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Greening the Trust: Enforcing Pennsylvania's Environmental Rights and Duties to Combat Climate Change

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NOTES

GREENING THE TRUST: ENFORCING PENNSYLVANIA'S ENVIRONMENTAL RIGHTS AND DUTIES TO COMBAT CLIMATE CHANGE

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INTRODUCTION

Over the last century, humans have warmed the planet by approximately 1.0°C.¹ Pennsylvania's average temperature has risen 1.8°F in the last hundred years, and climate scientists predict it will warm an additional 5.4°F by 2050.² These rising temperatures create feedback loops, leading to warming that will eventually become irreversible.³ Warmer temperatures have already led to melting ice caps, rising sea levels, dangerous weather patterns, and food shortages.⁴ Human-produced greenhouse gases (GHG) are the largest contributing factor to this warming.⁵ The scientific community largely agrees that if humans do not reach carbon neutrality by 2050, damage to the climate will be irreparable.⁶ Beyond that point, it will be nearly impossible for humans to mitigate, let alone prevent, the worst of climate change's impacts on the planet.⁷

For at least the last decade, scientists and environmental organizations have emphasized the need to take protective measures against climate change and have provided actionable steps

1. See generally Myles R. Allen, Opha Pauline Dube, William Solecki, Fernando Aragón-Durand, Wolfgang Cramer, Stephen Humphreys, Mikiko Kainuma, Jatin Kala, Natalie Mahowald, Yacob Mulugetta, Rosa Perez, Morgan Wairiu & Kirsten Zickfeld, *Framing and Context*, in GLOBAL WARMING OF 1.5°C, at 59 (Valérie Masson-Delmotte et al. eds., 2018), https://www.ipcc.ch/site/assets/uploads/sites/2/2019/05/SR15_Chapter1_Low-Res.pdf [<https://perma.cc/SVK8-9ZPS>]; Joeri Rogelj, Drew Shindell, Kejun Jiang, Solomone Fifita, Piers Forster, Veronika Ginzburg, Collins Handa, Haroon Kheshgi, Shigeki Kobayashi, Elmar Kriegler, Luis Mundaca, Roland Séférián & Maria Virginia Vilariño, *Mitigation Pathways Compatible with 1.5°C in the Context of Sustainable Development*, in GLOBAL WARMING OF 1.5°C, *supra*, at 93, <https://www.ipcc.ch/sr15/chapter/chapter-2/> [<https://perma.cc/H4GS-QLLP>].

2. *Climate Change in PA*, PA. DEP'T OF ENV'T PROT., <http://www.depgis.state.pa.us/ClimateChange/index.html> [<https://perma.cc/APU3-5KB2>].

3. Susan Solomon, Gian-Kasper Plattner, Reto Knutti & Pierre Friedlingstein, *Irreversible Climate Change Due to Carbon Dioxide Emissions*, 106 PROC. NAT'L ACAD. SCI. U.S. 1704, 1705 (2009).

4. See *id.* at 1704.

5. Benjamin T. Sharp, *Stepping into the Breach: State Constitutions as a Vehicle for Advancing Rights-Based Climate Litigation*, 14 DUKE J. CONST. L. & PUB. POL'Y SIDEBAR 39, 40 (2019).

6. Rogelj et al., *supra* note 1, at 95; see also Solomon et al., *supra* note 3, at 1704.

7. See, e.g., Robert B. McKinstry, Jr. & John C. Dernbach, *Applying the Pennsylvania Environmental Rights Amendment Meaningfully to Climate Disruption*, 8 MICH. J. ENV'T & ADMIN. L. 49, 64-65 (2018).

for governments at every level.⁸ Above all, these groups have stressed the importance of reducing carbon emissions and have proposed guidelines to achieve that goal.⁹ These strategies include transitioning energy sources and industries to greener practices, investing in sustainable infrastructure and agricultural systems, and climate finance and carbon pricing programs.¹⁰ Some countries have taken these proposals seriously and implemented significant policies and legislation to combat climate change.¹¹

The United States, particularly at the federal level, has ignored many of these recommendations for combatting climate change.¹² Despite intense lobbying efforts and growing public support, Congress has failed to enact meaningful climate legislation.¹³ In recent years, the executive branch has rolled back many protective regulations.¹⁴ Constitutional jurisdiction requirements and the

8. See, e.g., Climate Action Summit 2019, *Report of the Secretary-General on the 2019 Climate Action Summit and the Way Forward in 2020*, at 6-7 (Dec. 11, 2019) [hereinafter Climate Action Summit 2019], http://sdghelpdesk.unescap.org/sites/default/files/2020-06/cas_report_11_dec.pdf [<https://perma.cc/N435-KVXX>].

