

Building Emissions Saving Ordinance (BESO)

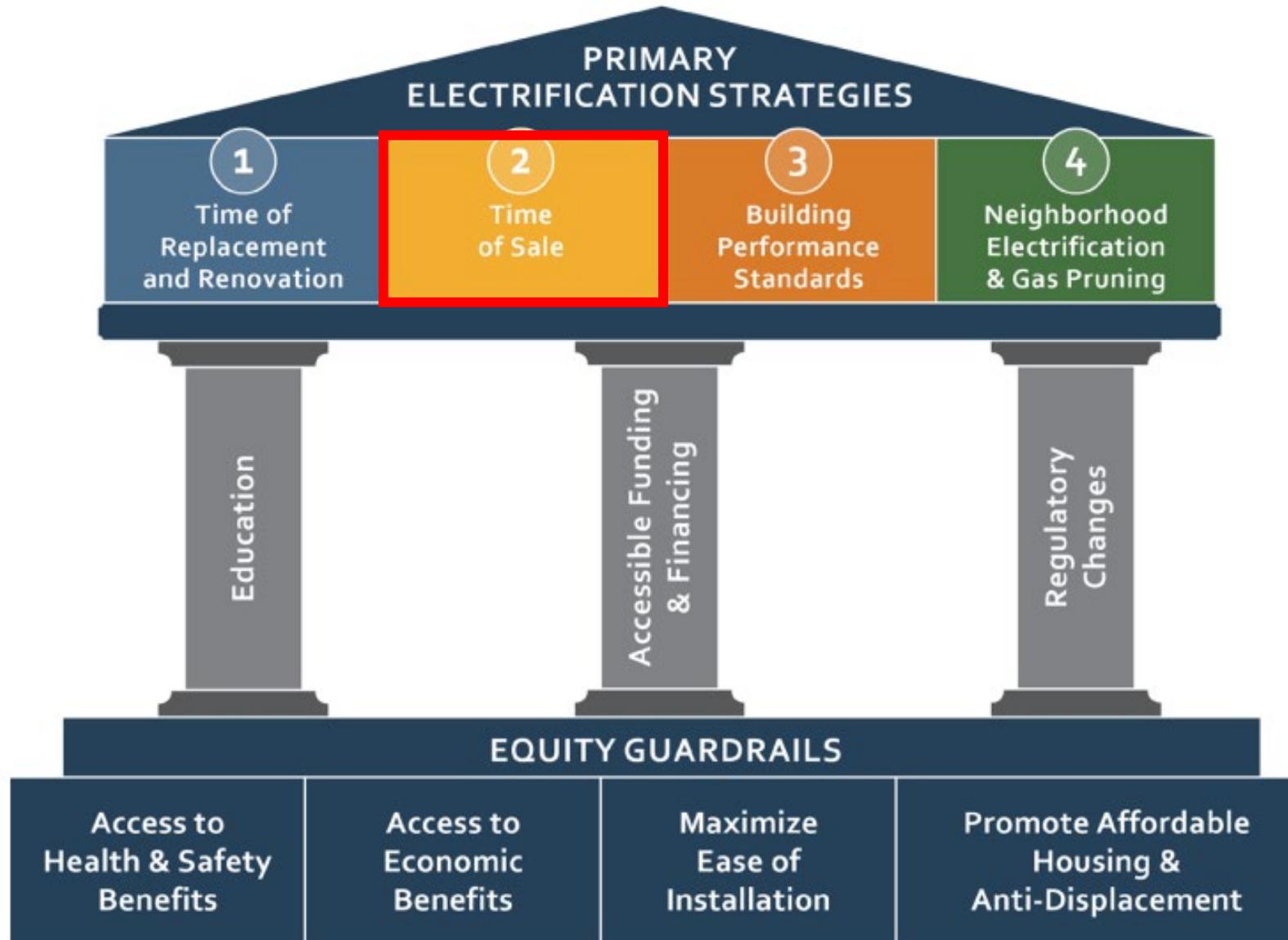
Time of Sale Upgrade Requirements

December 2, 2024



Background and Current BESO Requirements

Berkeley's Existing Building Electrification Strategy



Building Emissions Saving Ordinance (BESO)

