

**Clean Air Council
Environmental Entrepreneurs (E2)
Evangelical Environmental Network
Natural Resources Defense Council
PennFuture Energy Center
Pennsylvania Utility Law Project
Sierra Club Pennsylvania Chapter**

March 16, 2020

By Email

**Honorable Secretary Patrick McDonnell
Pennsylvania Department of Environmental Protection
400 Market Street
Harrisburg, Pennsylvania 17101**

Dear Secretary McDonnell:

The undersigned environmental, consumer, and faith organizations submit these joint comments on the Department's preliminary draft rule to cap and reduce emissions from power plants in the Commonwealth and link to the multistate Regional Greenhouse Gas Initiative (RGGI). We applaud Governor Wolf and the Department for taking the first steps toward regulating carbon pollution from Pennsylvania power plants. As set out below, our comments are aimed at ensuring that the rule maximizes both pollution reductions from power plants and program benefits for environmentally and economically burdened communities.

To that end, we submit comments on the following parts of the preliminary draft rule:

- 1) our support for an ambitious cap that will significantly reduce pollution in Pennsylvania;
- 2) our support for the auction of all emissions allowances (with the exception of a voluntary renewables set-aside);
- 3) our opposition to the proposed set-aside for waste coal along with ways the set-aside, if retained, could be improved;
- 4) our support for the addition of a voluntary renewables set-aside similar to those found in many other RGGI states;
- 5) our opposition to any abandoned wells offset that does not ensure real, quantifiable, additional and enforceable emissions reductions;
- 6) our support for broadening the coverage of the program to include smaller generators;

- 7) our support for a plan to study the localized economic and environmental impact of the program on vulnerable communities and act to mitigate any negative impacts identified through the study; and
- 8) our support for ensuring that communities overburdened by pollution and other impacted communities receive their fair share of the benefits of the program, including reductions in conventional air pollutants and the investment of auction proceeds.

I. **Pennsylvania Needs an Ambitious Declining Cap on Carbon Pollution**

A critical program design element that is not included in the preliminary draft rule is the initial emissions cap, or CO₂ allowance budget. We urge DEP to establish an ambitious cap that drives significant reductions in carbon pollution. The Pennsylvania emissions budget in the final rule should be no higher than the final emissions inventory for covered sources in 2019. If emissions from those sources continue to decline consistent with past trends, the budget should be further adjusted downward to reflect the most recent year for which a complete dataset is available at the time the rule takes effect. Modeling of future power sector changes may indicate that a lower budget is necessary, but should not result in setting a higher budget than recent actual emissions. Setting the budget any higher than recent actual emissions can be problematic for several reasons.

First, based on past modeling, it is clear that much of Pennsylvania's coal fleet is extremely marginal and is likely to retire in the near term for economic reasons. The likely result is significant retirements of coal plants in Pennsylvania regardless of participation in RGGI. To maintain the integrity of the RGGI program, DEP's initial cap should take the resulting drop in emissions into account when setting its initial cap.

Second, a budget higher than actual recent emissions would appear to presuppose the retirement of the Beaver Valley nuclear power station (or of another Pennsylvania nuclear facility). However, on March 13, Energy Harbor announced that because Pennsylvania is proceeding with a RGGI regulation, it would keep Beaver Valley open. If DEP assumes the premature retirement of nuclear facilities and therefore a relatively high starting base budget, this will suppress allowance prices and result in fewer economic benefits to low-carbon generators. By contrast, establishing a sufficiently stringent CO₂ cap will likely result in allowance prices high enough to prevent the premature retirement of Pennsylvania's nuclear generators. Essentially, if DEP assumes that nuclear plants will go offline and emissions will go up, this could become a self-fulfilling prophecy.

Third, a starting base budget can also be lower than projected emissions because covered facilities will have time to plan ahead for regulatory compliance.

Furthermore, the carbon budget should decline annually by at least 3%, which is consistent with the existing RGGI program, and DEP should consider a more stringent rate of decline to achieve a 45% reduction by 2030. It can also be challenging to accurately predict future emissions based on current data, and we urge DEP to provide for a mechanism to adjust the starting allowance budget if actual emissions are lower than currently projected.

