Commercial Building Performance Standard Info Session

ELECTRIFY SAN MATEO

BUILDING FOR THE FUTURE

City of San Mateo Sustainable Buildings Strategy

4.10.25

Presentation Goals

- Project Overview and Timeline
- What is a Building Performance Standard?
- Legislative Drivers
- BPS Implementation Phasing
- Equity Considerations for Multi-family
- Discussion / Q&A
- Next Steps

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City of San Mateo Sustainable Buildings Strategy

Sustainable Buildings Strategy Project Goals

- Actionable roadmap with real steps for City of San Mateo to electrify buildings
- Approach must
  - Be **cost effective** + most effective in reaching climate goals
  - Use **best available science and data**
  - **Community driven** approach: engage early and often, two phases of community outreach
  - **Policy Analysis Framework** used as Criteria to Select Best-fit Policies: Effectiveness + Equity Criteria

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City of San Mateo Sustainable Buildings Strategy

Strategy Development Timeline

- Phase 1: Community Outreach: Effectiveness + Equity Criteria Feedback
- Results of building inventory and market segmentation
- Draft prioritized policies list

- Phase 2: Outreach: Community feedback on policies & pathways
- Incorporation of community feedback in prioritized policy list
- Drafting of pathway

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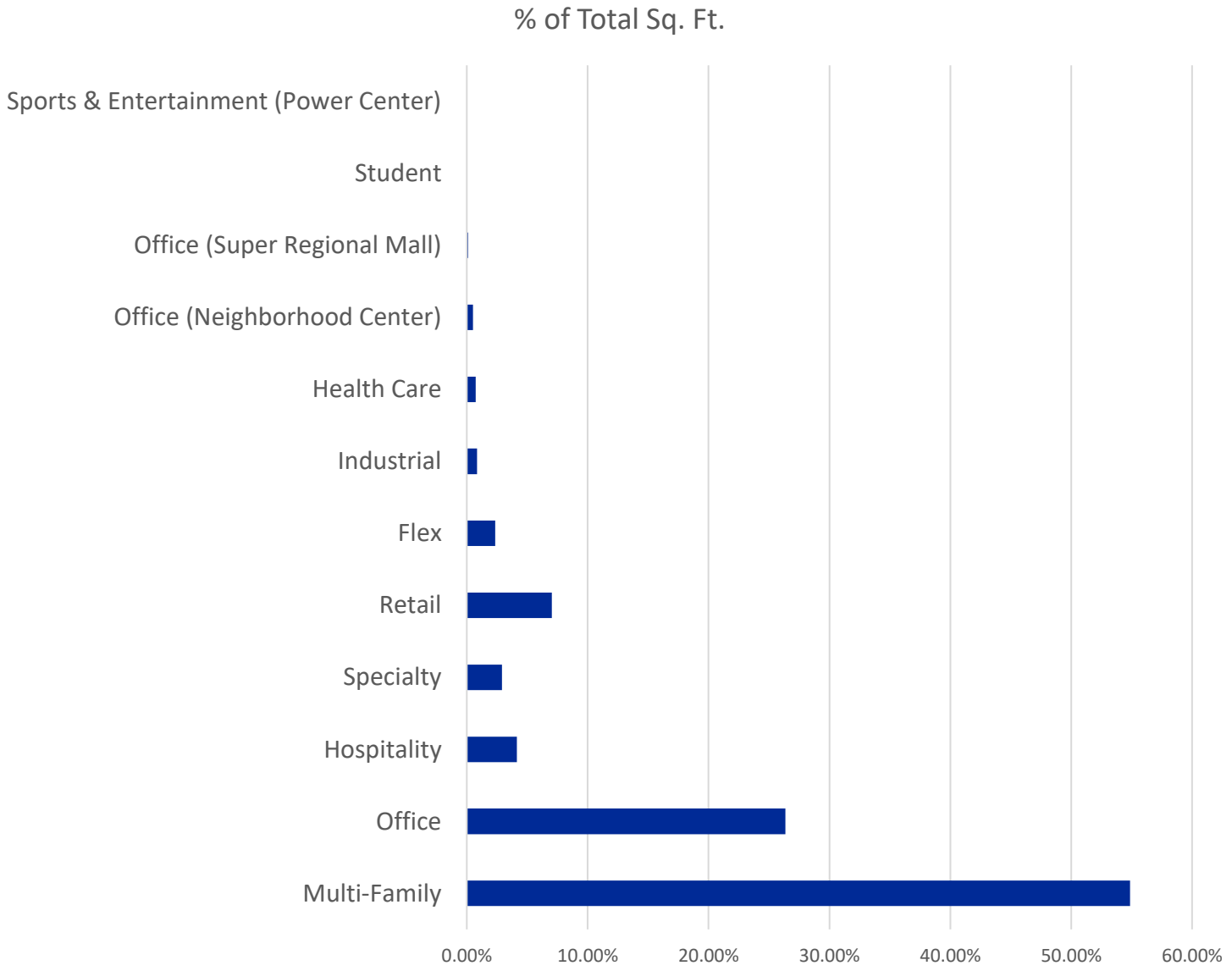
- Public review of draft strategy

