



Colorado's Climate Action Plan

By Samantha Falco

Over the past few years, Colorado has set ambitious goals to reduce the state's greenhouse gas (GHG) emissions. This issue brief provides an overview of the state's climate action plan and recent legislation that has supported the goal established by Governor Polis for the state to reach net-zero emissions by 2050.

Colorado's Roadmap to Reduce Emissions

In 2019, Colorado enacted [House Bill 19-1261](#), establishing statewide GHG emissions reduction goals. Colorado also enacted [Senate Bill 19-096](#), requiring the Air Quality Control Commission (AQCC) within the Colorado Department of Public Health and Environment (CDPHE) to adopt rules to collect and report on GHG data and to implement measures to meet the emissions reduction goals. As a result, Colorado officials released that state's first [Greenhouse Gas Pollution Reduction Roadmap](#) in January 2021 establishing administrative, regulatory, and legislative actions to reduce emissions.

The roadmap includes an inventory of emissions in the state, sector-based plans, and near term actions (NTA) to which state agencies have committed. The state

determined the following sectors to be the largest sources of GHG emissions:

- transportation;
- electricity generation;
- oil and gas production;
- industry and manufacturing; and
- fuel use in homes and buildings.

Between 2021 and 2022, the state initiated 90 percent of the listed NTAs listed in the roadmap and updated lists of actions to support state progress towards meeting roadmap goals

Roadmap 2.0

In February 2024, Governor Polis released the [Greenhouse Gas Pollution Reduction Roadmap 2.0](#). Using 2005 emission levels as a baseline, the state has set targets to reduce greenhouse gas emissions, which include reducing GHG emissions by 26 percent by 2025, 50 percent by 2030, 65 percent by 2035, 75 percent by 2040, 90 percent by 2045, and net-zero by 2050. These goals align with the [Intergovernmental Panel on Climate Change](#) targets in an effort to keep global warming under 1.5 degrees Celsius.

The Roadmap 2.0 recommended the following methods to attain these goals:

- transition from coal to renewable energy;

Colorado's Climate Action Plan

- reduce methane emissions from oil and gas production;
- accelerate shift to electric vehicles (EVs);
- adjust transportation and land use planning to encourage alternatives to driving;
- increase building efficiency and electrification; and
- reduce methane waste from landfills, waste-water, and other sources.

Has there been any progress toward these goals?

[Executive Order B 2021 01](#) requires that the following state agencies regularly publish [Greenhouse Gas Pollution Reduction Roadmap Implementation Reports \(under “Additional Resources”\)](#):

- Colorado Energy Office;
- Department of Public Health and Environment;
- Department of Natural Resources;
- Department of Agriculture;
- Department of Transportation;
- Office of Economic Development and International Trade;
- Department of Labor and Employment’s Office of Just Transition;
- Department of Local Affairs; and,
- Department of Regulatory Affairs.

According to a June 2025 implementation report, the state projects that Colorado is 87.5 percent of the way toward achieving the 2030 goal of reducing GHG emissions by

50 percent. Additionally, the report highlights the following recent progress:

- Colorado leads the nation in EV sales in the fourth quarter of 2024 at 30 percent of all light duty vehicle sales. Sales remained strong the first quarter of 2025 at 26 percent.
- 10,000 new electric bicycles were purchased from July 2024 to June 2025 utilizing state-funded incentives and programs.
- Colorado jumped from 13th to 7th in the nation for energy efficiency according to the American Council for an Energy-Efficient Economy [2025 State Energy Efficiency Scorecard](#).

Recent Legislation

Appendix A provides a detailed list of legislation from the past 5 years passed in order to support meeting the states’ GHG goals.

