



# Energy Conservation

## 21 Elements

June 6, 2014

Housing Elements are required by the State of California to include an Energy Conservation section that provides “an analysis of opportunities for energy conservation with respect to residential development” (Government Code Section 65583(a)(7)).

This section presents some background on California's energy conservation efforts, introduces several notable PG&E programs, and offers some potential policy suggestions. These policies and programs can be integrated into your Housing Element to meet the Energy Conservation requirements.

### **Background**

Energy costs have increased significantly over the past several decades, and climate change concerns have increased the need and desire for further energy conservation and related “green building” programs. Buildings use significant energy in their design, construction and operation. The use of “green building” techniques and materials can reduce the resources that go into new construction and can make buildings operate much more efficiently. One common definition of “green building” is “design and construction practices that significantly reduce or eliminate the negative impacts of buildings on the environment through energy efficiency and renewable energy, conservation of materials and resources, water efficiency, site planning and indoor environmental quality.”

### **State Codes and Guidelines**

The following section is a brief introduction to California's Green Building Codes. The State of California is a nationwide leader in sustainable building practices.

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Written into the State Building Code are several sets of requirements and guidelines to facilitate the production of more environmentally friendly buildings.

Part 6 of Title 24 of the California Code of Regulations sets forth mandatory energy standards for new development, and requires adoption of an “energy budget.” In turn, the home building industry must comply with these standards while localities are responsible for enforcing the energy conservation regulations. In 2011, California added the California Green Building Standards Code (CALGreen) to the state’s official building code. CALGreen is a new set of building codes, some mandatory, and some voluntary, for all new buildings and renovations. It is the first state level “green” building code to be implemented in the US. Minimum energy conservation standards implemented through CALGreen may slightly increase initial construction costs, but reduce operating expenses and expenditure of natural resources over the long run.

Jurisdictions can use CALGreen standards as a framework to adopt their own mandatory Green building codes, as Brisbane, Redwood City, and San Mateo County among others, have already done.

## **PG&E Programs**

Pacific Gas & Electric (PG&E) provides power for all jurisdictions in San Mateo County. PG&E offers variety of energy conservation services for residents that help save money while moving towards greater sustainability, including energy assistance programs for lower income households, which help qualified homeowners and renters, conserve energy and control electricity costs. By publicizing these programs, jurisdictions can help residents make their homes more energy efficient.

PG&E provides customers with information about their energy usage through programs like the Home and Business Area Network (HAN) and the Smart-Rate Add-on. These programs are designed to identify peak energy use times and unnecessarily energy-consuming appliances, to assist consumers in making energy-saving and money-saving decisions. Through Energy Upgrade California, PG&E also offers homeowners up to \$4,500 in rebates for implementing energy-saving home improvements. PG&E also has launched the Zero Net Energy Pilot Program (ZNE) to move towards all new residential construction be zero net energy by 2020, and all commercial construction by 2030.

PG&E also participates in several other energy assistance programs for lower income households, which help qualified homeowners and renters, conserve energy and control electricity costs. These include the California Alternate Rates

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for Energy (CARE) Program and the Relief for Energy Assistance through Community Help (REACH) Program. The CARE provides a 15 percent monthly discount on gas and electric rates to income qualified households, certain non-profits, facilities housing agricultural employees, homeless shelters, hospices and other qualified non-profit group living facilities. The REACH Program provides one-time energy assistance to customers who have no other way to pay their energy bill. The intent of REACH is to assist low-income customers, particularly the elderly, disabled, sick, working poor, and the unemployed, who experience severe hardships and are unable to pay for their necessary energy needs.

NOTE: JURISDICTION SHOULD ADD A DISCUSSION OF LOCAL PROGRAMS IMPLEMENTED AND NUMBER OF UNITS SERVED OVER THE PAST SEVERAL YEARS. THIS WILL ALSO PROVIDE TARGETS FOR THE 2015-2023 HOUSING ELEMENT PLANNING PERIOD PROGRAMS. JURISDICTIONS SHOULD ALSO DISCUSS OUTREACH AND MARKETING PROGRAMS.

