

DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

Air Quality Control Commission

REGULATION NUMBER 22

Colorado Greenhouse Gas Reporting and Emission Reduction Requirements

5 CCR 1001-26

[Editor's Notes follow the text of the rules at the end of this CCR Document.]

Outline of Regulation

- PART A Greenhouse Gas Reporting
- PART B Greenhouse Gas Emission Reduction Requirements
- PART C Statement of Basis, Specific Statutory Authority, and Purpose

Pursuant to Colorado Revised Statutes Section 24-4-103 (12.5), materials incorporated by reference are available for public inspection during normal business hours, or copies may be obtained at a reasonable cost from the Air Quality Control Commission (the Commission), 4300 Cherry Creek Drive South, Denver, Colorado 80246-1530. The material incorporated by reference is also available through the United States Government Printing Office, online at www.gpo.gov/fdsys. Materials incorporated by reference are those editions in existence as of the date indicated and do not include any later amendments.

Unless otherwise indicated, any incorporation by reference of provisions of Title 40 of the Code of Federal Regulations (CFR) are to the edition effective as of July 1, 2019.

PART A Greenhouse Gas Reporting

I. General Provisions

- I.A. This regulation establishes mandatory greenhouse gas (GHG) monitoring, recordkeeping and reporting requirements for owners and operators of certain facilities that directly emit GHGs, and retail or wholesale electric service providers. Additionally, certain suppliers will be required to report GHGs based upon the quantity that would be emitted from combustion or use of the products supplied.
- I.B. Entities subject to this regulation that are also subject to the reporting requirements of the U.S. Environmental Protection Agency's (EPA) mandatory GHG reporting rule under 40 CFR Part 98 (Part 98) must also report directly to the State of Colorado under this regulation.

II. Definitions

- II.A. "Anaerobic process" means a procedure in which organic matter in wastewater, wastewater treatment sludge, or other material is degraded by microorganisms in the absence of oxygen, resulting in the generation of carbon dioxide (CO₂) and methane (CH₄). This source category consists of the following: anaerobic reactors, anaerobic lagoons, anaerobic sludge digesters, and biogas destruction devices (for example, burners, boilers, turbines, flares, or other devices).

- II.B. "Carbon Dioxide Equivalent (CO₂e)" means a metric measure used to compare the emissions from various GHG based upon their global warming potential (GWP). CO₂e is determined by multiplying the mass amount of emissions (metric tons per year), for each GHG constituent by that gas's GWP, and summing the resultant values to determine CO₂e (metric tons per year). Note that this term differs from that defined in the Air Quality Control Commission Common Provisions Regulation and Regulation Number 3.
- II.C. "CFR" means Code of Federal Regulations.
- II.D. "Domestic Wastewater Treatment Plant" has the same meaning as defined by the Water Quality Control Commission in 5 Code of Colo. Regs. (CCR) 1002-22 (September 30, 2009).
- II.E. "Electric service provider" or "electric utility" means any public utility as defined in Section 40-1-103, C.R.S., (July 1, 2019) providing electric services or providing electric energy for retail or wholesale sales, including imported and exported electric energy, in the State of Colorado.
- II.F. "Emergency generator" means a stationary combustion device, such as a reciprocating internal combustion engine or turbine that serves solely as a secondary source of mechanical or electrical power whenever the primary energy supply is disrupted or discontinued during power outages or natural disasters that are beyond the control of the owner or operator of a facility. An emergency generator operates only during emergency situations, for training of personnel under simulated emergency conditions, as part of emergency demand response procedures, or for standard performance testing procedures as required by law or by the generator manufacturer. A generator that serves as a back-up power source under conditions of load shedding, peak shaving, power interruptions pursuant to an interruptible power service agreement, or scheduled facility maintenance shall not be considered an emergency generator.
- II.G. "Exported electricity" means electricity generated inside the State of Colorado and delivered to serve load located outside the State of Colorado. Exported electricity does not include electricity that is generated outside the State of Colorado, is transmitted through the State of Colorado, and with the final point of delivery outside the State of Colorado.
- II.H. "Facility" means any physical property, plant, building, structure, source, or stationary equipment located on one or more contiguous or adjacent properties in actual physical contact or separated solely by a public roadway or other public right of way and under common ownership or common control, that emits or may emit any greenhouse gas. Operators of military installations may classify such installations as more than a single facility based on distinct and independent functional groupings within contiguous military properties.
- II.I. "Food processing" means an operation used to manufacture or process meat, poultry, fruits, and/or vegetables as defined under NAICS 3116 (Meat Product Manufacturing) or NAICS 3114 (Fruit and Vegetable Preserving and Specialty Food Manufacturing). For information on NAICS codes, see <http://www.census.gov/eos/www/naics/> (as published January 30, 2020).
- II.J. "Global warming potential" or "GWP" means the ratio of the time-integrated radiative forcing from the instantaneous release of one kilogram of a trace substance relative to that of one kilogram of a reference gas, i.e., (CO₂). For the GHG emissions calculations requirements of this rule, the GWP values that must be used are as specified in Table A-1 to Subpart A of Title 40 CFR Part 98.

- II.K. "Greenhouse gas" or "GHG" means carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF₆) and Nitrogen Trifluoride (NF₃). Note that this term differs from that defined in the Air Quality Control Commission Regulation Number 3.
- II.L. "Hydrofluorocarbons (HFCs)" means a class of GHGs consisting of hydrogen, fluorine, and carbon.
- II.M. "Industrial waste landfill" means a landfill other than a municipal solid waste landfill, a Resource Conservation and Recovery Act (RCRA) Subtitle C hazardous waste landfill, or a Toxic Substance Control Act (TSCA) hazardous waste landfill, in which industrial solid waste, such as RCRA Subtitle D wastes (non-hazardous industrial solid waste, defined in 40 CFR § 257.2), commercial solid wastes, or conditionally exempt small quantity generator wastes, is placed. An industrial waste landfill includes all disposal areas at the facility.
- II.N. "Industrial wastewater treatment" means use of anaerobic processes to treat industrial wastewater and industrial wastewater treatment sludge at pulp and paper manufacturing, food processing, ethanol production and petroleum refining facilities. Industrial wastewater treatment does not include municipal wastewater treatment plants or separate treatment of sanitary wastewater at industrial sites.
- II.O. "Imported electricity" means electricity generated outside the State of Colorado and delivered to serve load within the State of Colorado. Imported electricity does not include electricity that is generated outside the State of Colorado, is transmitted through the State of Colorado, and with the final point of delivery outside the State of Colorado.
- II.P. "Local distribution company" or "LDC" means a company that owns or operates distribution pipelines, not interstate pipelines or intrastate pipelines, that physically deliver natural gas to end users and that are within a single state that are regulated as separate operating companies by State public utility commissions or that operate as independent municipally-owned distribution systems. LDCs do not include pipelines (both interstate and intrastate) delivering natural gas directly to major industrial users and farm taps upstream of the local distribution company inlet.
- II.Q. "Metric ton" means a common international measurement for mass equal to 1,000 kilograms, which is equivalent to 2204.6 pounds or 1.1 short tons.
- II.R. "Municipal solid waste landfill" or "MSW landfill" means an entire disposal facility in a contiguous geographical space where household waste is placed in or on land. An MSW landfill may also receive other types of RCRA Subtitle D wastes (40 CFR § 257.2) such as commercial solid waste, non-hazardous sludge, conditionally exempt small quantity generator waste, and industrial solid waste. Portions of an MSW landfill may be separated by access roads, public roadways, or other public right-of-ways. An MSW landfill may be publicly or privately owned.
- II.S. "Natural gas transmission and storage" has the same meaning as "natural gas transmission and storage segment" as defined in Air Quality Control Commission (AQCC) Regulation Number 7, Part D, Section IV.A. (effective February 14, 2020).
- II.T. "North American Industry Classification System (NAICS) code(s)" means the six-digit code(s) that represents the product(s)/activity(s)/service(s) at a facility or supplier as listed in the Federal Register and defined in "North American Industrial Classification System Manual 2007," available from the U.S. Department of Commerce, National

Technical Information Service, Alexandria, VA 22312 and <http://www.census.gov/eos/www/naics/> (as published January 30, 2020).

- II.U. “Oil and natural gas operations and equipment” means the equipment and activities listed in AQCC Regulation Number 7, Part D, Section V.C. (effective February 14, 2020).
 - II.V. “Perfluorocarbons (PFCs)” means a class of greenhouse gases consisting on the molecular level of carbon and fluorine.
 - II.W. “Research and development” means those activities conducted in process units or at laboratory bench-scale settings whose purpose is to conduct research and development for new processes, technologies, or products and whose purpose is not for the manufacture of products for commercial sale, except in a de minimis manner.
 - II.X. “Responsible official” means the definition of that term found in the Air Quality Control Commission’s Common Provisions Regulation (effective January 14, 2016).
 - II.Y. “Supplier” means a producer, importer, or exporter in any supply category included in Table A-5 of Subpart A, 40 CFR Part 98, as defined by the appropriate subpart in 40 CFR Part 98.
 - II.Z. “Year” means calendar year.
- III. Applicability and Emissions Quantification for Affected Sources
- III.A. The GHG monitoring, recordkeeping, and reporting requirements of this rule apply to the owners and operators of any facility or entity that is located in the State of Colorado and that meets any of the following requirements:
 - III.A.1. Any electric service provider or electric utility. GHGs reported must include all emissions from electricity generation and transmission equipment, not including emergency generators.
 - III.A.2. Any local distribution company.
 - III.A.3. Any supplier. The GHGs reported must be based on the fuel delivered to retail providers or end users and are the quantity that is emitted from combustion or use of the fuel products delivered or supplied.
 - III.A.4. Any industrial waste landfill active at any point during the year. Inert material facilities as defined under 6 CCR 1007-2, Part 1 (November 30, 2019), are exempt from the requirements of this regulation. The GHGs reported must include emissions from the landfill, landfill gas collection systems, and destruction devices for landfill gases
 - III.A.5. Any industrial wastewater treatment.
 - III.A.6. Any underground coal mine active at any point during the year.
 - III.A.7. All oil and natural gas operations and equipment at or upstream of a natural gas processing plant and all natural gas transmission and storage.
 - III.A.8. Any facility or supplier not covered under Sections III.A.1. through III.A.7. that is required to report under 40 CFR Part 98 must report GHGs to the same extent as reported under 40 CFR Part 98.