Appendix A
Recent Energy-Related Legislation
2021 – 2025

Bill Number and Title	Summary
<u>HB 25-1040</u> Adding Nuclear Energy as a Clean Energy Resource	The bill specifies that nuclear energy is a clean energy source for the renewable energy standard.
<u>HB 25-1096</u> Automated Permits for Clean Energy Technology	The bill requires certain local governments to use automated permitting software for residential solar energy systems.
<u>HB 25-1165</u> Geologic Storage Enterprise and Geothermal Resources	The bill creates an enterprise to support geologic storage operations and updates regulations for certain geothermal resources.
<u>HB 25-1175</u> Smart Meter Opt-In Program	The bill requires large utilities to create communication plans to notify customers about residential advanced metering infrastructure.
<u>HB 25-1177</u> Utility Economic Development Rate Tariff Adjustments	The bill updates requirements for the Public Utilities Commission to regulate economic development rates.
<u>HB 25-1234</u> Utility Consumer Protection	The bill prohibits utilities from selling customer data and limits when they can disconnect services.
<u>HB 25-1267</u> Support for Statewide Energy Strategies	The bill creates minimum standards for retail electric vehicle charging stations.
<u>HB 25-1269</u> Building Decarbonization Measures	The bill establishes building performance standards for 2040 and creates a new state enterprise to support building decarbonization efforts.
<u>HB 25-1280</u> Advanced Leak Detection Technology Rules	The bill requires the Public Utilities Commission to adopt rules on natural gas pipeline leak detection by November 1, 2025.
<u>HB 25-1292</u> Transmission Lines in State Highway Rights-of-Way	The bill establishes criteria for the development of utility corridors and requires a study on state highway corridors and high voltage transmission development.
<u>SB 25-037</u> Coal Transition Grants	The bill specifies and updates how the state prioritizes grants to local governments and extends a reporting deadline for the Colorado Energy Office.

Bill Number and Title	Summary
<u>SB 25-039</u> Agricultural Buildings Exempt from Energy Use Requirements	The bill clarifies which agricultural buildings are exempt from existing energy use reporting requirements under the Buildings Performance Program.
<u>SB 25-068</u> Municipal Utility Unclaimed Utility Deposit Program	The bill allows municipal utilities to opt out of the unclaimed utility deposits program.
<u>SB 25-299</u> Consumer Protection Residential Energy Systems	The bill establishes procedures that solar sales companies must follow and establishes a deceptive trade practice for violations.
<u>SB 25-307</u> Decarbonization Tax Credits Administration Cash Fund	The bill limits money credited to the Decarbonization Tax Credits Administration Fund to net oil and gas severance tax collections in FY 2024-25 and FY 2025-26 and makes cash fund transfers in both years.
<u>HB 24-1173</u> Electric Vehicle Charging System Permits	The bill creates expedited permit review processes for electric vehicle charging systems.
<u>HB 24-1370</u> Reduce Cost of Use of Natural Gas	The bill establishes a process by which local governments and utilities that offer both electricity and gas service can identify gas planning priority communities to explore neighborhood-scale alternative energy projects.
<u>SB 24-207</u> Access to Distributed Generation	The bill creates procedures for developing inclusive community solar facilities and dispatchable distributed generation systems.
<u>SB 24-212</u> Local Govs Renewable Energy Projects	The bill requires that the Department of Natural Resources provide technical support to local and tribal governments related to renewable energy projects, and requires that the Department of Local Affairs and the Governor's Energy Office jointly develop a repository of model codes and ordinances for renewable energy projects.
<u>SB 24-214</u> Implement State Climate Goals	The bill creates a new Office of Sustainability, clarifies existing tax credits, and makes various programmatic adjustments.
<u>SB 24-218</u> Modernize Energy Distribution Systems	The bill makes changes to the requirements for investor-owned electric utilities in the state and creates a grant program in the Department of Labor and Employment.

