be used as a BPS ACP, challenges will need to be addressed related to its reliance on the ENERGY STAR score and how it accounts for renewable energy, which does not have the same geographic boundaries as used by those states and localities in BPS metrics.[37]

EPA has also developed plans to launch a new recognition called Rising Star™. Rising Star was developed in recognition of the fact that many buildings benchmarking in Portfolio Manager would need to reduce energy use by 50% or more to earn ENERGY STAR certification, and as a result aspiring to ENERGY STAR certification may not provide sufficient motivation to improve. Rising Star will offer recognition to buildings that achieve a 20% reduction in weather-normalized site EUI over a 5-year period, thereby providing a more attainable improvement that will motivate poorer performing buildings. The 20% threshold was selected as EPA looked at the history of reductions over time by buildings benchmarking in Portfolio Manager and found 20% to be a sweet spot—a 25+% reduction would not result in enough buildings being eligible, and a 10% reduction is not that far above 'noise.'[38] EPA had planned to launch Rising Star in early 2026 and work is continuing on its development, but the exact timing is now in question pending a decision by about future plans for the ENERGY STAR program.

Building performance planning guides

The remainder of this section highlights the common stages in decarbonization or building energy performance planning and provides examples or links for further detail. Table 3 provides an overview of several existing building performance planning frameworks and Appendix A describes each framework or resource in more detail. The frameworks included in the table are not an exhaustive list of all frameworks that exist. When an individual framework is called out, it is not intended as a recommendation for that framework, but rather a guide on where to find more information as needed.

[37] ENERGY STAR, "ENERGY STAR NextGen Certification: Eligibility Criteria for Existing Commercial and Multifamily Buildings," accessed June 6, 2025, https://www.energystar.gov/buildings/tools-and-resources/energy-star-nextgen-criteria.

[38] Michael Zatz, "The Federal Taxonomy for Optimized Performance in U.S. Buildings" (lecture given to Real Estate Roundtable Sustainability Policy Advisory Committee, Washington, D.C, January 23, 2025).

Table 3. Overview of Existing Building Performance Planning Guides

(detailed in Appendix A)

Resource	Organization	Use case	Short description
Strategic Decarbonization Planning Guide[39]	ASHRAE, USGBC, NYSERDA	Building specific; supports earning LEED v5 O+M credit EAc5[40]	Narrative on the process to develop a plan. Focused on scenario development and selection. Supplementary workbook from USGBC forthcoming.
Building Energy Hub Building Performance Planning Guide[41]	Illinois Green Alliance, Slipstream	Building specific - Illinois focused	Includes 3-stage performance planning process; measures to consider; implementation & capital planning.
Best Practices For Achieving Zero Over Time for Building Portfolios[42]	RMI, Urban Land Institute	Portfolio focused	Includes a 6-step process for achieving zero emissions. Includes key actions to consider during capital planning or real estate trigger events.
MassCEC Building Electrification and Transformation Accelerator Project[43]	Slipstream, RMI, RISE Engineering, SMMA, GSK	Building specific - Massachusetts project	A pilot program funded by MassCEC that develops strategic electrification plans for commercial buildings over 20,000 ft^2.
Better Climate Challenge Emissions Reduction Planning for Portfolios[44]	U.S. Department of Energy, LBNL, Introba	Portfolio	Includes five milestones for emissions reduction planning across portfolios. Includes scenario planning & analyzing measures across portfolios.
Resource Efficient Decarbonization (seen in the Retrofit Playbook)[45]	NYSERDA, RMI, ULI, BE-Ex	Building specific - New York project	Developed for New York state and includes a library of case studies, best practices for planning, and a suite of technical resources.

[39] Adam Hinge, Laurie Kerr, and Lane Burt, *Guide to Strategic Decarbonization Planning*, (Peachtree Corners, GA: ASHRAE, 2025), https://www.ashrae.org/about/cebd-technical-resources.

[40] USGBC, "Decarbonization and Efficiency Plans," in *LEED Credit Library* (Washington, DC: USGBC, 2025), https://www.usgbc.org/credits/existing-buildings/v5/eac5?return=/credits/Existing%20Buildings/v5.

[41] Building Energy Hub, "Building Performance Planning Guide," Illinois Green Alliance, accessed June 9, 2025, https://www.buildinghub.energy/building-performance-guide.

[42] Matt Jungclaus, Alisa Petersen, and Cara Carmichael, *Guide: Best Practices for Achieving Zero Over Time for Building Portfolios* (Boulder, CO: Rocky Mountain Institute, 2018).

[43] "BETA: Project Planning," MassCEC, accessed June 9, 2025, https://www.masscec.com/program/beta-project-planning.

[44] Hannah Kramer, et al., *Better Climate Challenge Framework for Greenhouse Gas Emissions Reduction Planning: Building Portfolios* (Washington, DC: U.S. Department of Energy, 2023). https://betterbuildingssolutioncenter.energy.gov/sites/default/files/attachments/ERP_Framework_Building_Portfolios.pdf.

Framing for planning guides

The general intent of these building performance planning guides is to help building owners and managers establish a long-term plan to achieve deep carbon emissions reductions. The goal is to move beyond short-term planning focused on measures with the lowest payback and instead develop 10-to-25 year plans that achieve significant reductions and align with capital planning events. The consistent focus is on changing the mindset from traditional energy audits to multi-disciplinary planning for long-term, deep reductions in emissions.

The guides all highlight that long-term plans should incorporate energy efficiency and demand reduction measures, reduction of on-site fossil fuel use or electrification, and generation of renewable energy. The guides also focus on using lifecycle cost analysis (LCCA) and Net Present Value (NPV) for the financial analysis. This provides a more complete picture of the total costs and total benefits over the lifetime of measures. This is a critical shift from traditional energy audits, which focus on measure-by-measure simple payback, compared to a BAU of no action with no first costs.

It is important for businesses and communities to understand that doing nothing is not free. Between now and 2050, virtually all commercial buildings will replace all major mechanical equipment at least once—and given the 20+ year lifespans of such equipment, likely *only once*. All building performance planning guides recognize this and consider that replacement part of the BAU scenario. The key metric in most of these planning frameworks, therefore, is the *relative* NPV of comparing the BAU scenario to alternative scenarios. Moreover, the NPV is a total scenario-level metric that accounts for the interaction of measures, rather than treating the savings impact of each measure in isolation, as measure-level simple payback calculations do. This provides a much more robust analysis that accounts for a range of long-term considerations, including forecasted utility costs, ongoing operations and maintenance expenses, and existing baseline costs. Including these elements helps stakeholders understand the financial implications more fully.

A few guides focus primarily on how to apply this approach to a portfolio of buildings, while others are more geared at individual buildings. In either case, the process could be adapted to apply to an individual building or portfolio, respectively. The process also works quite well for large campuses with district energy systems. Decarbonizing district-scale systems takes time, but doing so can yield massive, cost-effective carbon savings—especially if the distribution piping must be replaced anyway in a BAU scenario. A decarbonized district system also generally has lower exergy than traditional steam systems. Among other implications, this makes building-level energy audits (that assume no change to delivered district energy) of limited use, and a campus-wide decarbonization plan more appropriate.[46]

[45] "Retrofit Playbook for Large Buildings," New York State Energy Research and Development Authority, RMI, Building Energy Exchange, and Urban Land Institute, accessed June 9, 2025, https://retrofitplaybook.org/.

[46] For more on district energy decarbonization, exergy, and a district-scale planning process with similarity to the other frameworks discussed in this section, see: Vladimir Mikler, *District Energy 101.* (Vancouver, BC: Introba, 2023.) https://issuu.com/deepgreenengineering/docs/district_energy_101

Steps in process

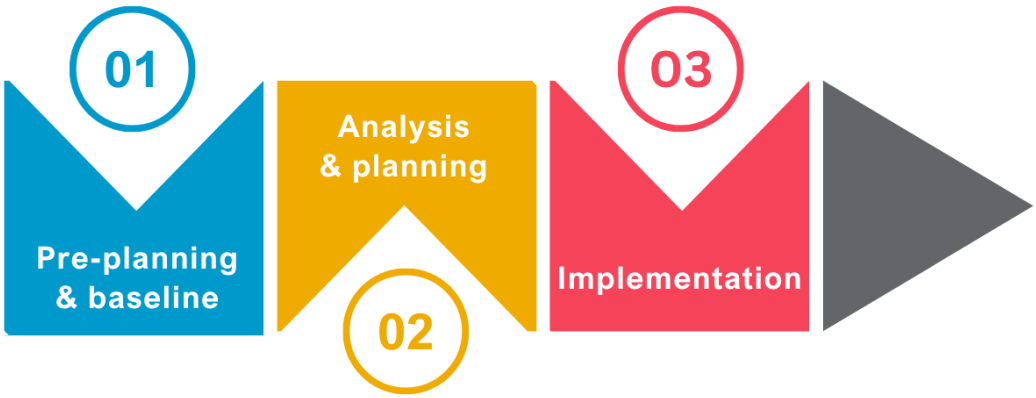

Figure 6. Building Performance Planning Process

Each planning guide highlights a key set of steps to complete the long-term building performance plan. The names of these steps and exact order varies somewhat across the guides, but several similar components exist in each. In general, the steps involved include pre-planning, scenario development, finalization of scenarios, and implementation. We'll discuss each below.

Pre-planning or baseline

The pre-planning or baseline phase is referred to in a variety of ways in the guides, and sometimes as one step or sometimes as a few distinct steps. Common elements include:

- **Create a team for the planning.** Create a multidisciplinary team for the planning exercise. The guides highlight the need to include finance and capital planning experts, facility or energy managers, and leadership that understands the owner's perspective. The Strategic Decarbonization Planning Guide and Better Buildings Emissions Reduction Planning Framework both provide a table that outlines key roles for the planning process. The early creation of this team is seen as critical for getting the broad organizational and leadership buy-in needed to unlock bigger changes.
- **Inventory the energy, carbon, and equipment baseline.** This includes building energy, characteristics, equipment and system information and end-of-life, and breakdown of energy-use by type and system.
- **Create a list of trigger events.** This list would include: key equipment reaches end of life; incentives sunset; the building reaches typical five-year capital plan process; the lease structure changes; or new financing becomes available. In a few guides, this step is highlighted as occurring in tandem with the measure or scenario selection.
- **Create a business-as-usual finance scenario**. This step is highlighted in the planning phase in a few guides, but is referenced in all guides as needed at the point of

evaluating cost impact of scenarios. As discussed above, BAU projections are a vital step to recognize that there are costs associated with doing nothing as well as implementing improvements. If there are existing capital replacement plans, those should be leveraged; otherwise typical like-for-like or like-for-similar replacement costs can be used.

- **Create business-as-usual emissions projection, including BPS targets.** Having early agreement on the BAU emissions impact helps narrow down scenarios and avoid circular discussions. Plans vary in how "realistic" the BAU emissions scenario should be. The USGBC Strategic Planning Guide's workbook uses a simple straight-line BAU GHG scenario to promote consistency and avoid rabbit holes (e.g., marginal emission rates, time-of-use, renewable energy attribution, etc.). The Strategic Decarbonization Guide also recommends that projects subject to a BPS should generate a second BAU carbon projection based on regulated emissions factors, and overlay of project-specific BPS caps; for BETA projects in Boston, Slipstream likewise projects emissions using Boston-specific GHG factors and overlays applicable BPS targets.
- **Set emissions reductions targets.** Consider regulations or goals for the building or portfolio to set measurable outcomes for the planning process. Identify value propositions that support goals including non-energy benefits such as improved tenant retention or resiliency aspects. Align important long term planning considerations, such as renovations with goal timelines.

Beyond the list above, there are a few less universal steps included in some guides:

- **Categorize portfolio.** The Better Buildings ERP Framework for portfolios includes an early step of identifying common characteristics across buildings to help select representative buildings for further study. This approach highlights doing a deep dive with a smaller number of buildings and using those results to scale across similar buildings in the portfolio.
- **Collection of similar case studies.** The Strategic Decarbonization Planning Guide suggests collecting case studies from similar buildings to expose the team to other examples.

Audits versus assessments

The discussion of the use of audit or building assessment varies slightly across guides. Under any situation, the decarbonization assessment or energy audit would just be one piece of the planning process. In contrast to a typical energy audit, the assessment done as part of decarbonization planning should provide the needed inputs for longer term planning, such as an inventory of all equipment contributing to the GHG emissions and the lifetime of that equipment, GHG emissions projections accounting for grid changes, and discusses future opportunities as well as current ones.

The Better Buildings ERP Framework and Building Performance Plan Guide from the Building Energy Hub both highlight GHG emissions reduction audits - which focus on carbon emissions

and evaluation of key technology for emission reductions.[47,48] The Building Performance Plan Guide also highlights other assessments that can help inform the decarbonization planning process, such an electrical load study, a boiler heating system stress test, or structural assessment. Similarly, Zero Over Time highlights that pairing the site visit needed for an assessment with a recommissioning can generate better insights for the planning process as well as yielding immediate impact.[49]

The Strategic Decarbonization Planning tool highlights that an audit is not a required prerequisite for decarbonization planning but emphasizes the need for key building information to inform the plan, and notes that recent audit or retro-commissioning reports may provide the information needed.

Analysis and planning

The next phases discussed in the guides differ in naming, but generally share the objectives of: starting to identify the measures for the building; aligning action steps with trigger events or key capital planning dates; and creating scenarios or a plan. In some guides, the focus is on how to identify measures and general sequencing and in others, the narrative is more focused on the process required. Table 4 summarizes the planning section for published guides. The common themes for this stage in the process are below:

- **Host an interdisciplinary planning charrette**. The strategic decarbonization guide and the retrofit playbook both recommend a planning charrette after the pre-planning phase to ensure that all members of the cross-disciplinary team understand the issues at play, and to ensure that all key representatives are at the table. The charrette process can help to ensure that good ideas from unexpected quarters appear early and problems aren't identified late.[50]
- **Align plan with trigger events.** Each guide emphasizes that the planning process should link measure upgrades to trigger events. This ensures that the upgrades are happening when changes are occurring anyways, and likely lowers the incremental cost of upgrades.
- **Incorporate flexibility.** The guides highlight that the final plan should balance flexibility with set steps - ensuring that a path forward is determined but can be altered if equipment fails early or other timeline changes occur.
- **Consider demand reduction and energy efficiency, electrification, and renewable energy measures.** The guides highlight main categories of measures to include in the plan. The Building Performance Planning Guide also highlights enabling activities, such

[47] Hannah Kramer, et al. *Better Climate Challenge GHG Emissions Reduction Audit: A Checklist for Owner*s. (Washington, DC: U.S. Department of Energy, 2023.) https://betterbuildingssolutioncenter.energy.gov/sites/default/files/attachments/Emissions_Reduction_Audit_Checklist.pdf

[48] Building Energy Hub, "Building Performance Planning Guide."