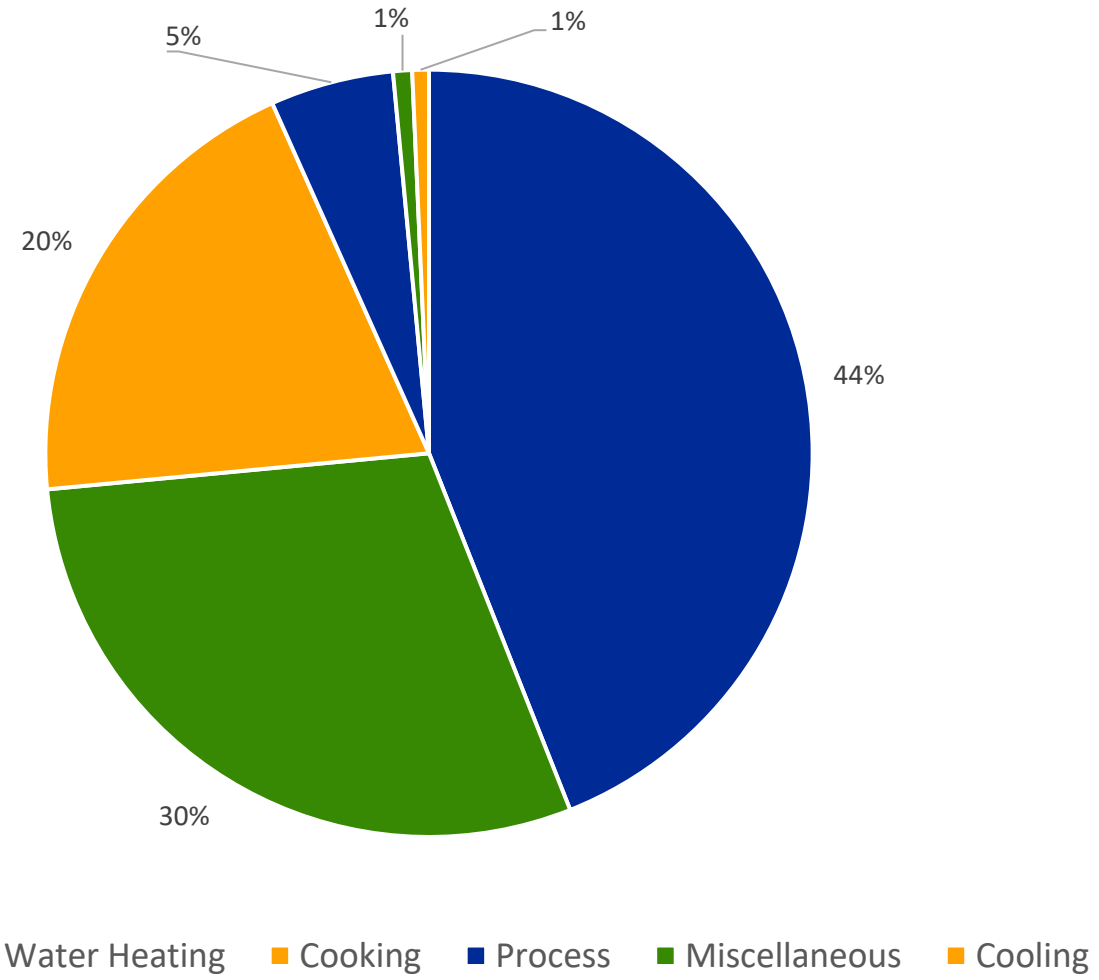
Snapshot of San Mateo Buildings

- Multi-Family and Office make up largest percent of the building stock over 20,000 square feet
- 55% Multifamily
- 45% Office/Retail/Other
- 39 Million Sq. Ft.



San Mateo Buildings 20k SF and up by Property Type

Nearly all Emissions from Buildings Come from Natural Gas



Key Takeaways

Commercial Buildings are Variable

- Many different equipment types and end uses.
- Electrification for smaller commercial likely similar to residential

Equipment is Often Oversized

- Many older buildings have oversized and inefficient equipment to make up for poor building performance.

Costs and Paybacks are Project Specific

- No one size fits all approach identified.

Possible to Electrify Cost Effectively

- Several case studies of commercial buildings were found to be cost effective when paired with efficiency and building upgrades.

What is a Building Performance Standard?

A **Building Performance Standard (BPS)** is a policy that sets specific deadlines for existing buildings over a certain size to achieve quantified standards of performance across one or more metrics—such as energy use, water use, and/or greenhouse gas emissions.

Whole Building Approach (Performance Based Metric)

Flexible Path/ Can Avoid Costly Repairs Up Front

Cost Saving through Increased Efficiency

Real Data on Building Energy Consumption

BPS Benefits

Phased Implementation of a BPS

- Policy would require disclosing building energy use, increasing energy efficiency, and eventually, electrifying buildings as a phased approach
- Include more buildings (by property type and square footage) and make standards more ambitious over time

Year 1-2:
Benchmark
Annually Report MT CO_2e and square footage

Year 2-4:
Retro-commission
Engineering report on energy saving opportunities

Year 4+:
Performance Standard
Complete projects to reach the threshold (GHG reduction/ SF)

Co-Benefits of BPS Buildings

- **Greenhouse gas emission reductions**
  - Forecasted Built Environment emissions: 38% in 2030, 39% in 2045

- **Community Health**
  - Electric appliances → improved air pollution, reduced risk of asthma (particularly childhood asthma)

- **Cost Savings**
  - Energy efficiency projects can have short paybacks (1-2 years)

