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Building Performance Standards Stakeholder Committee Meeting #3

March 21, 2023

Meeting Agenda

12:00	**Welcome and Goals for Today**
12:20	**Agenda Review, Process Agreements and Context for Today's Discussion**
12:30	**Recap from February Meeting + Refined BPS Energy Efficiency Policy Options**
12:50	**BPS Beneficial Electrification Options**
1:20	**Alternate Compliance Pathways – Discussion + Committee Input**
1:40	**BREAK**
1:50	**Small Group Discussions + Full Group Debrief** – electrification + alternative compliance
2:30	**Discuss Compliance Support Options**
2:50	**Working Group Updates –** Workforce + Equity/Affordability
2:55	**Next steps + April Committee meeting**

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Where We Are in the Process + Where We're Going

Meeting 1 **January 24th**	Introductions, background and scope or 'charge' for the Committee
Meeting 2 **February 28th**	• What buildings should be covered • Energy efficiency targets/policy options • Supports needed • Workforce • Discuss workgroup formation
Meeting 3 **March 21st**	• Beneficial electrification policy options • Alternative compliance • Workforce • Supports needed
Meeting 4 **April 25th**	• Costs and funding, with equity focus • Compliance/Enforcement • Workforce • Supports needed
Meeting 5 **May, 31st**	Synthesize recommendations, discuss next steps + wrap up

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Meeting Participation / Agreements

- Thank you for being present and engaged!
- Importance of Committee **input** and **role** – at and between meetings.
- Please help create an **inclusive**, participatory atmosphere.
- Seek creative solutions that respond to your + others' **interests**.

- Feel free to ask clarifying questions as we go (via Chat or 'hand raise' function), but please hold other topics/questions until our **Discussion** time.
- There are no dumb **questions**!

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Recap from February Meeting: *Energy Efficiency*

- here is what we heard from you, any more discussion needed
- did we hear you
- residential, feedback, here is what we came up with
- 3 policy options- make a poll

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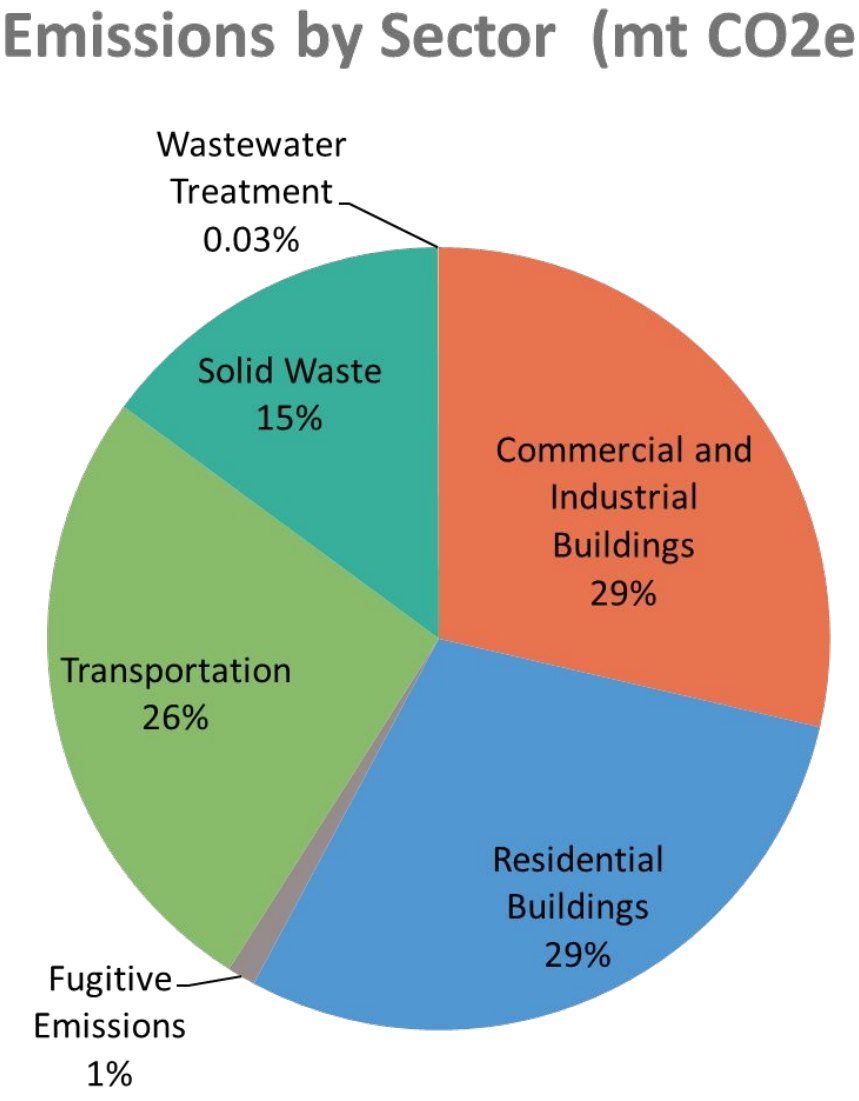
Buildings are Aspen's biggest contributor to GHG emissions



