



Energy Commission

AGENDA

REGULAR MEETING OF THE ENVIRONMENT AND CLIMATE COMMISSION

**Wednesday, June 21, 2023
6:00 PM**

**North Berkeley Senior Center
1901 Hearst Avenue**

LAND ACKNOWLEDGEMENT

The City of Berkeley recognizes that the community we live in was built on the territory of xučyun (Huchiun (Hooch-yoon)), the ancestral and unceded land of the Chochenyo (Cho-chen-yo)-speaking Ohlone (Oh-low-nee) people, the ancestors and descendants of the sovereign Verona Band of Alameda County. This land was and continues to be of great importance to all of the Ohlone Tribes and descendants of the Verona Band. As we begin our meeting tonight, we acknowledge and honor the original inhabitants of Berkeley, the documented 5,000-year history of a vibrant community at the West Berkeley Shellmound, and the Ohlone people who continue to reside in the East Bay. We recognize that Berkeley’s residents have and continue to benefit from the use and occupation of this unceded stolen land since the City of Berkeley’s incorporation in 1878. As stewards of the laws regulating the City of Berkeley, it is not only vital that we recognize the history of this land, but also recognize that the Ohlone people are present members of Berkeley and other East Bay communities today. The City of Berkeley will continue to build relationships with the Lisjan Tribe and to create meaningful actions that uphold the intention of this land acknowledgement.

PRELIMINARY MATTERS

1. Call to Order and Roll Call:

Tregub, Igor	Mayor	Mayor
Ranney, Sarah	Kesarwani	District 1
Hedlund, Marc	Taplin	District 2
McGuire, Brianna	Bartlett	District 3
Tahara, Daniel	Harrison	District 4
Allen, Shannon	Hahn	District 5
Guliasi, Les	Wengraf	District 6
Lunaparra, Cecilia	Robinson	District 7
Gould, Ben	Humbert	District 8

2. Public Comment: Comments on subjects not included on the agenda (3-minute limit per individual)

3. Approval of Minutes: [Approval of Minutes from last meeting \(May 24, 2023\)](#)**4. Agenda Check:** Commissioners may rearrange items on the agenda**5. Update from Chair** (Chair Gould)**6. Update from Staff** (Billi Romain & Rebecca Milliken)

- a. [DC Fast Chargers](#)
- b. Native Street Trees

DISCUSSION AND ACTION ITEMS**7. Presentation & Discussion:** [BESO Development of Upgrade Requirements \(Ammon Reagan\)](#)**8. Presentation & Discussion:** Loading Zones and Parking (Brianna McGuire)**9. Reports from Commission Liaisons**

- a. Planning Commission (Ben Gould)
- b. Transportation and Infrastructure Commission (Brianna McGuire)
- c. Parks, Recreation and Waterfront Commission (Cecilia Lunaparra)
- d. Zero Waste Commission (Sarah Ranney)
- e. Disaster and Fire Safety Commission (Les Guliasi)
- f. Housing Advisory Commission (Marc Hedlund)

10. Workplan Subcommittee Updates

- a. Transportation Public Space Reallocation Subcommittee (Hedlund, McGuire, Lunaparra, Gould)
- b. Native Plants and Pest Reduction Subcommittee (Ranney, McGuire, Allen)
- c. Electrification Subcommittee (Tregub, Hedlund, McGuire, Tahara)

11. Items for Future Agenda

- Principles of Equitable Community Engagement (July)
- BESO development of upgrade requirement (September)
- Municipal buildings (October)
- Fleet Electrification and EV Infrastructure (November)
- Community Resilience Centers

INFORMATION ITEMS**12. Communications****13. Announcements from Commissioners**

ADJOURNMENT

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*This meeting will be conducted in accordance with the Brown Act, Government Code Section 54953. Any member of the public may attend this meeting. Questions regarding this matter may be addressed to Billi Romain, 510-981-7432, [bromain@berkeleyca.gov](mailto:bromain@berkeleyca.gov).*

*Communications to Berkeley boards, commissions or committees are public record and will become part of the City's electronic records, which are accessible through the City's website. Please note: E-mail addresses, names, addresses, and other contact information are not required but, if included in any communication to a City board, commission, or committee, will become part of the public record. If you do not want your e-mail address or any other contact information to be made public, you may deliver communications via U.S. Postal Service or in person to the secretary of the relevant board, commission, or committee. If you do not want your contact information included in the public record, please do not include that information in your communication. Please contact the secretary to the relevant board, commission, or committee for further information.*

*Any writings or documents provided to a majority of the commission regarding any item on this agenda will be made available for public inspection at the Planning Department located at 1947 Center Street.*

**COMMUNICATION ACCESS INFORMATION:**

This meeting is being held in a wheelchair-accessible location. To request a disability-related accommodation(s) to participate in the meeting, including auxiliary aids or services, please contact the Disability Services specialist at 981-6418 (V) or 981-6347 (TDD) at least three business days before the meeting date. Please refrain from wearing scented products to this meeting.