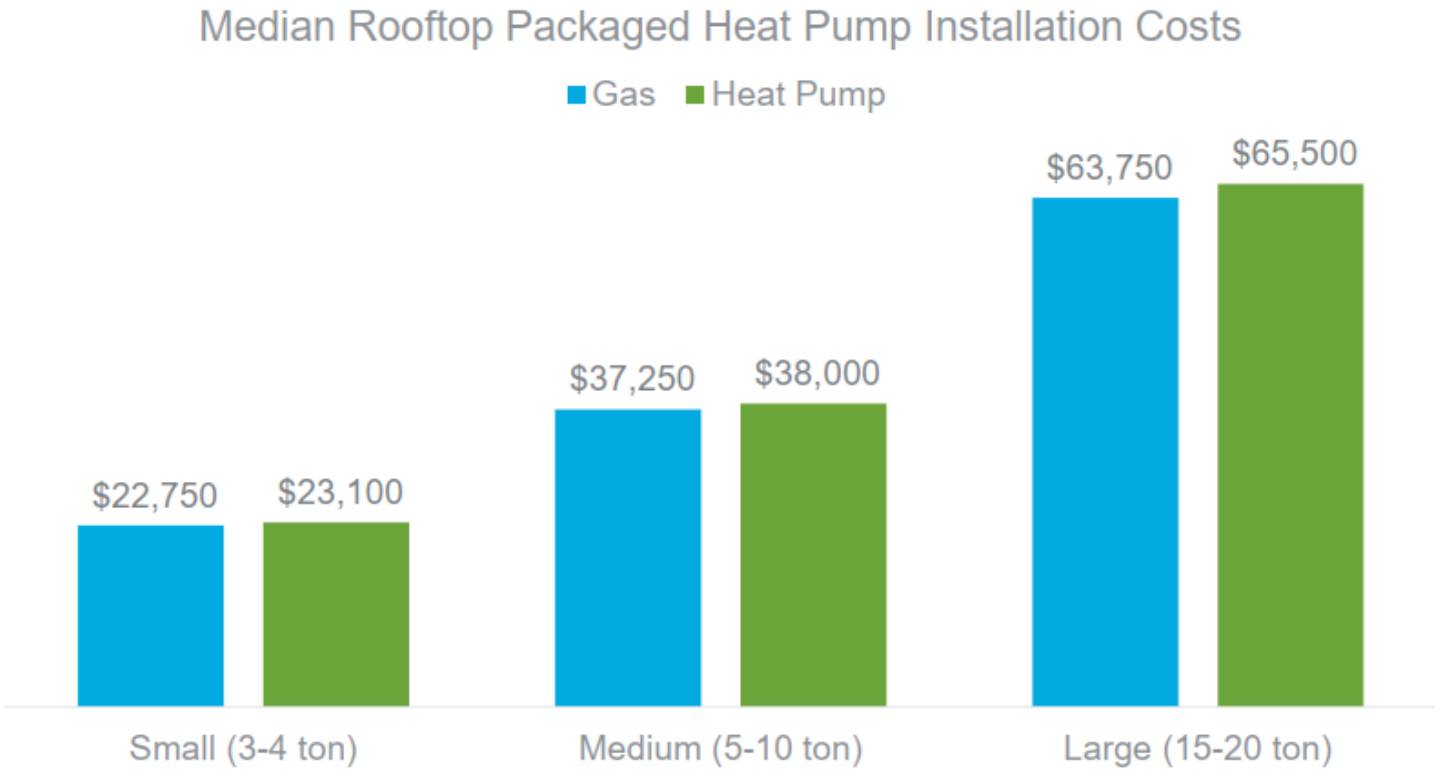
- **Resilience & Safety**
  - Decreased fire & carbon monoxide risk, increased resilience with solar

- **Decreased Vacancy**
  - Increased desirability of building space, increased comfort, lower utility bills

