

Executive Summary

Colorado's farmers and ranchers depend on reliable water supplies to irrigate crops; our tourism sector depends on stable snowpack and healthy forests; our communities depend on reliable infrastructure; and our children depend on clean air. State actions are essential to address climate change and safeguard our communities, and our future.

Coloradans are already seeing the impacts of climate change in our daily lives: Hotter summers and more intense droughts, earlier spring snowmelt, forests decimated by the pine beetle epidemic, and more unpredictable weather are all manifestations of a changing climate. These changes impose real costs on our communities and our economy. Today, as the federal government rolls back protections for our health and environment, cuts funding for clean energy research, and promotes the fossil fuel industry, **state and local leadership on climate change is more critical than ever.**

Hundreds of cities and 14 states—including Colorado—have pledged to rein in their emissions in order to limit global warming to 1.5 to 2 degrees Celsius (1.5-2°C), the level scientists say is necessary to avoid the most catastrophic impacts of climate change. To achieve that goal, we must embark on an expansive effort to reduce carbon pollution.

Colorado Governor Hickenlooper's executive order on climate, issued in July of 2017, is a critical step forward for our state. Colorado state agencies, the legislature, cities, and businesses should adopt measures to make the executive order's ambitious emission reductions a reality. But addressing climate change is a long-term effort, and future governors and legislators should build on the progress to date by establishing emission targets, regulations, and market incentives to drive the deep, long-term pollution reductions needed to safeguard our climate.

Colorado is well-positioned to build on our clean energy successes by accelerating current efforts and advancing new policies. But our research shows that policies currently in place are projected to keep emission levels flat at best, not drive the reductions in carbon pollution that are needed to meet the goals of the executive order and the Paris Climate Agreement (Figure 1).

OUR RESEARCH SHOWS THAT COLORADO POLICIES CURRENTLY IN PLACE ARE PROJECTED TO KEEP EMISSION LEVELS FLAT AT BEST, NOT DRIVE THE REDUCTIONS **IN CARBON POLLUTION THAT ARE NEEDED TO AVOID SEVERE IMPACTS FROM CLIMATE CHANGE.**

Figure 1. Key Policies and a Market-Based Program Can Reduce Carbon Pollution Consistent with Limiting Warming to 2°C

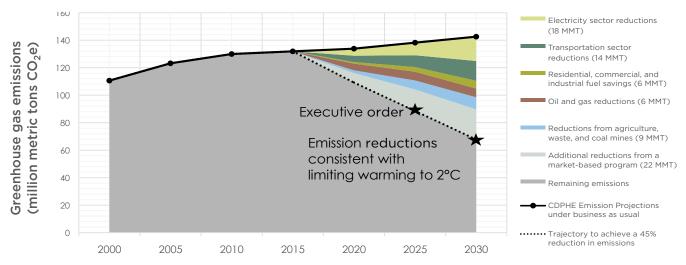


Figure 1. Colorado's emissions under "business as usual" are projected to rise (based on projections by the Colorado Department of Public Health and Environment); measures in each of the key sectors can reduce emissions significantly, and adopting a market-based policy will drive the deep reductions needed to be on an emissions trajectory consistent with limiting warming to 2°C. Emission reductions for each sector are shown in the legend, in million metric tons of CO₂ equivalent (MMT CO₂e).

As shown in Figure 1, we need visionary policies in the areas of electricity, transportation, energy efficiency, oil and gas, voluntary incentives, and a market-based carbon program to reduce carbon pollution and avert the most severe impacts of climate change.

In order to meet the goals of the governor's executive order and science-based targets for avoiding the most severe impacts of climate change, Colorado should:

1. Adopt statewide carbon pollution limits that reduce emissions at least 45% below 2005 levels by 2030 and 90% below 2005 levels by 2050, consistent with limiting warming to 1.5–2°C.

Achieving science-based climate goals requires near-term action to reduce emissions. Colorado should commit to reduce emissions at least 45% below 2005 levels by 2030 and 90% below 2005 levels by 2050. Establishing these targets is critical: They will inform the type and scale of policies adopted by executive agencies and future legislatures, and provide key benchmarks for measuring success. The Colorado legislature and governor should move quickly to adopt binding emission targets for 2030 and beyond.

Advance policies that drive carbon pollution reductions in key sectors, including the electricity, transportation, industrial, and commercial sectors.

Colorado should adopt policies that drive innovation and investment in new, clean technologies, accelerate the transition to a clean energy economy, and successfully achieve near-term reductions in carbon pollution. For example, over the next 18 months, state administrative agencies can take these actions:

- The Air Quality Control Commission should adopt rules to reduce greenhouse gas pollution from power plants and other industrial sources, and adopt California's more stringent fuel economy standards for vehicles, including a zero-emission vehicle sales requirement.
- The Public Utilities Commission should advance actions to retire older, coal-fired units and invest in clean energy resources, a modernized grid, and energy efficiency programs.
- The Air Quality Control Commission should advance regulations that reduce venting and flaring of methane and ensure the state has adequate monitoring in place to catch leaks of potent methane pollution.
- The Colorado Energy Office should explore opportunities to advance a program to enable voluntary carbon reductions in sectors like agriculture, waste management, and coal mine methane, similar to the Colorado Carbon Fund.

The Colorado legislature should also move important sector-specific policies forward, including but not limited to:

- Adopting up-to-date energy-efficient building codes.
- Maintaining and expanding policies and incentives to support electric vehicles and to ensure growing cities plan for new growth in a way that focuses on moving people, not just cars.
- Further supporting efforts to reduce carbon pollution in the power sector by advancing policies to enable greater levels of clean energy and energy efficiency.
- Enact a market-based policy to reduce carbon pollution, such as a carbon tax or a cap-and-trade program, that can link with other states or jurisdictions and incentivize the most cost-effective investments in clean energy.

A market-based carbon policy can establish the framework for achieving deep, long-term pollution reductions. Market-based environmental policies have a long, successful track record of reducing pollution at lower costs and have been utilized in phasing out lead in gasoline, curbing acid rain, and reducing ozone-depleting chemicals through the Montreal Protocol. Collectively, these programs have saved billions of dollars compared to traditional regulations.

In addition to adopting carbon pollution reduction targets and key sector-specific policies, the Colorado legislature should direct the Air Quality Control Commission to implement a market-based carbon program for Colorado. Importantly, the commission should ensure that any market-based program not disproportionately impact working families and other frontline communities, who are more vulnerable to the impacts of climate change and to potential cost impacts due to the larger portions of their budgets spent on energy.

The benefits of acting on climate change are clear. Transitioning to a low-carbon economy takes dedicated, thoughtful leadership. Colorado's businesses, local governments, and communities have shown a willingness to lead—but the magnitude of the challenge and the opportunity for success calls for a broad, comprehensive statewide approach.

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