

Building Emissions Saving Ordinance

Time of Listing Update

July 1st, 2021



Berkeley's Ambitious Climate Action Goals





BESO Evaluation & Amendment

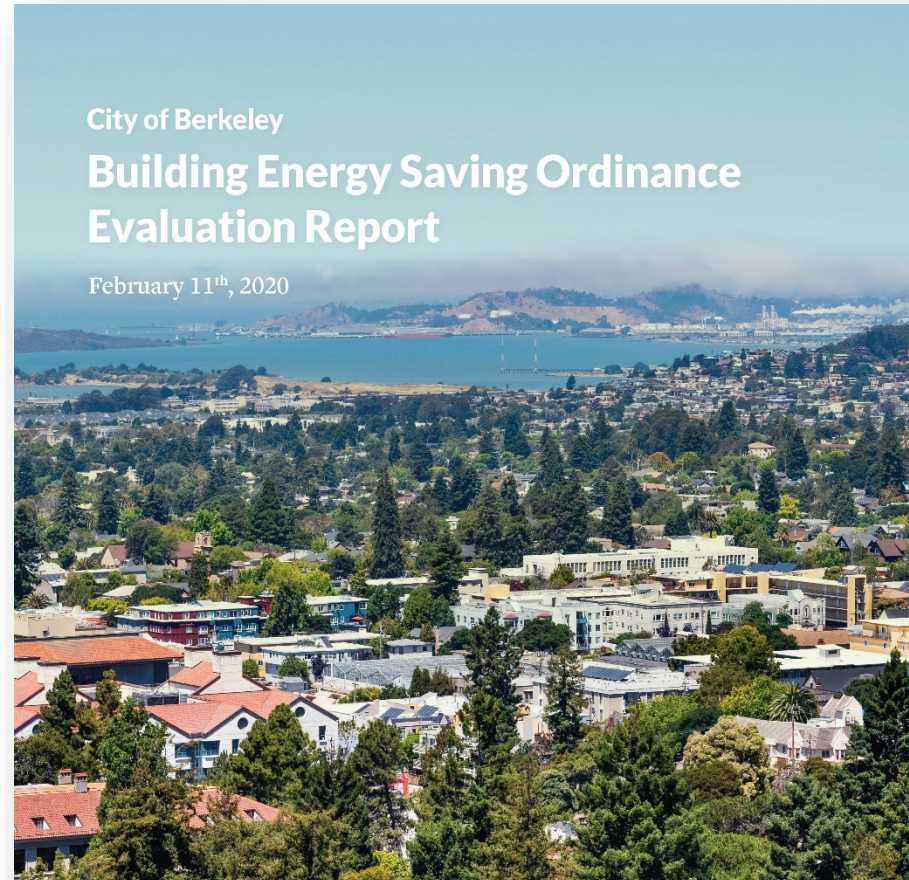
New BESO Portal

Time of Listing Update

New Deferral Process & Demo

FAQ

BESO Evaluation 2019



City of Berkeley

Building Energy Saving Ordinance Evaluation Report

February 11th, 2020

To: City of Berkeley

Billi Romain
Sustainability Manager

Marna Schwartz
Sustainability Coordinator

Ammon Reagan
Sustainability Program Coordinator

From:

Cassidce Kido
Project Manager

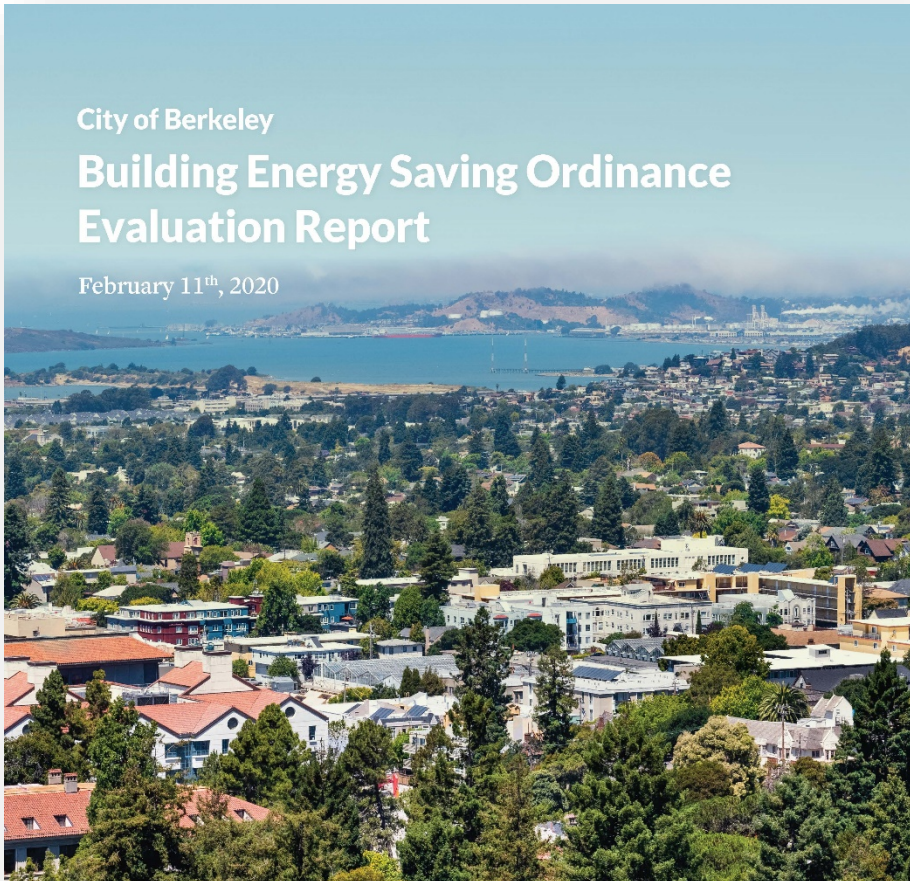
Alamelu Brooks
Senior Engineer

Nate Dewart
Senior Project Manager

Michael McGaraghan
Director



BESO Amendment 2020



City of Berkeley

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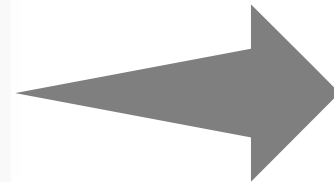
From:

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Project Manager

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Director



Chapter 19.81

Chapter 19.81

BUILDING EMISSIONS SAVING

Sections:

19.81.010	Purpose.
19.81.020	Applicability.
19.81.030	Definitions.
19.81.040	Large Buildings.
19.81.050	Medium and Small Buildings.
19.81.060	Single Family Buildings
19.81.070	Reserved.
19.81.080	Incentives.
19.81.090	Exceptions, Deferrals and Extensions.
19.81.100	Responsibilities.
19.81.110	Administration and Enforcement.
19.81.120	Fees.
19.81.130	Enforcement.
19.81.140	Violation-Penalty.
19.81.150	Reserved.
19.81.160	Severability.
19.81.170	Reserved.

Section 19.81.010 Purpose.

The purpose of this chapter is to reduce energy use, water consumption, and greenhouse gas emissions in existing buildings. These efficiency and emission reduction improvements will lower energy and water costs, transition buildings away from the use of fossil fuels, and increase comfort, safety and health for building occupants. The provisions of the ordinance will inform decision makers about energy and emissions performance and improvement opportunities. (Ord. 7740-NS § 1, 2020; Ord. 7397-NS § 5 (part), 2015)

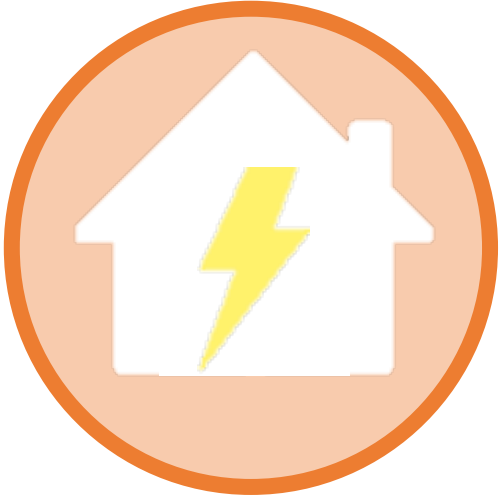
Section 19.81.020 Applicability.

The requirements of this Chapter shall apply to all buildings that are located in whole or in part within the City. However, it shall not apply to agencies that are not subject to City authority. (Ord. 7740-NS § 1, 2020; Ord. 7397-NS § 5 (part), 2015)

Section 19.81.030 Definitions.

- A. "Administrator" means the Director of Planning and Development or their designee.
- B. "Building Owner" means the owner of record of a building. In the case of a building held in cooperative or condominium form of ownership, the term "Building Owner" shall refer to the board of managers, board of directors, homeowners association, or other representative body of the jointly-owned building with authority to make decisions about building assessments and alterations.
- C. "Building Energy Score" means a measurement of how efficiently a building uses energy and/or water based on modeled simulations or actual energy use of the building over time compared to similar buildings, which can be in the form of a performance score, asset score or other comparable metric that meets standards and formats established by the Administrator.
- D. "Electrification" means the transition of building systems and appliances away from natural gas to electricity as the source of energy.
- E. "Energy Report" means a report submitted by a Registered Service Provider that identifies existing conditions, opportunities for water and energy efficiency in a building, opportunities to transition off fossil fuels, greenhouse gas emissions reductions, and available incentives and financing, as well as any applicable Building Energy Score, in accordance with the standards and formats established by the Administrator.
- F. "ENERGY STAR Performance Report" means an ENERGY STAR Portfolio Manager Benchmark report generated by the on-line tool developed by the U.S. Environmental Protection Agency that determines energy use intensity and an Energy Star Performance Score for a building based on utility usage data.