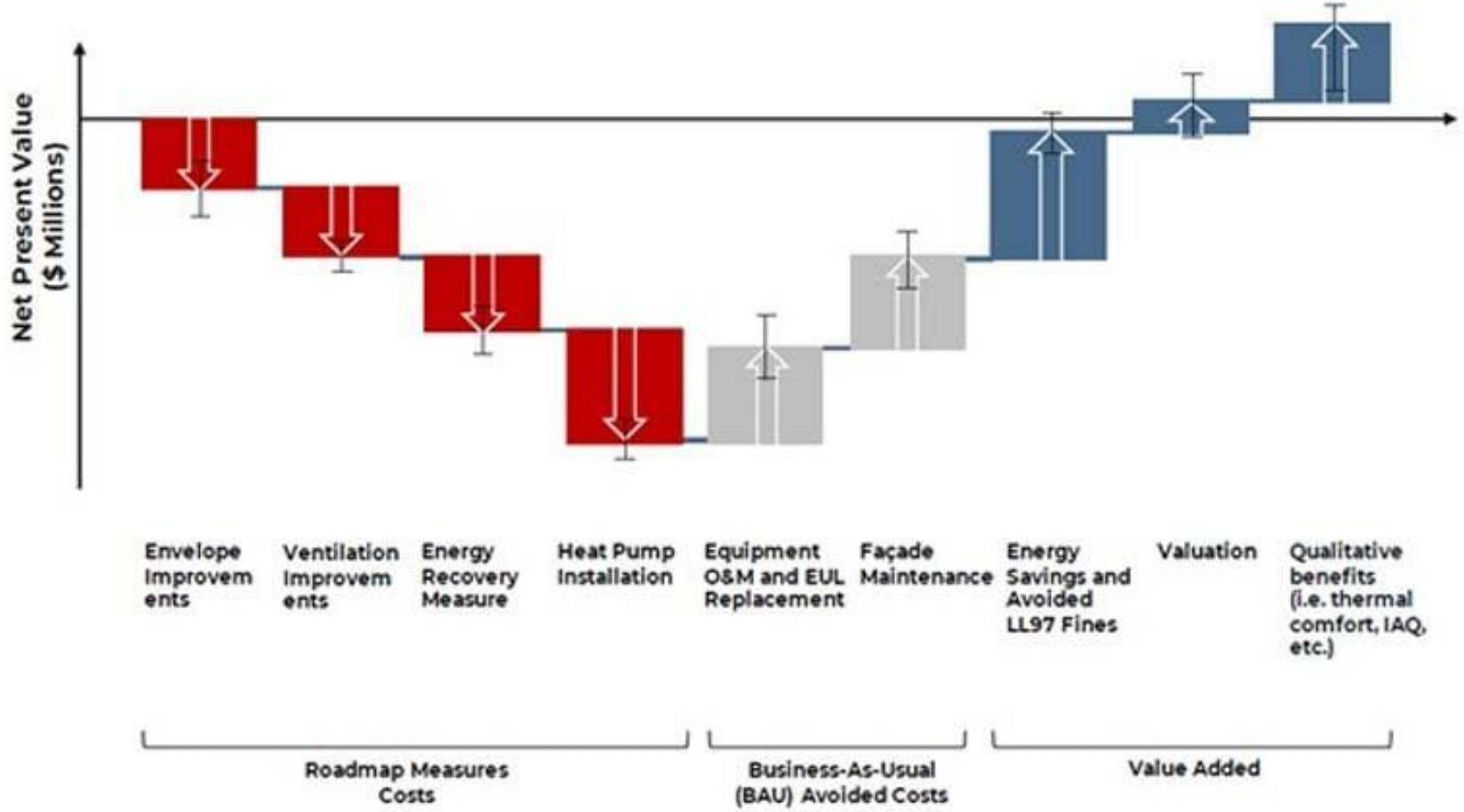
Costs to Building Owners

- Capital Costs (Building Retrofit): building by building case
  - Upgrading insulation, windows, HVAC systems, etc. to improve energy efficiency
- Operational Costs (Ongoing Expenses):
  - Benchmarking and annual reporting – 10 hours ($3,000)
  - Retrocommissioning – $0.30 sq.ft but can unlock 16% energy savings (1-2 year ROI)
  - Energy Efficiency Projects – Costs/Savings prioritized during retrocommission
- Penalties for noncompliance (fines)
  - Denver: Up to $124,500 cycle for a 50k SF building
  - Washington, D.C.: Up to $10/ SF per cycle, potentially reaching $500,000 for a 50,000 square foot building