- III.A.9. Any municipal solid waste landfill not required to report under 40 CFR Part 98 may voluntarily report GHGs. The GHGs reported must include emissions from the landfill, landfill gas collection systems, and destruction devices for landfill gases.
- III.A.10 Any domestic wastewater treatment plant may voluntarily report GHGs.
- III.A.11. Any agricultural operation may voluntarily report GHGs or operational information sufficient to allow the Division to determine GHGs.
- III.A.12. Research and development activities are excluded from GHG reporting requirements.
- III.B. Owners and operators of facilities or entities covered under Paragraph III.A., whether as mandatory or voluntary reporters, must report all GHGs regardless of the amount emitted. Reported GHGs must include the mass of each GHG constituent and total CO₂e. To quantify GHG emissions for the reporting purposes of this rule, the owner or operator of a facility or an entity identified in Paragraph III.A of this section must calculate GHG emissions by year as described below:
 - III.B.1. For an electric service provider or utility identified in Section III.A.1, GHG emissions must be calculated using the applicable calculation methodologies and appropriate equations specified in Subparts C, D, and DD of 40 CFR, Part 98.
 - III.B.2. For a local distribution company identified in Section III.A.2., GHG emissions must be calculated using the applicable calculation methodologies specified in Subparts W and NN of 40 CFR, Part 98.
 - III.B.3 For a supplier identified in Section III.A.3., GHG emissions must be calculated using the applicable calculation methodologies specified in Subparts LL, MM, or NN of 40 CFR, Part 98.
 - III.B.4. For an industrial waste landfill identified in Section III.A.4., GHG emissions must be calculated according to Subpart TT of 40 CFR, Part 98.
 - III.B.5. For industrial wastewater treatment identified in Section III.A.5., GHG emissions must be calculated according to Subpart II of 40 CFR, Part 98.
 - III.B.6. For an underground coal mine identified in Section III.A.6., GHG emissions must be calculated according to Subpart FF of 40 CFR, Part 98.
 - III.B.7. For oil and natural gas operations and equipment at or upstream of a natural gas processing plant identified in Section III.A.7., GHG emissions must be calculated according to the requirements of AQCC Regulation Number 7, Part D, Section V. (effective February 14, 2020). For natural gas transmission and storage identified in Section III.A.7. of this section, GHG emissions must be calculated according to the requirements of AQCC Regulation Number 7, Part D, Section IV. (effective February 14, 2020).
 - III.B.8. For a facility or supplier included pursuant to Section III.A.8., GHG emissions must be calculated using the calculation methodologies specified in each applicable Subpart of 40 CFR, Part 98.
 - III.B.9. For a municipal solid waste landfill identified in Section III.A.9., GHG emissions must be calculated according to Subpart HH of 40 CFR, Part 98.

III.B.10. For a domestic wastewater treatment plant identified in Section III.A.10., GHG emissions must be calculated according to the “U.S. Community Protocol for Accounting and Reporting of Greenhouse Gas Emissions ” (Version 1.2, July 2019), at Appendix F: Wastewater and Water Emission Activities and Sources, published by ICLEI: Local Governments for Sustainability and available in hardcopy at the offices of the CDPHE and for download at: [Division to create URL with document available for download].

III.B.11. For an agricultural operation identified in Section III.A.11., reported GHG emissions or operational information must utilize emission calculation protocols applicable to the specific activities in the agricultural sector.

IV. Reporting Requirements

IV.A. On or before March 31 of each year, unless otherwise specified, owners and operators of facilities or entities identified in Section III.A. must submit a report of GHG emissions in the previous calendar year. GHGs must be reported utilizing Division-approved format or forms.

IV.A.1. The first report for owners and operators of facilities or entities required to report for calendar year 2020 pursuant to 40 CFR, Part 98 is due on or before March 31, 2021.

IV.A.2. The first report for owners and operators of facilities or entities under Sections III.A.1. through III.A.6. and III.A.9. through III.A.11. that were not required to submit a federal report for calendar year 2020 pursuant to 40 CFR, Part 98 is due on or before March 31, 2022 for calendar year 2021.

IV.A.3. Owners and operators of oil and natural gas operations and equipment and natural gas transmission and storage identified in Section III.A.7. must report GHGs to the Division according to the inventory reporting requirements and deadlines of AQCC Regulation Number 7, Part D, Sections IV. and V. (effective February 14, 2020).

IV.B. GHG reports submitted must include the following:

IV.B.1. Individual GHG constituent emissions (metric tons per year) and associated CO₂e emissions, and aggregated CO₂e emissions.

IV.B.2. AIRS ID if assigned to a subject facility, along with the facility name, entity name or supplier name (as appropriate), and physical street address of the facility, entity or supplier, including the city, State, and zip code. If the facility does not have a physical street address, then the facility must provide the latitude and longitude representing the geographic centroid or center point of facility operations in decimal degree format. This must be provided in a comma-delimited “latitude, longitude” coordinate pair reported in decimal degrees to at least four digits to the right of the decimal point.

IV.B.3. NAICS code(s) that apply to the facility or supplier, including the primary NAICS code and any additional NAICS code(s).

IV.B.4. Year and months covered by the report.

IV.B.5. Date of submittal.

- IV.B.6. Certification statement signed and dated by a responsible official that identifies the official's title and contact information and attests that the report being submitted is true, accurate and complete to the best of the certifying individual's knowledge.
- IV.C. In addition to the information required under Section IV.B., electric service providers and electric utilities must also report the following information using a Division-approved form no later than June 30 of each year:
 - IV.C.1. The data elements verifying GHG emissions attributable to imported and exported electricity.
 - IV.C.2. The data elements confirming compliance with GHG reductions from plans approved by the Public Utilities Commission.
- IV.D. Report Revisions Due to Substantive Errors
 - IV.D.1. A substantive error is an error that impacts the quantity of GHG emissions reported or otherwise prevents the reported data from being validated or verified.
 - IV.D.2. If one or more substantive errors as defined in Section IV.D.1. are discovered in a previously submitted GHG report by an entity responsible for preparing or submitting the report, or providing data for the report, the Division must be notified in writing of the errors within five (5) business days of discovery of the errors and a revised report that corrects the substantive errors must be submitted within forty-five (45) days of the discovery of the errors.
 - IV.D.3. If the Division identifies substantive errors in a submitted report, the Division may notify the entity responsible for the report of the errors and a revised report that corrects the substantive errors must be submitted within forty-five (45) days of the notification.
 - IV.D.4. The Division may provide reasonable extensions of the forty-five day (45) period for submission of a revised report on a case-by-case basis when requested in writing by the reporting entity. The extension request must include details on why the request is being made and the additional requested time needed to submit the revised report.

V. Recordkeeping Requirements

- V.A. All data elements and reports listed below must be retained by the owners and operators of facilities or entities reporting under Section III.A. and be provided to the Division upon request:
 - V.A.1. All records of supporting documentation used to prepare and submit the GHG report, including but not limited to:
 - V.A.1.a. All units, operations, processes, and activities for which GHG emissions were calculated.
 - V.A.1.b. Operating data, fuel use records, or process information used for GHG emissions calculations.

V.A.1.c. GHG emissions calculations and methods used, including a written explanation if emission calculation methodologies used during the reporting period are changed.

V.A.1.d. Any records required to be retained pursuant to Subpart A of 40 CFR, Part 98 and the applicable Subparts of 40 CFR, Part 98 identified in Section III.B.

V.A.2. Reports submitted pursuant to the requirements of Section IV.

V.B. Records must be maintained for five (5) years from the date of submission of the annual GHG report.

PART B Greenhouse Gas Emission Reduction Requirements

I. Prohibitions on Use of Certain Hydrofluorocarbons in Aerosol Propellants, Chillers, Foam, and Stationary Refrigeration End-Uses

I.A. Purpose and Applicability

I.A.1. The purpose of this regulation is to reduce hydrofluorocarbon (HFC) emissions in the State of Colorado by adopting United States Environmental Protection Agency (EPA) Significant New Alternatives Policy (SNAP) Program prohibitions for certain HFCs in air conditioning and refrigeration equipment, aerosol propellants, and foam end-uses. This regulation is designed to support greenhouse gas emission reductions identified in Colorado Revised Statutes, Section 25-7-102(2)(g).

I.A.2. This regulation applies to any person who sells, offers for sale, leases, rents, installs, uses, or manufacturers in the State of Colorado any product or equipment that uses or will use an HFC in end-uses listed in Section I.E.1.

I.B. Definitions

I.B.1. "Aerosol Propellant" means a compressed gas that serves to dispense the contents of an aerosol container when the pressure is released.

I.B.2. "Air Conditioning Equipment" means chillers, both centrifugal chillers and positive displacement chillers, intended for comfort cooling of occupied spaces.

I.B.3. "Bunstock" or "bun stock" means a large solid box-like structure formed during the production of polyurethane, polyisocyanurate, phenolic, or polystyrene insulation.

I.B.4. "Capital Cost" means an expense incurred in the production of goods or in rendering services including but not limited to the cost of engineering, purchase, and installation of components and/or systems, and instrumentation, and contractor and construction fees.

I.B.5. "Centrifugal Chiller" means air conditioning equipment that utilizes a centrifugal compressor in a vapor-compression refrigeration cycle typically used for commercial comfort air conditioning. Centrifugal chiller in this definition is a chiller intended for comfort cooling and does not include cooling for industrial process cooling and refrigeration.

