

Comparison of U.S. Building Performance Standards

August 2023



Note: Government abbreviated as "Gov't"; Multifamily abbreviated as "MF"; Commercial abbreviated as "Comm"

GOVERNMENT	POLICY INFORMATION	DESCRIPTION OF REQUIREMENTS	COMPLIANCE	ENFORCEMENT	EXEMPTIONS
<p>City/County/State</p> <p>Boston MA</p>	<p>Name Building Emissions Reduction and Disclosure Ordinance (Chpt VII, Sec 7-2.1 & 7-2.2)</p> <p>Year Enacted 2021</p> <p>Covered Buildings All Public/Gov't, Comm & MF buildings ≥ 20,000 sq. ft., 15 residential units</p>	<p>Performance Metrics Annual greenhouse gas (GHG) emissions (kgCO₂e/sq. ft./year)</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, with the targets becoming more stringent every 5 years. Building owners can apply for an individual compliance schedule 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 their individual compliance schedule aligned with a 50% reduction by 2030 and 100% reduction by 2050 targets. Buildings with more than one primary use may comply with a blended CO₂ emission standard.</p>	<p>Failure to comply with emission standards will result in a fine of \$1000 a day for non-residential buildings 35,000 sq. ft. or two or more buildings on a parcel ≥ 100,000 sq. ft. and for residential buildings ≥ 35,000 sq. ft. or with 35 dwelling units or more. Failure to comply with emission standards will result in a fine of \$300 a day for non-residential buildings ≥ 20,000 sq. ft. but < 35,000 sq. ft. and for residential buildings ≥ 20,000 sq. ft. but < 35,000 sq. ft. or with ≥ 15 dwelling units but < 35 dwelling units.</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, single family housing and multifamily housing with under 15 dwelling units.</p>
<p>Cambridge MA</p>	<p>Name Building Energy Use Disclosure Ordinance (Ordinance 2021-26)</p> <p>Year Enacted 2023</p> <p>Covered Buildings Public/Gov't ≥ 10,000 sq. ft., Comm ≥ 25,000 sq. ft.</p>	<p>Performance Metrics GHG Intensity</p> <p>Performance Targets/Standards Straight line trajectory from baseline to zero carbon by 2035 for buildings ≥ 100,000 sq. ft. and 2050 for buildings ≥ 25,000 - 99,999 sq. ft. For covered properties that receive their certificate of occupancy in the years 2018 through 2024, the baseline shall be the average GHG for the first two full calendar years following the certificate of occupancy.</p>	<p>Compliance Cycle Annually for buildings ≥ 25,000 sq. ft. with emissions targets ratcheting down every 5 year compliance cycle thereafter until net-zero in 2035 for buildings ≥ 100,000 sq. ft. and 2050 for buildings ≥ 25,000 - 99,999 sq. ft.</p> <p>Compliance Pathways Buildings must meet targets based on their use type, with targets becoming more stringent every 5 year compliance cycle until net-zero in 2035 for buildings ≥ 100,000 sq. ft. and 2050 for buildings ≥ 25,000 - 99,999 sq. ft.</p>	<p>Up to \$300 per day per violation, each day counting as a separate violation.</p>	<p>TBD</p>