[49] Jungclaus, et al., "Zero Over Time."

[50] Hinge, Kerr, and Burt, *Guide to Strategic Decarbonization Planning*.

as adding infrastructure or space to allow for future electrification or renewable energy.[51] Zero Over Time highlights the nature of independent energy conservation measures or actions that are less linked to key trigger events.

- **Use life cycle cost analysis.** The guides highlight the use of LCCA either in the capital plan or to help make the business case for the plan. Lifecycle cost analysis compares the incremental cost to the incremental benefits of the plan compared to business-as-usual, and goes beyond simple payback to provide a more complete financial picture.
- **Build a capital plan.** As described above, a key feature of building performance planning is coordinating energy and carbon reduction activities with key capital plans or real estate activities. The guides all include the development of a capital plan that matches all measures with timelines and *incremental cost* estimates. They also examine how the measures will be funded, the impact of the measures on carbon and energy, and potential procurement approaches. Some guides consider the capital plan to be inclusive of all actions in the project; the Building Performance Planning Guide says the capital plan timeframe should match the implementation plan. Others think of the capital plan as a shorter-term, action-focused document; the Strategic Decarbonization Planning Guide recommends a five-year capital plan to ensure the overall decarbonization plan does not sit on a shelf.

For examples of graphs and implementation plans, refer to the full guides. Case studies of decarbonization plans are available from Empire Building Challenge[52] and soon to be available from the MassCEC BETA project.

[51] Building Energy Hub, "Building Performance Planning Guide."

[52] Relevant examples include 345 Hudson, The Heritage, and Whintey Young Manor.

Table 4. Planning Section of Guides

Existing resource	Section on planning
Strategic Decarbonization Planning Guide	Includes a narrative around how to conduct a planning charrette, develop and analyze at least two scenarios (including list of measures, timeline, and impact on energy, carbon, and cost), select a final scenario, and develop a more detailed 5-year capital plan. Narrative is process-focused and supported by a supplementary spreadsheet tool.
Illinois Green Alliance Building Performance Planning	Highlights measures to consider to decarbonize more thoroughly (split across energy efficiency, enabling activities, electrification, and renewables). Includes an implementation plan that links measure upgrades to trigger events and a capital plan of the same length.
Zero Over Time	Includes (1) highlight of ideal process of measure types (independent measures, load reduction, and HVAC) and (2) trigger events and actions to consider at each and (3) a separate section on renewables. Sequences measures across a portfolio of buildings.
Better Buildings Emissions Reduction Planning	Describes the development of a plan across a portfolio. Includes audits of select buildings, application of identified measures to the portfolio, implementation phasing across buildings, and creation of multiple scenarios. Final step is to select a scenario using evaluation criteria and develop a capital plan and work plan.
Retrofit Playbook	Includes design of resource efficient solutions and creation of a business case. Recommends 5 stages of improvements - review of existing conditions, reduce energy load, recover wasted heat, partial electrification and full electrification.

Implementation

The final stage in the process is implementation of the plan, and ongoing maintenance and updates to the plan itself as needed. This includes procurement and implementation of measures in the plan, tracking of energy and carbon reductions over time, and evaluation of the plan during key capital planning cycles to ensure changes are not needed. It is recommended that stakeholders establish a verification or evaluation plan, and a cadence for when progress will be formally evaluated and when the plan will be re-evaluated and updated if needed.

The Building Performance Planning Guide includes additional details on how to find and select vendors to complete equipment upgrades or renovations during the implementation phase. In addition, building energy resource hubs provide tools on how to select and find quality vendors to complete the work–see DC Building Innovation's Hub Service Procurement Guide for an

example.[53] Additionally, DOE refers to the Better Buildings Emissions Reduction Planning guide as an early step in the ISO 50001 continual improvement process. The ISO "50001 Ready Program" helps organizations utilize the benefits of a "plan-do-check-act" Energy Management System and could be a valuable implementation tool.[54]

What's needed for BPS application

The high degree alignment of these existing building performance guides is encouraging. They overlap with ACPs in several ways, including the development of a long-term plan to meet decarbonization targets (or BPS targets), the need to revisit the plan at set cadences (or compliance timelines), and the documentation of measures to meet the targets. The following are open questions that will need to be addressed as we adapt the frameworks for BPS:

1. **Who needs a plan under building performance standards?** The frameworks described above generally encourage the development of a plan for most building owners and managers to reduce energy use and emissions. However, the goal of this project is to determine how to offer flexibility within BPS if a building cannot meet the standard target. Although it may be helpful for everyone to create a plan, such plans would have a regulatory role for buildings struggling to meet BPS targets and deadlines.
2. **Does this process fit with all building performance standards?** Not all BPS have long-term targets. A 'recalculated' BPS, by definition, does not have any long-term target for a plan to aim for, and even some BPS with other structures have no targets beyond 2030. In such cases, ACP requirements for long-term planning may not be the best fit.
3. **What elements are best practice, but shouldn't be required?** Many of the concepts in these guides are best practices, but that does not mean all of them need to be required in an ACP. Moreover, as discussed in the ACP challenges section, an overly prescriptive process will not be widely utilized, defeating its purpose.
4. **How much information must be shared?** One key question is how much information needs to be provided as part of ACP application and reporting. An LCCA, in particular, may involve the use of confidential financial data.
5. **How do we simplify the process of creating a plan for under-resourced buildings?** A primary qualifier for alternative compliance is financial hardships or building type (e.g., affordable housing or under-resourced buildings[55]). The processes described above require a number of stakeholders, potential technical consultants, and a significant amount of time. Many applications of these frameworks have been in well-resourced sectors, such as class A office buildings and highly selective universities. This leaves the question of how to streamline and simplify the planning process for ACPs, to make it

[53] Building Innovation Hub, "Service Procurement Guide," accessed June 9, 2025, https://buildinginnovationhub.org/resource/find-a-qualified-vendor/service-procurement-guide/

[54] Better Buildings Challenge, "50001 Ready Program."

[55] Under-resourced buildings are buildings that may have access to less funding or technical resources to undertake significant renovation efforts. Often includes nonprofits, community centers, schools, affordable housing, etc.

accessible for the buildings who most need the help. One encouraging example is New Ecology's application of Zero Over Time to the affordable housing market.[56]

6. **What commitments and tracking are needed to show compliance?** The existing planning guides are not designed to show compliance with regulations, which is a key component for ACPs. In jurisdictions with building improvement plan options, the way to show compliance vary, with some ACPs requiring a level of energy savings and others just demonstration of implementation. Meanwhile, the USGBC LEED v5 O+M credit that the Strategic Decarbonization Guide supports only requires the owner to commit to implementing the five-year capital plan component, which may have limited savings.[57]
7. **What financial considerations and metrics should be used?** As noted above, some current ACP requirements in policies use simple payback as a way to document which measures need to be implemented in an ACP, with some setting fixed payback thresholds. However, the planning guides discussed above generally recommend against the use of simple paybacks as a central decision-making tool. The standardized ACP framework needs to address how to address financial considerations and integrate that into what is required in the planning process. While some jurisdictions currently review key assumptions in BPAPs like discount rates informally, the framework might benefit from clearer guidance or bounding conditions.
8. **What is the appropriate role for the jurisdiction?** The frameworks described above are all written from the perspective of helping building owners and managers plan how to decarbonize—not how those plans can be used for regulatory requirements. The ACP framework will need to address how jurisdictions can add ACP language into policies or rules, and the role of the jurisdiction in reviewing, approving, and sharing ACPs.
9. **How are ACPs streamlined for easier review, approval, and ongoing tracking?** A common concern of governments when designing ACPs is the amount of time associated with review and approval and how to determine who internally both reviews and approves ACPs. It's essential to consider how the framework and associated toolkit support jurisdictions in determining who should review and approve ACPs, what to look for an ACP to determine it should be approved, the ongoing cadence for tracking and evaluating progress against the plan, and general process of adding ACPs into the policy and implementing review and approval.
10. **How can ACP toolkit and Hub training support implementation?** As noted above, implementation is often mentioned in the guides as the final step, but there is generally significantly less detail on this step compared to the pre-planning and planning phases. Although implementation is separate from what needs to be included in a building performance action plan for approval, it is important to address this to ensure owners are supported in this step and achieve expected emissions reduction goals.

[56] New Ecology, Inc. "Existing Building Decarbonization." Accessed June 6, 2025. https://www.newecology.org/existing-building-decarbonization

[57] USGBC, "Decarbonization and Efficiency Plans."

Next Steps

This report serves as an exploration of the current state of compliance for BPS, alternative compliance pathways in existing policies, and existing frameworks to guide the development of a building performance action plan framework.

The next steps for this work are to build out a model regulatory framework and toolkit to standardize the alternative compliance pathway process. The framework will include a narrative on the recommended process, language to include in policies or regulations, and supporting tools and resources.

The project team will create the framework through a working group process and solicit peer review and feedback before finalizing. The working group will be convened in Summer 2025, and will be made up of team members, jurisdiction partners, leading experts from the real estate and engineering industries, NGOs, and representatives from DOE and the national labs. Given the overlap between this project and the ongoing work of ASHRAE SSPC 100 and SSPC 211, select committee members from both committees have also been invited. We anticipate publishing a draft model regulatory framework in early 2026.

The framework will also be tested through pilot projects in several partner jurisdictions over 2026-2027, and revised as needed from the learnings of the pilot. Training resources developed by IMT and the BPP network of hubs will support education and compliance.

Appendix A: Decarbonization Frameworks

Strategic Decarbonization Planning Guide

Developed collaboratively by ASHRAE, USGBC, and NYSERDA, this guide helps project teams establish plans for deep carbon emission reductions in existing buildings. It creates a framework that shifts from traditional energy efficiency audits to comprehensive, long-term strategic planning.[58] Builds on the Strategic Decarbonization Assessment and the Retrofit Playbook.[59]

Rather than focus on technical solutions, this guide emphasizes broadening the planning process to integrate decarbonization into real estate business cycles and capital planning. It suggests bringing together multidisciplinary teams—including sustainability professionals, engineers, operators, owners, asset managers, and architects—to collaborate on strategic decision-making that spans decades rather than focusing on short-term paybacks.

The guide employs a bottom-up approach at the building or asset level (not portfolio level). It starts with each building's current equipment and conditions to establish a business-as-usual (BAU) baseline, then develops customized pathways to deep carbon reductions based on the building's specific circumstances and opportunities.

Part of an integrated toolkit

The guide is part of a coordinated suite of tools for the LEED V5 Green Building Rating System:

1. **The Guide to Strategic Decarbonization Planning** - Introduces and explains the framework
2. **The USGBC Strategic Decarbonization Planning Workbook** - Standardizes data collection and provides visualizations
3. **LEED v5 O+M EA Credit Decarbonization and Efficiency Plans** - Awards up to 4 points for 20-year Strategic Decarbonization Plans (SDPs)[60]

Core strategy and process

The basic decarbonization strategy follows three principles: reduce/eliminate on-site combustion of fossil fuels, improve energy efficiency and reduce demand, and generate or purchase carbon-free power.

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[58] Hinge, Kerr, and Burt, *Guide to Strategic Decarbonization Planning*.

[59] "Strategic Decarbonization Assessment," San Francisco Department of the Environment, n.d., https://www.sfenvironment.org/strategic-decarbonization-assessment-sda.

[60] USGBC, "Decarbonization and Efficiency Plans."

The SDP process unfolds in two main phases. During the Pre-planning Phase, teams assemble expertise, compile building profiles, create BAU projections, gather historical analyses and case studies, and develop conceptual plans. The Planning Phase begins with a decarbonization charrette, then progresses through developing multiple plan options, creating the final strategic decarbonization plan, and establishing a detailed five-year capital plan for implementation. Each step is explained in the guide.

Technical and financial approach

The guide's technical principles prioritize addressing envelope issues first, avoiding equipment oversizing, using lower-grade distribution temperatures, moving rather than creating heat, and minimizing electric resistance heating.

Financially, the guide forgoes simple payback calculations to help teams consider total cost of ownership and the true cost of inaction. All costs and revenues are compared against BAU scenarios that include equipment replacement costs and potential regulatory fees. Strategic alignment with trigger events—such as equipment end-of-life, refinancing, or tenant turnover—significantly improves financial feasibility.

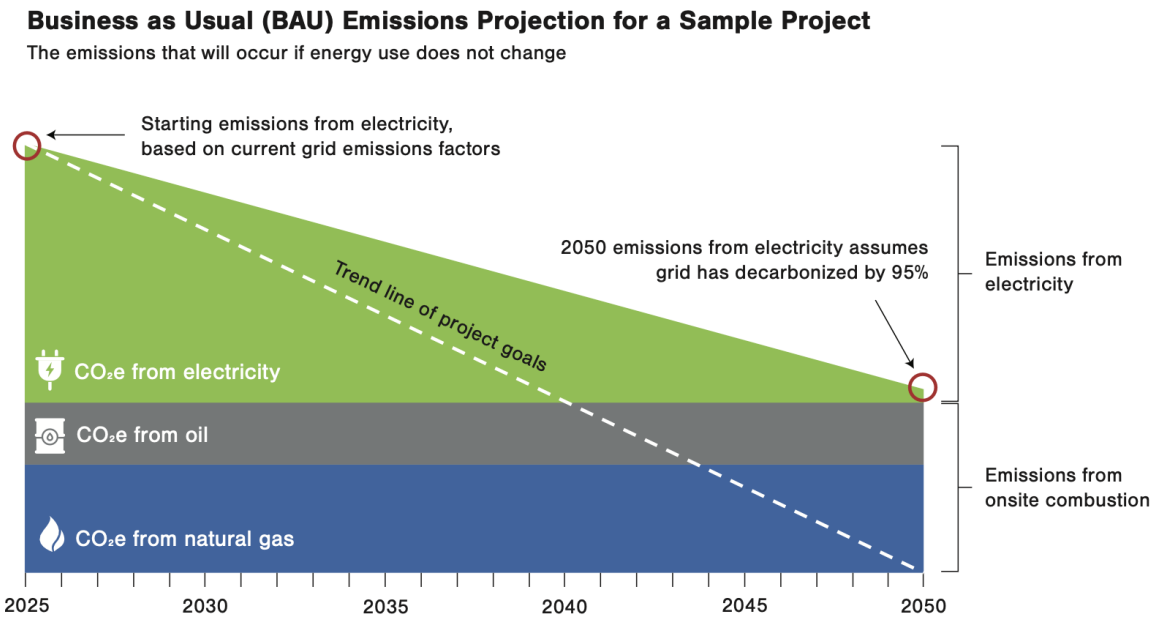

Figure A1: SDP Guide Diagram of Business-as-Usual Emissions Projections

Living document

Recognizing that perfect decarbonization may not be immediately achievable for all buildings, the guide emphasizes that every building needs a plan. SDPs are designed as living documents with regular reviews and comprehensive reassessments every five years to maintain alignment with capital planning cycles. This ongoing maintenance ensures plans remain relevant as technologies, costs, and regulations evolve. The guide's message is clear: start planning now, take early actions where beneficial, and prepare for the larger transformations ahead.