BESO Amendment Goals



Align BESO with
Emissions Reduction
& Resilience Goals



Streamline requirements
for small and medium
sized buildings



Increase upgrades and
utilization of
rebate/incentive
programs



Increase **transparency**
and **information sharing**
in the building sale
process

Updates to BESO – 2020 Amendment



- Updated **purpose** and **name** of BESO to the ***Building Emissions Saving Ordinance***
- Changed energy assessment to be **due at listing** for all buildings less than 25,000 sq ft
- Shortened deferral period to **6 months**
- **Disclose the fuel source** for all building systems and appliances at time of listing in addition to information on electrification requirements/incentives
- Develop **energy upgrade requirements** for Council consideration

Updated BESO Fees



BESO Fees	Previous	Starting July 1st
1-4 Units/Single Family Home Assessment Filing fee	\$79	\$79
Buildings 850-4,999 sqft Assessment Filing Fee	\$79	\$79
Buildings 5,000-24,999 sqft Assessment Filing Fee	\$152	\$152
BESO Deferral Fee	\$48	\$110
Administrative Late Fee	n/a	\$85

Building Emissions Savings Ordinance



Previous

New – Starting July 1st



Homes 1-4 Units

- Assessment at time of sale

- Electrification Assessment *and fuel source disclosure at time of listing*



Small Buildings
Up to 15k

- Assessment every 10 years

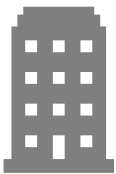
- Electrification Assessment *and fuel source disclosure at time of listing*



Medium Buildings
15k -25k

- Assessment every 10 years

- Electrification Assessment *and fuel source disclosure at time of listing*
- *Annual Benchmarking (starting 2022)*



Large Buildings
25k+

- Assessment every 5 years
- Annual Benchmarking

- Electrification Assessment every 5 years
- Annual Benchmarking



BESO Evaluation & Amendment

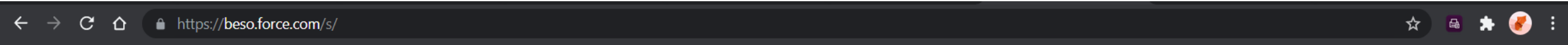
New BESO Portal

Time of Listing Update

New Deferral Process & Demo

FAQ


Online BESO Portal (<https://BESO.Force.com>)



CITY OF BERKELEY - BUILDING EMISSIONS SAVING ORDINANCE (BESO)

Address Selection

Search the address of your building to look up status or start a new application :

Previous

For questions, email beso@cityofberkeley.info or call 510-981-7465.

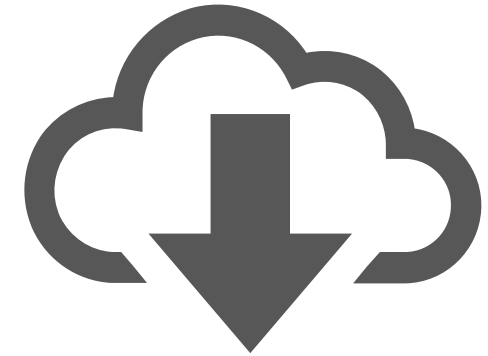
Online BESO Portal



**Look-up a building's
compliance status in
real time**



**Submit BESO
applications & pay fees
via Credit Card**



**Retrieve BESO
compliance forms &
download assessments**

Using the BESO Portal



BUILDING EMISSIONS SAVING ORDINANCE (BESO)

Address Selection

Search the address of your building to look up status or start a new application :

Property Information

Building Address
1003 TEST ST

Current Status
Compliant

Status Description
Energy Report on File

Full Address
1003 TEST AVE, BERKELEY, CA 94704

Energy Report Due

BESO Disclosure Link
[Click here to view BESO Assessment](#)

DO YOU WANT YOUR COMPLIANCE FORM SENT TO YOUR EMAIL ADDRESS? Yes No

Check Compliance Status

Download Assessment

Receive Compliance Form via Email

No Status Listed?