Cost Effective Opportunities



Cost Effective Opportunities



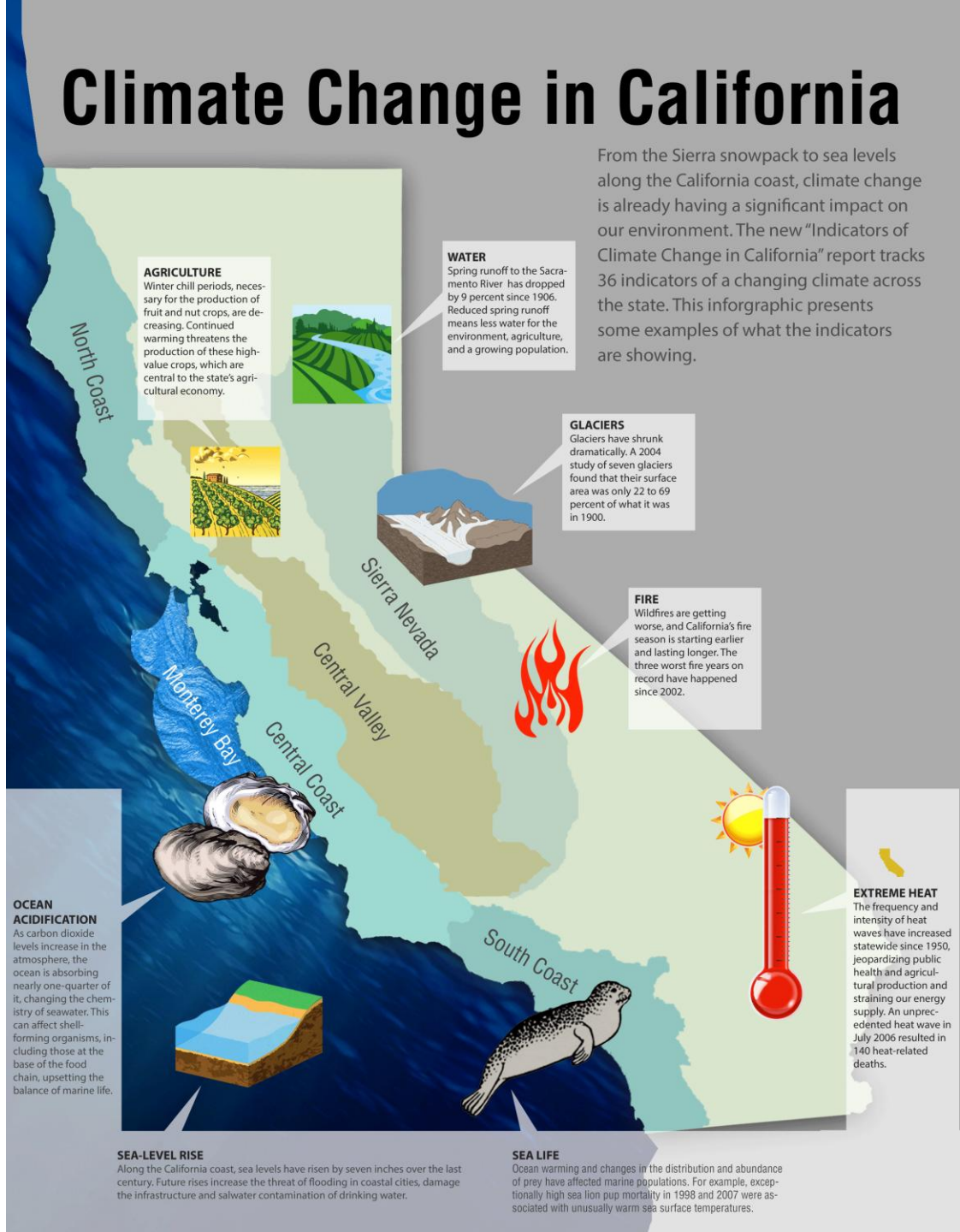
https://www.nyserda.ny.gov/Featured-Stories/The-Business-Case-for-Decarbonization

Financing Opportunities

- Incentives and Tax Credits (Federal and State/Local)
- Green Banks and Bulk Procurement
- On-bill financing (utilities allow costs to be paid through utility bills)
- HUD and Foundation Funds
- Incentives: Some jurisdictions offer rebates or tax deductions for energy efficiency improvements
- Fines collected from non-compliant buildings can be used to support compliance initiatives
- Plan retrofits for end of life of appliances to minimize cost