- I.B.6. "Cold Storage Warehouse" means a cooled facility designed to store meat, produce, dairy products, and other products that are delivered to other locations for sale to the ultimate consumer.
- I.B.7. "Component" means a part of a refrigeration system, including but not limited to condensing units, compressors, condensers, evaporators, and receivers; and all of its connections and subassemblies, without which the refrigeration system will not properly function or will be subject to failures.
- I.B.8. "Cumulatively Replaced" means the addition of, or change in, multiple components within a three-year period.
- I.B.9. "Date of Prohibition" means the applicable date after which the prohibition for use of HFCs in a specific end-use provided in Section I.E. goes into effect.
- I.B.10. "End-use" means processes or classes of specific applications within industry sectors, including but not limited to those listed in Section I.E.
- I.B.11. "Flexible Polyurethane" means a non-rigid synthetic foam containing polymers created by the reaction of isocyanate and polyol, including but not limited to that used in furniture, bedding, and chair cushions.
- I.B.12. "Foam" means a product with a cellular structure formed via a foaming process in a variety of materials that undergo hardening via a chemical reaction or phase transition.
- I.B.13. "Foam Blowing Agent" means a substance used to produce foam.
- I.B.14. "Household Refrigerators and Freezers" means refrigerators, refrigerator-freezers, freezers, and miscellaneous household refrigeration appliances intended for residential use. For the purposes of this regulation, "household refrigerators and freezers" does not include "household refrigerators and freezers - compact", or "household refrigerators and freezers - built-in."
- I.B.15. "Household Refrigerators and Freezers - Compact" means any refrigerator, refrigerator-freezer or freezer intended for residential use with a total refrigerated volume of less than 7.75 cubic feet (220 liters).
- I.B.16. "Household Refrigerators and Freezers - Built-in" means any refrigerator, refrigerator-freezer or freezer intended for residential use with 7.75 cubic feet or greater total volume and 24 inches or less depth not including doors, handles, and custom front panels; with sides which are not finished and not designed to be visible after installation; and that is designed, intended, and marketed exclusively to be: installed totally encased by cabinetry or panels that are attached during installation; securely fastened to adjacent cabinetry, walls or floor; and equipped with an integral factory-finished face or accept a custom front panel.
- I.B.17. "Hydrofluorocarbons" or "HFC" means a class of greenhouse gases (GHGs) consisting of hydrogen, fluorine, and carbon.
- I.B.18. "Integral Skin Polyurethane" means a synthetic self-skinning foam containing polyurethane polymers formed by the reaction of an isocyanate and a polyol, including but not limited to that used in car steering wheels and dashboards.

- I.B.19. "Manufacturer" means any person, firm, association, partnership, corporation, governmental entity, organization, or joint venture that produces any product that contains or uses HFCs or is an importer or domestic distributor of such a product.
- I.B.20. "Metered Dose Inhaler," or "Medical Dose Inhaler," or "MDI" means a device that delivers a measured amount of medication as a mist that a patient can inhale, typically used for bronchodilation to treat symptoms of asthma, chronic obstructive pulmonary disease (COPD), chronic bronchitis, emphysema, and other respiratory illnesses. An MDI consists of a pressurized canister of medication in a case with a mouthpiece.
- I.B.23. "Motor-bearing" means refrigeration equipment containing motorized parts, including compressors, condensers, and evaporators.
- I.B.24. "New" means products or equipment that are manufactured after the date of prohibition or equipment first installed for an intended purpose with new or used components after the date of prohibition, expanded by the addition of components to increase system capacity after the date of prohibition, or replaced or cumulatively replaced such that the cumulative capital cost of replacement after the date of prohibition exceeds 50% of the capital cost of replacing the whole system.
- I.B.25. "Phenolic Insulation Board" means phenolic insulation including but not limited to that used for roofing and wall insulation.
- I.B.26. "Polyolefin" means foam sheets and tubes made of polyolefin.
- I.B.27. "Polystyrene Extruded Boardstock and Billet (XPS)" means a foam formed from predominantly styrene monomer and produced on extruding machines in the form of continuous foam slabs which can be cut and shaped into panels used for roofing, walls, and flooring.
- I.B.28. "Polystyrene Extruded Sheet" means polystyrene foam including that used for packaging. It is also made into food-service items, including hinged polystyrene containers (for "take-out" from restaurants); food trays (meat and poultry) plates, bowls, and retail egg containers.
- I.B.29. "Positive Displacement Chiller" means vapor compression cycle chillers that use positive displacement compressors, typically used for commercial comfort air conditioning. Positive displacement chiller in this definition is a chiller intended for comfort cooling and does not include cooling for industrial process cooling and refrigeration.
- I.B.30. "Refrigerant" or "Refrigerant Gas" means any substance, including blends and mixtures, which is used for heat transfer purposes.
- I.B.31. "Refrigerated Food Processing and Dispensing Equipment" means retail food refrigeration equipment that is designed to process food and beverages dispensed via a nozzle that are intended for immediate or near-immediate consumption, including but not limited to chilled and frozen beverages, ice cream, and whipped cream. This end-use excludes water coolers, or units designed solely to cool and dispense water.
- I.B.32. "Refrigeration Equipment" means any stationary device that is designed to contain and use refrigerant gas, including but not limited to retail or commercial

refrigeration equipment, household refrigerators and freezers, and cold storage warehouses.

- I.B.33. "Remote Condensing Units" means retail refrigeration equipment or units that have a central condensing portion and may consist of compressor(s), condenser(s), and receiver(s) assembled into a single unit, which may be located external to the sales area. The condensing portion (and often other parts of the system) is located outside the space or area cooled by the evaporator. Remote condensing units are commonly installed in convenience stores, specialty shops (e.g., bakeries, butcher shops), supermarkets, restaurants, and other locations where food is stored, served, or sold.
- I.B.34. "Residential Use" means use by a private individual of a substance, or a product containing the substance, in or around a permanent or temporary household, during recreation, or for any personal use or enjoyment. Use within a household for commercial or medical applications is not included in this definition, nor is use in automobiles, watercraft, or aircraft.
- I.B.35. "Retail Food Refrigeration" or "Commercial Refrigeration" means equipment designed to store and display chilled or frozen goods for commercial sale including but not limited to stand-alone units, refrigerated food processing and dispensing equipment, remote condensing units, supermarket systems, and vending machines.
- I.B.36. "Retrofit" means to convert a system from one refrigerant to another refrigerant. Retrofitting includes the conversion of the system to achieve system compatibility with the new refrigerant and may include, but is not limited to, changes in lubricants, gaskets, filters, driers, valves, O-rings, or system components.
- I.B.37. "Rigid Polyurethane and Polyisocyanurate Laminated Boardstock" means laminated board insulation made with polyurethane or polyisocyanurate foam, including that used for roofing and wall insulation.
- I.B.38. "Rigid Polyurethane Appliance Foam" means polyurethane insulation foam in household appliances.
- I.B.39. "Rigid Polyurethane Commercial Refrigeration and Sandwich Panels" means polyurethane insulation for use in walls and doors, including that used for commercial refrigeration equipment, and used in doors, including garage doors.
- I.B.40. "Rigid Polyurethane High-pressure Two-component Spray Foam" means a foam product that is pressurized 800-1600 pounds per square inch (psi) during manufacture; sold in pressurized containers as two parts (i.e., A-side and B-side); and is blown and applied in situ using high-pressure pumps to propel the foam components, and may use liquid blowing agents without an additional propellant.
- I.B.41. "Rigid Polyurethane Low-pressure Two-component Spray Foam" means a foam product that is pressurized to less than 250 psi during manufacture; sold in pressurized containers as two parts (i.e., A-side and B-side); and are typically applied in situ relying upon a gaseous foam blowing agent that also serves as a propellant so pumps typically are not needed.
- I.B.42. "Rigid Polyurethane Marine Flotation Foam" means buoyancy or flotation foam used in boat and ship manufacturing for both structural and flotation purposes.

- I.B.43. "Rigid Polyurethane Slabstock and Other" means a rigid closed-cell foam containing urethane polymers produced by the reaction of an isocyanate and a polyol and formed into slabstock insulation for panels and fabricated shapes for pipes and vessels.
- I.B.44. "Stand-alone Unit" means retail refrigerators, freezers, and reach-in coolers (either open or with doors) where all refrigeration components are integrated and the refrigeration circuit may be entirely brazed or welded. These systems are fully charged with refrigerant at the factory and typically require only an electricity supply to begin operation.
- I.B.45. "Stand-alone Low-Temperature Unit" means a stand-alone unit that maintains food or beverages at temperatures at or below 32°F (0 °C).
- I.B.46. "Stand-alone Medium-Temperature Unit" means a stand-alone unit that maintains food or beverages at temperatures above 32°F (0 °C).
- I.B.47. "Substance" means any chemical intended for use in the end-uses listed in Section I.E of this regulation.
- I.B.48. "Supermarket Systems" means multiplex or centralized retail food refrigeration equipment systems designed to cool or refrigerate, which typically operate with racks of compressors installed in a machinery room and which includes both direct and indirect systems.
- I.B.49. "Use" means any utilization of any substance, including but not limited to utilization in a manufacturing process or product in the State of Colorado, consumption by the end-user in the State of Colorado, or in intermediate applications in the State of Colorado, such as formulation or packaging for other subsequent applications. For the purposes of this regulation, use excludes residential use, but it does not exclude manufacturing for the purpose of residential use.
- I.B.50. "Vending Machine" means a self-contained unit that dispenses goods that must be kept cold or frozen.

I.C. Prohibitions and Exemptions

- I.C.1. No person may sell, lease, rent, install, use, or manufacture in the State of Colorado, any product or equipment using a prohibited substance for any air-conditioning, refrigeration, foam, or aerosol propellant end-use listed in Section I.E.1.
- I.C.2. Except where an existing system is retrofit after the date of prohibition, nothing in this regulation requires a person that acquired a product or equipment containing a prohibited substance prior to the applicable date of prohibition in Section I.E.1. to cease use of that product or equipment. Products or equipment manufactured prior to the applicable date of prohibition specified in Table 1 of Section I.E.1 (including spray foam systems not yet applied on site) may be sold, imported, exported, distributed, installed, and used after the specified date of prohibition.
- I.C.3. End-uses that are exempted from Part B, Section I of this regulation are provided for in Section I.E.2.

