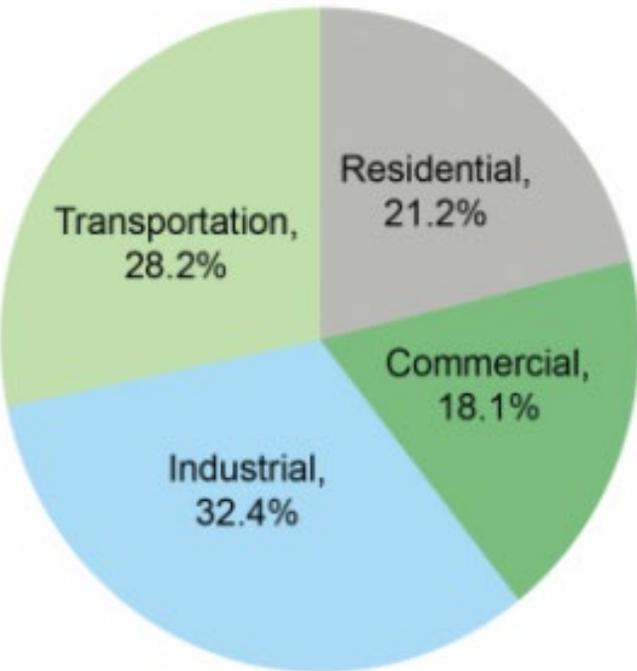


What is the purpose of energy codes and standards?



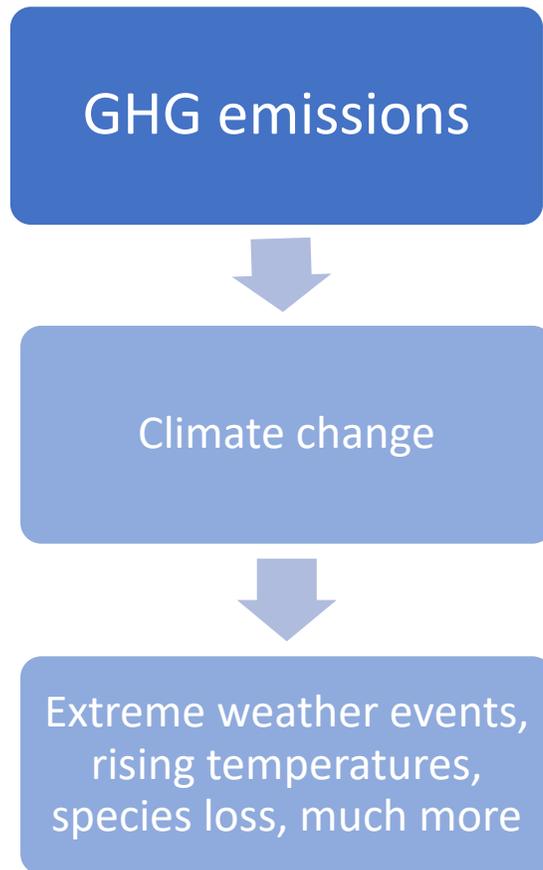
# Buildings consume nearly 40% of the nation's total primary energy

Many buildings are inefficient, wasting billions of dollars in energy costs for homes and businesses

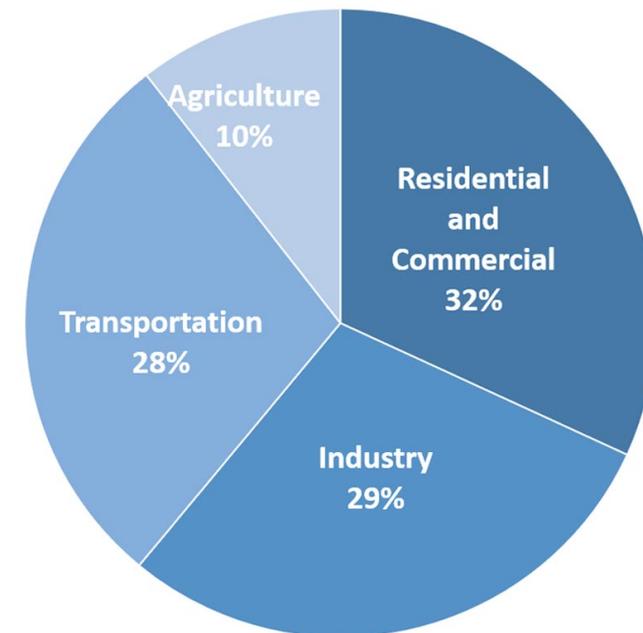


Source: U.S. EIA (2020) Monthly Energy Review April 2020.

# Building energy use makes up 32% of total U.S. greenhouse gas emissions



Total U.S. Greenhouse Gas Emissions by Sector with Electricity Distributed



U.S. Environmental Protection Agency (2020). Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2018

Source: U.S. EIA (2020) Monthly Energy Review April 2020.



# Energy codes: An opportunity to design for efficiency

- It's easier and less expensive to make a building efficient from the start, rather than trying to make it more efficient later.
- Upfront design and construction decisions largely determine a building's efficiency.



