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RE: Letter of Support for Petition Pursuant to the Pennsylvania Air Pollution Control Act to Adopt the Regulation Establishing a Comprehensive Program to Limit Greenhouse Gas Emissions Through an Auction-Cap-and-Trade Program

Dear Secretary McDonnell and Ms. Edinger,

The American Wind Energy Association (AWEA)¹ encourages the Pennsylvania Environmental Quality Board (EQB) to accept the Clean Air Council's petition² (Petition) and have the Department of Environmental Protection (DEP) evaluate the proposed economy-wide auction-cap-and-trade program set forth therein. In general, AWEA supports carbon pricing

¹ AWEA is the national trade association representing a broad range of entities with a common interest in encouraging the deployment and expansion of wind energy resources in the United States. AWEA members include wind turbine manufacturers, component suppliers, project developers, project owners, financiers, researchers, renewable energy supporters, utilities, marketers, customers and their advocates.

² Robert B. McKinstry, Jr., et al., *Amendment and Supplement to Petition Pursuant to 25 Pa. Code §§ 23.1-23.5, Article I, §27 of the Pennsylvania Constitution, and the Pennsylvania Air Pollution Control Act to Adopt the Attached Regulation Establishing a Comprehensive Program to Limit Greenhouse Gas Emissions Though an Auction-Cap-and-Trade Program to Conserve and Maintain a Stable Climate and Other Public Resources for Which the Commonwealth is a Trustee*, Clean Air Council, 4-8 (2019), http://files.dep.state.pa.us/PublicParticipation/Public%20Participation%20Center/PubPartCenterPortalFiles/Environmental%20Quality%20Board/2019/02_Petition_GHG%20Emissions/GHG%20Emission%20Petition_February%202028,%202019.pdf [hereinafter *Petition*].



programs that are market-based and designed to create long-term price signals that drive low-cost solutions, such as the one proposed in the Petition. While there are many pathways that Pennsylvania could take to achieve real carbon pollution reduction goals (together or separately),³ including joining the Regional Greenhouse Gas Initiative (RGGI) and/or advocating for PJM to adopt a carbon-pricing in its wholesale market, if adopted, the proposed auction-cap-and-trade program could have numerous economic, public health, and environmental benefits for the Commonwealth of Pennsylvania and the country at large.⁴

I. COMMENTS

A. The Pennsylvania Constitution Imposes a Duty on the EQB to Accept the Petition.

The Pennsylvania Environmental Rights Amendment imposes upon the Commonwealth an affirmative duty to use legislation to “prevent and remedy the degradation, diminution, or depletion of our public natural resources . . . whether such degradation, diminution, or depletion would occur through direct state action or indirectly, e.g., because of the state's failure to restrain the actions of private parties.”⁵ The people of Pennsylvania, as represented in the Petition, have

³ *Governor Wolf Establishes First Statewide Goal to Reduce Carbon Pollution in Pennsylvania*, Governor Tom Wolf (Jan. 9, 2019), <https://www.governor.pa.gov/governor-wolf-establishes-first-statewide-goal-reduce-carbon-pollution-pennsylvania/> [hereinafter *Governor Wolf*] (“The commonwealth will work to achieve a 26 percent reduction of greenhouse gas emissions by 2025 and an 80 percent reduction by 2050, from 2005 levels.”).

⁴ We note that the proposed regulation contemplates integration with RGGI and adoption of a PJM pricing mechanism. Further, the proposed regulation’s economy-wide approach put a cost on all GHG emissions, thereby encouraging the electrification of the transportation, industrial and building sectors, as well as the decarbonization of the electricity sector.

⁵ *Robinson Twp. v. Commonwealth*, 83 A.3d 901, 957 (Pa. 2013) (plurality opinion) (finding a state statute unconstitutional under the Environmental Rights Amendment (ERA) to the Pennsylvania Constitution). A majority of the court has adopted and applied this plurality interpretation of the ERA to find that the Pennsylvania legislature could not enact a statute that eliminating requirements that revenues from oil and gas leases on state lands be used for conservation efforts. *Pa. Env'tl. Def. Found. v. Commonwealth*, 161 A.3d 911, 933 (Pa. 2017) (explaining that there is a “common ownership by the people, including future generations, of



a right to seek to enforce the Commonwealth's obligations, as a trustee, to "conserve and maintain' public natural resources in furtherance of the people's specifically enumerated rights."⁶ Procedurally, under Pennsylvania Code, citizens have a right to petition the Commonwealth to take regulatory action,⁷ and thus act on its duty protect the people's "right to clean air, pure water, and to the preservation of the natural, scenic, historic and esthetic values of the environment."⁸

