

Building Performance Standards Advancements in Minnesota

Meeting 2 – 10.16.2024



Agenda

- Introductions
- Involvement throughout the process
- How targets are commonly set
- Compliance pathways
- Penalty guidance

Speakers



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Institute for Market Transformation*

About the Institute for Market Transformation (IMT)



Mission

Catalyze widespread and sustained demand for high-performing buildings.



Vision

A world where buildings dramatically lower greenhouse gas emissions and support our physical, social, and economic well-being.



How we work

Advancing policies and business practices that enable people to build and operate healthy, high-performing buildings.



CEE's Principles for a BPS



Build upon existing benchmarking policy



Set practical milestones and targets using best practices



BPS should align with our state's economy wide GHG reduction goals



This policy will require significant ongoing funding, and we should leverage existing sources as much as possible



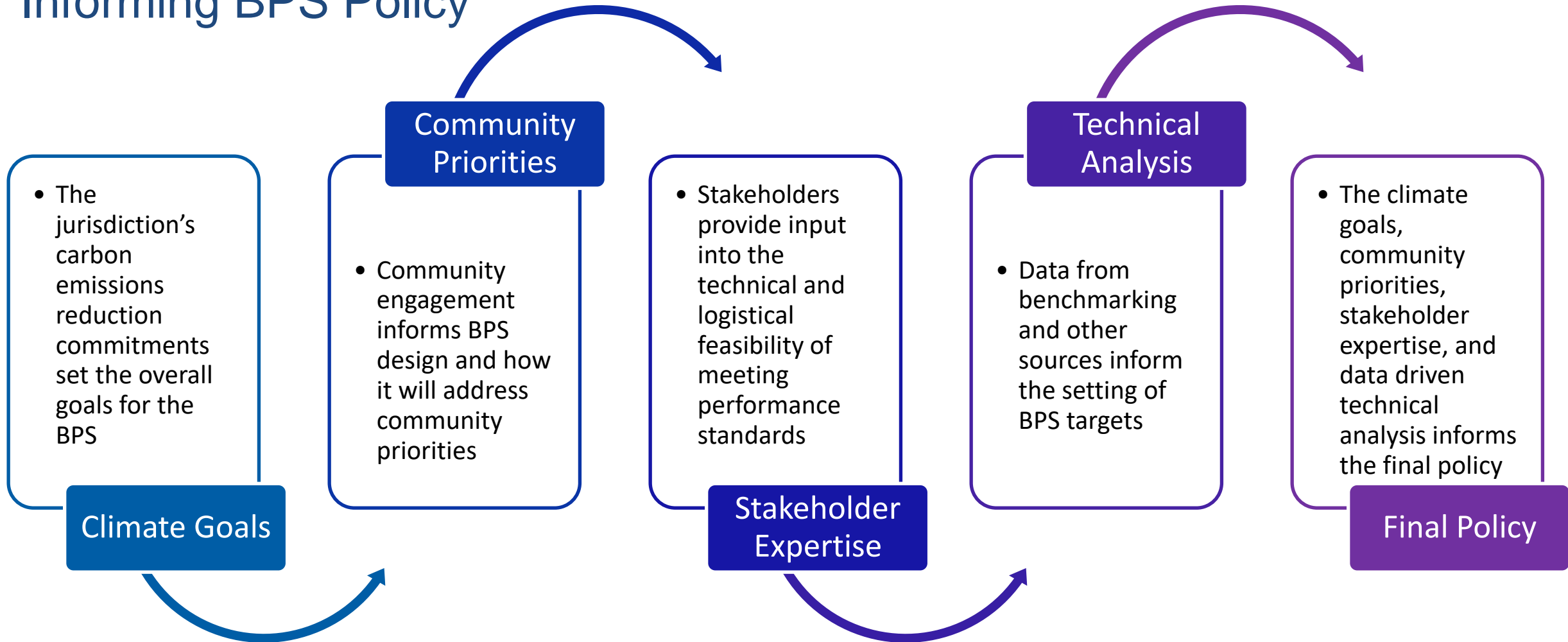
Utilities will be able to claim savings and support retrofits



