Colver
Green Energy
141 Interpower Drive
Colver, PA 15927

January 14, 2021

Submitted via http://www.ahs.dep.pa.gov/eComment
Environmental Quality Board
Harrisburg, PA 17105-8477

Re: Public Comments to the Proposed Rulemaking: CO_2 Budget Trading Program #7-559

To Whom It May Concern,

On behalf of the ownership and employees of Colver Green Energy, please accept our comments to the Environmental Quality Board (EQB) published notice of its proposal to amend 25 Pa. Code Chapter 145 (relating to interstate pollution transport reduction) to 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 (EGU) located in this Commonwealth, with a nameplate capacity equal to or greater than 25 megawatts (MWe). 50 Pa.B. 6212. Adoption of this proposal will establish Pennsylvania's participation in the Regional Greenhouse Gas Initiative, known as RGGI, a regional CO2 Budget Trading Program.

About Colver Green Energy:

The Colver Power Project located in Cambria and Barr Township, Cambria County Pennsylvania, is a 110 MW waste coal power plant. Colver Power went into service in 1995 and operated as a circulating fluidized bed (CFB) facility until it was shuttered in May 2020 in part due to its Power Purchase Agreement ending. In August of 2020, Generation Holdings, LP bought the plant and five related mine reclamation sites from interests associated with Northern Star Generation. The plant is now referred to as Colver Green Energy LLC.

The plant generates enough electricity to power 130,000 homes in the PJM Interconnection. The majority of the waste coal fuel is sourced from the reclamation activities at five abandoned mines in Cambria County that are legacy sites created from now defunct coal and steel companies. Additional fuel will be sourced from Somerset, Indiana, and Clearfield Counties.

At full load operation this CFB process remediates over 700,000 tons per year of waste material from local abandoned mine lands; using the waste coal as fuel while capturing 95% - 99% of all emissions that would be created by the legacy abandoned mine land sites burning in place. This entire process of remediating waste coal via CFB technology has a multi-decade operating history showing massive

improvements in local air and water quality, areas that have are at high risk for environmental abandonment. This process also mitigates public safety risks inherent to these sites.

The reopening of the plant has brought back 32 direct and an additional 45 jobs in trucking and material handling bringing, for a total of 77 family sustaining fulltime jobs in an area that has experienced economic hardship due to the decline in coal mining over the decades. The plant resumed full operations in October 2020.

Colver spent a quarter-century cleaning up abandoned waste coal piles and restoring land and water which has really been the plant's mission. The plant has remediated over 17.5 million tons of waste coal, in Blair, Cambria, Clearfield and Somerset Counties while converting the waste into energy

The facility utilizes pulverized limestone when burning waste coal for SO2 reduction and fabric filter technology for particulate control. A byproduct of utilizing limestone is that it also creates a beneficial ash product which is used for acid mine drainage remediation and reclamation that helps to encapsulate heavy metals and other soil containments from leaching further into the soil or waterways

At a maximum run rate, Colver is capable of remediating over 700,000 tons annually. In past 11 years, the plant has consumed 7,263,672 tons of waste coal.

	Fuel (tons)	Capacity Factor	MMBTU
'10	772,205	99.20%	9,793,766
'11	762,997	99.78%	9,768,078
'12	672,805	98.08%	9,649,323
'13	715,857	98.47%	9,695,365
'14	693,358	94.62%	9,424,579
'15	680,287	92.81%	9,150,387
'16	594,129	81.57%	8,099,972
'17	632,726	90.9%	8,779,056
'18	657,410	90.9%	8,903,848
'19	653,134	85.8%	8,803,098
'20	428,764	89.3%	5,632,895

Although waste coal at one time was considered a cheap fuel source, economics have changed to the cheap and abundant natural gas that feeds new state of the art natural gas power plants. Additionally, when the plant was built, it was built near abandoned waste coal piles that were the closest and less expensive to remediate. Over time as those sites have been restored, the next phase of waste coal projects are located farther away, thus increasing the logistic costs of remediation for the plant. waste coal piles have been cleaned up It is estimated that there is 30 years' worth of projects within a 50-mile trucking radius from the Colver facility.

