



Berkeley Energy Commission

ACTION CALENDAR

November 18, 2014

To: Honorable Mayor and Members of the City Council

From: Berkeley Energy Commission

Submitted by: Al Murray, Chairperson, Berkeley Energy Commission

Subject: Replace the Residential and Commercial Energy Conservation Ordinances, BMC Chapters 19.16 and 19.72, with a Building Energy Saving Ordinance, BMC Chapter 19.81

RECOMMENDATION

1. Adopt first reading of an Ordinance repealing the Residential and Commercial Energy Conservation Ordinances (RECO and CECO), BMC Chapters 19.16 and 19.72, and adding the Building Energy Saving Ordinance, BMC Chapter 19.81.
2. Direct the City Manager to establish incentives for energy efficiency improvements equivalent to one-third of the property transfer tax, but no more than \$3,000 per building, to encourage improvements in residential buildings.

SUMMARY

In September 2013, City Council directed staff to initiate a public process to update the current RECO and CECO. Council direction specified that the update should incorporate energy information disclosure, which is a market transformation tool that makes building energy use information more transparent to owners and prospective renters or buyers. Energy information disclosure has been shown to catalyze property owner investment in energy upgrades. Council direction also emphasized the need for user-friendly ordinance compliance and minimized costs to residents.

Staff proposes that the existing RECO and CECO be replaced with a new Building Energy Saving Ordinance. The new ordinance will eliminate the current minimum energy and water efficiency measures required by RECO and CECO and replace them with a requirement for property owners to conduct and disclose a site-specific opportunity assessment for water and energy efficiency. The assessment will provide building owners with actionable recommendations packaged with rebates and incentives, with consideration given to existing and planned capital improvements. The assessment will include a cost/benefit analysis of measures and will identify health, comfort, and safety benefits of recommended upgrades.

The proposed Building Energy Saving Ordinance requirements are summarized below:

1. Remove existing requirements to install minimum RECO and CECO measures at time of sale or remodel
2. Require energy and water efficiency assessments and disclosure of energy information for all Berkeley buildings, phased-in by size (requirements vary by building size)
3. Simplify compliance by enabling on-line applications and requiring a maximum of one site visit
4. Provide a summary of the efficiency assessments and building score, if applicable, on a City website for all large and medium buildings and for any small buildings that have been sold

This process was informed by community input gathered at various venues, including three public workshops hosted by the Berkeley Energy Commission; discussions with the Housing Advisory Commission, the Community Environmental Advisory Commission and the Berkeley Rent Board; a series of technical advisory meetings with efficiency experts; and presentations at meetings of Berkeley stakeholders, including the Berkeley Association of Realtors, the Berkeley Property Owners Association, commercial property owners and managers, the Sierra Club and others. The proposal is also informed by extensive research into existing energy information disclosure policies in California and around the country.

FISCAL IMPACTS OF RECOMMENDATION

New City administrative costs will be recovered by filing fees, ranging from \$79 to \$240 depending on building size, which will be due upon filing an energy assessment (every five to ten years). See Attachment 2 for customer cost estimates.

Client costs will include the fees, noted above, plus the portion of the cost of assessments that is in excess of available financial and technical assistance incentives. Assessments will be conducted by private entities registered with the City who will establish their own competitive rates. Assessment costs will be tracked by staff and reported to the Energy Commission on a regular basis with service provider pricing terms posted on the City website. It is expected that costs will range from estimated \$400 for a single family home up to \$10,000 for a very large commercial building. The costs will only be incurred during the periodic assessments, i.e., every 5 years for large buildings and 8 to 10 years or upon sale for small and medium buildings. Those costs may be offset by incentive programs, such as the Bay Area Multifamily Building Enhancements (BAMBE), which currently provides up to \$4,000 in technical assistance services for multifamily energy assessments and a \$300 rebate for single family energy assessments upon completion of an Advanced Home Upgrade. All buildings that demonstrate efficient use of energy, such as buildings that have undergone whole building upgrades, will be designated "High Performance" and exempt from assessment requirements and filing fees.

The Energy Commission suggests that the City incent residential building owners to make energy improvements within one year of purchase by offering a rebate of one-third of the 1.5% property transfer tax, capped at the net cost of the upgrade (gross project cost less other rebates and incentives). An analysis of the first five years of a transfer tax incentive program estimates annual costs of \$565,000. This assumes that 33% of properties sold, estimated at 570 per year over 5 years (this excludes repeat sales) install energy improvements and apply for rebates averaging \$3,000. The Commission has not identified any potential revenue sources for this incentive. If recommended, this should be referred to the Council budget process.

CURRENT SITUATION AND ITS EFFECTS

Energy use in residential and commercial buildings is a major source of greenhouse gas (GHG) emissions, comprising approximately 45% of total community emissions. The goal of the Berkeley Climate Action Plan is to reduce GHG emissions to 33% below 2000 levels by 2020. This target is ambitious and achieving it depends on accelerating energy and water efficiency in Berkeley's existing residential, commercial, and municipal building stock. Importantly, increased energy efficiency has non-energy benefits, including improved durability, occupant comfort and indoor air quality, lower utility bills and the creation of green jobs. While GHG emissions associated with residential and commercial building energy use have decreased since 2000, significant additional reductions are needed.

RECO and CECO have played important roles in advancing building energy and water efficiency and reducing Berkeley's greenhouse gas emissions. The ordinances prescribe a list of minimum energy and water saving measures that must be installed in all buildings at the point of sale or during significant remodels. RECO and CECO have been fundamental to Berkeley's climate action effort because they served as a minimum standard for energy efficiency in existing buildings.