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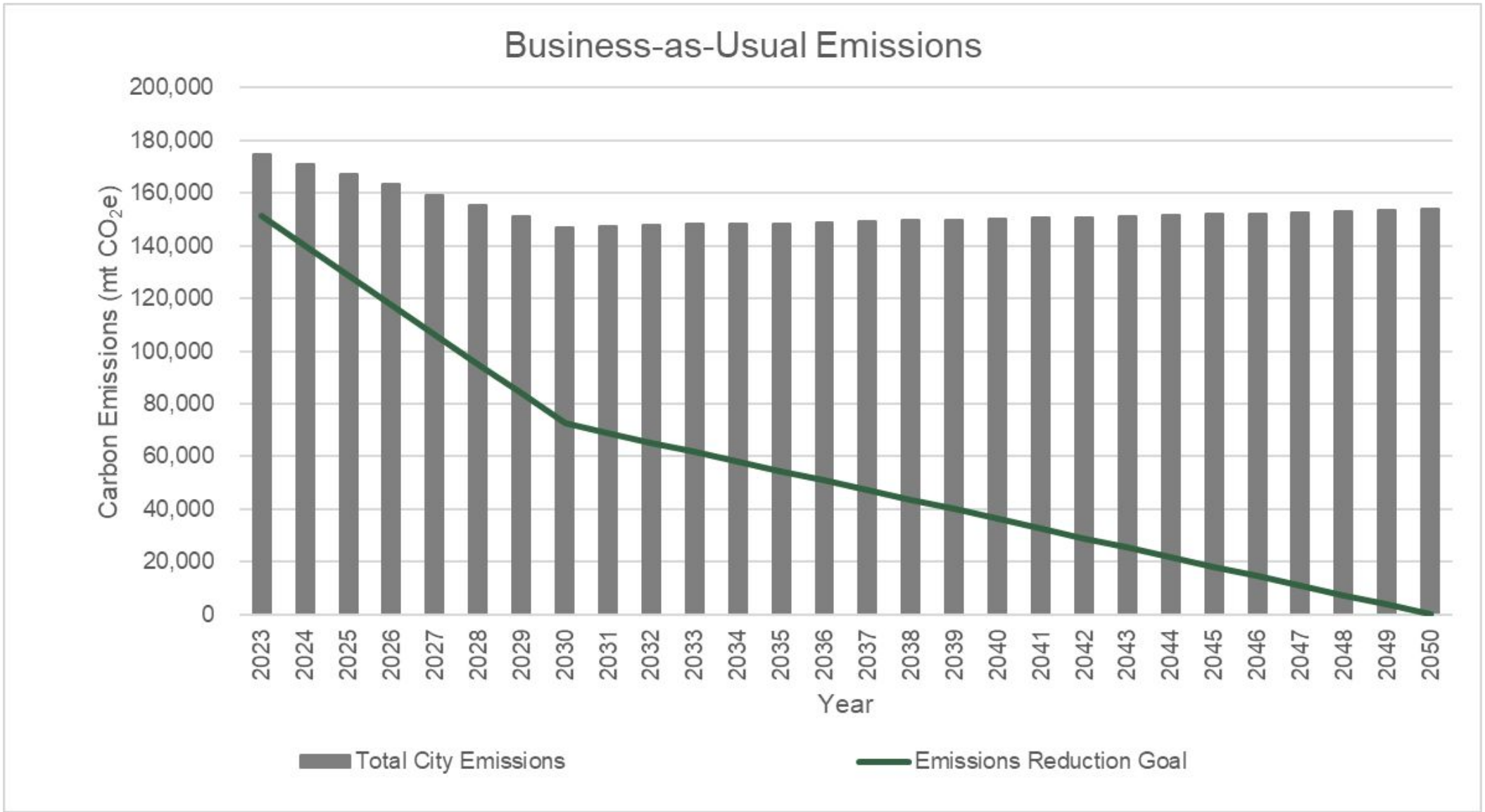

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Recap of Committee's Purpose

- Provide input to City staff in developing draft Building Performance Standards (BPS) guidelines for **existing** buildings to help City of Aspen reach goal of **zero** greenhouse gas emissions by **2050**.*

- Guidelines may consider related opportunities to develop **workforce** skillsets, foster **job** creation, and improve **health** and **equity**.

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Key Components of BPS Energy Efficiency Guidelines

