

Residential Energy Conservation Ordinance Factsheet

To meet the challenge of reducing greenhouse gas emissions as required by Assembly Bill 32, The Global Warming Solutions Act, local governments are exploring a variety of policy tools to capture efficiency improvements to the existing building inventory.

One of those tools may be the Energy Conservation Ordinance (ECO), which provides a means for improving the energy efficiency of residential and commercial buildings. ECOs typically require property owners to implement specific measures to reduce energy and water use where a property does not meet a minimum standard.

Where the ECO model applies to residences, there are three additional resources that may prove useful in creating effective policy: (1) the new California Energy Commission home energy analysis program (known as HERS-2), (2) the resurgence of the Federal Housing Administration's Energy Efficient Mortgage (EEM) program, and (3) the new Assembly Bill 811 funding plan that allows local governments to lend money to property owners for energy efficiency and renewable system upgrades and receive payment on the loan through the property tax system.

The recent availability of the new HERS-2 program, EEM mortgages, and AB811 funding combined with a flexible ECO model provide more options for local government and property owners when exploring the possibility of establishing a ECO policy

Energy Conservation Ordinances

There are two types of ECOs: *Residential Energy Conservation Ordinance* (RECO), which applies to homeowners and rental property landlords, and *Commercial Energy Conservation Ordinance* (CECO). These policy tools have been in use since the early 1980s.

Intended Benefits

Included in the list of actions that may trigger a RECO are sale of the property (i.e., point of sale), during the rental license inspection process, when the property undergoes significant renovation (\$50,000 or more), and in some cases as part of a periodic safety inspection. Which type and combination triggers differs depending on the RECO jurisdiction. The intended results of a RECO are to:

- Reduce homeowner/renter utility bills, which is particularly pertinent to affordable housing and rental properties
- Reduce greenhouse gas emissions to address climate change issues
- Reduce the economic impact on the community of fluctuating energy prices
- Improve the comfort, indoor air quality, and durability of the home by fixing problems such as drafts and uneven heating

- Improve local air quality by reducing GHG emissions associated with energy received from the utility grid

There are six cities in the U.S. that currently have RECOs, San Francisco, California; Berkeley, California; Davis, California; Burlington, Vermont; and Ann Arbor, Michigan; and one state, Wisconsin.

Existing RECO Models

While the form and scope of the existing RECOs varies, they currently share two common elements: (1) a prescriptive list of energy efficiency and water conservation measures with which the property owner must comply and (2) an verification inspection by a certified private, City, or State inspector to verify the efficiency/conservation measures have been properly installed. In the City of Berkeley, the inspection is provided by a community-based nonprofit organization. Typically the property owner is responsible for scheduling and paying for the inspection.

Checklist upgrades: RECOs traditionally include a prescriptive checklist of upgrades such as attic insulation, duct sealing/insulation, insulation of the water heater and hot water pipes, and water conservation measures.

Funding: The funding for the RECO improvements is typically provided by the seller and calculated as either (1) a percentage of the sales price, (2) a set spending cap per unit, or (3) a per square foot rate. In addition there may be a filing fee in the range of \$15 to \$50.

Implementation: In some existing point-of-sale RECOs the responsibility for implementing the upgrades can be negotiated between the seller and buyer. Typically where the buyer assumes responsibility for implementing the upgrades, he/she will have up to one year to complete the RECO improvements.

Cost to government: Because most RECOs charge a small filing fee and rely on independent inspectors whose services are paid for by the property owner, there has been little to no impact on government budgets.

Energy savings results: There is a lack of information about the energy savings results for most current programs because tracking the before and after energy use is not within the scope or budget of the RECOs. However, San Francisco reports an average energy efficiency increase of 15 percent.

New Tools for Developing RECO Models

Just about the time the first RECOs were established, the federal government initiated its Energy Efficient Mortgage (EEM) program, which was administered by the Federal Housing Administration (FHA) and Veterans Administrations (VA). This mortgage program is available for home purchase and refinancing and may be a re-

source for expanding the home buyer budget for RECO compliance.