Bill Number and Title	Summary
<u>SB 24-229</u> Ozone Mitigation Measures	The bill limits pollutant emissions from oil and gas operations, modifies how the Department of Public Health and Environment (CDPHE) and the Energy and Carbon Management Commission (ECMC) in the Department of Natural Resources (DNR) enforce air quality requirements, requires CDPHE to publish additional enforcement reports, establishes community liaisons in the ECMC, and allows for the plugging of marginal oil and gas wells.
<u>HB 23-1039</u> Electric Resource Adequacy Reporting	The bill requires load-serving entities to publish resource adequacy annual reports, and the Colorado Energy Office to publish an aggregate annual report.
<u>HB 23-1069</u> Study Biochar In Plugging of Oil and Gas Wells	The bill creates a work group to study the use of biochar in plugging oil and gas wells.
<u>HB 23-1134</u> Require Electric Options In Home Warranties	The bill requires home service warranty contracts that provide coverage for gas-fueled appliances to allow the homeowner to replace gas-fueled appliances with electric powered appliances of their choosing.
<u>HB 23-1137</u> Solar Garden Net Metering Credits Stabilization	The bill modifies how fixed bill credits are calculated for community solar gardens that receive a net metering credit from a utility by specifying what charges and exclusion must be applied.
<u>HB 23-1161</u> Environmental Standards for Appliances	The bill sets environmental standards on certain appliances and requires the Colorado Department of Public Health and Environment to verify compliance.
<u>HB 23-1210</u> Carbon Management	The bill directs the Colorado Energy Office to contract with a qualified organization to develop a carbon management roadmap.
<u>HB 23-1216</u> Natural Gas Pipeline Safety	The bill directs the Public Utilities Commission (PUC) in the Department of Regulatory Agencies to adopt rules regarding the positioning, inspection, and maintenance liability for natural gas pipelines.
<u>HB 23-1233</u> Electric Vehicle Charging and Parking Requirements	The bill includes a number of provisions concerns electric vehicle charging stations, including electric code requirements, local parking regulations, property tax provisions, and potential charging stations at rest areas.
<u>HB 23-1234</u> Streamlined Solar Permitting and Inspection Grants	The bill creates a grant program in the Colorado Energy Office to assist local governments in implementing automated permitting and inspection software for residential solar energy systems.
<u>HB23-1242</u> Water Conservation in Oil and Gas Operations	The bill places new reporting requirements on oil and gas operators concerning water use and requires the Department of Natural Resources to adopt rules to reduce, reuse, and recycle water used in oil and gas operations.

Bill Number and Title	Summary
<u>HB 23-1247</u> Assess Advanced Energy Solutions In Rural Colorado	The bill directs the Colorado Energy Office (CEO) to conduct two studies of electric transmission and advanced energy solutions. The studies must include specific energy generation and storage solutions, regional economic impacts, and potential, prerequisite regulatory changes. One study must focus on parts of Montrose County; the other must focus on southeastern Colorado.
<u>HB 23-1252</u> Thermal Energy	The bill addresses geothermal energy usage by expanding an existing grant program, creating requirements for thermal energy networks, and repealing the Geothermal Heat Suppliers Act.
<u>HB 23-1281</u> Advance the Use of Clean Hydrogen	The bill requires the Public Utilities Commission (PUC) to initiate a proceeding and adopt rules addressing the appropriate regulatory framework for potential clean hydrogen projects. The bill also specifies the factors the PUC must consider in reviewing clean hydrogen projects submitted by investor-owned utilities.
<u>SB 23-016</u> Greenhouse Gas Emission Reduction Measures	The bill creates a state income tax credit for new, electric-powered lawn equipment; requires the Public Employees' Retirement Association and insurance companies to study climate risks to their investment portfolios; authorizes the Department of Natural Resources to regulate Class VI injection wells; updates the state's greenhouse gas emissions reduction goals; and commissions a study on electric transmission capacity.
<u>SB 23-186</u> Oil and Gas Commission Study Methane Seepage Raton Basin	The bill commissions a study on methane seepage in the Raton Basin.
<u>SB 23-198</u> Clean Energy Plans	The bill expands the applicability of Clean Energy Plans and requires the Department of Public Health and Environment to verify greenhouse gas emissions reductions.
<u>SB 23-285</u> Energy and Carbon Management Regulation in Colorado	The bill renames the Colorado Oil and Gas Conservation Commission as the Energy and Carbon Management Commission and expands the commission's regulatory authority to include emerging energy generation and storage technologies, specifically deep geothermal and underground gas storage.
<u>SB 23-291</u> Utility Regulation	The bill updates transparency, rulemaking, and rate filing requirements for certain electric and gas utilities.
<u>HB 22-1013</u> Microgrids for Community Resilience Grant Program	The bill creates the Microgrids for Community Resilience Grant Program in the Department of Local Affairs to provide grants for cooperative electric associations and municipally owned utilities to purchase microgrid resources for eligible rural communities located within their service territories.
<u>HB 22-1018</u> Electric and Gas Utility Customer Protections	This bill moves back two dates established in House Bill 21-1105 related to the Department of Human Services' supplemental utility assistance program. It establishes income standards for utility assistance eligibility. It also requires the Public Utilities Commission to adopt rules regarding utility service disconnections and reconnections.

