

Carbon Smart Construction



The construction and operation of buildings accounts for about 40% of the global carbon emissions contributing to climate change. Build Carbon Smart to reduce your impact!

ENERGY EFFICIENCY AND RENEWABLES

The burning of natural gas, and of coal to make electricity, directly emits carbon dioxide and other greenhouse gases into the atmosphere. Making your home more energy-efficient is a great way to reduce your climate impact. Whether you're building new or upgrading an existing home, start with air-tight and well-insulated floor, wall and roof systems. Install high efficiency electric mechanical systems and appliances and then add a source of renewable energy, like solar PV, to meet as much of your energy needs as possible.



MATERIAL SELECTION

The selection of materials is a key factor in reducing the carbon footprint of a building. Materials represent an up-front carbon impact, and time is a critical factor in our efforts to address climate change. Select materials with low embodied energy and carbon by looking for local, regional, reclaimed, recycled and sustainably harvested materials. There are even materials, like cellulose insulation, that are carbon-negative and sequester carbon in the building! Environmental Product Declarations and life cycle analysis software are great tools for analyzing the impact of specific materials.



HOUSE SIZE

In the past four decades, average home size has increased by 1000 square feet. Larger homes require more material to build, with corresponding increases to carbon emissions, and they also use more energy to heat and cool. Decreasing house size if you're building a home, or choosing a smaller home to live in, will lower your climate impact.



REFRIGERANTS

While the use of refrigerants is small compared to the burning of fossil fuels, they are still important to consider for climate change mitigation. The reason is their potency. The most common refrigerant today, R-22, has a global warming potential (GWP) almost 1800 times that of carbon dioxide! New refrigerants available now have much lower GWPs. The [Climate Friendly Cooling Campaign](#) maintains a database of refrigerators, air conditioners and other appliances that are Energy Star qualified and also utilize these lower-impact chemicals.



COMMUNITY CONNECTIVITY

Location, location, location! isn't just important for business traffic, it is also important for climate impact. Siting your home near your workplace, shopping and the activities you enjoy will reduce the carbon footprint associated with necessary travel. Locations that make alternative methods of transportation like biking, walking or taking the bus feasible are also desirable.



WATER EFFICIENCY

Though water usage itself doesn't emit carbon gases, the process involved in getting drinking water to your tap does. It takes energy to pump, treat and distribute water. Reducing your water usage by installing [WaterSense](#) fixtures and [Energy Star](#) appliances and reducing the need for landscape irrigation will reduce your climate impact.

RESILIENCE

The climate is already changing. Anticipated impacts to our community include: greater risk of wildfire with corresponding flood danger, longer and hotter summers, and more severe drought conditions. Our efforts toward reducing our impacts on the climate are important, and efforts toward adaptation are also needed. Some important resilience-building measures are making your home and property [Firewise](#), siting your home away from flood-prone areas and adding to the local food supply by gardening.