1. Building sizes
2. Building types
3. Targets and how to meet them

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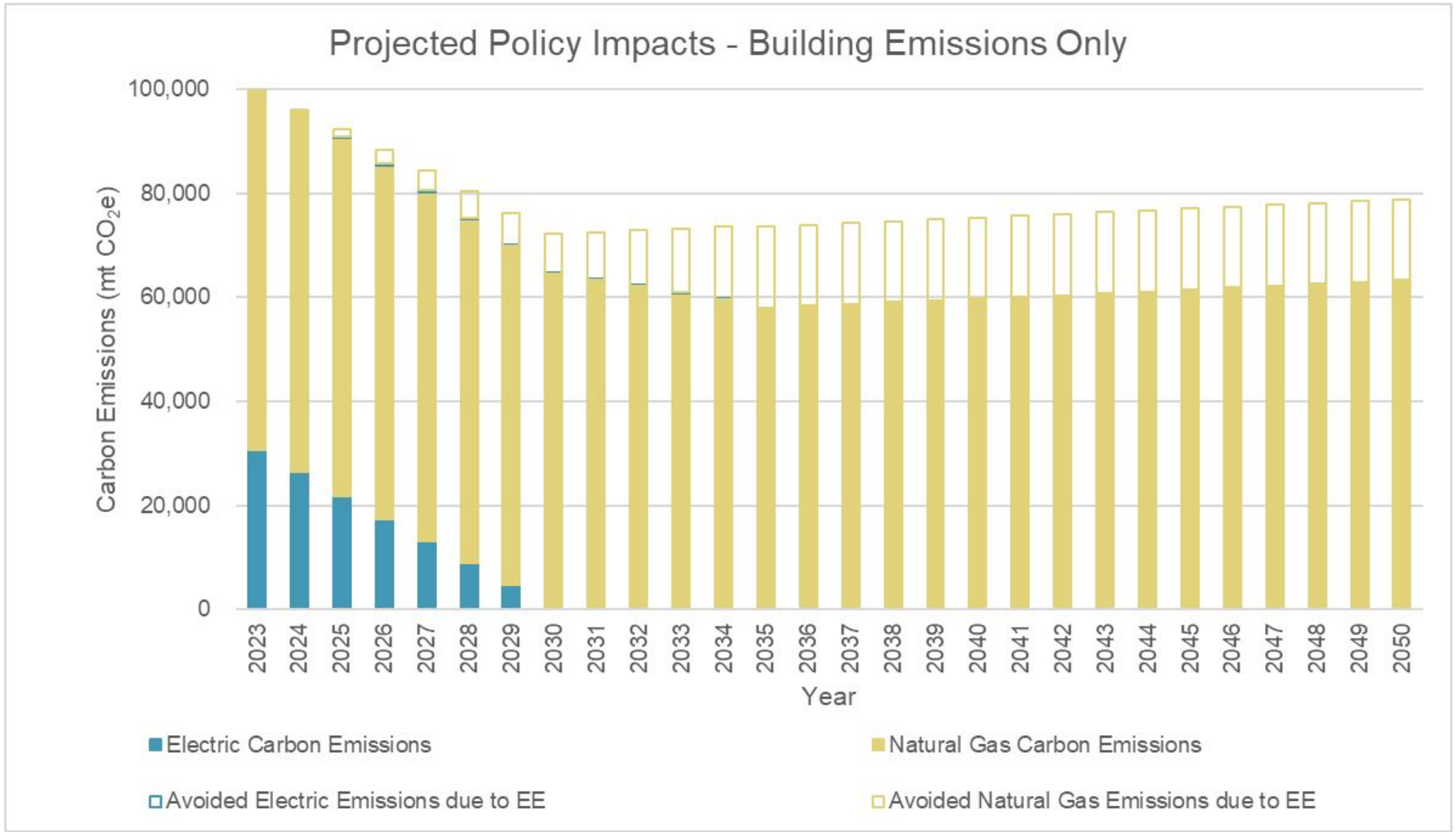

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Energy Efficiency: EUI Targets

1. **Buildings A, B & C are hotels**
2. **Performance metric**: Site energy use intensity (EUI)
3. **Final standard**: A site EUI of 55
   - This standard is in alignment with the City's carbon reduction goals

EUI Targets Proposed Timeline

Building Size (sq ft)	Building Type	2 years of data by	Interim Target	Final Target
All	City-owned	2023	2027	2035
5k+	Commercial	2026	2030	2035
15+	Multi-family	2026	2030	2035
*5k- 15k**	*Multifamily*	*2027?*	*2030*	*2035*
*5k+ **	*Residential*	*2027?*	*2030*	*2035*

not yet included in Building iQ Benchmarking

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Key Components of BPS Energy Efficiency Guidelines

