Report Title	Author	Date of Publication	Model(s)	Modeling Scenario	Sector Focus	2030 Electricity Sector Emission Reductions Relative to 2005 Baseline	Coal Generation	Gas Generation	Wind + Solar Installed Capacity (GW)	Cost Impacts / Average Retail Rates
Committing to Climate Action. Equitable Pathways to Meeting Colorado's Climate Goals	**GridLab / Evolved Energy for NRDC & Sierra Club**	Sep. 2020	Energy PATHWAYS + RIO	Core Decarbonization	Economy-wide	98%	All retired by 2025	Some remains (less than 2% of electricity production annually)	19.5	Decarbonizing the power sector by 2030 is the cheapest cost option, total annual system cost is 2% higher than reference case in 2025. 10% higher in 2030, and 1% higher in 2050.
				Slow Electricity		67%	Plants without a firm retirement date stay online through 2035	Yes – unspecified	Not specified	Most expensive pathway.
Colorado Greenhouse Gas Pollution Reduction Roadmap	**Colorado Energy Office / E3**	Jan. 2021	PATHWAYS + RESOLVE	2019 Action Scenario	Economy-wide	80%	Most coal retired by EOY 2030. Approximately 1.5 GW remains beyond 2030.	Requires 9.9 GW of installed capacity in 2030	13.6	Not discussed
				HB19-1261 Target		Same as 2019 Action Scenario	Same as 2019 Action Scenario	Requires 11.2 GW of installed capacity in 2030	17.8	Not discussed
Retirement of Colorado Coal-fired Power Plants (CRS)	**Vibrant Clean Energy for Community Energy, Inc.**	Jan. 2018	WIS:dom	Coal through 2040	Power Gen.	1%	No coal without firm retirements, retired before 2040.	Requires 8.6 GW of installed capacity in 2030	5.1	10.34 cent rates in 2030
				Coal Plants Gradually Retire		37%	Model selects retirement dates - ~2 GW remains through 2030 but falls to 106 MW by 2040.	Requires 8.6 GW of installed capacity in 2030	10.5	9.82 cent rates in 2030
				Retire all coal by 2025		62%	All coal retired by 2025	Requires 9.8 GW of installed capacity in 2030.	13.0	10.18 cent rates in 2030
Colorado Electrification & Decarbonization Study (CEDS)		Nov. 2019		Retire Coal	Power Gen.	51%	Most coal retired by 2035, 42 MW remains through 2040. Comanche 3 retired in 2035.	Requires 13 GW of installed capacity in 2030.	12.9	Approximately 9.3 cents in 2030
				Deep Decarbonization	Economy-Wide	80%	Same retirement schedule as “Retire Coal” scenario.	Requires 6.1 GW of installed capacity. Also requires 2.3 GW of energy storage (increasing to 7.3 GW by 2040)	23.6	Approximately 8.9 cents in 2030 (lower costs in the deep decarbonization scenario are due new flexible electric demands coming online)
Colorado’s Climate Action Plan Emission Targets: Illustrative Strategies and GHG Abatement Potentials	**MJ Bradley & Associates for Environmental Defense Fund**	Feb. 2020	RHG-NEMS	100% zero emitting incremental resources	Economy-wide	78%	All coal retired by 2030	0%	Not specified	Not discussed
				80% zero emitting incremental resources		76%	All coal retired by 2030	20%	Not specified	Not discussed