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<p>City/County/State</p> <p>Chula Vista CA</p>	<p>Name Building Energy Saving (Ordinance 3498)</p> <p>Year Enacted 2021</p> <p>Covered Buildings Public/Gov't, Comm, & MF ≥ 20,000 sq. ft.</p>	<p>Performance Metrics ENERGY STAR score or Weather Normalized Site EUI</p> <p>Performance Targets/Standards Conservation requirements differ based on property type. Non-residential and multifamily both have conditions under which they have the option of adhering to performance target requirements. Non-residential buildings are required to meet EITHER the performance targets OR both the audit requirements and minimum improvement requirements. Multifamily properties are subject to Multifamily Prescriptive Measure requirements; multifamily properties with significant common load are required to meet EITHER the performance targets OR both the audit requirements and minimum improvement requirements. Performance targets are based on ENERGY STAR Score and if that is not available, EUI-WN : baseline year ENERGY STAR Score 0-45 or EUI-WN 80+ : 30% baseline year ENERGY STAR Score 46-65 or EUI-WN 51-79: 20% baseline year ENERGY STAR Score 66-79 or EUI-WN 19-50: 10% baseline year ENERGY STAR Score 80+ or EUI-WN 0-18: none</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>Non-compliance may result in a notice of failure to comply; on the 60th day following the issuance of said notice, public disclosure of non-compliance and monetary fines may be issued. Maximum fine amounts depend on property size: 20,000-49,999 sq. ft. up to \$750, 50,000-99,999 sq. ft. up to \$1,500, 100,000+ sq. ft. up to \$2,250.</p>	<p>The law 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
<p>Colorado</p>	<p>Name Energy Performance for Buildings (HB 21-1286)</p> <p>Year Enacted 2021</p> <p>Covered Buildings Public/Gov't, Comm, & MF ≥ 50,000 sq. ft.</p>	<p>Performance Metrics TBD in regulations by the Air Quality Control Commission. Site EUI is recommended Task Force metric.</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 TBD in regulations by the Air Quality Control Commission.</p>	<p>An owner that fails to comply may be subject to a civil penalty of up to \$2000 for a first violation and up to \$5,000 for each subsequent violation.</p>	<p>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, and triplexes.</p>

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<p>City/County/State</p> <p>Denver CO</p>	<p>Name Energize Denver (Bill 21-1310)</p> <p>Year Enacted 2021</p> <p>Covered Buildings All Comm & MF 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. 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>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 law allows buildings to deduct the value of investments in onsite or offsite solar from its measured site EUI. Renewable short-term contracts can now be used for interim targets to offset building electricity usage.</p> <ul style="list-style-type: none"> 2024 - 2026 up to 20% of building's electricity usage. 2027 - 2029 up to 10% of the building's electricity usage. Long-term only after 2030. 	<p>An owner that violates any provision of the ordinance or its rules and regulations is subject to a civil penalty of up to \$0.70 per year for each required kBtu reduction that the owner's building failed to achieve in that year. If unpaid within 180 days the penalty becomes a lien on the property. A fine of \$2000 can be levied for failing to correct benchmarking errors, or knowingly submitting inaccurate information, or withholding information. Starting in 2031, maintenance penalties may occur if an owner fails to maintain their 2030 target indefinitely, as defined as the annual site EUI being 5% worse than the maintenance target. The penalty is \$0.30/kBtu.</p>	<p>Exemptions currently exist for some buildings related to demolition, manufacturing and agricultural processes, low occupancy, construction, and difficulty obtaining energy data.</p>
<p>Federal BPS</p>	<p>Name Federal Building Performance Standard (Section 510(b)(ii) of E.O. 14057)</p> <p>Year Enacted 2022</p> <p>Covered Buildings Refer to Section 3.2 - Federal BPS Applicable Facilities</p>	<p>Performance Metrics MT CO₂e/yr. The performance pathway is measured through annual scope 1 GHG emissions from fossil fuels combusted on-site.</p> <p>Performance Targets/Standards 30% (by total building area) of each Federal agency's buildings to eliminate all Scope 1 emissions — on-site fossil fuel use — by 2030. No later than 2028, CEQ will set new targets for years 2038 and 2045 for the percentage of buildings that every agency must electrify.</p>	<p>Compliance Cycle Agencies will capture data in their annual Compliance Tracking System (CTS) reporting to FEMP (Federal Energy Management Program) based on forthcoming guidance from CEQ and FEMP. Reporting will begin as part of the FY 2024 CTS data report. Agencies will set annual progress targets in consultation with CEQ and OMB (Office of Management and Budget), beginning with FY 2024. CEQ and OMB will review progress annually and assess satisfaction in FY 2030.</p> <p>Compliance Pathways Performance pathway: Facility achieves zero scope 1 emissions from on-site fossil fuel emissions.</p>	<p>The federal BPS document does not mention penalties.</p>	