BUILDING EMISSIONS SAVING ORDINANCE (BESO)

Address Selection

Search the address of your building to look up status or start a new application :

No Status Listed?
Building needs to
comply with BESO &
is still eligible for
deferral



Property Information

Building Address	Full Address
1005 TEST ST	1005 TEST AVE, BERKELEY, CA 94704

[Continue](#)



BESO Evaluation & Amendment

New BESO Portal

Time of Listing Update

New Deferral Process & Demo

FAQ

Time of Listing Process Overview



- Starting **July 1st**, all buildings will need to complete a BESO compliance path **Prior to Listing**
- The BESO Assessment or Deferral must to be provided to all potential buyers in the disclosures
- Maintained the Deferral to Buyer option



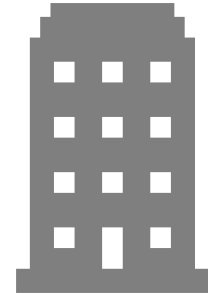
BESO Compliance Paths



**Option 1:
Complete BESO
Assessment**



**Option 2:
Deferral to
Buyer**



**Option 3:
Building or sale is
exempt**

Time of Listing Process – BESO Assessment



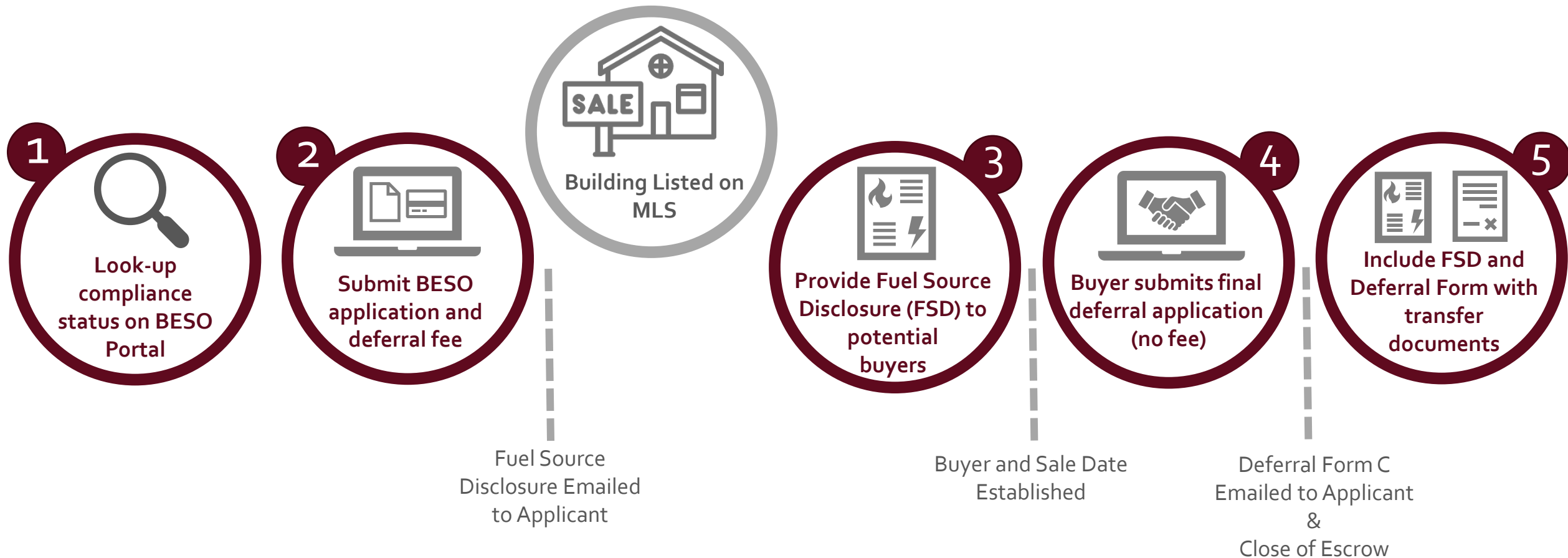
Option 1: Complete BESO Assessment



Time of Listing Process – Deferral to Buyer



Option 2: Request Deferral to Buyer

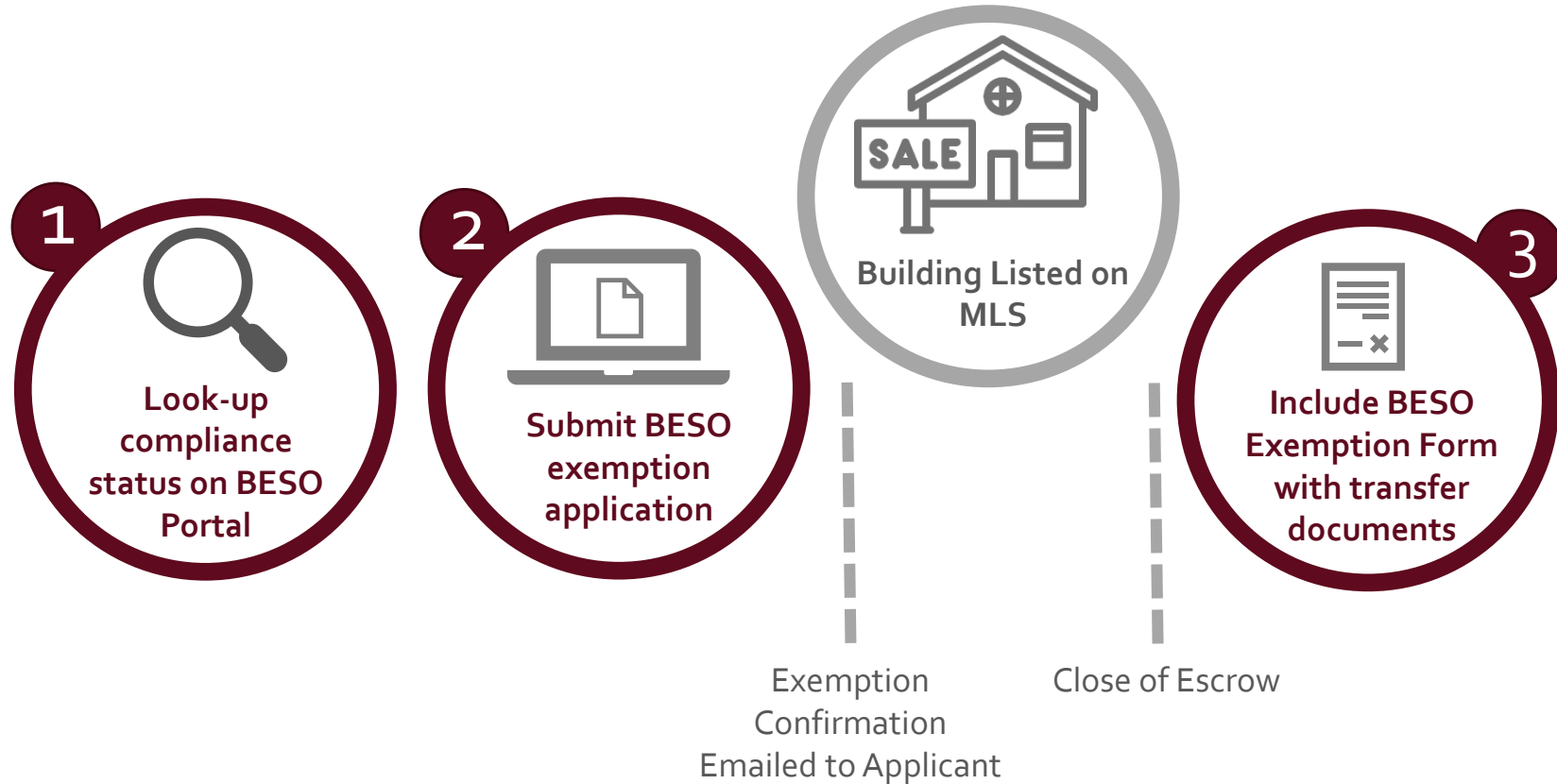


Time of Listing Process - Exemption



Option 3: Building or Sale is Exempt

- Building is <850 sqft
- Building is >25,000 sqft
- Sale of an Attached Condominium
- Industrial Building or Laboratory





BESO Evaluation & Amendment

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New Deferral to Buyer Process



Shortened deferral period. Deferrals extend assessment requirement for **6 months**