Cost of Doing Nothing

- Cost of mitigation vs cost of rebuilding after climate disaster
  - LA fires ($250 Billion in damages)
  - San Diego floods ($1.4 Billion in damages)
- Building electrification is the most cost-effective strategy to decarbonize the building stock



Legislation Drivers

SB 48: Buildings Energy Savings Act

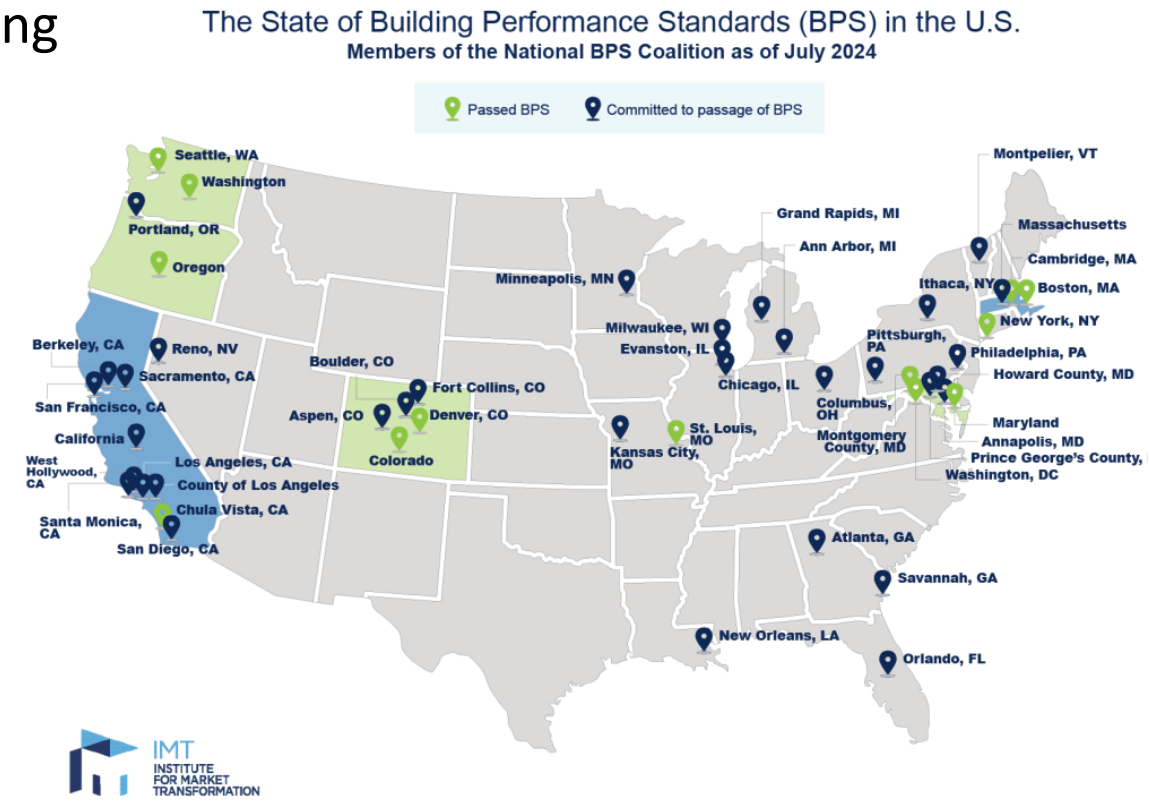
- Requires the California Energy Commission (CEC) to use the data from California's existing building energy benchmarking and transparency law to develop a strategy to decarbonize California's large existing buildings by July 1, 2026

Building Energy Benchmarking Program

- Since June 1, 2018, commercial buildings over 50,000 SF must report energy use data annually to the CEC

