Executive Summary

CO_2 Budget Trading Program
25 Pa. Code Chapter 145

Purpose and Summary of the Proposed Rulemaking

The Environmental Quality Board (Board) proposes to amend Chapter 145 (relating to interstate pollution transport reduction) to read as set forth in Annex A. This proposed rulemaking would add Subchapter E (relating to CO_2 budget trading program) to establish a program to limit the emissions of carbon dioxide (CO_2) from fossil fuel-fired electric generating units (EGUs), with a nameplate capacity equal to or greater than 25 megawatts (MWe).

The purpose of this proposed rulemaking is to reduce anthropogenic emissions of CO_2, a greenhouse gas (GHG) and major contributor to climate change impacts, in a manner that is protective of public health, welfare and the environment. This proposed rulemaking would establish the Commonwealth's participation in the Regional Greenhouse Gas Initiative (RGGI), a regional CO_2 Budget Trading Program. This proposed rulemaking would establish a CO_2 Budget Trading Program for this Commonwealth which is capable of linking with similar regulations in states participating in RGGI ("participating states"). These CO_2 Budget Trading Program regulations together make up the regional CO_2 Budget Trading Program or "RGGI."

This proposed rulemaking would effectuate least cost CO_2 emission reductions for the years 2022 through 2030. The declining CO_2 Emissions Budget in this proposed rulemaking directly results in CO_2 emission reductions of around 20 million short tons in this Commonwealth as well as emission reductions across the broader PJM regional electric grid. However, the Department projects that 188 million short tons of CO_2 that would have been emitted over the next decade are avoided by this Commonwealth's participation in RGGI. According to data from the United States Energy Information Administration, this Commonwealth generates the 4th most CO_2 emissions from EGUs in the country. Since CO_2 emissions are a major contributor to regional climate change impacts, the Department developed this proposed rulemaking to establish this Commonwealth's participation in a regional approach that significantly reduces CO_2 emissions and this Commonwealth's contribution to regional climate change impacts.

Considering that this Commonwealth has the 4th leading CO_2 emitting electricity generation sector in the country, this proposed rulemaking is a significant component in achieving the Commonwealth's goals to reduce GHG emissions. Although this proposed rulemaking will not solve global climate change, it will aid this Commonwealth in addressing its share of the impact, joining other states and countries that are addressing their own impacts. The statutory authority for this proposed rulemaking, the Air Pollution Control Act (APCA), is built on a precautionary principle to protect the air resources of this Commonwealth for the protection of public health and welfare and the environment, including plant and animal life and recreational resources, as well as development, attraction and expansion of industry, commerce and agriculture. In order to be proactive, this proposed rulemaking is needed to address this Commonwealth's contributions to climate change, particularly CO_2 emissions. The Board determined to address CO_2 emissions through a regional initiative because regional cap and trade programs have proven to be beneficial at reducing air pollutant emissions. In fact, this Commonwealth has and continues to participate in successful regional cap and trade programs.

On October 3, 2019, Governor Wolf signed Executive Order 2019-07, Commonwealth Leadership in Addressing Climate Change through Electric Sector Emissions Reductions, which directed the Department to use its existing authority under the APCA to develop this proposed rulemaking to abate, control or limit CO_2 emissions from fossil fuel-fired electric power generators. The Executive Order also directed the Department to present this proposed rulemaking to the Board by July 31, 2020. On June 22, 2020, Governor Wolf amended the Executive Order to extend the deadline to September 15, 2020. As directed by the Executive Order, this proposed rulemaking establishes a CO_2 budget consistent in stringency to that established in the participating states, provides for the annual or more frequent auction of CO_2 emissions allowances through a market-based mechanism, and is sufficiently consistent with the RGGI Model Rule such that CO_2 allowances may be traded with holders of allowances from other states.