Resource Efficient Decarbonization

From the Empire Building Challenge Retrofit Playbook,[61]
A program of the New York State Energy Research and Development Authority (NYSERDA)

Resource Efficient Decarbonization (RED),[62] also known as Resource Efficient Electrification is an emerging best-practices informed approach to building decarbonization that emphasizes optimizing the use of both energy and infrastructure resources while transitioning away from fossil fuels. Developed to provide practical mental models for prioritizing decarbonization projects, this strategy also emerged in response to the growing recognition that indiscriminate electrification—without careful consideration of when, where, and how energy is used—can result in costly and inefficient outcomes. Unplanned electrification of building systems could induce intensive spending on the construction of local utility distribution, transmission and firm power generation infrastructure leading to unaffordable electric rates. Originating from research, industry, and policy conversations in California and the Northeast U.S., RED builds on the foundation of traditional energy efficiency, but adapts it to the needs of an increasingly electrified and renewable-powered grid. It also reflects evolving thinking from leading energy system analysts who highlight the importance of grid-interactive, demand-side solutions for climate-aligned energy transformation of the buildings sector.

At its core, RED is based on the idea that not all electrification is equally beneficial, and that electrification should occur in ways that reduce total system costs, minimize infrastructure strain, and avoid unnecessary emissions. RED strategies prioritize replacing fossil fuel systems with high-efficiency electric technologies (like heat pumps), but only when these technologies are appropriately sized, timed, and controlled. For example, instead of over-sizing equipment to match outdated fossil-based assumptions, RED advocates for right-sizing electric equipment based on improved building envelopes, climate conditions, and real load profiles. Similarly, RED emphasizes load flexibility—such as preheating or precooling or storing such available thermal energy during renewable energy peaks—to better align building energy use with low-carbon electricity availability.

In practical terms, RED encourages buildings designers, policymakers, municipalities and utilities to consider a holistic, systems-based approach. This may involve first upgrading building envelopes (through insulation, air sealing, or window improvements), then sizing electric equipment based on reduced thermal loads, and finally integrating demand control systems that respond to grid signals. It also considers the embodied carbon and infrastructure costs of electrification—such as whether existing electrical panels, transformers, or distribution lines need upgrading—and seeks to minimize these costs through strategic deployment of efficient, flexible loads. In multifamily and commercial settings, RED may involve shared thermal

[61] "Empire Building Challenge," New York State Energy Research and Development Authority, accessed April 29, 2025, https://www.nyserda.ny.gov/All-Programs/Empire-Building-Challenge.

[62] Jared Rodriguez, Maya Lujan, Brett Bridgeland, and Michael Beguin, "A rational approach to large building decarbonization: Lessons learned from New York's Empire Building Challenge," *BuildingEnergy* 40.1 (2021): 20–23. https://emflipbooks.com/flipbooks/NESEA/BuildingEnergy/2021/Vol40_Number1/book/.

systems, district-scale solutions, or hybrid designs that retain some non-electric components temporarily during the transition.

The RED framework is structured around three core steps:

1. **Examine current conditions**: This initial phase involves a comprehensive assessment of the building's existing systems, energy consumption patterns, and infrastructure. Understanding the current state is crucial for identifying opportunities and constraints in the decarbonization process.
2. **Design resource efficient solutions**: In this phase, the focus is on integrating measures that reduce energy loads, recover waste heat, conduct deep decarbonization enabling activities like reconfiguring thermal energy transport and delivery systems, store thermal energy for demand peaks, and transition towards partial or full electrification. Strategies may include upgrading insulation, implementing energy recovery ventilation systems, and adopting high-efficiency heat pumps with appropriately designed system integrations. The goal is to enhance operational efficiency, optimize energy peaks, and avoid oversized heating systems, thereby minimizing retrofit costs over time.
3. **Build the business case**: The final step involves developing a compelling financial narrative to support the decarbonization plan. This includes evaluating capital expenditures, operational savings, and potential incentives. By presenting a clear return on investment and aligning with policy goals, stakeholders can be more effectively engaged in the decarbonization journey.

Building Energy Hub Building Performance Planning Guide

The Building Energy Hub, a project of the Illinois Green Alliance, produced the Building Performance Planning Guide in partnership with Slipstream. The initiative offers a comprehensive framework to help building professionals achieve their decarbonization goals. The guide outlines three key phases: 1) Get to Know Your Building, 2) Develop Your Decarbonization Plan, and 3) Implement Your Decarbonization Plan. While the overall approach is applicable nationwide, many tools and resources are specifically tailored for Illinois buildings.

Figure A2: Strategic Decarbonization Plan from the Building Performance Planning Guide Diagram

This guide is intended for engineers, building owners, property managers, general contractors, and architects seeking a detailed, actionable resource to support decarbonization. It aligns with the Illinois Green Alliance's mission to make net zero buildings feasible, affordable, and standard statewide by 2050.

Phase 1: Get to Know Your Building

This phase focuses on understanding a building's current energy performance and identifying opportunities to reduce greenhouse gas emissions, while also addressing long-term maintenance and capital planning.

Start with energy benchmarking to assess performance and compare usage to similar buildings, establishing a baseline. The guide outlines whether benchmarking is mandatory or voluntary. Next, develop a business-as-usual projection to estimate future performance without carbon-reduction measures, which serves as a reference point for evaluating upgrades.

Conduct an emissions reduction audit to identify efficiency improvements and emissions-reduction opportunities. This may be done in-house or with outside support, depending on building complexity. Throughout this phase, consider deferred maintenance, capital improvements, and operational changes to inform near- and long-term decisions. A strong understanding of the building's current condition lays the groundwork for effective decarbonization planning.

Phase 2: Develop Your Decarbonization Plan

In this phase, building professionals create a tailored roadmap that reflects the building's characteristics, operations, and financial context.

Begin by identifying energy efficiency measures and enabling upgrades (e.g., electrical infrastructure). Reduce energy loads through improvements such as insulation upgrades and HVAC optimization. Then, electrify building systems—replacing fossil-fuel-based heating, cooling, and hot water systems with electric alternatives. Simultaneously, explore renewable energy options and grid-interactive technologies to enhance resilience and sustainability.

Set clear decarbonization goals, establish a capital plan with estimated costs and funding sources, and develop an implementation timeline. Create a sequencing schedule based on equipment life cycles, construction timelines, and available incentives. Maintain flexibility and consult design or engineering experts as needed.

Phase 3: Implement Your Decarbonization Plan

The final phase brings the roadmap to life. Define the scope of work and assemble a qualified team to carry out the plan. Issue and evaluate Requests for Proposals or Quotes to select experienced professionals. Create a verification plan to ensure the implemented measures meet performance goals.

Implement the planned upgrades, including energy efficiency improvements, system electrification, and renewable energy installations. Apply measurement and verification practices during implementation to monitor progress and validate results. Finally, evaluate the impact of the completed measures on energy use and emissions, using these insights to guide future improvements and keep the building aligned with its decarbonization targets.

For more information, visit the Building Performance Guide landing page: https://www.buildinghub.energy/building-performance-guide [63]

[63] Building Energy Hub, "Building Performance Planning Guide."

MassCEC Building Electrification and Transformation Accelerator

The Massachusetts Clean Energy Center (MassCEC) has launched the Building Electrification and Transformation Accelerator (BETA) program, a pilot initiative designed to accelerate the decarbonization of the commercial building sector. This program provides building owners with no-cost, comprehensive decarbonization assessments and customized plans to eliminate on-site fossil fuel use. It supports Massachusetts' goal of achieving net zero emissions by 2050.

BETA is designed to address the technical, financial, and logistical challenges of electrifying existing commercial buildings. Participants receive building assessments that result in tailored decarbonization plans, considering each building's unique characteristics, operational needs, and capital planning timelines. Eligible participants include owners of commercial offices, healthcare facilities, educational institutions, hospitality venues, laboratories, retail spaces, multi-family housing, and other commercial building types.

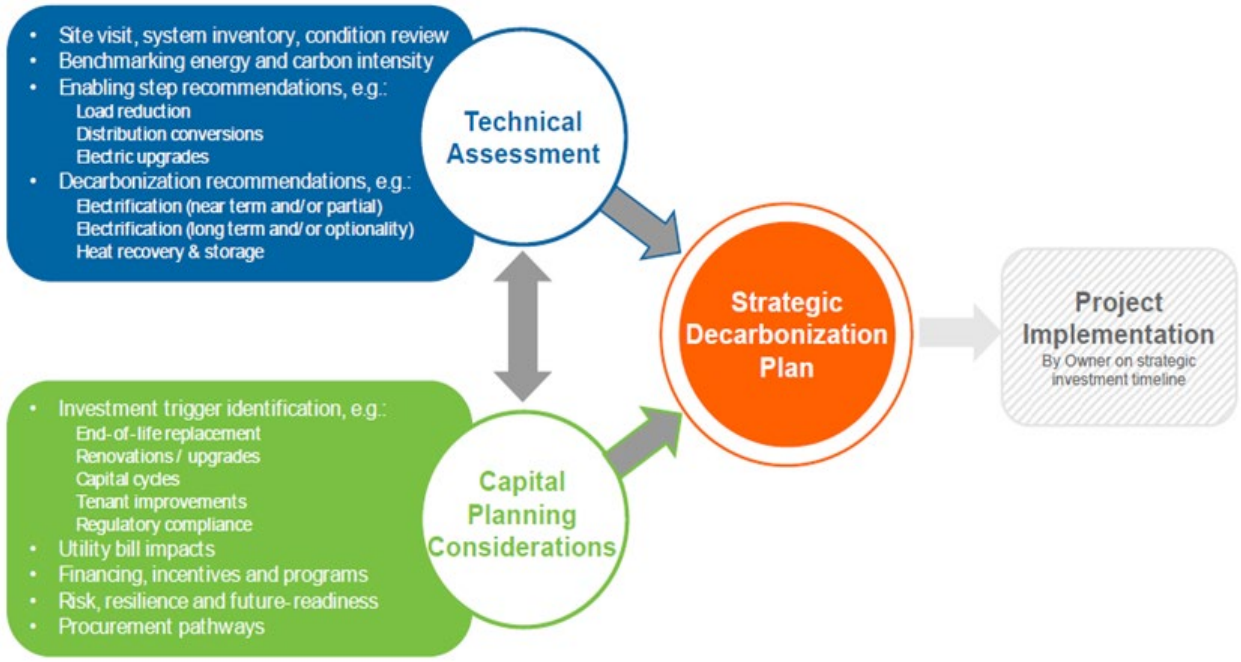

Figure A3: Illustration of BETA process

Program structure

Interested building owners submit applications on a rolling basis. The pilot seeks to enroll over 50 sites across a range of building typologies, vintages, communities, and ownership structures.

Over approximately three months, consultant teams conduct on-site assessments and collaborate with participants to develop detailed decarbonization plans. This work is carried out in two phases, each lasting about 6 weeks. The initial assessment phase: provides an on-site building audit reviewing age and condition of equipment, potential opportunities and barriers for system upgrades, and efficiency potential. A capital planning survey is provided to owners and key stakeholders to outline potential implementation timelines and funding mechanisms. Energy and carbon are benchmarked using a future outlook for GHG emissions based on anticipated

grid factors and BERDO targets. For projects within other BPS jurisdictions those requirements are provided for specific site context. Existing conditions in key areas such as building enclosure, electrical infrastructure, mechanical systems, lighting and process equipment are summarized by performance level, remaining useful life, and decarbonization readiness. Goals and implementation timelines are discussed with a focus on funding and financing, benefits such as tenant retention and resiliency, and phasing of installations based on replacement cycles and planned development.

The plan optimization phase: takes the goals, opportunities, and constraints and formulates a strategic plan for decarbonization. This plan is optimized around the lowest life cycle cost to fully decarbonize the site by 2050 while achieving owner objectives and meeting equipment replacement timelines. Decarbonization upgrades are priced and assessed against a business as usual case. A series of four measure categories are reviewed to help simplify steps.

- **Foundational efficiency:** These are conventional efficiency measures typically with paybacks less than 5 years and are included in the statewide TRM and utility programs.
- **Advanced load reduction:** These are measures which historically have not been incorporated into efficiency recommendations due to long payback times (e.g. triple pane window retrofits). While electrifying, these solutions may make financial sense by helping manage loads to support smaller equipment sizes, reduced electrical capacity needs, improved comfort, and lower utility bills from lower peak demand.
- **Enabling measures:** These are the measures which would need to take place in order to enable the building to electrify. For instance, the building may need to increase electrical capacity or convert hydronic system components to lower supply temperatures.
- **Electrification:** These are the measures to replace on-site combustion for heating, hot water, and certain process loads like commercial cooking. A range of solutions are considered for site needs and goals. These include both immediate upgrades and phased strategies aligned with equipment replacement cycles.
- **Renewables and Battery Storage:** On-site solar and grid-edge technologies are reviewed to support the techno-economic feasibility of decarbonization.

After the measures are identified and turned into optimized packages, an implementation timeline of between 5 - 25 years is developed. The timeline outlines key considerations, GHG emission reductions, specific timing, and the sequence to achieve the desired outcomes.

Market guidance

Participants share feedback on the planning process, helping to shape tools and resources that support broader market transformation. The ultimate goal is to generate case study examples that showcase decarbonization plans across a wide range of building types and ownership models. These case studies will inform a scalable framework for electrifying commercial buildings throughout Massachusetts. Assessments and resulting case studies are expected to be completed and published by the end of 2027. [64]

[64] "BETA: Project Planning." https://www.masscec.com/program/beta-project-planning

Better Climate Challenge Framework for Greenhouse Gas Emissions Reduction Planning

In 2023 the Department of Energy developed a framework to provide guidance to building owners aiming to address greenhouse gas emissions from their buildings and vehicle fleet. The process results in a plan that meets Scope 1 and 2 GHG emissions reduction targets set as part of the Better Climate Challenge.[65]

The framework highlights the benefits of creating an Emissions Reduction Plan, such as aligning carbon goals with operational actions, preparing to meet any regulatory or reporting requirements, ensuring decisions do not lock in carbon emissions, and building confidence that a plan exists.

The framework is meant to address a portfolio of buildings, and create a plan across the portfolio of buildings and fleet. The process recommended includes five milestones and then ongoing implementation of the plan. The five milestones are summarized below and the framework states that they do not need to be completed in order.

