

REGULATORY ANALYSIS

In performing a regulatory analysis, each rulemaking entity must provide the information requested for the regulatory analysis to be considered a good faith effort. Each regulatory analysis shall include quantification of the data to the extent practicable and shall take account of both short-term and long-term consequences. The regulatory analysis must be submitted to the Air Quality Control Commission Office at least five (5) days before the administrative hearing on the proposed rule and posted on your agency's web site. For all questions, please attach all underlying data that supports the statements stated in this regulatory analysis.

DEPARTMENT:	Colorado Department of Public Health & Environment	AGENCY:	Air Quality Control Commission
CCR:	5 CCR 1001-26	DATE:	October 15, 2021

RULE TITLE OR SUBJECT:

REGULATION NUMBER 22

Colorado Greenhouse Gas Reporting and Emission Reduction Requirements

Per the provisions of 24-1-103(4.5)(a), Colorado Revised Statutes, the regulatory analysis for the proposed Greenhouse Gas Emissions and Energy Management for Manufacturing "GEMM" rule must include the following:

I. A description of the classes of persons who will be affected by the proposed rule, including classes that will bear the costs of the proposed rule and classes that will benefit from the proposed rule;

The proposed GEMM rule primarily affects energy-intensive trade-exposed (EITE) manufacturing sources with annual direct emissions equal to or greater than 50,000 metric tons of greenhouse gas (GHG) emissions per year, as reported under Regulation 22. There are currently 4 EITE stationary sources meeting the statutory definition of an EITE stationary source as defined by §§ 25-7-105 subsection (1)(e)(IX)(B) and meet or exceed this annual GHG emission threshold: EVRAZ Rocky Mountain Steel; CEMEX Construction Materials South, LLC Lyons Cement Plant; GCC Rio Grande Cement Manufacturing; and Holcim (U.S.) Inc. Portland Cement Plant. EITE manufacturing sources will bear the cost of the proposed rule.

This rule may also create a limited amount of jobs in Colorado. If an EITE stationary source chooses to manage the majority of the energy and emissions control audit planning and compliance plan development internally, there also may be need for an additional person to lead this recurring process, and assure implementation of the GHG reduction strategies for the company as well as required recordkeeping and reporting. Additionally, if a facility chooses to install control technologies to meet the required GHG reductions, the purchase, installation and maintenance of equipment along with supervisory oversight and required recordkeeping and reporting will likely result in additional job creation. However, the potential number of such new jobs has not been calculated.

For permanent renewable energy installations, the system operator may need to hire staff to run the system over the length of the contract. These employees could be hired internally at the EITE stationary source or through a contracted company. The number of temporary jobs for engineering and constructing the facility will likely be greater than the number of permanent jobs created for the ongoing operation and maintenance. The number of jobs created would be relative to the type and size of the renewable energy installation with approximately one temporary or full-time job created for each MW of renewable energy¹.

The citizens of Colorado in communities that surround these facilities will benefit from the proposal through a potential reduction in local air pollution. Additionally, measures implemented at the EITE stationary source are planned to reduce GHG emissions resulting in decreased pollution burden for the entire State of Colorado.

¹ Bighorn Solar Case Study, available at: https://s3-eu-west-1.amazonaws.com/assets.lightsource-re.com/2021/04/Bighorn-Solar-Case-Study_20191009_CRP_US_D15.pdf (last accessed October 12, 2021).

II. To the extent practicable, a description of the probable quantitative and qualitative impact of the proposed rule, economic or otherwise, upon affected classes of persons;

A detailed analysis of the probable quantitative and qualitative impacts of the proposed rule can be found in the Final EIA² and the Cost Benefit Analysis³.

III. The probable costs to the agency and to any other agency of the implementation and enforcement of the proposed rule and any anticipated effect on state revenues;

A. Cost to the Division

The Division anticipates the following actions may need to be performed as part of implementation of the GEMM rule.

The Division will be responsible for reviewing and analyzing the audit plan to assure the audit scope is accurate and complies with the requirements in the rule. This review is estimated to take 8 hours of staff time per audit plan. The Division will review and analyze the audit reports in depth, including the GHG BAECT and Energy BMP analysis, determining report completeness and subsequently issuing a GHG BAECT determination for the specific EITE stationary source that will be incorporated into a compliance plan and annual certification. This review and determination is estimated to take between 60 and 120 hours of staff time per audit report. The Division will review any compliance action plans submitted by the EITE stationary sources. With four covered entities, audit review is expected to require 272-512 hours of staff time per five-year audit cycle; most of this time will happen in the months immediately following audit report submissions, the first of which is in December 2022.