For all of these reasons, DEP should adopt a starting budget that is sufficiently ambitious to drive significant reductions in carbon emission. At a minimum, that means excluding emissions from plants that are expected to retire for economic reasons, and it will likely require choosing a budget that is lower than the actual emissions the year the program starts.

II. **DEP should Auction All of the Allowances, with a Set-Aside for Voluntary Renewable Energy Purchases**

While we applaud the DEP for proposing to auction the vast majority of allowances and credit the proceeds of the auction to the Clean Air Fund for investment in further air pollution reductions – we recommend DEP eliminate the waste coal set-aside so that an even greater number of allowances can be sold at auction. Alternatively, if DEP retains the waste-coal set-aside, we make recommendations below on ways to maximize the environmental effectiveness of the program with such a set-aside. We also outline our request that the rule include a voluntary renewable energy purchase set-aside.

A. **Eliminate the Waste Coal Set-Aside, or Significantly Improve It**

We acknowledge the problems posed by abandoned coal refuse piles throughout PA, but because burning the refuse to generate electricity is not always a net benefit for communities or the environment, we do not support a waste-coal set-aside. In the context of sector-wide carbon dioxide limits, we do not support special treatment for waste coal power plants, which are among the most carbon-intense of electric generators. For these reasons, we think DEP should eliminate the proposed waste coal set-aside.

If, however, DEP decides to retain the waste coal set-aside, we propose the following improvements to the proposal:

- 1) **The set-aside should be no larger than is necessary to cover the sector's actual emissions.** The preliminary draft rule proposes a set-aside with 7.9 million CO₂ allowances. This figure derives from what DEP defines as the “legacy emissions” from all waste coal-fired units, i.e., the highest-emitting year in the last three calendar years (waste coal units emitted 7.9 million tons of CO₂ in 2018). For context, 7.9 million tons of carbon exceeds the annual emissions from all sources in six of the RGGI states, respectively. Last year, it is projected that Pennsylvania waste coal plant emissions declined to roughly 6 million tons and further declines are projected by 2022. Since

2018, three plants have retired and one announced retirement by September 1, 2020. The four plants combined have a capacity of nearly 300MW, or nearly 20% of the waste coal capacity that existed in 2018. The emissions from Colver, Cambria Cogen, Northeastern Power, and Wheelabrator Frackville totaled roughly 2.5 million tons in 2018, and those emissions should be removed from the calculation of legacy emissions as they no longer exist or will not by 2022.

- 2) **Recipients should be required to reduce their emissions.** Receipt of allowances under any waste coal set-aside should be contingent on the recipient having submitted to DEP a plan and making an enforceable commitment to reduce emissions—both carbon and other pollution—at the waste coal facility, including by implementing all reasonably available efficiency improvements and control technology for conventional air pollutants.
- 3) **The definition of “waste coal” should be limited.** The definition of what qualifies as waste coal should include only refuse that was abandoned prior to 1982, and should not include refuse that was part of a permitted disposal after that date or in the future. Any benefits of waste coal plant operation stem from their cleanup of abandoned coal piles, for which no existing entity has a financial obligation or legal liability, that are creating water pollution and other environmental issues for surrounding communities. If these problems are present at permitted refuse disposal sites, then that is a problem with the permit or its enforcement that needs to be addressed independently. Waste coal power plants should not be viewed as a substitute for current and future mining companies’ environmental restoration responsibilities.
- 4) **Set-aside allowances should not go to entities violating other environmental laws.** In no event should an individual waste coal power plant receive allowances from a set-aside if the plant (a) is polluting in excess of any federal air or water pollution standard that applies to conventional coal-fired power plants, including and especially the requirements of the Mercury and Air Toxics Standards, or has been shown to be contributing to an exceedance of the National Ambient Air Quality Standards; or (b) the plant receives waste coal from a site or operation that has been issued a citation or enforcement action for violations related to coal refuse extraction or site restoration in the previous 12 months.
- 5) **Unused allowances from the set-aside should be retired.**¹ The DEP’s draft language says that unneeded “allowances remaining in the waste coal set-aside account will be transferred to the air pollution reduction account and auctioned in equal installments