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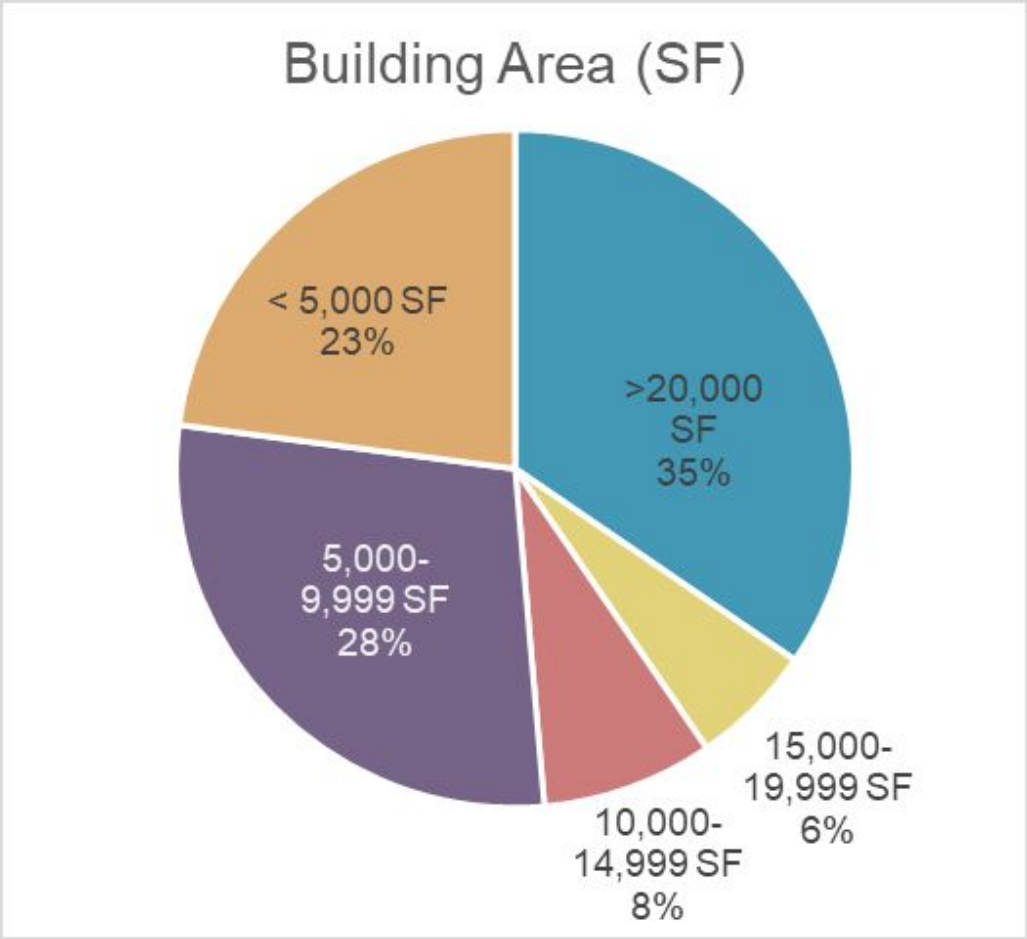
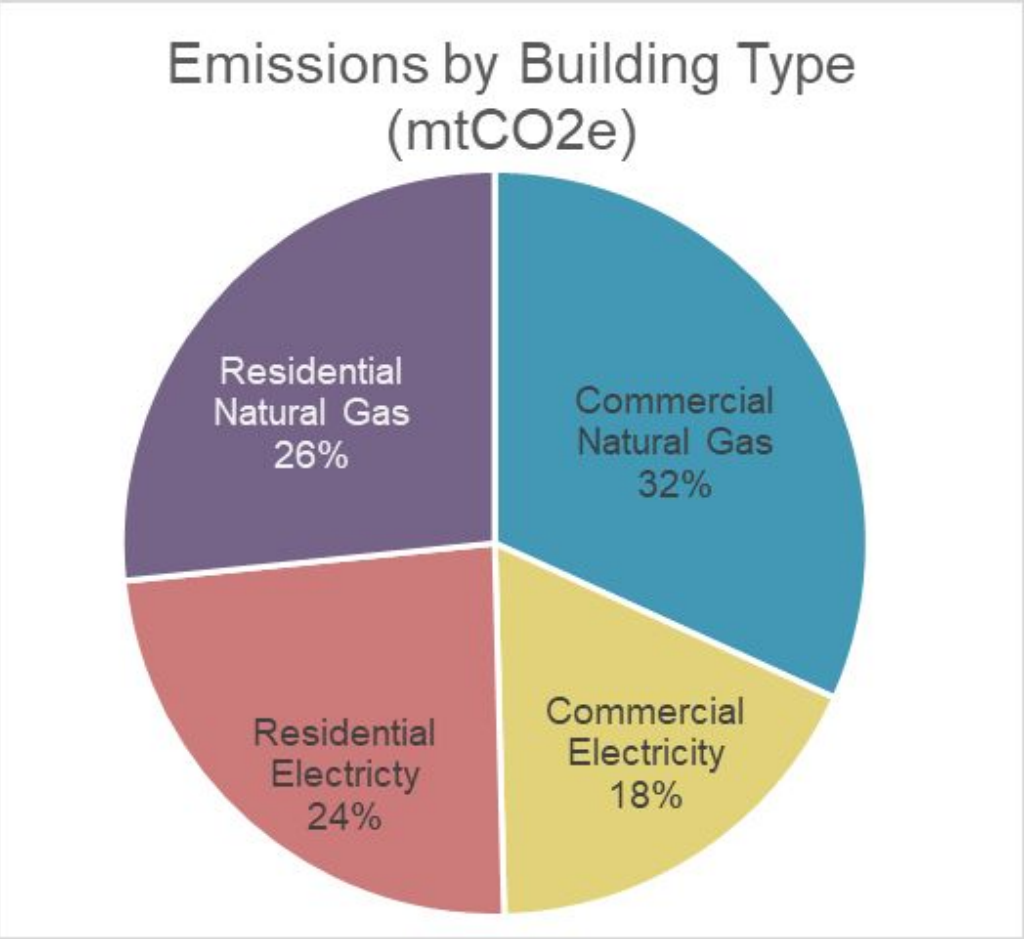
Residential Building Stock & Emissions