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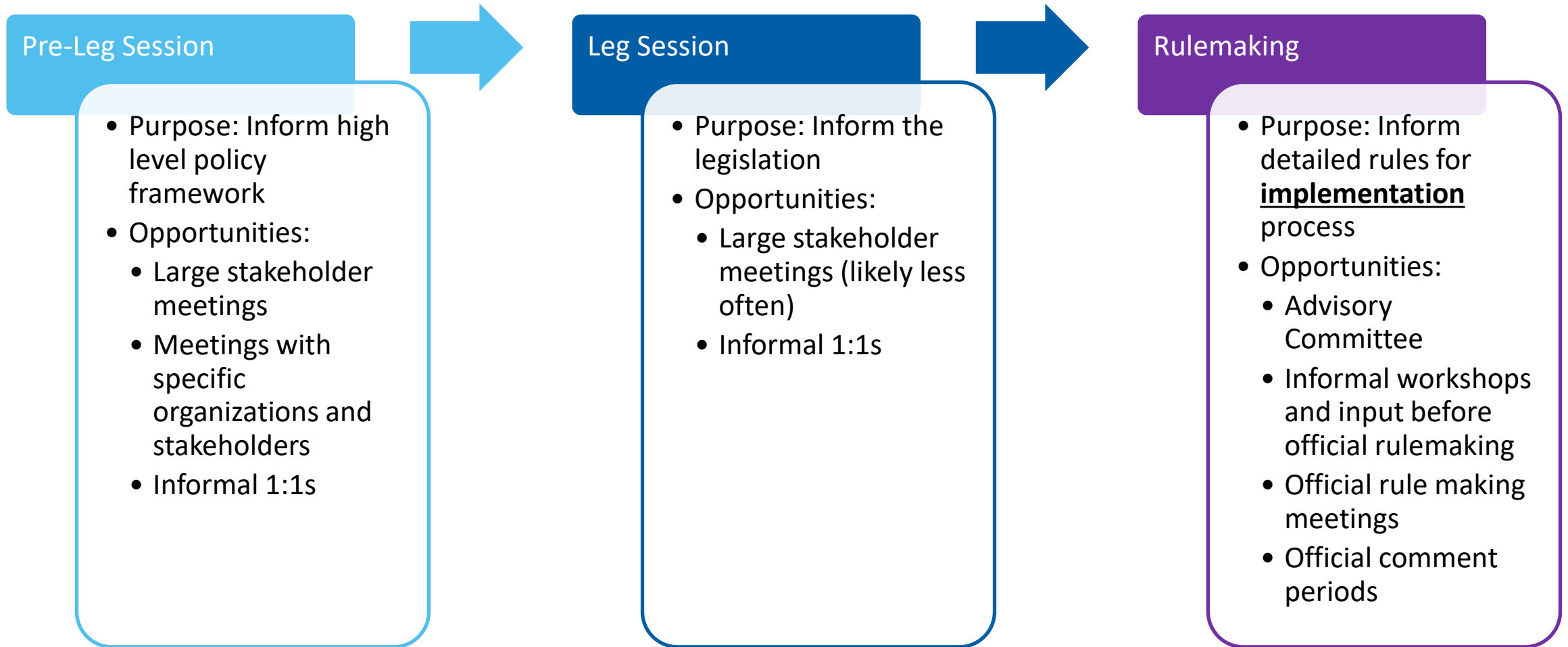
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Informing BPS Policy





Stakeholder Involvement in the Process





Decision points

Legislation

1. Sets global target
 - e.g., XX% energy or emissions reduction across the whole building set
2. Sets directive building target
 - E.g. linear path compliance data
 - Special consideration (building type, ownership, condition, use, etc.)
3. Sets flexibility directives for exemptions, extensions, and target adjustments
4. Establishes penalties guidelines

Rules

- Rulemaking takes place after and at the directive of adopted legislation

Individual building targets will NOT be set in legislation. targets based

- Sets mechanisms and processes for compliance reporting and verification



Decision points

Legislation

1. **Sets global target**
 - **XX% EUI reduction across the whole building set**
2. Sets directives for developing individual building targets
 - E.g. linear path that decreases from first to last compliance date
 - Special considerations that must be made (i.e. building type, ownership, condition, use, etc.)
3. Sets flexibility directives for exemptions, extensions, and target adjustments
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Rules

- Rulemaking takes place after and at the directive of adopted legislation
- Sets individual building targets based on legislative directives
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Decision points

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Rules

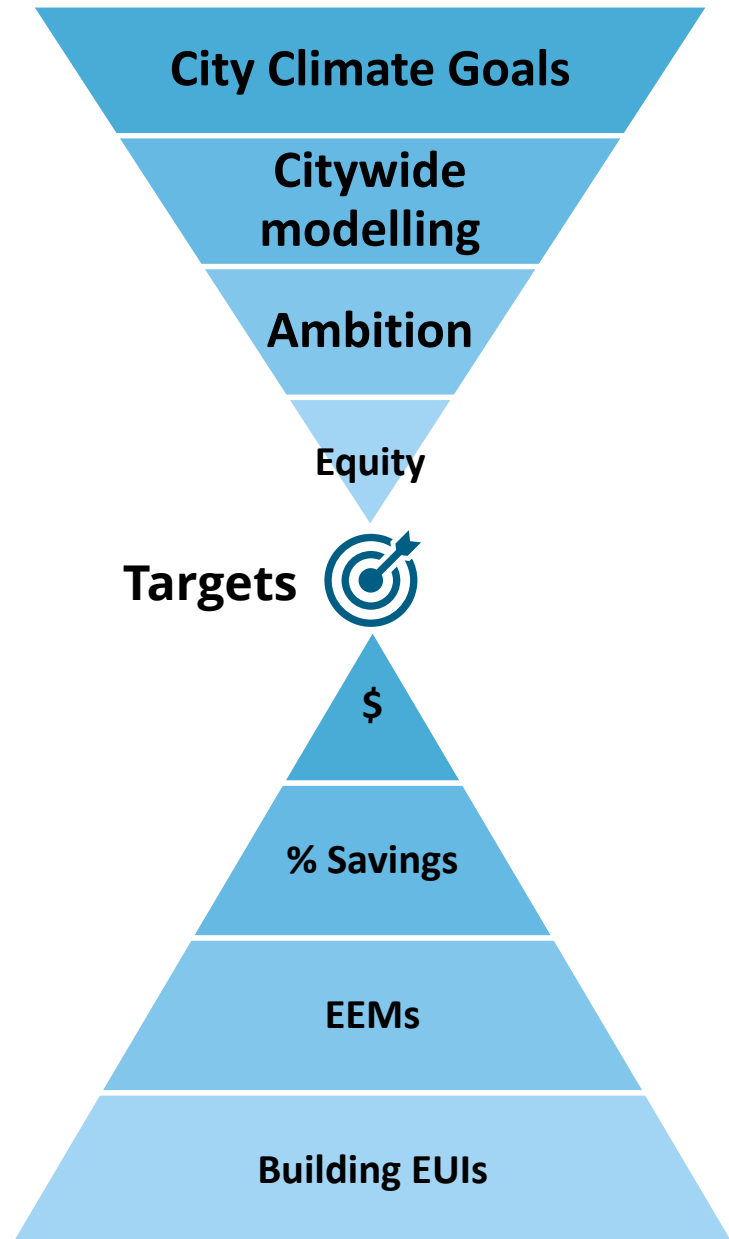
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Target Principles