¹ In general, we believe that allowances that are not used from any set-aside should be retired. If those allowances cannot be retired, they should be used to supply the cost-containment reserve. Lastly, if they cannot be retired or used in the CCR, they should be deposited in the Clean Air Fund.

during the next four auctions.” We believe that this will devalue the allowances in the air pollution reduction account and lead to unnecessary excess pollution because waste coal is far more carbon intensive than alternative generating source. Indeed, according to data from the US Energy Information Administration, Pennsylvania’s waste coal generators operated at a carbon intensity of 2,668 pounds of CO₂ per megawatt-hour (MWh) in 2018. At that rate, the proposed 7.9 million allowances being set aside represent over 5.9 million MWh of generation. Replacing that generation with natural gas would only require 2.97 million allowances resulting in a surplus of nearly five million allowances. Should the waste coal generation be replaced by clean renewable generation or any other zero-carbon generation, that surplus would be even greater. In the event that retirement of the allowances is not possible, the unused allowances could be used to supply the state’s cost containment reserve account.

B. DEP Should Implement a Voluntary Renewable Energy Set-Aside

A number of the other RGGI states have voluntary renewable set-aside accounts that are between 1 percent and 2 percent of their total emissions budgets and are meant to protect the voluntary renewable energy certificate (REC) market in those states. Currently voluntary renewable energy purchases are used by businesses and individuals to offset their carbon emissions. Use of voluntary renewables for this purpose hinges on being able to claim that the renewable energy has produced actual, quantifiable reductions in carbon pollution. Once a cap has been implemented on electricity emissions in the state, however, renewable energy will merely free up allowances that can be “burned” by fossil fuel generators and voluntary purchasers of renewable energy will be forced to purchase renewable energy from areas not covered by a cap. To rectify this problem, many other RGGI states have set up a mechanism to retire allowances upon a showing that purchasers have purchased renewable energy for purposes of reducing their carbon footprints. We recommend that DEP include such a voluntary renewable set-aside to support in-state renewable energy producers by discouraging voluntary purchasers from going out of state to voluntarily buy renewable energy.

III. Any Abandoned Wells Offset Should Ensure Real, Quantifiable, Additional and Enforceable Emissions Reductions

While we recognize the value of addressing methane emissions from abandoned wells, the offset should not be available until adequate protocols can be developed. In order to be valid, an offset must be real, verifiable, additional and enforceable. This means DEP must develop measurement, monitoring, reporting and verification requirements. There are numerous other concerns, including whether any such emission offsets are truly voluntary and additional, whether the highest emitting wells can and will be prioritized, and whether emissions can be quantified accurately enough to ensure that reduction benefits are being realized. One alternative may be for verified well plugging to be included as an eligible activity for future Clean Air Fund expenditure.

IV. **The Program Should Cover 15 MW Generators and Larger**

The preliminary draft rule proposes to define covered sources as fossil fuel burning generating units with a capacity of 25 MW or more, which is consistent with the RGGI model rule. We urge the DEP to lower that threshold to 15 MW, and to aggregate units at each site for the purposes of determining applicability.

Our preliminary analysis indicates that Pennsylvania is home to 256 generating units that burn fossil fuels and have a capacity below 25 MW, representing a total capacity of 1,513 MW. Combined, this would be the equivalent capacity of the fifth largest power plant in the Commonwealth, and represents about 4.4% of the overall fossil generating capacity. We were only able to locate 2018 CO₂ emissions data for 25 of these units representing 267 MW, and these units emitted over 1.4 million tons of CO₂. This is about 1.8% of the emissions from generators over 25 MW in that year, despite the fact that small units represented only 0.8% of the generating capacity.

This analysis indicates that units below 25 MW contribute a small but significant percentage of the overall electric sector carbon dioxide pollution; and their relative emissions per unit of capacity are more than double than the average unit, likely due to significantly higher heat rates than larger units.

