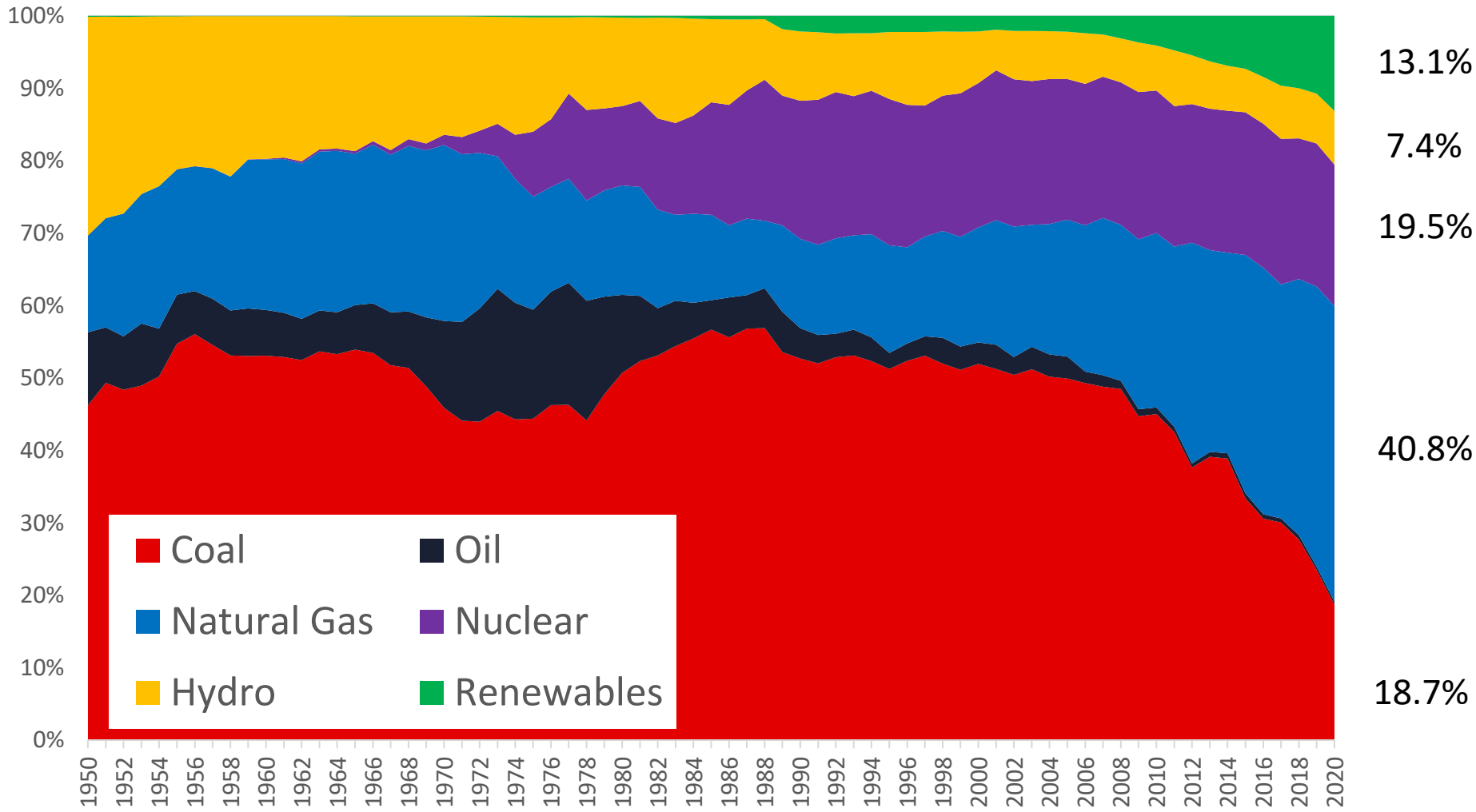
COLORADO NATURAL GAS LEGISLATION: TRENDS AND OPTIONS FOR THE FUTURE