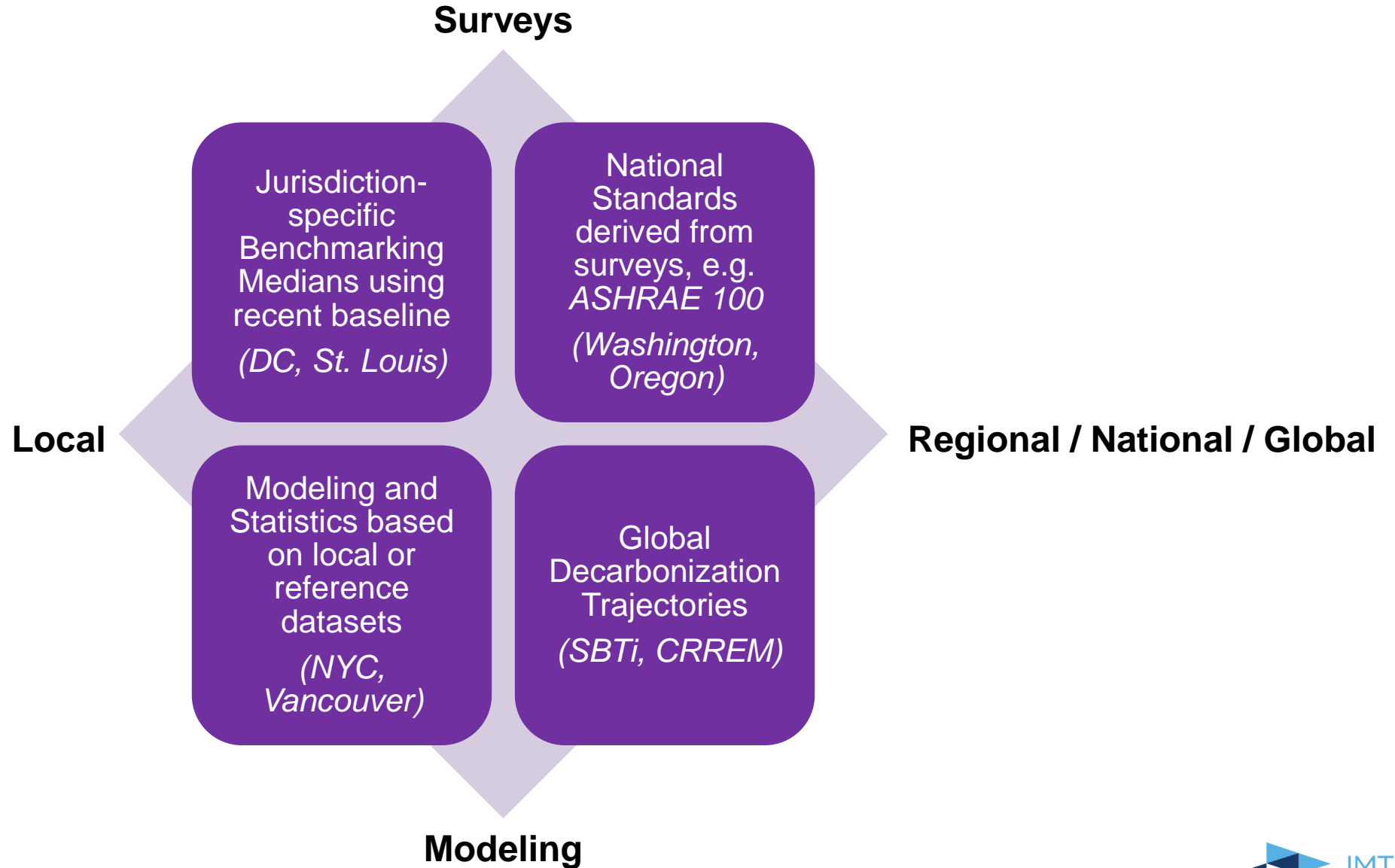
Common Principles:

- Flexibility
- Long-term clarity
- Efficient buildings receive credit
- Specific targets for different building types
- Similar percentage of building stock covered for different building types
- Address equity risks
- Reasonable costs

Trajectory Approach



Approaches to Setting BPS Performance Thresholds



What defines a good benchmarking data set?

