

Comparison of U.S. Building Performance Standards

November 2021



	POLICY INFORMATION	DESCRIPTION OF REQUIREMENTS	COMPLIANCE	AFFORDABLE HOUSING PROVISIONS	EXEMPTIONS
Boston MA	<p>Name Building Emissions Reduction and Disclosure Ordinance</p> <p>Year Enacted 2021</p> <p>Covered Buildings All municipal. All commercial and multifamily buildings above 20,000 sq. ft. in size, 15 residential units, or multiple buildings on the same parcels totaling 20,000 sq. ft. or 15 or more units in size.</p>	<p>Performance Metrics Annual greenhouse gas (GHG) emissions (tCO₂e/sq. ft.)</p> <p>Performance Targets/Standards Building targets are set by building type on an emissions intensity basis, each building's target being multiplied by its gross floor area (blended average for multi-use buildings). Buildings must meet their targets annually starting in 2025 and these targets are ratcheted down every 5 years. Buildings can also opt into a "glide path" target achieving 50% emissions reduction by 2030 and 100% by 2050 using a 2005 or later baseline.</p>	<p>Compliance Cycle Annually starting in 2025 for buildings ≥ 35,000 sq. ft. and 2030 for those between 20,000 - 34,999 sq. ft., with emissions targets ratcheting down every 5 years thereafter until zero carbon in 2050.</p> <p>Compliance Pathways Buildings must meet emissions targets based on their use type or the glide path aligned with a 50% reduction by 2030 and 100% reduction by 2050 targets. Any combination of energy efficiency, electrification, onsite renewables is allowed. Buildings may use Renewable Energy Credits to offset greenhouse gas emissions from electrical demand. RECs must, 1) be Massachusetts Class 1 RECs or be from a long-term Power Purchasing Agreement that meets approval by the city; 2) are solely owned and retired by owner; and 3) are from the same year as the reporting year.</p>	<p>The Equitable Emissions Investment Fund made up of monies acquired through enforcement is set aside for investment into local carbon abatement projects specifically targeting Boston's environmental justice populations and affordable housing buildings. The Fund is under the authority of the Review Board made up of 2/3 environmental justice community organization-nominated members.</p>	<p>Does not cover state, county, or federal buildings. Exemptions for newly constructed buildings, those with permits for demolition, and those facing specific financial distress.</p>

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Chula Vista CA	<p>Name Building Energy Saving Ordinance</p> <p>Year Enacted 2021</p> <p>Covered Buildings Municipal, commercial, institutional, and multifamily buildings 20,000 sq. ft. or larger</p>	<p>Performance Metrics ENERGY STAR score or Weather Normalized Site EUI</p> <p>Performance Targets/Standards Buildings that qualify as High Performance Buildings (HPBs) are considered compliant and do not need to take further action. To qualify as a HPB a building must have a verified ENERGY STAR Score ≥ 80; or be ENERGY STAR certified; or be LEED Existing Building Certified for 3 of the 5 preceding years.</p>	<p>Compliance Cycle Every five years beginning 2023 for buildings ≥ 50,000 sq. ft. and 2026 for buildings ≥ 20,000 sq. ft.</p> <p>Compliance Pathways Buildings that do not qualify as HPBs must complete conservation requirements to comply. Multifamily buildings must perform a minimum number of prescriptive measures within all tenant spaces where utility costs are borne by tenants. Non-residential buildings and Multifamily buildings with significant owner-paid energy use must either (1) achieve a minimum EUI improvement or (2) complete an Energy Audit and Retrocommissioning and meet a smaller mandatory minimum improvement by the end of the next compliance cycle.</p>	<p>The law states owners must amortize any compliance costs passed through to tenants. Costs of complying with the required audit shall be amortized over 5 years. The costs of implemented measures shall be amortized over the expected useful life of the measure.</p>	<p>The ordinance does not apply to county, state, and federal buildings, Metropolitan Transit Service buildings, or buildings owned by the Chula Vista and Sweetwater School Districts.</p> <p>Properties meeting any of the following conditions are exempt from the performance standard requirements:</p> <ul style="list-style-type: none"> • Properties that have been occupied less than 5 years • Properties in financial distress • Properties with a permit for demolition that have already commenced demolition work • Properties that have not been previously subject to the benchmarking requirement
Colorado	<p>Name HB21-1286</p> <p>Year Enacted 2021</p> <p>Covered Buildings Public, commercial, institutional, and multifamily buildings 50,000 sq. ft. or larger</p>	<p>Performance Metrics TBD in regulations by the Air Quality Control Commission</p> <p>Performance Targets/Standards TBD by Air Quality Control Commission in consultation with a BPS task force. Standards must achieve a GHG emissions reduction of 7% from 2021 levels by 2026 and 20% from 2021 levels by 2030. The task force must also recommend to the Commission a process for determining standards for 2030 to 2050.</p>	<p>Compliance Cycle Every four years, beginning in 2026 and going through 2050.</p> <p>Compliance Pathways Multifamily buildings with separately metered tenants that do not achieve HPB status must perform a minimum number of prescriptive energy conservation measures.</p>	<p>The law states owners must amortize any compliance costs passed through to tenants. Costs of complying with the required audit shall be amortized over 5 years. The costs of implemented measures shall be amortized over the expected useful life of the measure.</p>	<ul style="list-style-type: none"> • Storage facilities, stand-alone parking garages, or airplane hangars that lack heating and cooling • Buildings where more than half of gross floor area is used for manufacturing, industrial, or agricultural purposes • Single family homes, duplexes, or triplexes