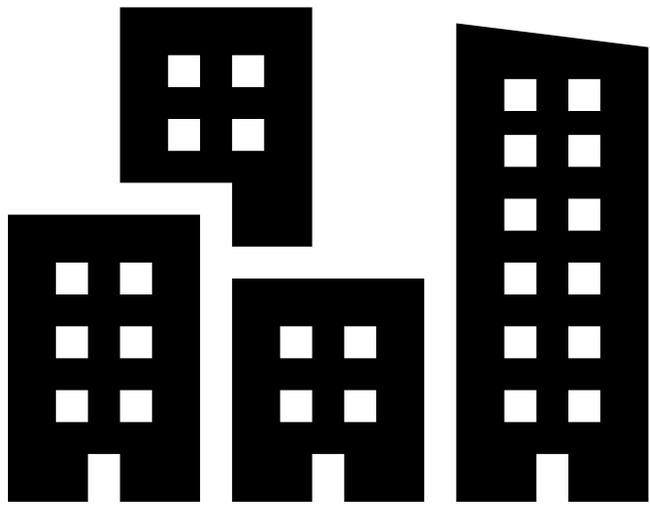


Time of Sale Program



Buildings **less** than
25,000 sqft

Large Building Program



Buildings **greater** than
25,000 sqft

Current 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

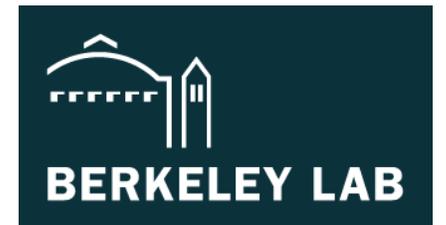


Technical Advisory Committee



Members:

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



Outreach and Engagement



- Real Estate Community
 - Realtor Offices
 - Real Estate Professionals Webinar
 - Bridge Association of Realtors
- Berkeley Rent Board – Sustainability Committee
- Berkeley Neighborhoods Council
- City Green Building Coordination Team
- Berkeley Property Owners Association
- Community and Environmental Organizations
- Council Policy Committees
- Environment and Climate Commission



