

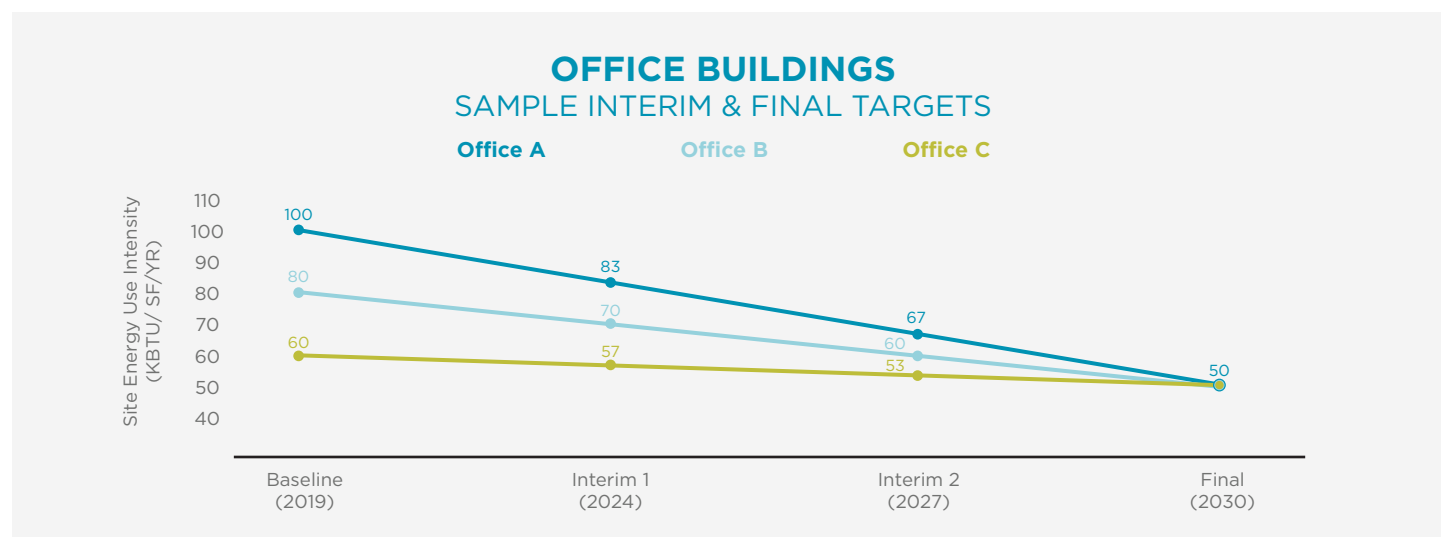


DENVER'S INNOVATIVE BUILDING PERFORMANCE STANDARD LEGISLATION

An estimated 40% of global greenhouse gas emissions comes from the built environment¹. Because the built environment is concentrated in urban communities, cities are playing a major role in achieving the goal of decarbonizing the world². On November 22, 2021, the Denver City Council unanimously passed Bill 21-1310 adopting a comprehensive building decarbonization policy for its existing 17,000 commercial and multifamily buildings. The ordinance has a unique building performance standard involving a “trajectory approach” to be applied to the city’s largest commercial and multifamily buildings, a prescriptive energy requirement for small commercial and multifamily buildings and an innovative electrification requirement for replacement of space and water heaters in all buildings³.

TRAJECTORY APPROACH

Denver’s unique “trajectory approach” to building performance standards for enclosed structures of 25,000 square feet or larger will ensure a maximum site Energy Use Intensity (EUI) goal will be achieved by 2030. The target site EUI for each building type should achieve at least 30% total energy savings across all buildings⁴. Each building will have interim targets to achieve in 2024 and 2027 to confirm it is on track to meet its 2030 goals and to prevent building owners from delaying improvements⁴. The trajectory approach calculates the building’s 2024 and 2027 interim goals by taking its 2019 energy usage and drawing a straight-line downwards to the 2030 established standard. This approach takes into consideration that each building starts at a unique level of performance and has its own trajectory to reach its goal³. It also demonstrates to the building owner where the building’s performance standard should be at any given time. Three hypothetical building performance trajectories are shown in the graph below⁴.



The ordinance does allow prescriptive compliance for the 2024 and 2027 interim requirements for buildings between 25,000 square feet – 100,000 square feet if 70% of space and water heating equipment loads are electrified and the building uses all LED lights.



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SMALLER BUILDINGS

While not imposing building performance standards on smaller commercial and multifamily buildings of 5,000 square feet to 24,999 square feet, Denver's ordinance does apply energy consumption standards at these properties³. The owners of these smaller buildings will be required to certify installation of all LED lights, installation of solar panels, or purchase of off-site solar that generates 20% of the building's annual energy usage. This requirement becomes effective in 2025 and will be phased in based on the building's size as shown in the table below⁴.

Building Size (SF)	Deadline for Compliance
5,000 – 10,000	December 31, 2027
10,001 – 15,000	December 31, 2026
15,001 – 24,999	December 31, 2025

BUILDING ELECTRIFICATION

Denver's legislation uses an innovative approach to achieve building electrification. By modifying its building codes, Denver requires partial or full electrification of replacement space and thermal water heating equipment starting in 2025⁴. Starting this year, all buildings requiring permits for the replacement of gas-fired equipment will require an electrification feasibility report. Financial incentives will be available for specific electrification projects until 2025 for new projects and for replacement of gas-fired equipment³.

Denver's Bill 21-1310 demonstrates how a city can use an innovative approach to mitigate greenhouse gas emissions in the built environment through a trajectory approach for large commercial and multifamily building performance standards,

prescriptive energy requirements for smaller structures and electrification requirements with incentives for the replacement of gas-fired space and water heaters⁴. Property owners and managers can track these decarbonization pathways using ENERGY STAR® Portfolio Manager, the industry-standard platform to analyze property energy performance and to make informed energy decisions to meet these critical deadlines. Using ENERGY STAR® Portfolio Manager, Cushman & Wakefield's Energy & Sustainability Services (ESS) team can assist buildings with complying with these local benchmarking requirements and building performance standards.

WORK CITED

1 The Climate Group: Built Environment. <https://www.theclimategroup.org/built-environment>

2 WRI: Accelerating Building Decarbonization: Eight Attainable Policy Pathways to Net Zero Carbon Buildings For All. <https://www.wri.org/research/accelerating-building-decarbonization-eight-attainable-policy-pathways-net-zero-carbon>

3 IMT: Denver Passes Building Performance Standard. <https://www.imt.org/news/denver-passes-building-performance-standard/#:~:text=Denver%E2%80%99s%20Building%20Performance%20Standard%20and%20the%20Trajectory%20Approach,on%20its%20occupancy%20type%20by%20the%20year%202030>

4 EDTF: Energize Denver Task Force Recommendations. <https://www.denvergov.org/files/assets/public/climate-action/documents/hpbh/energize-denver/task-force/edtf-recommendations-8-31-final.pdf>

5 Cushman & Wakefield: CUSHMAN & WAKEFIELD NAMED ENERGY STAR® PARTNER OF THE YEAR FOR 10th CONSECUTIVE YEAR. <https://www.cushmanwakefield.com/en/united-states/news/2022/05/named-energy-star-partner-of-the-year-for-10th-consecutive-year>

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