We suspect that higher CO₂ emissions rates are correlated to higher rates of co-pollutants as well, which negatively impact communities in the plants' airsheds. Most often, low income and minority communities are most impacted, creating disproportionate health impacts and other negative outcomes for these marginalized communities. If these small generators are not required to purchase CO₂ emissions allowances, they will be at a competitive advantage relative to covered sources, and may increase their operation as a result – compounding the disparate impact on marginalized communities.

Furthermore, we have identified 81 planned gas-fired units that are below 14 MW, most of which are at sites with a combined capacity of 21 MW or less, but totaling 430 MW in aggregate. Development of these plants would be more likely in the future under the proposed threshold.

If DEP is reluctant to regulate all fossil generators under this rule, lowering the threshold to 15 MW would exempt more than 75% of existing small units, while capturing over two-thirds of the generating capacity. In order to include any of the proposed small gas plants under the 15 MW cap, it would have to be applied at the site level, rather than the unit level.

V. **DEP Should Conduct an Analysis of Community-level Air Pollution Impacts**

Overall, the level of power plant co-pollutants has decreased significantly in RGGI-participating states since the inception of the program, as carbon-intensity and co-pollutant intensity are well correlated. That said, there is at least a possibility that some communities could see increases in co-pollutant exposure after RGGI participation commences, due in part to shifting generation patterns or construction of new plants, and that potential should be taken seriously by DEP as the program moves forward.

In addition to CO₂, fossil fuel-fired generation emits air pollutants with localized adverse public health impacts, such as fine particulate matter, nitrogen oxides (NO_x), sulfur dioxide (SO₂), and hazardous air pollutants. If a stringent carbon pollution cap is adopted, participation in RGGI can be expected to reduce emissions of other harmful air pollutants from power plants as well. An independent comprehensive analysis of RGGI's health impacts found that over its first six years the program improved air quality in the region and generated significant public health benefits.² Specifically, "RGGI resulted in net reductions of both [SO₂ and NO_x] in each year of RGGI's first two compliance periods" as well as "incremental improvements in air quality in every year of the program's first six years."³

By reducing power plant CO₂ emissions, joining RGGI will also help Pennsylvania reduce emissions of these harmful air pollutants in the state. However, even an ambitious CO₂ emissions cap is unlikely to fully address the long-standing air pollution concerns caused by Pennsylvania's fossil power plant emissions, because a statewide CO₂ emissions limit will not guarantee reductions of locally-harmful co-pollutants in any particular location.

Accordingly, as Pennsylvania looks to enter RGGI, we urge the DEP to work with communities that have historically borne higher pollution burdens and face disproportionate risks from climate change—to identify policies and programs that will further reduce air pollution and improve public health. We believe that the success of Pennsylvania's participation in RGGI must be measured by the achievement of these outcomes, in addition to the reduction of carbon pollution.

Pennsylvania's RGGI rule should require an environmental justice analysis to assess potential localized environmental and economic impacts on communities, mitigate any identified impacts, and provide for ongoing monitoring to evaluate local impacts of RGGI implementation. The first step would be a public process with meaningful engagement of potentially impacted

² Abt Associates, Analysis of the Public Health Impacts of the Regional Greenhouse Gas Initiative, 2009-2014 (Jan. 1, 2017), <https://www.abtassociates.com/insights/publications/report/analysis-of-the-public-health-impacts-of-the-regional-greenhouse-gas-0>.

³ *Id.* at 22, 27. In addition, the Abt Associates modeling results "show substantial air quality benefits in the non-RGGI states of Pennsylvania and New Jersey due to emission reductions from plants located in RGGI states." *Id.* at 29.

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communities to determine how best to define a “vulnerable” community, considering metrics such as income level, health indices, compliance with the national ambient air quality standards, percent minority population, etc. If it is then determined that a community is experiencing increased levels of co-pollutant exposure relative to a pre-RGGI baseline, has encountered disproportionate economic impacts as a result of RGGI implementation, or is not sharing in any air quality improvements enjoyed by the broader region, the DEP should engage residents and leaders in that community to identify an appropriate remedy. Remedies should include but should not be limited to: (a) the priority investment of allowance proceeds in projects or programs that directly benefit the impacted community and more than offset any increased pollution from power plants contributing to local pollution levels; and/or (b) additional permit restrictions on power plants impacting vulnerable communities to limit their emissions of co-pollutants.

