

MAY 2022



BUILDING A BETTER FUTURE

HOW BUILDING CODES CAN HELP US FIGHT
THE CLIMATE CRISIS

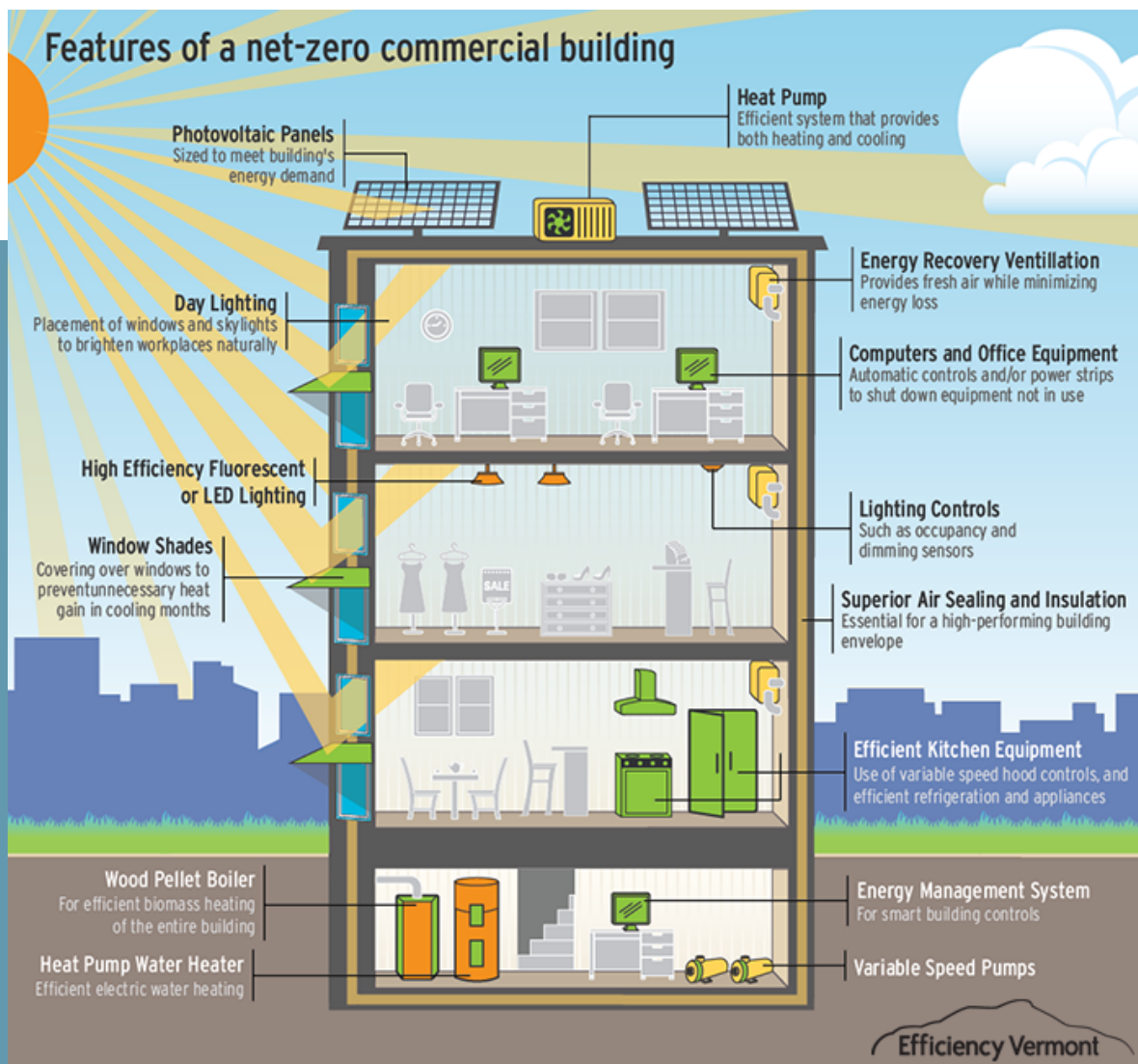


BUILDINGS AND CLIMATE CHANGE



Building design is critical to long-term housing affordability, public health protection, and reducing greenhouse gas emissions. Buildings account for almost **one-third of global carbon emissions**. In the U.S., 43% of total energy use is for heating and cooling buildings, and the residential and commercial sectors are responsible for about 13% of greenhouse gas emissions.

When a building or home is built or renovated, **building codes** (the standards for building or renovating the structure) determine how much energy that building will need every year. It's critical that buildings are built to be as efficient as possible **from the start**.



ENERGY-EFFICIENT BUILDING CODES SET A BASELINE FOR ENERGY USE IN NEW AND RENOVATED BUILDINGS.

Energy-efficient building codes help reduce energy use in new and renovated buildings. These codes can include requirements for improved insulation, energy-efficient windows, and better systems to heat or cool a home or business.

Typically, effective energy codes should reduce energy use, reduce energy costs over the lifetime of the building or home, and reduce indoor air pollution and climate-changing pollution. Montana should adopt updated and modernized building codes that conserve energy, keep people safe, and save residents and businesses money in the long term.

