Upgrades at Sale: Building Resilience, Cutting Emissions

Berkeley's Time of Sale Upgrade Requirements

October 2026



Berkeley's History with Energy Efficiency

1987 — **RECO** — Homes required to complete 11 minimal energy efficiency measures at sale, transfer, or major renovation

1993 — **CECO** — Commercial buildings required to meet minimal energy efficiency measures at sale or transfer

2009 — **Berkeley Climate Action Plan** —  **Buildings**

Reduce Emissions 30% by 2020
80% by 2050

2015 — **B**uilding **E**missions **S**aving **O**rdinance

Original BESO Requirements (2015-2025)

- Required an **energy/electrification assessment** prior to listing a building for sale
  - Home Energy Score for Single family homes
  - Provides information to potential buyers

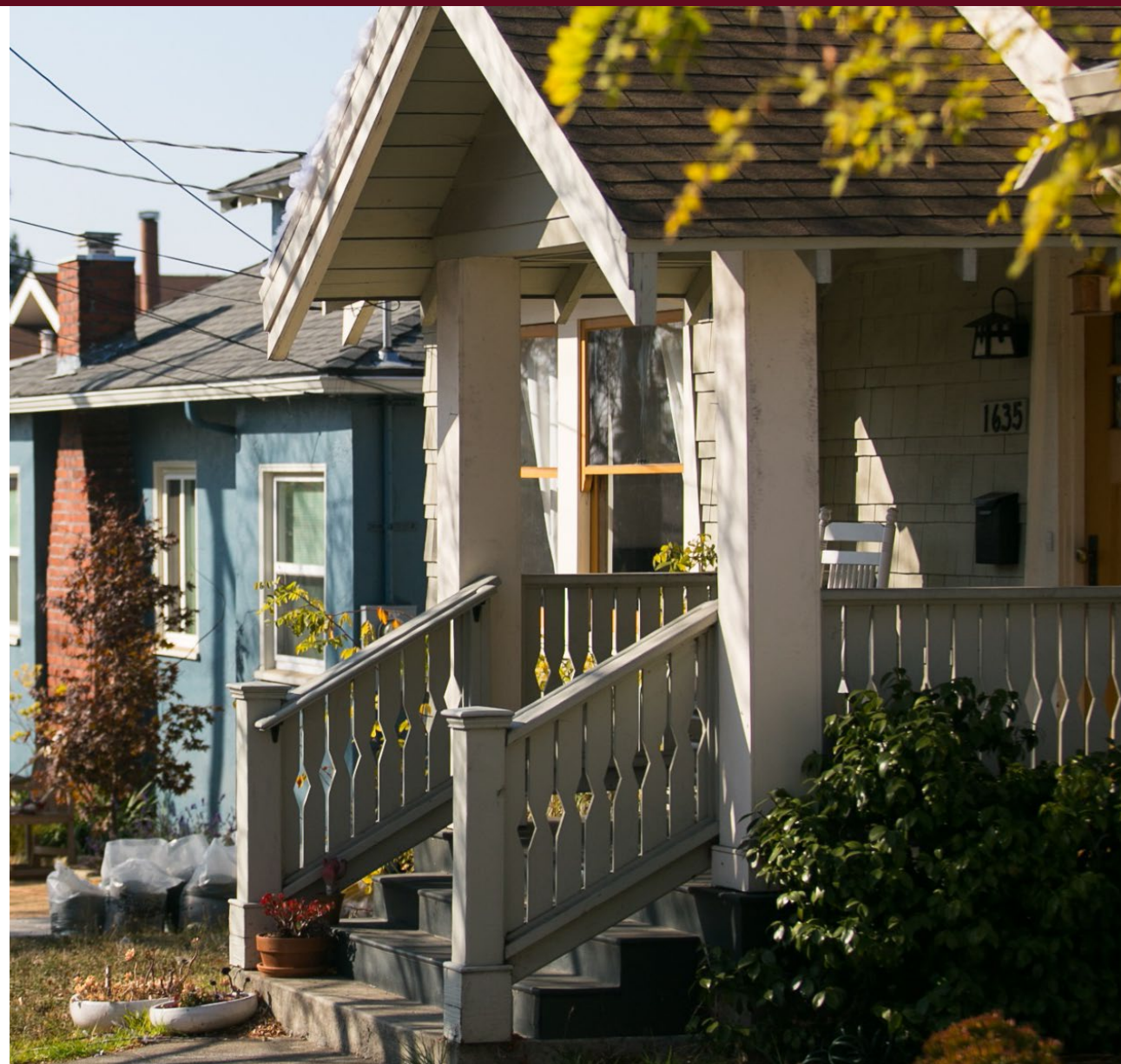
- Referred building owners into local incentive programs to complete voluntary upgrades