Important

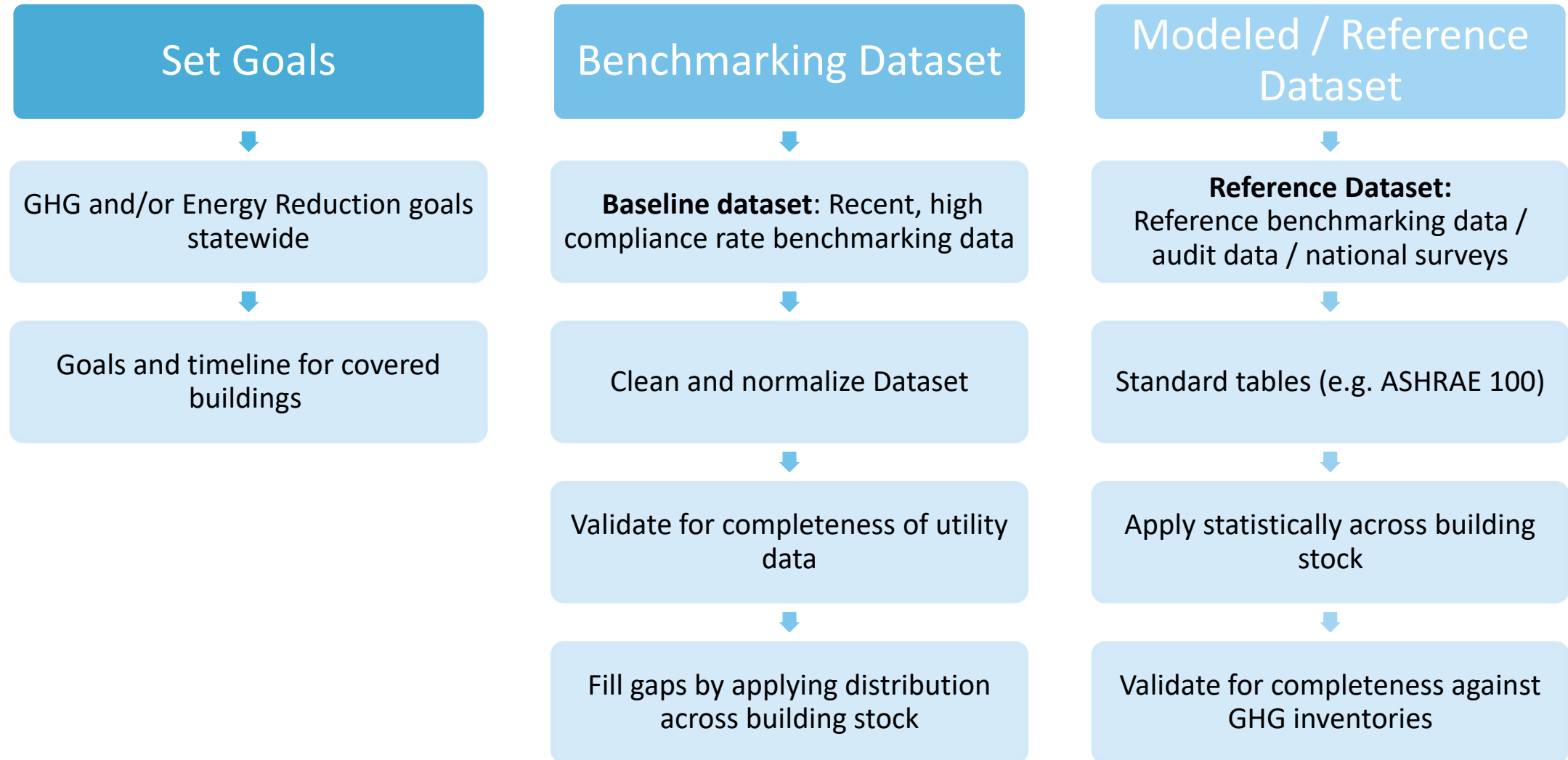
- ✓ **Completeness (within a geography)** -- 75%+ reporting
- ✓ Geographic coverage across applicable **climate zones**
- ✓ **Recent data – recent baseline important**
- ✓ Includes **whole building data**, especially for multifamily
- ✓ Ideally, **independently verified**

Less Important

- × Coverage across the full state
- × Going back to some prior baseline (code baseline for example)
- × Uses same GHG methodology — these can be adjusted for!

- Minnesota has sufficient benchmarking data from over 2,000 buildings from multiple cities from Minneapolis to Rochester to St. Paul – at least 1/3 of all building expected for Climate Zone 6A
- Supplemental data like ASHRAE 100 / CBECS will be needed for Duluth region in Climate Zone 7A

Standard setting: Goals and Baseline Datasets



Standard setting: Targets

For areas where targets are all from estimated data, collect real data and evaluate if target adjustments are needed, before enforcing!