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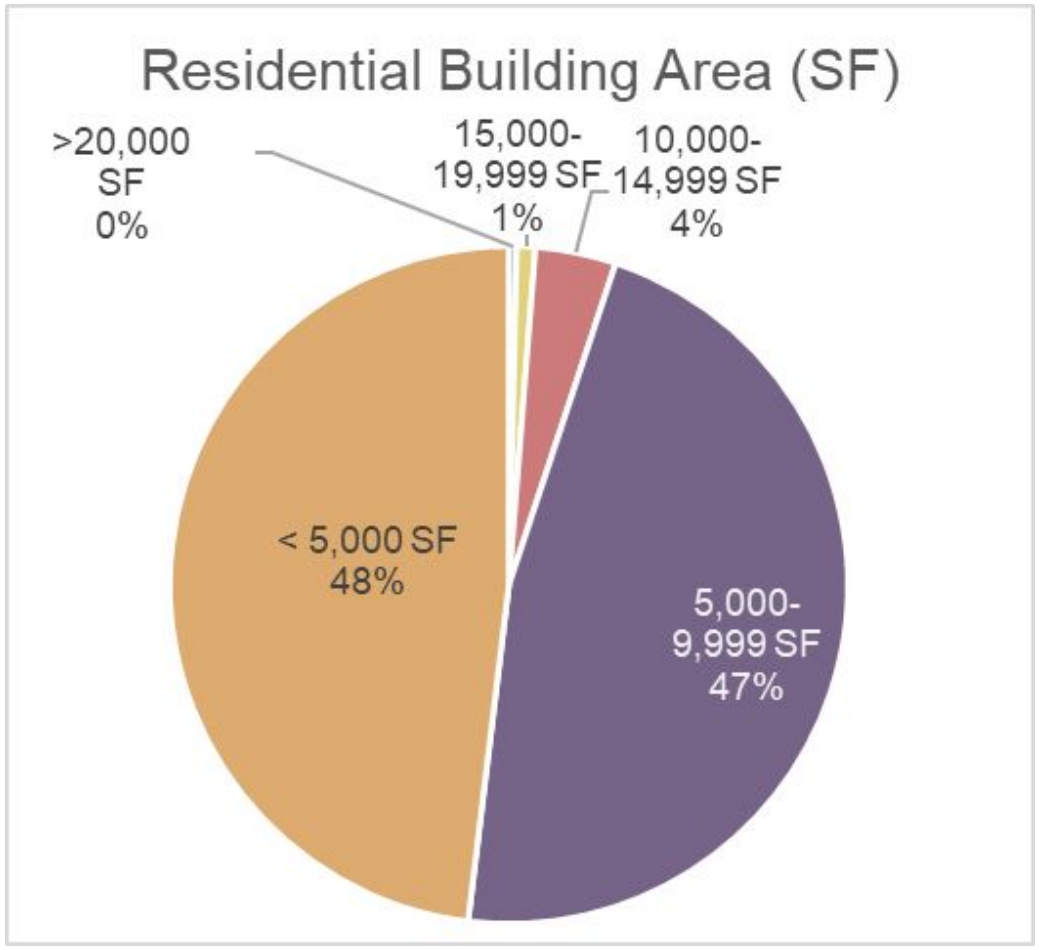
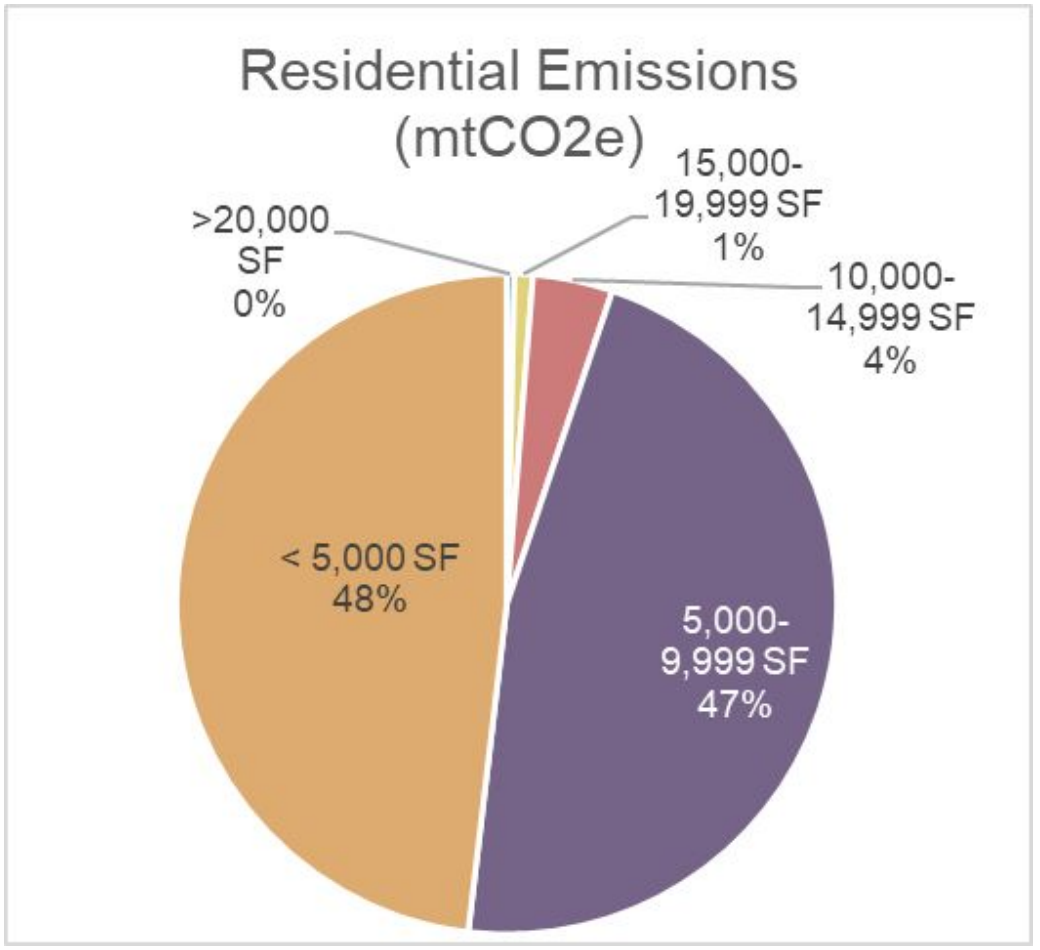
Residential Building Stock & Emissions





