



## Colorado's Climate Action Plan and Climate Change Data Collection

By Christina Van Winkle

In 2019, Colorado enacted [House Bill 19-1261](#), establishing statewide greenhouse gas (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 promulgate rules to collect and report on GHG data and to implement measures to meet these GHG emissions reduction goals. This *issue brief* provides an overview of AQCC rulemaking related to these legislative directives.

### Legislative Directives

**House Bill 19-1261.** House Bill 19-1261, the Climate Action Plan to Reduce Pollution, establishes goals to reduce GHG emissions by the following amount, measured relative to 2005 GHG emissions levels:

- 26 percent by 2025,
- 50 percent by 2030; and
- 90 percent by 2050.

The bill requires the AQCC to timely promulgate rules and regulations to achieve the goals, while also considering other factors such as disproportionately impacted communities, reductions in other harmful air pollutants, and the benefits and costs of compliance.

**Senate Bill 19-096.** Senate Bill 19-096 directs the AQCC to undertake rulemaking to require GHG-emitting entities to monitor and publicly report emissions, and to implement measures to meet its GHG emission-reduction goals. The bill also requires the Air Pollution Control Division within CDPHE to update the statewide inventory of GHG emissions

and projections at least every two years and to recalculate Colorado's 2005 GHG emissions. The 2005 GHG emissions will serve as a baseline for measuring progress toward the goals established in House Bill 19-1261.

### Supporting the Rulemaking Process

Colorado is taking a sector-based approach to reducing GHG emissions. Although the AQCC is directed to undertake rulemaking to achieve the GHG emission-reduction goals, other state commissions, such as the Public Utilities Commission, the Oil and Gas Conservation Commission, and the Transportation Commission may play key roles in rulemaking and implementing emission-reduction actions.

**Colorado Greenhouse Gas Pollution Roadmap.** Several state agencies, including CDPHE, the Colorado Energy Office (CEO), and the Departments of Agriculture, Natural Resources, and Transportation, are developing a GHG Pollution Reduction Roadmap of sector-based actions to achieve the goals defined in House Bill 19-1261. The Roadmap will establish the 2005 GHG emissions baseline and assess the emission-reduction effects of 2019 legislation. The CEO hired Energy and Environmental Economics, Inc., to help develop the Roadmap. More information on Roadmap development can be accessed [here](#).

**AQCC GHG strategy subcommittee.** The AQCC formed a GHG strategy subcommittee to identify, prioritize, and make recommendations to the full commission on sector-based strategies to meet GHG emission-reduction goals, as well as to develop

contingency plans to ensure Colorado remains on track to meet those goals. The subcommittee held public meetings in the summer and fall of 2020 to:

- discuss sector-based mitigation strategies,
- estimate emissions reductions,
- develop a contingency process; and
- prioritize the AQCC long-term activity calendar.

During the August subcommittee meeting, the Air Pollution Control Division in CDPHE presented preliminary emission-reduction estimates based on recent, ongoing, and near-term actions, as well as possible focus areas for additional emission reductions.

Materials, minutes, and recordings of the GHG strategy subcommittee are available [here](#).

## AQCC GHG Regulatory Action

The following sections outline the regulatory steps the AQCC has taken since House Bill 19-1261 was enacted, and provides a timeline for future rulemaking.

**Zero Emission Vehicle Program.** In August 2019, the AQCC adopted revisions to the Colorado Low Emission Automobile Regulation ([Regulation Number 20](#)), requiring vehicle manufacturers to meet minimum zero emission vehicle (ZEV) sales requirements for light-duty vehicles in Colorado, beginning with the 2023 model year. The Colorado ZEV program, including percentage requirements, credit and debit calculations, and reporting requirements, incorporates the requirements of the California ZEV program, available [here](#).<sup>1</sup>