Other Bay Area Jurisdictions with a BPS

- San Jose
- Brisbane
- San Francisco
- Berkeley (in development)



Phase 1: Benchmarking & Data Collection

- Year 1-2
- Buildings over SF threshold
- Completion of annual energy benchmarking
- Reporting of energy and natural gas consumption on Energy Star Portfolio Manager Website

Buildings over 50,000 sf already complete this task as per CA Building Energy Benchmarking Program

Over time, square footage for program will be lowered

Phase 2: Retro-commissioning

- Year 2-4: After 2 years of data collection
- Expanded energy audit; fine tunes building energy efficiency
- Identify opportunities for downsizing equipment/limiting service upgrades
- Uncovers inefficiencies + prioritizes equipment for replacement

Phase 3: Building Performance Standard

- Year 4+:
- Implemented after year four (data collected, opportunities to improve efficiency identified)
- Buildings reduce GHG emissions on a sq/ft basis
- Reduction threshold based on data, starts high, reduces over time
- Smaller buildings brought into program over time

Equity Considerations

- Before Phase 3 equity considerations must be addressed
- Balance decarbonization goals with costs
- Consider green leases and or tenant protections in exchange for incentives
- Phase in some building types (multifamily)

POLICY MATRIX 1: DECARBONIZATION SUBSIDY PROGRAMS

Policy Recommendation	Policy Description
A. PREVENT RENT BURDEN AND MAINTAIN AFFORDABILITY	
Prohibit pass-through costs	Energy efficiency and electrification measures are ineligible for cost recovery through rent raises.
Cap rents	Units are subject to rent caps for between 5 and 15 years. If a tenant vacates a unit during the rent-cap period, the unit must maintain the same rental rate until the cap expires.
B. PREVENT EVICTIONS AND KEEP PEOPLE HOUSED	
Limit evictions	Tenants cannot be evicted for any reason other than nonpayment of rent. This limitation should be in place for between 5 and 15 years after work is complete.
C. MINIMIZE DISRUPTION TO TENANTS DURING RETROFIT WORK	
Limit the length of construction projects	Retrofit and construction work related to the subsidy program should be limited to under 30 days to ensure minimal disruption to tenants.
Establish temporary relocation fees	Property owners who must relocate tenants due to construction must provide them with comparable temporary housing within a two mile radius as well as a per-diem for meals, laundry, and pet accommodations.
Mandate a right to return	Tenants who cannot safely stay in their homes during construction have the right to return at the same rental rate once the project is completed.
Regulate construction practices	Construction work should be restricted to tenant-friendly days and hours, and workers should receive training to ensure tenant rights and needs are respected. Regulations should also mandate cleanliness and noise-control measures and encourage consecutive scheduling to streamline projects and limit inconvenience.
D. DESIGN AND DEDICATE RESOURCES TO ENFORCEMENT MECHANISMS	
Require a landlord-tenant contract	The contract should stipulate the terms and conditions of participating in the subsidy program and appoint a local implementing organization (LIO) to monitor progress and compliance. It should outline the LIO's responsibilities, such as informing tenants of their legal rights, periodically assessing adherence to mandatory certifications, investigating tenant complaints, and determining whether the agreement has been violated. The contract should give the LIO enforcement authority and establish clear penalties for violations and remedies (e.g., a civil action). Consider making this contract a lease addendum.
E. ENACT PENALTIES	
Reimbursements for violation of program guidelines	A property owner who breaches the terms and conditions of a decarbonization subsidy program must reimburse the administrator in the amount equal to that spent on retrofits and program participation, including parts and labor, overhead costs, attorney and court fees, and interest at the statutory rate for judgments from the time of the breach. If the property owner cannot repay, a lien should be placed against their building. Property owners should also be liable for damages to tenants in the amount of $500 per day, as setting high fines deters violations.

Discussion + Q&A

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Thank You!

Online Survey

More Building Electrification Resources

Questions? Contact:
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Thank you!

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