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I hereby certify that the agenda for this regular/special meeting of the Berkeley City Commission on Commissions was posted at the display case located near the walkway in front of the Maudelle Shirek Building, 2134 Martin Luther King Jr. Way, as well as on the City's website.
Billi Romain, Commission Secretary



Environment & Climate Commission

ENVIRONMENT AND CLIMATE COMMISSION DRAFT MINUTES
Wednesday, May 24, 2023

Tregub, Igor	Mayor	Mayor
Ranney, Sarah	Kesarwani	District 1
Hedlund, Marc	Taplin	District 2
McGuire, Brianna	Bartlett	District 3
Tahara, Daniel	Harrison	District 4
Allen, Shannon	Hahn	District 5
Guliasi, Les	Wengraf	District 6
Lunaparra, Cecilia	Robinson	District 7
Gould, Ben	Humbert	District 8

1. Call to Order and Roll Call

The meeting was called to order by Billi Romain at 6:01 pm.

Commissioners Present: Tregub, Ranney, Hedlund, McGuire, Allen (6:12 pm), Gould

Commissioner Leave of Absence: Tahara, Guliasi, Lunaparra

Commissioner Absent: None

Staff: Billi Romain, Rebecca Milliken, Alene Pearson

2. Public Comments and Announcements:

4 member(s) of the Public

3 comment(s)

3. Approval of Minutes:

Motion/second to approve the April 26, 2023 Minutes (Hedlund, Tregub). The motion carried with an amendment to change the members of the Workplan Electrification Subcommittee from McGuire to Guliasi: 5-0-1-3; Ayes: Ranney, Hedlund, McGuire, Allen, Gould. Noes: None. Abstain: Tregub. None. Absent: Tahara, Guliasi, Lunaparra

4. Agenda Check

5. Update from Chair

6. Update from Staff

a. OESD staffing update

b. Community Resilience Centers (CRC)

c. Building electrification outreach – May 20 Green Home Tour report:

<https://www.eastbaygreenhome.com/>

DISCUSSION AND ACTION ITEMS

7. Presentation & Discussion: Lead Paint Hazard Enforcement (Alene Pearson)

8. Reports from Commission Liaisons

- a. Planning Commission (Gould)
- b. Transportation and Infrastructure (McGuire)
- c. Parks, Recreation and Waterfront Commission (Lunaparra)
- d. Zero Waste Commission (Ranney)
- e. Disaster and Fire Safety Commission (Guliasi)
- f. Housing Advisory Commission (Hedlund)

9. Workplan Subcommittee Updates

- a. Transportation Public Space Reallocation Subcommittee (Hedlund, McGuire, Lunaparra, Gould)
- b. Native Plants and Pesticide Reduction Subcommittee (Ranney, McGuire, Allen)
- c. Electrification Subcommittee (Tregub, Hedlund, Tahara, Guliasi)

10. Items for Future Agenda

- BESO development of upgrade requirement (June & September)
- Loading Zones & Parking (June)
- Berkeley High student report of Washington, DC trip (TBA June)
- Community Resilience Centers (CRC)
- Municipal buildings (October)
- Fleet Electrification and EV Infrastructure

INFORMATION ITEMS

11. Communications

12. Announcements from Commissioners

- a. Adopt-a-Spot: <https://berkeleyca.gov/community-recreation/volunteering/adopt-traffic-circle>

ADJOURNMENT

Motion/second to adjourn at 8:02 pm (McGuire, Ranney)

Minutes Approved:

/S/ Billi Romain, Berkeley Energy Commission Secretary



Office of the City Manager

CONSENT CALENDAR
December 13, 2022

To: Honorable Mayor and Members of the City Council
From: Dee Williams-Ridley, City Manager
Submitted by: Paul Buddenhagen, Deputy City Manager
Subject: Adopt a Resolution Authorizing the City Manager to Execute a License Agreement with East Bay Community Energy for Electric Vehicle Fast Charging Stations on Municipal Property

RECOMMENDATION

Adopt a Resolution authorizing the City Manager or their designee to execute a Master Site License Agreement with East Bay Community Energy (EBCE) for the installation and operation of publicly-available electric vehicle (EV) direct current fast charging stations on municipal property.

FISCAL IMPACTS OF RECOMMENDATION

The Master Site License Agreement (MSLA) and the siting of charging stations will have no costs to the City's General Fund or other City funds. EBCE will fully fund the cost of the fast charging stations and their installation, operation, and maintenance on municipal property. Staff time will be required for review and approval of a Notice to Proceed prior to the charging station development at each site. The City may see an increase in utility user tax (UUT) revenue as a result of increased electricity use for fueling cars. EBCE estimates that there will be an additional \$400,000-\$600,000 in UUT proceeds annually over next 2-3 years due to existing City policies, and up to \$1.3 million per year by 2025 if Berkeley meets its EV adoption goals.

CURRENT SITUATION AND ITS EFFECTS

This proposal seeks authorization for the City Manager or their designee to execute a Master Site License Agreement (MSLA) with EBCE for the development of publicly available EV direct current fast charging stations on municipal property. As directed by Council Resolution 70,216-N.S. (February 8, 2022), staff has been working with EBCE to identify municipal parking lots and garages, in areas of dense concentrations of multifamily dwelling units, to serve as sites for EBCE fast charging stations.