I.D. Requirements

I.D.1. Disclosure Statement

I.D.1.a. Any person who manufactures or sells in the State of Colorado a product or equipment in the air-conditioning, refrigeration, foam, or aerosol propellant end-uses listed as prohibited in Section I.E.1., must provide a written disclosure to the buyer as part of the sales transaction and invoice or a label on the product or equipment as of the applicable date of prohibition for the end-use in Section 1.E.1.

I.D.1.a.(i) For motor-bearing refrigeration and air-conditioning equipment that is not factory-charged or pre-charged with refrigerant, the disclosure or label must state:

“This equipment is prohibited from using any substance on the “List of Prohibited Substances” for that specific end-use, in accordance with State regulations for hydrofluorocarbons.”

I.D.1.a.(ii) Except for products and equipment with existing labeling required by state or local building codes and safety standards which contain the information required in this subsection I.D.2.a.ii., the disclosure or label for refrigeration and air-conditioning equipment that are factory-charged or pre-charged with a refrigerant must include the date of manufacture and the refrigerant and foam blowing agent the product or equipment contains.

I.D.1.a.(iii) For foam, the disclosure or label must include the date of manufacture and hydrofluorocarbon the product contains or the hydrofluorocarbon used to make the product. Alternatively, the disclosure or label may state:

“Where sold, compliant with State HFC regulations.”

I.D.1.a.(iv) For aerosol propellant products, the disclosure or label must include the date of manufacture and the hydrofluorocarbon the product contains or the hydrofluorocarbon used to make the product. Alternatively, the disclosure requirement may be met if the hydrofluorocarbon the product contains or the hydrofluorocarbon used to make the product is listed in a Safety Data Sheet for the product that complies with the requirements of 29 CFR 1910.1200 (effective February 8, 2013).

I.D.2. Recordkeeping

I.D.2.a. Any person who manufactures any product or equipment in the end uses listed in Section I.E.1. for sale or entry into commerce in the State of Colorado must maintain for five (5) years the following records, where applicable, as of the date of prohibition for that end-use:

I.D.1.a.(i) Date of manufacture of the equipment or product.

I.D.1.a.(ii) Date of sale of the equipment or product.

I.D.1.a.(iii) The refrigerant, aerosol propellant, or foam blowing agent(s) that the equipment or product is designed to use.

I.D.1.a.(iv) The refrigerants, aerosol propellants, or foam blowing agent used in the equipment or products and the full charge capacity, where available.

I.D.1.a.(v) A copy of the disclosure statement or label issued to the buyer or recipient of the equipment or product.

I.D.2.b. Records must be made available to the Division upon request.

I.E. List of Prohibited Substances and Exemptions

I.E.1. Table 1 lists prohibited substances in specific end-uses and the date of prohibition for each end-use, unless an exemption is provided for in Section I.E.2.

Table 1: End-Use, Prohibited Substances, and Date of Prohibition

End-Use Category: Aerosol Propellants		
End-Use	Prohibited Substances	Date of Prohibition
Aerosol Propellants	HFC-125, HFC-134a, HFC-227ea and blends of HFC-227ea and HFC-134a	January 1, 2021
End-Use Category: Air Conditioning		
End-Use	Prohibited Substances	Date of Prohibition
Centrifugal Chillers (New)	FOR12A, FOR12B, HFC-134a, HFC-227ea, HFC-236fa, HFC245fa, R-125/ 134a/ 600a (28.1/70/1.9), R-125/ 290/ 134a/ 600a (55.0/1.0/42.5/1.5), R-404A, R-407C, R-410A, R-410B, R-417A, R-421A, R-422B, R-422C, R-422D, R-423A, R-424A, R-434A, R438A, R-507A, RS-44 (2003 composition), THR-03	January 1, 2024

End-Use Category: Air Conditioning		
End-Use	Prohibited Substances	Date of Prohibition
Positive Displacement Chillers (New)	FOR12A, FOR12B, HFC-134a, HFC-227ea, KDD6, R125/134a/600a (28.1/70/1.9), R-125/290/134a/600a (55.0/1.0/42.5/1.5), R-404A, R-407C, R-410A, R-410B, R-417A, R-421A, R-422B, R-422C, R-422D, R-424A, R-434A, R-437A, R438A, R-507A, RS-44 (2003 composition), SP34E, THR-03	January 1, 2024
End-Use Category: Refrigeration		
End-Use	Prohibited Substances	Date of Prohibition
Cold Storage Warehouses (New)	HFC-227ea, R-125/290/134a/600a (55.0/1.0/42.5/1.5), R404A, R-407A, R-407B, R-410A, R-410B, R-417A, R-421A, R421B, R-422A, R-422B, R-422C, R-422D, R-423A, R-424A, R428A, R-434A, R-438A, R-507A, RS-44 (2003 composition)	January 1, 2023
Household Refrigerators and Freezers (New)	FOR12A, FOR12B, HFC-134a, KDD6, R-125/290/134a/600a (55.0/1.0/42.5/1.5), R-404A, R-407C, R-407F, R-410A, R-410B, R-417A, R-421A, R-421B, R-422A, R-422B, R-422C, R-422D, R424A, R-426A, R-428A, R-434A, R-437A, R-438A, R-507A, RS24 (2002 formulation), RS-44 (2003 formulation), SP34E, THR-03	January 1, 2022
Household Refrigerators and Freezers— Compact (New)	FOR12A, FOR12B, HFC-134a, KDD6, R-125/290/134a/600a (55.0/1.0/42.5/1.5), R-404A, R-407C, R-407F, R-410A, R-410B, R-417A, R-421A, R-421B, R-422A, R-422B, R-422C, R-422D, R424A, R-426A, R-428A, R-434A, R-437A, R-438A, R-507A, RS24 (2002 formulation), RS-44 (2003 formulation), SP34E, THR-03	January 1, 2021

End-Use Category: Refrigeration		
End-Use	Prohibited Substances	Date of Prohibition
Household Refrigerators and Freezers—Built-in (New)	FOR12A, FOR12B, HFC-134a, KDD6, R-125/290/134a/600a (55.0/1.0/42.5/1.5), R-404A, R-407C, R-407F, R-410A, R-410B, R-417A, R-421A, R-421B, R-422A, R-422B, R-422C, R-422D, R424A, R-426A, R-428A, R-434A, R-437A, R-438A, R-507A, RS24 (2002 formulation), RS-44 (2003 formulation), SP34E, THR-03	January 1, 2023
Supermarket Systems (Retrofit)	R-404A, R-407B, R-421B, R-422A, R-422C, R-422D, R428A, R-434A, R-507A	January 1, 2021
Supermarket Systems (New)	HFC-227ea, R-404A, R-407B, R-421B, R-422A, R-422C, R-422D, R-428A, R-434A, R-507A	January 1, 2021
Remote Condensing Units (Retrofit)	R-404A, R-407B, R-421B, R-422A, R-422C, R-422D, R428A, R-434A, R-507A	January 1, 2021
Remote Condensing Units (New)	HFC-227ea, R-404A, R-407B, R-421B, R-422A, R-422C, R-422D, R-428A, R-434A, R-507A	January 1, 2021
Stand-alone Units (Retrofit)	R-404A, R-507A	January 1, 2021

End-Use Category: Air Conditioning

End-Use	Prohibited Substances	Date of Prohibition
Stand-alone Medium-Temperature Units (New)	FOR12A, FOR12B, HFC-134a, HFC-227ea, KDD6, R125/290/134a/600a (55.0/1.0/42.5/1.5), R-404A, R407A, R-407B, R-407C, R-407F, R-410A, R-410B, R417A, R-421A, R-421B, R-422A, R-422B, R-422C, R422D, R-424A, R-426A, R-428A, R-434A, R-437A, R438A, R-507A, RS-24 (2002 formulation), RS-44 (2003 formulation), SP34E, THR-03	January 1, 2021
Stand-alone Low-Temperature Units (New)	HFC-227ea, KDD6, R-125/290/134a/600a (55.0/1.0/42.5/1.5), R-404A, R-407A, R-407B, R-407C, R-407F, R-410A, R-410B, R-417A, R-421A, R-421B, R422A, R-422B, R-422C, R-422D, R-424A, R-428A, R434A, R-437A, R-438A, R-507A, RS-44 (2003 formulation)	January 1, 2021
Refrigerated Food Processing and Dispensing Equipment (New)	HFC-227ea, KDD6, R-125/ 290/ 134a/ 600a (55.0/1.0/42.5/1.5), R-404A, R-407A, R-407B, R-407C, R-407F, R-410A, R-410B, R417A, R-421A, R-421B, R-422A, R-422B, R-422C, R-422D, R424A, R-428A, R-434A, R-437A, R-438A, R-507A, RS-44 (2003 formulation)	January 1, 2021

End-Use Category: Air Conditioning		
End-Use	Prohibited Substances	Date of Prohibition
Vending Machines (New)	FOR12A, FOR12B, HFC-134a, KDD6, R125/290/134a/600a (55.0/1.0/42.5/1.5), R-404A, R407C, R-410A, R-410B, R-417A, R-421A, R-422B, R422C, R-422D, R-426A, R-437A, R-438A, R-507A, RS-24 (2002 formulation), SP34E	January 1, 2022
Vending Machines (Retrofit)	R-404A, R-507A	January 1, 2022
End-Use Category: Foams		
End-Use	Prohibited Substances	Date of Prohibition
Rigid Polyurethane and Polyisocyanurate Laminated Boardstock	HFC-134a, HFC-245fa, HFC-365mfc, and blends thereof	January 1, 2021
Flexible Polyurethane	HFC-134a, HFC-245fa, HFC-365mfc, and blends thereof	January 1, 2021
Integral Skin Polyurethane	HFC-134a, HFC-245fa, HFC-365mfc, and blends thereof; Formacel TI, Formacel Z-6	January 1, 2021
Polystyrene Extruded Sheet	HFC-134a, HFC-245fa, HFC-365mfc, and blends thereof; Formacel TI, Formacel Z-6	January 1, 2021