Designed for first-time and low-to-moderate home buyers, the FHA programs have a mortgage cap (Sonoma County: \$520,950 one-family, \$666,900 two-family, \$806,105 three-family, \$1,001,850 four-family) and include energy efficiency upgrade requirements; however, there are no income limits and the program is open to all applicants.

The EEM program allows the home buyer/home owner to add to the mortgage 100 percent of the cost of the eligible, "cost-effective" energy improvements up to \$8,000. (The FHA is considering increasing the EEM limit in 2009.) EEMs only fund the energy efficiency upgrades whose savings potential is greater than their cost.

Residences with from one to four units are eligible for EEMs, which can be applied to home purchase, refinance, and second deeds of trust. In addition, the interest on EEMs is tax deductible.

There are two types of EEMs: the *Energy Efficiency Mortgage* for new construction or older homes renovated for energy efficiency and the *Energy Improvement Mortgage* for older homes that need an energy retrofit.

Energy Efficient Mortgage Model

Energy Improvement Mortgages require the following elements:

- A Home Energy Rating System (HERS) home analysis (a national home energy rating system)
- Signed retrofit contract(s) before the close of escrow
- Completion of the retrofit within three months of closing escrow
- Funds are paid out by the escrow company directly to the contractors upon verification by the HERS rater that the work is complete

In the HERS report, the EEM borrower receives a list of energy efficiency upgrades prioritized by their cost-effectiveness (comparing the cost to install with the estimated energy savings for each upgrade).

The EEM model offers two effective tools: (1) the HERS rating, which provides a game plan and cost-effective data for the house, and (2) the escrow fund strategy that reserves the retrofit funds and makes payment only after the work is certified as properly completed.

Home Energy Rating Service (HERS)

This national home energy analysis program was founded to provide EEM borrowers with a complete list of needed energy upgrades specific to the subject house and cost-effectiveness data to ensure implementation of upgrades that would produce sufficient energy savings to

offset the cost of financing. A HERS rating includes a site visit, inspection of the home, collection of site data, optional testing for building and duct system leaks, and a report. The field data and contractor bids are processed by a software program that calculates the projected energy savings and eligible cost-effective upgrades.

New California HERS program: Before 2009, the California HERS program only covered inspections of new construction and the replacement of heating/cooling systems in existing homes to verify the work complied with California Energy Code (known as Title 24). In December 2008, the California Energy Commission (CEC) adopted a new HERS-2 program for the EEM-style whole-house analysis of existing homes, which goes into effect in July 2008.

HERS-2 provides an important tool for local policy makers because its standards and methods are well-vetted by the CEC, comply with the national HERS program, and offer a reliable and consistent assessment program, as well as a financial planning tool for borrowers.

Assembly Bill 811

In July 2008, the State legislature passed Assembly Bill 811 (AB811), which allows local governments to lend money to property owners for energy efficiency and renewable system installation and pay back the loan through his/her property taxes. This funding source also offers home buyers in communities with a RECO ordinance a third funding source with which to expand their energy efficiency retrofit budget for RECO compliance.

There are currently three AB811 programs in development: two public programs from the County of Sonoma and the State of California and a private-sector program from the Green Energy Program.

Putting It All Together

Where traditional point-of-sale RECOs rely on limited funds provided by the seller, the new availability of EEMs and AB811 loans offer home buyers additional options to expand their energy retrofit budget beyond mere RECO compliance.

The HERS-2 program provides local governments and home owners with a reliable energy analysis process that can make it easier to choose an upgrade package that yields the best cost-effectiveness and GHG reductions.

Resources

Reiss, Rachel. Consideration of a Residential Energy Conservation Ordinance (RECO) for Boulder, Colorado," City of Boulder OEA, edited by Josh Radoff. 06/20/07."

http://www.recaonline.com/docs/arc/arc2008/PointofSale_BoulderCO.pdf

Cone, Chris. "Green Homes 101: What Are They? Who Wants Them? How to Finance?" 01/27/09.