BESO Compliance Pre-2026

- **From 2015-2025:**
  - ~4,500 HES assessments
  - ~500 HES per year
  - 4.5 average score

- **Compliance:**
  - ~90% compliance rate



Home Energy Score Assessment

Home Energy Score
Energy Savings Pathway Report

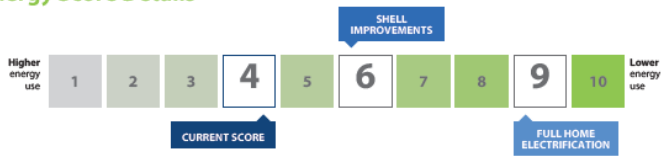
BAYREN

U.S. DEPARTMENT OF ENERGY
Home Energy Score™

LOCATION: 1837 Berryman St, Berkeley, CA, 94703
BEDROOMS: 3 **HEATED FLOOR AREA:** 1,672 sq.ft.
COMPANY: DMP East Bay Inspections LLC
EMAIL: dave@dmpinspections.com
YEAR BUILT: 1909
ASSESSMENT DATE: 02/19/2025
ASSESSOR: Dave Pagano
PHONE: (925) 222-2023

Current Score	Recommended Shell Improvements[1]	Full Home Electrification[2]
4	6	9
OUT OF 10	OUT OF 10	OUT OF 10
Estimate of Current Yearly Energy Costs[3]	Estimate of Energy Costs with Shell Improvements	Estimate of Energy Costs with Electrification
$3,899	$3,561	$4,067

Home Energy Score Details



Official Assessment: ID# 572560 Average U.S. Home's Score = 5

The U.S. Department of Energy's Home Energy Score assesses the energy efficiency of a home based on its structure and heating, cooling and hot water systems. Learn more at HomeEnergyScore.gov.

Current Estimated Energy Use By Fuel Type[3]

Fuel Type	Estimated Current Use	After Shell Improvements	After Full Electrification
Electric: 6,399 kWh/yr ($0.43/kWh)	$2,752	$2,713	$4,067
Natural Gas: 484 therms/yr ($2.37/therm)	$1,147	$848	$0
Other:	$0	$0	$0
Renewable Generation: ($0.43/kWh)	N/A	N/A	N/A
TOTAL ESTIMATED YEARLY ENERGY COSTS	$3,899	$3,561	$4,067

This Home's Carbon Footprint[4]

Carbon footprint by fuel type (measured in Metric tons of CO2): Electric: 0.1 Natural Gas: 2.6



Learn how to improve this score and electrify your home to use less energy on the next page.

Tackle energy waste today!

- ☑ Get your home energy assessment. Done!
- ☐ Choose energy improvements from the list of recommendations below.
- ☐ Select a contractor (or two, for comparison) and obtain bids.
- ☐ Perform upgrades and enjoy a more comfortable and energy efficient home.

Current Score
4
OUT OF 10

For More Information Visit the Websites Below

Find Incentives	Find A Contractor	US Rebates & Tax Credits	AVA
SCAN ME	SCAN ME	SCAN ME	SCAN ME
bayren.org	switchison.org	energy.gov/save	avaenergy.org

Energy Improvements Customized for Your Home

SHELL IMPROVEMENTS[1]