End-Use Category: Foams		
End-Use	Prohibited Substances	Date of Prohibition
Phenolic Insulation Board and Bunstock	HFC-143a, HFC-134a, HFC-245fa, HFC-365mfc, and blends thereof	January 1, 2021
Rigid Polyurethane Slabstock and Other	HFC-134a, HFC-245fa, HFC-365mfc and blends thereof; Formacel TI, Formacel Z-6	January 1, 2021
Rigid Polyurethane Appliance Foam	HFC-134a, HFC-245fa, HFC-365mfc and blends thereof; Formacel TI, Formacel Z-6	January 1, 2021
Rigid Polyurethane Commercial Refrigeration and Sandwich Panels	HFC-134a, HFC-245fa, HFC-365mfc, and blends thereof; Formacel TI, Formacel Z-6	January 1, 2021
Polyolefin	HFC-134a, HFC-245fa, HFC-365mfc, and blends thereof; Formacel TI, Formacel Z-6	January 1, 2021
Rigid Polyurethane Marine Flotation Foam	HFC-134a, HFC-245fa, HFC-365mfc and blends thereof; Formacel TI, Formacel Z-6	January 1, 2021
Polystyrene Extruded Boardstock and Billet (XPS)	HFC-134a, HFC-245fa, HFC-365mfc, and blends thereof; Formacel TI, Formacel B, Formacel Z-6	January 1, 2021

End-Use Category: Foams		
End-Use	Prohibited Substances	Date of Prohibition
Rigid Polyurethane High-pressure Two-component Spray Foam	HFC-134a, HFC-245fa, and blends thereof; blends of HFC365mfc with at least 4 percent HFC-245fa, and commercial blends of HFC-365mfc with 7 to 13 percent HFC-227ea and the remainder HFC-365mfc; Formacel TI	January 1, 2021
Rigid Polyurethane Low-pressure Two-component Spray Foam	HFC-134a, HFC-245fa, and blends thereof; blends of HFC365mfc with at least 4 percent HFC-245fa, and commercial blends of HFC-365mfc with 7 to 13 percent HFC-227ea and the remainder HFC-365mfc; Formacel TI	January 1, 2021
Rigid Polyurethane One-component foam sealants	HFC-134a, HFC-245fa, and blends thereof; blends of HFC365mfc with at least 4 percent HFC-245fa, and commercial blends of HFC-365mfc with 7 to 13 percent HFC-227ea and the remainder HFC-365mfc; Formacel TI	January 1, 2021

I.E.2. Table 2 lists exemptions to the prohibitions in Section I.E.1.

Table 2: Exemptions.

End-Use Category	Prohibited Substances	Acceptable Uses
Aerosol Propellants	HFC-134a	Cleaning products for removal of grease, flux and other soils from electrical equipment; refrigerant flushes; products for sensitivity testing of smoke detectors; lubricants and freeze sprays for electrical equipment or electronics; sprays for aircraft maintenance; sprays containing corrosion preventive compounds used in the maintenance of aircraft, electrical equipment or electronics, or military equipment; pesticides for use near electrical wires, in aircraft, in total release insecticide foggers, or in certified organic use pesticides for which EPA has specifically disallowed all other lower-GWP propellants; mold release agents and mold cleaners; lubricants and cleaners for spinnerettes for synthetic fabrics; duster sprays specifically for removal of dust from photographic negatives, semiconductor chips, specimens under electron microscopes, and energized electrical equipment; adhesives and sealants in large canisters; document preservation sprays; U.S. Food and Drug Administration (FDA)-approved MDIs for medical purposes; wound care sprays; topical coolant sprays for pain relief; products for removing bandage adhesives from skin; bear spray; and law enforcement pepper spray.
Aerosol Propellants	HFC-227ea and blends of HFC-227ea and HFC-134a	FDA-approved MDIs for medical purposes.
Air Conditioning	HFC-134a	Military marine vessels where reasonable efforts have been made to ascertain that other alternatives are not technically feasible due to performance or safety requirements.
Air Conditioning	HFC-134a and R-404A	Human-rated spacecraft and related support equipment where reasonable efforts have been made to ascertain that other alternatives are not technically feasible due to performance or safety requirements.

End-Use Category	Prohibited Substances	Acceptable Uses
Foams – Except Rigid polyurethane spray foam	All substances	Military applications where reasonable efforts have been made to ascertain that other alternatives are not technically feasible due to performance or safety requirements until January 1, 2022.
Foams – Except Rigid polyurethane spray foam	All substances	Space- and aeronautics-related applications where reasonable efforts have been made to ascertain that other alternatives are not technically feasible due to performance or safety requirements until January 1, 2025.
Rigid polyurethane two-component spray foam	All substances	Military or space- and aeronautics-related applications where reasonable efforts have been made to ascertain that other alternatives are not technically feasible due to performance or safety requirements until January 1, 2025.

PART C STATEMENTS OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE

I. Adopted: [date of the rulemaking hearing; if a multi-day hearing this would be the last day]

This Statement of Basis, Specific Statutory Authority, and Purpose complies with the requirements of the Colorado Administrative Procedure Act §24-4-103, the Colorado Air Pollution Prevention and Control Act §§25-7-1. This Statement of Basis, Specific Statutory Authority, and Purpose complies with the requirements of the Colorado Administrative Procedure Act, §§ 24-4-101 - 108, C.R.S., at Section 103(4), the Colorado Air Pollution Prevention and Control Act (the Act), §§ 25-7-101, C.R.S. et seq at Sections 105(1), 110, 110.5, and 110.8 C.R.S., and the Air Quality Commission’s Procedural Rules, 5 CCR 1001-1.10 and 25-7-110.5, and the Air Quality Control Commission’s (Commission) Procedural Rules.

Basis

During the 2019 legislative session, Colorado’s General Assembly adopted House Bill 2019-1261 (concerning the reduction of greenhouse gas pollution) (HB 19-1261) amending the legislative declaration in Section 25-7-102 of the Act, and Senate Bill 2019-096 (concerning the collection of greenhouse gas emissions data) (SB 19-096) creating Section 25-7-140 of the Act. HB 19-1261 and SB 19-096 both define greenhouse gas pollution (GHG) as including carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF₆) and nitrogen trifluoride (NF₃).

In HB 19-1261, now codified at Section 25-7-102(2), C.R.S., the General Assembly declared that “climate change adversely affects Colorado’s economy, air quality and public health, ecosystems, natural resources, and quality of life[.]” acknowledged that “Colorado is already experiencing harmful climate

impacts[.]” and that “many of these impacts disproportionately affect” certain disadvantaged communities. Consequently, the legislature updated Colorado’s statewide greenhouse gas pollution (GHG) reduction goals requiring the Commission to implement regulations to achieve a 26% reduction of statewide GHG by 2025; 50% reduction by 2030; and 90% reduction by 2050 as compared to 2005 levels. § 25-7-102(g), C.R.S. To accomplish these important goals the legislature also passed SB 19-096, now codified as Section 25-7-140, C.R.S., directing the Air Quality Control Commission (Commission) to undertake two phases of rulemaking aimed first at requiring GHG emitters to monitor and report GHG emissions, § 25-7-140(2)(a)(I), C.R.S., and second to implement measures allowing the state to cost-effectively meet its GHG reduction goals. § 25-7-140(2)(a)(III), C.R.S.

With respect to GHG reporting and the statewide inventory, Section 25-7-140(2)(a)(I), C.R.S., requires the Commission to adopt rules by June 1, 2020, “requiring greenhouse gas-emitting entities to monitor and publicly report their emissions as the Commission deems appropriate to support Colorado’s [GHG] inventory efforts and to facilitate implementation of rules that will timely achieve Colorado’s greenhouse gas emission reduction goals.” Further, Section 25-7-140(2)(a), C.R.S., requires the Commission to consider what information is already being reported for Colorado under EPA’s current federal GHG reporting rule, otherwise known as the Mandatory Greenhouse Gas Reporting Rule codified in Title 40 CFR Part 98 (Part 98), and tailor new reporting requirements to fill any gaps in data as determined to be appropriate to allow for a comprehensive and robust state GHG inventory.

Sections 25-7-105(1)(e) and 140(2)(a)(III), C.R.S., further requires the Commission to implement GHG reduction strategies to achieve the reduction goals set forth in Section 25-7-102(2)(g), C.R.S. HFCs are highly potent GHGs generally used in aerosols, refrigeration and air conditioning, and foam blowing. Phasing out HFCs from most manufacturing processes and end-uses is adopted as a strategy to accomplish the mandated GHG reductions.

Regulation 22, Parts A and B.I. are intended to satisfy the requirements set forth by the General Assembly in Section 25-7-140(2)(a)(I), C.R.S., with respect to statewide GHG reporting and an initial GHG reduction strategy to address statewide reductions required by Section 25-7-140(2)(a)(III), C.R.S., and 25-7-105(1)(e), C.R.S., by implementing the phase-out of HFCs in manufacturing and end-use products in Colorado.

Specific Statutory Authority

The Act, specifically Section 25-7-105(1), C.R.S., directs the Commission to promulgate such rules and regulations as are consistent with the legislative declaration set forth in Section 25-7-102, C.R.S., and that are necessary for the proper implementation and administration of the Act.

Section 25-7-102(2), C.R.S., declares that “climate change adversely affects Colorado’s economy, air quality and public health, ecosystems, natural resources, and quality of life” that reducing GHG is necessary “to limit the increase in the global average temperature” and that “reducing [GHG], Colorado will also reduce other harmful air pollutants, which will, in turn, improve public health, reduce health care costs, improve air quality, and help sustain the environment[.]” Further, Section 25-7-102(2), C.R.S., declares that reducing GHG will result in economic benefits to Colorado by creating new markets, spurring innovation, and driving investment in low-carbon technologies thus positioning Colorado’s “economy, technology centers, financial institutions, and businesses to benefit from national and international efforts to reduce [GHG.]” § 25-7-102(2)(f), C.R.S.