Staff are negotiating a draft MSLA that identifies these locations as potential charging station sites:

- 4th Street and University Avenue (parking stalls on the east and west side of 4th Street under the University Avenue overpass)

Resolution to Execute a License Agreement with EBCE for Public EV
Fast Charging Hubs on Municipal Property

CONSENT CALENDAR
December 13, 2022

- Parking lot at the southeast corner of Adeline Street and Alcatraz Avenue¹

EBCE requires each project site to have a standard design goal of 10 dual-port fast charging stations, requiring approximately 22-23 parking spaces to accommodate charging station spaces (a charging hub), ADA accessibility for the spaces, and space for transformers or other ancillary equipment.

Both of the potential locations in Berkeley can meet EBCE requirements. Both locations are located in areas identified for investment for equitable electric mobility within the Berkeley Electric Mobility Roadmap and as Equity Priority Areas designated by the Transportation Division. Both locations also have sufficient other nearby municipal on-street parking so that no parking constraints in either area are anticipated as a result of developing these fast charging spaces. Once the MSLA is executed, EBCE will conduct detailed engineering assessments, secure project financing, and work with PG&E to provide the additional utility service required for EV charging. A Notice to Proceed, detailing the site design, charging stall descriptions, construction coordination schedule, and site access hours for each site must be still be agreed upon and executed by the City Manager or designee prior to charging hub development.

City owned parking garages, including the Center Street Garage and Telegraph Channing Garage, were also considered but have not been included due to the bond obligations for parking revenue as well as space, electrical, and access constraints.

Key features of the MSLA include:

- A term of 15 years in which EBCE would use designated municipal parking spaces to install and operate fast charging stations, with removal and restoration of the site at the end of the term, or an extension if authorized by Council
- EBCE will pay for the equipment, installation, operation, and maintenance of the charging stations
- The City will provide the parking spaces used for the charging hubs
- EBCE will be responsible for all electricity and communication costs of the charging stations
- Rates for use of the charging stations will be set by EBCE and may change over time at the discretion of EBCE (the City has representation on the EBCE Board of Directors, which will be involved in rate setting)
- EBCE may place signage at the sites for the charging hubs
- The City will issue a Notice to Proceed for each charging hub site before development begins

¹ Resolution No. 66,829-N.S. (2014) allows the City to allocate up to 40% of the total spaces at this lot to long-term parking exclusively for tenants of 3271 Adeline Street/1835 Alcatraz Avenue. This allocation is currently being used by Satellite Affordable Housing Associates (SAHA).

Resolution to Execute a License Agreement with EBCE for Public EV
Fast Charging Hubs on Municipal Property

CONSENT CALENDAR
December 13, 2022

Creating public EV fast charging hubs is consistent with the Berkeley Electric Mobility Roadmap and is a Strategic Plan Priority Project, advancing our goal to be a global leader in addressing climate change, advancing environmental justice, and protecting the environment. Partnership with EBCE, Berkeley's public power provider, could provide cost-effective public fast charging stations at locations that prioritize equity, providing charging in proximity to multifamily housing and in areas that have less access to transportation options and/or are more highly impacted by pollution, poverty, and other socioeconomic factors.

BACKGROUND

EBCE is building a network of EV fast charging hubs on behalf of its customers and Joint Power Authority (JPA) member cities. These public fast charging stations will help EBCE's service area meet statewide mandates for zero-emission vehicles and help meet the needs of current and future EV drivers, especially renters who do not have access to at-home charging.

As directed by Resolution 70,216-N.S. (February 8, 2022), staff has been working with EBCE to identify municipal parking lots and garages, in areas of dense concentrations of multifamily dwelling units, to serve as sites for EBCE fast charging stations. EBCE had originally requested non-binding terms that required an annual service fee from the City of \$100,000 per fast charging hub, resulting in annual costs of \$200,000-\$300,000 to the City. This expense may have been offset, and potentially exceeded over time, by a site license fee, paid by EBCE to the City when the project net operating income exceeded EBCE's cost to service the debt.

EBCE has since adjusted its original plans and financing mechanism. Rather than developing the charging hubs directly, with payments from JPA members, EBCE is pursuing private infrastructure capital through a tolling partnership available to the utility industry. EBCE now aims to develop 40-50 public fast charging hubs by 2030 through a tolling structure contract with a counterparty who will finance, construct, and maintain the charging stations over a 10-year period for a fixed monthly payment from EBCE at no cost to the City.

This new model removes risk, uncertainties, and expenses for the City. Original calculations of revenues from EBCE's Site License fees were based on Low Carbon Fuel Standards (LCFS) credit pricing above \$160; in the intervening time LCFS credits have dropped to \$60-70 average sales, which reduces the revenue projections for the chargers by \$1.2M over 10 years. As a result, the City's estimated total revenues of \$50,000 to \$851,000 over the agreement term in EBCE's original proposal would be completely subsumed and the City would not recover the investment made in the project.

EBCE's new model eliminates the capital request to the City, while still delivering the benefit in the form of beginning a robust charging network in Berkeley and across the

Resolution to Execute a License Agreement with EBCE for Public EV
Fast Charging Hubs on Municipal Property

CONSENT CALENDAR
December 13, 2022

County. EBCE will be requesting approval from their Board of Directors to sign contracts with development partners, with an overall program cost not to exceed \$3M/year or \$30M over their 10-year agreements. EBCE hopes not to spend \$30M to provide this charging infrastructure, but is setting expectations with their Board that this program may not earn returns/profits as the market is volatile, costs are shifting, and EBCE wants the flexibility to deliver low cost charging to all customers, which could include discounts for low income customers that would reduce project revenues. Any profits generated by EV charging hubs will be delivered back to EBCE customers and communities through lower electricity rates and/or local programs investments in further electrification projects.