Despite their achievements, the current ordinances must be updated or replaced in order to achieve deeper energy and water savings and further reduce GHG emissions from existing buildings. The current ordinances' prescriptive measures are out of date with building science, lag behind the current Title 24 California Energy Code and do not align with rate-payer funded incentive programs. Energy efficiency is not "one-size-fits-all" and the current standard list of measures is often not the optimal solution for a specific building. Some of the current requirements, such as attic insulation, may also preclude future opportunities for deeper energy savings, such as thorough air sealing. Furthermore, prescriptive measures are limited to existing technologies, when efficiency gains over the next 10 years are projected to come from emerging technologies.

Given evolving energy efficiency technologies and the need to analyze buildings as integrated systems to achieve deep energy reductions, state-mandated incentive programs have moved away from providing rebates for individual measures and moved toward incentives based on whole building performance assessments and improvements. The existing individual measures in RECO or CECO are ineligible for the

wealth of incentives provided by State-mandated rate-payer funds under current programs such as Energy Upgrade California.

Given the current time of sale and remodel triggers, the impact of the current RECO and CECO is limited because the number of buildings affected on an annual basis is relatively small. The number of single family properties triggered by sale and remodel ranges from 500 to 1,000 annually, or 2%-4% of the market; multifamily and commercial transactions impact very few buildings, averaging less than 40 per year, or 1.5% of the market. While sale and remodel are good opportunities to improve building energy efficiency, many buildings will never be affected by RECO or CECO and others will not be affected for decades.

In addition to the need to modify the RECO and CECO requirements, the information systems currently deployed to manage compliance are neither user-friendly nor easily accessible. They do not provide a web-based interface that enables building owners, as well as prospective buyers and tenants, access to compliance status and energy information of a building. Without that critical information, informed decisions about the value of energy efficiency and comparisons between properties are difficult.

The current ordinances also do not provide a way to measure outcomes and the associated contribution to energy use, utility costs and GHG reductions. No systems are in place to enable the City to report which specific measures were installed and estimate associated savings.

Ultimately, there is significant potential for additional cost-effective energy efficiency improvements in existing residential and commercial buildings but the current RECO and CECO will not achieve that potential. The current ordinances do not enable property owners to leverage their investments in energy efficiency in the marketplace and fail to provide an on-ramp to incentive programs, while existing minimum requirements only skim the surface of energy-saving opportunities.

BACKGROUND

The proposed ordinance requirements would (see Attachment 3 for BESO Overview):

1. Remove existing requirements to install minimum RECO and CECO measures at time of sale or remodel
2. Require energy assessments and disclosure of energy information (requirements vary by building size)
 - **Large Buildings** 25,000 sq ft or more
 - Report US Environmental Protection Agency (EPA) ENERGY STAR® Portfolio Manager performance benchmark score annually
 - Conduct and disclose an energy assessment once every 5 years
 - **Medium Buildings** 5,000 to 24,999 sq ft
 - Conduct and disclose energy assessment with benchmark at time of sale or at least once every 8 years (whichever comes first)

- **Small & Single Family Buildings** up to 5,000 sq ft and all 1 to 4 residential units
 - Conduct and disclose energy assessment at time of sale or at least once every 10 years (whichever comes first)
- 3. Simplify the process by enabling on-line applications and requiring only a single site visit
- 4. Provide a summary of the energy assessments and the benchmark score, if applicable, available on a City website for all large and medium buildings and for any small buildings that are under contract for sale

This approach was developed in response to Council guidance and a public process involving community stakeholders and experts. In September of 2013, City Council directed staff to develop a new energy saving ordinance that would achieve the following main outcomes:

- Energy information disclosure to enable property owners to leverage their investment in energy upgrades in the marketplace and to enable prospective tenants and buyers to assess the energy performance and associated costs of a given building
- Consistency with the Title 24 California Energy Code
- User-friendly compliance and compliance tracking for residents and businesses through improved information technology systems and on-call assistance
- Minimize compliance costs through synergy with ratepayer-funded utility incentive programs such as Energy Upgrade California
- Increased recognition for residential and commercial energy efficiency leaders within the community through awards and other recognition efforts
- Improved ability for City staff to track compliance, direct energy services to underperforming buildings or areas and to measure and report the energy, cost and GHG reductions associated with the ordinance

This process was informed by community input gathered at various venues, including three public workshops hosted by the Berkeley Energy Commission; discussions with the Housing Advisory Commission, the Community Environmental Advisory Commission and the Berkeley Rent Board; a series of technical advisory meetings with efficiency experts; and presentations at meetings of Berkeley stakeholders, including the Berkeley Association of Realtors, the Berkeley Property Owners Association, commercial property owners and managers, the Sierra Club and others. The proposal is also informed by extensive research into existing energy information disclosure policies in California and around the country.

The community outreach and engagement culminated in a recommendation consistent with the approach taken by other progressive cities -- to transform the market by making energy performance information transparent and thereby an explicit component of a building's value. Property owners have an incentive to invest in and market the energy

efficiency of their building(s). Likewise, energy information disclosure helps prospective tenants and buyers to compare energy performance across buildings. In addition, energy information disclosure policies enable local government and energy service providers to direct resources and assistance to underperforming buildings.

There are a variety of existing information reporting tools and templates; staff will specify methods and register service providers as part of a set of regulations based on best practices and reasonable compliance costs.

Cities around the country are adopting energy information disclosure policies. Seven cities have passed legislation requiring commercial buildings to track and disclose energy consumption information. These cities include Austin, Boston, Cambridge, District of Columbia, Minneapolis, New York, Philadelphia, San Francisco and Seattle. In California, Assembly Bill 1103 (2007) was passed to provide access to commercial building energy information during transactions such as sale, whole building lease and refinancing. Senate Bill 407 (2009) requires disclosure of plumbing fixture requirements at time of sale, beginning with single-family properties in 2017. The proposed ordinance will facilitate compliance with these California laws and improve information transparency.