With respect to the rulemaking process, we urge the DEP to ensure that Pennsylvanians who reside in environmental justice communities, as well as other marginalized and vulnerable community members, are able to have meaningful input into how the state implements RGGI and addresses air pollution. Attachment 1 includes recommended changes to the Draft Annex that would enshrine this analysis and input process in the regulation.

Finally, while we recognize that the regulation being developed by the DEP will not address how the proceeds of allowance auctions deposited into the Clean Air Fund will be spent, we note the importance of ensuring that those expenditures are made in ways that benefit environmental justice communities that are disproportionately impacted by pollutants, as well as low-income Pennsylvanians that already bear a disproportionately high energy burden. We look forward to working with the DEP on expenditure issues outside of the rulemaking process.

In conclusion, we the undersigned once again applaud Governor Wolf and the Department of Environmental Protection for taking the first steps toward regulating carbon pollution from power plants. We appreciate the opportunity to submit these comments and look forward to working with the Department to improve on the preliminary draft made public.

Sincerely,

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DRAFT ANNEX LANGUAGE AND COMMENTS

EDIT §145.301 Purpose

This subchapter establishes the Pennsylvania component of the CO2 Budget Trading Program, which is designed to reduce anthropogenic emissions of CO2, a greenhouse gas, from CO2 budget sources in a manner that is protective of public health, welfare and the environment, is economically efficient, **and benefits communities that are already disproportionately burdened by pollution from these and other sources, including reductions in the emission of air pollutants and direct reinvestment of auction proceeds in such communities.**

EDIT § 145.302. Definitions

"Air pollution reduction account" means the general account established by the Department from which allowances will be sold or distributed in order to provide funds for **Air Pollution Elimination Measures within the full and normal range of activities of the Department** and the administration of the Pennsylvania component of the CO2 Budget Trading Program."

EDIT § 145.376. Petitions.

(c) The CO2 authorized account representative of a CO2 budget unit that is not subject to an acid rain emissions limitation may submit a petition to the Administrator under 40 CFR 75.66 and to the Department requesting approval to apply an alternative to any requirement of 40 CFR Part 75. Application of an alternative to any requirement of 40 CFR Part 75 is in accordance with this subchapter only to the extent that the petition is approved in writing by the Administrator and subsequently approved in writing by the Department **and the Environmental Justice Advisory Board.**

ADD § 145.302. Definitions

"Air Pollution Elimination Measures" within the full and normal range of activities of the Department, for which disbursement of Clean Air Fund monies is appropriate under 25 Pa. Code 143.1, are those reasonably related to the elimination, prevention, control, reduction and abatement of air pollution and associated harmful impacts.

ADD § 145.401. Auction of CO2 allowances

f) Environmental Justice Analysis. As part of the determination to participate in multistate CO2 allowance auctions or to conduct Pennsylvania-run auctions, the Department, in consultation with the Environmental Justice Advisory Board, shall complete an environmental justice analysis of the auction programs. As a part of this analysis, the Department shall:

- 1) Establish criteria to identify vulnerable communities for the purposes of air pollution elimination and allocation of investments from the Clean Air Fund.
 - a) vulnerable communities shall be identified based on geographic, public health, environmental hazard, and socioeconomic criteria, including but not limited to:
 - i) Areas burdened by cumulative environmental pollution and other hazards that can increase the potential of negative public health effects;
 - ii) Areas with concentrations of people that are of low income, high unemployment, high rent burden, low levels of home ownership, low