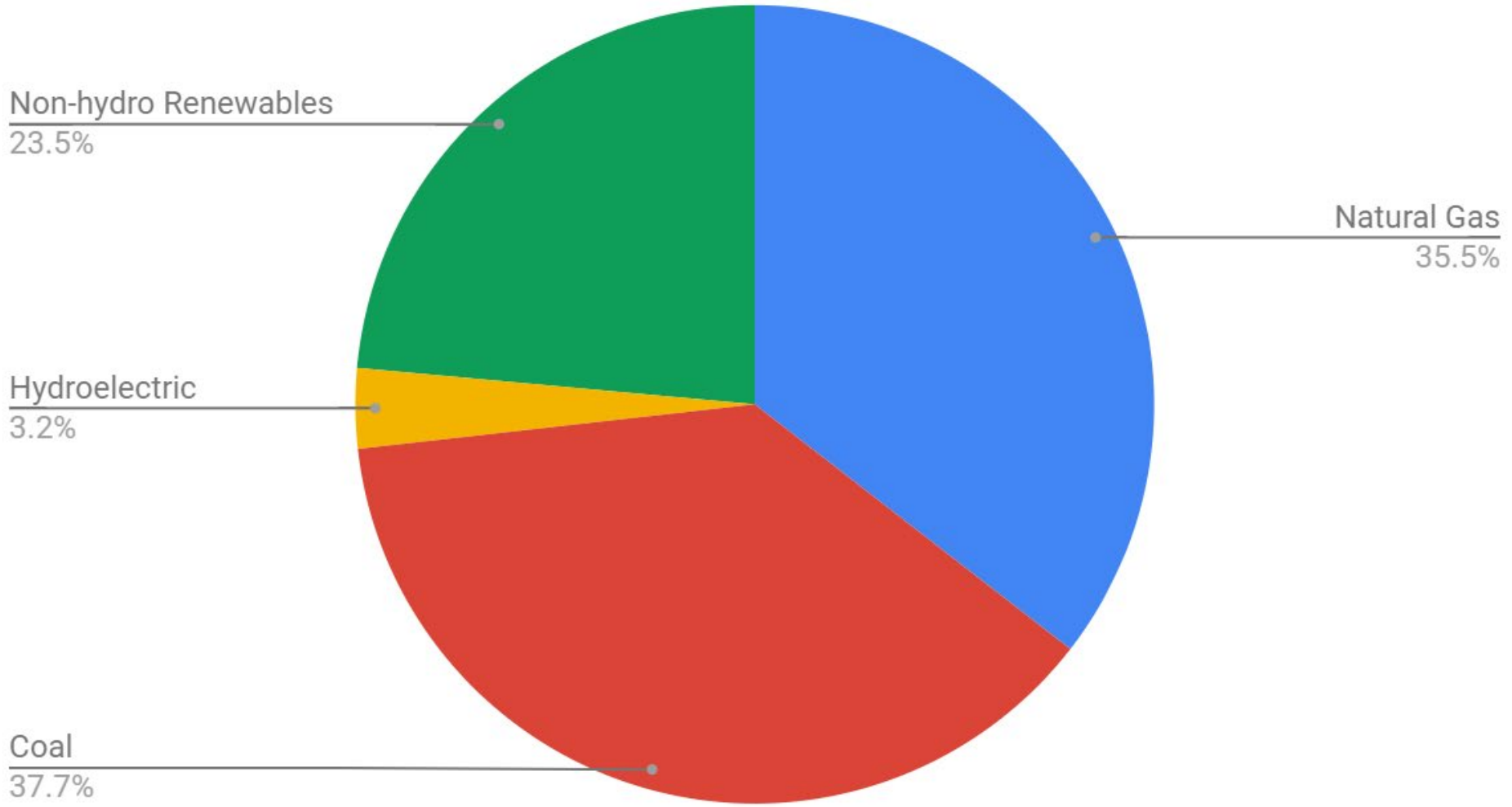
SENATOR CHRIS HANSEN (D-DENVER; CO SENATE DISTRICT 31)

U.S. NET GENERATION BY MARKET SHARE (1950-2020)