Section 25-7-106, C.R.S., provides the Commission maximum flexibility in developing an effective air quality program and promulgating such combination of regulations as may be necessary or desirable to carry out that program. Section 25-7-106(6), C.R.S., further authorizes the Commission to require owners and operators of any air pollution source to monitor, record, and report emission data and other information as the Commission may require.

Section 25-7-140(2)(a)(I), C.R.S., specifically directs the Commission to, by June 1, 2020, “adopt rules requiring [GHG]-emitting entities to monitor and publicly report their emissions as the commission deems

appropriate to support Colorado's greenhouse gas emission inventory efforts and to facilitate implementation of rules that will timely achieve Colorado's greenhouse gas emission reduction goals. The commission shall consider what information is already being publicly reported by the federal environmental protection agency and tailor new reporting requirements to fill any gaps in data, as it determines is appropriate, to allow for maintaining and updating state inventories that are sufficiently comprehensive and robust. The rules must include requirements for providers of retail or wholesale electric service in the state of Colorado to track and report emissions from all generation sources within the state and elsewhere that electricity consumption by their customers in this state causes to be emitted. The commission may require emitting entities to report the amount of emissions of each of the seven individual components of greenhouse gases as well as the carbon dioxide equivalent of those emissions.”

Section 25-7-140(2)(a)(III), C.R.S., requires the Commission to implement measures to cost-effectively allow the state to meet its GHG emission reduction goals, which includes reduction of HFCs as potent GHGs. Section 25-7-105(e), C.R.S., authorizes the Commission to promulgate implementing rules and regulations to achieve statewide GHG emission reduction goals, including emission reduction strategies that have been deployed by another sector to reduce multi-sector GHG emissions. Section 25-7-109(2), C.R.S., authorizes the Commission to adopt emission control regulations to reduce emissions of various pollutants, including chemical substances such as HFCs.

Purpose

The following section sets forth the Commission's purpose in adopting Regulation 22, and includes the technological and scientific rationale for the adoption of Regulation 22:

Part A: Greenhouse Gas Reporting

Part A has been developed to allow the reporters and the Division to leverage existing EPA reporting tools that are currently used by the majority of sources covered by this regulation, as well as for consistency with other U.S. Climate Alliance states that have implemented GHG reporting regulations. Use of existing EPA reporting tools will allow for the GHG data reporting program in Colorado to begin as expeditiously as possible and minimize the burden on the regulated sources. Additionally, consistency with EPA and other state data collection programs will be necessary if Colorado joins a regional program at some point in the future and will allow for a smooth transition if additional federal legislation or regulation is adopted for GHGs. To accomplish this, GHG data reporting by the affected sources under Part A, will be performed using the Intergovernmental Panel on Climate Change (IPCC) 4th Assessment Report, 100-year time horizon GWP values. Part A covers the collection of the GHG data pursuant to Section 25-7-140(2)(a)(I), C.R.S., and does not address how that data will be used in the Colorado GHG Inventory or other planning activities. Because the data will be collected for each individual GHG pollutant, the Division will be capable of converting and comparing reported data to CO₂e using other IPCC Assessment Reports' GWP values and/or time horizons as appropriate.

Consistent with the Federal Mandatory Reporting Rule (Part 98), emissions of each GHG pollutant, as required and defined in Section 25-7-140, C.R.S., will be reported in metric tons of CO₂e. Where emissions reporting of existing Colorado regulations is used to meet the obligations of this regulation, emissions will be reported by the source in the unit of measure required by the referenced regulation. The Division will convert the emissions to metric tons for use in the GHG inventory or other planning activities.

While Part A utilizes the reporting tools and protocols of the Federal Mandatory Reporting Rule (Part 98), the Division is removing the 25,000 metric ton reporting threshold in Colorado for certain source categories to obtain a more complete and granular data set to inform the inventory and planning processes. More detailed data will also inform local governments as they pursue their own climate change goals. The categories that are required to report all GHG emissions, below the current Federal Mandatory Reporting Rule thresholds, include electricity generation, suppliers including local distribution companies, industrial waste landfills, active coal mines, and industrial wastewater facilities.

GHG reporting for oil and gas operations and equipment and transmission and storage will be gathered in accordance with Regulation 7. These reporting requirements and protocols fill gaps in the federal reporting requirements by expanding the facilities required to report as well as the data reported under Regulation 7, Part D, Sections IV. and V.

Having considered all relevant factors, including but not limited to, current federal GHG reporting under Part 98, statutory requirements under Sections 24-4-103(2.7) and 29-1-304.5, C.R.S., and feedback from stakeholders, the Commission has decided to provide for optional GHG reporting from domestic wastewater plants and active municipal landfills not otherwise required to report under Part 98.

Any facilities or operations for which GHG reporting is optional should report in accordance with the protocols and deadlines set forth in Part A, Sections III and IV. In doing so, these facilities and operations will enable the Commission to establish a more robust statewide GHG inventory and better inform future reduction strategies.

The protocol selected for domestic wastewater treatment plants at Part A, Section III.B.10., has been developed by a nationally recognized organization focused on climate change solutions, ICLEI: Local Governments for Sustainability, and is already being used by some Colorado communities for estimating GHGs from domestic wastewater treatment plants for GHG inventories.

For an agricultural operation identified in Part A, Section III.A.11., the Division will collaborate with voluntary reporters and provide guidance on emission calculation protocols applicable to specific activities in the agricultural sector, such as those developed by the IPCC for the sector.

Part A will also quantify the GHG emissions associated with electricity imported into Colorado, as required by Section 25-7-140(2)(a)(I), C.R.S., and which is not covered by the federal mandatory reporting under Part 98 data submissions. This will be accomplished by requiring subject facilities to submit supplemental generation, distribution, sales, and emissions rate information to the Division. Direct reporting of this information, rather than relying on summaries provided through the Department of Energy, will give better granularity of the data for state and local GHG strategy development. Additionally, direct reporting to the Division will also allow for more timely incorporation into the Colorado GHG Inventory process and more detailed analysis and trending to assess the progress toward achieving the statewide carbon reduction goals.

Part B.I.: Prohibitions on Use of Certain Hydrofluorocarbons in Aerosol Propellants, Chillers, Foam, and Stationary Refrigeration End-Uses

The federal EPA adopted two rules under its Significant New Alternatives Policy (SNAP), Rule 20 in July 2015, and Rule 21 in December 2016, which require phasing out the use of high-GWP HFCs in retail and residential refrigeration and air conditioning (AC), aerosol products, and rigid and spray foam end-uses. Under SNAP Rule 20, the compliance dates for eliminating unacceptable HFCs ranged from July 2016 to January 2022, depending on the application. The compliance dates under SNAP Rule 21 ranged from January 2017 to January 2025. In August 2017, the D.C. Circuit of the United States Court of Appeals vacated SNAP Rule 20 to the extent it requires manufacturers to replace HFCs with a substitute substance finding the EPA had exceeded its authority under Section 612 of the Clean Air Act (42 U.S.C. § 7671k). However, the D.C. Circuit found that EPA's removal of HFCs from the list of safe substitutes under SNAP was lawful thus enabling the EPA to prohibit or limit prospective use of HFCs in manufacturing and end uses. Yet, in 2018, EPA guidance advised that it would not be enforcing SNAP Rule 20 until it developed new rules based on the D.C. Circuit's ruling, which has not occurred. In April 2019, the D.C Circuit vacated SNAP Rule 21 to the same extent and on the same grounds as SNAP 20.

Absent federal enforcement regulating use of these highly potent GHGs, individual states have adopted, or are in the process of adopting, statutes and regulations phasing out the use of HFCs in manufacturing and end-use products. The U.S. Climate Alliance has drafted a model rule to promote uniformity of HFC regulation. Part B.I. is based upon the U.S. Climate Alliance's model rule as are proposed rules under consideration in other states.

Based on public comment and stakeholder feedback, Part B.I. differs from the U.S. Climate Alliance's model rule in the treatment of bear spray and law enforcement pepper spray. These two products in the aerosol-propellant category have been exempted in Part B.I.

Additional Considerations

The following are additional findings of the Commission made in accordance with the Act:

Section 25-7-110.5(5)(b), C.R.S.

As these revisions exceed and may differ from the federal rules under the federal act, in accordance with Section 25-7-110.5(5)(b), C.R.S., the Commission determines:

(I) Any federal requirements that are applicable to this situation with a commentary on those requirements;

Part A: In order to create a nationwide inventory of GHG emissions, 40 CFR Part 98 (Part 98) sets forth the federal GHG reporting requirements for qualifying source categories in accordance with the Federal Clean Air Act. The Subparts to Part 98 establish the reporting protocols and methodologies for each source category. Part 98 effectively establishes three groups of source categories required to report annual GHG emissions: sources required to report regardless of emission volumes; sources only required to report if emissions meet or exceed specified thresholds (generally 25,000 metric tons of CO₂e in combined emissions from stationary sources); and fuel suppliers that import or export product equivalent to 25,000 metric tons of CO₂e or more. Through Part A the Commission builds upon established federal reporting requirements and closes reporting gaps by eliminating reporting thresholds for certain sources and expanding certain other source categories to report GHG emissions in order to establish a more robust and accurate GHG inventory for Colorado.

Part B.I.: To the extent Part B.I. requires manufacturers to replace HFCs, there are no applicable federal requirements as a result of the D.C. Circuit Court's vacature of SNAP Rules 20 and 21 and EPA's lack of progress in further regulating HFCs. To the extent that Part B.I. prohibits or restricts prospective uses of prohibited HFCs (phases out), it does not conflict with any applicable federal regulations.

