Environmental Impact of Buildings*

- 65.2% of total U.S. electricity consumption \(^1\)
- > 36% of total U.S. primary energy use \(^2\)
- 30% of total U.S. greenhouse gas emissions \(^3\)
- 136 million tons of construction and demolition waste in the U.S. (approx. 2.8 lbs/person/day) \(^4\)
- 12% of potable water in the U.S. \(^5\)
- 40% (3 billion tons annually) of raw materials use globally \(^6\)

* Commercial and residential

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**COLORADO, UTAH**

Population Growth, 1940 to 2025

Source: U.S. Census Bureau
New Goals

Encourage the use of products, technologies and practices that will:

- Provide energy efficiency, reduce atmospheric pollution
- Protect and improve indoor air quality
- Conserve water
- Preserve natural resources, reduce waste
- Result in durable, comfortable, low-maintenance homes
- Educate the homeowner

Green Labeling Programs in Utah for New Construction
The Rise of the Eco Label
Eco Label Goals

- Identify consumer products that avoid detrimental impacts on the environment and human health.
- Stimulate specific market activities for businesses and product manufacturers.
- Redirect consumer behavior.
- Provide the market with an measure of sustainability that allows for market differentiation vis-à-vis non-labeled products.
- Other goals you can think of?

Green Labeling Programs in Utah for New Construction
U.S. Department of Energy & Environmental Protection Agency
ENERGY STAR Program

www.energystar.gov/homes
What is an ENERGY STAR home?

• Focus on energy efficiency and reduced emissions.

• When compared to a reference house, an ENERGY STAR qualifying home saves 2,501 kWh/year, 171 therms/year, 5,823 lbs CO2/year.
Compliance Methods

- **Performance Path**
  - Requires a home energy rating that results in a HERS Index Score
  - Flexibility in choice of energy components of the home
  - Performance testing

- **Prescriptive Path**
  - Menu of required specifications to meet ENERGY STAR. No flexibility.
  - Performance Testing