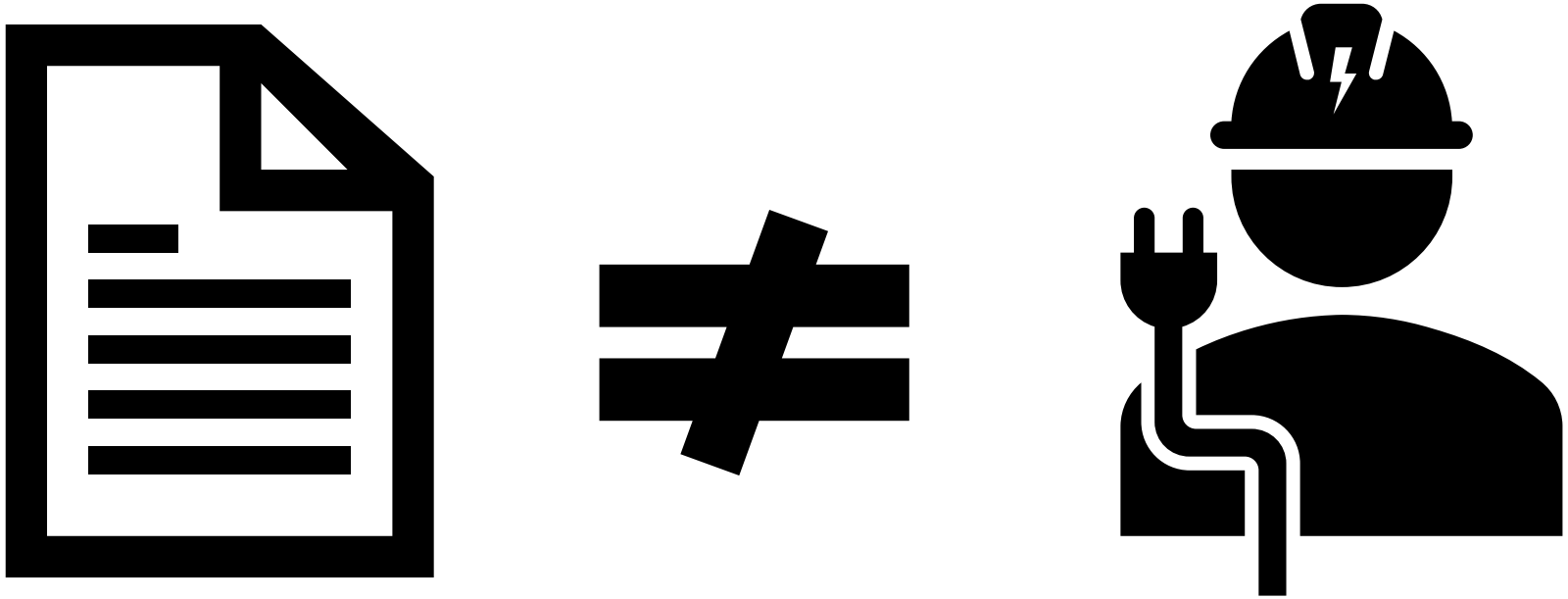
FEATURE	TODAY'S CONDITION	RECOMMENDED IMPROVEMENTS
Envelope/Air sealing	Not professionally air sealed	Professionally air seal
Attic insulation	Ceiling insulated to R-9	Insulate to R-38 or higher
Duct insulation	Insulated	No recommendation
Duct sealing	Un-sealed	Reduce leakage to a maximum of 5% of total airflow
Wall insulation	Insulated to R-0	Insulate to R-13 or higher
Floor insulation	Insulated to R-0	Insulate to R-30 or fill floor cavity
Knee Wall insulation	Knee wall insulated to R-11	No recommendation
Skylights	Double-pane	No recommendation
Windows	Multiple types	Upgrade to double-pane or other high-efficiency windows

FULL HOME ELECTRIFICATION IMPROVEMENTS[2]

FEATURE	TODAY'S CONDITION	RECOMMENDED IMPROVEMENTS
Appliances: Heat Pump Dryer	Gas Dryer	Heat pump clothes dryer 4.5 Combined Energy Factor (CEF) replacing a natural gas clothes dryer
Appliances: Induction Cooking	Gas Range/Cooktop	Induction electric range/cooktop replacing a natural gas range/cooktop
Electrical Panel	100Amps	Discuss potential need for a panel upgrade with an electrician.
Air Conditioner	None installed	Upgrade to Electric Heat Pump, minimum 15 SEER
Heating equipment	Natural gas furnace 80% AFUE	Upgrade to Electric Heat Pump, minimum 8.6 HSPF
Solar PV	None installed	Consider solar PV
Water Heater	Natural gas EF 0.67	Replace with heat pump hot water heater

Next page provides additional notes from your Home Energy Score Assessor

Lessons Learned



New BESO Requirements (2026+)