RGGI is a cooperative regional market-based cap-and-trade program designed to reduce CO_2 emissions from fossil fuel-fired EGUs. RGGI is currently composed of ten northeastern states, including Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island and Vermont. Since its inception on January 1, 2009, RGGI has utilized a market-based mechanism to cap and cost-effectively reduce CO_2 emissions that cause climate change. Because CO_2 from large fossil fuel-fired EGUs is a major contributor to regional climate change, the participating states developed a regional approach to address CO_2 emissions. This regional approach resulted in a Model Rule applicable to fossil-fired EGUs with a nameplate capacity equal to or greater than 25 MWe. RGGI is implemented in the participating states through each state's independent CO_2 Budget Trading Program regulations, based on the Model Rule, which link together.

RGGI is a "cap and trade" program that sets a regulatory limit on CO_2 emissions from fossil fuel-fired EGUs and permits trading of CO_2 allowances to effect cost efficient compliance with the regulatory limit. RGGI is also referred to as a "cap and invest" program, because unlike traditional cap and trade programs, RGGI provides a "two-prong" approach to reducing CO_2 emissions from fossil fuel-fired EGUs. The first prong is a declining CO_2 emissions budget and the second prong involves investment of the proceeds resulting from the auction of CO_2 allowances to further reduce CO_2 emissions.

Each participating state has an annual CO_2 emissions budget which sets the total amount of CO_2 emitted from fossil fuel-fired EGUs in a year. What is commonly referred to as the "RGGI cap" on emissions is a reference to the total of all the state CO_2 emissions budgets. This proposed rulemaking includes a declining annual CO_2 emissions budget, which starts at 78,000,000 tons in 2022 and ends at 58,085,040 tons in 2030. This is anticipated to reduce CO_2 emissions in this Commonwealth by 31% compared to 2019. The declining annual CO_2 emissions budget is equivalent to the CO_2 allowance budget, which is the number of CO_2 allowances available each year. A CO_2 allowance represents a limited authorization by the Department or a participating state under the CO_2 Budget Trading Program to emit up to 1 ton of CO_2. The number of CO_2 allowances available each year decreases along with the CO_2 emissions budget.

One of the benefits of participating in a regional market-based program is that CO_2 allowances are fungible across the participating states. Although this Commonwealth has an established CO_2 allowance budget for each year, this Commonwealth's CO_2 allowances are available to meet the compliance obligations in any other participating state and vice versa. Therefore, CO_2 emissions from this Commonwealth's power sector are not "capped" by the CO_2 emissions budget, meaning they are not limited to strictly the amount of this Commonwealth's CO_2 allowances. This provides additional compliance flexibility and the regional market assists in achieving least cost compliance for all participating states.

Affected Parties

Under this proposed rulemaking, the owner or operator of a fossil-fuel-fired EGU with a nameplate capacity equal to or greater than 25 MWe that sends more than 10% of its annual gross generation to the electric grid would have a compliance obligation. These regulated EGUs are referred to as "CO_2 budget units" and a facility that includes one or more CO_2 budget units is a "CO_2 budget source." Under this proposed rulemaking, the owner or operator of each CO_2 budget source will be required to have a permit under Chapter 127 (relating to construction, modification, reactivation and operation of sources) which incorporates the requirements of the CO_2 Budget Trading Program. The owner or operator will be required to operate the CO_2 budget source and each CO_2 budget unit at the source in compliance with the permit.

Based on the most recent data from the U.S. Environmental Protection Agency's Clean Air Market Division, the U.S. Energy Information Administration and the Department's emission inventory, the Department estimates that as of the end of 2019, 57 CO_2 budget sources (facilities) with 140 CO_2 budget units (EGUs) would have a compliance obligation under this proposed rulemaking. However, due to the dynamic nature of the electricity generation sector, the number of covered facilities will likely change by the implementation date, January 1, 2022, of this proposed rulemaking. The Department projects based on announced closures and future firm capacity builds that on January 1, 2022 there will be 62 CO_2 budget sources with 150 CO_2 budget units with a compliance obligation under this proposed rulemaking. The Department conducted an analysis of power sector emissions and the facilities that meet the applicability criteria in this proposed rulemaking and determined that around 99% of this Commonwealth's power sector CO_2 emissions would be covered under this proposed rulemaking.