The Department of Environmental Protection (DEP) must refer the Petition to the EQB if it is it complete, requests an action the EQB can rightfully take, and does not conflict with federal law.⁹ EQB is given permission to refuse to consider a petition in limited circumstances,¹⁰ none of which are present here. Given the obligations imposed on the Commonwealth to protect the state's natural resources and the people's right to enforce this obligation, it would be a violation of the Environmental Rights Amendment for the EQB to ignore or refuse the Petition.¹¹

Pennsylvania's public natural resources" and that "the Commonwealth must act affirmatively via legislative action to protect the environment").

⁶ *Pa. Env't. Def. Found.*, 161 A.3d at 934, 937.

⁷ 25 Pa. Code § 23.

⁸ PA. CONST. art. I, § 27; *see also Pa. Env't. Def. Found.*, 161 A.3d at 934, 937.

⁹ 25 Pa. Code § 23.2.

¹⁰ *Id.* § 23.5 ("The EQB may refuse to accept a petition if it determines that one or more of the following conditions exist: (1) The EQB has within the previous 2 years considered the issue addressed by the petition for rulemaking as part of an earlier decision concerning the adoption, amendment or deletion of a regulation. (2) The action requested by the petitioner concerns a matter currently in litigation. (3) The requested action is not appropriate for rulemaking by the EQB due to policy or regulatory considerations. (4) The petition involves an issue previously considered by the EQB, and it does not contain information that is new or sufficiently different to warrant reconsideration of that decision.").

¹¹ *See* 25 Pa. Code § 23; Robert B. McKinstry Jr. & John C. Dernbach, *Applying the Pennsylvania Environmental Rights Amendment Meaningfully to Climate Disruption*, 8 Mich. J. Env'tl. & Admin. L. 49, 77 (2018) ("[T]he ERA creates rights and general duties, that there are specific duties for the EQB to consider a petition with an attached rule, and that there is a duty to adopt regulations addressing climate change under the APCA.").



B. An Auction-Cap-and-Trade Program Could Result in a Wide Range of Benefits to Pennsylvania.

1. Environmental and Public Health Benefits

As the Clean Air Council’s petition explains in detail, rising global temperatures pose an incredible risk to public health and the environment, as well as economic stability.¹² World leaders, various environmental groups, scientists, and public health officials agree that global GHG emissions must be addressed expeditiously in order to mitigate the most serious and dangerous effects of climate change.¹³ Climate change is expected to cost the U.S. economy “hundreds of billions of dollars” by the end of the century,¹⁴ with Pennsylvania alone experiencing significant economic losses in the agricultural and tourism sectors of its economy, among others.¹⁵

Pennsylvania is the third largest carbon emitter in the United States,¹⁶ and its per capita emissions were greater than any nation in the world in 2014.¹⁷ Thus, Pennsylvania plays a

¹² See *Petition*, supra note 2, at 4-8.

¹³ See *Petition*, supra note 3, at 28 (“Because most fossil fuel CO2 emissions will remain in the surface carbon reservoirs for millennia . . . [t]he failure to act promptly will not only increase the costs of future reductions, it will have irreversible adverse effects on the youth and all future generations, as detailed above.”).

¹⁴ *Fourth National Climate Assessment*, U.S. Global Change Research Program, 26 (2018), https://nca2018.globalchange.gov/downloads/NCA4_2018_FullReport.pdf (noting that projected losses are as large as the current gross domestic product of many U.S. states).

¹⁵ *Climate Change Impacts and Solutions for Pennsylvania*, Union of Concerned Scientists, 6 (2008),

https://www.ucsusa.org/sites/default/files/legacy/assets/documents/global_warming/Exec-Summary_Climate-Change-in-Pennsylvania.pdf (explaining that climate change will depress dairy farming productivity, threaten fruit production, reduce forest habitat, decimate the snowmobile industry, hamper the ski and snowboarding industry, diminish recreational fishing, increase inland and coastal flooding, put vulnerable individuals at a much higher risk of heat stroke-related fatality, prolong the allergy season, and increase the prevalence of pests and diseases in Pennsylvania).