- Calculate % reduction across dataset needed
- *Optional:* Model EEMs that can achieve reductions
- Set percentile targets

Calculate Reductions

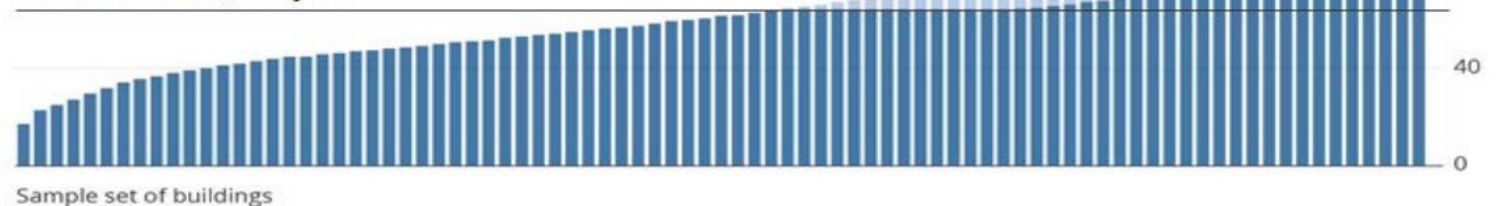
Set EUI targets

- EUI targets by building type and climate zone
- Based on percentile for most building types
- National data for uncommon buildings

- Set building baselines
- Buildings must meet target by final date, on trajectory from baseline
- Many buildings will meet standard!

Apply targets

50th Percentile, 1st Cycle





Questions?

We have some for you! Please join our
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3. **Establishes alternative compliance pathways: flexibility directives for exemptions, extensions, and target adjustments**
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Exemptions, Extensions, Adjustments in Draft Bill

Exemptions available for buildings experiencing:

- Is in a current state of financial distress
- <50% occupancy
- Have demolition permit
- Haven't used energy in 30 days
- Meeting target would cause financial hardship for interim target

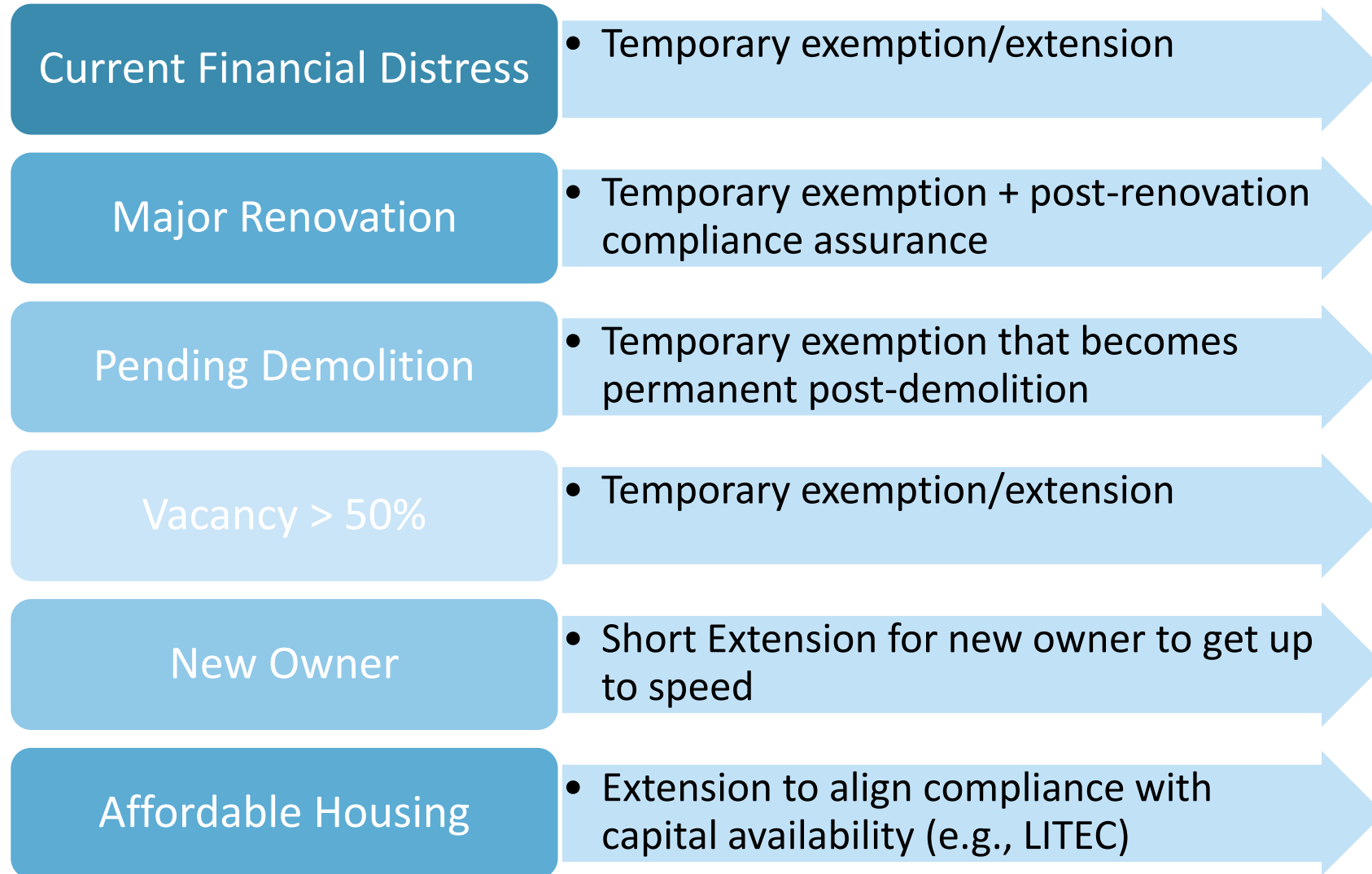
Extensions available for buildings:

- That apply in a timely manner and as approved by commissioner
- Affordable housing using federal financing

Adjustments available for buildings:

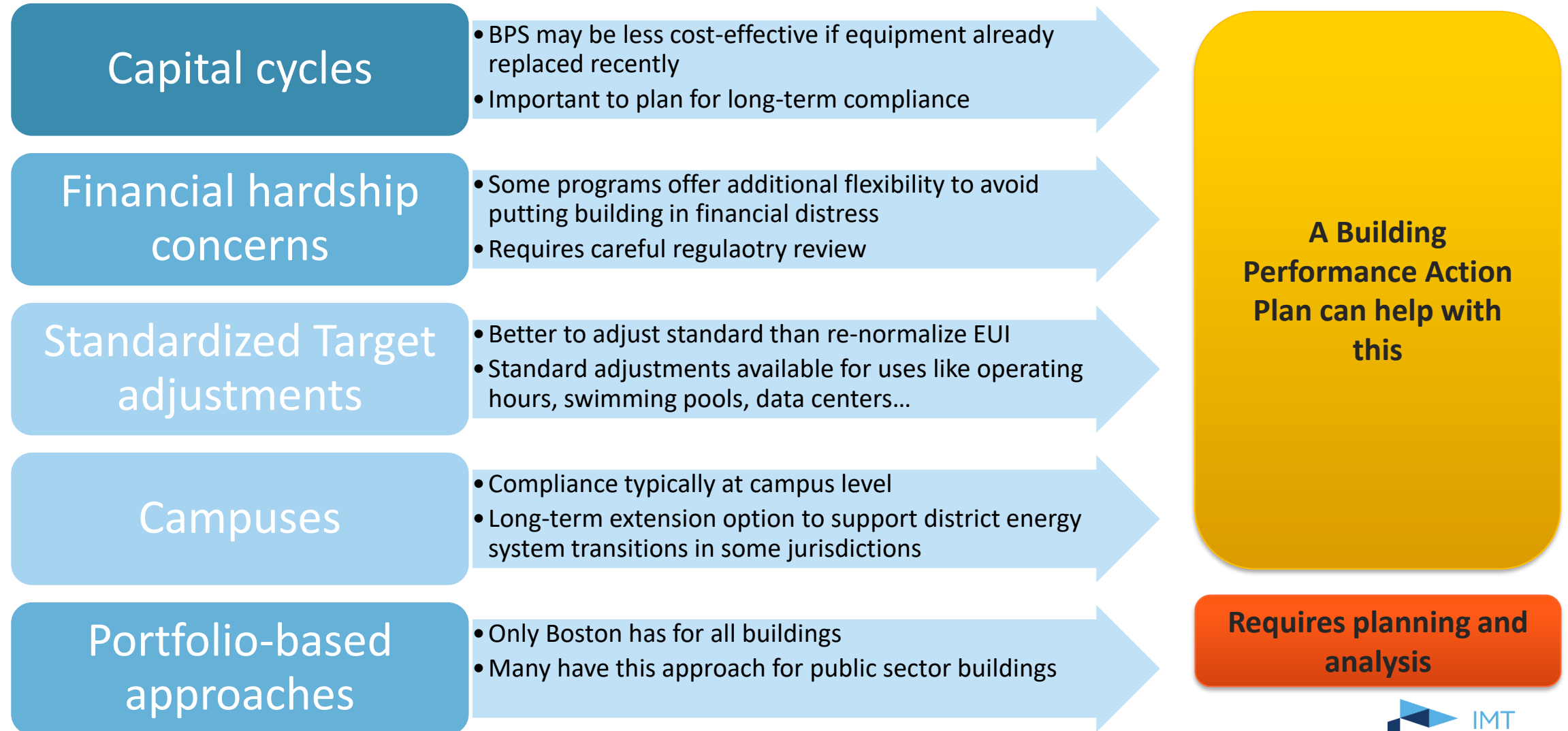
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Common flexibility cases in a BPS bill