(II) Whether the applicable federal requirements are performance-based or technology-based and whether there is any flexibility in those requirements, and if not, why not;

Part A: There are no control requirements associated with the Part A GHG reporting rule.

Part B.I.: To the extent SNAP Rules 20 and 21 remain in effect and are enforceable, the federal HFC rules are primarily technology-based in that the rules largely proscribe or severely limit the use of HFCs in certain manufacturing processes and end-uses thus requiring substitution or replacement with lower GWP substances.

(III) Whether the applicable federal requirements specifically address the issues that are of concern to Colorado and whether data or information that would reasonably reflect Colorado's concern and situation was considered in the federal process that established the federal requirements;

Part A: Colorado's General Assembly has determined that climate change adversely affects Colorado's economy, air quality and public health, ecosystems, natural resources, and quality of life and that reducing statewide GHG emissions can mitigate these impacts. § 25-7-102, C.R.S. While the EPA also indicated that its "mandatory GHG reporting program [set forth in Part 98] will provide EPA, other government agencies, and outside stakeholders with economy-wide data on facility-level (and in some cases corporate-level) GHG emissions," Section 25-7-140, C.R.S. explicitly requires the Commission to adopt GHG reporting requirements to fill any gaps in the federal reporting requirements. To the extent that reporting under 40 CFR Part 98 establishes adequate GHG reporting to satisfy this legislative

directive, those requirements and reporting protocols have been adopted. To the extent that the Commission has determined certain source categories may be underreporting due to reporting thresholds or exemptions of certain source categories, those thresholds or exemptions have been eliminated. Additionally, Part A establishes new reporting requirements for certain source categories for which there are no federal reporting requirements.

Part B.I.: To the extent Part B.I. requires manufacturers to replace HFCs, there are no applicable federal requirements as contemplated in this regulation. As a result of the D.C. Circuit Court's vacature of SNAP Rules 20 and 21 and EPA's lack of progress in further regulating HFCs, there are no applicable federal requirements relating to the phase-out of HFCs as contemplated in this regulation. To the extent that Part B.I. prohibits or restricts prospective uses of prohibited HFCs (phases out), it does not conflict with any applicable federal regulations.

(IV) Whether the proposed requirement will improve the ability of the regulated community to comply in a more cost-effective way by clarifying confusing or potentially conflicting requirements (within or cross-media), increasing certainty, or preventing or reducing the need for costly retrofit to meet more stringent requirements later;

Part A: Part A will maintain reporting requirements for facilities already required to report under Part 98 and will require additional facilities to report under reporting protocols either set forth in Part 98 and related subparts or under state reporting requirements already in place (i.e. oil and gas operations). By adopting existing protocols and reporting procedures, Part A minimizes inefficiencies while still accomplishing the legislative mandate set forth in Section 25-7-140, C.R.S.

Part B.I.: To the extent Part B.I. requires manufacturers to replace HFCs, there are no applicable federal requirements as contemplated in this regulation. As a result of the D.C. Circuit Court's partial vacature of SNAP Rules 20 and 21 and EPA's lack of progress in further regulating HFCs, there are no applicable federal requirements relating to the phase-out of HFCs as contemplated in this regulation. However, Part B.I. imposes restrictions on the same substances as those restricted under SNAP Rules 20 and 21 with which the regulated community had already started to comply before those rules were vacated. Absent federal regulation of HFCs, individual states have adopted legislation and regulations to phase-out HFCs. Absent federal progress in regulating use of these highly potent GHGs, individual states have adopted, or are in the process of adopting, statutes and regulations phasing out the use of HFCs in manufacturing and end-use products. The U.S. Climate Alliance has drafted a model rule to promote uniformity of HFC regulation. Part B.I. is based upon the U.S. Climate Alliance's model rule as are proposed rules under consideration in other states.

Based on public comment and stakeholder feedback, Part B.I. differs from the U.S. Climate Alliance's model rule in the treatment of bear spray and law enforcement pepper spray. These two products in the aerosol-propellant category have been exempted in Part B.I.

(V) Whether there is a timing issue which might justify changing the time frame for implementation of federal requirements;

Part A: The March 31 annual reporting deadline is the same under Regulation 22 and Part 98 for all reporters. Regulation 22 does not affect federal GHG reporting requirements for those sources subject to federal reporting requirements. With respect to any sources required to report under Regulation 22 but not under federal requirements, there is no timing issue related to implementation of any federal requirements.

Part B.I.: To the extent Regulation 22, Part B.I., requires manufacturers to replace HFCs, there are no applicable federal requirements as a result of the D.C. Circuit Court's vacature of SNAP Rules 20 and 21 and EPA's lack of progress in further regulating HFCs. To the extent that Regulation 22, Part B.I., prohibits or restricts prospective uses of prohibited HFCs (phases out), there are no timing issues that justify changing the time frame for implementation of any federal requirements.

(VI) Whether the proposed requirement will assist in establishing and maintaining a reasonable margin for accommodation of uncertainty and future growth;

Part A: Rule: Regulation 22, Part A's annual GHG reporting requirements are retrospective in that they are a report of past emissions and therefore are not subject to uncertainty and do not hinder or negatively affect future growth of facilities required to report past emissions.

Part B.I.: The HFC phase-out in Regulation 22, Part B.I. allows a reasonable time to comply and permits the substitution of lower-GWP substances or retrofit of components. As such, affected businesses or industrial sectors are afforded a reasonable margin for accommodation of uncertainty and future growth.

(VII) Whether the proposed requirement establishes or maintains reasonable equity in the requirements for various sources;

Part A.: With respect to any sources already required to report GHG emissions under the federal reporting requirements, Regulation 22, Part A, maintains reasonable equity as reporting requirements are the same for each source type. With respect to any sources newly required to report GHG emissions under Regulation 22, Part A, the rule establishes reasonable equity as reporting requirements are the same for each source type.

Part B.I.: Regulation 22, Part B.I., phases-out the use of HFCs across specific end-uses and manufacturing processes, with only limited exemptions. Reasonable equity is established among these end-uses and processes by use of phase-out dates that are the same as those determined to be achievable with industry input in the development of the SNAP rules. The rules are also based upon a uniform model rule to allow those subject to the rule to avoid varying requirements across states. Where phase-out dates differ from the federal or model dates, such as those for vending machines, have been adjusted based on direct feedback from stakeholders and are comparable to phase-out timelines in other states implementing comparable regulations.

(VIII) Whether others would face increased costs if a more stringent rule is not enacted;

Part A: No, it is not anticipated there would be increased direct costs to others if a more stringent rule is not enacted.

Part B.I.: The legislature has acknowledged that climate change impacts Colorado's economy and directed that GHG emissions should be reduced across the many sectors of our economy. Colorado has established specific GHG reduction goals. A more stringent HFC rule could achieve additional GHG reductions. Reductions not achieved in one sector will require measures in other sectors of the economy to achieve the state's GHG reduction goals. The HFC rule is drafted to strike a balance between the costs to the entities impacted under the rule and further measures that will need to be utilized in other sectors of the economy.

(IX) Whether the proposed requirement includes procedural, reporting, or monitoring requirements that are different from applicable federal requirements and, if so, why and what the "compelling reason" is for different procedural, reporting, or monitoring requirements;

Part A: Reporting requirements beyond those required under federal Part 98 are necessary to effectively quantify and measure Colorado's progress toward statewide GHG reductions and to achieve the public health, safety and welfare goals set forth in Section 25-7-102, C.R.S., Section 25-7-140(2)(a)(I), C.R.S., dictates that the Commission tailor new [GHG] reporting requirements to fill any gaps in the existing federal reporting requirements and "allow for maintaining and updating state inventories that are sufficiently comprehensive and robust."

Part 98 effectively establishes three groups of source categories required to report annual GHG emissions: sources required to report regardless of emission volumes; sources only required to report if

emissions meet or exceed specified thresholds (generally 25,000 metric tons of CO₂e in combined emissions from stationary sources); and fuel suppliers that import or export product equivalent to 25,000 metric tons of CO₂e or more. Through Part A, the Division proposes building upon established federal reporting requirements and closes reporting gaps by lowering or eliminating reporting thresholds for certain sources, expanding certain other source categories, and requiring new source categories to report GHG emissions in order to establish a more robust and accurate GHG inventory for Colorado. Each of the bullets below identify the sources covered under the Part A rule.

Source categories required to report under EPA's Part 98 that will also submit these reports directly to Colorado under Regulation 22, Part A:

- Electricity Generating Units (EGUs)
- Electrical transmission and distribution equipment facilities (Sulfur Hexafluoride [SF₆] and Perfluorocarbons [PFCs] > 17,820 pounds)
- Cement Plants
- Steel Producers (CO₂e ≥ 25,000 metric tons/year)
- Underground Coal Mines (CH₄ emissions ≥ 36,500,000 ACF/year)
- Petrochemical Refineries
- Importers/Exporters of refined petroleum and natural gas liquid (NGL) products [Suppliers] (CO₂e > 25,000 metric tons/year)
- Natural Gas Local Distribution Companies (LDC) (> 460,000 SCF of natural gas/year)
- Large Electronics Manufacturers (CO₂e ≥ 25,000 metric tons/year)
- Municipal Solid Waste Landfills (CO₂e ≥ 25,000 metric tons/year)
- Industrial Solid Waste Landfills (CO₂e ≥ 25,000 metric tons/year)
- Industrial Wastewater Treatment (CO₂e ≥ 25,000 metric tons/year)
- Other source categories for which Part 98 thresholds will not be affected by Regulation 22 (see 40 CFR § 98.2)

Source categories subject to EPA's Part 98, but below federal reporting thresholds that will be required to report under Regulation 22, Part A.:

- Industrial Solid Waste Landfills (CO₂e < 25,000 metric tons/year)
- Industrial Wastewater Treatment (CO₂e < 25,000 metric tons/year)
- Active Underground Coal Mines (CH₄ emissions < 36,500,000 ACF/year)
- Local Distribution Companies (< 460,000 SCF of natural gas/year)
- Importers/Exporters of refined petroleum and NGL products [Suppliers] (CO₂e < 25,000 metric tons/year)

Source categories reporting to the Division under AQCC Regulation 7, Part D, Sections IV and V:

- Oil and Natural Gas Operations and Equipment upstream or at Natural Gas Processing Plants (Regulation 7, Part D, Section V)
- Natural Gas Transmission and Storage Equipment and Facilities (Regulation 7, Part D, Section IV)

Source categories with voluntary reporting under Regulation 22, Part A.:

- Municipal Solid Waste Landfills (CO₂e < 25,000 metric tons/year)
- Domestic Wastewater Treatment Plants
- Agricultural Sector

Part B.I: To the extent Regulation 22, Part B.I., requires manufacturers to replace HFCs, there are no applicable federal requirements as a result of the D.C. Circuit Court's vacature of SNAP Rules 20 and 21 and EPA's lack of progress in further regulating HFCs. To the extent that Regulation 22, Part B.I.,

prohibits or restricts prospective uses of prohibited HFCs (phases out), there are no timing issues that justify changing the time frame for implementation of any federal requirements.