In Berkeley, approximately 90 non-residential buildings are already tracking their energy use using EPA's ENERGY STAR Portfolio Manager tool. These include municipal buildings, Berkeley Unified School District buildings, office buildings, hotels and others. Several of these buildings received Berkeley Energy Smart Awards in 2011 and 2012. Awards and recognition programs create positive reinforcement that supports information disclosure policies, raises the public profile of building performance and enhances interest in energy efficiency.

On September 30, 2014, the Energy Commission passed the following motion (Motion: James. Second: Lee. Carried: 8-0. Ayes: Bernhardt, Constantine, Hurst, James, Lee, Murray, Schlachter, Wang. Nays - none):

“The Berkeley Energy Commission recommends that City Council adopt an ordinance substantial similar to draft presented on September 30, as corrected at the meeting.”

At the same meeting, the Commission passed another motion, regarding incentives (Motion: Constantine. Second: Lee. Carried: 6-0-1-1. Ayes: Bernhardt, Constantine, James, Lee, Murray, Schlachter. Noes: None. Abstention: Wang. Absent: Hurst):

The Energy Commission supports incentives for energy improvements equivalent to one-third of the property transfer tax, but no more than \$3,000 per building, to encourage improvements in residential buildings.

ENVIRONMENTAL SUSTAINABILITY

This ordinance is a key implementation action of the Climate Action Plan and is projected to result in substantial reductions in energy use and greenhouse gas emissions, as well as improve indoor air quality that will contribute to the health and well-being of occupants.

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

The policy should be categorically exempt from CEQA in so far as it is not a project and does not compel any projects. To the extent that the policy could influence projects, such projects would be exempt under Section 15301, Existing Facilities, and Section 15308, Actions by Regulatory Agencies for Protection of the Environment.

RATIONALE FOR RECOMMENDATION

Energy information and disclosure has demonstrated tremendous potential to accelerate energy efficiency by providing a compelling action plan that leverages incentives and non-energy benefits to owners while creating transparency in the market place to increase the value of efficiency to decision makers. The Institute for Market Transformation documents a series of studies demonstrating that energy information leads to reduced energy use through voluntary implementation of behavior changes and investment in efficiency (See Attachment 4 for Recent Benefits Studies), including the following:

- A 2012 study by the US EPA found energy savings achieved in 70% of buildings benchmarking their energy use, with an average energy savings of 2.4% per year over a seven-year period (DataTrends 2012).
- A 2012 report by the California Public Utilities Commission (CPUC) concluded that utility-led benchmarking programs yielded substantial and measurable energy savings and 85% of those who benchmarked energy use implemented or planned to implement retrofits.

In addition, the outcomes from the City of Berkeley's Money for Energy Efficiency (Me2) Rebate Program resulted in 76% of homes that had energy assessments investing an average of \$7,000 with an average of 18% in actual energy savings per home.

Building owners able to demonstrate that their buildings are relatively more efficient with labels and scores can leverage efficiency investments with increased value in the marketplace. A recent study funded by StopWaste concluded that homes labeled as green or energy efficient sold at a 6% premium in California (Kok and Kahn, 2013). In commercial real estate markets, a growing body of research shows that energy efficient properties have higher occupancy levels, lease rates, and premium lease and sales prices than less efficient properties (Pivo & Fischer, 2010, Fuerst & McAllister 2009/11, Wiley et al., 2010).

Furthermore, public reporting of benchmarks will provide a platform for the City to recognize high performing buildings with integration into the Energy Smart Awards program to cultivate leadership and begin to set aspirational goals for minimum benchmarking scores in the community.

The proposed ordinance was vetted by relevant commissions and is supported by the Community Environmental Advisory Commission, the Housing Advisory Commission and the Rent Board.

ALTERNATIVE ACTIONS CONSIDERED

Two separate analyses were undertaken; the first evaluated alternative policy options and the second looked at an incentive proposed by the Berkeley Association of Realtors.

Policy Alternatives

In addition to the recommended policy, staff analyzed two alternatives. A “business-as-usual” approach would entail modifications to the existing RECO and CECO prescriptive measures at time of sale (renovation would not be a trigger since the energy code has been significantly improved to include alterations of existing buildings) so that they would meet or exceed the current Title 24 California Energy Code and eliminate the lost opportunity of requiring insulation without air sealing. This approach would be costly and cumbersome because of additions to the California State Building and Energy Codes which require building permits for attic insulation, combustion safety testing for air sealing, independent inspection for duct repair or replacement and the need for moisture protection modifications. The range of costs would vary significantly based on building condition, with estimated improvement costs of \$3,000 to \$7,000 for homes needing the most basic measures of air sealing and attic insulation.

Despite the high costs, a prescriptive approach would not achieve a scale of energy savings that is consistent with the community’s goals because of the limited number of buildings – only an average of 600 per year - triggered at time of sale. Further, basic modifications to the existing prescriptive measures do not address other deficiencies of the current ordinances, including the lack of an energy information disclosure element and out-of-date information systems to enable user-friendly compliance and tracking.

Another option considered was to go beyond disclosing energy information by requiring measurable improvements in the energy performance. This approach might result in more energy savings, but with significant compliance cost – estimated at \$12,000 on the high end for energy improvements for poor performing, high opportunity single family homes. Further, specific assessment

tools that would be able to consistently identify high opportunity buildings on a broad scale have not yet been tested or validated.