At full-load operation the plant receives about 150 truckloads of waste coal a day, along with 40 truckloads of limestone for sulfur capture during the power-generation process.

Colver received The Pennsylvania Governor's Award for Environmental Excellence in 1997 and the 1999 Pennsylvania Resources Council Environmental Award for "Outstanding Achievement by a Business in Promoting a Sustainable Environment".

Background:

In the early days of coal mining, waste-coal was discarded with no environmental regulation in regard to proper disposal. Much of this refuse material was left in large waste piles near local waterways. These piles were often referred to as "bony piles" with some being up to 300 feet tall and can run for thousands of feet. Due to the acidic composition, the piles leach acid mine water and heavy metals into regional waterways greatly impairing water quality in economically distressed regions. This pile also can even spontaneously combust releasing uncontrolled hazardous emissions into the air including CO2.

During the 1990's and early 2000's on the back of new regulations designed to create a public private partnership to incentivize mine reclamation efforts in the state, a wave of new Circulating Fluidized Bed (CFB) power plants were constructed throughout Pennsylvania. These plants were designed to utilize fuels with lower heating values, primarily waste coal and provide the only economically viable solution for restoring the environment where refuse piles exist.

By cleaning up and restoring the land back to approximate original contour (AOC) and using the alkaline rich ash from CFB plants to remediate abandoned coal mines and waste coal sites in an environmentally safe and efficient solution that combats acid mine drainage. Plants such as Colver have helped to clean up hundreds of miles of streams and channels all while meeting strict environmental standards especially in air and water quality requirements. In areas where the land has been restored, streams have become alive again and able to support plant and fish life.

For example, Colver was built near the "Colver" pile which was spread across more than 60 acres and contained approximately 3.5 million tons of waste coal. Since Colver was built it has contributed to cleaning up dozens of waste coal piles and hundreds of acres of land restored, piles ranging in size from tens of thousands of tons of waste coal to millions of tons.

Pennsylvania has established grant and funding programs to clean up these legacy waste coal piles. However, these programs receive minimum funds, and it would be a massive burden on the state of Pennsylvania to remediate these sites; with estimated cleanup costs estimated to be in excess of 15% of the state's general fund at $5 billion. It is estimated that it could take well over a hundred years to clean up these waste coal piles if it were not for using it for electric generation and land reclamation.

RGGI:

Colver is a member of the Appalachian Region Independent Power Producers Association ("ARIPPA") and supports their comments submitted to the Department. However, we offer the following supplemental information.

Although the main purpose of RGGI is to reduce carbon emissions from fossil fuels thru the cap-and-trade program, we want to express our great appreciation to Governor Tom Wolf and his administration for recognizing the environmental benefits that waste coal plants (WC plants) provide to the Commonwealth by setting aside allowances for WC plants such as Colver.

According to the PA Department of Environmental Protection (DEP)'s comment notice, *"While this Commonwealth's participation in RGGI will have tangible health, environmental and economic benefits, the inclusion of the waste coal set-aside has the additional benefit of avoiding unintended impacts to this generation sector, so that the environmental benefits of continuing to remediate this Commonwealth's legacy waste coal piles may continue. For context, since 1988 a total of 160.7 million tons of waste coal has been removed and burned to generate electricity, with an additional 200 million tons of coal ash beneficially used at mine sites. Of this Commonwealth's over 13,000 acres of waste coal piles cataloged by the Department, 3,700 acres have been reclaimed with roughly 9,000 acres remaining. Additionally, of the piles that remain, approximately 40 of them have ignited, and continually burn which significantly impacts local air quality."*