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Denver CO	<p>Name Bill 21-1310</p> <p>Year Enacted 2021</p> <p>Covered Buildings All commercial and multifamily buildings > 25,000 sq. ft.</p>	<p>Performance Metrics Weather Normalized Site Energy Use Intensity (EUI)</p> <p>Performance Targets/Standards Each covered building must meet a maximum site EUI standard based on its occupancy type by the year 2030. Buildings are required to meet interim performance targets in 2024 and 2027 to ensure progress toward the final, 2030 standard.</p> <p>Interim targets are determined according to the building's "trajectory" from its baseline site EUI performance in 2019 to the final site EUI standard for its property type.</p> <p>Notable Provisions The ordinance requires buildings 5,000 - 24,999 sq. ft. to either certify they use all LED lighting or an equivalent lighting power density or demonstrate they have acquired enough onsite or offsite solar to meet 20% of the building's annual energy use.</p> <p>The ordinance also contains electrification requirements for most space and water heating equipment at the time of replacement.</p>	<p>Compliance Cycle Covered buildings must comply with interim performance targets in 2024 and 2027 before meeting a final performance standard in 2030.</p> <p>Compliance Pathways To comply buildings must meet the interim and final performance targets and maintain that level of performance afterward. The ordinance allows buildings to deduct the value of investments in onsite or offsite solar from its measured site EUI.</p> <p>Denver will issue regulations specifying alternative compliance options to allow buildings to apply for an adjusted compliance timeline, an adjusted performance target.</p> <p>Proposed regulations also include a prescriptive compliance option for covered buildings 25,000 - 100,000 square feet requiring electrification of at least 70% of heating and water heating load and verification of the use of LEDs for all lighting.</p>		