Section II.I. of the GEMM rule sets out provisions establishing an accounting system to track GHG reduction credits. These provisions task the Division with establishing the accounting system and maintaining it indefinitely. Importantly, the accounting and trading program proposed here will apply only to EITE stationary sources subject to the audit and GHG emission reductions in GEMM. There are four EITE sources that will be eligible to participate in a GHG emission reduction trading program in this first phase of the program, with additional facilities potentially able to participate in the trading program in subsequent phases. This means the GHG reduction credit accounting system will only initially need to handle a small number of users. This will keep maintenance costs down relative to larger systems in other states, and involve less oversight by Division personnel. However, given the authority granted to the Commission in CRS § 25-7-105(1)(f), it is possible that this program may serve as a model for a future, more broadly applicable GHG credit trading program for the industrial manufacturing sector. In this case, the program would expand in size and there may be need for increased workforce within the Division and increased costs with the contractors involved.

Depending on the extent to which the trading program is expanded, in the future the Division could enlist a contractor to build and maintain a robust accounting system. The contractor would serve as the Division's agent to operate the accounting system on behalf of the Division and with the Division's direct oversight. This approach is taken by other regulatory programs with accounting systems, including several programs operated by state environmental agencies, including New York's Acid Deposition Reduction Program, the Regional Greenhouse Gas Initiative (RGGI), and California's Cap and Trade Program.

The Division estimates that constructing an accounting and tracking system will cost approximately \$150,000 per year over the first two years⁴. As a starting place for estimating the potential cost, the accounting system for the RGGI cost approximately \$500,000 to construct in 2008 through 2009, and covered power sector emissions across ten states⁵.

² APCD Final EIA, GEMM Rulemaking Oct 2021, available at:

https://drive.google.com/file/d/1WaPa5DLJO8Dpd0nunNGqVXhu2rBxVx_j/view?usp=sharing (last accessed October 15, 2021).

³ APCD Cost Benefit Analysis, GEMM Rulemaking Oct 2021, available at:

<https://drive.google.com/file/d/1Ygvn5wMpBTp6cVlSMjhjdm5A10Gg7Wo/view?usp=sharing> (last accessed October 15, 2021).

⁴ See Franz Litz Expert Report at ¶6.

⁵ *Id.*; see also, RGGI, Inc. Annual budgets are available at: <https://www.rggi.org/rggi-inc/documents>. See also RGGI 2008 budget, https://www.rggi.org/sites/default/files/Uploads/RGGI-Inc-Documents/Budgets-Finances/RGGI_2008_Budget_Website.pdf; RGGI 2009 budget, https://www.rggi.org/sites/default/files/Uploads/RGGI-Inc-Documents/Budgets-Finances/RGGI_2009_Budget_Website.pdf.

Because the RGGI accounting system is significantly more complex than the system envisioned by the Division, which involves only one state and far fewer sources compared to RGGI (which covers multiple states and many more sources), this estimate significantly exceeds the estimated cost for Colorado. Thus, the cost for Colorado to construct an accounting and tracking system should be significantly lower. Maintenance costs for the system are anticipated to be quite low because few sources will be using the system initially⁶. This assumes the Division would not be making alterations to the system once it is constructed, which keeps maintenance costs low. For RGGI, the annual maintenance for the system is between \$200,000 and \$300,000; however, again, the RGGI system is a significantly more complicated accounting system⁷.

The GEMM rule will require general, long-term engagement between the Division and the EITE stationary source to assure compliance with the submitted plans, and starting in 2025, the annual compliance certificate, assuring the required GHG reductions are achieved, sustained and accounted for correctly.

B. Cost to other Agencies

The Division is the implementing agency for this State-only rule. There are no anticipated costs for other government agencies related to this proposal.

C. Effect on State Revenues

The proposal may result in a small increase in State revenues because of potential additional compliance and enforcement actions. The Division has not estimated the increase in revenues because it expects all affected businesses to comply with the proposed regulation. Potentially in the future, GEMM would affect lower permit and APEN fees for criteria and GHG emissions as those emissions are reduced over the life of this rule.

IV. **A comparison of the probable costs and benefits of the proposed rule to the probable costs and benefits of inaction;**

The costs and benefits of the proposed rule are detailed extensively in the Cost Benefit Analysis (see Footnote 3 above).

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. If Colorado does not adopt the proposed rule, other strategies would need to be identified to meet the statutory directives set forth in Sections 25-7-102(2)(g), -105(1)(e), and -105(1)(f) C.R.S., established by HB 1261 and HB 1266.

Additionally, EITE stationary sources would miss out on potential additional income from the proposed GHG emission trading program. The development of a GHG emission credit trading program creates positive economic incentive for decarbonization measures that go above and beyond the requirements. Where it is cost-effective to reduce GHG emissions above and beyond what is required of them through GEMM, EITE stationary sources can utilize the trading program as a source of additional income and be increasingly competitive in the marketplace. Further, the economic benefit to society on a global scale, based the range of potential emission reductions achieved by implementation of the GEMM rule, using the current social cost of greenhouse gases would not be realized.