(X) Whether demonstrated technology is available to comply with the proposed requirement;

Part A: Part A maintains reporting requirements for facilities already required to report under Part 98 and will require additional facilities to report under reporting protocols either set forth in Part 98 and related subparts or under state reporting requirements already in place (i.e. oil and gas operations). Demonstrated technology exists to enable compliance with the reporting requirements of Regulation 22.

Part B.I.: Yes, non-HFC replacements with significantly lower GWP are generally available and widely used in manufacturing processes and end-uses phased out in Regulation 22, Part B.I.

(XI) Whether the proposed requirement will contribute to the prevention of pollution or address a potential problem and represent a more cost-effective environmental gain;

Part A: Under Regulation 22, Part A the Commission will develop a sufficiently comprehensive and robust GHG inventory to enable and inform future implementation strategies to cost-effectively reduce statewide GHG emissions to meet the legislative directive of Section 25-7-102(2)(g), C.R.S.

Part B.I: The legislature has acknowledged that climate change impacts Colorado's economy and directed that GHG emissions should be reduced across the many sectors of our economy. Colorado has established specific GHG reduction goals. HFCs are a highly potent GHG such that small volumes of reduction can affect significant reductions of CO₂e GHG emissions. A more stringent HFC rule could achieve additional GHG reductions. Reductions not achieved in one sector will require measures in other sectors of the economy to achieve the state's GHG reduction goals. Regulation 22, Part B.I. is drafted to strike a balance between the costs to the entities impacted under the rule and further measures that will need to be utilized in other sectors of the economy.

(XII) Whether an alternative rule, including a no-action alternative, would address the required standard.

Part A: Section 25-7-140, C.R.S., does not permit a no-action alternative and requires the Commission to adopt GHG reporting regulations "to allow for maintaining and updating state inventories that are sufficiently comprehensive and robust." Further, the statute requires the rules "include requirements for providers of retail and wholesale electric service in the state of Colorado to track and report emissions from all generation sources within the state and elsewhere that electricity consumption by their customers in this state causes to be emitted." While alternative requirements could address these mandates, the Commission has determined that the proposed reporting requirements are appropriate to establish statewide progress towards the GHG emission reduction goals mandated by the General Assembly in Section 25-7-102, C.R.S. To the extent alternative reporting thresholds and source categories were considered, they were determined to be inadequate to satisfy the directives set forth in Section 25-7-140, C.R.S. To the extent alternative reporting thresholds and source categories were considered for Part A they were determined to be inadequate to satisfy the directives set forth in Section 25-7-140, C.R.S.

Part B.I.: Section 25-7-105(1)(e), C.R.S., requires the Commission to implement GHG emission reduction strategies in order to accomplish the statewide GHG emission reduction goals set forth in Section 25-7-102(g), C.R.S. HFCs are a highly potent GHG such that small volumes of reduction can affect significant reductions of CO₂e GHG emissions. A more stringent HFC rule could achieve additional GHG reductions. Reductions not achieved in one sector will require measures in other sectors of the economy to achieve the state's GHG reduction goals. The HFC rule is drafted to strike a balance between the costs to the entities impacted under the rule and further measures that will need to be utilized in other sectors of the economy. While the General Assembly has not explicitly required implementation of an HFC phase-out as a reduction strategy and therefore a no-action alternative is possible, given the statewide reduction goals and the potency of HFCs, no action on HFCs would require more stringent measures in other sectors in order to achieve the same GHG reductions.

Section 25-7-110.8, C.R.S.

To the extent that the Section 25-7-110.8, C.R.S., requirements apply to this rulemaking, and after considering all the information in the record, the Commission hereby makes the determination that:

(a) These rules are based on reasonably available, validated, reviewed, and sound scientific methodologies and all validated, reviewed, and sound scientific methodologies and information made available by interested parties has been considered.

(b) Evidence in the record supports the finding that the rule shall result in a demonstrable reduction in emission of HFCs and will enable the Commission to establish sufficiently comprehensive and robust inventories of GHGs as required by section 25-7-140, C.R.S.

(c) Evidence in the record supports the finding that the rule shall bring about reductions in risks to human health and the environment that will justify the costs to government, the regulated community, and to the public to implement and comply with the rule.

(d) The rules are the most cost-effective to achieve the necessary and desired results and reduction in air pollution.

(e) The rule will maximize the air quality benefits of regulation in the most cost-effective manner.

Section 25-7-105(1)(e), C.R.S. - Statewide GHG Pollution Abatement

To the extent that the Section 25-7-105(1)(e), C.R.S., requirements apply to this rulemaking, and after considering all the information in the record, the Commission hereby makes the determination that:

Any impacts to disproportionately impacted communities and (IV) Coordination with other state agencies, stakeholders, and the public:

The Commission carefully considered the concerns of and potential impacts on communities disproportionately impacted by climate change in the following ways:

Stakeholder engagement: The Division provided multiple ways for the public, local governments, industry, environmental groups, and other stakeholders to provide comment during the development of the proposed rules. Opportunities for input included email, remote stakeholder meeting participation, and in-person meeting participation. Public stakeholder meetings were held from early afternoon until after 6pm in both Denver and Glenwood Springs, to maximize access for working and busy individuals. Language interpretation services for stakeholder meetings were made available (though none were requested during this process).

Potential economic impacts: The Division conducted outreach to determine potential impacts to disproportionately impacted communities for Parts A and B.I. With respect to Part A, impacts on local governments and small rural operations were significant considerations in determining whether to require mandatory GHG reporting from domestic wastewater treatment facilities and municipal solid waste landfills with emissions below the reporting threshold in 40 CFR Part 98. Ultimately, in this rulemaking the Commission elected against mandatory reporting from these source categories, but to allow voluntary reporting. While more robust GHG data has the potential to enhance local climate efforts and ultimately reduce a variety of negative impacts on Colorado's communities, the Division recognizes that providing data can represent an administrative burden, particularly for small operations with fewer staff and serving smaller communities. For both domestic wastewater treatment and municipal solid waste landfill emissions (below the 40 CFR Part 98 threshold) reporting, the Division identified available reporting protocols to minimize the burden of the reporting process for any sources wishing to report voluntarily. In addition to public comments, the Division considered stakeholder comments from organizations representing local governments, local wastewater districts and the Wastewater Utility Council, and

conducted outreach to the Solid Waste Association of North America's Colorado Chapter in the drafting of the proposed GHG reporting rule.

For Part B.I, Division outreach efforts sought to determine if any manufacturers (large or small) of equipment or small niche end-uses that might be impacted by the proposed HFC reduction rule exist in the state. Based on discussions with industry partners and trade groups, as well as online research and communication with the Colorado Department of Labor & Employment (CDLE), the Division concluded that there are currently no equipment manufacturers or small niche end-uses in Colorado that would be impacted by the HFC rule. Accordingly, the Commission has determined that the HFC-phase out in Part B.I. will not result in an accumulation of negative or lack of positive environmental, health, economic, or social conditions within in a manner that disproportionately impacts certain communities within the state.

Coordination with other jurisdictions:

Absent federal enforcement regulating HFCs, individual states have adopted, or are in the process of adopting, statutes and regulations phasing out the use of HFCs in manufacturing and end-use products. The U.S. Climate Alliance has drafted a model rule to promote uniformity of HFC regulation. Part B.I. is based upon the U.S. Climate Alliance's model rule as are draft rules under consideration in other states.

Additional Considerations:

Having considered all relevant information in the record and those factors set forth in Section 25-7-105(1)(e)(VI), C.R.S., the Commission has determined that Parts A and B.I. are appropriate measures necessary to implement statewide GHG pollution abatement. Through the Division's Economic Impact Analysis, the Commission concludes that GHG reporting in Part A and the HFC phase-out in Part B.I. will either directly result in health, environmental, and air quality benefits or otherwise enable the Commission and General Assembly to better regulate GHG emissions in the future through a more robust inventory. Furthermore, the costs of compliance with Parts A and B.I. and any negative impacts to Colorado's jobs and economy are considerably outweighed by these benefits. Based on the Division's analysis, Part B.I. is anticipated to result in statewide GHG reductions in Colorado of about 560 thousand metric tons CO₂e in 2025 and 1.15 million metric tons CO₂e in 2030. Additionally, as these regulations will lower GHG emissions and the General Assembly has determined that reducing GHG emissions will result in economic and jobs growth by creating new markets, spurring innovation, and driving investments in low-carbon technologies. The time necessary for compliance under Parts A and B.I. reflect consideration of existing state and federal requirements as well as feedback from stakeholders. As described in significant detail above, Part A will enable the Commission to better inventory analyze statewide GHG emission sources across diverse sectors and sources by utilizing existing federal reporting requirements in 40 CFR Part 98 and also expanding those requirements. Parts A and B.I. are therefore determined to be appropriate and cost-effective.