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<p>City/County/State</p> <p>Maryland</p>	<p>Name Climate Solutions Now Act (SB 528)</p> <p>Year Enacted 2022</p> <p>Covered Buildings Public/Gov't, Comm, & MF buildings ≥ 35,000 sq. ft.</p>	<p>Performance Metrics Net direct emissions standards (kg CO₂e per square foot) for interim standards and Site EUI Standards (kBtu per square foot) for the final standard for 2040 and beyond.</p> <p>Performance Targets/Standards Existing buildings over 35,000 square feet achieve a 20% reduction in net direct greenhouse gas emissions on or before January 1, 2030, as compared with 2025 levels for average buildings of similar construction; and net-zero direct greenhouse gas emissions on or before January 1, 2040.</p>	<p>Compliance Cycle Five year cycle starting in 2030 and final standards in 2040.</p> <p>Compliance Pathways Buildings must meet interim and final net direct emissions and final site EUI standards according to their property type.</p>	<p>Payments will be based on the social cost of carbon and rules have not been set for this in Maryland as of yet. The Social Cost of Greenhouse Gases in 2030 are estimated to average \$230 per metric ton of CO₂e.</p>	<p>Single family, fast food restaurants, food services, restaurants, and parking are exempt from BPS.</p>
<p>Montgomery County MD</p>	<p>Name Building Energy Use Benchmarking and Performance Standards (Bill 16-21)</p> <p>Year Enacted 2022</p> <p>Covered Buildings Public/Gov't, Comm, & MF buildings ≥ 25,000 sq. ft.</p>	<p>Performance Metrics Normalized Site Energy Use Intensity (EUI)</p> <p>Performance Targets/Standards Trajectory approach, numerical values still to be set.</p>	<p>Compliance Cycle 5 years. Uses IMT's trajectory approach. Requirements phase-in by building type/size. Properties will have to meet 1 interim standard five years from their start date and a final standard 5 years after that.</p> <p>Compliance Pathways If 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>Still to be determined. Currently, the County has the authority to assess a fine of up to \$1,000. State legislation that would allow the County to increase fines above the statutory capped and increase the amount up to \$10 per square foot of gross floor area to enforce local building energy performance laws failed in 2022 session.</p>	<p>Single family homes.</p> <p>Buildings where 10% or more of their total floor space is used for public assembly in a building without walls; warehousing; self-storage; or a use classified as manufacturing and industrial or transportation, communication, and utilities.</p>

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<p>City/County/State</p> <p>New York City NY</p>	<p>Name</p> <p>Sustainable Buildings NYC (Local Law 97)</p> <p>Year Enacted</p> <p>2019</p> <p>Covered Buildings</p> <p>Comm & MF 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>Exceeding annual building emissions limit: Civil penalty of not more than an amount equal to the difference between the building emissions limit for such year and the reported building emissions for such year, multiplied by \$268.</p> <p>Failure to file a report: Penalty no more than an amount equal to the gross floor area of such covered building, multiplied by \$0.50, for each month that the violation is not corrected within the 12 months following the reporting deadline; provided, however, that an owner shall not be liable for a penalty for a report demonstrating compliance with the requirements of this article if such report is filed within 60 days of the date such report is due.</p> <p>False statement: Fine of not more than \$500,000 or imprisonment of no more than 30 days, or both, in addition to a civil penalty of not more than \$500,000.</p>	<ul style="list-style-type: none"> Single family homes; Industrial facility used for generating electric power or steam; Dwellings less than three stories consisting of attached, detached, or semi-detached housing for which owners are responsible for HVAC and hot water; City buildings; NYC Housing Authority buildings; Rent-regulated accommodation; Real estate owned by religious corporations and used as a place of public worship; Property owned by a housing development fund organized pursuant to article 11 of the Private Housing Finance Law.
<p>Oregon</p>	<p>Name</p> <p>Energy Performance Standards (HB 3409)</p> <p>Year Enacted</p> <p>2023</p> <p>Covered Buildings</p> <p>Public/Gov't & MF ≥ 35,000 sq. ft., Comm ≥ 20,000 sq. ft.</p>	<p>Performance Metrics</p> <p>EUI</p> <p>Performance Targets/Standards</p> <p>TBD</p>	<p>Compliance Cycle</p> <p>Every five years beginning July 2025.</p> <p>Compliance Pathways</p> <p>TBD</p>	<p>\$5,000 plus continuing violations assessed daily; total may not exceed \$1/yr/sq. ft.</p>	<p>Primary use for is manufacturing or another industrial use, as defined in accordance with the following use designations of the International Building Code; designated as an historic property under a state or local statute, ordinance, rule or other legislative act. See Section 10 for specific provisions.</p>