Incentive Alternatives

On July 23, 2014, the Berkeley Association of Realtors sent a memorandum expressing support for the proposed Building Energy Savings Ordinance and encouraged the Berkeley Energy Commission to consider incentives for energy assessments. The specific BAR proposal is to subsidize the cost of the energy assessment by \$300 per building for all 21,000 single family residential homes over the next 5 years for a total cost of \$6.3 million. Furthermore, they recommend using 1/3 of the property transfer tax collected over a five year period as the funding source for this rebate.

Since the BAR proposal pays for the cost of the energy assessment that is required in the proposed ordinance, there are no additional energy savings benefits associated with the rebate costs nor is it clear that there would be any incremental increase in voluntary assessments or that the local workforce would be able to meet the additional demand of an accelerated timeframe. Most importantly, even if local service providers could ramp up to serve the accelerated assessment schedule, it would be challenging to also provide improvements, which is the ultimate objective of the ordinance.

Several parties have expressed support for a property transfer tax rebate, modeled after the seismic incentive. This could provide a rebate of up to \$3,000 or a maximum of 1/3 of the transfer tax for energy improvements within one year of property purchase. Upgrade incentives in the form of rebates, technical assistance and financing will lead to more investment in efficiency and increase energy savings. Based on a 33% utilization of the seismic transfer tax rebate, it is reasonable to conclude that the number of energy upgrades would increase if the incentive were applied.

CITY MANAGER

The City Manager concurs with recommendation to adopt the ordinance and recommends the issue of incentives be referred to the budget process.

CONTACT PERSON

Billi Romain, Sustainability Coordinator, Planning and Development, 981-7432

Attachments:

- 1: Ordinance
- 2: Response to Comments
- 3: BESO Overview
- 4: Recent Benefit Studies

ORDINANCE NO. #,###-N.S.

ADDING A NEW CHAPTER 19.81 OF THE BERKELEY MUNICIPAL CODE REQUIRING ENERGY INFORMATION AND DISCLOSURE TO REDUCE ENERGY AND WATER USE IN BERKELEY BUILDINGS, REPEALING CHAPTERS 19.16 AND 19.72 EFFECTIVE JULY 1, 2015, AND REPEALING SECTIONS 19.16.080.A.3 AND 19.72.120.B EFFECTIVE MAY 1, 2015

BE IT ORDAINED by the Council of the City of Berkeley as follows:

Section 1. That Section 19.16.080.A.3 of the Berkeley Municipal Code is repealed effective May 1, 2015.

Section 2. That Section 19.72.120.B of the Berkeley Municipal Code is repealed effective May 1, 2015.

Section 3. That Chapter 19.16 of the Berkeley Municipal Code is repealed in its entirety effective July 1, 2015.

Section 4. That Chapter 19.72 of the Berkeley Municipal Code is repealed in its entirety effective July 1, 2015.

Section 5. That Chapter 19.81 of the Berkeley Municipal Code is added to read as follows:

Chapter 19.81

BUILDING ENERGY 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 Early Compliance.**
- 19.81.070 Incentives.**
- 19.81.080 Exceptions, Deferrals and Extensions.**
- 19.81.090 Responsibilities.**
- 19.81.100 Administration and Enforcement.**
- 19.81.110 Fees.**
- 19.81.120 Enforcement.**
- 19.81.130 Violation – Penalty.**
- 19.81.140 Appeals.**
- 19.81.150 Severability.**

19.81.160 Chapter Review.

19.81.010 Purpose.

The purpose of this chapter is to reduce energy and water consumption in existing buildings. These efficiency improvements will lower energy and water costs and greenhouse gas emissions citywide and increase comfort, safety and health for building occupants. The provisions of the ordinance will inform decision makers about energy performance and improvement opportunities.

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.

19.81.030 Definitions.

- A. "Administrator" means the Director of Planning and Community Development or her/his designee.
- B. "Building Owner" shall mean 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 rating or other comparable metric that meets standards and formats established by the Administrator.
- D. "Energy Report" means a report submitted by a Registered Service Provider that identifies existing conditions and opportunities for water and energy efficiency in a building, as well as any applicable Building Energy Score in accordance with the standards and formats established by the Administrator.
- E. "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.
- F. "Extensive Renovation" means any project that replaces all building space heating, cooling, and ventilation equipment and replaces at least half of the building envelope in accordance to standards established by the Administrator.
- G. "Green Building Rating" means an approved rating by a green building verification system designed for existing buildings, such as GreenPoint Rated, US Green Building Council Leadership in Energy and Environmental Design (USGBC LEED) or new building certification such as Zero Net Energy Building or Living Building

Challenge Certification, demonstrating approved levels of energy efficiency, as determined by the Administrator.

- H. "Gross Floor Space" means the total size, as measured between the principal exterior surfaces of the enclosed fixed walls of the building(s). This includes *all areas* inside the building(s) such as: occupied tenant areas, common areas, meeting areas, break rooms, restrooms, elevator shafts, mechanical equipment areas, and storage rooms. Gross Floor Space should not include interstitial plenum space between floors, which may house pipes and ventilation.
- I. "Large Building" means any building with 25,000 square feet or more of Gross Floor Space.
- J. "Medium Building" means any building with between 5,000 and 24,999 square feet of Gross Floor Space, excluding buildings comprised of 1 to 4 attached residential units.
- K. "Registered Service Provider" means an entity that has been registered by the Administrator to provide an Energy Report and/or Building Energy Score as required by this ordinance.
- L. "Sale" means the conveyance of title to real property as a result of the execution of a real property sales contract as defined in Section 2985 of the California Civil Code as well as any change of ownership described in subdivision (c) of Section 61 and subdivision (c) of Section 64 of the California Revenue and Taxation Code. "Sale" does not include transfer of title pursuant to inheritance, involuntary transfer of title resulting from default on an obligation secured by real property, change of title pursuant to marriage or divorce, condemnation, or any other involuntary change of title effected by operation of law.
- M. "Small Building" means any building with less than 5,000 square feet of Gross Floor Space, and any building comprised of 1 to 4 attached residential units, regardless of size.