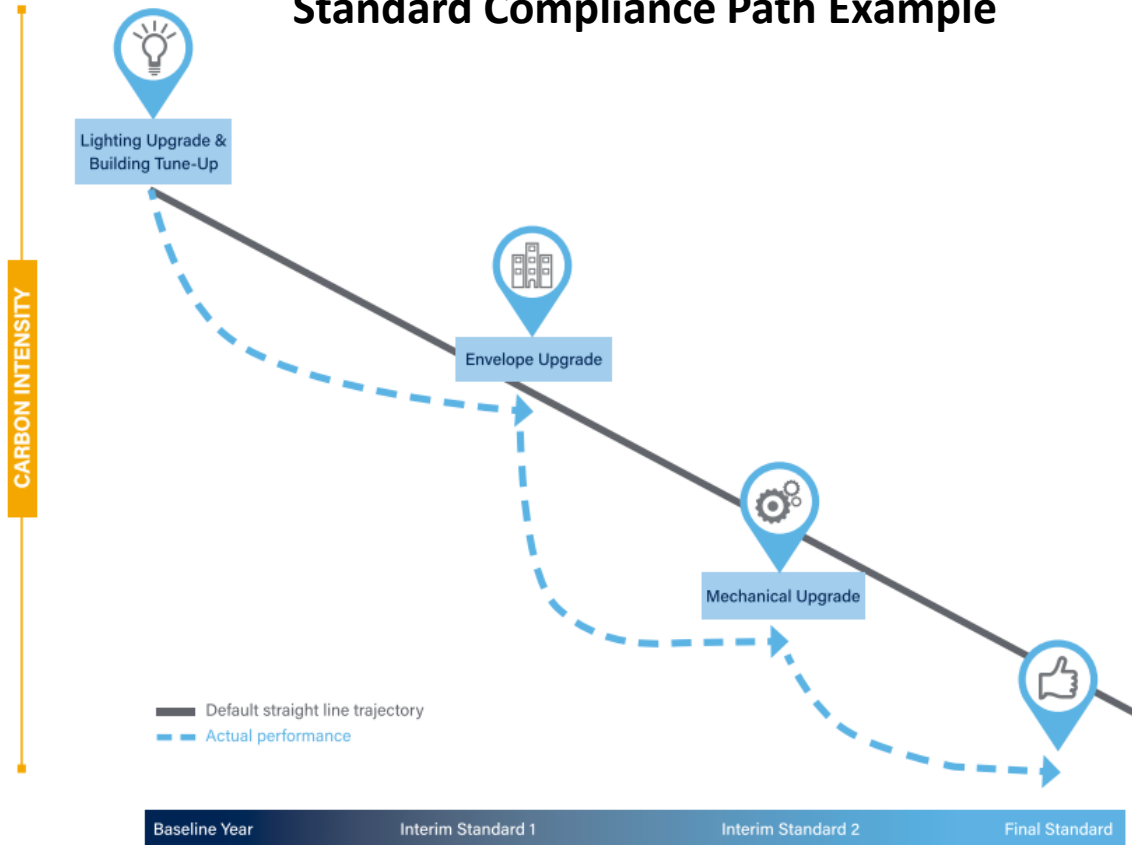
Legislation names a few options + authorizes agency to add others as needed

Flexibility cases that could be addressed through rulemaking

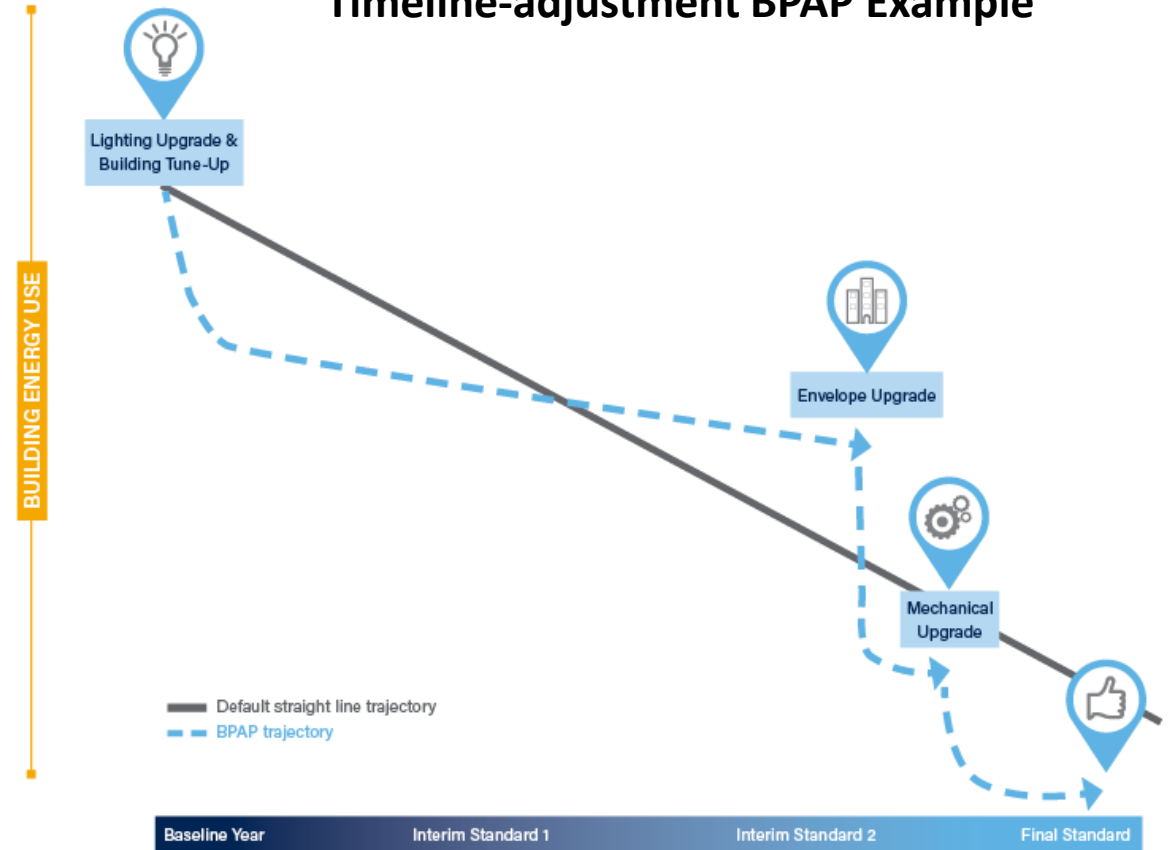


Building Performance Action Plan

Standard Compliance Path Example



Timeline-adjustment BPAP Example



BPAP design and application can vary in several ways; option 2 is shown on the right above. :

1. adjusting an interim or final standard,
2. adjusting interim or final timeline for compliance to account for capital replacements,
3. adjusting what has to be done to achieve the final target, and
4. adjusting enforcement.