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Residential Policy Options

1. **Pilot BPS** for existing large residential buildings (≥ 5k sq. ft.)
2. **Pilot BPS** and develop **alternative residential policies**
3. Develop **alternative residential policies**
4. Recommend **future action**

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Option 1: Pilot BPS

Pilot BPS for existing residential buildings ≥ 5k sq. ft.

Pros	Cons
Can benchmark residential buildings in Energy Star Portfolio Manager and use data to set targets	Not yet implemented in other jurisdictions
Equity among ≥ 5k building types	Omits smaller residential, which contribute substantially to residential emissions
1 policy to understand and manage	Enforcement and implementation unknowns
Large residential buildings may have capacity	Need to re-introduce Building IQ to community
	Slow rollout (need to collect benchmarking data)

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Option 2: Pilot BPS AND Develop Alternatives

Pilot BPS for existing residential buildings ≥ 5k sq. ft. and develop an alternative policy for smaller existing residential buildings with residential-focused committee

Pros	Cons
Potential to address emissions from more residential buildings	Multiple policies could be more difficult to understand and manage
Equity among ≥ 5k building types	Most complex - multiple policies to communicate and implement
Alternatives exist: other Cities have implemented policies to address residential emissions	No guarantee of policy alignment/ implementation
Time to get input from residential stakeholders	Potentially slow roll out if benchmarking data is needed
	Not yet implemented in other jurisdictions

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Option 3: Develop Alternative

Develop alternative policy for existing residential buildings (all sizes) with residential-focused committee

Pros	Cons
Potential to address significant emissions from residential buildings	Multiple policies could be more difficult to understand and manage
Some equity among ≥ 5k building types	Slower policy rollout to allow time for policy development
Alternatives exist: other Cities have implemented policies to address residential emissions	No guarantee of policy alignment/ implementation
Time to get input from residential stakeholders	

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Option 4: Recommend Future Action

Include recommendation to Council to address existing residential buildings through Committee or other process by X date

Pros	Cons
Time to get input from residential stakeholders	Not addressing significant portion of GHG emissions from existing buildings
Other Cities have implemented policies to address residential emissions – time to consider alternative options	No guarantee of policy alignment/ implementation
Council aware of importance of addressing residential emissions- can include timeline to impress urgency/importance	Fail to reach GHG emissions reductions goals
	Inequity among ≥ 5k building types – could result in pushback from commercial buildings and community

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COMMITTEE QUESTIONS / THOUGHTS?

COMPLETE POLL HERE:
https://www.menti.com/al217wt6zw7g

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Additional components of BPS