Proposed Upgrade Requirements

Proposed Time of Sale BESO Requirements

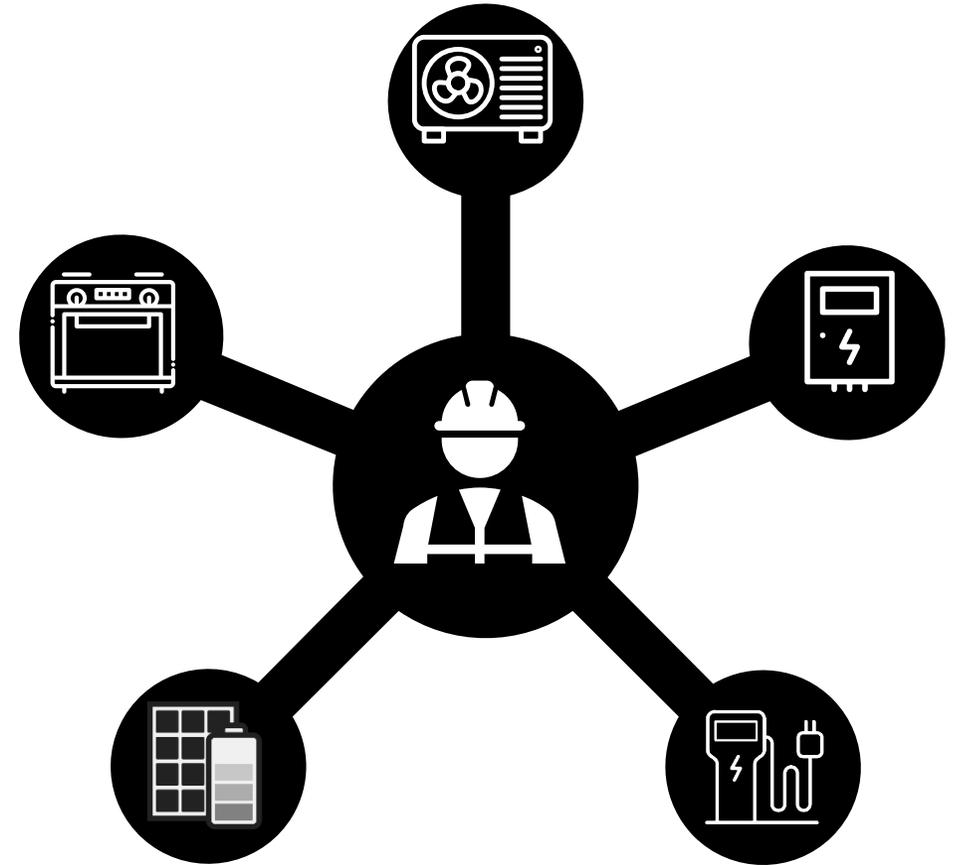


- **Seller completes the BESO assessment**
- **Buyer completes the upgrade(s) within 2 years of the sale if compliance has not been met**



Flexible Resilience Standard

- **Upgrade requirements:**
 - List of possible upgrades
 - Each upgrade has a corresponding credit value
 - Buildings need to achieve minimum number of credits through upgrades
- **Credit value criteria:**
 - Emissions savings
 - Cost
 - Health, safety, resilience bonus
- **Rationale:**
 - Addresses range of building conditions
 - Owner can prioritize



Potential Measures & Credits



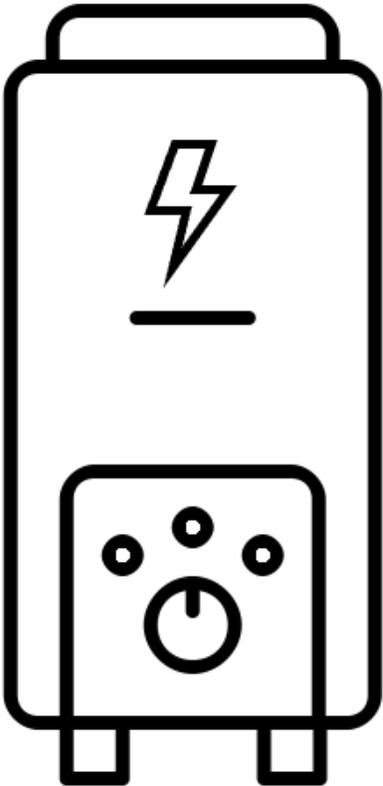
Credits Needed: 6

Measure	Credits*	Criteria
Heat Pump Water Heater	6	Emissions
Heat Pump HVAC	6	Emissions
Knob + Tube Replacement	6	Cost
Smart Panel	6	Cost
Solar PV + Storage	6	Cost
Panel Upgrade	4	Cost
Duct Sealing & Replacement	3	Emissions
Bi-Directional EV Charger	3	Cost
EV Charger	2	Cost

Measure	Credits*	Criteria
Induction Range	2	Emissions
Window Replacements	2	Emissions
Attic Insulation	2	Emissions
Wall Insulation	2	Emissions
Floor Insulation	1-2	Emissions
Greywater System	1-2	Cost
Air Sealing	1	Emissions
Prewiring & 240v receptacles	1/2 per receptacle	Cost

*The credit values are subject to change once vetted by the Technical Advisory Committee