¹⁶ *Id.* at 50 n.298.

¹⁷ *Id.* at 11.



critical role in regulating and reducing the GHG emission footprint of the United States and addressing global climate change. Therefore, the proposed auction-cap-and-trade program should have both in-state and global climate benefits.

2. Economic Benefits

Despite the uneven playing field the government has created by not internalizing carbon costs into energy markets, renewables are not only successfully competing with fossil fuels, but are thriving and driving economic development and job creation.¹⁸ Presently, the US wind, efficiency, and solar energy industries (all of which are represented in AWEA's membership) collectively employ more American workers than the coal, petroleum, and natural gas industries combined.¹⁹ For instance, the wind industry alone supported between 1,000 and 2,000 indirect jobs in Pennsylvania in 2017 and has brought in \$2.8 billion in total capital investment to the state through 2017.²⁰ Green jobs play a crucial role in the Pennsylvania job market; for example, there were over 86,000 clean energy jobs in Pennsylvania in 2018.²¹ Further, the U.S. Bureau of

¹⁸ See Darcy E. Hitchcock & Marsha L. Willard, *The Business Guide to Sustainability: Practical Strategies and Tools for Organizations* 234 (2015); Joe Ryan, *Economics to Keep Wind and Solar Energy Thriving With Trump*, Bloomberg (Nov. 22, 2016, 7:01 PM), <https://www.bloomberg.com/news/articles/2016-11-23/economics-will-keep-wind-and-solar-energy-thriving-under-trump>.

¹⁹ See The 2019 U.S. Energy 4-5 & Employment Report, National Association of State Energy Officials & Energy Future Initiative, (2019) <https://static1.squarespace.com/static/5a98cf80ec4eb7c5cd928c61/t/5c7f3708fa0d6036d7120d8f/1551849054549/USEER+2019+US+Energy+Employment+Report.pdf> (finding that across the “entire value chain” the natural gas industry employs 625,369 Americans, the coal industry employs 197,418 Americans, and the petroleum industry employs 799,531 Americans [1,622,318 total], while the solar industry employs 242,343 Americans (full time), the wind industry employs 111,166 Americans, and the energy efficiency sector employed over 2,324,866 Americans [2,678,375 total]).

²⁰ *Wind Energy in Pennsylvania*, American Wind Energy Association,

<https://www.awea.org/Awea/media/Resources/StateFactSheets/Pennsylvania.pdf>

²¹ *Report: 86,000 Pennsylvanians Now Work in Clean Energy*, E2 (June 19, 2018),

<https://www.e2.org/releases/report-86000-pennsylvanians-now-work-in-clean-energy/>



Labor Statistics projects that solar photovoltaic installers and wind service technicians will be the fastest growing occupations between 2016-2026.²²

These numbers would grow exponentially if a carbon reduction program were adopted and implemented in Pennsylvania. This is due to the fact that cap-and-trade programs, like the one proposed in the Petition, stimulate critical sectors of the U.S. economy and drive job creation in the green industries, which currently play a pivotal role in the U.S. economy and will become increasingly more important in the coming decades.²³ An auction-cap-and-trade program would promote fair competition in the energy market and, thus, drive renewable energy production in the Commonwealth,²⁴ accelerating Pennsylvania's transition to a robust green energy economy.²⁵

Cap-and-trade programs have been shown to facilitate economic growth and development, while strengthening the overall economic health of the regulated state.²⁶ California

²² *Fastest Growing Occupations*, Bureau of Labor Statistics (April 13, 2018), <https://www.bls.gov/ooh/fastest-growing.htm>.

²³ See Deanna Nord, *Renewable Energy = Economic Development and Jobs*, American Business Magazine, (Nov. 29, 2018), <http://www.americanbusinessmag.com/2018/11/renewable-energy-economic-development-and-jobs/>; see also *U.S. Energy and Employment Report*, U.S. Department of Energy, 80 (2017), https://www.energy.gov/sites/prod/files/2017/01/f34/2017%20US%20Energy%20and%20Jobs%20Report_0.pdf (“States such as California and Texas, which have abundant solar, wind, and fossil fuel resources, have shown dramatic employment gains, despite some losses linked to low fossil fuel prices. Coal-dependent states, such as West Virginia and Wyoming, have seen declines in employment since 2015.”).