1. Beneficial Electrification
2. Compliance pathways

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1. Beneficial Electrification
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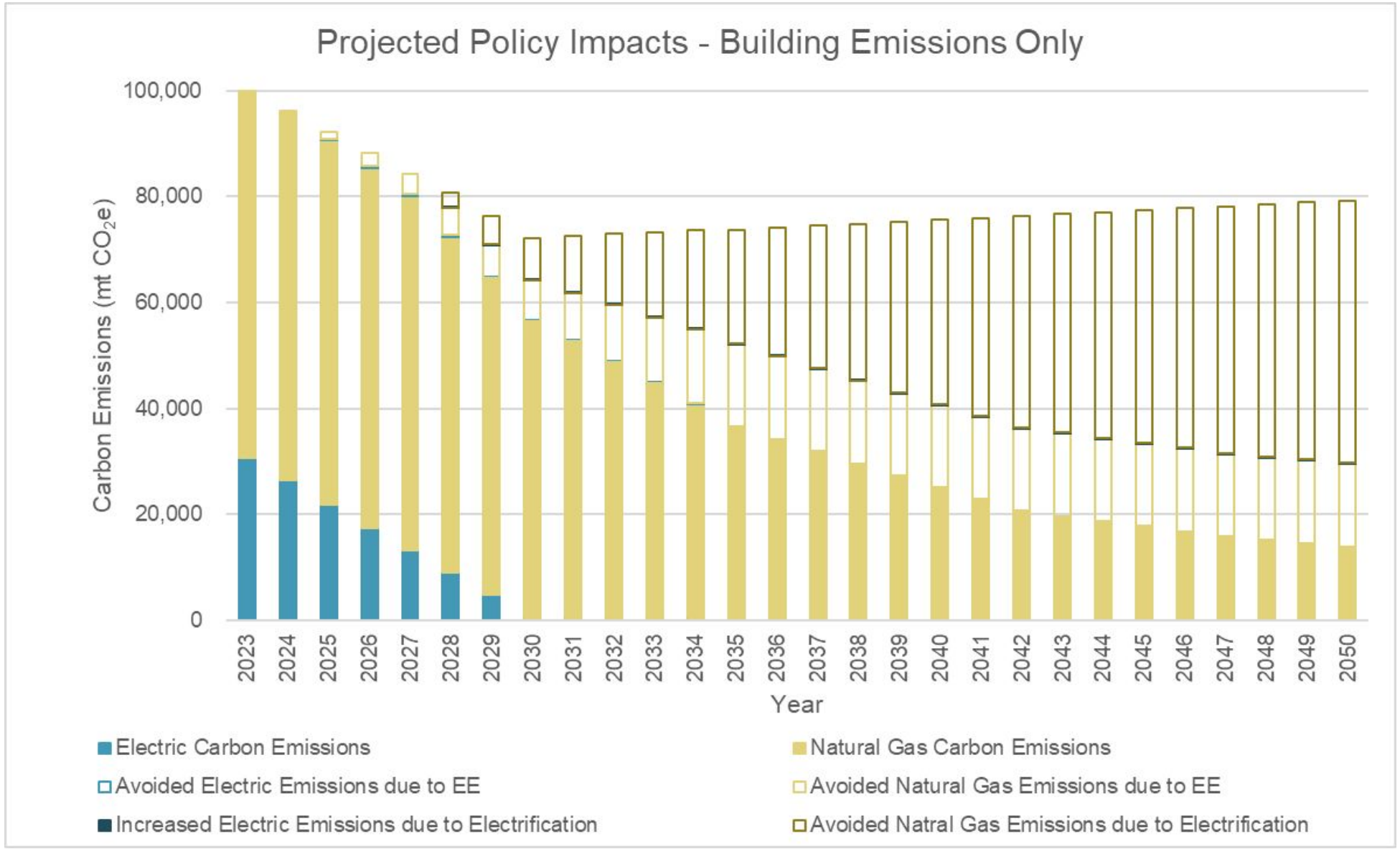

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Beneficial Electrification in Aspen

Aspen luxury residential property

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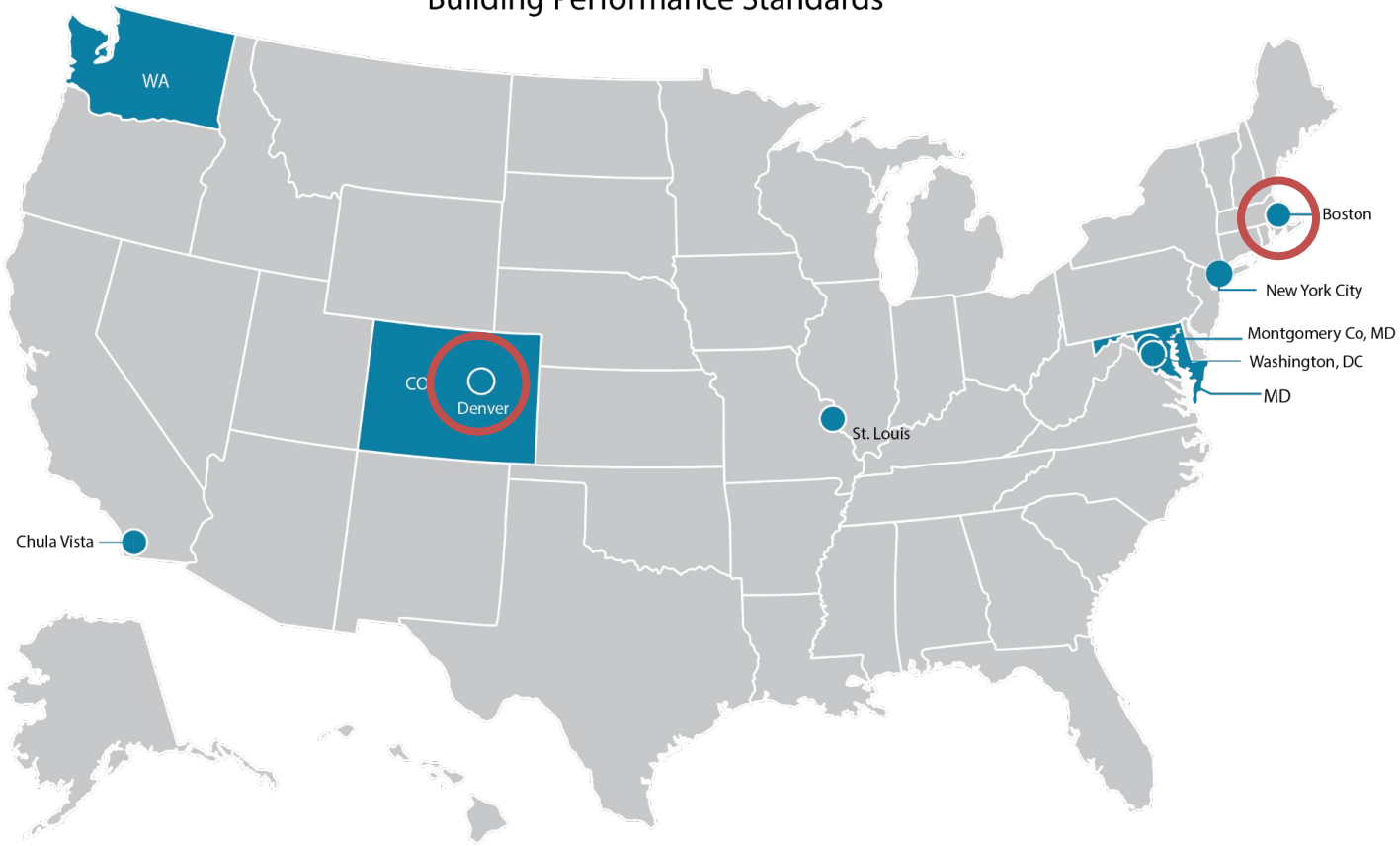
Beneficial Electrification in Aspen