Example Compliance Costs

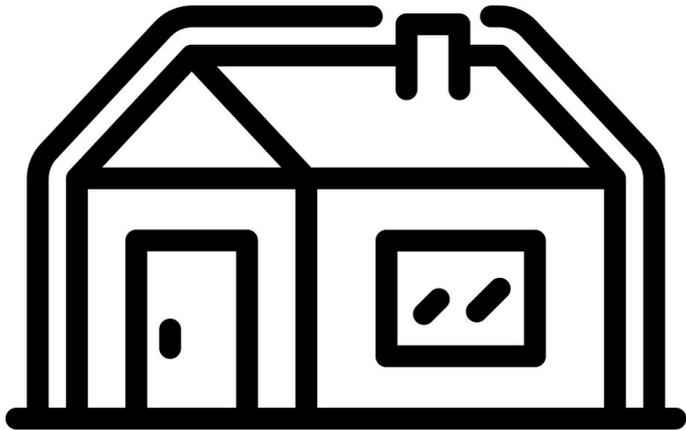


**Heat Pump
Water Heater**

Measure	Credits	Average Cost
Heat Pump Water Heater	6	\$6,800
Total	6	\$6,800*

***Up to \$2,000 Federal Tax Credit available**

Example Compliance Costs



Energy Efficiency & Envelope Improvements

Measure	Credits	Average Cost
Attic Insulation	2	\$2,500
Air Sealing	1	\$1,500
Duct Sealing/Replacement	3	\$4,600
Total	6	\$8,600*

***Up to \$1,200 Federal Tax Credit available**

Example Compliance Costs

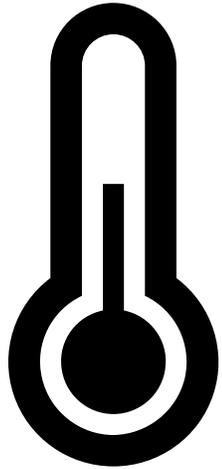


Electric Ready – Preparing for BAAQMD Compliance

Measure	Credits	Average Cost
Panel upsizing and replacement	4	\$4,300
240v outlet installation (oven, dryer, water heater, EV charger)	2	\$1,800
Total	6	\$6,100*