9. See Mark Szybist & Amanda Levin, *PA Needs CO2 Limits—and Strong Renewables Policy, Too*, NRDC (Aug. 8, 2019), <https://www.nrdc.org/experts/mark-szybist/pa-needs-renewable-energy-goals-well-carbon-limits> [<https://perma.cc/U4A8-CUY2>].

10. See, e.g., Climate Action Summit 2019, *supra* note 8, at 6-7.

11. Julia Rosen, *Here's How 6 Countries Are Stepping Up to Meet the Paris Climate Goals*, L.A. TIMES (Sept. 23, 2019, 4:00 AM), <https://www.latimes.com/environment/story/2019-09-22/how-countries-are-meeting-climate-change-goals> [<https://perma.cc/EA37-7MB5>].

12. See, e.g., Umair Irfan, *The House Just Passed Its First Climate Bill in a Decade*, VOX (May 2, 2019, 1:41 PM), <https://www.vox.com/2019/3/27/18283831/pelosi-climate-change-green-new-deal> [<https://perma.cc/U4BT-AJL7>]; Climate Action Now Act, H.R. 9, 116th Cong. (1st Sess. 2019) (as passed by House, May 2, 2019) (the bill was placed on the Senate's legislative calendar in May 2019 and has not been addressed since); Nadja Popovich, Livia Albeck-Ripka & Kendra Pierre-Louis, *The Trump Administration Is Reversing 100 Environmental Rules. Here's the Full List.*, N.Y. TIMES (July 15, 2020), <https://www.nytimes.com/interactive/2020/climate/trump-environment-rollbacks.html> [<https://perma.cc/Y9Z4-DY6B>].

13. See, e.g., Amber Phillips, *Congress's Long History of Doing Nothing on Climate Change, in 6 Acts*, WASH. POST (Dec. 1, 2015, 11:15 AM), <https://www.washingtonpost.com/news/the-fix/wp/2015/12/01/congresss-long-history-of-inaction-on-climate-change-in-6-parts/> [<https://perma.cc/Z8GT-6NU5>] (providing a timeline of Congress's few, and largely ineffective, attempts at climate regulation between 1990 and 2015).

14. See, e.g., Popovich et al., *supra* note 12; Sharp, *supra* note 5, at 41-42. However, the Biden-Harris administration seems to appreciate the existential threat posed by climate change and has committed to tackling the crisis head-on. See, e.g., *The Biden-Harris Administration Immediate Priorities*, WHITE HOUSE, <https://www.whitehouse.gov/priorities> [<https://perma.cc/58SA-RBDA>]. For a discussion of the kinds of steps climate experts believe the Biden-Harris administration will need to take to adequately fight climate change, see generally Thomas Hale & Nathan Hultman, *'All In' Climate Diplomacy: How a Biden-Harris*

federal judiciary's reluctance to recognize environmental rights have thus far posed insurmountable barriers to rights-based climate litigation.¹⁵

In light of these challenges at the federal level and the dwindling time remaining to correct course, states, with fewer threshold barriers posed by jurisdictional requirements, are an increasingly attractive forum for enforcing environmental rights.¹⁶ At the state level, officials can enact, implement, reinterpret, and amend policies, legislation, and constitutional provisions more quickly and with more flexibility than their federal counterparts.¹⁷ States, particularly in recent years, have taken advantage of that flexibility.¹⁸ As of 2011, twenty-two states have constitutional provisions that protect environmental concerns either as a civil right or as a general policy matter.¹⁹ Despite these amendments, enforcing environmental rights has proven challenging in many states.²⁰