- levels of educational attainment, or members of groups that have historically been subject to discrimination on the basis of race or ethnicity;
- iii) Areas with disproportionality high energy costs, especially those that are reliant on fossil fuels as a primary heating source for their home; and
 - iv) Areas vulnerable to impacts of climate change.
- b) Before finalizing the criteria for identifying vulnerable communities the Department shall publish draft criteria and a draft list of vulnerable communities and solicit public comment from persons who will be impacted by the criteria, with particular attention to persons living in areas that may be identified as vulnerable communities under the draft criteria.
- i) As part of the public comment process the Department shall allow communities an opportunity to self-designate as vulnerable, subject to review by the Environmental Justice Advisory Board.
- 2) Identify measures to maximize reductions of air pollutants in vulnerable communities and avoid any increase in emissions in vulnerable communities.
 - 3) Identify sector specific impacts on the state's current workforce and avenues to maximize the skills and expertise of that workforce in the clean energy economy;
 - 4) Identify sites of electric generating facilities that may be closed as a result of a transition to clean energy and the issues and opportunities presented by reuse of those sites;
 - 5) Identify likely areas of workforce and community disruption due to community transitions resulting from emission facility closures; and
 - 6) Identify measures that will directly remediate high energy use households, particularly in areas that are reliant on fossil fuel as a primary heating source for their home.

Comments

Equity and environmental justice considerations must be an integral part of the emissions trading rulemaking process and of DEP's implementation of the rule. Fossil fuel-fired power plants are disproportionately located in proximity to low income communities, communities of color, and other vulnerable groups, concentrating air pollution and climate impacts in these frontline communities. A carbon budget and trading regulation presents a crucial opportunity to in small part redress the historic disenfranchisement of frontline communities, if it includes a robust stakeholder engagement process that purposefully eliminates barriers to active involvement in the rulemaking process.

Truly meaningful engagement requires DEP to foster input from impacted communities at all critical junctures in rule development and implementation. DEP can remove common barriers to stakeholder engagement by committing to host meetings in impacted communities, providing plain language notice of meetings well in advance, scheduling meetings at accessible times and dates, providing interpreters for non-English speaking community members, and providing plain language and translated fact sheets. Input from community partners will provide invaluable insight on further meeting best practices and specific priority issues to address. DEP should consider holding an additional round of community meetings addressing the specifics of

a published draft rule to ensure non-technical stakeholders are provided the opportunity to engage.

In addition, DEP should include in its rulemaking provisions for an environmental justice analysis grounded in meaningful stakeholder engagement with communities most affected by CO₂ and co-pollutant emissions. Both the EPA's Clean Power Plan and California's carbon trading program (AB 32) provide precedent for requiring an environmental justice analysis, and corrective action where needed, to protect vulnerable communities from any disproportionate impacts resulting from a CO₂ trading program. In the 2015 Clean Power Plan, EPA committed to ensure that the Clean Power Plan would not have any disproportionate impacts on low-income communities and communities of color. EPA planned to conduct an assessment to determine whether state plans, once in place, were causing localized emissions impacts that need to be addressed under other Clean Air Act programs that regulate conventional pollutants. EPA also encouraged states to conduct their own evaluations to assess any adverse impacts on communities, and recommended considering approaches used by other states to determine these impacts.¹ One example is California's AB32 Adaptive Management Plan. California AB32's Adaptive Management Plan requires the California Air Resources Board (ARB) to address potential adverse localized air quality impacts that might result from the implementation of AB32.²

To both inform an Environmental Justice Analysis and to target stakeholder engagement, DEP must define how it will identify vulnerable communities. Criteria should include a combination of geographic, public health, cumulative environmental and financial energy burdens, and socioeconomic factors. The precise criteria should be developed in collaboration with representatives of communities of color, low-income communities, and communities bearing disproportionate pollution and climate change hazards. Before finalizing the criteria, DEP should publish draft criteria along with a draft list of identified communities, with an opportunity for meaningful public comment from persons affected by the criteria.

¹ 80 Fed. Reg. 64,662, 64,918-64,919.

² For more information, see California Air Resources Board, *Adaptive Management Plan - Localized Pollution Impacts*, <https://ww3.arb.ca.gov/cc/capandtrade/adaptivemanagement/adaptivemanagement.htm>.