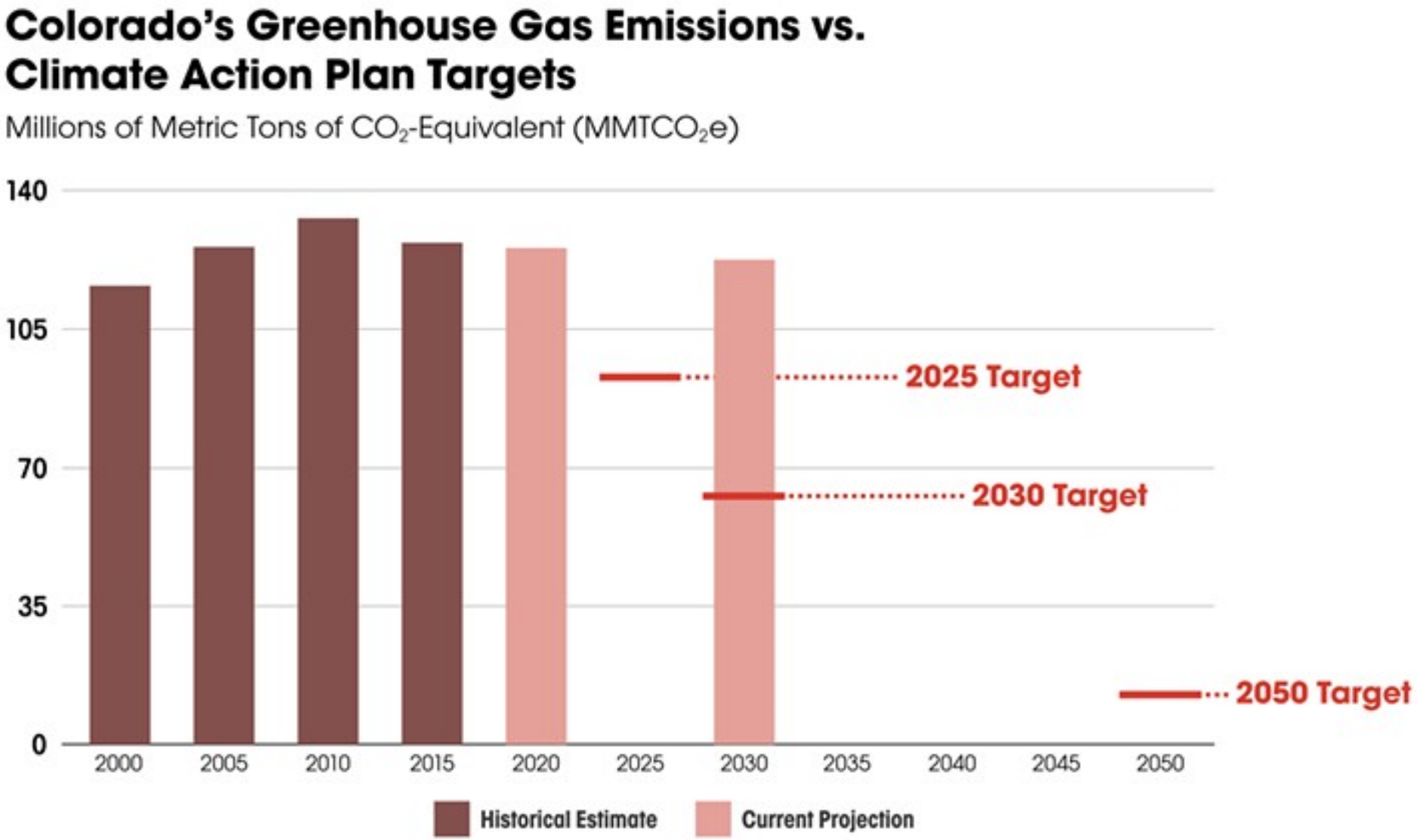


Source: U.S. Department of Energy, Energy Information Administration

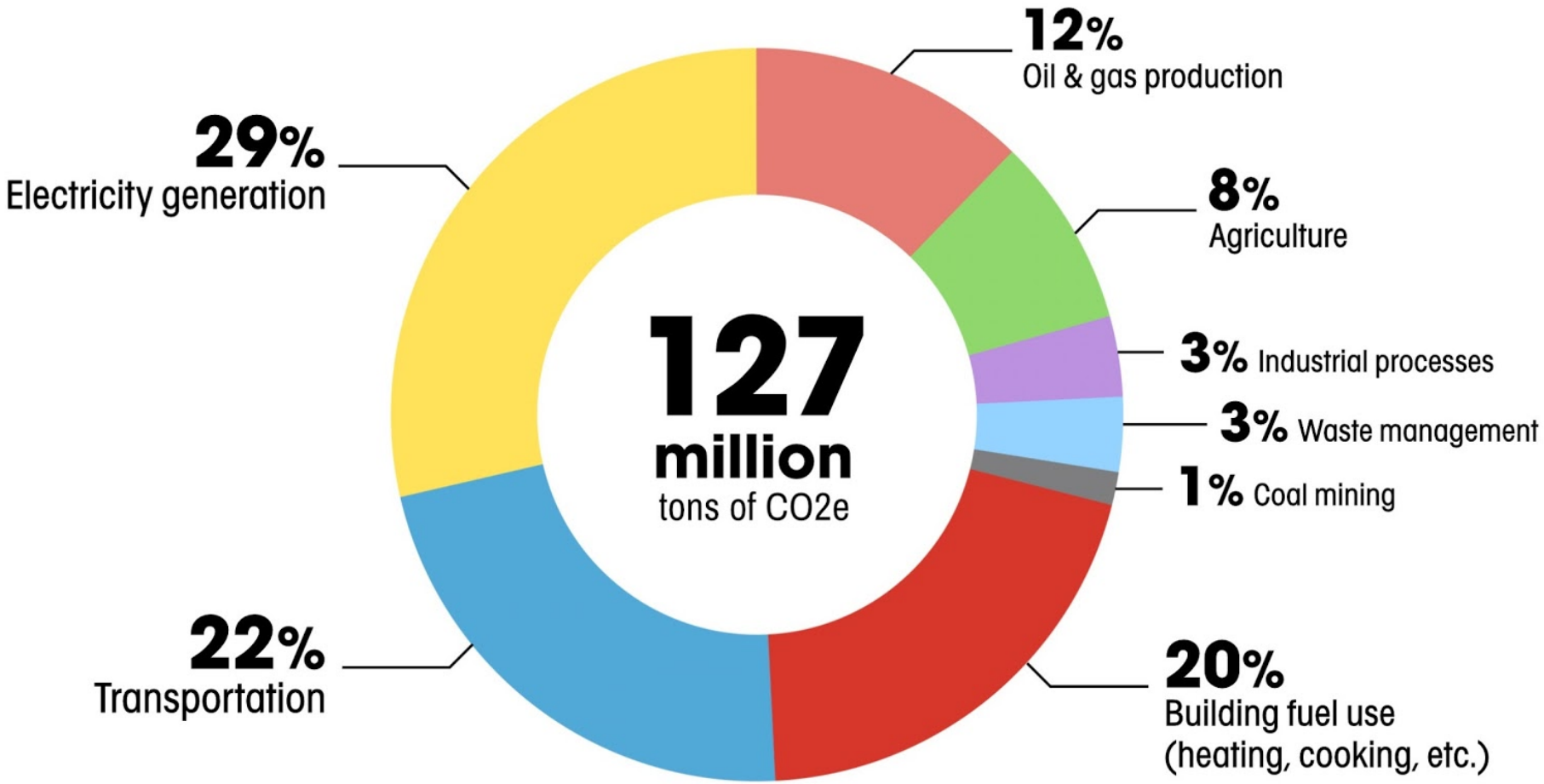