In order to include Berkeley sites as Phase I charging hubs, the City needs to execute the MSLA by the end of the year, so that EBCE can attract private infrastructure capital through a tolling partnership. Hayward and Pleasanton City Councils both authorized their city managers to authorize their MSLAs with EBCE on November 1, 2022.

As of August 2022, there were 184 publicly-available Level 2 EV charging ports and 22 direct current fast charge (DCFC) ports in Berkeley. Approximately 7.5% of registered cars in the community were electric. These values have doubled in the last four years; in late 2018 there were 105 publicly-available EV charging ports and nearly 4% of registered personal vehicles were electric.

In order to meet the Berkeley Electric Mobility goals of increasing the share of light-duty EVs registered in Berkeley to 25% by 2025, 55% by 2030, and 100% by 2045, more public charging is needed to ensure that all residents, especially renters without access to at-home charging, have convenient refueling options. Berkeley's goal is to install at least 100 public DCFC ports by 2025. Partnering with EBCE to site and develop DCFC hubs could result in approximately 40 new public DCFC ports within Berkeley in the next 1-3 years.

ENVIRONMENTAL SUSTAINABILITY AND CLIMATE IMPACTS

According to Berkeley's 2020 greenhouse gas emissions (GHGs) inventory, 46% of Berkeley's emissions result from transportation. In addition to increasing the use of public transportation, walking, biking and scooters, replacing internal combustion engine cars with EVs is necessary to reduce transportation emissions. Partnering with EBCE to create new EV direct current charging stations in Berkeley advances equity in line with Berkeley's Climate Action Plan, Electric Mobility Roadmap, and Climate Emergency Declaration. Siting charging in equity priority areas in proximity to multifamily housing and the inclusion of prevailing wage and other labor standards in the MSLA supports the Just Transition to becoming a Fossil Fuel Free City.

RATIONALE FOR RECOMMENDATION

In order to include Berkeley sites as Phase I charging hubs, the City needs to execute the MSLA by the end of the year. Partnering with EBCE to site and develop DCFC hubs

Resolution to Execute a License Agreement with EBCE for Public EV
Fast Charging Hubs on Municipal Property

CONSENT CALENDAR
December 13, 2022

could result in approximately 40 new public DCFC ports within Berkeley in the next 1-3 years without cost to the City.

ALTERNATIVE ACTIONS CONSIDERED

None. The City lacks funding, expertise, and staffing develop and operate this scale of fast charging stations. The City could wait for the private market to build fast-charging infrastructure at scale. However, this may not materialize in the timeframe needed to meet state and local climate action goals. Private sector owned fast-charging will not necessarily be sited in convenient or equitable locations that serve renters in multifamily housing. Staff has concentrated on protecting the City's real assets and interests, including maximizing community reinvestment and benefits, while negotiating the MSLA.

CONTACT PERSON

Sarah Moore, Sustainability Program Manager, OESD, Planning, (510) 981-7494
Farid Javandel, Deputy Director of Transportation, Public Works, (510) 981-7057

Attachments:

- 1: Resolution
- 2: Resolution Establishing City Process for Siting and Developing Public Electric Vehicle DC Fast Charging Hubs (Resolution No. 70,216-N.S.)

RESOLUTION NO. ##,###-N.S.

RESOLUTION AUTHORIZING THE CITY MANAGER TO EXECUTE A LICENSE AGREEMENT WITH EAST BAY COMMUNITY ENERGY FOR PUBLIC ELECTRIC VEHICLE FAST CHARGING STATIONS ON MUNICIPAL PROPERTY

WHEREAS, the State of California has a goal of 7.5 million zero emission vehicles (ZEVs) on California roads and approximately 1.2 million public and shared chargers to meet the fueling demands of those vehicles by 2030; and

WHEREAS, on August 25, 2022, the California Air Resources Board approved a rule requiring 100 percent of new car sales in California to be ZEVs by 2035; and

WHEREAS, the Berkeley Electric Mobility Roadmap targets the development of at least 100 public DC fast charging ports in Berkeley by 2025 to support carbon neutrality by 2045; and

WHEREAS, there are currently 22 DC fast charging ports in Berkeley; and

WHEREAS, the Berkeley Electric Mobility Roadmap includes developing public EV charging on municipal property through partnerships with third-party charging providers as a strategy to achieve zero net carbon; and

WHEREAS, East Bay Community Energy (EBCE), the not-for-profit public power agency which serves Berkeley, aims to deploy 40-50 charging hubs throughout its service area by 2030; and

WHEREAS, in their first phase of development, EBCE is seeking to develop two fast charging hubs in Berkeley, each providing approximately 20 DC fast charging ports, for a total of about 40 new DC fast charging ports; and

WHEREAS, EBCE's fast charging hubs would be installed, operated, and maintained by EBCE on municipal property at no cost to the City of Berkeley; and

WHEREAS, any revenues generated by EBCE's fast charging hubs would be reinvested in programs, including transportation electrification, or used to lower rates, in Berkeley and the other member jurisdictions; and

WHEREAS, additional EV charging infrastructure is needed in Berkeley to meet the current and future needs of residents, particularly renters, and visitors.