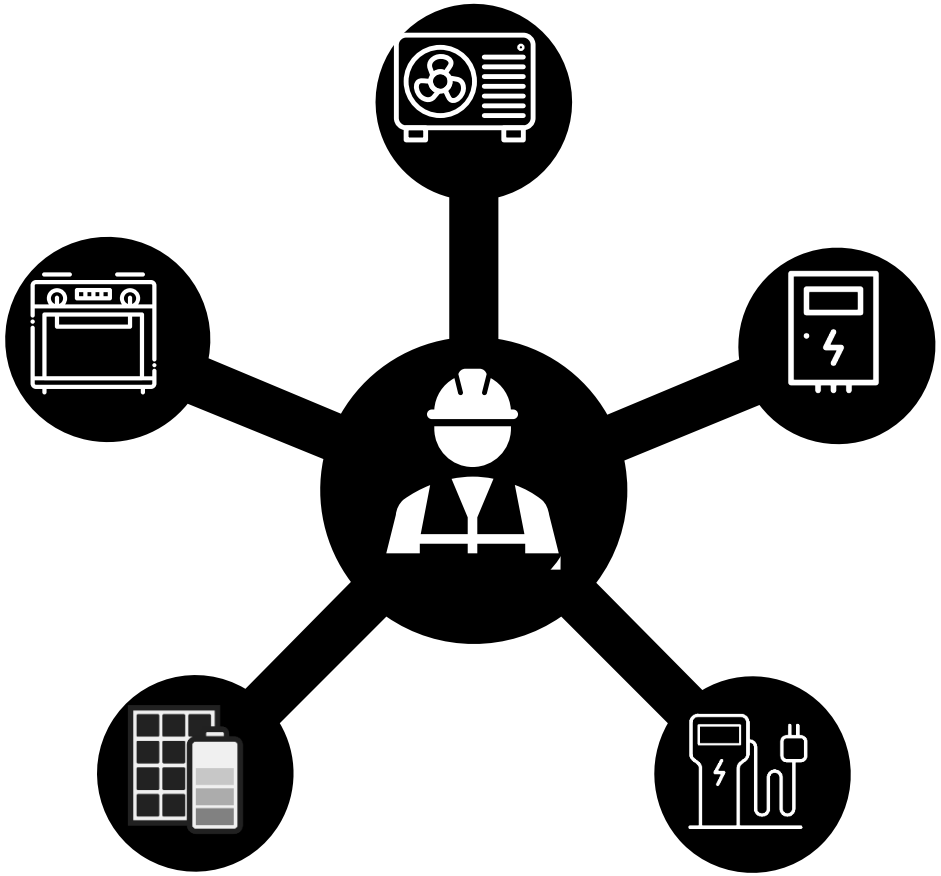
- **Home Energy Score Assessment:**
  - Seller completes the HES assessment prior to listing

- **Resilience Upgrades:**
  - Seller completes upgrades within 5 years prior to sale **OR**
  - Buyer completes the upgrade(s) within 2 years of the sale if compliance has not been met



Flexible Resilience Upgrade Requirement

- **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



Upgrade Measures & Credits

Credits Needed: 6

Measure	Credits*
Heat Pump Water Heater	6
Heat Pump HVAC	6
Knob + Tube Replacement	6
Smart Service Panel	6
Electrical Service Panel Upgrade	6
Solar PV	3
Battery Energy Storage System	3
EV Charger	2
Electric or Induction Range	2
Greywater System	1

Measure	Credits*
Window Replacements	2 or 4
Wall Insulation	2 or 4
Attic Insulation	2
High Home Energy Score	2
HVAC Duct Improvements	2
Whole-house Fan	2
Electric Clothes Dryer	1 or 2
Prewiring & 240v receptacles	1 or 2
Floor/Crawlspace Insulation	1
Air Sealing	1