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New York City NY	<p>Name</p> <p>Buildings Mandate: Local Law 97</p> <p>LL 97 is a part of NYC Climate Mobilization Act (2019), which in total includes Local Laws 92, 94, 96, and 97</p> <p>Year Enacted</p> <p>2019</p> <p>Covered Buildings</p> <p>All commercial and multifamily buildings > 25,000 sq. ft.</p>	<p>Performance Metrics</p> <p>Annual greenhouse gas (GHG) emissions (tCO₂e/sq. ft.)</p> <p>Performance Targets/Standards</p> <p>Targets change every five years to allow fewer building emissions.</p> <p>Building emissions limits are set for each building by multiplying the corresponding building type's building emissions intensity limit (in tCO₂e/sq. ft.) by the building's gross square floor area (in sq. ft.).</p> <p>Greenhouse gas emissions (building emissions) for a building are calculated by multiplying the total energy consumption of each fuel type consumed on the building's premise (utility electricity, natural gas, #2 and #4 fuel oils, district steam, other; all in kBtu) by the corresponding greenhouse gas coefficient for that fuel type (in tCO₂e/ kBtu) and totaling the resulting emissions.</p>	<p>Compliance Cycle</p> <p>Covered buildings must comply annually beginning in 2024. Emissions limits become increasingly stringent every five years.</p> <p>Compliance Pathways</p> <p>Buildings must meet the standard annually, but buildings can use RECs and offsets to compensate for going over the emissions limits. Additionally, the City is studying a carbon trading system so buildings that do not meet the annual emissions limits could buy credits from buildings that are below the limits.</p> <p>Buildings not covered by LL 97's emissions limits (some affordable housing, multifamily with more than 35% of units subject to rent regulations, places of worship), must comply with a prescriptive list of energy conservation measures.</p> <p>The Office of Building Energy and Emissions Performance may grant an adjustment of annual emissions limit (for up to three years) for a building if:</p> <ul style="list-style-type: none"> (i) capital improvements are necessary for compliance and it is not possible to make such improvement because of another law (e.g., historic preservation) or a physical condition of the building (e.g., lack of access to energy infrastructure) (ii) cost of financing improvements would prevent owner from earning reasonable return or the building is subject to financial hardship (iii) Buildings with 2018 emissions 40% higher than 2024- 2029 limits can have their standards adjusted if they meet certain conditions 	<p>Buildings with 35 percent or fewer rent-regulated units must meet the emissions limits starting in 2026. Buildings with a greater percentage of rent-regulated units may choose the prescriptive path to comply rather than meet emissions limits.</p> <p>The NYC Housing Authority shall make efforts to reduce aggregate GHG emissions from building it owns, manages or that is built on Authority-owned land by 40% by the year 2030 and 80% by the year 2050 relative to a 2005 baseline.</p>	<ul style="list-style-type: none"> (i) Industrial facility used for generating electric power or steam (ii) Dwellings less than three stories consisting of attached, detached, or semi-detached housing for which owners are responsible for HVAC and hot water (iii) City buildings (iv) NYC Housing Authority buildings (v) Rent-regulated accommodation (vi) Real estate owned by religious corporations and used as a place of public worship (vii) Property owned by a housing development fund organized pursuant to article 11 of the Private Housing Finance Law

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St. Louis MO	<p>Name Ordinance 71132: Building Energy Performance Standards</p> <p>Year Enacted 2020</p> <p>Covered Buildings Municipal, commercial, institutional, and multifamily buildings 50,000 sq. ft. or larger</p>	<p>Performance Metrics Site energy use intensity (EUI)</p> <p>Performance Targets/Standards Standards to be set no lower than the 65th percentile by property type, so that at least 65% of the buildings of the property type have a higher EUI. The Office of Building Performance will issue new performance standards at the end of each compliance cycle</p>	<p>Compliance Cycle Every four years, beginning May 2021. Each compliance cycle followed by one year to set standards for next cycle.</p> <p>Compliance Pathways Buildings that meet the standard at the end of each four-year cycle are compliant. Buildings that “benefit from deep energy improvements and achieve energy performance well beyond the required performance standard” are in compliance for 15 years. If building owners believe they will be unable to meet the standards by the deadline or will be exceptionally burdened by doing so, they may propose an alternative compliance plan for consideration by the Building Energy Improvement Board.</p>	<p>Qualified affordable housing buildings and houses of worship will operate on a six-year compliance cycle (versus a four-year cycle) to allow adequate time for owners’ financing and capacity restraints.</p>	<ul style="list-style-type: none"> Demolition permit issued or demolition is planned during the compliance cycle; Financial hardship or if compliance would not be in public interest; Primary use of building is industrial; Property is communications infrastructure; Property is owned by the state or federal government
Washington State	<p>Name HB 1257: Energy Efficiency – the Clean Buildings Act</p> <p>Year Enacted 2019</p> <p>Covered Buildings Commercial buildings (non-residential) 50,000 sq. ft. or larger</p>	<p>Performance Metrics Weather-normalized Energy Use Intensity</p> <p>Performance Targets/Standards EUI targets must be no greater than the average energy use intensity for the building’s occupancy type with adjustments for unique energy-using features. EUI targets initially based on ASHRAE standard 100– 2018. Proposed rules set first target at 15% below average EUI for building type.</p>	<p>Compliance Cycle Standard must be updated in 2029 and every five years thereafter.</p> <p>Compliance Pathways The law directs the Department of Commerce to create a “conditional compliance method” for buildings that do not meet the performance target. Method requires owners to complete energy audits and invest in measures that meet savings-to-investment ratio of 1.0 or greater.</p>		<p>Historic buildings do not need to meet any requirement that would compromise their historical integrity.</p> <p>Other exemptions:</p> <ul style="list-style-type: none"> No Certificate of Occupancy for all 12 months prior to compliance date Average occupancy less than 50% Primary use of building is industrial Primary use of building is agricultural Building meets conditions of financial hardship