# Building energy codes and standards help make buildings more efficient

- Building energy codes and standards govern up to 80% of a building's energy load.
- Meeting or exceeding code requirements leads to significant energy cost savings over life of the building.





# Building energy codes are a cost-effective way to reduce emissions

Efficiency is the most cost-effective solution to reduce emissions in the power sector.

Efficiency can account for nearly half of emissions reductions needed.

Efficiency is poised to help states and utilities meet ambitious climate goals.

Out of all of the actions that municipalities take to reduce emissions, enforcing building energy codes has the greatest impact.



# Building energy codes foster economic growth by helping businesses reduce operating costs

A typical commercial building can reduce energy use by 30-50% with energy efficient designs



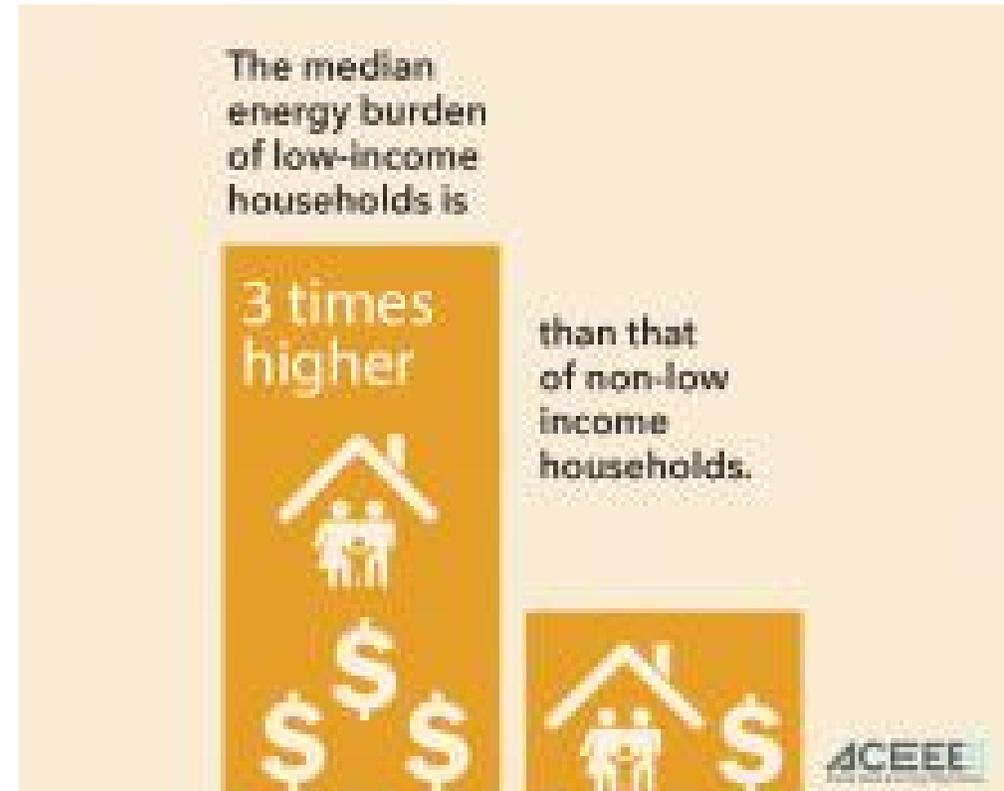
Building energy codes help schools reduce utility bills, saving money for supplies and salaries.

“In many school districts, energy costs are second only to salaries, exceeding the cost of supplies and books.”  
-US Department of Energy



# Building energy codes help reduce energy burden for households

Energy burden = the portion of your income you spend on energy bills.



# Building energy codes can contribute to electric grid reliability

Consuming less electricity =  
less demand on electric grid

One main purpose of utility  
energy efficiency programs is  
to reduce demand on the grid.



# Building energy codes and standards bring additional benefits

- Increased building comfort
- Reduced maintenance needs
- Improved health and safety



# Myth: It doesn't pay off to comply with the energy code

It depends upon if you consider **initial** costs or costs over the **building's lifespan**.

Energy code requirements may bring a modest increase in initial construction costs



But they bring big energy bill savings and reduced maintenance over the lifetime of the building.

Discussion: Is the initial investment worth it?

# Myth: It costs more to comply with the energy code

This is true in some cases.

In other cases, constructing an **efficient** building is similar in price to constructing an **inefficient** building.

Why?

Efficient buildings leak less, take advantage of local climate



Heating and cooling systems don't need to be as extensive to provide comfort.

Discussion: What are other examples of how energy efficient construction might cost less?

**Myth:** Customers care about first costs, not energy savings. I'll lose business if I comply with the energy code.

Most customers welcome designs that are efficient, comfortable, and that save money in the long run.

Complying with the energy code could give your business a competitive advantage.



**Myth:** The energy code will prevent me from building the kind of home/office I want to build.

The Energy Code is not intended to **prevent** the installation of any material or to **prohibit** any design or method of construction.

But it will help you **avoid inefficient designs** that you may have to fix later.

