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Report: Utah Building Code Upgrades Would Yield Better Air Quality into the Future

Higher Costs of More-Efficient Homes Counterbalanced by Energy Savings

(August 16, 2022) – Today, the Utah Foundation releases *To a Higher Standard: Building Codes, Improved Efficiency and Air Quality in Utah.* Utah has kept up to date on commercial building code standards, but it has maintained older residential building standards that fall short of more efficient building practices. The report explores possible new standards with an eye toward air quality, examining costs and benefits.

Among the findings of the study:

- Driven by Utah's rapid population growth, over 12% of Utah's homes have been built since 2010 – a far greater proportion than the U.S. average. With a robust pace in new residential and commercial construction expected to continue, there is a unique opportunity to build in a manner that reduces each structure's pollution emissions. The payoff is long-term, with many of these buildings maintaining reduced emissions far into the future.
- Heating air and water for residences and commercial buildings accounts for around 6% of winter inversion emissions for most Utahns; during other seasons and for Utahns living off the Wasatch Front, these emissions are a smaller proportion of local emissions.
- Given the regional variations in air quality issues related to area source emissions, the State might explore whether relevant variations in building codes are appropriate.
- The 2021 energy efficiency building standards are set for review by the Utah Legislature for adoption, rejection or amendment during the 2023 General Session.
- The main arguments for updating the energy efficiency standards in the building code include: lower utility costs for residents, better air quality, and an increase in Utah employment. The main points of opposition include: new homes are only a small part of the problem, home costs are too high already, and the government is getting too specific in its building mandates.
- A study of updating the Utah commercial code suggests a substantial savings in energy costs and commensurate emissions reduction, and most buildings would experience a decrease in per-square-foot initial construction costs due primarily to the need for a smaller heating and air conditioning systems.
- Studies of updating Utah residential code show life-cycle cost savings that appear to justify a full implementation of the 2021 energy efficiency standard.
- Our analysis suggests that each home built to the 2021 energy efficiency standard would see emissions related to natural gas usage decrease by about one-third compared to homes built to current Utah code.
- The cost of implementing the 2021 energy efficiency standards would be between 0.4% and 0.7% of a new $600,000 home (under $5,000). In terms of household cash flow, initial costs

would be recouped within two or three years. These homes would see a one-third annual reduction in local emissions – and a larger reduction during winter months.
- There is a standing energy efficiency loophole in Utah's building codes that is used with such frequency that it undermines any code update. It also creates transparency issues.
- Since the 2000s, the independence of Utah's Uniform Building Code Commission has diminished. Observers say that energy efficiency code adoption that affects air quality has become a much more political process.

Utah Foundation President Peter Reichard said the rapid pace of new development offers the opportunity to promote greater air quality stewardship. Builders may play an important part in a cleaner air Utah. "If we build with higher efficiency now, it will pay dividends into the future," Reichard said. "New construction is an important front in Utah's ongoing offensive against poor air quality."

To a Higher Standard is available on the Utah Foundation website at https://www.utahfoundation.org/reports/to-a-higher-standard-building-codes-improved-efficiency-and-air-quality-in-utah/.

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