***Up to \$600 Federal Tax Credit available**
(in conjunction with another energy improvement)

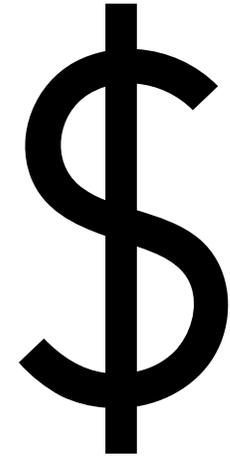
Benefits to Homeowners



**Improve Comfort
and Indoor Air
Quality**



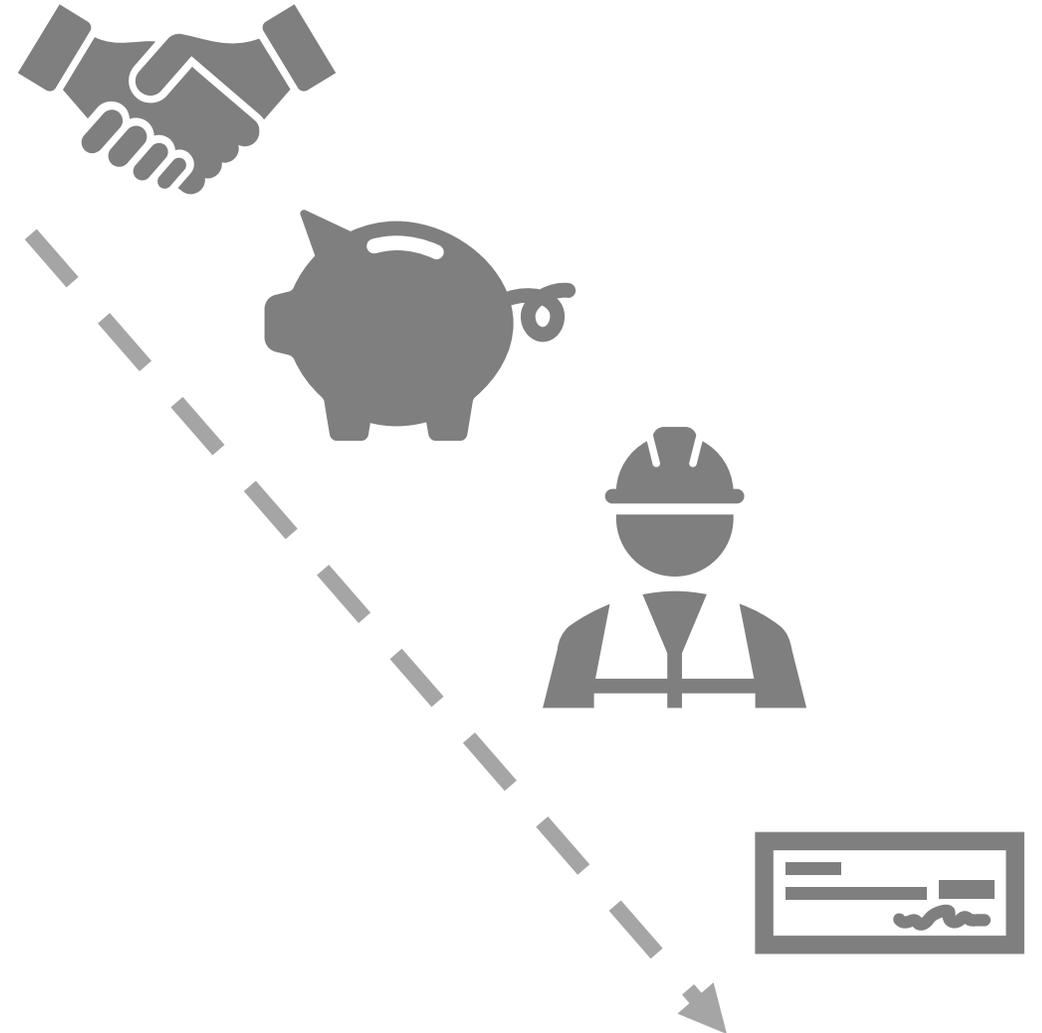
Increase Safety



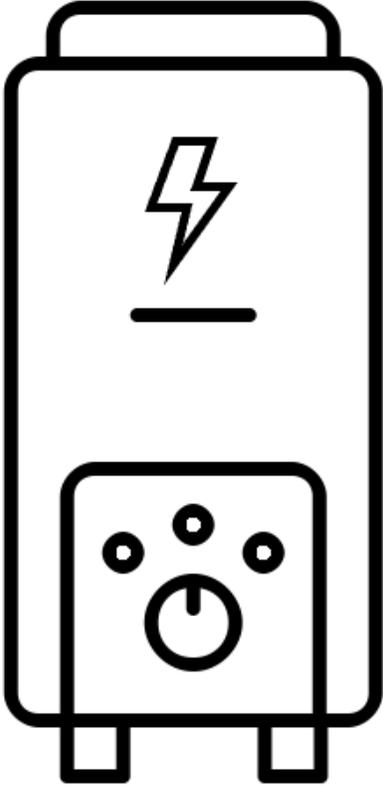
**Decrease utility
costs**

Utilize Escrow Deposit

- Deposit sent from escrow to City
- Buyer has up to 2 years to complete upgrades
- Refunded once property is compliant
- After 2-years the funds are forfeited to the City and could be used to help fund low-income electrification programs
- Operate similar to Private Sewer Lateral