V. **A determination of whether there are less costly methods or less intrusive methods for achieving the purpose of the proposed rule;**

The principal purpose of the GEMM rule is to satisfy the legislative directives contained in §§ 25-7-105(1)(e)(IX) (considerations for EITE manufacturing sources), -105(1)(e)(XIII) (GHG emission reductions from the industrial manufacturing sector), and -105(1)(f) (providing for a GHG trading program as recognized in 105(1)(e)(IX)(A)), while furthering the general directives to reduce statewide GHG pollution in § 25-7-102(2) and -105(1)(e). The Division has not identified any other methods that achieve the purpose of the proposed rule and satisfy these myriad statutory directives.

⁶ See Franz Litz report at ¶16.

⁷ See RGGI, Inc. Annual Budget for 2019, https://www.rggi.org/sites/default/files/Uploads/RGGI-Inc-Documents/Budgets-Finances/RGGI_2019_Budget_Website.pdf; Annual Budget for 2020: https://www.rggi.org/sites/default/files/Uploads/RGGI-Inc-Documents/Budgets-Finances/RGGI_2020_Budget_Website.pdf; Annual Budget for 2021: https://www.rggi.org/sites/default/files/Uploads/RGGI-Inc-Documents/Budgets-Finances/RGGI_2021_Budget_Website.pdf.

VI. A description of any alternative methods for achieving the purpose of the proposed rule that were seriously considered by the agency and the reasons why they were rejected in favor of the proposed rule.

A. Division Initial GEMM Proposal for Rulemaking, May 2021

The Division initially proposed a prior version of Greenhouse Gas and Energy Management for Manufacturing in Colorado to the Commission at its May 20, 2021 meeting⁸. On June 23, 2021, after the Commission granted that petition for rulemaking and issued a notice for proposed rulemaking, Colorado's General Assembly passed House Bill 2021-1266, which included amendments to § 25-7-105(1)(e), C.R.S., to include new provisions directly applicable to energy intensive, trade exposed manufacturing sources—the subject of this proposed rulemaking. On June 30, 2021, upon motion from parties to the prior rulemaking, the Hearing Officer assigned to that matter granted a motion to bifurcate and continue the portion of that proceeding related to Regulation Number 22, Part B, Section II—the subject of this rulemaking. On July 2, 2021, Governor Polis signed House Bill 2021-1266 into law.

The requirements of HB-1266 that are now incorporated in the GEMM rule include a 5 % required reduction for all EITE stationary sources that are determined to be meeting GHG BAECT and energy BMPs, additional prioritization of co-benefits in disproportionately impacted communities and the development of a GHG credit accounting and trading program. The economic impacts of this alternative are provided in the attached (Initial) EIA that was filed in May 2021⁹.

B. Division PHS Draft, September 2021

The Division included a revised draft rule for Greenhouse Gas and Energy Management for Manufacturing in Colorado to the Commission along with its Prehearing Statement on September 10, 2021¹⁰. The key changes from the Division's PHS rule draft are related to the 5% required reduction and the GHG BAECT and Energy BMP determination and compliance requirements, and how they are both calculated. Additionally, there have been changes related to the GHG BAECT and energy BMP analysis as well as the addition of an accounting and trading program for the EITE sources to utilize for compliance with the rule's reduction requirements.

In the PHS version of the rule, the 5% required reduction was a one-time mass-based reduction, calculated from a baseline of the 2 highest emitting years within the most recent 5 years of operations. In the current GEMM rule proposal, the 5% required reduction is a mass annual emissions limitation calculated as a function of the facility GHG BAECT and Energy BMP Intensity Rate as determined by the Division and the previous year's units of production. Each year, the facility will produce an annual compliance certification, showing what the annual emissions limit was, and how they met it.

Additionally, in the PHS version of the rule, compliance with GHG BAECT required installation and operation of the specific GHG technology determined by the Division to be best available for each emission unit. There were no other mechanisms for compliance, where in the current rule, the EITE stationary sources can comply with GHG BAECT determination through actual emission reductions within the facility, use of the GHG credit trading program or through installation of a retail distributed generation renewable energy system. This gives the EITE stationary source significant flexibility in meeting the required GHG emission reductions identified through the GHG BAECT and energy BMP analysis. The GHG BAECT and energy BMP determination will be issued as an intensity rate which will be used in part to calculate the annual emissions limitation for the facility as described above.

⁸ Air Quality Control Commission Meeting Information and Documents, available at: <https://drive.google.com/drive/folders/1hJLrrmhATdJkjenVl3Okfoi8QUxZDeZ6> (last accessed October 12, 2021).

⁹ APCD Initial EIA, GEMM Rulemaking Request May 2021, available at: https://drive.google.com/file/d/1nQJfz3YUL7uOJxL3JQj_sSSq_dITZeX4/view?usp=sharing (last accessed October 12, 2021).

¹⁰ APCD PHS Reg 22 Redline, GEMM Rulemaking Sept 2021, available at: https://drive.google.com/file/d/1mm5qb8SFXH7DY8XTvH_SFGBkxiA3ePQP/view?usp=sharing (last accessed October 15, 2021).