Furthermore, *"Under § 145.342(i) (relating to CO2 allowance allocations), the Department proposes to set aside 9,300,000 CO2 allowances at the beginning of each year for waste coal-fired units located in this Commonwealth. The Board is establishing this waste coal set-aside in this proposed rulemaking because waste coal-fired units provide an environmental benefit of reducing the amount of waste coal piles in this Commonwealth. Reducing waste coal piles is a significant environmental issue in this Commonwealth, because waste coal piles cause air and water pollution, as well as safety concerns. Waste coal-fired units burn waste coal to generate electricity thereby reducing the size, number and impacts of these piles otherwise abandoned and allowed to mobilize and negatively impact air and water quality in this Commonwealth. In recent years, waste coal-fired units have struggled to compete in the energy market, due in part to low natural gas prices, and several units have shut down or announced anticipated closure dates. Given the environmental benefit provided, the Board determined that it is necessary to assist owners or operators of waste coal-fired units with meeting their compliance obligation under this proposed rulemaking."*

In addition, *"By providing a set aside, as opposed to an exemption, the CO2 emissions from waste coal-fired units are included in this Commonwealth's CO2 emissions budget and owners or operators of waste coal-fired units are still required to satisfy compliance of all the regulatory requirements in this proposed rulemaking. After reviewing the last 5 years of CO2 emission data from waste coal-fired units, the Department determined that the CO2 allowance set aside should be equal to the total of each waste coal-fired unit's highest year of CO2 emissions from that 5-year period. That total is 9,300,000 tons of CO2 emissions. Thus, the Department will set aside 9,300,000 CO2 allowances annually. Each year, the Department will allocate the CO2 allowances directly to the compliance accounts of the waste coal-fired units equal to the unit's actual emissions. However, if the waste coal-fired units emit over 9,300,000 tons of CO2 emissions sector-wide in any year, then the units must acquire the remaining CO2 allowances needed to satisfy their compliance obligation."*

Although we greatly appreciate the set aside and have welcomed the participation in stakeholder meetings, we are seeking additional changes to the definition of "legacy emissions." We understand that DEP has to set a number for emissions for program purposes, but picking a set of years to base future needs can have negative consequences.

Colver was sold to new owners in 2020 who intend to operate the plant as a baseload plant. Although the legacy period would cover the new ownership, there have been other issues such as low electric market and maintenance issues that have prevented the plant from running near maximum capacity. By only looking at the past five years, Colver would be limited to 1,087,247 CO2 emissions. However, if DEP looked at the past ten years, then Colver's legacy emissions would be 1,147,763. Even this amount would limit the plant, as an Environmental Remediation facility, from removing the maximum amount of waste coal possible.

DEP had rationalized the legacy date by looking at the market in the past and in the future and maintained that it was "highly unlikely" that these plants would run more in the future than in the past five years. However, just as the Coronavirus has wreaked havoc in our lives and the economy, it has also had other consequences that no one could have predicted. For example, due to statewide and country lockdowns the demand for electricity decreased causing plants to run less than in prior years. As we rebound from the pandemic and demand for electricity grows it will likely increase the power pricing and the operating capacity of the Colver plant thus resulting in more waste coal tons being reclaimed from Pennsylvania watersheds.

Power prices over the past 5 years have been at historically low levels due to the factors mentioned above. The chart below shows how lower power prices would have affected Colver had they not been running on a Power Purchase Agreement.

	Colver 13KV Ave Power Price $/mwh	**Henry Hub Gas Price $/mmbtu**
2010	$ 41.90	$ 4.37
2011	$ 41.15	$ 3.99
2012	$ 32.89	$ 2.75
2013	$ 36.93	$ 3.72
2014	$ 45.97	$ 4.32
2015	$ 33.18	$ 2.60
2016	$ 27.31	$ 2.48
2017	$ 28.52	$ 2.96
2018	$ 35.12	$ 3.12
2019	$ 24.62	$ 2.51

In addition to market changes, there have been legislative changes that will influence the generation market too. On November 23, 2020, Governor Wolf signed House Bill 2536 (Act 114 of 2020) amending the Fiscal Code to include Section 1799.10-E limiting eligibility in Tier II of the Alternative Energy Portfolio Standards (AEPS) program to Alternative Energy Credits (AECs) created by alternative

energy resources located in the Commonwealth, effectively closing the border on participation in this program. This language is modeled after Section 2804 of the Administrative Code (amended by Act 40 of 2017), which excluded out-of-state resources from being eligible for the Solar Photovoltaic (PV) Carveout in Tier I of the AEPS program. An AEC represents a megawatt hour of generation, is valid for three years after the date it was generated, and prior to this change could originate within Pennsylvania or the PJM regional transmission organization (RTO). Out-of-state credits created prior to November 23, 2020 or sold under existing contracts as of that date will continue to be eligible for the remaining term of the contract.

