

Understanding Costs and Impacts of Energy Performance Mandates for Buildings

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Legislators have drafted an energy benchmarking and performance mandate bill for the 2021 session, targeting commercial buildings over 50,000 ft². The bill proposes an energy-use-and emission-reporting program, known as benchmarking, along with mandates for energy reduction to be met by as early as 2026.

[View the Full CSI Report Here](https://commonsenseinstituteco.org/understanding-costs-and-impacts-of-energy-performance-mandates-for-buildings/) - <https://commonsenseinstituteco.org/understanding-costs-and-impacts-of-energy-performance-mandates-for-buildings/>

For covered buildings, the path to compliance and associated costs are largely unknown as stated in the *Colorado Greenhouse Gas Pollution Reduction Roadmap*.

"While state and local governments and utilities are seeking to decarbonize their building stock, it is challenging to set energy or emissions reduction targets without an understanding of how buildings are performing currently." – Colorado Greenhouse Gas Pollution Reduction Roadmap, 2021

Summary of Report Key Findings: Performance Mandates

The current draft benchmarking and performance standards bill would set energy-use reduction requirements before any data is produced suggesting what the unintended consequences, costs, or even benefits might be.

- 45% of commercial building owners included in recent survey, conducted by CSI and the Colorado Real Estate Alliance (CREA), indicated that they either cannot or are unsure if they can meet any of the performance targets prescribed by the building benchmarking draft legislation by making investments with a positive financial return. Some common reasons provided included:
 - Energy efficiency projects with positive ROI have already been exhausted,
 - The existing and likely long-term impacts of COVID-19 on tenants makes large new expenses much more difficult and sometimes impossible to afford,
 - Requiring a minimum Energy Star score presents compliance challenges, since each building's score is determined based upon a ranking among all peer buildings nationally,
 - Because Energy Star will update their scores based upon its latest survey, high scores may be more difficult to achieve after the performance standards go into effect than they are now, and
 - Some tenants control their own energy usages and may not care to assist their buildings' compliance.

Summary of Key Findings: Building Electrification

Though the draft benchmarking and performance legislation does not directly prescribe building electrification, it is part of a broader effort to encourage it. Much deeper study is required to thoroughly identify its costs and consequences.

- Until Colorado's electric grid becomes clean enough, large-scale building electrification would increase the state's total emissions. In 2019, Colorado's electric utilities emitted 178% more CO₂e than the average of residential, commercial, and industrial buildings for each equivalent unit of energy they generated.
- The extent to which local utilities can support rapid increase in commercial building electrification is limited. Analysis from Xcel Energy of residential electrification indicated that a rapid shift to electrification would force the electrical grid to increase its capacity by over 50% and cause rates for natural gas customers to increase by up to 88% over the current average.
- Many commercial buildings lack the physical space required to house electric power equipment and would need structural renovations to accommodate it.
- Many buildings have new power systems with many years of usable life left.

Conclusion

Without comprehensive data collected through reporting or some other means, understanding the aggregate economic impacts and net costs of the performance mandates including in the draft benchmarking bill is not possible. Once enough is understood about Colorado's building sectors to begin developing reasonable performance standards, the guiding regulatory effort should be to prioritize targeting promising and cost-effective reductions and to avoid unintentionally penalizing building owners and their tenants.