

Building Energy Saving Ordinance: Accelerating Savings with Energy Information Disclosure

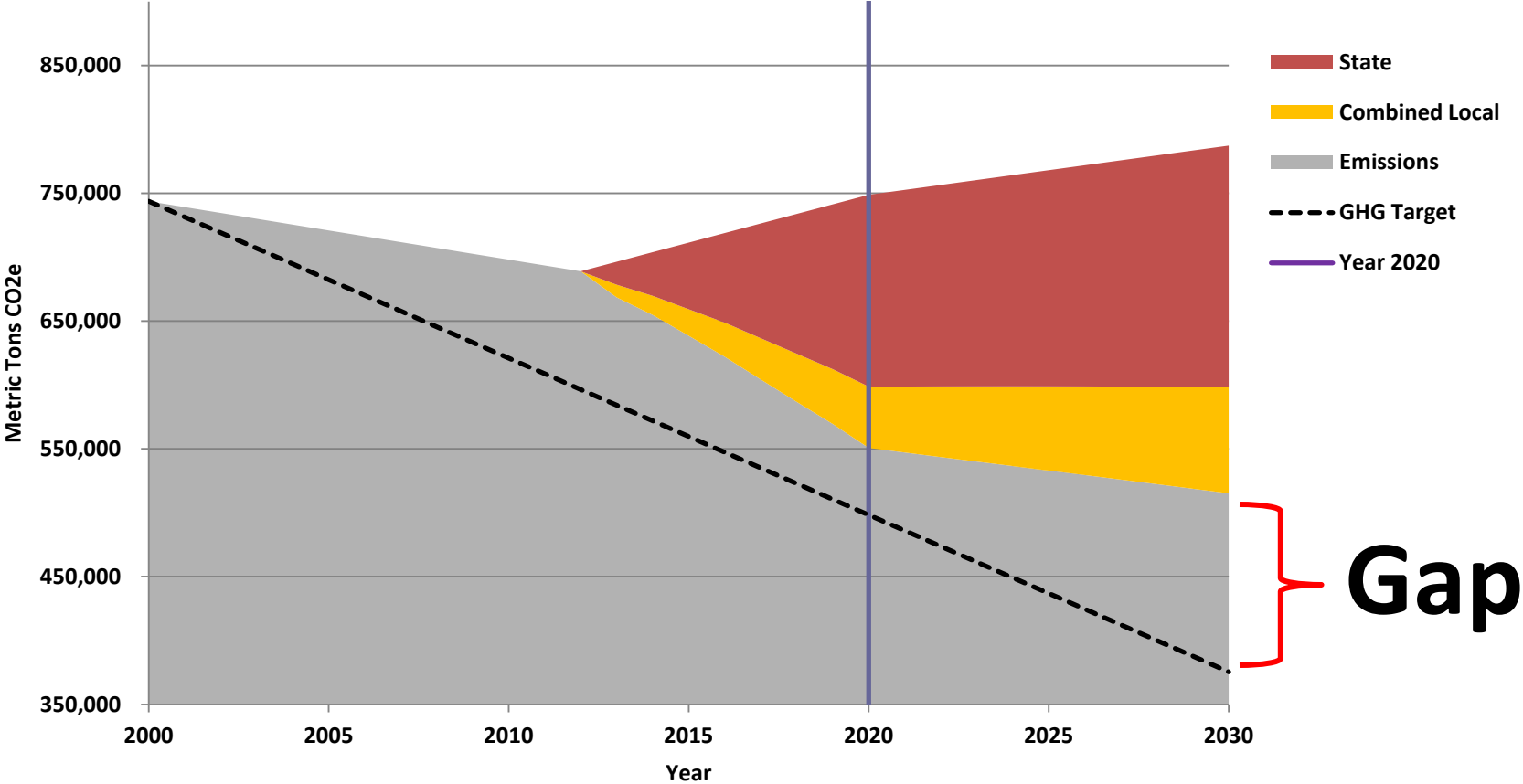
Berkeley City Council Workshop
November 18, 2014