UPDATING MONTANA BUILDING CODES

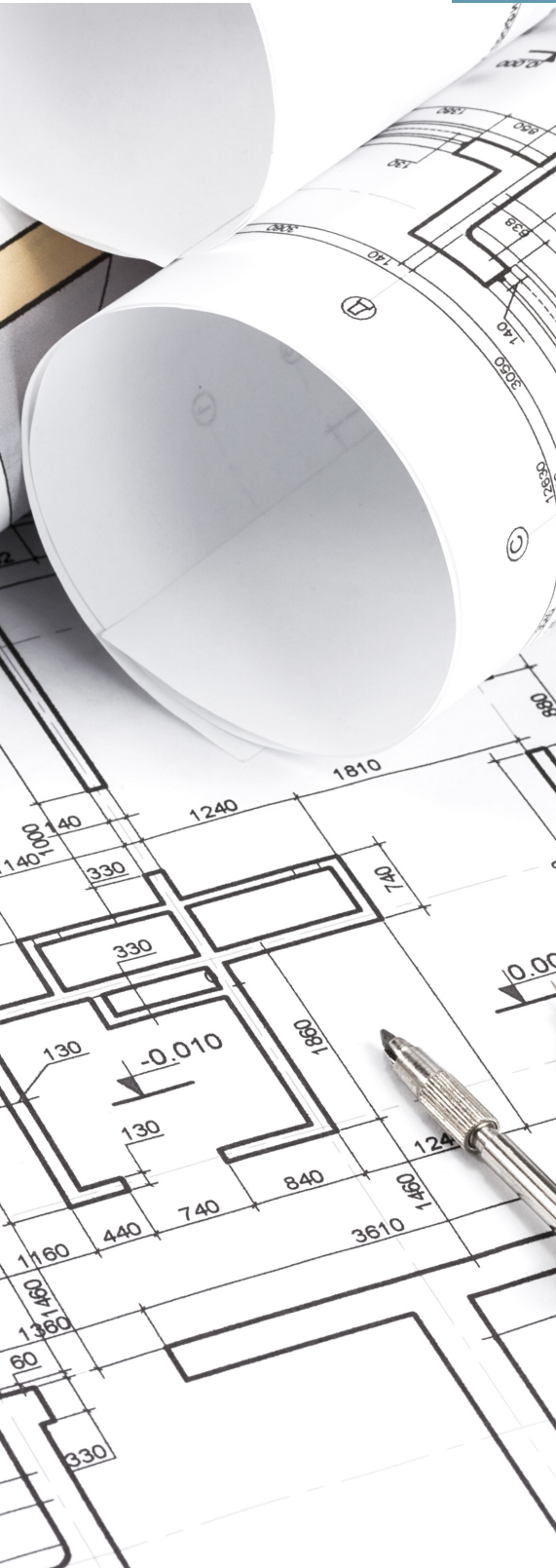
The Montana Department of Labor and Industry's (MDLI) proposed updates to the state building code include a number of positive changes to the building codes, including incorporating the 2021 International Energy Conservation Code and allowing local jurisdictions to implement certain "stretch codes," in addition to the base code.

For example, MDLI's proposed rules allow certified jurisdictions to adopt solar-ready residential codes (meaning new construction electrical systems and roofs must be ready to accommodate solar), solar-ready commercial zones, and zero-energy commercial code provisions (requiring new commercial buildings to offset energy consumption with renewable energy). These stretch codes would allow ambitious communities to use local government powers to accelerate the clean energy transition.

However, the proposed amendments do not allow stretch codes for residential buildings. Given that residential buildings are the most common and use the most aggregate energy, we feel that this is a massive oversight.



UPDATING MONTANA BUILDING CODES (CONT.)



There are a variety of stretch codes that MDLI could adopt. The Department of Energy's (DOE) Building Energy Codes Program has developed numerous model stretch codes related to advanced energy in buildings, any and all of which could be adopted by the State, at no cost. The MDLI is not responsible for enforcing the stretch codes adopted by local governments. Adopting stretch codes simply provides the option for local governments to go above and beyond the base code. Under Montana law, local government cannot pass code more stringent than the state's.

Some stretch codes we are advocating for include:

- EV Charging Readiness Code
- Grid-interactive Efficient Buildings Code
- Electric Readiness Code

Links to these can be found on the References page.

If you agree, email buildingcodes@mt.gov to submit a comment. The deadline for comments is May 13. You can also send a message through MEIC's website: www.meic.org/action-center.

BENEFITS OF UPDATED CODES:

Cost and savings.

Montanans' monthly electricity and gas bills are based on their use of electricity and gas. The 2021 Code requires high-efficiency lighting sources, which require less energy and can lower utility bills. Since lighting represents 20% of a home's energy expenses, more efficient lighting allows residents to save money on electricity.

Avoiding costly retrofits.

Retrofitting a building's existing lighting, HVAC system, or plumbing is expensive and time-consuming. However, if a building is designed following energy-efficient codes, homeowners may be able to avoid costly retrofits altogether.

Affordability and equity.

30% of Montanans rent their homes and have little input on improvements to their rented spaces. Buildings that are built to higher energy efficiency standards lock in savings for everyone. The 2021 Code increases the thermal resistance of insulation, which will retain more heat in the winter and lower costly heating bills (R.402.1.3).

Health and safety.

Buildings must be designed so owners can easily switch to electricity. Gas burned in furnaces, water heaters, and for cooking emits dangerous pollutants. Electrification of our energy supply is better for public health.

Jobs and prosperity.

Designing and building energy-efficient buildings can create jobs throughout Montana. Adopting new building codes keeps the construction workforce competitive when it comes to the latest design strategies and technology applications in the building sector.

REFERENCES

<https://www.energycodes.gov/stretch-codes>

https://www.energycodes.gov/sites/default/files/2021-07/TechBrief_EV_Charging_July2021.pdf

https://www.energycodes.gov/sites/default/files/2021-10/TechBrief_GEB_Oct2021.pdf

https://www.energycodes.gov/sites/default/files/2022-02/TechBrief_Electric_Readiness_Oct2021_v3.pdf