1. **Establish inventory & scope of work:** Focused on collecting initial data and setting a scope for completing the emissions reduction plan
    a. Identify stakeholders to engage
    b. Complete a GHG inventory and setting targets
    c. Define evaluation criteria to use to select a pathway
    d. Develop a scope of work
2. **Categorize portfolio:** Focused on identifying common characteristics across buildings that allow for selection of representative buildings for deeper dives
    a. Select key characteristics (ex: GHG intensity, total energy use, energy use intensity, planned renovations, building type, or HVAC system type) to collect on each building and to help categorize and benchmark buildings across the portfolio
    b. Collect information on characteristics for each building
    c. Categorize and benchmark the buildings into categories based on their common characteristics
    d. *S*elect representative buildings for further study from the portfolio
3. **Assess measures:** Focused on assessing measures for representative buildings and applying findings to the portfolio

[65] Hannah Kramer, et al., *Better Climate Challenge Framework for Greenhouse Gas Emissions Reduction Planning: Building Portfolios* (Washington, DC: U.S. Department of Energy, 2023), https://betterbuildingssolutioncenter.energy.gov/sites/default/files/attachments/ERP_Framework_Building_Portfolios.pdf

a. Conduct emissions reduction audits on representative buildings and develop measure packages
    i. Audits define packages of emissions reduction measures to meet targets for the building studied, and help define measure packages for that category of building across the building
b. Assess options for entire portfolio of buildings
    i. Consider how district energy systems or green power procurement can support emissions reductions across the portfolio

4. Develop scenarios

a. Apply emissions reduction measures to portfolio: the measures identified in audits can be applied to buildings in the same category and expected emissions and energy savings can be modeled
b. Develop implementation phasing: consider how to phase measures—either with expedited replacements, at timed building upgrade cycles or end-of-life cycles
c. Estimate changes in portfolio size: consider addition of new buildings or sale or demolition of existing buildings and how that may change over time.
d. Combine inputs to develop multiple scenarios: create multiple scenarios based on the above inputs for portfolio decarbonization

5. Define emissions reduction plan

a. Assess scenarios and select pathways: using the evaluation criteria from Milestone 1, assess all potential scenarios to determine which one best meets organizational needs and overall emissions reduction goals.
b. Define phasing and financing: once a scenario is selected, develop a more formal phasing plan for measures and begin to understand financing options and how measures can fit into the larger capital plan.
c. Develop a work plan: develop roles and timelines for implementation of measures within the Emissions Reduction Plan
d. Receive approval and buy-in: receive final approval on the Emissions Reduction Plan

Although not discussed as a key milestone to create an Emissions Reduction Plan, the framework also highlights the importance of implementation and ongoing review and updates to the plan over time. The guide points to the 50001 Ready Navigator as a key tool that can support implementation by establishing a continuous improvement process. The guide also recommends investing in an energy management and information system to track and measure progress over time.

Zero Over Time

Guide to Best Practices for Achieving Zero Over Time for Building Portfolios[66]

The guide documents a zero over time approach for building portfolio owners to develop a roadmap for achieving cost-effective deep energy retrofits. The guide states that it can apply to individual buildings or portfolios with zero emissions targets or other energy reduction targets. The approach's goal is to continue to encourage short-term cost-effective upgrades while also aligning long-term upgrades with major building events.

The guide starts by summarizing the reasons why the approach is more impactful at the portfolio level, including (1) bulk purchasing cost benefits, (2) reduce effort by sharing lessons learned across buildings, and (3) reducing risk. The zero over time approach has six steps for achieving energy reduction targets in a cost-effective manner over time:

1. **Set goals:** Establish the energy reduction goal with buy-in from organization leaders and a multidisciplinary set of stakeholders.
2. **Baseline**: Create an energy baseline by gathering energy data, age and condition of major equipment, and insulation and infiltration levels.
3. **Plan efficiency projects:** Identify and sequence projects. Consider types of measures and order and overlap with trigger events.
    a. *Separate measures into three categories:* (1) independent energy conservation measures that can be implemented whenever as they do not depend on trigger events, (2) load reduction energy conservation measures that reduce heating or cooling and (3) HVAC energy conservation measures that are replacements of major equipment at end-of-life.
    b. *Create a calendar of trigger events or building lifecycle events that may impact timing of upgrades.* Trigger events include lease turnovers, major equipment replacements, new buildings entering portfolio, buildings leaving portfolios, or renovations planned. The full guide includes an overview of actions to consider at each trigger event
    c. *Overlay measures and trigger events to create a plan for achieving zero-over-time.* The guide states that cost and energy analysis should be done at this phase to ensure timing of upgrades can achieve desired savings cost effectively.
4. **Analyze renewable energy and energy storage:** Analyze type and size of renewable energy that can help meet goals cost effectively. The guide recommends pursuing on-site renewable first followed by local off-site options and renewable energy certificates.
5. **Procurement:** Start to pursue projects and consider if implementation can be managed in-house or if a third party is needed to help manage procurement and implementation.
6. **Track progress:** Track overall progress against the set goals.

The guide ends with a comparison of how zero-over-time economics varies between Denver, Boston, and Milwaukee; and with a case study of how zero-over-time was applied to a portfolio of buildings in Colorado.

[66] Jungclaus, et al., "Zero Over Time."

Appendix B: Estimated Compliance Rates

IMT examined progress towards BPS compliance in the five U.S. jurisdictions furthest along in their initial implementation cycle: New York City, St. Louis, Denver, Boston, and Washington, DC. By comparing the most recently reported energy or greenhouse gas intensities of buildings in public benchmarking data against the published building type targets for each city, we can estimate how many buildings have already reached the required BPS targets. This data does not reflect approved compliance, nor does it reflect buildings that will be in compliance via alternate pathways. It also is not looking at whether buildings have reduced usage since passage of the law, whether or not they are still above the target.

As shown in Figure B1, progress towards compliance varies significantly by city, ranging from 35% of buildings in compliance with the initial target in Denver to 76% compliance in New York City. Compliance with the first deadline is of course only one part of the puzzle. Figure B1 also illustrates the progress towards 2030 targets for the three cities with 2030 targets established. Boston is the furthest towards the 2030 targets at 23% compliance, to Denver's 22% and New York City's 14%. (DC and St. Louis use the recalculated model and so have not established 2030 targets.) However, this range reflects the varying stringencies of each city's targets as much as it reflects implementation success, as shown in the percentiles in Figure B1.[67]

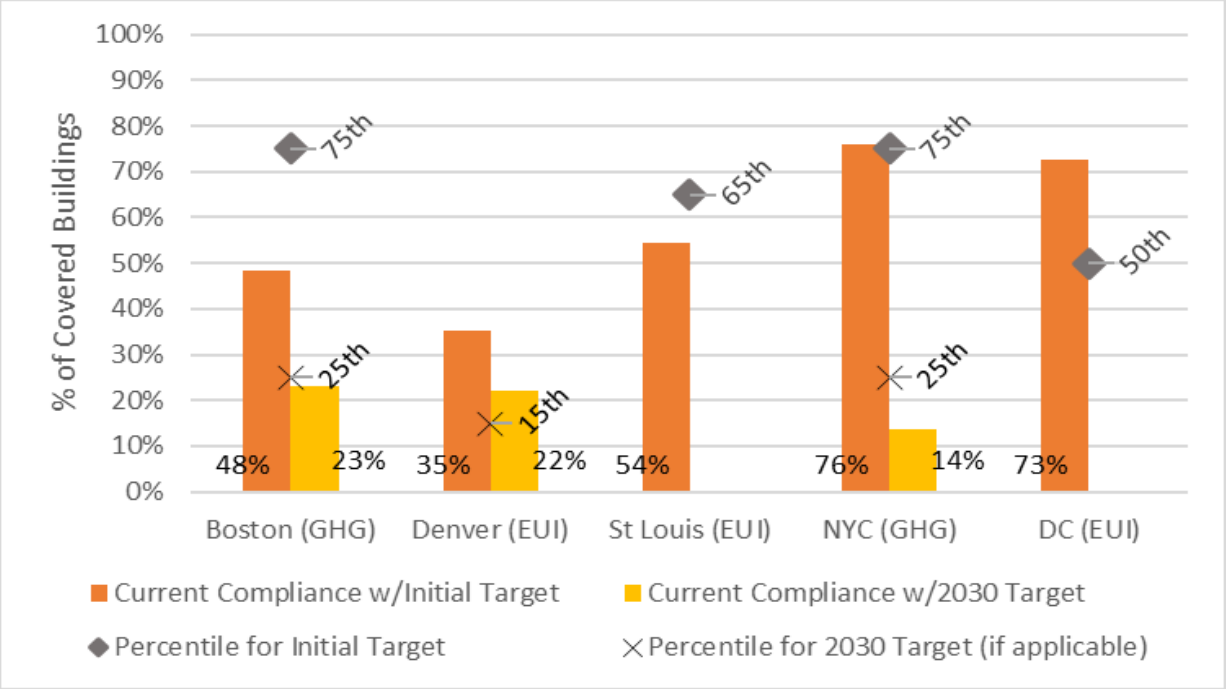

Figure B1: Compliance Rates

[67] For more discussion on this finding, and how the targets were set in each jurisdiction, see Duer-Balkind, "Lessons from the Ground."

We further examined these compliance progress rates for four key building types: multifamily, office, healthcare, and education, as they account for the majority of the covered buildings. Multifamily and education are key sectors for improving equitable policy results, while the complex building needs in the healthcare sector make it an important target for compliance flexibility as well. Figure B2 shows how the covered buildings in each city are distributed across these 4 types (based on number of buildings, not square footage). Multifamily—which is inclusive of market rate, affordable, condos and co-ops—is a significant portion of the stock, ranging from 25% of covered buildings in St. Louis to 68% in New York City. Washington, DC has the highest proportion of office buildings at 26%, while Denver and St. Louis have the most buildings in categories other than the 4 highlighted here.

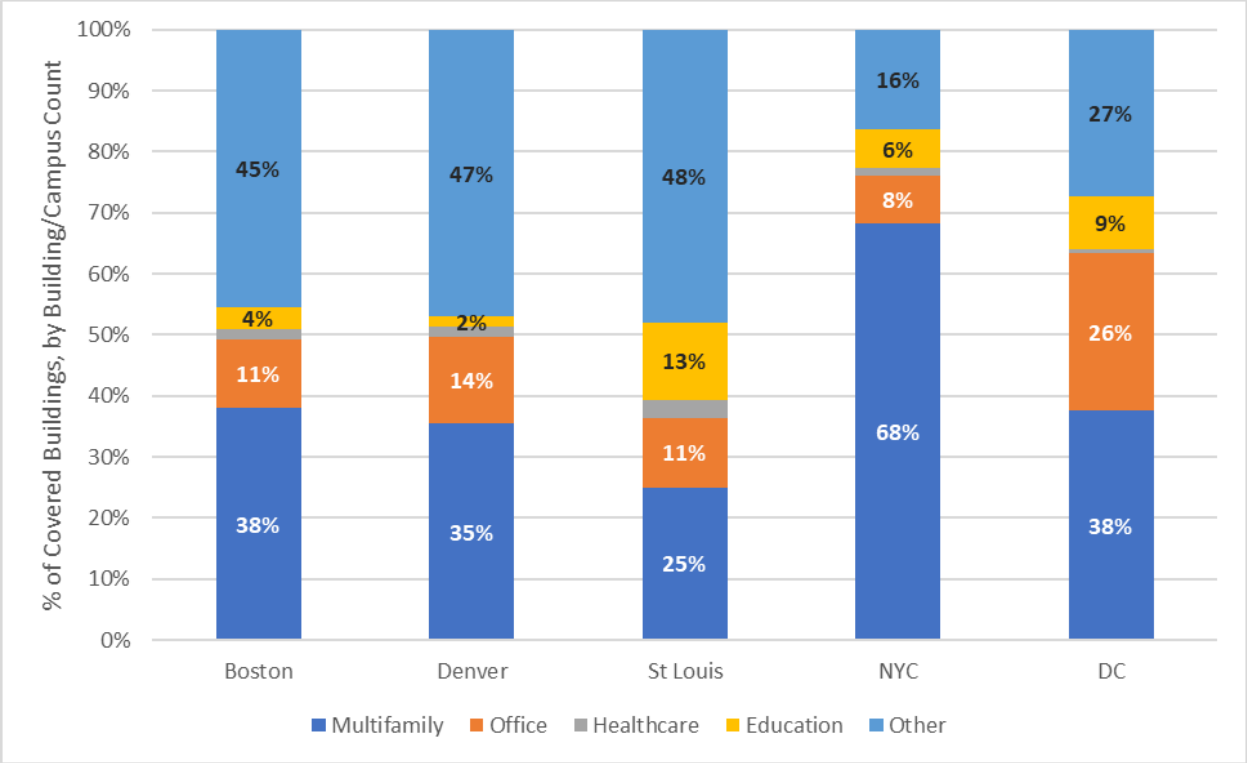

Figure B2: Building Type Breakdown

We then compare compliance rates for each of the four prioritized building types. Figures B3 and B4 show the compliance rates for each building type, organized by jurisdiction and building type, respectively. In most cities, the office and multifamily buildings have similar compliance progress towards the initial targets within a given city, and those rates track relatively closely with the compliance progress of all buildings. There was no discernible pattern for education or healthcare across the cities. The “All Cities” rates skewed towards NYC results due to the number of NYC buildings.