²⁴ See Gina-Marie Cheeseman, *The Case for Carbon Pricing*, *Global Warming is Real* (July 27, 2018), <https://globalwarmingisreal.com/2018/07/27/case-for-carbon-pricing/> (“[T]he U.S. energy market does not accurately reflect fossil fuel costs and has distorted competitive market forces. It fails to account for the cost of environmental damage of fossil fuels and incentivizes fossil fuel use through favorable treatments of subsidies.”).

²⁵ See *The Transition Takes Hold*, *supra* note 17, at 1 http://cleanenergycanada.org/wp-content/uploads/2017/03/CEC_TER-Report-Spring-2017_web.pdf (“[T]he clean energy transition now appears irreversible.”).

²⁶ See *Annual Report to the Legislature on California Climate Investments: Using Cap-and-Trade Auction Proceeds*, California Climate Investments, 8 (2019), https://www.arb.ca.gov/cc/capandtrade/auctionproceeds/2019_cci_annual_report.pdf [hereinafter *Annual Report*]; Paul J. Hibbard, et al., *The Economic Impacts of the Regional Greenhouse Gas*



has maintained a strong, economy wide cap-and-trade program since 2012, and during that time its economy has grown to be the fifth largest in the world.²⁷ The program has generated over \$10 billion in permit revenue for the state government since 2012.²⁸ This revenue has been invested in projects that promote community and economic development in disadvantaged localities in California.²⁹ Furthermore, low-income consumers have been shown to save money on their electricity bills under cap-and-trade programs,³⁰ indicating that these programs can successfully offset any compliance costs that might have been passed-through to consumers.³¹ Overall, California's low carbon policies are expected to "[i]ncrease California real gross state

Initiative on Nine Northeast and Mid-Atlantic States, Analysis Group, 26 (2018), https://www.analysisgroup.com/uploadedfiles/content/insights/publishing/analysis_group_report_april_2018.pdf. See generally *The New Climate Economy*, Global Commission on the Economy and Climate, 4 (2018), https://newclimateeconomy.report/2018/wp-content/uploads/sites/6/2018/09/NCE_2018_ExecutiveSummary_FINAL.pdf (finding that a shift to a low-carbon economy would generate \$26 trillion in cumulative direct economic benefits for the 2018-2030 period globally).

²⁷ Silvio Marcacci, *Oregon Clean Energy Jobs Bill: An Economic Engine and a Decarbonization Catalyst*, Forbes (Jan. 22, 2019, 7:40 AM), <https://www.forbes.com/sites/energyinnovation/2019/01/22/oregons-clean-energy-jobs-bill-an-economic-engine-and-a-decarbonization-catalyst/#7cfd35cd512d>

²⁸ See *California Cap-and-Trade Program: Summary of Proceeds to California and Consigning Entities*, California Air Resources Board (March 2019), https://www.arb.ca.gov/cc/capandtrade/auction/proceeds_summary.pdf.

²⁹ *Annual Report*, supra note 21, at 8 (finding that California appropriated \$2.2 Billion in cap-and-trade revenue to clean transportation, clean energy, affordable housing, and natural resource projects, supporting almost 20,000 jobs in California.).

³⁰ See Julien Gattaciecca, et al., *Protecting the Most Vulnerable*, Luskin Center for Innovation, 1 (2016), <https://innovation.luskin.ucla.edu/sites/default/files/FINAL%20CAP%20AND%20TRADE%20REPORT.pdf> (“We estimate that the financial impact of Cap-and-Trade in 2016 on our representative households’ electricity bills could on average be approximately \$15, while these households would also receive approximately \$65 in climate credits, for a net positive financial impact of \$50.”).

