

# Investing in the Future

California's updated energy efficiency codes for buildings

## Energy and Buildings: By the Numbers

RESIDENTIAL BUILDINGS  
ACCOUNT FOR

**1/3**

OF CALIFORNIA'S  
ELECTRICITY USE

BUILDINGS  
PRODUCE

**25%**

OF GREENHOUSE GAS  
EMISSIONS IN THE STATE

BUILDINGS ARE  
ONE OF THE

**TOP 3**

LARGEST SOURCES  
OF EMISSIONS

## What are California's energy efficiency codes for buildings?

- Every three years, the California Energy Commission updates the state's energy codes, also called the building energy efficiency standards (Title 24).
- The updates encourage cost-effective energy efficient technologies in new construction that save Californians money while reducing pollution.
- Right now, the California Energy Commission is preparing to adopt the newest codes for residential buildings, set to go into effect in 2020.

## California is building the homes of the future, today

Homes built to the new codes will:



### **BE EXTREMELY ENERGY EFFICIENT**

New homes will feature high efficiency windows, appliances, and lighting and heating.



### **HAVE SOLAR POWER**

All eligible residential buildings and homes will have access to renewable energy resources, such as rooftop solar.



### **INCENTIVIZE SOLAR + STORAGE**

In some cases, the rules will allow a limited trade-off between solar + storage and efficiency. The credit is meant to help incentivize on-site energy storage for individual households, an essential tool for achieving emission reductions.

### **Encouraging All-Electric:**

*Provisions in the code will encourage more electricity use and all-electric homes to reduce natural gas consumption. Technology such as electric water heaters are becoming increasingly cost effective.*

# Who benefits from building energy efficiency codes?

## HOMEOWNERS

- Having options to minimize the ongoing costs of homeownership is an important factor in whether people buy homes. Housing affordability isn't just about managing mortgage payments. It's also about ensuring the costs of living in a home—keeping the water hot and temperature comfortable—don't cost so much that you can't afford your monthly payments.

### CASE STUDY:

A family of four spent an average of **\$25 per month on electricity bills**, according to a [PG&E study](#) of a house in Stockton built to previous codes. The house had solar PV, which offset 56.3% of the house's energy - including gas.

The 2019 code will **save families even more money**.

## UTILITY CUSTOMERS

- Strong energy efficiency standards reduce energy demand and help utilities avoid costly upgrades and power outages.

## LOW-INCOME COMMUNITIES

- As a percentage of income, low-income households **spend twice** as much on energy costs than the state-wide average - even though their homes are generally smaller and less thermally comfortable.
- After paying rent and utilities, **75 percent** of extremely low-income people have less than half of their remaining income to cover all other needs.
- If low-income housing were to become just as efficient as the average U.S. home, low-income households' energy burden would be reduced by at least 20 percent.

## HOME SELLERS

- California homes with an energy efficiency certification sell at a **premium** of 2 percent to 5.3 percent higher than homes without a certification. Energy efficient homes also sell an average of 18 to 89 days faster.

## LOCAL ECONOMIES

- Spending less on energy means people have more money to spend locally, improving the local economy, creating local jobs, and catalyzing local investment.
- If you spend a dollar on energy, only 28 cents stays in the local community. But when you spend a dollar on other kinds of expenses, an average of 75 cents stays in the **local economy**.

# New codes to save Californians \$1.7 billion

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## The building energy efficiency codes are required to be cost-effective

(Meaning, any costs associated with the technology needs to pay for itself in energy savings)

- A home built to the 2020 update will save homeowners an estimated \$6,000 over the lifetime of the house.
- These savings estimates are modest and do not take into account:
  - **The falling price of technologies**, which will likely bring the costs of efficiency and solar energy down even further.
  - **The warming climate**, which will increase cooling demands.
  - **How the house is built**. Some contractors find that building efficient houses use less material, **offsetting** additional costs.

## Why make homes more energy efficient?

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### Energy efficiency is our cheapest energy resource

- Energy efficiency prevents the need to produce additional energy from fossil fuels.
- Energy efficiency programs cost utilities **two to three times less** than generating additional energy and results in tangible consumer savings every month.

### Energy demand is increasing; Energy efficiency helps

- Due to the state's growing population and rising temperatures driven by climate change, residential electricity demand in California is likely to increase.

L.A. County could see as much as a **47%-87% increase in its electricity demand** between 2020 and 2060 **without** policy intervention (*Reyna & Chester, 2017*).

- Average demand for cooling is projected to double in many parts of California by mid-century. (Cal-Adapt, 2018; Petri & Caldeira, 2015).
- Becoming energy smart means we don't need to spend more on electricity or build more costly power plants.

### California is required by law to become more energy efficient

- California has an ambitious goal to reduce our greenhouse gas emissions to 40 percent below 1990 levels by 2030 (SB 32).
- To help achieve this goal, the state aims to double the energy efficiency of buildings by 2030 (SB 350).