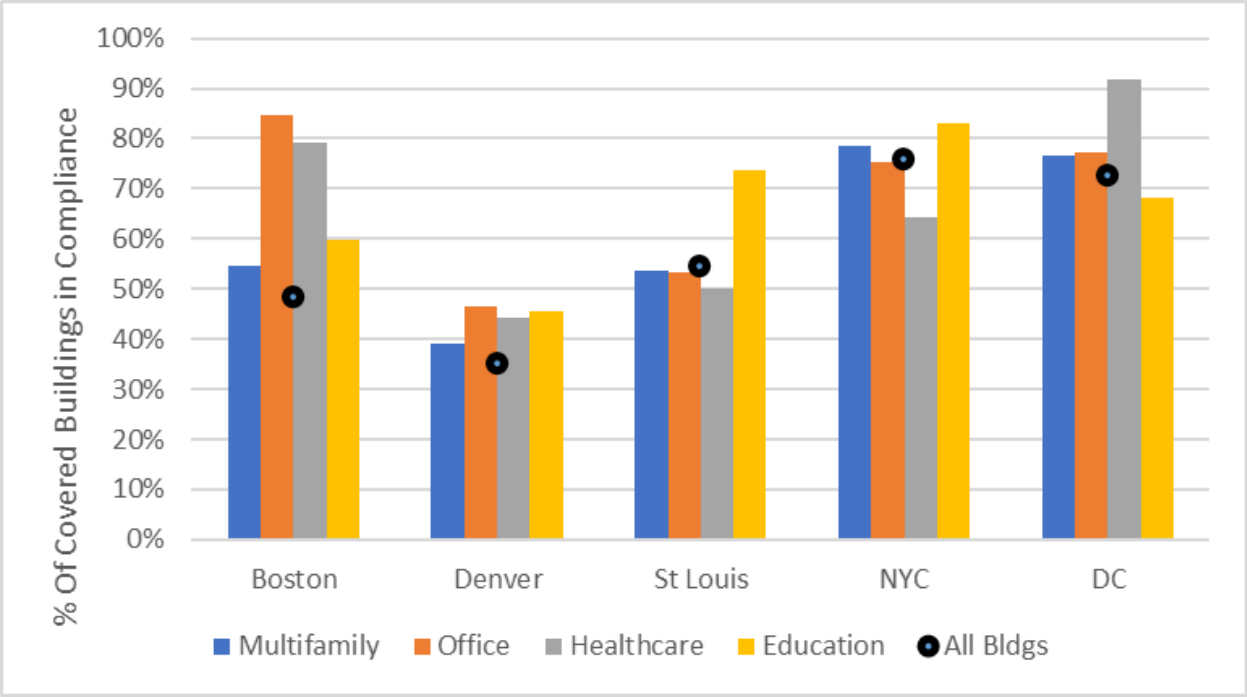

Figure B3: Initial Compliance by Building Type, Organized By Jurisdiction

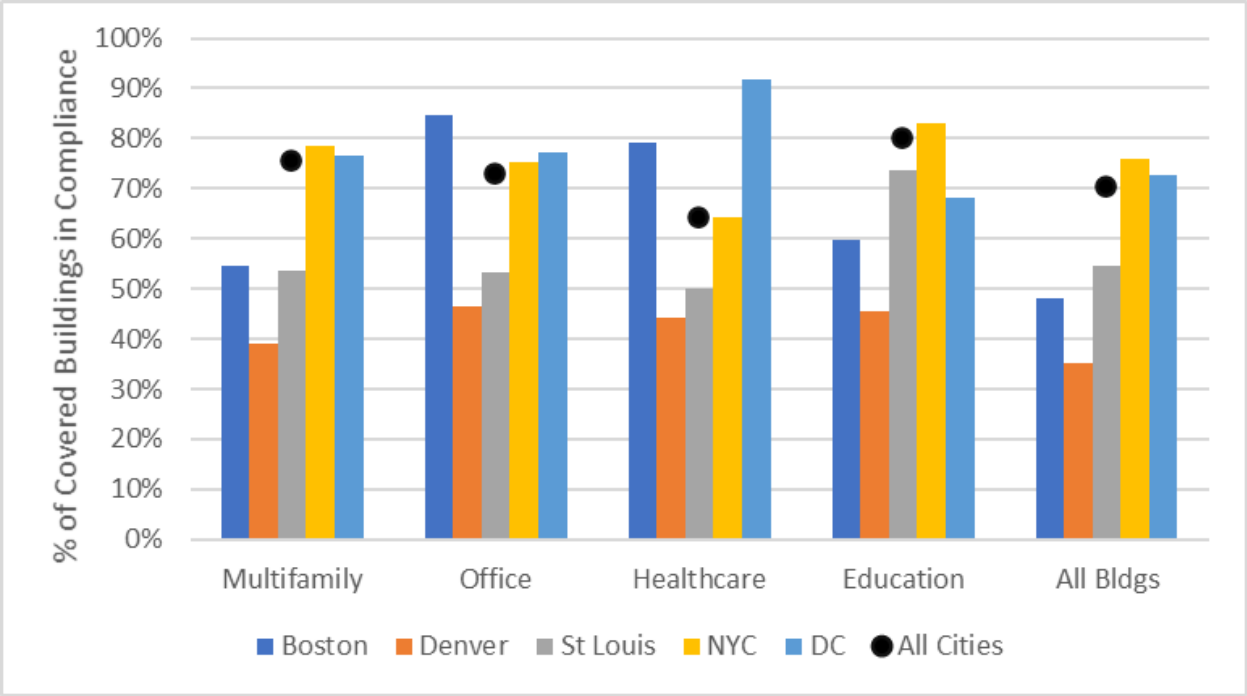

Figure B4: Initial Compliance by Building Type

Appendix C: Pathway options by jurisdiction

This appendix details the non-standard pathways available in all surveyed jurisdictions, according to the typology laid out in the report. Pathways detailed in this Appendix are listed below in Table C1. We include a pathway offered by a jurisdiction if either (a) the jurisdiction calls for an alternative compliance pathway, or (b) the option fits within the typology of pathways presented in this report, with the following exceptions:

- **Payments:** All jurisdictions have a payment or penalty; some also offer the ability to offset some emissions by paying into special funds. Even when the law calls it an "alternative compliance payment," whether they are actually treated as an equivalent form of alternative compliance, versus non-compliance, varies. To simplify, no payment-based compliance options are included in this appendix.
- **Standard target adjustment:** A number of jurisdictions also offer standard adjustments to targets for use factors; unless part of a broader ACP, these are not included.

For more details on each policy, see IMT's matrix comparing U.S. BPS.[68]

Table C1. Overview of Compliance Alternatives by Jurisdiction

	Percent Reduction	Timeline Adjustment	Custom Target	Campus Target	Portfolio Compliance	Prescriptive Measures
Boston		X	X	X	X	
Colorado	X	X				
Denver	X	X	X	X		X
Montgomery County, MD		X	X			
New York City		X	X		X	X
Oregon			X	X		
Seattle	X	X	X	X	X	X
St. Louis, MO	X	X	X			
State of Washington			X	X		
Washington, DC	X	X	X	X		X

[68] IMT, "Maps and Comparisons."

Boston

- **Program name:** Building Emissions Reduction and Disclosure Ordinance (BERDO)
- **Program established:** 2021
- **BPS type:** Fixed Limits
- **BPS metric(s):** Total GHGI

Table C2: Boston Alternative Pathways

Official Name	Eligibility	Alternative Provided	Compliance Application & Reporting	Pathway Implementation & Verification	Notes
Building Portfolio	Any portfolio or campus with a shared owner	Portfolio or Campus based emissions compliance	Identify buildings, demonstrate shared ownership, and conduct planning	Performance-based	Can also be combined with individual compliance schedule or hardship plan (but not both)
Hardship Compliance Plan	Qualifying conditions/ circumstances plus an eligible hardship	Timeline adjustment and/or custom target	Action plan	Application-specific	Can also be used for a portfolio; BERDO review board has to approve.
Individual Compliance Schedule	Any	Percent reduction and/or timeline adjustment	Identify buildings, demonstrated supporting documentation for establishing baseline data	Performance-based	Can also be used for a portfolio

Portfolio compliance

Alternative provided and notes: Allows grouping of multiple buildings (which may share a campus or may be geographically dispersed) into a single portfolio with a blended emissions standard for the portfolio.

Note: Boston also includes a "blended emissions standard" flexibility for mixed use buildings but this process is available in most jurisdictions; in Boston it can be applied to Portfolios as well.

Eligibility: All buildings in the Building Portfolio have the same owner or are part of the same Institutional Master Plan. Any occupied building type can be included in the portfolio (no vacant buildings). All buildings in the portfolio must be in compliance with benchmarking and third party verification requirements. No building can be included in more than one portfolio.

To define whether buildings have the same owner, Boston requires that the buildings either all have the same owner in the tax records (which is common for institutional owners), or for more complex situations, that at least one of the following conditions are true:

- Same sponsor for deed-restricted residential buildings;
- Same majority owner or beneficial owner for special purpose or charitable organizations;
- The single entity holds an ownership interest in all the buildings and either directly or indirectly through subsidiaries exercises control over the buildings; or
- Charitable organizations under common ownership from an entity legally responsible for BERDO compliance.

Compliance application and reporting: The requestor self-identifies all the buildings on a spreadsheet and provides documentation to meet the eligibility criteria as defined above. Application must also include building uses and gross floor area for all buildings. Based on the mix of uses and floor areas in the portfolio, the City establishes a portfolio level GHGI standard.

If a stakeholder impact review is required, or the owner is also applying for an additional ACP, the BERDO Review Board must hold a hearing to approve. For portfolios with impact concerns, the owner must submit an additional plan within 2 years of portfolio approval on plans to prioritize distribution of benefits associated with BERDO compliance.

Pathway implementation and verification: Portfolios take one of four pathways based on whether the buildings share a parcel, whether a stakeholder impact review is required, and whether the owner is also applying for another ACP in conjunction (e.g., individual schedule or hardship). Buildings that are sold or become vacant are removed from the portfolio; to remove a building from the portfolio for any other reason, or to add a building to the portfolio, the owner must request and receive approval from the BERDO Review Board.

Verification is based on reported benchmarking data for all buildings, with third-party verification for each individual building under the same requirements as other buildings.

Hardship compliance plan

Alternative provided and notes: This pathway allows building owners to apply for one or more types of flexibility if a building has characteristics or circumstances that create a hardship in

complying with the standard. It is the most flexible ACP available under BERDO, although it has a high administrative burden. Flexibility available under a hardship compliance plan includes:

- Alternative timelines,
- Alternative/custom emission limits,
- Exclusion of specified energy uses,
- Adjusted compliance obligations or mechanisms, and/or
- Other relief on a case by case basis.

Note: A portfolio of buildings can also apply for a hardship compliance plan.

Eligibility: Buildings must demonstrate (1) one or more qualifying circumstances of conditions, (2) that all other compliance options have been considered, and (3) buildings with characteristics or circumstances that create hardship in complying with the standard, including:

- **Financial:** bankruptcy, or demonstration that the owner has a schedule of compliance-related costs that does not align with long-term schedules for capital expenditures that cannot be changed or are beyond the control of the owner;
- **Regulatory or contractual:** long-term energy contracts for a significant portion of demand, long-term lease that prohibits significant retrofit work, delays in renewable energy purchase, delays in electrical system interconnections, delays in government approvals, or other regulatory restrictions limiting energy use reduction options;
- **Technical or operational:** building or space constraints, equipment needed for compliance is not available in the U.S., or sufficiently high process loads that cannot be reduced without hardship; or,
- **Other:** Low-income buildings, natural disasters, or other conditions.

Buildings with eligible circumstances/characteristics must *also* demonstrate that they have an eligible hardship such as:

- Compliance requires space, equipment, or electric service that is not available;
- Compliance would significantly interfere with the ability to, or significantly increase the cost to, provide services that are critical to community health and safety; or
- When compliance with emissions standards creates an unreasonable difficulty on a building owner in terms of costs.

Compliance application and reporting: Submit application proving eligible circumstances or conditions, that alternative compliance mechanisms and flexibility have been considered, and that an eligible hardship exists. Applications are reviewed and approved by the BERDO Review Board. The Review Board may also opt to offer different accommodations than those proposed, as they deem appropriate.

Pathway implementation and verification: Customized implementation and verification requirements are established through the approval process for the hardship compliance plan.

Individual compliance schedule

Alternative provided and notes: This pathway allows building owners or building portfolio managers to apply for an alternative timeline to reduce emissions by adjusting the baseline year to one between 2005-2021. It enables the building or portfolio to take advantage of emissions improvements already made. A building or portfolio must:

- Reduce emissions 50% by 2030;
- Establish declining CO_2 emissions standards in five-year increments that decline on a linear or better basis; and
- Reduce emissions 100% by 2050.

Note: A portfolio of buildings can also apply for an individual compliance schedule.

Eligibility: This pathway is useful for buildings or portfolios that have already performed emissions reductions upgrades. Individual Compliance Schedules must be approved by the Review Board.

Compliance application and reporting: Owners apply by identifying the building(s) and the baseline year, and providing supporting documentation to verify their energy and emissions performance for the proposed baseline year. In addition, owners must attest or demonstrate that each building's total Gross Floor Area has not been reduced by more than 10%, that the building primary uses have remained the same, and that all reporting and third-party verification requirements have been met.

Pathway implementation and verification: Verification is based on reported benchmarking data for all buildings, with third-party verification for each individual building under the same requirements as other buildings.

Other notes

Boston offers the following additional flexibility through the following mechanisms:

- **Renewable energy:** The impact of emissions from electricity use on compliance can be reduced or eliminated through the purchase and retirement of Massachusetts Class 1 RECs, or subscription to Boston's municipal aggregation program, "Boston Community Choice Electricity" at the "Green 100" level.
- **Alternative payments:** This option allows building owners to mitigate carbon emissions from energy use by making payments currently equal to $234 per metric ton of CO2e. Funds collected are directed to the Equitable Emissions Investment Fund and used to support implementation and administration of carbon abatement projects. Making payments for all excess emissions provides BERDO compliance.

Colorado

- **Program name:** Building Performance Colorado
- **Program established:** 2023
- **BPS type:** Recalculated
- **BPS metric(s):** Site EUI and/or GHGI

Table C3: Colorado Alternative Pathways

Official name	Eligibility	Alternative provided	Compliance application & reporting	Pathway Implementation & verification	Notes
Standard percent reduction: EUI or GHG	All buildings	Reduce by EUI or GHGI 29% by 2030	Selection	Benchmarking performance data	Not presented as ACP as such
Timeline adjustment	Various criteria	Timeline adjustment	Energy assessment and additional documentation	Not listed	

Standard percent reduction pathway: EUI or GHG

Alternative provided and notes: A flat percent reduction option is available for buildings that are not able to achieve the site EUI or GHGI target for their property type, or for buildings that do not align with the property types provided. This standard percent reduction pathway allows buildings to reduce their site EUI or GHGI by 13% by 2026 and 29% by 2030, as measured against their 2021 baseline (or their first year or reported data, for newly constructed buildings).

Eligibility: Optional for all buildings; default path for building types without an EUI or GHGI target.

Compliance application and reporting: Select in Colorado Energy Office portal. Note that unlike in some other jurisdictions, adjustment for use factors cannot be used to adjust the baseline for percent reduction.

Pathway implementation and verification: Performance-based, demonstrated through annual benchmarking reporting. Interim check-in goal of 13% reduction in 2026 data, reported in 2027.[69] Enforcement based on achieving 29% reduction from baseline by 2030.

Note: If a building type (manufacturing, agricultural, industrial, data centers, mixed-use, etc.) does not have a building-type-specific target, the building is automatically moved to the percent reduction pathway. Buildings must submit benchmarking data and some other documentation to receive their new individualized percent-reduction-based target.