NOW THEREFORE, BE IT RESOLVED by the Council of the City of Berkeley that the City Manager or their designee is authorized to execute a Master Site License

December 13, 2022

Agreement with East Bay Community Energy (EBCE) for publicly available EV fast charging stations on municipal property.

RESOLUTION NO. 70,216-N.S.

RESOLUTION ESTABLISHING CITY PROCESS FOR SITING AND DEVELOPING
PUBLIC ELECTRIC VEHICLE DC FAST CHARGING HUBS

WHEREAS, the world is facing a grave climate emergency, requiring municipalities to rapidly and justly transition towards a zero-carbon economy by 2030; and

WHEREAS, 60% of Berkeley's sector-based greenhouse gas (GHG) emissions as of 2019 result from the transportation sector, and in addition to public transportation, walking, biking and scooters, replacing internal combustion vehicles with electric vehicles will be a major factor in reducing emissions; and

WHEREAS, transitioning Berkeley's economy will require significant investment on the part of both government and residents and low-carbon technology, including electric vehicle charging infrastructure, which is underdeveloped in Berkeley and can often be out of reach for many households; and

WHEREAS, the primary hurdle to widespread electric vehicle adoption moving forward will be the availability of reliable and convenient fast charging infrastructure for residents who are renters who do not have access to charging at home and commuters, visitors and businesses; and

WHEREAS, City's Electric Mobility Roadmap and Climate Action goals provides a goal of having 15,000 electric light-duty vehicles registered in Berkeley by 2025, which according to California Energy Commission modeling would require a significant investment in public direct current fast charging (DCFC) ports; and

WHEREAS, Alameda County's default public power provider, East Bay Community Energy (EBCE), is proposing a public-public partnership with the City to develop and operate up to three DCFC hubs, that EBCE will own and operate, across Berkeley in areas with a dense concentration of multifamily housing that are near amenities desired by drivers; and

WHEREAS, the proposed public-public partnership would provide Berkeley residents and visitors with state-of-the-art fast charging infrastructure, enabling the transition from internal combustion vehicles for those who were not early adopters and reducing GHG emissions from the transportation sector; and

WHEREAS, EBCE and the City of Berkeley have developed the proposed non-binding term sheet describing how EBCE would develop, operate and market up to three DCFC hubs under a Service Agreement; and

WHEREAS, in parallel EBCE will negotiate a Site License Agreement with the City providing EBCE with access and use of public land for EBCE's DCFC hubs, and once the project is generating revenues above EBCE's annual project costs, EBCE will share revenue with the City via the Site License Agreement; and

WHEREAS, the Site License Agreement revenue payments and Utility Users Tax proceeds, resulting from increased electricity consumption as a transportation fuel at EBCE's DCFC hubs, can provide the City of Berkeley with new revenue sources; and

WHEREAS, it is in the public interest for the City to proceed to negotiate a Service Agreement with EBCE as generally proposed by the non-binding term sheet.


NOW THEREFORE, BE IT RESOLVED by the Council of the City of Berkeley that the City Manager or their designee is authorized to negotiate a Service Agreement with EBCE subject generally to the non-binding terms included in the attached term sheet and any subsequent amendments or modifications thereto, as the City and EBCE may deem appropriate, and that execution of the Service Agreement is contingent upon Council allocation of funding for the City's Service Fee as part of the FY 2023-2024 budget process and subsequent adoption of the Service Agreement by Council.

The foregoing Resolution was adopted by the Berkeley City Council on February 8, 2022 by the following vote:

Ayes: Bartlett, Droste, Hahn, Harrison, Kesarwani, Robinson, Taplin, Wengraf, and Arreguin.

Noes: None.

Absent: None.



Jesse Arreguin, Mayor

Attest: 