BESO fee study conducted and established a new **Deferral to Buyer fee of \$110**. Deferrals require additional staff time to process and follow-up with building owners.



In lieu of the assessment, a **Fuel Source Disclosure** must be provided to all potential buyers and contains:

- Current energy sources for all major systems/appliances
- An overview and benefits of electrification
- Berkeley's and California's electrification goals
- Available incentives/rebates

Go to the BESO Portal & start new application



BUILDING EMISSIONS SAVING ORDINANCE (BESO)

Address Selection

Search the address of your building to look up status or start a new application :

 1005 TEST AVE, BERKELEY, CA 94704 

▼ Property Information

Building Address

1005 TEST ST

Full Address

1005 TEST AVE, BERKELEY, CA 94704

Continue

Input contact & building information



CITY OF BERKELEY - BUILDING EMISSIONS SAVING ORDINANCE (BESO)

Applicant Info

Are you an Assessor? Yes No

Applicant Information

* First Name

* Last Name

* Contact Type

* Phone

* Email

Company

Title

Continue

CITY OF BERKELEY - BUILDING EMISSIONS SAVING ORDINANCE (BESO)

Building Information

APO Address Information

APN

00000000

Full Address

1003 TEST AVE, Berkeley Ca 94704

Application Information

Please fill out whole building information, not information pertaining to a single unit. If value unknown, please provide estimate or lookup information in the City's [Community GIS Portal](#) or [Berkeley's Taxable Square Footage Dataset](#).