Workshop Objectives

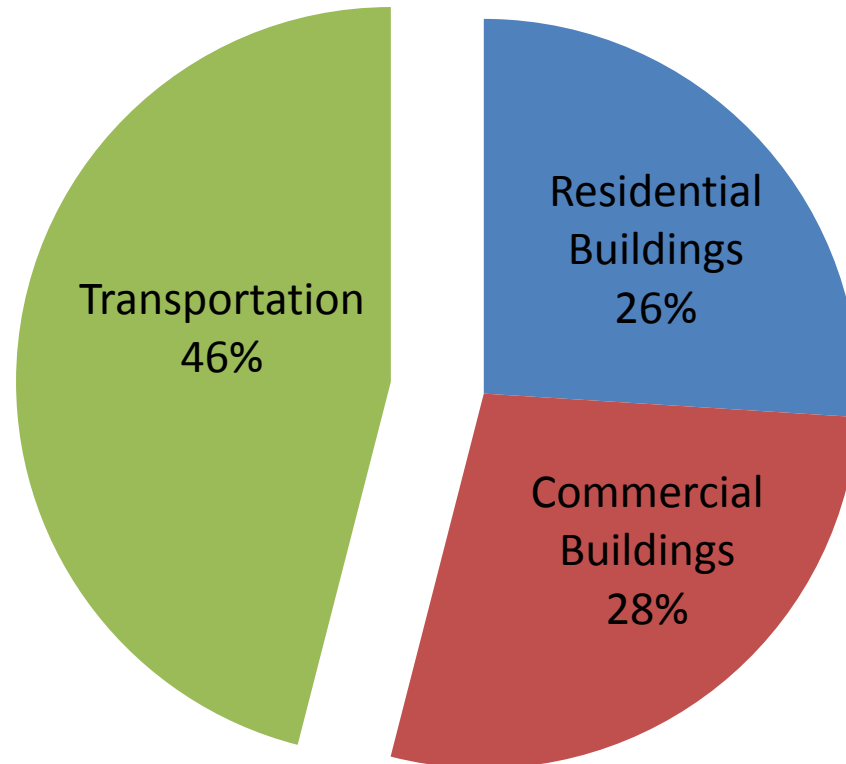
- Why we need to accelerate savings
- How the Building Energy Saving Ordinance (BESO) accelerates savings
- BESO Implementation plan

90,000 Metric Tons of GHG Reductions Needed

Historic, Projected and Target Emissions: State and Local + Additional Local



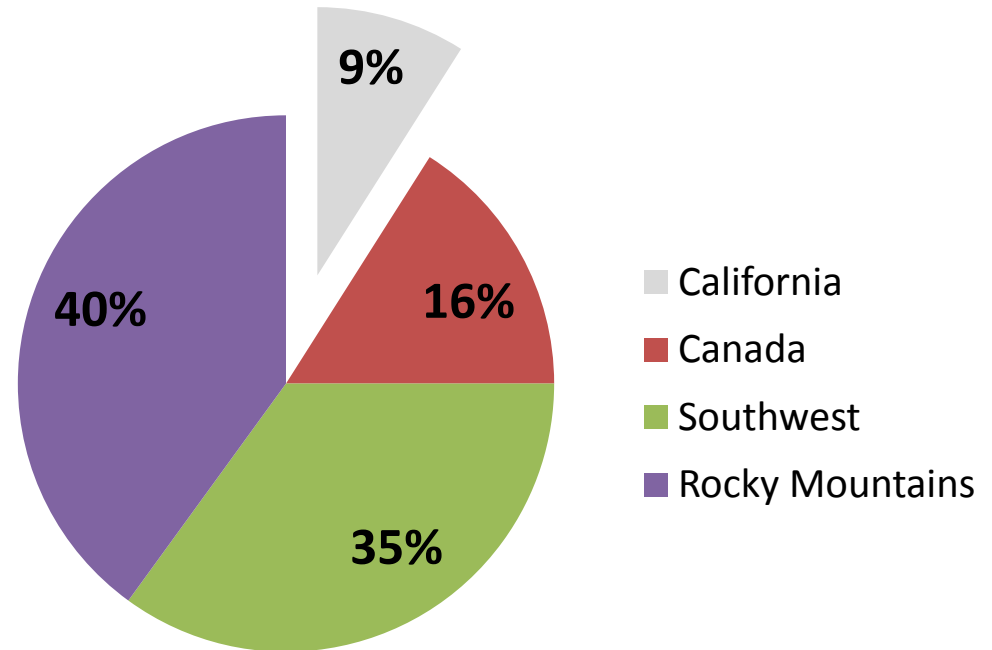
54% of Greenhouse Gas Emissions Come from Buildings