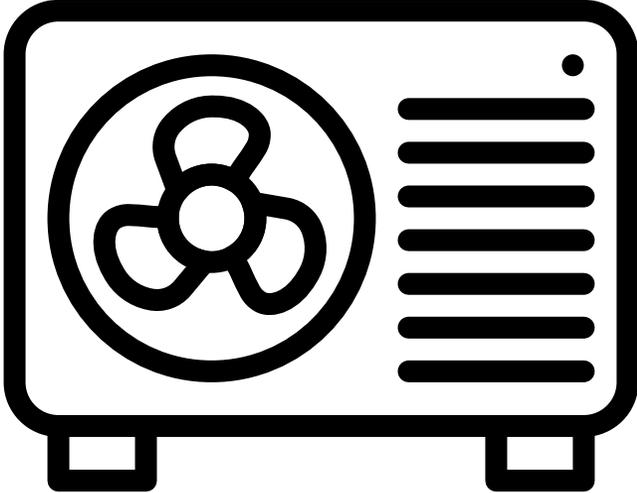


Exemption Pathway: Heat Pump System



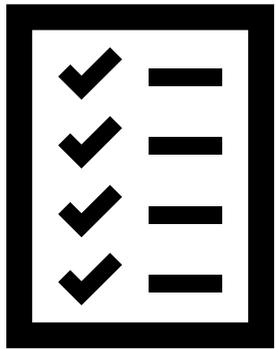
Water Heating

OR

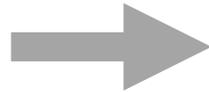


Space Heating/HVAC

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



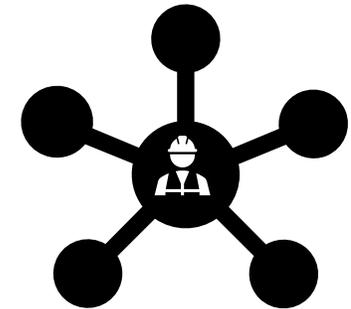
Seller completes assessment
(Home Energy Score)



Home listed for sale

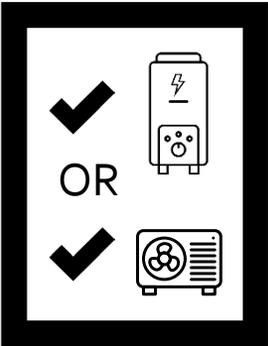


Funds to cover upgrades negotiated at closing through escrow deposit



Buyer completes upgrades to meet target credit requirement and utilizes escrow deposit

Example: Home *has* a heat pump system



Seller completes assessment
(Home Energy Score)

Home listed for
sale

Fully Compliant, no
upgrade needed

Phase-in by Building Type

- **Phase I: Single-family, ADUs, Duplexes, Condos within 1-4 unit buildings**
 - Expected implementation 2026
 - Likely to be owner-occupied
 - Bulk of sales

- **Phase II: 3-4 Units**
 - Expected implementation 2028
 - Likely to be rental properties
 - Complex/shared systems
 - Need to develop additional support systems



Berkeley Sales Analysis



Building Type	Avg. # of Buildings Sold per Year	% of Sales
Single Family	600	61%
Duplex	60	6%
Condominiums (within 2-4 Unit Buildings)	30	3%
3-4 Units	50	5%
Not subject buildings (Commercial, larger Multifamily, industrial)	260	25%

Proposed Exemptions/Support

- **BESO Exemptions:**
 - All-electric homes
 - Refinances, partial and inheritance transfers
 - Income qualified **First Time Home Buyers**
- **Support:**
 - **Offset BESO assessment costs** for income qualified sellers
 - Credit for **High Home Energy Score**
 - Option to obtain **early refund**
 - **Hardship** extensions and deferrals



Feedback from Additional Outreach

- **Timeline to complete upgrades**
 - *Concerns:* Some upgrades may take longer than 2 years
 - *Potential Update:* Allow 1-year with up to 2-year extension (up to 3 years total)
- **Condominiums**
 - *Concerns:* Technical feasibility, lowest entry for homeownership
 - *Potential Update:* Exclude condominiums
- **ADUs**
 - *Concerns:* Size limitations, additional costs to complete upgrades
 - *Potential Update:* Exclude ADUs
- **Escrow deposit**
 - *Concerns:* Requires buyers to have additional funds on hand for closing

Key Takeaways



- Only applies to buildings/units being sold
- Sellers are not required to complete upgrades
- Flexible upgrade options that buyers can choose from
- Upgrade Exemptions
 - Buildings with an electric water heater **OR** heat pump HVAC
 - Income qualified First Time Home Buyers
- Improves comfort, safety, and resilience

Thank You!



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