Cold climate heat pump at Elk Camp, Snowmass

Electrification in BPS

U.S. City and State Policies for Existing Buildings:
Building Performance Standards



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IMT INSTITUTE FOR MARKET TRANSFORMATION

Boston

Electrification through a **performance metric**

Carbon emissions targets by building type

Buildings can use combination of energy efficiency, **electrification,** onsite renewables to reach targets

Office building permitted to emit:	
Year	**kgCO2e/ sq ft/ yr**
2025	5.3
2030	3.2
2035	2.4
…2050	0

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Boston

Pros	Cons
Tracking towards greenhouse gas emissions reduction goals	Technology may not be cost effective for all buildings to reach greenhouse gas emissions targets
Could accompany EUI targets, requiring efficient electrification	Difficult to understand
Encourages early adoption and leadership	GHG calculations can vary
Provides building owners flexibility and choice	Cannot use Energy Star Portfolio Manager emissions calculations in Aspen context

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Denver

Electrification through **prescriptive requirements**

Partial electrification requirements upon system retirement for all existing commercial and multifamily buildings when:

- replacing gas-fired space and water heating and cooling; and
- when installing an electric heat pump will not cause economic hardship

AND

Efficiency credit for electrification

Buildings 80%+ electrified in 2022 will receive a 10% EUI credit to the 2030 target

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Denver

Pros	Cons
Clear requirements for building owners	Not tracking towards goal
Considers technological feasibility	Some equipment would not be “cost effective” to electrify, onus on only certain buildings
Discourages disposing of functional equipment– waits until end of system life	Does not necessarily encourage early adoption and leadership

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COMMITTEE QUESTIONS?

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Small-Group Discussions (~35 min)

- Should the BPS have an electrification component?
- What do you like about the 2 different types of approaches, and WHY?
- What will be key electrification CHALLENGES and how should we account for them?
- What further analysis is needed?

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Additional components of BPS

1. Beneficial Electrification
2. Compliance pathways

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Compliance: Boston

- Meet **GHG emissions target** for building type
- Achieve 50% emissions reduction by **2030** and 100% by **2050**
- Use renewable energy **credits** to offset GHG emissions from electrical demand
- Can mitigate emissions from energy use by paying an Alternative Compliance Payment (**ACP**) or $234 /metric ton of CO2e/ yr
- **Exemptions**: state, county, and federal buildings; new construction; permits for demolition; specific financial distress

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Compliance: Denver

- Meet site **EUI target** for building type
- Apply for timeline **adjustment**
- 80% minimum electrification of the building
- Bespoke % reduction goal
- Can deduct energy produced from onsite or off site solar from site EUI
- **Exemptions**: manufacturing, agricultural, and industrial buildings

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Considerations/Options: Compliance Pathways

- Alternative timelines
- Alternative targets
- Building assessment/ develop performance improvement plan
- Prescriptive measures
- Electrification “credit”
- Exemptions

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COMMITTEE QUESTIONS?

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Small-Group Discussions (~20 min)

- **What TYPES of alternative compliance pathways will be important for Aspen buildings, and WHY?**

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Supports – to Help Buildings Comply

High-Performance Building Hub (financial / technical / regulatory assistance)

- Technical support for benchmarking and building performance improvement options
- Support for assessments + consulting
- Financial support for under-resourced buildings and tenants
- Incentives for early adopters
- Access to tax credits and incentives from state and federal funding
- regulatory/ political support- navigating systems

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COMMITTEE QUESTIONS + DISCUSSION

- Did we hear you accurately?
- What else is missing?

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Working Groups

- **Workforce**: 2/24, 4/3 (roundtable), 4/11
- **Equity & Affordability**: 2 meetings (April)
  - Questionnaire
  - Sign Up
- **Water Efficiency**: More info in April

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Draft Work Plan

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Connecting with Your 'Peer Community'

Upcoming: BPS 1-pager for your peers, networks and/or constituents

- Background information
- Questions for consideration
- Link to Aspen Community Voice - due May 1st

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Final QUESTIONS / THOUGHTS?

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