Example Compliance Paths

6 credits



Heat Pump Hot Water Heater

= 6 credits

6 credits



Electrical service panel upgrade

2 credits



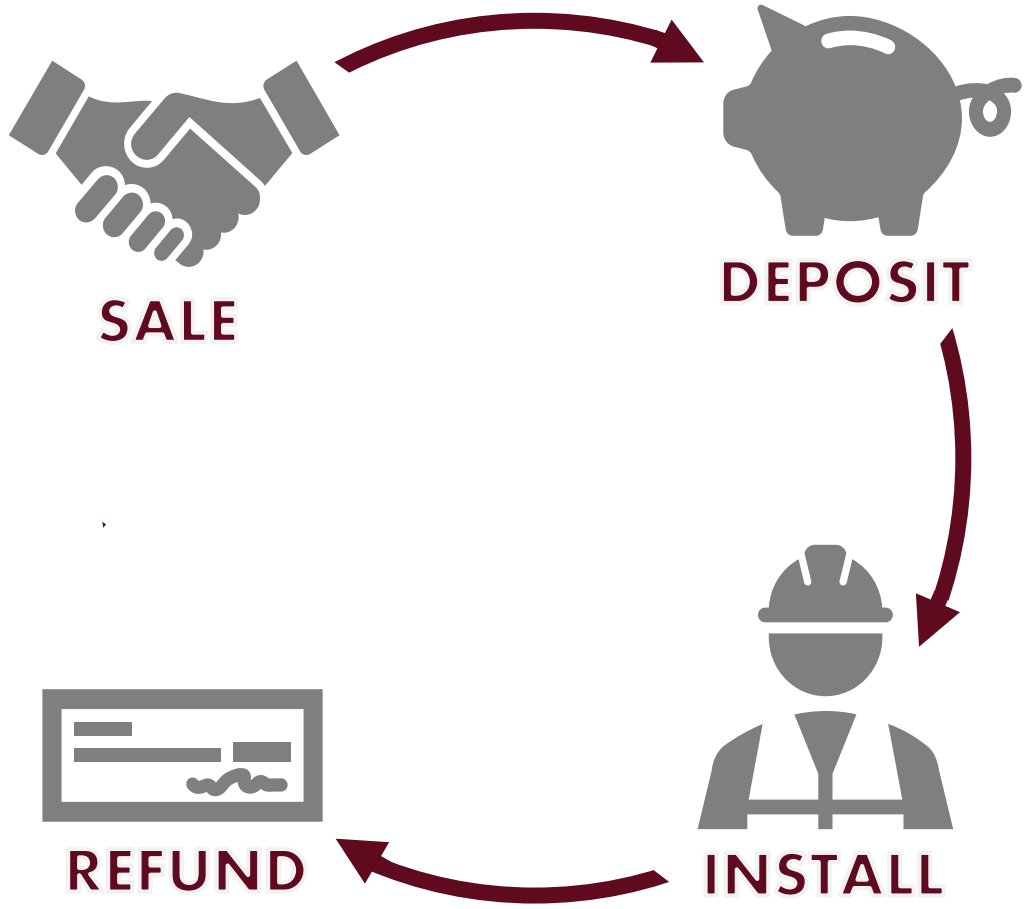
4 credits



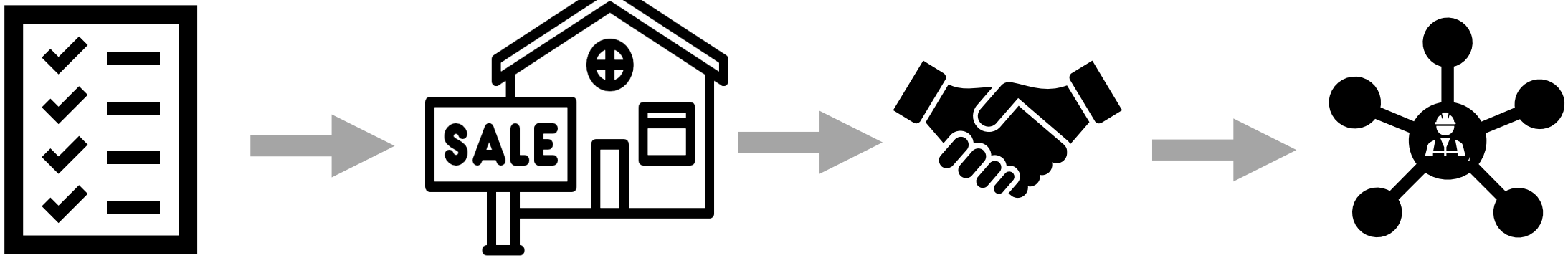
Attic insulation & window replacement

Utilizing an Escrow Deposit

- $5,000 deposit sent from escrow to City split between buyer and seller
- Buyer has up to 2 years to complete upgrades, additional extensions may be granted
- Refunded once property is compliant
  - Ability to refund early if work is underway
- Forfeited escrow deposits will be used for low-income electrification programs



Example: Upgrades Deferred to Buyer



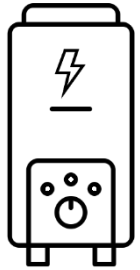
Seller completes assessment (Home Energy Score)

Home listed for sale

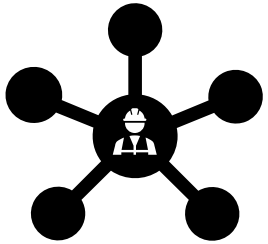
Funds to cover upgrades sent at closing through escrow deposit

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

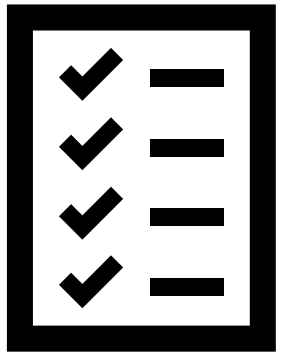
Example: Seller completed upgrades or has a heat pump



Home has a heat pump



Seller completed upgrades within 5 yrs prior to sale



Seller completes assessment (Home Energy Score)



Home listed for sale



Fully Compliant, no upgrade needed

Phase-in by Building Type

- **Phase I (January 1, 2026):**
  - Single-family & Duplexes
- **Phase II (January 1, 2028):**
  - 3-4 Unit Residential Buildings