**GHG Reporting and Emission Reduction Requirements Rule.** In May 2020, the AQCC adopted the Greenhouse Gas Reporting and Emission Reduction Requirements Rule ([Regulation Number 22](#)), establishing reporting requirements for GHG-emitting entities and suppliers. The regulations are applicable to owners and operators of

Colorado-based facilities and build upon established federal reporting requirements under the Mandatory Greenhouse Gas Reporting Rule. The rule also implements the phase-out of certain hydrofluorocarbons in manufacturing and end-uses involving aerosol propellants, chillers, foam, and stationary refrigeration.<sup>2</sup>

**Control of methane emissions from oil and natural gas operations.** Senate Bill 19-181 directed the AQCC to adopt emissions control regulations to minimize emissions of methane and other hydrocarbons, volatile organic compounds, and oxides of nitrogen from oil and gas operations. Rulemaking is ongoing, with two phases complete. The AQCC promulgated rules in December 2019 to require annual GHG emissions reporting from the sector. In September 2020, the AQCC adopted rules to minimize emissions through a number of monitoring, reporting, and control measures. A comprehensive rulemaking to reduce GHGs from the sector is scheduled for December 2021.

## Next Steps and Timeline

The Air Pollution Control Division continues to consult with the AQCC regarding sector-based strategies to meet the GHG emissions reduction targets in House Bill 19-1261. In addition to quantifying the emissions reductions for planned and ongoing actions, the AQCC is considering additional rulemaking, particularly in the transportation, building fuel use, waste management, and industrial processes sectors.

The table on the following page outlines the actions the AQCC is considering, related emissions reduction estimates, and any regulatory or legislative action that is required, along with a rulemaking timeline.

---

<sup>1</sup>In July 2020, Colorado signed a multi-state Medium- and Heavy-duty Zero Emission Vehicle Memorandum of Understanding. Rulemaking may require transportation funding and legislative authorization.

<sup>2</sup>Emissions from HFCs are accounted for in the non-energy industrial processes sector in GHG emissions inventories.

**Table 1**  
**Emissions Reduction Estimates by Sector, Action, and Timeline (MMT CO<sub>2</sub>e)**

<b>Emissions Sector</b>	<b>Action</b>	<b>2025 Reduction</b>	<b>2030 Reduction</b>	<b>Regulatory Actions</b>	<b>Legislative Action</b>	<b>Timeline</b>
<b>Recent, Ongoing, and Near-Term Actions</b>						
<b>Electric Power</b>	Electric Generation Sector Transition	18.90	32.20	Adopt Regional Haze Limits; AQCC Clean Energy Plan Guidance	None	Regional Haze Rulemaking Hearing: November 19 & 20, 2020 (Reg 3 and 23)
<b>Oil and Natural Gas</b>	Ongoing SB181 Rulemaking (Reg 7)	7.00	12.00	AQCC Rulemaking (Reg 7); COGCC Rulemaking	None	Ongoing (Dec 2019, Sept 2020). Comprehensive rulemaking scheduled for December 16 & 17, 2021
<b>Coal Mining and Abandoned Mines</b>	Coal Mine Methane Rulemaking	5.00	6.00	AQCC Regional Haze Rulemaking (Reg 3 and 23); APCD Permits	None	Regional Haze Rulemaking Hearing: November 19 & 20, 2020  Ongoing (for permits)
<b>Transportation</b>	Business as Usual: CAFE AND LEV <sup>1</sup>	5.00	6.00	No action required	None	n/a
<b>Transportation</b>	Comprehensive Efforts <sup>2</sup>	2.00	4.60	AQCC 2021-2023 Rulemaking	Potential Legislative Authorization and Appropriations	Initial Rulemaking scheduled for July 2021
<b>Transportation</b>	ZEV Regulations and Utility Transportation Electrification Plan	0.40	1.50	1. Adopt ZEV Standard 2. Engage with PUC re: Utility Transportation Electrification Plan Approvals	None	1. Complete: ZEV Standard adopted August 2019 (Reg 20)  2. Ongoing
<b>Industrial Processes</b>	HFC Phase Out	0.56	1.15	Adopt HFC Phase Out Rules	None	Complete: HFC Phase Out Rules adopted May 2020 (Reg 22)
<b>Waste Management</b>	Front Range Waste Diversion Enterprise Implementation	0.50	0.50	No action required.	None	Complete
<b>Multiple</b>	Local Action Programs	1.00	2.50	No action required.	None	n/a
<b>Total Emissions Reductions (MMT CO<sub>2</sub>e):</b>		<b>40.36</b>	<b>66.45</b>			
<b>Emissions Reductions Needed to Meet Goals (MMT CO<sub>2</sub>e)<sup>3</sup>:</b>		<b>35.07</b>	<b>67.45</b>			