Costs of Inefficient Buildings

- Berkeley spends over \$100 million on natural gas & electricity
- Increasing energy demand encourages & finances oil and gas exploration
- In California, lowest performing buildings use 70% more natural gas in the winter
- Highest opportunity buildings waste 40% of energy (lowest only waste 3%)

Sources of California's Natural Gas



2012, CA Energy Commission Energy Almanac

The Development of the Building Energy Saving Ordinance (BESO)

In Sept. 2013, City Council directed staff to update Berkeley's existing Energy Conservation Ordinances and to incorporate energy information disclosure to accelerate energy improvements.



Update Process

1. Researched existing policies
2. Learned from Federal Stimulus funded Money for Energy Efficiency (ME2) Program
3. Broad community engagement
4. Looked at ways to prioritize high opportunity buildings to achieve savings
5. Conducted options analysis
6. Developed workflows & implementation plan

Objectives for Update

- Improve customer service – make compliance **easier**
- Make compliance outcomes **more valuable** to property owners and tenants
- Enable property owners to **leverage rebates/financing** when undertaking requirements
- Accelerate energy savings to achieve Climate Action Plan goals

Update Provides New Approach

Current RECO CECO

- Must install minimum mandatory measures
- Required only when property sold or remodeled
- Status available by email

Energy Saving Ordinance

- No minimum measures
- Energy audits required for all buildings
- Energy information reported publicly
- Efficient buildings are exempt from audit provision
- On-ramp to rebates & incentives
- On-line compliance process and user-friendly compliance tracking

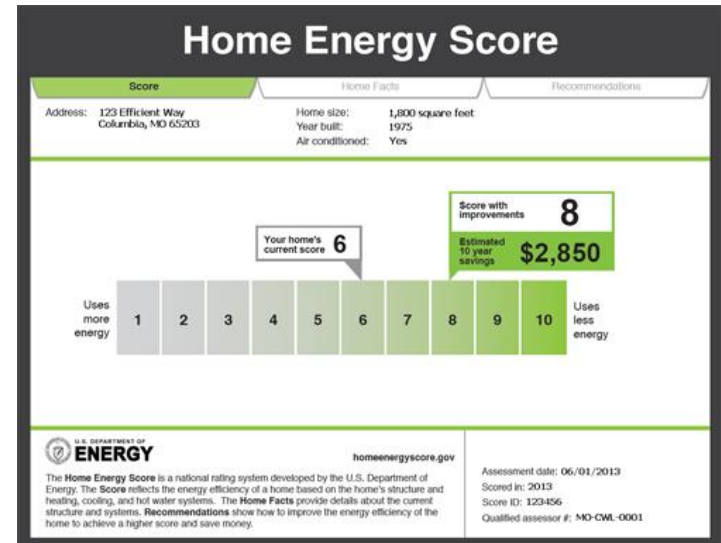
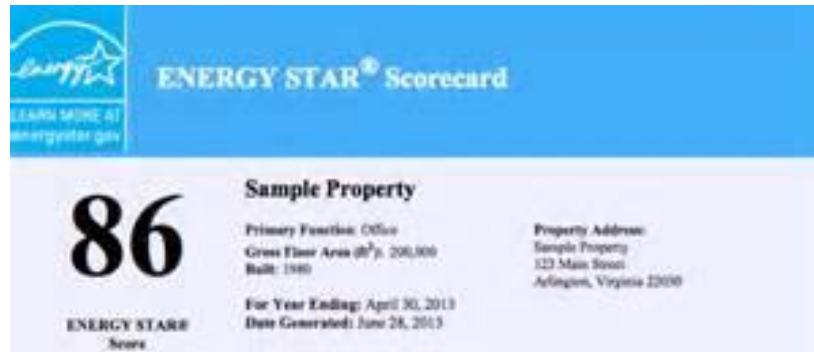
Community Engagement