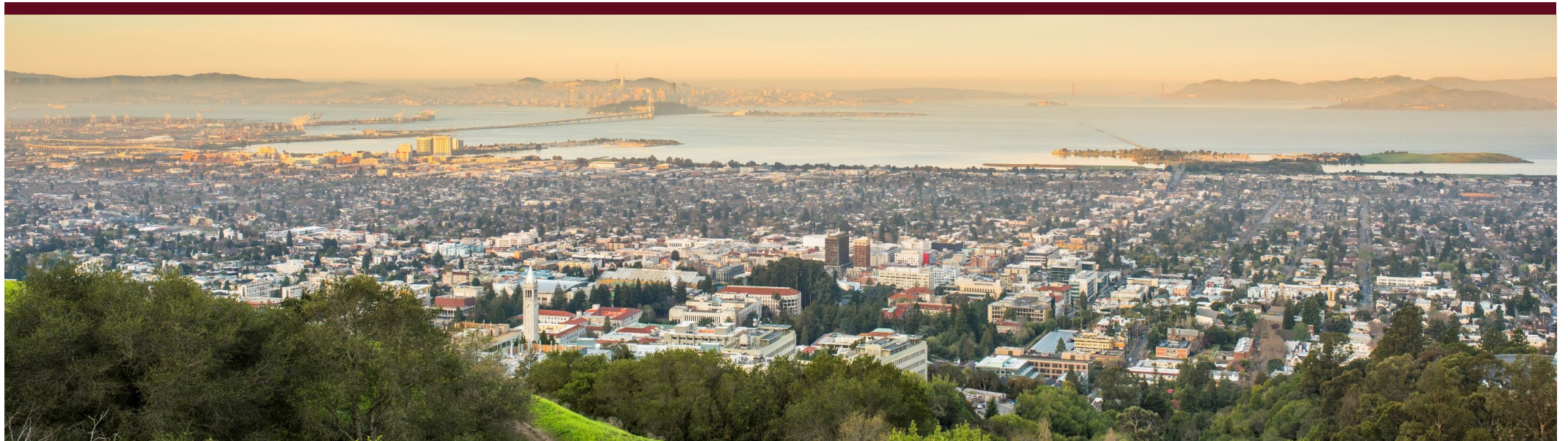
Mark Numainville, City Clerk



Building Emissions Saving Ordinance (BESO)

Energy Upgrade Requirements

June 21, 2023





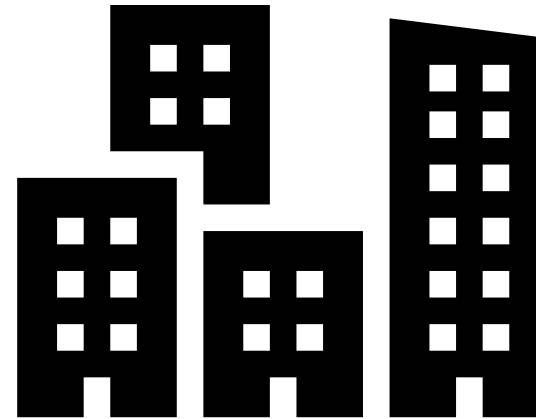
Building Emissions Saving Ordinance

Time of Sale Program



Buildings **less** than
25,000 sqft

Large Building Program



Buildings **greater** than
25,000 sqft



BESO - Time of Sale Program

- Requires an **energy/electrification assessment** prior to listing a building for sale.
 - Home Energy Score for Single family homes
 - Provides information to potential buyers
- Refers building owners into local incentive programs to complete voluntary upgrades





Policy Objectives



Accelerate building electrification upgrades



Promote early compliance



Align with available resources



Ensure smooth sales process



Provide flexibility in required upgrades



Policy Development Timeline

- **Spring 2023:** Work with stakeholders on policy development topics
 - Technical Advisory Committee
 - Realtors
 - Community
 - Environment and Climate Commission
- **Summer 2023:** Draft policy recommendation, outreach to commissions and stakeholders
- **Fall 2023:** Finalize policy recommendation with Council Committees
- **Winter 2023/Spring 2024:** Policy recommendation to City Council



Technical Advisory Committee (TAC)

- **Members:**

- Building Decarbonization Experts
- BESO Assessors
- Architects
- Electrification Contractors
- Utilities
- Regional and State entities

- **Goals:**

- Provide input on energy upgrade requirements
- Develop compliance pathways and exemptions
- Discuss policy implementation details (e.g. cost caps, timelines, enforcement, etc.)





TAC Meetings

1

- General Overview
- Policy Goals

2

- Requirements
- Alternative Measures
- 2-4 Unit Buildings/ADUs

3

- Deferrals/Exemptions
- Enforcement
- Complementary Programs and Support

Potential Upgrade Requirements



Zero-Emission Appliance Rule

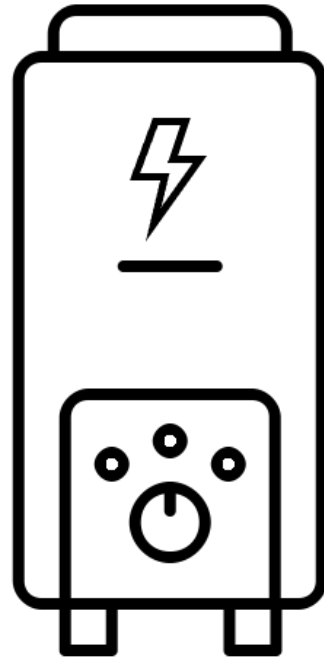
- Bans the sale and installation of new gas water heaters and furnaces
- **2027** - New water heaters rated less than 75,000 BTU/hr
- **2029** - New natural gas-fired furnaces
- **2031** – New large natural gas boilers, storage tank water heaters, or instantaneous water heaters less than 2,000,000 BTU/hr



BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT

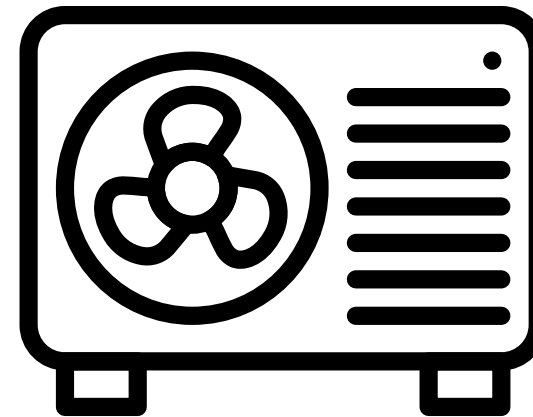


Potential Requirement – Heat Pump System*



Water Heating

OR



Space Heating/HVAC

*Alternative options available



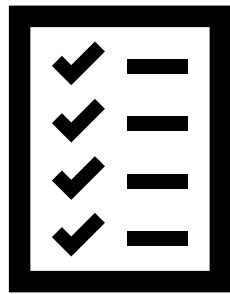
Potential Requirement – Rationale

- Consistent with local goals and BAAQMD
- Direct GHG savings
- Easy/Straightforward
- Promotes early adoption
- Provides electrification benefits
- Benefits the buyer





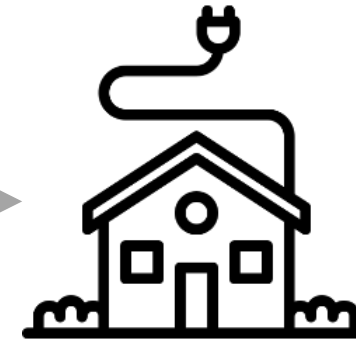
Example: Home *has* a heat pump



Seller completes
verification
assessment



Home listed for
sale



Assessment provides
next steps for full
electrification



Example: Home *doesn't* have a heat pump





Alternative upgrade measures

Electric Ready

- Pre-wiring & 240v outlets
- **Panel upgrade**

Electrification

- Heat Pump Water Heater
- Heat Pump HVAC
- EV Charging Station
- **Induction Stove**
- ~~Heat Pump Dryer~~

Removed by 50% of the groups
~~Removed by 75% of the groups~~

Energy Efficiency

- Attic Insulation
- Wall Insulation
- Floor Insulation/Crawlspace Improvement
- Air Sealing (Verified)
- Window replacements
- **Duct Sealing/Replacement (Verified)**

Resilience/Safety

- Solar PV Installation
- Battery storage installation
- **Replace knob and tube**
- ~~Automatic gas shutoff valve~~



Point based alternative compliance

- **Potential weighting criteria:**

- GHG Savings
- Cost
- Health, safety, equity benefits
- Electrification readiness

- **Rationale:**

- Addresses range of building conditions
- Buyer's are able to prioritize
- Greater impact

Table 1A: Target Score

Single Family Units - Climate Zone 3	Building Vintage		
	Pre-1978	1978-1991	1992-2010
Target Score	14	8	6