* Number of Buildings on Property

Building Identifier

If submitting applications for more than one building with the exact same address, please include a building identifier here (i.e. Unit Number, "back unit", "ADU", "main house"). Please note you need to submit one application per building (each separate structure).

* BESO Property Type

--None--

* Building Square Footage

Select "Request Deferral to Buyer" App



BUILDING EMISSIONS SAVING ORDINANCE (BESO)

Application Information

Are any of the following applicable?

None of these Apply -SUBMIT BESO APPLICATION

Please select Application Type

Select Application type

--None--

Pay Filing Fee for Energy Report (Form A)

High Performance Exemption (Form A-HPE)

Request Deferral to Buyer

Other Deferral (Form D)

Input the energy sources for each system



Application Information

Please review the following building systems and appliances and indicate the fuel source. Most existing homes and building have natural gas systems and appliances. Berkeley is moving to all electric buildings due to health, safety, and climate benefits.

* Space Heating/Furnace

* Hot Water Heater

* Stove

* Oven

* Clothes Dryer

* Fireplace

Please list any other natural gas uses:

✓ --None--

Natural Gas (Fossil Fuel)

Electric

Not Applicable

Previous

Pay \$110 Deferral Fee



Powered by
ACI PAYMENTS, INC.

City of Berkeley, CA

Building Energy Savings Ordinance (BESO)

[PAYMENT INFORMATION](#) > [PAYER INFORMATION](#) > [REVIEW & SUBMIT](#) > [COMPLETE](#)

Building Address: 1005 TEST ST

Payment Amount

\$.

Payment Method

New Card

Card Number

Expiration Date

Security Code [What is this?](#)

<input type="text"/>	<input type="text" value="--"/> <input type="text" value="--"/>	<input type="text"/>
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[Cancel](#)

Please note you will not be charged until you Submit at end.

[Continue](#)

This page supports 128-bit SSL encryption as verified by DigiCert.

Fuel Source Disclosure Emailed to Applicant



BUILDING EMISSIONS SAVING ORDINANCE (BESO) FUEL SOURCE DISCLOSURE - RESIDENTIAL BUILDINGS (1-4 UNITS)

Property Address: 1002 TEST AVE, BERKELEY, CA 94704

System/Appliance Fuel Sources:

- Hot water heater: Natural Gas (Fossil Fuel)
- Furnace/Heating system: Natural Gas (Fossil Fuel)
- Cooktop/Stove: Natural Gas (Fossil Fuel)
- Oven: Natural Gas (Fossil Fuel)
- Clothes dryer: Natural Gas (Fossil Fuel)
- Fireplace: Natural Gas (Fossil Fuel)

Other gas systems/appliances:

Why does BESO require the disclosure of fuel sources?

All-electric buildings are **healthier, safer,** and more **comfortable** than buildings with natural gas appliances. As the amount of solar and wind power on the electricity grid increases every year, all-electric buildings also reduce the pollution that causes climate change. Methane, the key component of natural gas, is a harmful greenhouse gas that traps 80 times more heat than carbon dioxide. By transitioning buildings off natural gas to clean electricity, we can reduce methane leakages that occur all along the natural gas system – from extraction to pipeline to our homes and businesses. Berkeley currently requires new buildings to be all-electric and encourages existing buildings to electrify when appliances/systems need replacement or building renovations occur.

See **reverse** for more information on the **benefits of electrification.**

How do I electrify my home?

Every gas appliance can be replaced with a modern, energy efficient, all-electric alternative. Appliances that run on all-electric technologies such as heat pumps and induction are cleaner, safer, and higher-performing than their natural gas counterparts. Unlike traditional natural gas or electric resistance which work by generating heat, heat pumps simply move heat from one area to another. This allows them to **use energy 3-5x more efficiently** than their natural gas counterparts, saving you money, improving indoor air quality, and reducing your carbon footprint.