19.81.040 Large Buildings.

A. Annual ENERGY STAR Performance Report

Owners of Large Buildings shall submit to the Administrator an ENERGY STAR Performance Report on an annual basis in accordance with the phase-in schedule below and no later than July 1 each year thereafter.

B. Energy Report

Owners of Large Buildings shall have a Registered Service Provider prepare and submit to the Administrator an Energy Report as specified in the phase-in schedule below and by July 1 every five years thereafter.

C. Disclosure

The most recent ENERGY STAR Performance Report and a summary version of the most recent Energy Report including a Building Energy Score, when

available, shall be made publicly available by the Administrator and shall be provided by the Building Owner to existing lessees and to prospective lessees and buyers prior to execution of a lease or contract for sale.

D. Phase-in and Reporting Cycle Schedule

Owners of Large Buildings shall be in compliance with the requirements of this section by the dates specified below.

1. July 1, 2016 for buildings with 50,000 or more square feet of Gross Floor Space, with an annual ENERGY STAR Performance Reporting cycle and a 5 year Energy Report reporting cycle thereafter.
2. July 1, 2017 for buildings with 25,000 or more square feet of Gross Floor Space with an annual ENERGY STAR Performance Reporting cycle and a 5 year Energy Report reporting cycle thereafter.

19.81.050 Medium and Small Buildings.

A. Energy Report

Owners of Medium and Small Buildings shall have a Registered Service Provider prepare and submit to the Administrator an Energy Report that includes a Building Energy Score upon the earlier of:

1. Time of building Sale; or
2. Within 12 months of a lender having acquired title due to foreclosure or deed in lieu of foreclosure; or
3. The phase-in dates and reporting cycle provided in the schedule below.

B. Disclosure

A summary version of the most recent Energy Report including a Building Energy Score, when available, shall be made publicly available by the Administrator and shall be provided by the Building Owner to existing lessees and to prospective lessees and buyers prior to execution of a lease or contract for sale.

C. Phase-in and Reporting Cycle Schedule

Effective April 1, 2015, owners of Medium Buildings and Small Buildings shall be in compliance with the requirements of this section at time of building Sale or within 12 months when a lender acquires title or by the dates specified below, whichever comes first.

1. By July 1, 2018 for Medium Buildings with 15,000 or more square feet of Gross Floor Space, and on an 8 year reporting cycle thereafter.
2. By July 1, 2019 for Medium Buildings with 5,000 or more square feet of Gross Floor Space, and on an 8 year reporting cycle thereafter.
3. Requirements for Small Buildings shall be phased-in starting July 1, 2020 and ending July 1, 2025, and on a 10 year reporting cycle thereafter. The specific schedule shall be published by the Administrator at least two years prior to the start of phase-in.

19.81.060 Early Compliance.

Any Energy Report completed after December 31, 2014 which otherwise meets the requirements of this Chapter or is deemed by the Administrator as equivalent shall be considered to be an Energy Report for the first compliance period.

19.81.070 Incentives.

The Administrator may establish rules and regulations to incent property owners to pursue early compliance and/or achieve a high performance exemption.

19.81.080 Exceptions, Deferrals and Extensions.

- A. High Performance Exemption. An exemption from the Energy Report requirement for current reporting period for buildings that demonstrates an effective and reasonably achievable level of efficiency, based on the specific building type, use, vintage, and condition, that supports the Berkeley Climate Action Plan (CAP) goal of 33% energy-related greenhouse gas reduction from 1990 levels by 2020 and 80% reduction by 2050, may be granted for:
1. Any building that receives a Building Energy Score or Green Building Rating that demonstrates an effective and reasonable level of efficiency, as determined by the Administrator.
 2. Any building that completes a multi-measure energy improvement project with a verified minimum improvement, as determined by Administrator.
 3. Any whole building that has been served by an income-qualified Weatherization Assistance program for low-income households.
 4. Any new building or Extensive Renovation with a construction completion date within ten years of the reporting deadline.
- B. Deferral at Time of Sale. The requirements for compliance prior to Sale may be deferred from the seller to the buyer, and any subsequent buyers, when the buyer consents to comply with the requirements within 12 months of the original sale date with an application for deferral to the Administrator prior to execution of contract of sale.
- C. Distressed Sale Extension. A 12-month extension may be granted to a buyer of a building purchased from a lender following default or transfer by deed in lieu of foreclosure.
- D. Hardship Deferral. The requirement for an ENERGY STAR Performance Report and the requirement for an Energy Report may be deferred for up to one reporting cycle in cases of financial hardship where one of the following is provided by the Building Owner and approved by the Administrator:
1. Proof of participation in energy efficiency income qualified programs.

2. Proof that the property qualifies for sale at public auction or acquisition by a public agency due to arrears for property taxes, within two years prior to the due date of the Energy Report.
3. Proof that a court appointed receiver is in control of the asset due to financial distress.
4. Proof that the senior mortgage is subject to a notice of default.
5. Proof that the responsible party is otherwise not able to meet the obligations of this Chapter.

Deferrals under this Section are granted to the Building Owner and are not transferrable with a building Sale, at which time compliance with this Chapter shall be required.

