



Planning and Development Department  
Office of Energy and Sustainable Development

## Berkeley’s Building Emissions Saving Ordinance (BESO) Proposed Amendments

In December 2020, Berkeley City Council directed staff to recommend upgrade requirements for Berkeley’s Building Emission Saving Ordinance (BESO) for Council’s consideration. The following year, City Council adopted Berkeley’s Existing Building Electrification Strategy (BEBES), which identified a time of sale upgrade policy as one of the four primary policy strategies to equitably decarbonize Berkeley’s existing buildings. The proposed BESO amendments build on BESO’s current requirements of energy disclosure at the time of sale and are coupled with upgrade requirements. Prior to BESO, from 1987-2015, Berkeley required prescriptive energy efficiency measures at time of sale through the Residential Energy Conservation Ordinance (RECO). The proposed BESO amendments increase resilience and can improve indoor air quality, comfort, health, and safety. They can also help new Berkeley homeowners prepare for the Bay Area Quality Management District’s (BAAQMD) zero NOx emissions standard, which prohibits the sale and installation of NOx emitting gas-powered water heaters and furnaces, starting in 2027. Homeowners can install an electric heat pump early (which is a zero NOx appliance) or complete necessary electrical upgrades to ensure a seamless transition.

### Flexible Resilience Standard

The proposed amendments to BESO would **maintain the current assessment and disclosure requirements** and **establish a flexible resilience standard** that requires small residential building owners to complete upgrades from a **menu of options** when a property is sold. **Building owners can choose which upgrades to complete** that best fit with their preferences and building’s conditions. Each upgrade measure will have a **corresponding credit value based on its emissions reductions and/or costs**. A building owner would need to complete one or more measures to meet the required **number of credits within two years of the sale**. The cost of compliance will vary, as a homeowner can choose which upgrades they want to complete. The proposed amendments would require **6 credits for full compliance**. Here’s an initial list of measures and potential credits:

Measure	Credits*	Measure	Credits*
Heat Pump Water Heater	6 (Full)	Induction Range	2
Heat Pump HVAC	6 (Full)	Window Replacements	2
Knob + Tube Replacement	6 (Full)	Attic Insulation	2
Smart Panel	6 (Full)	Wall Insulation	2
Solar PV + Storage	6 (Full)	Floor Insulation	1-2
Panel Upgrade	4	Greywater System	1-2
Duct Sealing & Replacement	3	Air Sealing	1
Bi-Directional EV Charger	3	Prewiring & 240v Receptacles	½ per receptacle
EV Charger	2	*The credit values may be subject to change.	

Installing a heat pump water heater is the simplest and cheapest way to comply. Without rebates, the average purchase and installation cost of a heat pump water heater in Alameda County is ~\$6,800<sup>1</sup>. There are tax credits and rebates currently available to reduce this cost.

### **Escrow Deposit**

Similar to Berkeley's Private Sewer Lateral Program, a cash **deposit** to cover the cost of compliance will be held by the City through escrow and be **refunded in full once the upgrades are complete**. The deposit will be set at an amount equivalent to the minimum estimated cost of compliance.

### **Heat Pump Exemption Pathway**

**If a building has at least one electric heat pump system, then no additional upgrades are needed.** The proposed amendments include a heat pump exemption pathway that encourages homeowners to install a heat pump in advance of a home sale in order to meet full compliance. Currently, 5-7% of Berkeley homes would already qualify for this exemption, and more will become exempt as they transition to electric heat pumps.

### **Additional Exemptions and Support**

- **First-time Homebuyers** – First time homebuyers participating in an approved income-qualified first-time home buying program or down payment assistance program would be exempt from the flexible resilience standard.
- **Early Refund Exception** – Building owners may apply for an early refund of their deposited funds if they supply sufficient evidence, such as issued building permits and a contract for qualifying work, to show the upgrades will be completed.
- **High Home Energy Score Credit** – Buildings that have received a high Home Energy Score demonstrate a high level of energy efficiency and will receive bonus credits, reducing the number of upgrades needed to meet the standard.

### **Phase-In Timeline for Building Types:**

- **Phase I:** Single Family Homes, ADUs, Duplexes, Condominiums within 1-4 Unit buildings (approximately 700 homes/units each year) - expected implementation 2025
- **Phase II:** Triplexes and Fourplexes (approximately 50 buildings each year) - expected implementation 2027

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<sup>1</sup> Based on data through TECH Clean California: <https://techcleanca.com/>