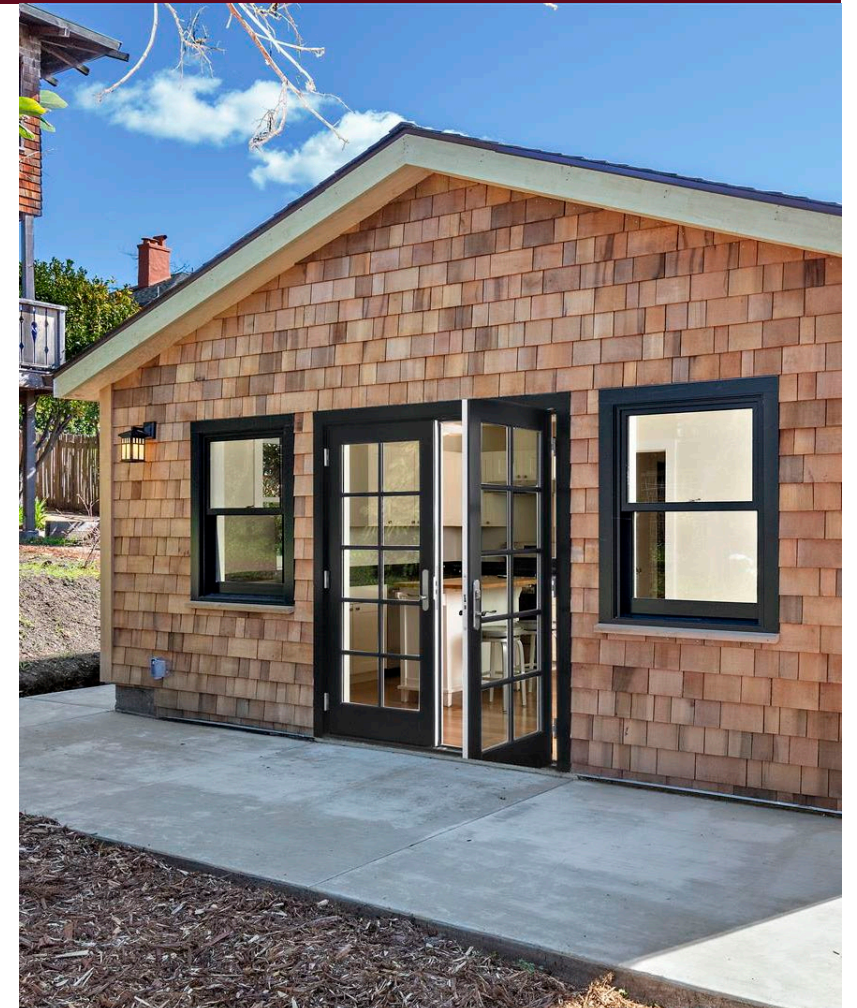
Table 1B: Measure Menu

Single Family Units - Climate Zone 3	Building Vintage		
	Pre-1978	1978-1991	1992-2010
LED + Exterior Photosensor	Mandatory	Mandatory	Mandatory
Water Heating Package	1	1	1
R-49 Attic Insulation	1	2	1
Air Sealing	1	1	1
Duct Sealing	3	2	--
New Ducts + Duct Sealing	6	4	2
Windows	3	3	--
R-13 Wall Insulation	5	--	--
HVAC Heat Pump	16	11	10
High Eff HVAC Heat Pump	17	12	11
HPWH	12	12	12
High Eff HPWH	13	13	13
Induction Cooktop	1	1	1
Heat Pump Clothes Dryer	1	1	1
PV + Battery	11	11	11
PV	12	12	12
PV + Electric Ready Pre-Wire	12	12	12
PV (points per KW)	5	5	5



Covered Building Phase-in

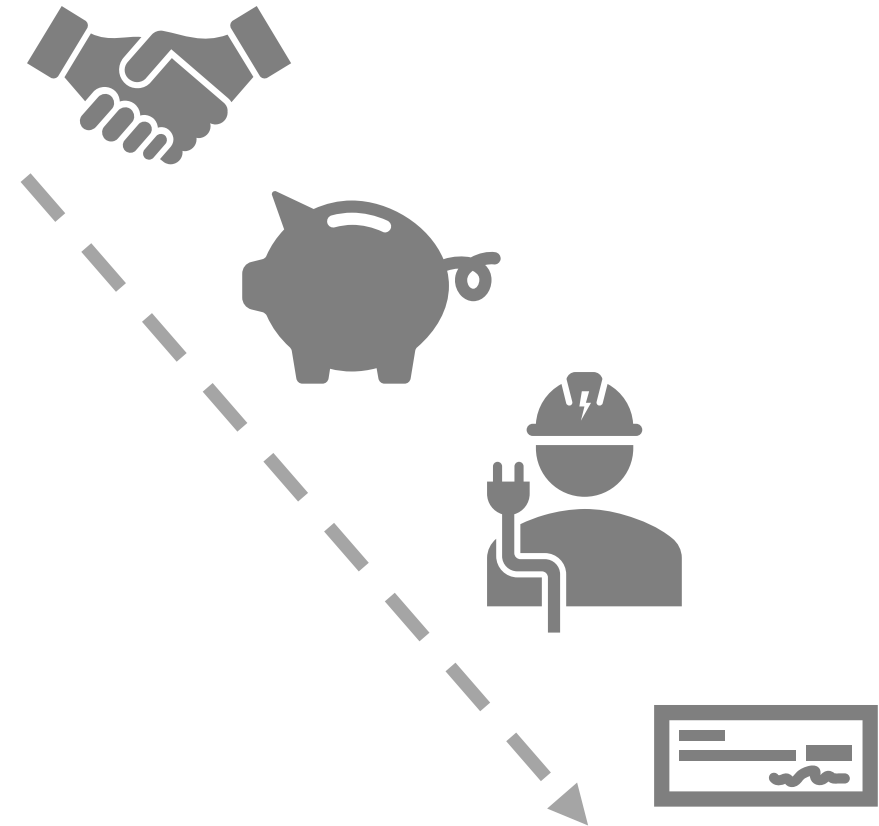
- **Phase 1: Single-family, ADUs, Duplexes**
 - Expected implementation in 2025
 - Likely to be owner-occupied
 - Bulk of sales
 - Addresses attached/detached ADUs
- **Phase 2: 3-4 Units**
 - Expected implementation in ~2027/2028
 - Use lessons learned from Phase 1
 - Likely to be rental properties
 - Complex/shared systems
 - Need to develop additional support systems





Enforcement - Require Escrow Deposit

- **Escrow deposit:**
 - Buyer/seller negotiated
 - Ensures compliance
 - Forfeited funds can support low-income electrification programs
- **Private Sewer Lateral program:**
 - If compliance requirements not met, 6-month extensions can be requested
 - \$4,500 deposit is sent from escrow to the City
 - Refunded once work has been completed





Potential Exemptions/Support

- **Exemptions:**
 - **All-electric homes** with permits showing capped gas line
 - **Refinances** and **partial transfers**
 - Participation in income qualified **First Time Home Buying** Program
- **Support:**
 - **Assessment support** for income qualified sellers





Questions and Feedback





Proposed Policy Components

- **Covered Buildings:**

- Phase 1: SFH, Duplexes, ADUs
- Phase 2: 3-4 Units

- **Requirement:**

- One heat pump system

- **Compliance Pathways:**

- HEScore & Heat Pump Verification
- HEScore & Point based upgrade requirements

- **Buyer vs Seller Responsibilities:**

- Seller: Assessment
- Buyer: Complete an upgrade (*if no heat pump*)

- **Enforcement:**

- Utilize escrow bond/deposit process
- Forfeited funds support low-income electrification program

- **Exemptions:**

- All-electric homes
- Refinances and partial transfers
- Income qualified First Time Home Buying Program



Thank You!

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