**Table 1 (Cont.)  
Emissions Reduction Estimates by Sector, Action, and Timeline (MMT CO<sub>2</sub>e)**

<b>Emissions Sector</b>	<b>Action</b>	<b>2025 Reduction</b>	<b>2030 Reduction</b>	<b>Regulatory Actions</b>	<b>Legislative Action</b>	<b>Timeline</b>
<b>Focus Areas Under Comprehensive Economy Wide Program (Priority- and Medium-Term)</b>						
<b>Waste Management</b>	Renewable Natural Gas (RNG) Standard for gas utilities	0.62	1.55	PUC Rulemaking, possible AQCC role	Requires Funding and Authority Bill	TBD
	Landfill and Wastewater Methane Rulemaking and Investment	0.47	0.95	AQCC 2021-2022 Rulemaking	Could be supported in RNG Standard bill	TBD
<b>Industrial Processes</b>	Refrigerant Management Program	TBD	0.5	AQCC 2021-2022 Rulemaking	None	TBD
	Residential High HFC high GWP Phase Out	TBD		AQCC 2021-2022 Rulemaking	None	TBD
<b>Building Fuel Use</b>	Beneficial Electrification Requirements	TBD	2.75	AQCC 2021-2022 Rulemaking	Potential Legislative Authorization and Appropriations	TBD
	Expanded Natural Gas Demand Side Management Requirements	TBD		PUC Rulemaking.	Potential Legislative Authorization and Appropriations	TBD
	Building Benchmarking and Performance Standards	TBD	2.34	AQCC 2021-2022 Rulemaking	Potential Legislative Authorization and Appropriations	TBD
	Industrial Energy and Emissions Audits and Efficiency Rulemakings	TBD		AQCC 2021-2022 Rulemaking	Potential Legislative Authorization and Appropriations	TBD

<sup>1</sup>CAFE = Corporate Average Fuel Economy standards, established by the National Highway Traffic Safety Administration, regulates how far vehicles must travel on one gallon of fuel. LEV = Low Emissions Vehicle standards, established by the Colorado Department of Public Health and Environment, regulates vehicle emissions of criteria pollutants and greenhouse gases.

<sup>2</sup>Transportation comprehensive efforts include GHG Planning and Pollution Standard; Vehicle Miles Traveled Reduction; Medium Duty/Heavy Duty Strategy; Additional Light Duty Vehicle Standards and Incentives; and Indirect Source Rules.

<sup>3</sup> The revised GHG emissions 2005 baseline is estimated to be 134.9 MMT CO<sub>2</sub>e, requiring emissions reductions of 35.1 MMT CO<sub>2</sub>e, 67.5 MMT CO<sub>2</sub>e, and 121.4 MMT CO<sub>2</sub>e in 2025, 2030, and 2050 respectively, compared to the 2005 revised baseline.

**Notes:** GHG emissions reported in million metric tons of carbon dioxide equivalent (MMT CO<sub>2</sub>e) and are calculated using the IPCC's 4<sup>th</sup> Assessment Report Global Warming Potential values for a 100-year time horizon. Table based on information compiled by the APCD to inform AQCC during GHG subcommittee meetings.