BOMA San Francisco Stakeholder Electrification Briefing

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Overview of Objectives

Promote consistency within the greater policy ecosystem

Ensure economic viability of carbon reduction strategies

Avoid inefficient options

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Regulatory Bodies and Their Respective Commercial Natural Gas Policies

2035

City and County of San Francisco

By 2035, require zero onsite fossil fuel emissions from all large existing commercial buildings

2031

Bay Area Air Quality Management District

Ban the sale of zero nitrogen oxides furnaces and water heaters by 2031. No early retrofit/ replacement requirements through 2045 have been specified.

2030

California Air Resources Board

Ban the sale of zero nitrogen oxides furnaces and water heaters by 2030. No early retrofit/ replacement requirements through 2045 have been specified.

2050

Industry Goals

Timelines vary, with most stakeholders committed to net-zero emissions by 2050. Assets in California subject to energy benchmarking and disclosure.

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San Francisco's Climate Goals

Mayor Breed sponsored updates to the City's Environment Code, which were adopted by Board of Supervisors in July 2021.

2030

61% reduction in sector-based emissions

40% reduction in consumption-based emissions

2040

NET ZERO EMISSIONS

90% reduction in sector-based emissions

Sequester remaining emissions

2050

80% reduction in consumption-based emissions

*reductions below 1990 levels

Building Operations Strategies

Eliminate fossil fuel use in existing buildings

Develop different policies, pathways, and incentives for residential, commercial, and municipal buildings

2035: all existing large commercial buildings zero emissions

SF Climate Action Plan Building Operations Strategies

Timeline of Implementation

Legislative Year	Policy Strategy
2023	Develop system to monitor the replacement rate of existing private sector natural gas-fueled equipment with all-electric. Annually report to BOS whether fossil-fuel using equipment is being switched at a rate sufficient to meet climate goals, including access to electrification by BIPOC and low-income communities.
2023	Develop a time-of-replacement policy that phases in requirements that all newly installed residential and other small building equipment be efficient and all-electric.
2025	Begin recording decarbonization status for each property at time of sale and permit review to ensure compliance with time of replacement policy.
2025	Adopt a building performance policy requiring large commercial buildings to: a) completely transition to efficient and all electric equipment no later than 2035 b) in 2025, begin regular disclosure of progress toward goal c) allow payment of annual fees in lieu of electrification, which must be invested into decarbonization of low-income and affordable housing.

Funding the SF Climate Action Plan's Implementation

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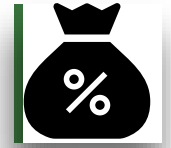
Potential Revenue Measures Identified by the Berkeley Center for Law, Energy and Environment

Term	Policy Strategy	Projected Revenue
Near Term 1-3 years	Building decarbonization general obligation bond to fund efficiency and electrification retrofits for residential buildings.	$300-500 million total
	Additional gross receipts tax on highest earning businesses to fund city staff, equity oversight bodies, workforce development initiatives	$25-50 million annually
	Parcel tax, based upon square footage of a property, to fund parks, green infrastructure, and tree canopy investments.	$12-25 million annually
Medium Term 4-7 Years	Implement a carbon emissions tax for large commercial buildings to fund building decarbonization and workforce development with investments at $100 per ton or $200 per ton of carbon emissions.	$20-128 million annually
	Congestion pricing proposal for climate action plan aligned transit and vehicle electrification investments in priority communities or free/discounted Muni	$50-110 million annually

Commercial Stakeholder Concerns

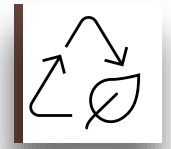


Capital Cost Sharing and Economic Viability

Electrification requires substantial capital investment that will need to be shared with tenants. Furthermore, the cost to some buildings will not be recoverable in a reasonable project payback window.

Sharing the Financial Burden of Electrification Twice

In addition to the cost of electrifying our buildings, proposed future revenue measures for the Climate Action Plan disproportionately target the commercial real estate and our tenants.



Lack of Efficient Electrification Options

If forced into using electric resistance systems, building owners face costly investments that will yield worse carbon performance than a natural gas system for the foreseeable future. It also remains unclear whether our electric grid can sustain this demand.

Lack of Clarity on Other Uses of Natural Gas

The Climate Action Plan remains silent on other uses of natural gas such as fuel cells, absorption chillers, cogeneration facilities, and systems with biogas.

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Policy Consistency

Align with regional and state government in mandating replacement at end of useful life

- To promote policy consistency do not subject buildings to early replacement
- Support pending regulatory guidelines from the California Air Resources Board and Bay Area Air Quality Management District
- Institute stringent benchmarking, auditing, and other efficiency requirements on buildings to encourage continued progress towards curbing emissions, and ultimately electrification.

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Ensure Owners Can Share Costs

The ability to pass-through costs will be critical to meeting large capital requirements of electrification

- Turning "Capex" into "Opex" will help make projects pencil.
- Issues in NYC with LL97 where "penalty assessments" cannot be passed through.
- This is interdependent with the state of the CRE market. We need tenants in our buildings to make electrification viable.

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Provide Runway for Our Most Efficient Buildings

Stipulate that no building with an ENERGY STAR score of 90 or above shall be subject to early replacement

- Buildings with these scores are in the top 10% of building performance nationwide. Many of these buildings qualify for ENERGY STAR Next Gen, the federal government's electrification standard.
- Electrification is much easier with an efficient system.
- Incentivize buildings to invest in meaningful efficiency retrofits or promote electrification for lowest performing buildings first which will make the most substantial emissions progress.

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Provide Runway for Buildings with No Efficient Pathway to Electrification

Any building with no technical pathway to electrification other than electric resistance heat (e.g., engineer cannot design a solution or permits not available) shall not be subject to early replacement of their system.

- Heat pump technology is not currently viable for many office buildings due to size and space constraints.
- Electric resistance systems increase energy usage by as much as 400% while yielding much worse efficiency.
- In SF, this is common for large office buildings with variable air volume systems.
- Introduce enhanced auditing, benchmarking, and efficiency requirements to incentivize the best possible carbon performance until viable technology is available.

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Provide Runway for Buildings with No Economic Pathway to Electrification

Any building with no feasible economic path to electrification through a project simple payback, including noncompliance fees of 6 years or greater, as certified by a California registered Professional Engineer, shall not be levied with more than 10 years of annual fees.

- While there are many electrification cases that are economically feasible, several other BOMA members face large costs through no fault of their own.
- Consider capping square footage of applicable cases.

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Additional Ideas to Assist Owners and Tenants

One-time gross receipts tax credit to building owner for audit fees relating to electrification studies

- Most buildings will need to study electrification pathways in the near-term.
- Requiring this to be taken advantage of within a certain time frame would spur owners and managers to take advantage of credit, and therefore quicker action.

Financing for smaller commercial buildings (i.e., 50,000 sq. ft. or less) to help pay for costs of electrification

- Providing loans and grants to smaller buildings will help offset costs and promote electrification where physically viable.

Assistance programs for small business tenants to help offset increased utility costs

- Due to increased energy demands, targeted assistance to certain tenants may help offset some increased costs of building transition.

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