Bill Number and Title	Summary
<u>HB 22-1104</u> Powerline Trails	The bill authorizes transmission providers to contract for the construction and maintenance of powerline trails in transmission corridors.
<u>HB 22-1249</u> Electric Grid Resilience and Reliability Roadmap	This bill requires the Colorado Energy Office to produce a grid resilience and reliability roadmap.
<u>HB 22-1361</u> Oil and Gas Reporting	The bill requires that the Office of State Auditor conduct a performance audit on oil and gas operations, reporting, and revenue. It also requires the Colorado Oil and Gas Conservation Commission to promulgate rules requiring annual meter certification and calibration and emissions reporting and increases civil penalties.
<u>HB 22-1362</u> Building Greenhouse Gas Emissions	The bill requires the Colorado Energy Office and the Department of Local Affairs to convene an Energy Code Board to develop a model electric ready and solar ready code and a model low energy and carbon code for adoption by counties, municipalities, and state agencies. It also creates two grant programs to provide funding for high efficiency electric equipment.
<u>HB 22-1381</u> Colorado Energy Office Geothermal Energy Grant Program	The bill creates the geothermal energy grant program in the Colorado Energy Office for single-structure geothermal grants, community district heating grants, and geothermal electricity generation grants.
<u>HB 22-1394</u> Fund Just Transition Community and Worker Supports	The bill provides and further appropriates funding to the Department of Labor and Employment for the Office of Just Transition and Coal Transition Worker Assistance Programs.
<u>SB 22-110</u> Equip Wind Turbine Aircraft Detection Lighting System	The bill requires the installation of aircraft detection lighting systems on wind-powered generation facilities.
<u>SB 22-118</u> Encourage Geothermal Energy Use	This bill modifies certain statutory provisions that apply to solar energy so that they also apply to geothermal energy systems. It also directs the Colorado Energy Office to develop basic consumer education materials about leased and purchased geothermal installations.
<u>HB 21-1052</u> Define Pumped Hydroelectricity as Renewable Energy	This bill removes an existing restriction on pumped hydroelectricity generation as a source of recycled energy, which is included in the definition of an eligible energy resource under the renewable energy standard statute.
<u>HB 21-1105</u> Low-income Utility Payment Assistance Contributions	This bill requires investor-owned utilities to collect a monthly energy assistance system benefit charge from each customer beginning October 2021 to help finance the low-income energy assistance programs administered by Energy Outreach Colorado, the Colorado Energy Office, and the Department of Human Services, and eliminates the existing Tier 2 severance tax allocations to these programs.