By limiting where the generation of these credits can come from, this will increase the need for instate credit generation. Waste coal is a Tier II source. Prior to this change, the Tier II category under Pennsylvania's AEPS had two notable failures: (i) a historically low AEC price rendering it almost meaningless in the past, and (ii) a looming Tier II structural crisis leading to an expected outflow of over $100 million per year of Pennsylvania ratepayer financial support to out-of-state resources. An oversupply of out of state credits historically produced Tier II AEC prices so insignificant as to offer no support for plant operations or investment decisions. While there were 6678.4 MW of Tier II generation facilities located outside of the Commonwealth registered under the AEPS program, only 4067 MW of facilities located in Pennsylvania were similarly registered. As such, the average Tier II AEC traded around $0.25 over the life of the AEPS program due to this massive surplus of registered out-of-state capacity.

The Public Utility Commission (PUC) has projected that there will be a 2.5 million AEC shortfall in Tier II based upon the previous three years of production from in-state Tier II resources by 2023. (See ARIPPA's comments and attached letter from the PUC on HB 2536).

At the time DEP wrote the proposed regulation it was projected that Colver was going to close. This resulted in DEP to exclude its legacy emissions resulting in 9,300,000 CO2 tons instead of 10,400,000 CO2 tons that would be needed to include Colver. Since Colver will remain active, DEP needs to include these emissions in their calculations and set aside.

DEP also states that "*To comply with this proposed rulemaking, each CO2 budget unit within this Commonwealth will need to acquire CO2 allowances equal to its CO2 emissions. If CO2 allowances are purchased through the multistate auctions, the owner or operator of a CO2 budget unit will pay the auction allowance price, currently around $5 per ton, for each ton of CO2 the unit emits. As mentioned previously, reserved CO2 CCR allowances can be released into the auction if allowance prices exceed predefined price levels, meaning emission reduction costs are higher than projected. The total cost of purchasing allowances will therefore vary per unit based on how much CO2 the unit emits and the allowance price. The owner or operator may also purchase CO2 allowances on the secondary market where they could potentially purchase CO2 allowances at a price lower than the RGGI allowance price. CO2 allowances also have no expiration date and can be acquired and banked to defray future compliance costs.*

Since the Department will allocate CO2 allowances to waste coal-fired units each year up to 9,300,000 allowances sector-wide, waste coal-fired units will incur minimal compliance costs. Owners or operators of waste coal-fired units will only need to purchase CO2 allowances if the set-aside amount is

exceeded. However, waste coal-fired units still have to comply with the other components of the regulation, including incorporating the CO2 budget trading programs into their permits.

The requirements this proposed rulemaking would establish will require the owner or operator of an applicable source to submit a complete application for a new, renewed or modified permit and pay the associated fee. The application must be submitted by the later of 6 months after the effective date of the final-form rulemaking or 12 months before the date on which the CO2 budget source, or a new unit at the source, commences operation."

Even with an increase in Tier II prices and the expected rebound in power prices, waste coal plants like Colver will still face economic hardship if it would have to purchase RGGI allowances for any emissions that exceeds its legacy set aside. So much so, the plant's annual remediation effort will stop when the cap is exceeded. Therefore, we are respectfully requesting that the Administration and DEP work with us and similar stakeholders in reaching a legacy emissions definition that will hold them harmless per the goals of the Administration.

Thank you for your consideration. We look forward to working with you.

Sincerely,

Fred Farabaugh
Plant Manager