Advisory Groups

The Department consulted with the Air Quality Technical Advisory Committee (AQTAC) and the Citizens Advisory Council (CAC) in the development of this proposed rulemaking. On December 12, 2019, the Department presented concepts to AQTAC on a potential rulemaking to participate in RGGI. The Department returned to AQTAC on February 13, 2020 for an informational presentation on a preliminary draft Annex A. At the April 16, 2020 AQTAC meeting, the Department provided a brief update on the development of this proposed rulemaking. In response to requests from committee members for more opportunities to learn about the CO_2 Budget Trading Program, on April 23, 2020, the Department presented on and provided the modeling results associated with this proposed rulemaking in a Special Joint Informational Meeting of AQTAC and CAC. The meeting was held via a webinar and over 225 members of the public were able to listen to the modeling results. Anyone interested in hearing the modeling results can also watch the meeting at any time through a link on the Department's website.

AQTAC was established under section 7.6 of the APCA (35 P.S. § 4007.6) to provide technical advice at the request of the Department on policies, guidance and regulations. On May 7, 2020, this proposed rulemaking was presented to AQTAC for review and technical advice before the Department moved this proposed rulemaking forward to the Board for consideration. The meeting was held via a webinar and over 200 members of the public had the opportunity to listen to the discussion and to request to provide comments. The AQTAC members were divided on whether to submit a formal letter of concurrence and ultimately declined to do so without a majority decision. The Department will continue to seek technical advice from AQTAC and address member questions and concerns throughout the rulemaking process.

The opportunity to provide public comment on this proposed rulemaking to AQTAC members was provided on three occasions, at the February 13, April 16 and May 7 AQTAC meetings.

Under section 7.6 of the APCA, the Department is required to consult with CAC in the development of the Department's regulations and State implementation plans. On November 19, 2019, the Department presented concepts to CAC on a potential rulemaking to participate in RGGI. The Department returned to CAC on February 18, 2020 for an informational presentation on a preliminary draft Annex A. The Department also conferred with CAC's Policy and Regulatory Oversight Committee concerning this proposed rulemaking on May 8, 2020. At the May 19, 2020 CAC meeting, this proposed rulemaking was presented to CAC for review before the Department moved this proposed rulemaking forward to the Board for consideration. The CAC members ultimately declined to submit a formal letter of concurrence with the Department's recommendation to move this proposed rulemaking forward to the Board for consideration. The Department will continue to consult with CAC and address member questions and concerns throughout the rulemaking process.

Under section 7.8 of the APCA (35 P.S. § 4007.8), the Small Business Compliance Advisory Committee (SBCAC) is required to review and advise the Department on rulemakings which affect small business stationary sources. The Department provided informational presentations on this proposed rulemaking to SBCAC on January 22, 2020 and April 22, 2020. On July 22, 2020, the Department presented this proposed rulemaking to SBCAC for review and advice on the potential small business stationary source impact of this proposed rulemaking. During the presentation, the Department mentioned that it has estimated that ten small business stationary sources, as defined under section 3 of the APCA (35 P.S. § 4003), may need to comply with this proposed rulemaking. Of those ten sources, seven are estimated to be waste coal-fired power plants. The Department also mentioned that it has included in this proposed rulemaking a CO_2 allowance set-aside provision to assist all waste coal-fired power plants located in this Commonwealth with their compliance obligation. The SBCAC ultimately voted not to concur with the Department's recommendation to move this proposed rulemaking forward to the Board, with 4 opposed and 3 in support. The Department will continue to seek advice from SBCAC on the small business stationary source impact of this proposed rulemaking and address member questions and concerns throughout the rulemaking process.

The Department provided an informational presentation on this proposed rulemaking to the Climate Change Advisory Committee on February 25, 2020. Additionally, the Department provided informational presentations to the Environmental Justice Advisory Board on May 21, 2020 and the Oil and Gas Technical Advisory Board on May 20, 2020.

Public Comments and Board Hearings

The Department recommends a 60-day public comment period on this proposed rulemaking and an opportunity for a minimum of five public hearings.