³¹ *Id.* (finding that the California cap-and-trade compliance costs are offset by climate credit and energy efficiency programs, which receive funding from the cap-and-trade auction revenues).



product 2 percent by 2030 and 9 percent by 2050 [and] [c]reate more than 500,000 additional full-time-equivalent jobs by 2030 and 3.3 million by 2050.”³²

Similarly, RGGI, which employs an auction-cap-and-trade program to regulate the GHG emissions of power plants, has served as a positive stimulus to the economy of its participants and the region as a whole.³³ Since its inception in 2012, RGGI has achieved approximately \$4 billion in net positive economic value added for the participating states.³⁴ From 2015-2017 alone, RGGI led to “overall jobs increases” amounting to 14,500 new job-years.³⁵ Under RGGI, the GHG emissions of participating states have plummeted while their economies have grown 4.3% faster than the rest of the country.³⁶ Additionally, electricity prices decreased 6.4% in RGGI states from 2008-2016,³⁷ showing that the program has benefitted consumers. Clearly, RGGI opponents’ predictions that RGGI would ruin the New England economy have been proven to be totally unfounded.³⁸

³² David Roland-Holst et al., *Exploring Economic Impacts in Long-Term California Energy Scenarios*, California Energy Commission, 2 (2018), <https://www.energy.ca.gov/2018publications/CEC-500-2018-013/CEC-500-2018-013.pdf>.

³³ Hibbard, *supra* note 21, at 26.

³⁴ *Id.* (These numbers are based exclusively on the economic impacts of RGGI, they do not account for “other potential measures of economic benefits . . . such as climate risk mitigation and air quality or other human health and environmental impacts.”).

³⁵ *Id.* at 9.

³⁶ Jordan Stutt, et al., *Outpacing the Nation: RGGI’s Environmental and Economic Success*, Acadia Center, 6 (2017), http://acadiacenter.org/wp-content/uploads/2017/09/Acadia-Center_RGGI-Report_Outpacing-the-Nation.pdf.

³⁷ *Id.*

³⁸ Meredith Connolly, *Ten US States Show Economic Benefits from Capping Climate Pollution*, Climate Solutions (March 29, 2017), <https://www.climatesolutions.org/article/1490741595-ten-us-states-show-economic-benefits> (“Before RGGI was implemented, naysayers argued that reducing carbon pollution through RGGI would cost too much and lead to economic decline.”).



D. Cap-and-Trade Programs are Cost-Effective.

Cap-and-trade programs are an incredibly cost-effective means of addressing GHG pollution.³⁹ Like other market-based carbon regimes, cap-and-trade programs collectively allow firms across the regulated industry to achieve emission reductions at the lowest possible cost and promote innovation.⁴⁰ These programs allow the most emissions efficient firms in the market to capitalize on their advanced technology, while allowing less efficient firms to significantly benefit from other, more efficient, firms ability to achieve compliance at a low cost.⁴¹ They are also less administratively burdensome to develop or to implement, since markets will determine how to achieve reductions.

Cap-and-trade programs are especially appropriate for achieving GHG emissions reduction because “GHGs are not harmful on a localized basis.” Therefore, there is no need to ensure that polluters are not concentrated in one area; the market is truly free to distribute emission allowances in the most cost-effective manner possible.⁴² Finally, the proposed auction-cap-and-trade regulation is generally consistent with other, pre-existing cap-and-trade programs

³⁹ *Market Mechanisms: Understanding the Options*, Center for Climate and Energy Solutions, 1-2,6 (April 2015), <https://www.c2es.org/site/assets/uploads/2015/04/market-mechanisms-brief.pdf> (explaining that the EPA’s ozone cap-and-trade program generated an estimated \$250 million in costs savings in 1992 “and perhaps twice as much by 1996”).

⁴⁰ *Id.* at 3-4. Consider the following hypothetical. Modifying a piece of equipment so as to reduce emissions and achieve compliance with the “cap” proves to be cost-prohibitive or unreasonably expensive for “Firm A”. However, “Firm B” is capable of reducing its emissions for a much cheaper price. If it is cheaper for Firm A to pay Firm B to reduce its emissions than it would be for A to try to reduce its own emissions, then Firm A will pay the more efficient Firm B to proportionally reduce its emissions so as to ensure that both companies do not exceed the regulatory “cap”. *See generally id.*

⁴¹ *Id.*

⁴² *Id.*



in the United States.⁴³ This means that many regulated entities will already be familiar with the auction mechanisms, reducing compliance costs.⁴⁴

II. CONCLUSION

For the reasons stated above, AWEA urges the EQB to accept the Clean Air Council's petition.

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⁴³ See *Petition, supra* note 3, at 3.

⁴⁴ *Id.*