Timeline adjustment

Alternative provided and notes: Buildings facing financial or logistical challenges meeting the targets by the specified timelines may request a timeline adjustment. The length of the available adjustment is not specified in the regulations and may be requested by the building owner and approved or modified at the discretion of the Colorado Energy Office.

Eligibility: Buildings eligible for a timeline adjustment include, but are not limited to:

- Affordable housing and under-resourced buildings
- Buildings undergoing a major renovation
- Building owners experiencing significant supply chain or workforce delays
- Building owners who can demonstrate a plan to replace heating and cooling systems at end of life where system end of life occurs after the compliance period
- Building owners experiencing financial hardship
- Inherent and unique building characteristics of the physical building that prohibit reaching the timeline
- Buildings that require updates to the electrical infrastructure that cannot be completed in time to meet the performance standard deadline due to delays outside of the control of the building owner
- Building owners who purchase a covered building in the 12 months prior to a performance standard deadline

Compliance application and reporting: Covered building owners applying for an adjusted timeline must submit their application to the Colorado Energy Office by December 31, 2025, for the 2026 target and by December 31, 2029, for the 2030 target. Documentation must include:

- An ASHRAE Level 2 energy audit for the building along with a report describing the results and recommendations of the audit; and

[69] Current program guidance lists the 2026 milestone as a requirement, but these were converted to goals by HB25-1269. The same legislation authorized additional changes to ACPs, but these have not yet been developed and implemented and so are not reflected in the appendix.

- Dates and documentation of planned or completed energy efficiency or emission reduction upgrades that will enable the building owner to achieve the performance targets within the adjusted timeline; and
- Any additional information that the state requests.

Buildings whose application is not approved as requested may appeal to the head of the implementing department within 90 days.

Pathway implementation and verification: Unspecified.

Denver

- **Program name:** Energize Denver Building Performance Policy
- **Program established:** 2021
- **BPS type:** Trajectory
- **BPS metric(s):** Site EUI

Table C4: Denver Alternative Pathways

Official name	Eligibility	Alternative provided	Compliance application & reporting	Pathway implementation & verification	Notes
Percent reduction target adjustment	All buildings - must have received a standard target adjustment	Cap of 42% EUI reduction	Applied directly if building corrected benchmarking and cities applied all other adjustments		Variance on standard path
Custom target adjustments	All buildings - must have received standard target adjustment	Target adjustment	Submit online application, complete energy audit, and create renewable energy options memo	Evaluated one year after all work completed. If target met, it stands. If 5% difference, then target adjusted to that EUI and then must be maintained. If more than 5% difference, enter performance enforcement process or corrective action process	Variance on standard path

Official name	Eligibility	Alternative provided	Compliance application & reporting	Pathway implementation & verification	Notes
Timeline extension option	Technical constraints, Building changes, Building/owner type, Innovative, energy efficiency approaches,	Timeline extension	Application that includes audit, compliance plan, operations and maintenance document	Submit invoice or project completion documentation for items in compliance plan Meet performance target by updated date	Official alternative compliance path
Interim compliance hold	Financial hardship, Change of ownership/tenant, major renovation, other	Short-term timeline extension	Application that includes documentation of eligibility	12-month check-in with City; meet target or request further extension	Official alternative compliance path
Residential condominium reserves option	Building type Financial hardship	Timeline extension	Application that includes audit, compliance plan, operations and maintenance document, and fundraising plan	Submit invoice or project completion documentation for items in compliance plan; Meet performance target by updated date	Official alternative compliance path
Manufacturing /Agricultural/ Industrial (MAI) Option	Building type	Percent reduction, EUI target, or prescriptive	Varies based on the option selected.	Varies based on the option selected.	Official alternative compliance path

Percent reduction target adjustment

Alternative provided and notes: All buildings are able to adjust their target based on standard adjustment factors for certain use conditions such as non-standard operating hours, pools, parking, EV charging, data centers. If, after applying any applicable standard adjustment factors, the EUI reduction the building would need to achieve to meet the final 2030 target is larger than 42%, the final target will be changed to 42% reduction.

Note that certain unusual building types without sufficient reference data, such as aquariums and zoos have a standard target that is just set as a 30% reduction in EUI from the baseline. Buildings in this category and historically designated buildings can submit an online application with an ASHRAE audit if they cannot meet the 30% reduction in EUI; the City will review and determine a custom target as needed.

Eligibility: All buildings

Compliance application and reporting: Apply for standardized target adjustment process. If third-party verification shows the difference is still larger than 42%, this path is selected.

Pathway implementation and verification: Meet new target on the standard timeline

Custom target adjustment

Alternative provided and notes: If standard adjustment is applied and adjustments are still needed, the owner can apply for a custom target adjustment

Eligibility: All buildings as long as completed target adjustment and reviewed benchmarking report for normalization—however, this is presented particularly important for building types where the standard targets may not be sufficiently representative.

Compliance application and reporting:

- Submit online application
- Complete energy audit
- Create renewable energy options memo
- Onsite visit from staff to review and verify that the information is complete before target is accepted

Pathway implementation and verification: Evaluated one year after all work completed. If the target is met, that stands as the level of performance the building needs to continue to maintain. If the target is not met, but the building's performance is no more than 5% higher than the custom target, the building is still considered compliant and that higher EUI level is set as the performance the building needs to maintain. If the building is more than 6% away from the

target, the building can perform another audit to evaluate what went wrong; if issues are found, time is provided to address them, before penalties are to be assessed.

Timeline extension option

Alternative provided and notes: May apply to change the timeline of performance target compliance for just one target or multiple targets within one application. Requires a mix of prescriptive and performance requirements based on what's in the compliance plan.

Eligibility: Reasons include: 1) planning for end of system service life for major equipment, 2) energy service capacity, 3) district steam loop system limitations, 4) planning for major renovation, 5) innovative approach to energy efficiency, 6) under-resourced buildings may apply for additional reasons

Compliance application and reporting:

- Energy audit that meets minimum requirements
- Compliance plan articulating when improvements will be made and how the improvements will result in meeting the final target.
- Operations and Maintenance program document
- Supporting documentation that validates the reason for requesting the timeline

Pathway implementation and verification:

- Submit invoice or project completion documentation for items in compliance plan
- Meet performance target by updated date

Interim compliance hold

Alternative provided and notes: Used for a temporary situation and grants a 24-month hold on the performance requirements. Benchmarking is still required while on interim compliance hold

Eligibility: Qualifying financial distress, financial solvency, vacancy rate above 20%, lease terminations, redevelopment or demolition, adaptive reuse projects, change of building owners or tenant, natural or man-made disasters, historical building (Landmark Preservation Commission review process won't be done in time)

Compliance application and reporting:

- Online application form
- Narrative letter signed by executive leadership containing request for hold, eligibility reasons, and why hold is needed

- Documentation that supports reason requested
- Contact information for who will provide annual updates

Pathway implementation and verification:

- At the 12-month mark, check in on status in recovering from the situation.
- At end of two years, either proceed with meeting final target or extend hold for another 12 months by submitting documentation that shows the situation still exists
- Can apply for timeline adjustment option if longer time is needed

Residential condominium reserves option

Alternative provided and notes: May apply to change compliance timeline for fundraising purposes. If extension is needed for any other reason than fundraising, apply through timeline extension.

Eligibility: Residential condominium where portion is for separate dwelling unit ownership and rest is common ownership. Balance of capital reserves fund must be less than 30% of funds needed for work identified.

Compliance application and reporting:

- Energy audit that meets minimum requirements
- Compliance plan, including
    - The package of measures that must be completed to meet final target
    - How the homeowners association will complete measures in common areas with less than 5-year payback in three years
    - A plan and timeline for each individual homeowner to complete upgrades
- Operations and maintenance program document
- Fundraising plan
- Supporting documentation showing copy of reserves, current dues, and financial analysis

Pathway implementation and verification:

- Submit invoice or project completion documentation for items in compliance plan
- Meet performance target by updated date

Manufacturing/Agricultural/Industrial (MAI) Option:

Alternative provided and notes: May apply for a performance pathway or prescriptive pathway.

- Performance path includes either (1) 30% EUI reduction from baseline, (2) custom metric, such as a 30% production efficiency improvement from baseline, (3) EUI target of 52.9, or (4) ENERGY STAR Energy Performance Indicator of 75
- Prescriptive pathway: select either an estimated 30% EUI reduction or estimated 30% production efficiency improvement and develop an action plan that illustrates how the building will meet the metric. If reporting shows less than 20% reduction, submit a corrective action plan
- New buildings: demonstrate that at least 30% of annual site energy use is covered by renewable energy generation long-term or select a metric that will be maintained through 2032 (EUI, production efficiency, or ENERGY STAR Energy Performance Indicator Score of 75)

Eligibility: Manufacturing, agricultural or industrial building. Distribution centers and warehouses do not qualify.

Compliance application and reporting:

- Performance pathway: submit an application for which metric to use; otherwise default to 30% site EUI reduction
- Prescriptive path: submit an application that includes an energy audit and an action plan on how the building will meet the metric chosen

Pathway implementation and verification:

- Performance target shown through submission of benchmarking data
- Prescriptive path met by submitting Interim Implementation Report to show measures were implemented and an evaluation, monitoring, and verification report showing progress towards metric selected.
    - If less than a 20% reduction, must implement a corrective action plan.

Montgomery County, Maryland

- **Program name:** Building Energy Performance Standards (BEPS)
- **Program established:** 2022
- **BPS type:** Trajectory
- **BPS metric(s):** Site EUI

Table C5. Montgomery County, MD Alternative Pathway

Official Name	Eligibility	Alternative provided	Compliance application & reporting	Pathway Implementation & verification	Notes
Building Performance Improvement Plan (BPIP) Path	Covered buildings where the measures required to meet the interim or final standard are not cost-effective or when there are other circumstances outside the owner's control.	Timeline Adjustment and/or Custom target	Energy audit and assessment of electrification and renewable energy feasibility. Submission of a retrofit plan.	Annual reports demonstrating compliance with retrofit plan.	Both a timeline adjustment and a custom target are available under the BPIP. Achieving the actions and timelines in the BPIP results in compliance with BEPS regardless of the building's performance.

Building Performance Improvement Plan (BPIP) Path

Alternative provided and notes: Timeline adjustments and custom targets are both opportunities provided under Montgomery County's Building Performance Improvement Plan (BPIP) Path. The path supports buildings that cannot reach one or more targets because of economic infeasibility or other circumstances outside the owner's control, such as characteristics inherent to the building or the building's equipment lifecycles, occupancy, or financing.

Eligibility: Buildings where the measures required to meet targets are not cost-effective or when there are other circumstances outside the owner's control.

Compliance application and reporting:

- Documentation demonstrating economic infeasibility or circumstances outside of the owner's control.
- Level 2 energy audit and assessment of electrification and renewable energy feasibility
- Development of a retrofit plan outlining cost-effective energy improvement measures and the associated years or qualifying events that will prompt implementation of the measure. Cost-effectiveness is defined by each measure's simple payback period and is the lesser of the lifespan of the measure or ten years for specially designated buildings including affordable housing.

Pathway implementation and verification:

- Annual reports showing compliance with the retrofit plan in accordance with the schedule.
- Building owners meeting the requirements of the BPIP are considered in compliance with the BEPS regardless of the building's performance.

New York City

- **Program name:** Local Law 97 (LL97)
- **Program established:** 2019
- **BPS type:** Fixed limits
- **BPS metric(s):** GHH emissions

Table C6. New York City Alternative Pathways

Official Name	Eligibility	Alternative Provided	Compliance Application & Reporting	Pathway Implementation & Verification
Prescriptive pathway	Buildings with >35% rent-regulated units or place of worship	Prescriptive	File a one-time report by reporting deadline (extension available to Dec 31 2025)	Submit energy compliant building report and energy conservation measures report or meet target
Extension for income-restricted housing	Buildings owned by a limited profit housing company with income-restricted units	Extension	Demonstrate meet requirements, reporting in 2036	Meet targets starting in 2035
Good faith efforts	Any	Timeline adjustment	Illustrate compliance with LL88 and benchmarking Submit an application that shows compliance with LL84 & LL88 and meeting one of 6 criteria	Prove work needed to meet target is complete by May 1, 2026 for the 2024-2029 limit
Target adjustments	Building type; technical considerations; or buildings facing financial constraints, that are non-profit hospitals, or significantly over their limits.	Target adjustment	Apply for adjustment and include GHG Reduction Plan	Meet adjusted target
Government operations	NYC-owned/ operated	Portfolio	Default	City government GHG inventory

Prescriptive pathway

Alternative provided and notes: Buildings not covered by LL97's emissions limits (some affordable housing, multifamily with more than 35% of units subject to rent regulations, places of worship), must comply with a prescriptive list of energy conservation measures.

Eligibility: Buildings with 35% of units or more subject to rent regulation, or is a Housing Development Fund Corporation co-op, or has one or more units that participate in a federal project-based housing program

Compliance application and reporting: Demonstrate that emissions are below applicable 2030 limits or show that applicable prescriptive measures have been fully implemented.

Pathway implementation and verification: File a one-time report by 2025 reporting deadline

Extension for income-restricted housing

Alternative provided and notes: Extension to 2035 as the first compliance date

Eligibility: Buildings owned by a limited profit housing company and contain one or more units that are income-restricted

Compliance application and reporting: Show that you meet eligibility requirements

Pathway implementation and verification: Meet 2035 compliance

Good faith effort

Alternative provided and notes: Provides a timeline extension for buildings that are not going to meet targets by 2025, but can illustrate good faith efforts to reach compliance.

Eligibility: Buildings that are in compliance with Local Law 84 (benchmarking), and Local Law 88 (lighting upgrades and submeter installation) or a plan for implementing.

Compliance application and reporting: Illustrate compliance with LL84 and LL88 and one of the following: 1) demonstrating work is underway to meet compliance requirements, 2) demonstrating electrification readiness work is underway, 3) previously under emissions limit for previous year, 4) critical facility like hospital, 5) showing adjustment has been granted, or 6) providing a decarbonization plan that will result in compliance by 2027.

Pathway implementation and verification: Prove work needed to meet target is complete by May 1, 2026 for the 2024-2029 limit

Target adjustment

Alternative provided and notes: Provides a short-term increase in emissions target. Not intended to be a long-term target adjustment for buildings. Meet 30% reduction in emissions, or qualify for external or financial constraints.

Eligibility: (1) capital improvements are necessary but not possible due to historical landmark status or space constraints, (2) special circumstances for building such as 24-hour operations, (3) nonprofit hospital or healthcare facility, or (4) emissions are more than 40% above emissions limit/target. Also financial constraints.

Compliance application and reporting: Application must be made and include details on measures that will be installed to comply with emissions limits by 2030

Pathway implementation and verification: Prove work needed to meet target is complete by May 1, 2026 for the 2024-2029 limit

Government operations

Alternative provided and notes: LL97 includes a special section for government operations, requiring reduction of GHG emissions (scope 1 and 2) by 40% by 2025 and 50% by 2030.