- E. Data Unavailable. An exemption from ENERGY STAR Performance Report requirement for any current reporting period may be granted if
1. The Building Owner demonstrates to the Administrator that he or she has been unable to obtain tenant authorization to obtain tenant utility data, despite a good faith effort to obtain such consent.
 2. The building occupant demonstrates to the Administrator that such disclosure may result in the release of proprietary information which can be characterized as a trade secret.
- F. Deferral for Planned Demolition or Extensive Renovation. The requirements of this Chapter may be deferred for 24 months if the owner or buyer has obtained a Building Permit, Demolition Permit, or Permit under the Zoning Ordinance that includes demolition or Extensive Renovation of the subject building.

Deferrals under this Section are granted to the Building Owner and are not transferrable with a building Sale, at which time compliance with this Chapter shall be required.

- G. Exemption for Sale of a Condominium. The requirements to submit an Energy Report with an Energy Benchmark to the Administrator shall not apply to any sale of a residential or commercial condominium that is a unit within a building and not a detached structure.
- H. Low Energy Building Use Deferral. Buildings with uses that are very low energy intensity because of operations specific to their building use, such as institutions that operate less than three days a week, may be granted a Low Energy Building Use deferral for the current compliance cycle, provided it can be demonstrated to the Administrator that there are procedures or controls in place to power down energy systems when the building is unoccupied.

Deferrals under this Section are granted to the Building Owner and are not transferrable with a building Sale, at which time compliance with this Chapter shall be required.

- I. Exemption for Long-Term Tenancy under Rent Control. The requirements of this Chapter for any building which is subject to rent control in which all of the units, excluding any owner-occupied units, have leases that date prior to January 1, 1999 may be deferred until the next reporting period.
- J. Unconditioned Floor Space Reclassification. The size classification of a building may be reduced by the Administrator to exclude physically separated floor area that is not served by heating, ventilation or cooling equipment.
- K. Phase-In.
 - 1. Through July 1, 2015, compliance required pursuant to a Sale may be satisfied through compliance with the requirements specified under the prior residential and commercial energy conservations ordinances, Chapters 19.16 and 19.72 of the Berkeley Municipal Code.
 - 2. Any buyer who, prior to May 1, 2015, has filed an acceptance of compliance responsibility pursuant to Berkeley Municipal Code 19.16.080 Section A. 3 or 19.72.120 Section B, has the option of complying either with the requirements in effect at the time of filing or the requirements of this Chapter.

19.81.090 Responsibilities.

- A. It shall be the responsibility of sellers, buyers, owners, real estate agents and brokers, property managers, title companies, non-residential tenants and energy service providers to comply with the requirements of this Chapter.
- B. The seller of any real property and the licensed real estate agent or broker handling a sale of real property shall be jointly responsible for disclosing to the prospective buyer the compliance status of the real property in question.

19.81.100 Administration and Enforcement.

The Administrator may adopt reasonable rules and regulations implementing the provisions and intent of this Chapter before the operative date of this Chapter and may amend these rules and regulations as needed.

19.81.110 Fees.

The City Council may set fees, by resolution, for the administration of this chapter.

19.81.120 Enforcement.

The Administrator shall issue a written Notice of Violation to any building owner determined to be in violation of any provision of this Chapter. In the event a building owner fails to file an ENERGY STAR Performance Report for 30 days after the scheduled deadline or an Energy Report 90 days after the scheduled deadline, the

Administrator shall indicate the building's compliance status via the publicly accessible electronic reporting interface.

19.81.130 Violation – Penalty.

A violation of this Chapter shall be a misdemeanor, but may be charged as an infraction as set forth in Chapter 1.20, and is punishable by administrative citation as set forth in Chapter 1.28.

Administrative fines collected under this section shall be used to fund implementation and enforcement of the Berkeley Building Energy Saving Ordinance.

19.81.140 Appeals.

Aggrieved persons may file appeals to the City Manager or her/his designee.

19.81.150 Severability.

If any word, phrase, sentence, part, section, subsection, or other portion of this Chapter, or any application thereof to any person or circumstance is declared void, unconstitutional, or invalid for any reason, then such word, phrase, sentence, part, section, subsection, or other portion, or the prescribed application thereof, shall be severable, and the remaining provisions of this Chapter, and all applications thereof, not having been declared void, unconstitutional or invalid, shall remain in full force and effect. The City Council hereby declares that it would have passed this title, and each section, subsection, sentence, clause and phrase of this Chapter, irrespective of the fact that any one or more sections, subsections, sentences, clauses or phrases is declared invalid or unconstitutional.

19.81.160 Chapter Review.

The Berkeley Energy Commission shall, within 3 years of the effective date of this Chapter, evaluate implementation and outcomes. Implementation evaluation shall include an analysis of reporting systems and compliance rates, and outcomes evaluation shall analyze the number of energy improvements and amount of energy reduced as a result of this Chapter, and may recommend revisions and/or incentive programs to accelerate improvements to low performing buildings as it considers advisable. The Berkeley Energy Commission shall then report on its evaluation and recommendations to the City Council.

Section 6. Copies of this Ordinance shall be posted for two days prior to adoption in the display case located near the walkway in front of Council Chambers, 2134 Martin Luther King Jr. Way. Within 15 days of adoption, copies of this Ordinance shall be filed at each branch of the Berkeley Public Library and the title shall be published in a newspaper of general circulation

Responses to Issues Raised during the Development of the Draft Building Energy Saving Ordinance

In developing the proposed Building Energy Saving Ordinance, City staff engaged in a broad dialogue with community stakeholders. These discussions included three community workshops held between March and June of 2014, presentations to the Housing Advisory Commission, the Community Environmental Advisory Commission, and the Rent Board Safe and Sustainable Housing Committee, as well as numerous meetings with the Berkeley Association of Realtors, the Berkeley Property Owners Association, the Berkeley Chamber of Commerce, the Sierra Club, Building Owners and Managers Association of the East Bay, and the Berkeley Climate Action Coalition. Staff also solicited input from technical experts in energy efficiency and energy reduction strategies including local energy service providers, the Institute for Market Transformation, the US Environmental Protection Agency, the US Department of Energy, Natural Resource Defense Council and the Lawrence Berkeley National Laboratory.