Colorado Net Electricity Generation by Source (Feb 2020)



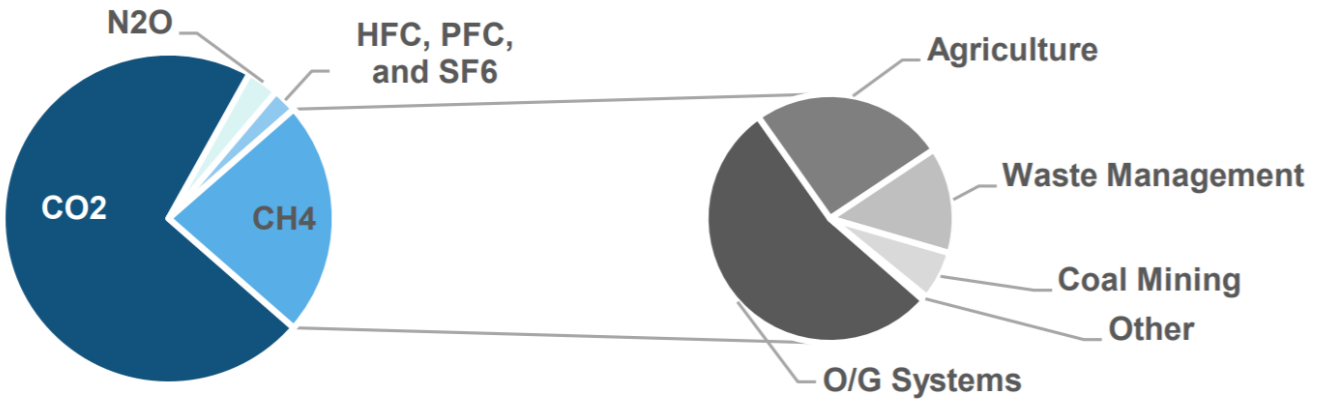
Source: U.S. Department of Energy, Energy Information Administration