Alternative Compliance Pathways: a need for standardization

- We've heard from you – there is a strong need for both standardization *and* flexibility
- Every jurisdiction is handling this differently
- R&D on this topic is ongoing and will be available to support rulemaking
 - Example: DOE just issued IMT and its partners a grant to develop an improved, standardized alternative compliance pathway framework, along with tools to support implementation. Draft will be completed by end of 2025.



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3. Establishes alternative compliance pathways: flexibility directives for exemptions, extensions, and target adjustments
4. **Establishes penalty guidance**

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Cost of Compliance – What we know

Cost of Compliance: First/Capital Costs

- Preliminary LBNL modeling for MN: \$12 per sq. ft.
- Studies in DC, Boston, Denver, Vancouver all found costs of \$9 to \$17 per sq. ft.

Cost of Compliance: Lifecycle Costs

- When converted into lifecycle carbon abatement cost, costs are often comparable to EPA Social Cost of Carbon (see recent IMT paper)

Cost of Non-Compliance

- Often set, intentionally, to be higher than estimated average cost of compliance
- *This is true in DC, Boston, Denver, Vancouver, Seattle, NYC, etc.*

IMT Cost recommendations

- Capital costs should be compared to a 'business-as-usual' like-for-like replacement
- Look at costs over full equipment lifetime
- Account for cost of carbon
- Use "payment" instead of "penalty" to allow cost-sharing and reinvestment



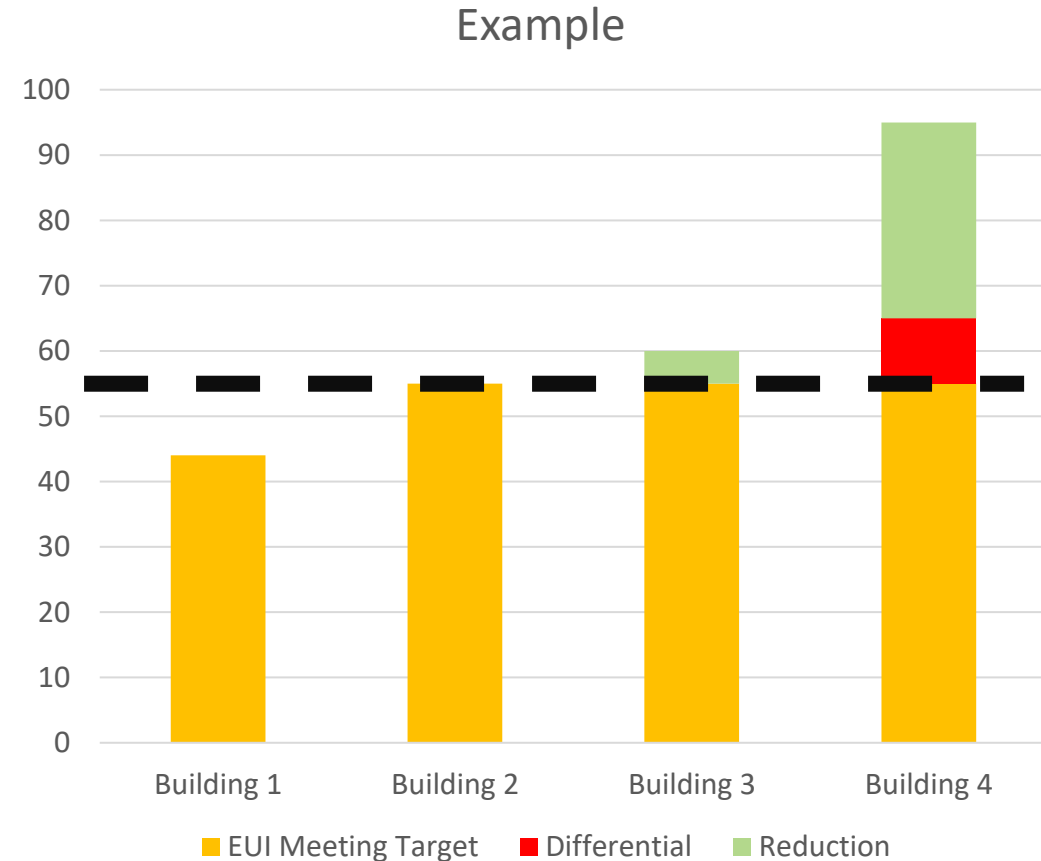
Penalty guidance currently in the draft bill

- Based on differential between the target and building's performance in compliance year.
- \$ factors determined by the Dept. in rulemaking
 - EUI up to \$0.70/kbtu
 - GHG based on PUC greenhouse gas emissions valuation adopted under section 216B.2422, subdivision 3
- EUI penalties only apply if GHG target is met but EUI is not AND if building is in lower half of Benchmarking rankings



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Proposed changes to penalty language

- Reevaluate the \$/kbtu range based on new information
- Provide direction for rulemaking for determining final \$/kbtu penalty.
 - *A penalty should incent compliance*
 - *“Credit for trying”* - Based on differential between the target and building’s performance in compliance year.
 - *Cost of carbon should be a consideration*



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Next Steps

- Upcoming sector focused meetings:
 - Affordable housing - 10/21
 - Architecture stakeholders - TBD
- BPS Meeting #3 - 10/31



THANK YOU!

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