The following is a compilation of feedback and responses.

1. *Accelerate the phase-in timeframe for all buildings.* *Some encouraged an accelerated implementation schedule.*

The proposed 10-year phase-in schedule is recommended to develop the capacity of service providers to staff up a trained work force to deliver high-quality energy reports. Further, the proposed schedule provides room for service providers to develop a relationship with building owners that focuses on implementation, not simply generation of reports. This approach also provides opportunities for improvements, as staff will be evaluating the types of assessments and reports that are the most effective and will be able to make a recommendation regarding acceleration in the 3-year Evaluation and Recommendation Report specified in Section 19.81.160 of the Ordinance.

2. *What are the costs to comply?* *There were inquiries about service provider costs for the energy assessments for each of the markets.*

The goal of the Energy Report is to provide building owners with compelling energy reduction strategies leveraging all available incentives and financing programs at the lowest possible price. Since this service has not previously existed, it is difficult to project the costs, though a robust and competitive market is expected to keep costs down. Based on a survey of service providers and information provided by the San Francisco Existing Commercial Buildings Energy Performance Ordinance, service costs are projected in the following ranges.

Building size	Building Use	Estimated Service Provider Cost Range	Proposed Filing Fee
Large (25,000 sf and up)	Commercial	\$0.05 to \$0.15/sf	\$240
	Multifamily	\$40 to \$75 per unit	
Medium (5,000 to 24,999 sf)	Commercial	\$.08 to 0.20/sf	\$152
	Multifamily	\$60 to \$100 per unit	
Small (less than 5,000 sf)	Commercial	\$200 to \$1,000	\$79
	1-4 Res units	\$200 to \$600	

Whenever possible, administrative requirements for Energy Reports will align with free or highly subsidized technical assistance program assessments to lower costs for building owners leveraging State-mandated public benefits funds earmarked for energy efficiency. Examples of these subsidized resources include free Smartlights Audits for small commercial buildings and free Building Assessments for Multifamily properties in the Bay Area.

3. *Include requirements to implement energy improvements. Some favored inclusion of requirements for improvements.*

Such requirements would significantly increase costs to building owners and may be difficult to require for all buildings. Administrative costs would also be considerably higher since the unique conditions for individual buildings would need to be considered on a case-by-case basis and service providers would need to be monitored in the field for quality assurance purposes. The cost of meaningful energy improvements varies broadly for individual buildings, resulting in difficulties around equity and implementation.

4. *Consider setting energy reduction targets for 3-year evaluation, which, if not met, will trigger mandatory requirements. It was suggested that if the specific targets are not met, mandatory improvements should be triggered.*

It would be extremely difficult to set realistic targets without the outcomes data for each of the building types. Staff will set targets in the 3-year Evaluation and Recommendation Report based on empirical results at that time.

5. *Support for annual report to the Energy Commission and reports to Council every 3 years. It was recommended that the ordinance require staff to report to Council every three years.*

The Energy Commission will receive regular briefings on the roll-out of the ordinance and a full evaluation report with three years of data needed to

measure outcomes and successes. At that time, the Energy Commission will propose a time frame for a subsequent follow-up evaluation.

- 6. Don't exempt banks from complying or limit exemption for 12 months.** *It was suggested that banks not be exempted from the requirement to complete an Energy Report within the 12 month deferral period.*

The requirements that apply pursuant to the sale of a property may be assumed by the buyer and deferred for 12 months. This requirement could unintentionally prevent a distressed property from returning to the market in cases where the 12 month period has lapsed. Based on experience with the existing RECO and CECO, it has been extremely challenging to have banks foreclosing on a property cooperate with energy requirements and any effort to compel them could delay a sale, harming the buyer. Furthermore, banks are extremely unlikely to act on any of the recommendations in an Energy Report. Therefore, the ordinance includes a provision that enables buyers of a distressed property to assume responsibility of compliance, regardless of the existing compliance status. It was never the intent to exempt banks in cases where they maintain ownership and the text of the draft ordinance was modified to make this clear.

Deferral at Time of Sale. The requirements for compliance prior to sale may be deferred if the buyer, and any subsequent buyers, consent to comply with the requirements within 12 months of the original sale date with an application for deferral to the Administrator prior to execution of contract of sale. A subsequent buyer may request another 12 month deferral from the new sale date if the building is owned by a financial institution through default of the borrower or the building is being acquired by deed in lieu of foreclosure. In the case where a financial institution maintains ownership of a building for over 12 months, they shall be subject to comply with all applicable requirements of this Chapter.

- 7. Specify in the ordinance if process loads (i.e. energy used for manufacturing processes) will be included in Energy Report.** *It was suggested that the ordinance specifically call out industrial process loads to be included in the Energy Reports.*

Due to highly complex and often proprietary processes, it may not always be feasible to include process loads in an Energy Report. It is recommended that staff have the discretion to include analysis on process loads in the Administrative Regulations in cases where efficiency opportunities exist with available technology.

- 8. Concern about the clarity of ordinance regarding disclosure to tenants.** *There was a concern that the method of disclosure to tenants is not clear in the ordinance.*

The ordinance establishes the requirement for disclosure to tenants (see language below); more direction will be provided in Administrative Regulations.