Berkeley Sales Analysis

January - June 2026

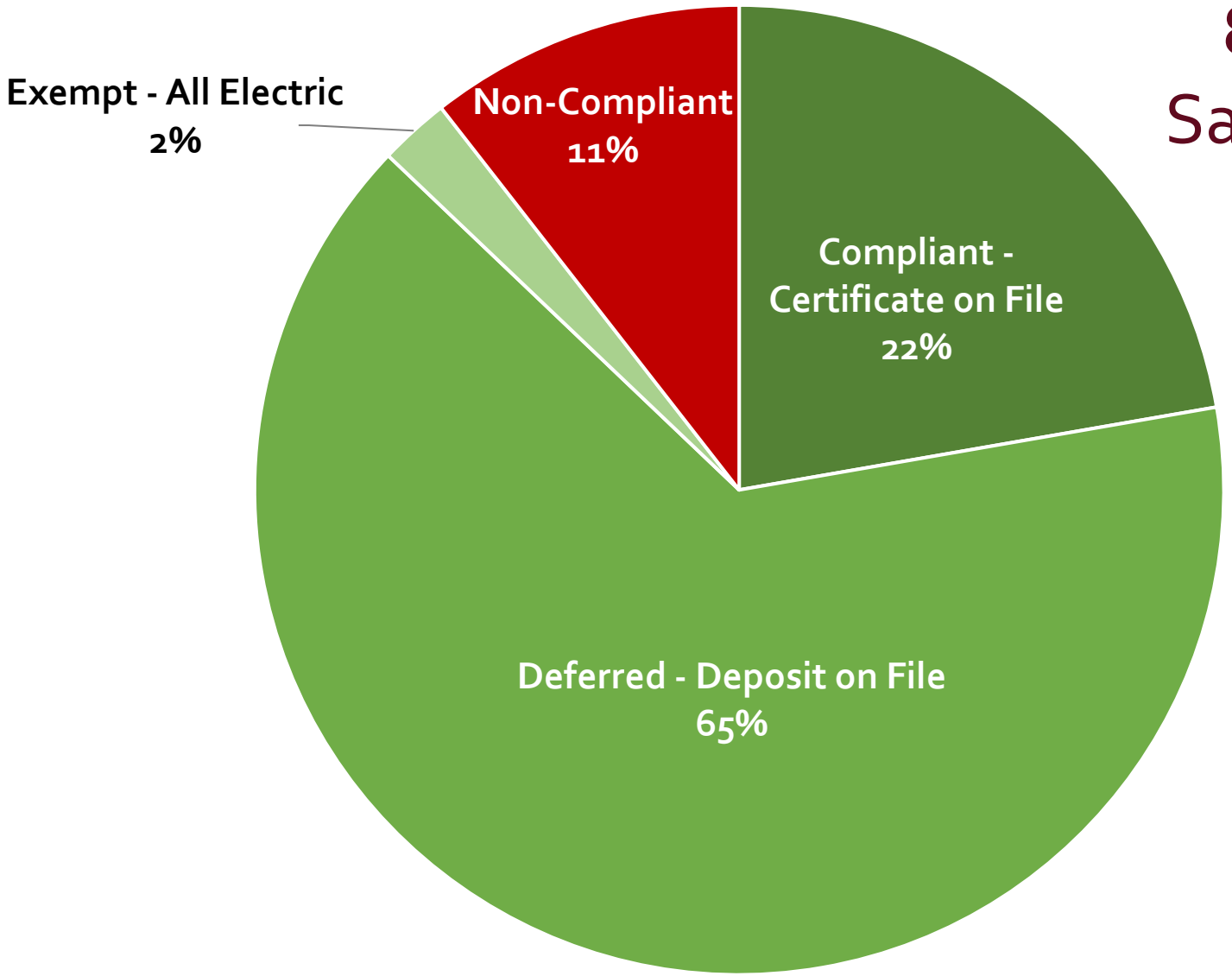
Berkeley 2026 Sales (January – June)

Building Type	# of Sales	% of Sales
Single Family/Duplex	**304**	**65%**
Condominiums	73	16%
Multifamily 3+ Units	36	8%
Commercial/Industrial	40	9%
Other (Refinances/Vacant lots)	17	4%
Total	470	100%

Breakdown of Covered Sales – SFH/Duplexes

Sale Type	# of Sales	% of Sales
Subject to New Requirements	**257**	**85%**
Exempt from Upgrade Requirement - Listed in 2025	30	10%
Exempt Sale (Family/Partial Transfer, Probate, Demolition)	17	5%
Total	304	100%