Eligibility: Only specific to buildings and other operational activities within the “government operations” boundary for the City’s GHG inventory. This includes buildings, but also wastewater treatment facilities, fleet vehicles, and ground-mount or canopy renewable energy installations.

Compliance application and reporting: Automatic

Pathway implementation and verification: Reporting through city operations GHG reporting; independent from benchmarking in Portfolio Manager.

Oregon

- **Program name:** Oregon Building Performance Standards
- **Program established:** 2023
- **BPS type:** Recalculated
- **BPS metric(s):** Energy use intensity

Table C7. Oregon Alternative Pathways

Official name	Eligibility	Alternative provided	Compliance application & reporting	Pathway Implementation & verification
Campus district energy system decarbonization plan	Large campuses with centralized heating and/or cooling systems	Portfolio or campus based compliance	Custom decarbonization plan, energy management plan and operations and maintenance plan, regular progress reports	Performance-based
Investment criteria	Any building unable to meet performance targets	Custom target	Energy data, energy audit, life-cycle cost assessment, energy management plan and operations and maintenance plan,	Annual reports All EEMs are installed and commissioned prior to the compliance date. The Energy Management Plan and O&M program are fully implemented

Oregon Participating Campus District Energy System

Alternative provided and notes: Allows large campuses with centralized heating and/or cooling systems to comply through a decarbonization plan rather than meeting individual building performance targets. The decarbonization plan must provide a strategy for up to 15 years to reduce greenhouse gas emissions and create a roadmap to replace fossil fuels

Eligibility: Energy districts which meet the following criteria can opt into the compliance path:

- Serve three or more buildings
- Have more than 100,000 square feet of total conditioned space
- Deliver steam, hot water, or chilled water using a centralized system
- Be under common ownership or operated under a public-private partnership

Compliance application and reporting:

- Develop decarbonization plan by June 30, 2026
- Submit a final Decarbonization Plan to the AHJ by June 30, 2027
- Submit an energy management plan and operation and maintenance plan
- Progress report every five years after June 30, 2027 until full implementation of the decarbonization plan and compliance with the standard has been met
- Submit completion report by July 1, 2042, or the alternatively approved decarbonization plan completion date

Pathway implementation and verification:

- Validation of implementation of decarbonization plan
- Fully implemented operations and maintenance and energy management plans
- Full compliance is achieved when annual performance shows the district system has met the GHG threshold or emissions reductions.

Investment criteria

Alternative provided and notes: The investment criteria is a path for complying when a building cannot meet the EUI or GHG intensity targets. Instead of meeting performance requirements, the building owner must show that all cost-effective energy efficiency measures (the “optimized bundle”) have been implemented.

Eligibility:

- Tier 1 covered buildings that cannot meet performance targets
- Tier 1 covered buildings without performance targets in 50% or more of their space

Compliance application and reporting:

- Building activity and energy use intensity target
- Calculation of EUI
- Energy audit
- List of energy efficiency measures

- Life-cycle cost assessment and simple payback calculations to define cost effectiveness of measures
- Identified “optimized bundle” of cost effective energy efficiency measures
- Annual reporting until full implementation and verification are complete

Pathway implementation and verification:

- Conditional compliance is given after documentation of implementation of the optimized bundle of energy efficiency measures is provided to the Oregon Department of Energy.
- Full compliance is achieved after verification of post-implementation performance showing at least 75% of projected savings or use of verification meeting International Performance Measurement and Verification Protocol.
- Energy management plan and operations and maintenance program are fully implemented.

Seattle

- **Program name:** Building Emissions Performance Standard
- **Program established:** 2023
- **BPS type:** Fixed limits
- **BPS metric(s):** GHGI

Table C8. Seattle Alternative Pathways

Official name	Eligibility	Alternative provided	Compliance application & reporting	Pathway implementation & verification	Notes
Alternate GHGI target	Covered building, district campus, connected buildings, or public/ nonprofit building portfolio, or those with extremely high emissions	Percent Reduction	Building owner must apply for and receive approval before the first compliance deadline to use an alternate GHGIT.	Calculate alternate GHGI Target (GHGIT)	Building is able to use alternate GHGIT for all compliance intervals.
Aggregate GHGI target	Building owners with a building portfolio, district campus, or connected buildings	Portfolio compliance	Must apply to use and may be required to demonstrate ownership of the buildings	Calculate aggregate standard	Landmark

Official name	Eligibility	Alternative provided	Compliance application & reporting	Pathway implementation & verification	Notes
Affordable multifamily housing and human service uses extension	Affordable multifamily housing and human service uses	Timeline adjustment	Must meet benchmarking verification and all reporting obligations for 2031-2035 interval Must meet GHGITs for all subsequent intervals		Applies only to the 2031–2035 interval.
High rental vacancy extension	Leased buildings with high rental vacancy	Timeline adjustment	Must demonstrate high rental vacancy rate during a 12-month period within the 36 months before the compliance date.		An extension for only one compliance interval, but may be renewed
Financial distress extension	Buildings with pre-existing financial distress	Timeline adjustment	Must demonstrate financial distress Must meet benchmarking verification and reporting		An extension for only one compliance interval, but may be renewed
District Campus Decarbonization Compliance Plan	Campus with a district energy plant	Custom campus plan to decarbonize the plant and other campus buildings	Plan that demonstrates upgrades will generate greater cumulative emissions reductions	Energy and GHG audit, incremental targets, milestones and final GHGITs, cost analysis.	

Official name	Eligibility	Alternative provided	Compliance application & reporting	Pathway implementation & verification	Notes
Net-zero by 2041-2050 Decarbonization Compliance Plan	Buildings with extenuating circumstances	Custom targets at each compliance interval	Plan must be updated every interval with targets and or milestones achieved	Plan must include energy audit and GHG analysis, incremental and final GHGITs, specific measures per interval, cost analysis, and documentation of extenuating circumstances.	
Low Emissions by 2041-2050 Decarbonization Compliance Plan	Buildings with extenuating circumstances for whom net-zero is infeasible	Custom targets at each compliance interval	Plan must be updated every interval with targets and or milestones achieved	Plan must include energy audit and GHG analysis, incremental and final GHGITs, specific measures per interval, cost analysis, and documentation of extenuating circumstances.	
Prescriptive options	Multifamily building	Prescriptive measures	May only use one option (HVAC or DHW) per compliance interval	Must replace fossil fuel DHW or HVAC with electric systems subject to energy code	

Alternate GHGI target

Alternative provided and notes: Eligible buildings are able to use a percent reduction target instead of the standard Greenhouse Gas Intensity Target (GHGIT) across all compliance intervals.

Eligibility: Covered building, district campus, connected buildings, or public/nonprofit building portfolio, or those with extremely high emissions

Compliance application and reporting: Building owner must apply for and receive approval before the first compliance deadline to use an alternate GHGIT.

Pathway implementation and verification: The target is calculated in accordance with Section 22.925.080 and used for future intervals.

Aggregate GHGI target

Alternative provided and notes: Building owners with more than one building may comply with the emissions standards by using an Aggregate GHGI target based on a prorated blend of spaces for all their buildings' square footage combined, across a portfolio, district campus, or connected buildings.

Eligibility: Eligibility for this pathway is available to owners with the one of the following:

- Building portfolio (private, public, or nonprofit ownership): Two or more covered buildings on one or more lots, all owned by the same public, private, or nonprofit entity. .
- Connected buildings: Two or more covered buildings owned by the same building owner that are situated on the same or adjacent parcels and have shared mechanical or metering equipment such as energy meters, building controls, or HVAC.
- District campus: Two or more covered buildings on the same or adjacent parcels owned by the same building owner that is served by a campus district energy system.

Buildings under the policy floor area threshold of 20,000 ft2 may not be included in a portfolio, and may only be included in a district campus or connected buildings report if they are not submetered.

Compliance application and reporting: A qualified person must submit benchmarking verification for the buildings, along with verification of the ownership of the buildings and documentation of their shared systems in a connected buildings or district campus report. Buildings approved for inclusion in another pathway cannot be included in the aggregate GHGI target pathway. Buildings seeking a low-income/low-rent extension can be included in the aggregate pathway *only if all* buildings are seeking both pathways together.

Pathway implementation and verification: The target is calculated in accordance with Section 22.925.080.

Affordable multifamily housing and human service uses extension

Alternative provided and notes: Provides a temporary timeline extension to eligible buildings during the 2031-2035 interval. (These properties have no performance limits before 2030.)

Eligibility: Affordable multifamily housing, Low-rent housing, or human service uses

Compliance application and reporting: Building owners must conduct benchmarking verification and emissions reporting as usual.

Pathway implementation and verification: GHGIT compliance resumes in the following interval using those interval targets.

Extension for high rental vacancy

Alternative provided and notes: Provides extension for buildings with high rental vacancy prior to the compliance deadline.

Eligibility: leased building with high rental vacancy rate (draft rule published June 2025 proposes ≥35% for a consecutive 12 month period within the 36 months prior to the compliance date). Low occupancy of leased spaces does not qualify as vacancy.

Compliance application and reporting: Must provide proof of eligibility no more than two years prior to the deadline. Must still conduct benchmarking verification and complete emissions reporting.

Pathway implementation and verification: GHGIT compliance resumes in the next compliance interval using those interval targets.

Extension for pre-existing financial distress

Alternative provided and notes: Provides extension for buildings with pre-existing financial distress from targets, data verification, and/or reporting requirements

Eligibility: Buildings with pre-existing financial distress–such as foreclosure, receivership, or tax liens.

Compliance application and reporting: Must provide proof of eligibility no more than two years prior to the deadline.

Pathway implementation and verification: GHGIT compliance resumes in the next compliance interval using those interval targets.

Net-zero by 2041-2050 Decarbonization Compliance Plan

Alternative provided and notes: Allows building with extenuating circumstances to propose and be approved to follow a custom path toward achieving net-zero emissions by 2041-2050 rather than meeting the standard target.

Eligibility: Individual buildings facing technical, financial, or physical barriers such as needed seismic work, major electrical upgrades, or tenant access issues.

Compliance application and reporting: Apply to demonstrate building meets eligibility criteria. If approved, submit a decarbonization compliance plan developed by a qualified professional.

The plan must be updated each compliance interval with targets and or milestones achieved and resubmitted if there are ownership or significant building use changes.

Pathway implementation and verification: The Plan must include energy audit and GHG analysis, incremental and final GHGITs, specific measures per interval, cost analysis, and documentation of extenuating circumstances.

Low Emissions by 2041-2050 Decarbonization Compliance Plan

Alternative provided and notes: Provides a lower GHGIT for buildings that cannot achieve net zero emissions by 2050.

Eligibility: Low income housing, historic buildings, or those with structural, technical, or financial limitations

Compliance application and reporting: Apply to demonstrate building meets eligibility criteria. If approved, submit a decarbonization compliance plan developed by a qualified professional. The plan must be updated each compliance interval with targets and or milestones achieved and resubmitted if there are ownership or significant building use changes.

Pathway implementation and verification: The Plan must include energy audit and GHG analysis, incremental and final GHGITs, specific measures per interval, cost analysis, and documentation of extenuating circumstances.

District Campus Decarbonization Compliance Plan

Alternative provided and notes: Allows a campus to comply by demonstrating that upgrades to the district energy plant will cumulatively reduce emissions from 2028-2050 at least as much as meeting standard or alternate GHGIT would.

Eligibility: Campus with a district energy plant

Compliance application and reporting: Eligibility application. Submission of a campus-wide decarbonization plan.

Pathway implementation and verification: Based on aggregated performance. Must meet decarbonization compliance plan standards including energy and GHG audit, incremental targets and final GHGITs, cost analysis.

Prescriptive options

Alternative provided and notes: For one or more compliance intervals, a multifamily building can implement one of the following prescriptive measures to comply. The measures include:

1. Replacing existing fossil fuel combustion domestic hot water (DHW) system(s) with electric heat pump water heating (HPWH) system(s)
2. Replacing existing fossil fuel combustion HVAC heating system equipment with electric heat pump systems (or in-unit electric resistance subject to restrictions in the Seattle energy code)[70]

Eligibility: Multifamily building

Compliance application and reporting: Building owner must implement upgrades and verify installation to the City.

Pathway implementation and verification: Must replace fossil fuel hot water systems with heat pump water heaters and/or fossil fuel HVAC systems with electric heat pumps (or in-unit electric resistance subject to restrictions in the per Seattle energy code)

[70] City of Seattle. "Energy Code - Overview" https://www.seattle.gov/sdci/codes/codes-we-enforce-(a-z)/energy-code

St. Louis

- **Program name:** Building Energy Performance Standard (BEPS)
- **Program established:** 2020
- **BPS type:** Recalculated
- **BPS metric(s):** Site Energy Use Intensity (EUI)

Table C9. St. Louis Alternative Pathways

Official name	Eligibility	Alternative provided	Compliance application & reporting	Pathway Implementation & verification	Notes
Narrow the gap	Properties that filed valid 2018 benchmarking reports and are in first or second compliance cycle	Meet EUI halfway between baseline and target	Annual benchmarking + data verification in final year	Performance-based. OBP calculates the Narrow the Gap target as the midpoint between Baseline and Target. Properties are compliant for that cycle if their verified EUI meets or beats this midpoint.	Only available in Cycles 1 and 2
Custom Alternative Compliance Plan (CACP)	Properties that cannot meet other paths due to qualified limitations (e.g., refinancing cycles, long-term leases, financial hardship)	Custom performance or prescriptive plan tailored to unique constraints	Requires eligibility application, third-party, ASHRAE Level 2 audit or RCx, and Building Energy Improvement Board (BEIB)-approved plan	Combination of performance- and/or prescriptive. Property follows the custom pathway outlined in the approved plan. Required milestone tracking. Final compliance is determined by adherence to plan terms and demonstrated savings.	Requires application, eligibility approval, and custom plan approval. Failure to meet milestones may result in enforcement or penalties.

Narrow the Gap

Alternative provided and notes: This alternative compliance pathway allows properties that cannot meet their standard target to comply by reaching an EUI that is halfway between their baseline and target. It is designed to offer a more attainable performance standard for underperforming properties in early stages of BEPS implementation.

Eligibility: Properties that submitted a valid 2018 benchmarking report and are in Cycle 1 or Cycle 2. This pathway is not available in Cycle 3 or beyond.

Compliance application and reporting: No special application is required. OBP automatically assesses whether the reported and verified EUI meets the “Narrow the Gap” threshold, calculated as (Baseline + Target)/2.

Pathway implementation and verification: Properties must submit annual benchmarking and third-party verified data in the Verification Year demonstrating that they meet or exceed the calculated intermediate EUI threshold.