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<p>City/County/State</p> <p>Washington</p>	<p>Name</p> <p>Clean Buildings Performance Standard (HB 1257)</p> <p>Year Enacted</p> <p>2019</p> <p>Covered Buildings</p> <p>Public/Gov't ≥ 10,000 sq. ft. Comm & MF ≥ 20,000 sq. ft.</p>	<p>Performance Metrics</p> <p>Weather-normalized Energy Use Intensity</p> <p>Performance Targets/Standards</p> <p>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.</p> <p>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</p> <p>Standard must be updated in 2029 and every five years thereafter.</p> <p>Compliance Pathways</p> <p>Buildings must meet the EUI target specified for their building type, or satisfy an investment criteria pathway consisting of an energy audit identifying all cost effective energy efficiency measures. Complete one of the following: - Target EUI path: benchmark building's performance and calculate EUI target. Meet target by compliance deadline (conditional compliance period of 180 days) - Investment Criteria path: Conduct an audit and identify all EEMs. Identify an optimized bundle of EEMs that provides maximum energy savings without resulting in a savings-to-investment ratio of less than one. The optimized bundle of measures shall be implemented based on the schedule established within the energy management plan.</p>	<p>The Department of Commerce may impose a penalty up to \$5,000 plus an amount based on the duration of any continuing violation. The additional amount for a continuing violation may not exceed a daily amount equal to \$1 per gross square foot of floor area. The Department may raise penalty rates to adjust for inflation. Administrative penalties collected must be deposited into the low-income weatherization and structural rehabilitation assistance account.</p>	<p>Federal buildings and buildings belonging exclusively to recognized Tribes are not required to comply with the standard. 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
<p>Washington DC</p>	<p>Name</p> <p>Building Energy Performance Standards and Benchmarking (D.C. Law 22-257)</p> <p>Year Enacted</p> <p>2018</p> <p>Covered Buildings</p> <p>Public/Gov't ≥ 10,000 sq. ft. Comm & MF ≥ 25,000 sq. ft.</p>	<p>Performance Metrics</p> <p>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</p> <p>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.</p> <p>The law directs DOEE to set campus-wide standards for educational campuses and hospitals.</p>	<p>Compliance Cycle</p> <p>Compliance cycles are 5 years long. While standards are recalculated every 6 years.</p> <p>Compliance Pathways</p> <p>Performance Pathway: Reduce site EUI 20% Standard Target Pathway: Reach the standard for the building's property type (only available for property type groups performing above the national median)</p> <p>Prescriptive Pathway: Conduct audit, create action plan, implement EE measures, complete monitoring, evaluation, and verification.</p>	<p>The BEPS Compliance Regulations establish the maximum alternative compliance penalty amounts with the maximum penalty for buildings at ten dollars (\$10) per each square foot of gross floor area. The building gross square footage is based on the ENERGY STAR Portfolio Manager® calculation as reported on the building's most recent District Benchmark Results and Compliance Report. The maximum penalty for a building shall be no greater than \$7,500,000. Monies collected pursuant to this provision shall be deposited into the Sustainable Energy Trust Fund.</p>	<p>DOEE has established 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>