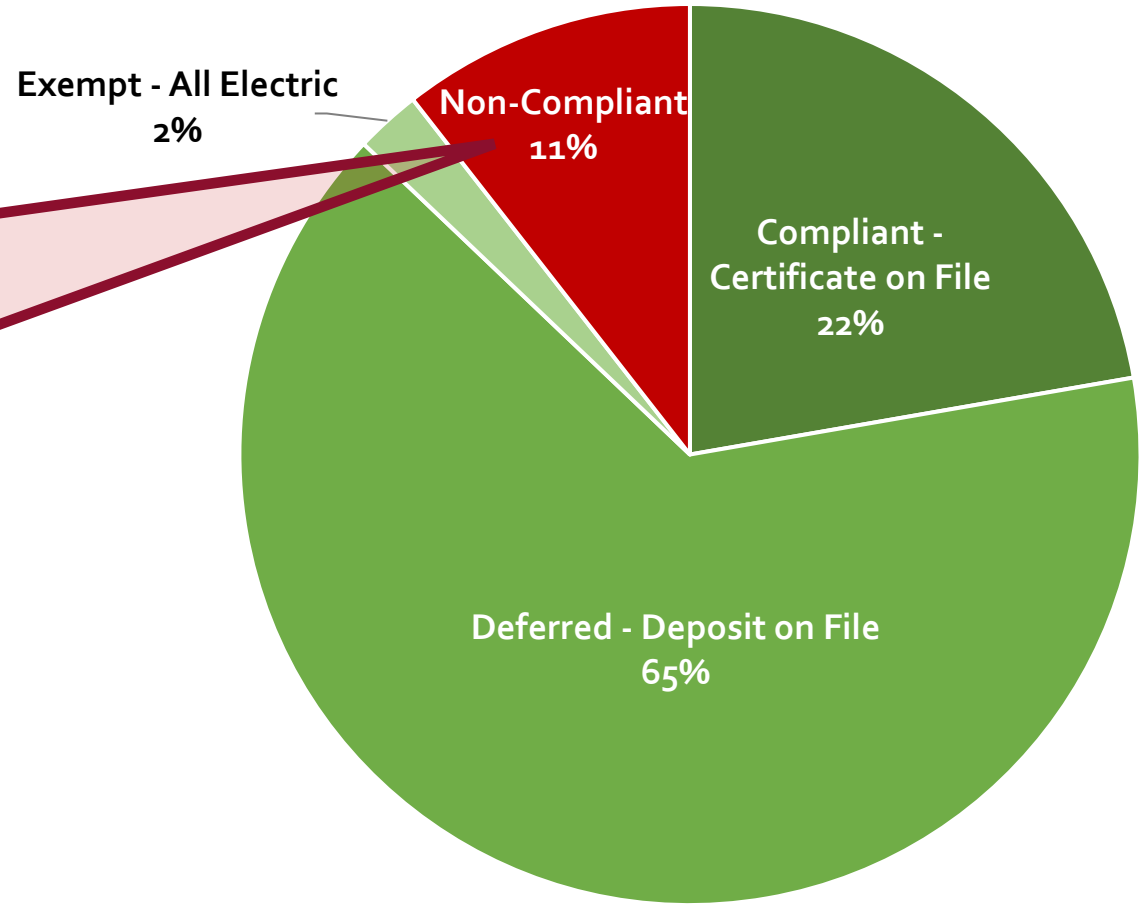
Resilience Upgrade Compliance (January – June)



89% of Covered Sales are Compliant

Resilience Upgrade Compliance (January – June)

- Half of these had an active compliance document from a recent sale.
- Several sales used title companies and/or realtors that weren't local and may be unaware of BESO.



Progress to Date

January, 1 – October, 22 2026

Progress to Date (Upgrades Deferred Post Sale)

313

Upgrade Deposits Received

These new homeowners have access to
$5,000 to complete resilience upgrades

Progress to Date (Refunds Issued)

