

ELECTRIC GENERATION SECTOR TRANSITION:

- Includes announced coal plant retirements
- Includes reduced coal unit capacity for units remaining online
- Includes increased natural gas usage in 2025 to offset decreased coal capacity and retirements as additional renewables, storage, and transmission are constructed and brought online
- EGU sector achieves 80% GHG reduction by 2030 through Clean Energy Plans and Regional Haze SIP requirements

TRANSPORTATION SECTOR TREND:

- Compares 2005 GHG Inventory value to REFERENCE scenario modeled by E3 for Roadmap
- 2005 Value ~31 MMT, 2025 Value ~26 MMT, 2030 Value ~25 MMT
- CAFE standards and extension as well as historical vehicle turnover used for projected values in the model

COAL MINE METHANE:

- 2019 Inventory calculated decrease from ~6.8 MMT to ~1.8 MMT between 2005 and 2015
- 5 MMT reduction held constant through 2025
- Additional 1 MMT reduction expected by 2030 through additional closures and flaring permit(s)

ONGOING OIL AND GAS RULEMAKINGS:

- Based on revised O&G Inventory and Projections included in June 18 AQCC Roadmap update, with projections updated in July based on COGCC mill levy information
- Includes production growth post-COVID
- Assumes declining state-wide leak rate due to ongoing Rulemakings for SB-181 and HB-1261

REGULATION 22 HFC PHASE-OUT:

- Emissions reductions estimates from Economic Impact Analysis (EIA) ZEV Regulation and Utility Transportation Electrification Plans (TEP):
- Assumes smaller impact in 2025 and expanding impact in 2030 and beyond due to vehicle life span and fleet turnover
- Includes emissions reduction estimates from rulemaking EIA and recently filed TEPs

WASTE DIVERSION - FRONT RANGE WASTE DIVERSION ENTERPRISE:

- Uses EPA's WARM tool to estimate benefits of increasing waste diversion rates for paper, cardboard, food and yard waste from 18% to 28% by 2025 and maintains that level through 2030
- Assumes total waste generation remains flat

LOCAL ACTION PROGRAMS:

- October 2018 report for Boulder county that estimated ~1.8 MMT reduction potential by 2030
- Expect that Denver, Fort Collins, and other municipalities will also be achieving GHG reductions through planning and programs implemented
- May be some double counting but cities and counties are pushing forward with these programs and will achieve benefits looking forward

LANDFILL AND WASTEWATER METHANE RULEMAKING AND INVESTMENT:

- Uses a target of 20% reduction by 2025 and 40% reduction by 2030 from 2005 levels
Renewable Natural Gas Standard:
- Uses Energy Office review of RNG potential in Colorado to estimate benefits

REFRIGERANT MANAGEMENT PROGRAM:

- Emissions reductions highly dependent on scope and timing of program
- Assumes no reductions by 2025 due to rulemaking and program implementation timing
- Provides a way to limit GHG emissions growth with possible reductions from 2005 levels

RESIDENTIAL HFC HIGH GWP PHASE-OUT:

- Emissions reductions highly dependent on scope and timing of program
- Assumes no reductions by 2025 due to rulemaking and program implementation timing
- Combined with refrigerant management program rules could target an overall reduction from 2005 levels of 0.5 MMT with additional reductions beyond 2030

BENEFICIAL ELECTRIFICATION REQUIREMENTS:

- Based on Energy Office study of potential benefits
- Limited ability to achieve 2025 benefits once legislation and rulemakings are completed
- Expedited implementation could be possible through strong support by the AQCC for utility beneficial electrification programs

OTHER BUILDING AND EFFICIENCY REQUIREMENTS:

- Includes natural gas DSM, Benchmarking and Performance Standards, and Industrial Energy and Emissions Audits and Efficiency requirements
- Limited ability to achieve 2025 benefits once legislation and rulemakings are completed
- Could target about ~5 MMT total reductions from buildings and energy efficiency by 2030 with expansion beyond that time period
- Modest change in overall BE well below technical potential

COMPREHENSIVE TRANSPORTATION PLANNING:

- Includes maintaining 10% VMT reductions post COVID
- Includes expanded ZEV adoption for LDV
- Includes HD/MD ZEV adoption
- Includes mass transit ZEV adoption