Hot Water Heating

Switch out your natural gas or electric resistance hot water heater for a **Heat Pump Water Heater (HPWH)** to save energy and decrease emissions. (Up to \$1,000 BayREN)



Furnace/Heating System

Air Source Heat Pumps can provide efficient heating and cooling for your home for reliable year-round comfort and energy savings. (Up to \$1,000 BayREN incentive)



Cooktop/Stove/Oven

Upgrade your gas stove to an **Induction Cooktop.** Induction cooking uses electromagnetism to heat pots and pans, resulting in faster cook times, less wasted heat, and a safer healthier kitchen. (\$300 BayREN incentive)



Clothes Dryer

A **Heat Pump Dryer** can reduce energy use by at least 28% compared to standard dryers and is gentler on your clothes. (\$300 BayREN incentive)

For additional information on BESO visit www.cityofberkeley.info/BESO/

BESO Fuel Source Disclosure - 1002 TEST ST

Building Electrification Requirements & Goals:

According to the California Air Resources Board, *"Significant GHG emission reductions and improved air quality can be achieved through building decarbonization (i.e. electrification) without compromising functionality or comfort."*

- **State of California Executive Order B-55-18:** Achieve carbon neutrality as soon as possible, and no later than 2045, and maintain net negative emissions thereafter.
- **Fossil Fuel Free Berkeley:** In June 2018 the Berkeley City Council established the goal of becoming a Fossil Fuel Free City, supporting the transition to all-electric buildings.

Resources, Incentives, & Financing:

- Contact a [BayREN Home+ Energy Advisor](#) to get help finding qualified contractors, navigating rebates, learning about financing options, or to get free advice at any stage of your electrification project.
- Visit the [Switch Is On](#) to learn more about how and why you should electrify.
- Find affordable financing at [GoGreen Financing](#), administered by the State of California.
- [BayREN](#) offers incentives for installing highly efficient electric space heating, water heating, clothes drying and induction cooking appliances. These can be stacked with [utility rebates](#) and [federal tax credits](#) to maximize savings.

Electrification Benefits:



Health

Burning gas in household appliances produces harmful indoor air pollution that can increase the risk of, or exacerbate, asthma and other respiratory problems. Without proper ventilation, emissions from gas appliances – such as carbon monoxide – can even be deadly.



Comfort

Air source heat pumps provide both heating and cooling, offering year-round comfort during warm summer months and during the cool winter.



Safety

Natural gas is a hazardous and combustible material. Major gas leaks and explosions, such as those at Aliso Canyon and San Bruno, can be devastating and natural gas use in homes is responsible for almost half of residential house fires.



Equity

All-electric new construction can reduce housing costs. For disadvantaged populations who spend a disproportionate amount of their income on energy, and are more likely to suffer from asthma due to poor indoor air quality, all-electric buildings are an opportunity to deliver social benefits.



Cost Savings

All-electric new buildings are less expensive to build than mixed fuel buildings as they do not require the installation of gas infrastructure such as pipes and venting. When paired with rooftop solar, new and existing all-electric buildings also benefit from reduced operating costs. In the future, gas prices are expected to rise, which will make all-electric buildings less costly to power than natural gas powered buildings.



Resilience

Natural gas lines are a dangerous risk during wildfires or earthquakes. Compared to electricity, the gas system also typically takes much longer to be restored after a disaster-related outage, inspection or repair. When paired with [solar panels and backup batteries](#), electric buildings can have power during grid outages.



Smaller Carbon Footprint

In California, buildings are the second largest source of greenhouse gas emissions. As electricity from the grid gets cleaner (moving to 100% carbon-free by 2045), emissions from all-electric buildings will eventually disappear. All-electric buildings that have rooftop solar or purchase 100% renewable electricity are zero-emission.

For additional information on BESO visit www.cityofberkeley.info/BESO/

Buyer needs to submit their application



BUILDING EMISSIONS SAVING ORDINANCE (BESO)

Address Selection

Search the address of your building to look up status or start a new application :

Property Information

Building Address

1002 TEST ST

Full Address

1002 TEST AVE, BERKELEY, CA 94704

Current Status

Pending - Buyer's application needed

Energy Report Due

Status Description

Deferral to Buyer Requested

BESO Disclosure Link

[Click here to view Fuel Source Disclosure](#)

Download
copy of FSD



Continue

Select "Deferral to Buyer (Form C)"



BUILDING EMISSIONS SAVING ORDINANCE (BESO)

Application Information

Are any of the following applicable?

None of these Apply -SUBMIT BESO APPLICATION

Please select Application Type

Select Application type

--None--

Deferral to Buyer (Form C)

Input sale date and submit application



BUILDING EMISSIONS SAVING ORDINANCE (BESO)

Application Information

Are any of the following applicable?