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Washington, DC	<p>Name Building Energy Performance Standards and Benchmarking. BEPS is under Title III of the DC Law 22– 257. CleanEnergy DC Omnibus Amendment Act of 2018</p> <p>Year Enacted 2018</p> <p>Covered Buildings Jan 1, 2021: Privately owned buildings ≥ 50,000 sq. ft. District-owned buildings ≥ 10,000 sq. ft. Jan. 1, 2027: All privately owned buildings ≥ 25,000 sq. ft. Jan. 1, 2033: All privately owned buildings ≥ 10,000 sq. ft.</p>	<p>Performance Metrics ENERGY STAR score or an equivalent metric (source EUI for buildings ineligible for ENERGY STAR). Law directs department to assess a metric based on emissions by 2023.</p> <p>Performance Targets/Standards For buildings that are eligible for an ENERGY STAR score, the building energy performance standard shall be no lower than the District median ENERGY STAR score for buildings of each property type. The District Department of Energy & Environment (DOEE) will issue new performance standards every six years. The law directs DOEE to set campus-wide standards for educational campuses and hospitals.</p>	<p>Compliance Cycle Compliance cycles are five years long with one year in between to recalculate the standard for the next period.</p> <p>Compliance Pathways Buildings that meet the performance standard the beginning of the period do not have regulatory requirements for that compliance cycle. Buildings that do not meet the standard enter a compliance cycle where they must either 1) reduce site EUI by 20% before the end of the compliance cycle; 2) comply prescriptively (see below); or 3) if the standard for their property type is better than the national median, then buildings have the additional option to comply by improving their performance to the standard by the end of the compliance cycle. The law requires DOEE to create a prescriptive compliance pathway that is comparable to the 20% energy savings required by the “performance pathway.” Prescriptive compliance paths will be determined in the rulemaking process.</p>	<p>DOEE may establish an exemption criterion for qualifying affordable housing buildings to delay compliance with the building energy performance requirements without restriction, provided that the owner demonstrates financial distress, change of ownership, vacancy, major renovation, pending demolition, or other acceptable circumstances as determined by regulation.</p> <p>DOEE shall coordinate with the DC Sustainable Energy Utility (DCSEU) and the Green Finance Authority (DC Green Bank) to establish an incentive and financial assistance program to help qualifying building owners and affordable housing providers to meet building energy performance requirements.</p>	<p>DOEE shall establish exemption criteria for qualifying buildings to delay compliance with the building energy performance requirements for up to three years if the owner demonstrates financial distress, change of ownership, vacancy, major renovation, pending demolition, or other acceptable circumstances determined per criteria set through regulation.</p>