- Berkeley Energy Commission workshops
 - March 26, April 23, June 25
- Berkeley Commissions
 - Housing Advisory Commission, Rent Board, Community Environmental Advisory Commission
- Presentations
 - Berkeley Association of Realtors, Building Owners & Managers Association, Business District Associations, Chamber of Commerce, Climate Action Coalition, Berkeley Property Owners Association, Sierra Club

<http://www.ci.berkeley.ca.us/EnergyOrdinanceUpdate/>

Energy Information

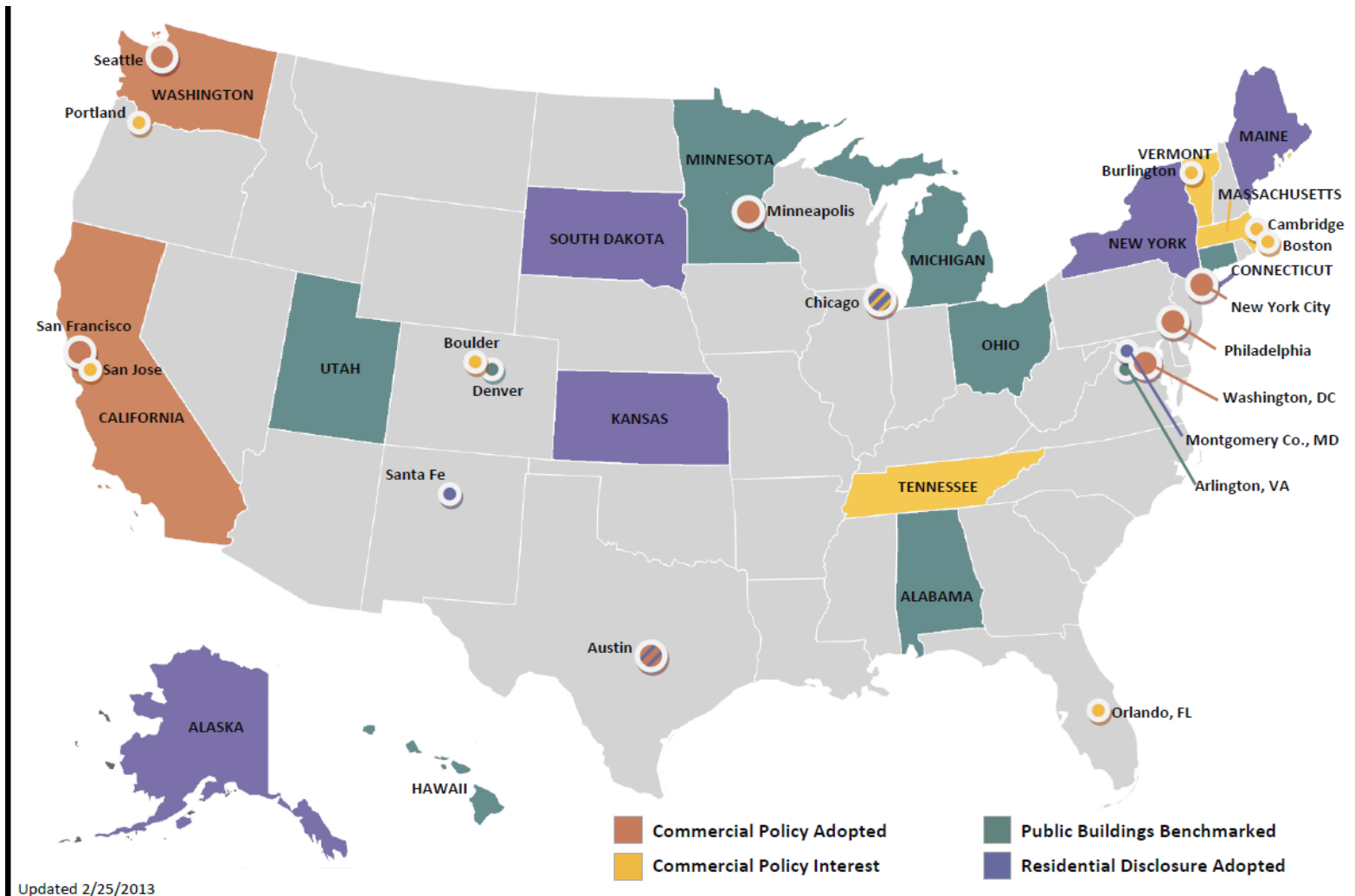
- Benchmarks & Scores



- Audit Reports

Energy Conservation Measure	Demand Savings (kW)	Annual Electricity Savings (kWh)	Annual Natural Gas Savings (therms)	Total Annual Cost Savings (\$)	Implementation Costs (\$)	Simple Payback before incentives (Years)	Potential Energy Incentives
Replace Incandescent and Halogen Lighting with	8.4	36,680		\$6,066	\$9,017	1.5	\$1,100

National Energy Disclosure Policies



Updated 2/25/2013

Benefits of Energy Information Reporting

- Shows property owners how to reduce energy costs & increase property values
- Provides building-specific recommendations to maximize efficiency, health, safety & comfort
- Identifies potential health & safety issues
- Teaches owners how to access valuable financing & incentive opportunities
- Motivates property owners to invest in energy-saving improvements

Case Study – ME2 Program

- Commercial & Multifamily Grant Program
- Single Family Home Rebates
 - 196 assessments resulted in 142 upgrades – with average energy savings of 18%
 - Non-energy benefits have highest value to clients:
 - Improved comfort
 - Reduced noise
 - Better indoor air quality