16

Deposits Refunded

Buyer's that completed upgrades and received their $5,000 deposit back

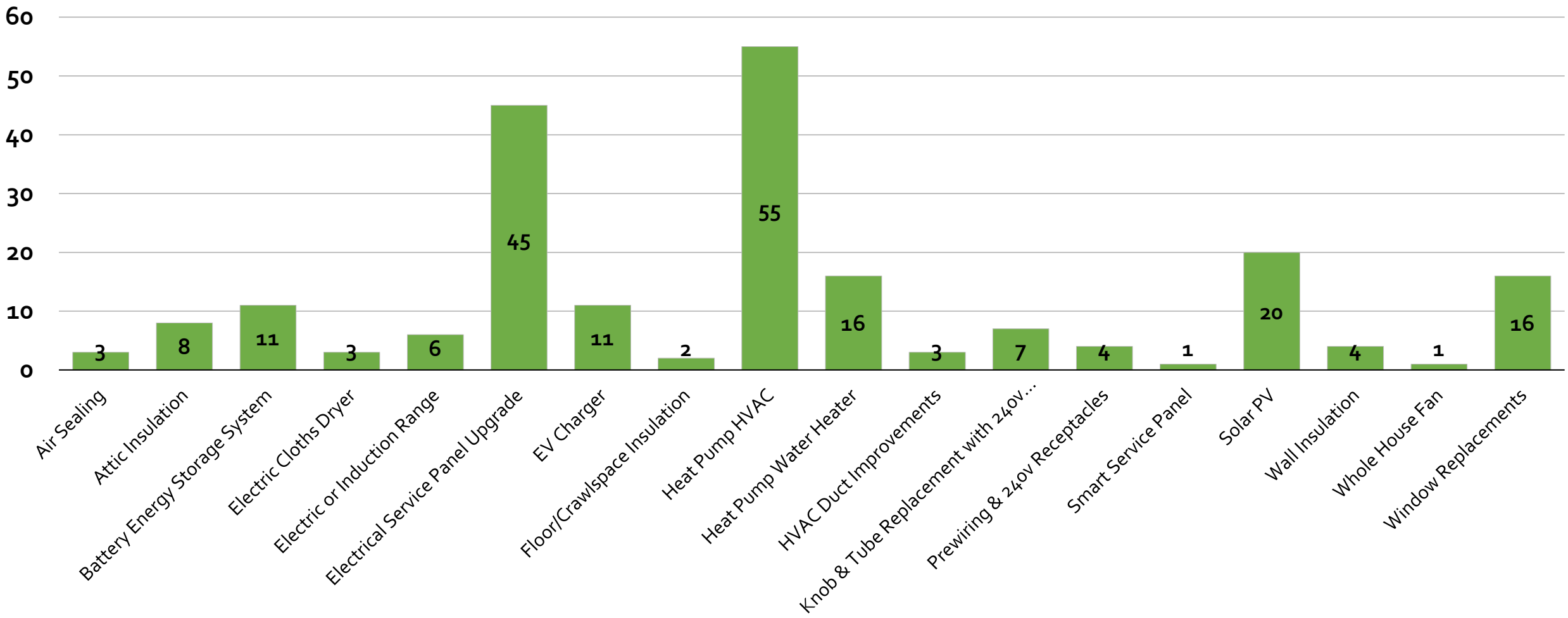
Progress to Date (Upgrades Prior to Sale)

127

Certificate of Compliances Issued

Homes completed qualifying upgrades prior to sale

All Approved Resilience Upgrade Measures*



*This includes upgrades completed in the last 5 years and heat pumps installed at any time in the past.

Upgrades Installed in 2026 for BESO Compliance*

Measure Type	Installations in 2026
Electrical Service Panel Upgrade	**28**
Heat Pump HVAC	**26**
Heat Pump Water Heater	**13**
Window Replacements	9
Knob & Tube Replacement with 240v receptacles	7
EV Charger	6
HVAC Duct Improvements	3
Attic Insulation	4

Measure Type	Installations in 2026
Electric or Induction Range	3
Battery Energy Storage System	3
Solar PV	3
Air Sealing	2
Prewiring & 240v Receptacles	2
Wall Insulation	2
Electric Clothes Dryer	2
Floor/Crawlspace Insulation	1
Whole House Fan	1

*This includes all upgrades with a permit finaled date in 2026 and likely can be attributed to BESO's new requirements.

Upgrades Installed by buyers for BESO Compliance

Measure Type	Installations by buyers
Electrical Service Panel Upgrade	**7**
Heat Pump Water Heater	**5**
Knob & Tube Replacement with 240v receptacles	3
Heat Pump HVAC	**2**
Attic Insulation	2
Solar PV	1

Measure Type	Installations by buyers
Battery Energy Storage System	1
Air Sealing	1
Electric Clothes Dryer	1
Floor/Crawlspace Insulation	1
Whole House Fan	1

Early Trends

- **Compliance Trends**
  - 25% of sellers are obtaining a Certificate of Compliance Prior to sale (Completing upgrades within 5 years of the sale or they have a heat pump system)

- **Upgrade Trends**
  - Panel upgrades seems to be popular upgrade choice



BESO in the News

Bloomberg NEWS

THE DAILY CALIFORNIAN
BERKELEY'S NEWS • JULY 10, 2026

Los Angeles Times

NBC BAY AREA

CANARY MEDIA

EAST BAY TIMES

Santa Barbara Independent

Sharing Out About BESO

- 2025
  - USDN Western Regional Meeting
  - November BayREN Forum
- 2026
  - SF Climate Week
  - Existing Buildings Call – Local Govs. in Washington and Canada
  - Residential Transparency Panel – Local Govs. In Colorado
  - Marin County Reach Code Call
  - Menlo Park's Environmental Quality Commission





Sharing Out About BESO - ACEEE

SUMMER STUDY PROCEEDING PAPER

Buildings 2026

Flexible by Design: Rethinking Performance Standards for Single-Family Electrification & Resilience

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Thank You!

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