Although compliance under the Narrow the Gap pathway is recognized for Cycles 1 and 2, it is not equivalent to achieving the full performance target. Building owners should understand that this pathway defers—but does not eliminate—the need to meet the full EUI target in subsequent cycles. Given this expectation to close the remaining performance gap in future cycles, building owners are advised to incorporate this trajectory into capital planning and retrofit timelines.

Custom Alternative Compliance Plan (CACP)

Alternative provided and notes: This is the most flexible pathway for properties unable to meet their standard Target or Narrow the Gap Target due to unique and verifiable barriers. A property must first apply to establish eligibility under one of five qualifying scenarios:

1. Mortgage refinancing cycles
2. Alignment with life cycle of major equipment
3. Long-term lease limitations
4. Historic preservation constraints
5. Severe financial hardship

Each scenario requires supporting documentation (e.g. refinancing schedules, lease agreements, engineering attestations, financial audits) that demonstrates how the condition limits compliance. Not all applicants will be approved. Properties denied eligibility may file one appeal to the Building Energy Improvement Board (BEIB), whose decision is final unless judicially challenged.

Eligibility: Properties that cannot meet their Target or Narrow the Gap Target due to one of the five qualifying scenarios and submit the required documentation through a formal application process.

Compliance application and reporting: The process includes two phases:

1. **Eligibility application** (submitted at least 26 months before compliance deadline to OBP)
2. **CACP plan submission**, which must include:
    - An ASHRAE Standard 211 Level 2 Energy Audit (unless completed within the past 5 years), or Retro-Commissioning (RCx) per OBP guidelines
    - A custom implementation plan listing specific Energy Conservation Measures (ECMs), timeline, associated costs, and anticipated energy savings
    - Supporting documentation and a measurement and verification plan if required

Pathway implementation and verification: If the plan is approved by OBP, the property must follow the custom schedule and demonstrate progress by meeting required milestones and submitting documentation through the BEPS Owner Portal. Compliance is evaluated against the custom pathway's terms. Missed milestones or insufficient implementation may result in corrective actions, non-compliance status, or ineligibility for future CACP approval.

Washington State

- **Program name:** Clean Buildings Performance Standard (CBPS)
- **Program established:** 2019
- **BPS type:** Recalculated
- **BPS metric(s):** Energy use intensity

Table C10. Washington State Alternative Pathways

Official name	Eligibility	Alternative provided	Compliance application & reporting	Pathway implementation & verification
Campus District Energy System Decarbonization Plan	Mandatory for State-owned properties with district energy systems. Optional for other properties with district energy systems.	Campus based compliance	Custom decarbonization plan, energy management plan and operations and maintenance plan, regular progress reports	Progress reports every five years until compliance with decarbonization plan is achieved
Investment Criteria	Any building unable to meet performance targets	Custom target	Building Level 2 energy audit, Life-Cycle Cost Assessment, energy efficiency measure list, energy management plan and operations and maintenance plan, annual reporting until implementation and verification are complete	Optimized bundle of energy efficiency measures are installed and commissioned prior to the compliance date. Verification of ≥75% of projected savings, or use of IPMVP protocols. The Energy Management Plan and Operations and Maintenance program are fully implemented. Annual reports

District Energy System Decarbonization Pathway

Alternative provided and notes: The Decarbonization pathway for energy districts provides a compliance path for energy districts through the development and implementation of a Decarbonization Plan that phases out fossil gas use in the district energy system heating plant, in addition to achieving an EUI target. The path allows for an extended compliance timeline (15+ years) for an entire district system to be evaluated as a whole, rather than requiring each building to achieve a target by the initial compliance dates (2026, 2027 & 2028).

Eligibility: Energy districts who meet the following criteria can opt into the compliance path:

- Serve five or more state owned buildings, or three or more buildings for other properties
- Have more than 100,000 square feet of total conditioned space
- Deliver steam, hot water, or chilled water using a centralized system
- Be under unified ownership or operated under a public-private partnership

Compliance application and reporting:

- Develop a decarbonization plan by June 30, 2024
- Submit final Decarbonization Plan to the AHJ by June 30, 2025
- Submit an energy management plan and operation and maintenance plan by July 1, 2030
- Progress report every five years after June 30, 2025 until full implementation of the decarbonization plan and compliance with the standard has been met
- Completion report by July 1, 2040

Pathway implementation and verification:

- Progress reports that validate the energy inputs to thermal systems, confirm emissions intensity, and verify that system wide performance is in alignment with compliance metrics
- Compliance is granted upon verified performance at completion of project

Investment criteria

Alternative provided and notes: The investment criteria pathway allows a building to implement only EEMs provided by an audit that are cost effective, rather than all EEMs identified by the audit. Any building that does not meet its EUI target can opt into the pathway. The pathway supports compliance for buildings that 1. Cannot measure EUI, 2. Don’t have a target, or 3. That cannot meet a target.

Eligibility:

- Tier 1 covered buildings that cannot meet performance targets

Compliance application and reporting:

- Level 2 Energy Audit that identifies energy efficiency measures
- Life-Cycle Cost Assessment to define cost effectiveness of measures
- Continued reporting until full implementation and verification are complete

Pathway implementation and verification:

- Documentation showing energy efficiency measures installed and commissioned
- Energy management and operation and maintenance plan updates
- After measuring implementation, provide measured savings that show at least 75% of projected savings or use IPMVP protocols for measurement and verification
- Annual progress reports
- Final compliance is achieved when performance data aligns with projected savings

Washington, DC

- **Program name:** Building Energy Performance Standard (BEPS)
- **Program established:** 2019
- **BPS type:** Recalculated
- **BPS metric(s):** ENERGY STAR Score, or Source EUI if no score

Table C11. District of Columbia Alternative Pathways

Official name	Eligibility	Alternative provided	Compliance application & reporting	Pathway implementation & verification	Notes
Performance pathway	All	Percent reduction in site EUI	N/A	Performance-based	Default principal pathway
Prescriptive pathway	All	"Prescriptive"	Energy assessment	Measure-based	Retired in 2025
Delay of Compliance	Various criteria	Timeline adjustment	Proof of eligibility	Performance-based	DC does not treat this as ACP per se
Accelerated deep energy retrofit	Achieve deeper savings	Timeline adjustment	Proof of eligibility	Performance-based	Covers multiple cycles
Extended deep energy retrofit	Affordable housing; campus	Timeline adjustment	Proof of eligibility + action plan	Performance-based	Covers multiple cycles
Campus target adjustment	College/ university campus	Custom Target (blended)	Selection of buildings and proposed target	Performance-based	Also used to reset target when buildings on campus changes

Official name	Eligibility	Alternative provided	Compliance application & reporting	Pathway implementation & verification	Notes
New Construction and change of property type	New construction or change of primary property type	Meet new standard	Proof of eligibility	Performance-based	
Adjusted baseline	Various criteria	Custom target (through adjusted baseline)	Proof of eligibility and energy assessment	Performance-based	
Custom ACP	Meet qualifying criteria	Application-specific	Custom application	Application-specific	

Performance pathway

Alternative provided and notes: Percent Reduction, reduce site EUI by 20% relative to baseline year.

This is the default compliance pathway under DC's BEPS, not an alternative. It is included here because it matches the percent reduction ACP approach in this report.

Eligibility: All buildings (selected automatically)

Compliance application and reporting: None, selected automatically

Pathway implementation and verification: Compliance measured in reported data showing savings against baseline. Building owners are also required to submit a brief "completed actions report" on efficiency measures implemented to achieve savings for informational purposes.

Prescriptive pathway (retired)

Alternative provided and notes: Building owners seeking more certainty of compliance could opt to use a measure-based compliance approach wherein they contract for a Level II energy audit and select measures that add up to 25% savings (to provide headroom), but where compliance is then measured based on completing those measures, with multiple phases of reporting.

As of 2025, no buildings are currently on this pathway, and due to its structure, it can no longer be selected. In 2025, the DC Council adopted legislation that eliminates this pathway from future cycles. It is included here for completeness.[71]

Eligibility: All buildings

Compliance application and reporting: Multi-phase process beginning with an energy audit, followed by an action plan and an O&M program plan.

Pathway implementation and verification: Submit implementation report verifying measure installation, along with attestation of O&M program implementation.

Delay of compliance

Alternative provided and notes: Buildings can request a delay of compliance of up to three years. Qualifying affordable housing can request a delay for a custom time period; the length of the delay for affordable housing is not bounded to allow it to align with refinancing cycles. Building owners should only request this extension if meeting the target by the end of the cycle is infeasible.

Eligibility: Any building that can demonstrate eligible circumstances, which include: change of ownership, major renovation, pending demolition, change in property type, officially designated historic building, or if the building becomes unoccupied.[72] Affordable housing qualifies for the longer delay if 1) use restrictions or covenants reserve at least half the units for households with income less than 50% of area median income (AMI); 2) at least half the units rent at levels affordable to such households; or 3) it is a limited-equity cooperative.

Compliance application and reporting: Application with proof of eligibility, proposed measures and timeline for implementation, and description of financing strategy to support their implementation. Once approved, DOEE issues a Delay of Compliance Decision Letter.

Pathway implementation and verification: Performance-based. A building that does not meet the conditions of the Delay of Compliance decision letter is ineligible to apply for a delay in the following cycle.

Accelerated deep energy retrofit

Alternative provided and notes: Buildings that achieve far greater energy use reductions than required in one cycle can apply to be considered compliant for the one to three additional cycles

[71] DC Law 25-307.

[72] The DOEE BEPS Guidebook also lists financial distress as a qualifying condition for a delay of compliance, but DC Law 25-307 replaces that with a full cycle exemption for buildings in financial distress.

depending on the level of savings achieved—so long as at the end of the additional cycle(s) they maintain 75% of the savings by the end of the cycle.

Eligibility: Any building that meets the accelerated savings threshold. The required savings to qualify are based on what would be achieved by reducing EUI 20% for each additional cycle: a building that reduces EUI in the first cycle by 36% qualifies for one cycle on this path, 49% for two cycles, and 59% for three cycles.

Compliance application and reporting: Building owners must submit a pathway selection form for each applicable compliance cycle. Building owners should include the proposed level of accelerated savings recognition they are requesting and documentation showing that they qualify.

Pathway implementation and verification: A building must demonstrate it has maintained at least 75% of the level's savings by the end of each cycle where recognition is earned.

Extended deep energy retrofit

Alternative provided and notes: Qualifying building types wishing to implement deeper retrofits that will take longer to implement but are projected to exceed performance requirements over several cycles can apply for this pathway. The required savings are greater than would be achieved with 20% reduction each cycle to make up for the loss of early savings (and the associated additional cumulative GHG emissions).

Eligibility: Affordable housing buildings, rent-controlled buildings, college/university campuses, hospital campuses (and for Cycle 1 only, buildings that were in financial distress due to the COVID-19 public health emergency).

Compliance application and reporting: An action plan must be submitted that proposes a set of planned measures, implementation timing, and anticipated savings. Qualifying buildings must also submit documentation of their eligibility, which vary by building type. Upon approval, DOEE enters an ACP Agreement outline the requirements, including alternative compliance payment if savings are not achieved.

Pathway implementation and verification: Performance-based, plus any other reporting requirements established in the ACP Agreement.

Campus target adjustment

Alternative provided and notes: The campus target adjustment pathway allows campuses to adjust their baseline to account for changes in energy consumption resulting from construction, demolition, or other major alterations affecting energy use.

Eligibility: A college/university campus on the standard target pathway that undergoes a major renovation, reconfiguration, addition, or demolition during the compliance cycle may propose an adjustment to the blended custom source EUI standard.

Compliance application and reporting: The campus must provide documentation that all expected changes to the campus were completed by the evaluation year(s). If the documentation is not provided, the campus's performance will be assessed against the energy performance and reporting/verification requirements of the standard target pathway, using the original targets.

Pathway implementation and verification: Performance-based using third-party verified benchmarking report.

New construction and change of property type

Alternative provided and notes: The new construction or change of property type option provides flexibility for new buildings built before the start of the cycle, and for buildings where property type changed during a BEPS cycle. These buildings need only meet the BEPS standard for their property type. (Unlike the standard target pathway, this is not limited by property type). Note that new buildings that receive their certificate of occupancy during a compliance cycle are exempt until the following cycle.

Eligibility: New buildings are eligible if they were issued a DC Certificate of Occupancy before the beginning of the BEPS Period and did not submit a District Benchmark Results and Compliance Report for the baseline period. An existing building is eligible if it undergoes renovation that results in a change of property type during the cycle and receives its Use Change Certificate of Occupancy before the end of the evaluation year(s).

Compliance application and reporting: Submit application with new certificate of occupancy.

Pathway implementation and verification: New buildings that meet the standard in their first year of reporting and have that data third-party verified are judged compliant and have no further requirements for the cycle. New buildings that do not meet the standard initially have until the end of the cycle to meet the standard. Existing buildings with a different property type have uncle the end of the cycle to meet the standard.

Adjusted baseline

Alternative provided and notes: The baseline adjustments option allows a building owner to request a change in the buildings baseline year or baseline Site EUI. This is useful for buildings that have performed permanent changes impacting energy consumption. The adjustment applies for one cycle. *This is not considered an ACP in the typology of this report but is included here for completeness.*

Eligibility: Demonstrate a permanent change impacting energy performance, such as previously installed energy efficiency measures or new ventilation systems.

Compliance application and reporting: Submit the appropriate application and documentation showing good cause for the adjustment.

Pathway implementation and verification: Performance-based using third-party verified benchmarking report.

Custom ACP

Alternative provided and notes: Building owners can propose their own custom pathway that may not be possible under existing compliance pathways.

Eligibility: All property types are eligible for the custom application pathway. To be considered, a proposal must achieve all of the following:

- Meet the goals of the BEPS program of reducing energy demand
- Addresses an existing barrier(s) in the building industry that makes it difficult to comply through the principal pathways
- Maintains or improves economic opportunities for DC residents and building occupants
- Prioritizes energy efficiency and expects to achieve energy savings comparable to or greater than the principal pathways
- Is thorough, complete, and technically achievable, and
- Measurable and verifiable

Compliance application and reporting: Buildings must 1) submit a proposal application, 2) include a backup compliance option if the proposal is not approved, and 3) provide detailed documentation showing how the proposal meets the eligibility criteria. DOEE's review of the custom pathway usually requires substantial back-and-forth with the proposer. Upon approval, DOEE enters an ACP Agreement outline the requirements, including alternative compliance payment if savings are not achieved. Summaries of pathways are published online so others can use them; identities of private entities covered by the approved pathway are anonymized.

Pathway implementation and verification: Customized implementation and verification requirements are established in the ACP Agreement.

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