BESO Requirements

Large Buildings

25,000 sq ft or more



Medium Buildings

5,000-24,999 sq ft



Small Buildings

Up to 5,000 sq ft &
1-4 residential units

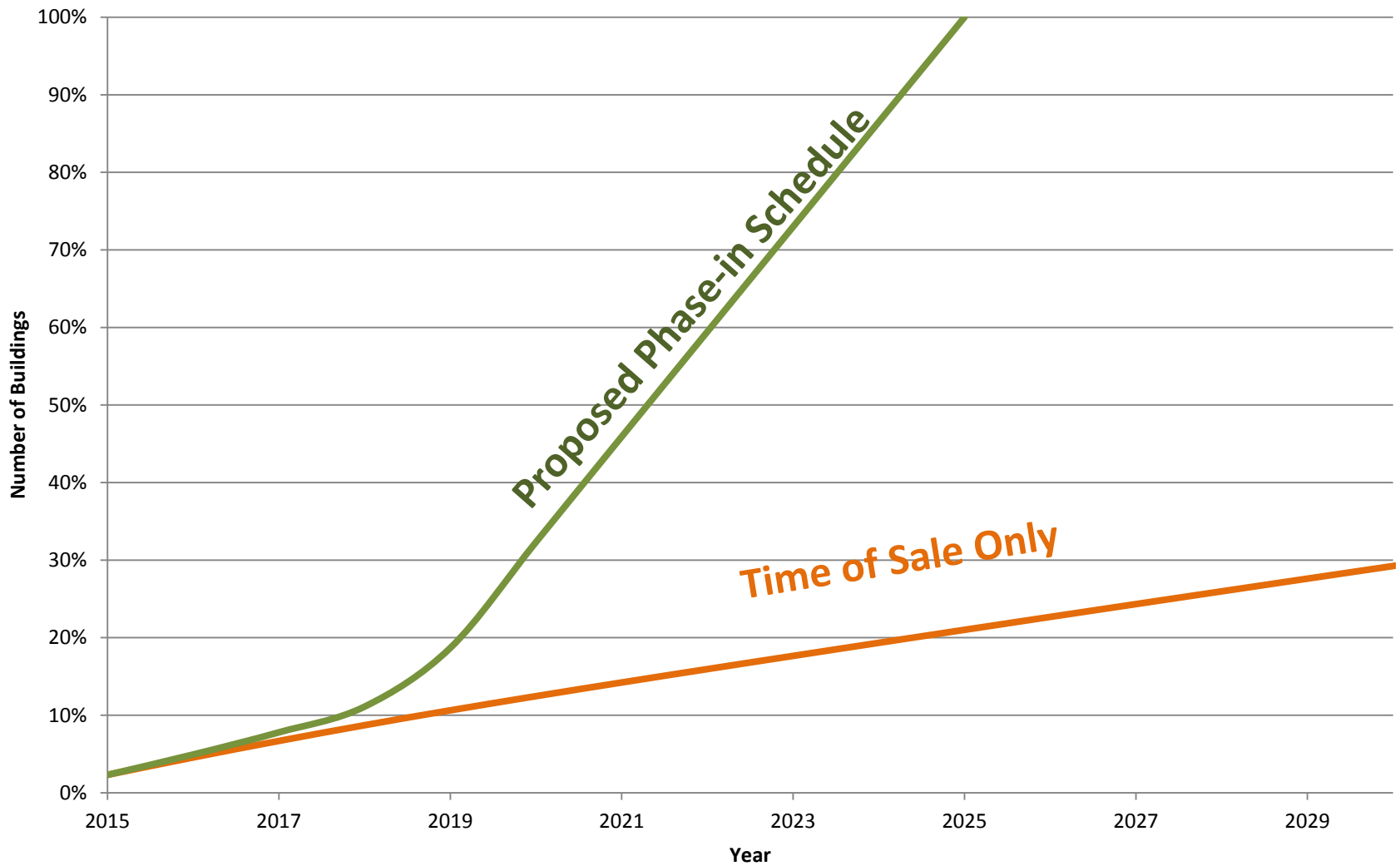


Owners must report energy use every year. Buildings must undergo an energy efficiency audit every 5 years.
Phase-in starting in 2016

Buildings must undergo an energy efficiency audit every 8 years or at time of sale (whichever comes first)
Phase-in starting in 2018

Buildings must undergo an energy efficiency audit every 10 years or at time of sale (whichever comes first)
Phase-in starting in 2020

Total Buildings under BESO Compliance Options



BESO Costs & Incentives

Building Type	Estimated Audit Costs (plus filing fee)	Incentives
Commercial	\$0.05 - \$0.20/sq ft	Smartlights free lighting audit Lighting fixture rebates HVAC rebates On-bill finance PACE finance
Multifamily	\$40 - \$300/unit	Smartlights free lighting audit BayREN free technical assistance Incentive up to \$750/unit PACE finance
Single Family (1-4 unit)	\$200 - \$600	Energy Upgrade incentive up to \$6,500 PACE Finance

Exemptions & Deferrals

- High Performance Exemption
- Deferral at Time of Sale
- Hardship Deferral
- Distressed Sale Extension
- Data Unavailable
- Planned Demo or Extensive Renovation
- Low Energy Building Use
- Long-Term Tenancy under Rent Control

2014-15 Implementation Plan

Nov – Jan 2015	On-line tracking system
Jan - Mar	Service provider training & registration Education & Outreach to large buildings, Realtors & Title Companies
April	Early Compliance Phase 1 Large Buildings notification
May 1	Effective Date RECO/CECO Overlap
July 1	Repeal RECO/CECO

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www.cityofberkeley.info/energyordinanceupdate