## Potential Best Practices

Below are sample best practices that promote sustainability and energy conservation. In some cases, programs can apply to both new and existing developments.

**Program 1. Adopt a green streets/complete streets and green parking lots code.** As of 2011, jurisdictions are required to plan for “complete streets” as a result of the Complete Streets Act (AB 1358) or face ineligibility for certain funds. Current street standards are often designed more for cars than for pedestrians, cyclists or public transportation. The Complete Streets Act mandates that jurisdictions incorporate pedestrians, cyclists, and public transportation into their Circulation Element. Jurisdictions can go above and beyond the mandates by including green standards for surface parking lots to assist with storm water drainage.

**Program 2. Allow minor zoning variations to promote sustainable energy or other environmental goals.** Green building requires being sensitive to local conditions and can affect design and site planning decisions. It can be desirable to allow minor variations to the zoning code to allow increases in efficiency.

**Program 3. Offer a density bonus for green projects.** To compensate for the increased cost of green building, offer a density bonus for outstanding projects.

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**Program 4. Strengthen sustainable building code.** Require new residential development and rehabilitation projects to incorporate sustainable building design and siting, construction and operation. Sustainable green building means development design, construction and operation that reduces energy consumption, particularly reduction in the use of fossil fuels and potable water; incorporates alternate and renewable energy sources and recycled water; provides more natural light; reduces storm runoff; uses renewable, local, salvage and nontoxic building materials; reduces use of non-recyclable materials and promotes recycling; and improves indoor air quality. Specific examples include requiring the use of low- or no-VOC paint, wood finishes, and adhesives or increasing efficiency standards beyond CALGREEN requirements.

**Program 5. Provide expedited review of green projects.** Prioritize review and permitting for projects that meet certain green building standards. In San Mateo County, buildings that meet minimum green standards are already eligible for expedited permitting and processing. However, jurisdictions can expand on this policy by requiring more strict green standards.

**Program 6. Create a program to provide free or low-cost energy audits and weatherization for homes.** Partner with nonprofits if appropriate. Often, weatherization (fixing leaks, caulking, etc) is the most cost effective way of greening a building. Programs can also provide jobs for local residents. If the program is targeted towards low income residents, the lower heating and cooling costs can often help promote affordability. PG&E already provides many of these programs (see above), so jurisdictions can also better publicize these programs.

**Program 7. Form a solar power tax district to allow residents to get down payment assistance for solar panels, and repay the cost over time through an increase in their taxes** ([see Berkeley authorizing legislation](#)). This is a new and innovative way to help offset the initial cost of installing solar panels or completing other improvements. Residents who apply can receive a loan to improve the energy efficiency of their homes or add solar panels. They pay back the loan through an increase in their taxes (which is offset by their decreased electric bill). The tax district only affects residents who choose to participate (or opt-in). Additional policies, such as forbidding that trees grow over solar panels, may be useful here as well.

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**Program 8. Develop minimum green building standards for all municipal buildings** ([see sample policy from City of Long Beach](#)). Cities can lead by example and require all new city buildings or major retrofits to meet green building standards. There is often savings for the city in the long term through decreased operating costs.

**Program 9. Require energy audits and retrofits before resale of homes** ([see sample ordinance](#) from Berkeley). “Time of Sale” requirements can be an effective way to green a community, without having an excessive burden on home owners. Often, ordinances have an exemption for hardship.

**Program 10. Develop a program (or continue efforts) to rehabilitate rental and owner housing.** Rehabilitate substandard residential units for extremely low, very low and low income renters and owners using available subsidies in addition to code enforcement. ([see Green Rehab guide by Bay Area LISC](#)) Such rehabilitation programs focus health and safety improvements including improved energy conservation. Actively market rehabilitation programs and encourage public-private partnership rehabilitation programs.