None of these Apply -SUBMIT BESO APPLICATION

Please select Application Type

Deferral to Buyer (Form C)

A deferral to buyer has been requested for this property, transferring responsibility for BESO compliance from seller to buyer. The Time of Sale Deferral requires the buyer to complete an energy assessment within 6 months of the sale date. A Deferral to Buyer (Form C) will be emailed to the applicant upon submission of this application. Submit the Form C Deferral email confirmation to the title company at closing

Application Information

* Anticipated Date of Sale

6/15/2021




Finish

BESO Deferral Form C Emailed to Buyer



BESO Help Desk Mon, Jun 14, 10:12 PM (11 hours ago) ☆ ↶ ⋮
to mhilloakland@gmail.com ▾

 City of Berkeley
Office of Energy and Sustainable Development
Building Energy Saving Ordinance (BESO)
Ordinance No. 7,397 – N.S. § 19.81

Hello Martha Hill,

This email confirms that Building Energy Saving Ordinance (BESO) compliance has been deferred to Buyer for 12 months for the property at the above address. This notification services as evidence of deferred compliance to be included with transfer documents at close of escrow.

Form C Deferral to Buyer

Building Address	:	1428 SIXTY-SEVENTH ST
BESO Property Type	:	House (1-4 Units)
Number of Residential Units	:	3
High Performance Qualification	:	
Next Energy Report Due	:	7/16/2022
Current Status as of 6/14/2021	:	Deferred to Buyer (Form C)

Instructions to complete Energy Assessment:

To complete the required energy assessment, please schedule an assessment with one of the Registered Energy Assessors listed for the appropriate building type ([1-4 unit homes or Commercial, Multifamily \(5+ units\) or Mixed Use Buildings](#)). At such time, the building owner must also complete the online [BESO Application](#) and pay the appropriate filing fee for report submission. If you choose to participate in an [Energy Efficiency Upgrade Program](#), your building will be considered High Performance and will be exempt from the current assessment requirement. For single family homes, please call a Home Upgrade Advisor at (866) 878-6008 for free expert advice on efficiency incentives and financing.

Best,
BESO Team
City of Berkeley
1947 Center, 1st Floor, Berkeley CA 94704
BESO@CityofBerkeley.info
www.cityofberkeley.info/BESO/

A vertical white line runs down the left side of the slide, with five white circles spaced evenly along it. The top four circles are hollow, while the bottom one is solid. Each circle is positioned to the left of a corresponding text item.

BESO Evaluation & Amendment

New BESO Portal

Time of Listing Update

New Deferral Process & Demo

FAQ

Properties Listed Before July 1st



- The old Time of Sale process and fees apply
 - Buildings will need to complete BESO Assessment or apply for the deferral to buyer prior to sale.
- Applying for a Time of Sale Deferral before July 1st
 - Submit the BESO Deferral Application \$48 filing fee through the Online BESO Portal
- Applying for a Time of Sale Deferral after July 1st
 - Mail a paper application with a \$48 check to the BESO office and provide documentation showing that the building was listed prior to July 1st.
 - The BESO Portal will be switching to the new Time of Listing Deferral Process on July 1st and will no longer allow the \$48 deferral fee.

Time of Listing FAQ



- **What is considered *Listing a Building*?**
 - Listing is defined as any notice for sale by any advertisement, internet posting (i.e. Zillow), publicly displayed sign, or through a private database (i.e. Multiple Listing Services).
- **What if a property is listed without a BESO Assessment or Deferral?**
 - There will be a two month grace period for the new time of listing process.
 - Starting Sept. 1st an administrative late fee \$85 will be imposed. For example, if a title company sends in the BESO Deferral Fee and Application it would be \$195 (\$110 deferral fee + \$85 late fee)
- **How do I disclose the BESO Assessment or Fuel Source Disclosure (FSD) to Potential Buyers?**
 - The BESO Assessment or FSD need to be included in the disclosure documents provided to potential buyers.

Time of Listing FAQ



- **How long does it take to schedule a BESO assessment?**
 - We maintain a list of Registered BESO assessors that can conduct assessments, typically within a few weeks.
- **Does BESO require the recommendations to be implemented?**
 - No, the assessment is a tool for building owners on how to best upgrade their building and does not require the recommendations to be implemented.
- **How long are BESO Assessments valid for?**
 - BESO Assessments expire after 5 years as the recommendations and score are no longer accurate.
 - If the building is sold again after the assessment has expired the building will need to comply with BESO before listing.

BESO Portal FAQ



- **What payment methods does the BESO Portal take?**
 - Only Visa and Mastercard. Amex, Discover and E-Checks are not accepted.
- **Where can I find more information on a specific BESO Status?**
 - <https://www.cityofberkeley.info/besosale/> has a list of all statuses and their description
- **What if the address isn't listed?**
 - Confirm that the building is in Berkeley and email the BESO helpdesk.
 - Some buildings have a Berkeley address but pay property taxes to the City of Oakland (common in the Claremont Hills).
- **How long does it take for applications to be approved?**
 - Applications are usually approved with-in 24 hours
 - The final deferral to buyer application, to obtain BESO Deferral Form C, is automatically approved.

Questions?



BESO HelpDesk

BESO@CityofBerkeley.info