Bill Number and Title	Summary
<u>HB 21-1131</u> Cooperative Electric Associations Governance Requirements	The bill modifies the requirements governing cooperative electric associations.
<u>HB 21-1238</u> Public Utilities Commission Modernize Gas Utility Demand-side Management Standards	This bill updates the methods used to determine cost-effectiveness and other requirements of demand-side management programs implemented by gas utilities.
<u>HB 21-1253</u> Renewable and Clean Energy Project Grants	This bill transfers \$5.0 million from the General Fund to the Local Government Severance Tax Fund for the Department of Local Government to provide renewable and clean energy project grants.
<u>HB 21-1269</u> Public Utilities Commission Study of Community Choice Energy	The bill requires the Public Utilities Commission to study the implementation of community choice energy in Colorado through an investigatory proceeding.
<u>HB 21-1284</u> Limit Fee Install Active Solar Energy System	This bill limits the fees assessed to install solar energy systems on residential or commercial property.
<u>HB 21-1286</u> Energy Performance for Buildings	The bill directs the Colorado Energy Office to implement a building performance program, and requires owners of certain large buildings to submit annual energy use data to the office and meet energy performance standards.
<u>HB 21-1290</u> Additional Funding for Just Transition	The bill provides funding to the Department of Labor and Employment for the Office of Just Transition and Direct Assistance to Coal Transition Workers.
<u>HB 21-1324</u> Promote Innovative and Clean Energy Technologies	The bill allows investor-owned electric utilities to submit proposals to the Public Utilities Commission in the Department of Regulatory Agencies for innovative energy technology projects and partnerships in Colorado in areas of the state that are economically affected by the retirement of existing generation resources.
<u>SB 21-020</u> Energy Equipment and Facility Property Tax Valuation	This bill requires clean energy resources, energy storage facilities, and solar facilities with a generation capacity of under 2 megawatts to be valued for property tax purposes using the "income approach" rather than the "cost approach".
<u>SB 21-065</u> Gasoline and Special Fuels Tax Info Disclosure	This bill allows the executive director of the department of revenue to disclose information gathered from an assessment of a gasoline or special fuels distributor to other taxpayers and requires a distributor to disclose certain records to local government officials upon written request.

Bill Number and Title	Summary
<u>SB 21-072</u> Public Utilities Commission Modernize Electric Transmission Infrastructure	This bill creates the Colorado Electric Transmission Authority, requires transmission utilities to join organized wholesale markets, and expands the authority to install broadband facilities on an electric utility easement. It also requires the Public Utilities Commission to issue a final order concerning a utility's application to construct or expand transmission facilities within 240 days.
<u>SB 21-103</u> Sunset Office of Consumer Counsel	This bill continues the newly renamed Office of the Utility Consumer Advocate and the Utility Consumers' Board in the Department of Regulatory Agencies through September 1, 2028.
<u>SB 21-108</u> Public Utilities Commission Gas Utility Safety Inspection Authority	This bill directs the Public Utilities Commission to expand its rules related to gas pipeline safety and increases the maximum penalty for violations of pipeline safety rules.
<u>SB 21-230</u> Transfer to Colorado Energy Office Energy Fund	The bill transfers \$40.0 million in the current FY 2020-21 from the General Fund to the Energy Fund administered by the Colorado Energy Office for renewable and clean energy programs.
<u>SB 21-235</u> Stimulus Funding Department Of Agriculture Efficiency Programs	This bill transfers \$3.0 million from the General Fund to the Agriculture Value-Added Cash Fund to support the Advancing Colorado's Renewable Energy and Energy Efficiency Program. It also appropriates \$2.0 million from the General Fund to the Conservation Services Division within the Department of Agriculture for voluntary soil health programs.
<u>SB 21-246</u> Electric Utility Promote Beneficial Electrification	The bill requires investor-owned electric utilities to file beneficial electrification plans with the Public Utilities Commission.
<u>SB 21-261</u> Public Utilities Commission Encourage Renewable Energy Generation	The bill makes various changes to the renewable energy standards and the regulation of distributed generation.
<u>SB 21-272</u> Measures to Modernize the Public Utilities Commission	This bill makes various statutory changes to the operation of the Public Utilities Commission, and increases the cap on annual fees collected from regulated public utilities.

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