The most recent Energy Benchmark and a summary version of the most recent Energy Report shall be made publicly available by the Administrator and shall be provided by the owner to existing lessees and to prospective lessees and buyers prior to execution of a lease or contract for sale.

- 9. Support for development of an incentives programs such as PACE and Transfer Tax Rebates.** *Many parties recommended the incentives, with particularly strong support for property transfer tax rebates.*

There is general agreement that any and all incentive programs will enhance investments in energy improvements and accelerate savings. The availability of incentives will depend on direction from Council.

Berkeley's Updated Building Energy Saving Ordinance (BESO)

Berkeley's proposed energy ordinance would require all Berkeley building owners to evaluate and publicly report building energy and water consumption. The goal of this ordinance is to motivate property owners to reduce energy and water usage by making optimal use of efficiency technologies and incentives. **Highly efficient buildings and those that access free income-qualified energy services will be exempt from the energy audit provision.**

Requirements for:

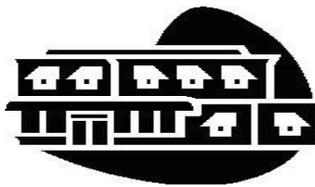
Large Buildings

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

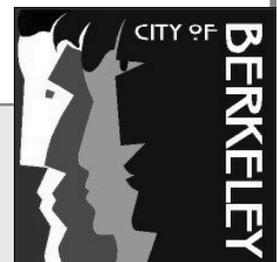
Buildings must undergo an energy efficiency audit every 10 years or at time of sale (whichever comes first)
Phase-in starting in 2020

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 natural gas hazards.
- Teaches owners how to access valuable financing & incentive opportunities.
- Motivates property owners to invest in energy-saving improvements.

For more information:

www.cityofberkeley.info/EnergyOrdinanceUpdate
or email greenbuilding@cityofberkeley.info



Energy Benchmarking and Disclosure – An Overview of Recent Benefit Studies

A 2012 study by the U.S. EPA of more than 36,000 benchmarked buildings across the nation found that those buildings reduced energy consumption by an average of 7 percent over a three-year time span. Between 2008 through 2011, the buildings in the study attained average annual energy savings of 2.4 percent. The study also found that buildings that started with lower Energy Star scores and higher energy use made the largest gains, with those scoring below 50 in 2008 making improvements that saved them twice as much energy over the three-year period as buildings that started with above average scores. **Environmental Protection Agency, “Benchmarking and Energy Savings.”** http://www.energystar.gov/ia/business/downloads/datatrends/DataTrends_Savings_20121002.pdf?3d9b-91a5. October 2012.

In Australia, buildings that regularly track their energy performance using NABERS (a rating tool that is similar in scope to Portfolio Manager) have reported an average improvement in energy efficiency of 9 percent, or 2 kWh/ft², as of 2011. **NABERS, “Research and Statistics.”** <http://www.nabers.gov.au/public/WebPages/ContentStandard.aspx?module=10&template=3&include=ResearchStats.htm&side=factsheets.htm>.

A 2012 report by the Georgia Tech Ivan Allen College School of Public Policy found that energy benchmarking could reduce national energy consumption by 5.6 percent in 2035. **Matt Cox, Marilyn A. Brown, and Xiaojing Sun, “Making Buildings Part of the Climate Solution by Overcoming Information Gaps through Benchmarking.”** <http://www.spp.gatech.edu/faculty/workingpapers/wp72.pdf>. September 2012.

A Building Operating Management survey of hundreds of facility managers who used Portfolio Manager found that 70 percent have used Energy Star to guide energy efficiency upgrade plans and 67 percent have used Energy Star to help justify an energy efficiency project. **Lindsay Audin, “Careful Assessment of Energy Options Can Show What Steps to Take,” Building Operations Management.** <http://www.facilitiesnet.com/powercommunication/article/Careful-Assessment-of-Energy-Options-Can-Show-What-Steps-to-Take--12849>. December 2011.

A 2012 report by the NMR Group for the California Public Utilities Commission (CPUC) concluded that utility-led benchmarking programs yielded substantial and measurable energy savings. Of those survey participants who benchmarked their buildings, 62 percent took energy management actions, such as monitoring of controls and thermostats; 84 percent planned or implemented improvements to benchmarked buildings; and 81 percent link improvements to utility energy efficiency programs. Survey responses also indicated that benchmarking motivates more comprehensive retrofits: 90 percent of participants agreed with the statement “you implement more comprehensive energy efficiency measures in the buildings you benchmark.” **NMR Group. “Statewide Benchmarking Process Report.” Submitted to California Public Utilities Commission.** April 2012.

A 2011 study by the Energy Efficient Buildings Hub found that 77% of Philadelphia’s commercial building stock – or 7,000 buildings – need energy upgrades. Retrofitting them would generate more than \$600 million in local spending and support 23,000 jobs. Benchmarking can help identify those buildings most in need of improvement. **Greater Philadelphia Innovation Cluster (GPIC) for Energy-Efficient Buildings Policy Markets and Behavior Task Team, “The Market for Commercial Property Energy Retrofits in the Philadelphia Region.”** http://www.eebhub.org/media/files/eebhub_reports_energy-market.pdf. October 2011.

A 2011 Lawrence Berkeley National Laboratory analysis of existing commercial buildings that underwent commissioning determined that commissioning revealed energy-related deficiencies that, when corrected, resulted in 16 percent median whole-building savings with payback times of 1.1 years. Benchmarking can help identify which buildings are good candidates for commissioning. **Evan Mills, “Building Commissioning: a golden opportunity for reducing energy costs and greenhouse gas emissions in the United States.” Energy Efficiency Volume 4, Number 2.** May 2011.