Colorado's Greenhouse Gas Emissions vs.
Climate Action Plan Targets
Millions of Metric Tons of CO_2-Equivalent ($MMTCO_2e$)
140
105
70
35
0
2000
2005
2010
2015
2020
2025
2030
2035
2040
2045
2050
2025 Target
2030 Target
2050 Target
Historical Estimate
Current Projection

Sources of Colorado's Greenhouse Gas Emissions, 2015



Colorado's 2015 Methane Emissions by Source



Sector	Source	2015 Methane Emissions (MMT CO_2e)
Agriculture	Enteric Fermentation*	6.19
	Manure Management	1.20
	Agricultural Residue Burning	0.00
Waste Management	Landfills	3.52
	Wastewater Treatment Plants	0.51
Coal Mining	Coal Mining	1.85
Oil and Gas Systems	Oil and Gas Systems	15.62

Source: Colorado Department of Public Health and Environment

* *Enteric fermentation is the microbial fermentation process during digestion in ruminant animals (e.g., cattle) that produces methane as a byproduct. This methane is either exhaled or belched by the animal.*

In 2019, SB19-181 strengthened AQCC's ability to regulate and curb methane emissions

Requires the AQCC to:

- Review leak detection and repair rules
  - Consider more stringent provisions, including semi-annual leak detection and repair inspections at all well production facilities
- Adopt rules to minimize methane, hydrocarbons, volatile organic compounds, and nitrogen oxides emissions from oil and natural gas

Requires oil and gas companies to:

- Install methane emissions monitors at facilities with large emissions potential, at multi-well facilities, and at facilities in close proximity to occupied dwellings

SB21-xxx: An opportunity for significant greenhouse gas reductions via GHG performance standard

This bill establishes a phased in greenhouse gas performance standard for natural gas local distribution companies (LDCs) of:

- at least 5% emissions reduction by January 1, 2025;
- at least 10% emissions reduction by January 1, 2030;
- at least 15% emissions reduction by January 1, 2035 and every year thereafter

Eligible resources to accomplish the performance standard include:

- Renewable Natural Gas
- Emissions offsets that can include coal mine methane, forestry, and agriculture
- Leak detection and repair of the LDC
- MSW methane, wastewater biogas, MSW and tire pyrolysis

The bill also establishes different criteria for large and small investor owned natural gas utilities & provides guidance for municipally owned natural gas utilities

Potential GHG emissions savings under SB21-xxx

Portfolio Targets under SB20-150	**Quantity of Natural Gas displaced by RNG** Million cubic feet	**Potential GHG Savings from Displaced Geologic Natural Gas** Metric tons of CO_2e	**Potential GHG Savings from Avoided Methane Emissions** Metric tons of CO_2e
5%	6,727	0.4 million	up to 3.4 million
10%	13,453	0.7 million	up to 6.8 million
15%	20,180	1.1 million	up to 10.2 million

Potential Displacement of Natural Gas by RNG for large and small utilities

Natural Gas Utility	Number of Meters	2018 Natural Gas Sales Million cubic feet	Quantity of Natural Gas Displaced by RNG under Large Utility Targets Million cubic feet		
			5%	10%	15%
PSCo (Xcel Enegy)	1,329,848	134,534	6,727	13,453	20,180
Black Hills Colorado Gas	84,586	9,180	459	918	1,377
Black Hills Gas Distribution	99,764	1,732	87	173	260
Colorado Natural Gas	21,831	1,790	90	179	269
Atmos Energy	114,866	4,086	204	409	613

Source: Public Utilities Commission.
Note: Atmos Energy retail sales based on 2020 gas cost recovery filings.

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