In 1971, Pennsylvanians voted to ratify the Environmental Rights Amendment (ERA) in Article I, Section 27 of the Commonwealth's constitution.²¹ Unlike other states, Pennsylvania enumerates environmental protections in its Declaration of Rights, placing them alongside other fundamental rights, such as the freedom of speech

Administration Can Leverage City, State, Business and Community Climate Action (Glob. Econ. and Dev. at Brookings, Global Working Paper No. 147, 2020), https://www.brookings.edu/wp-content/uploads/2020/11/All-in-climate-diplomacy_final.pdf [<https://perma.cc/9QUD-V2L6>].

15. See, e.g., *Juliana v. United States*, 947 F.3d 1159, 1175 (9th Cir. 2020) ("That the other branches may have abdicated their responsibility to remediate the problem does not confer on Article III courts, no matter how well-intentioned, the ability to step into their shoes.").

16. See Sharp, *supra* note 5, at 44.

17. See JEFFREY S. SUTTON, 51 IMPERFECT SOLUTIONS: STATES AND THE MAKING OF AMERICAN CONSTITUTIONAL LAW 16-19 (2018).

18. See Jack R. Tuholske, *U.S. State Constitutions and Environmental Protection: Diamonds in the Rough*, 21 WIDENER L. REV. 239, 240 (2015); see also Brad Plumer, *Blue States Roll Out Aggressive Climate Strategies. Red States Keep to the Sidelines.*, N.Y. TIMES (June 21, 2019), <https://www.nytimes.com/2019/06/21/climate/states-climate-change.html> [<https://perma.cc/S9TD-R6DD>].

19. James R. May & William Romanowicz, *Environmental Rights in State Constitutions*, in PRINCIPLES OF CONSTITUTIONAL ENVIRONMENTAL LAW 305, 306, 315-21 (James R. May ed., 2011).

20. Lynda L. Butler, *State Environmental Programs: A Study in Political Influence and Regulatory Failure*, 31 WM. & MARY L. REV. 823, 847 (1990).

21. Franklin L. Kury, *The Environmental Amendment to the Pennsylvania Constitution: Twenty Years Later and Largely Untested*, 1 VILL. ENV'T L.J. 123, 123-24 (1990).

and religion.²² Despite this elevation, early decisions from the Pennsylvania courts severely limited the ERA's power.²³ However, Pennsylvania courts have recently construed section 27 to protect Pennsylvanians' environmental rights and impose certain duties on the Commonwealth.²⁴ Pennsylvania's ERA jurisprudence offers helpful legal principles that other states can tailor to their own constitutional frameworks to address climate change at a subnational level.

In October of 2019, Pennsylvania Governor Tom Wolf signed Executive Order 2019-07, which directed the Commonwealth's Department of Environmental Protection (DEP) to produce a plan by July 2020 to reduce Pennsylvania's carbon emissions by either joining the Regional Greenhouse Gas Initiative (RGGI), a greenhouse gas cap and trade program, or establishing its own carbon emission reduction scheme.²⁵ As participants in RGGI's cap and trade system, nine states in the Northeast and mid-Atlantic region limit GHG emissions by selling carbon allowances in quarterly auctions, the proceeds of which are returned to participating states.²⁶ In early 2020, the DEP presented its preliminary proposal

22. PA. CONST. art. 1, § 27; *see also* Pa. Env't Def. Found. v. Commonwealth (*PEDF*), 161 A.3d 911, 918 (Pa. 2017) ("The decision to affirm the people's environmental rights in a Declaration or Bill of Rights, alongside political rights, is relatively rare in American constitutional law.").

23. John C. Dernbach, Kenneth T. Kristl & James R. May, *Recognition of Environmental Rights for Pennsylvania Citizens*: Pennsylvania Environmental Defense Foundation v. Commonwealth of Pennsylvania, 70 RUTGERS U. L. REV. 803, 810-12 (2018).

24. *See PEDF*, 161 A.3d at 934-36.

25. Pa. Exec. Order No. 2019-07 (Oct. 3, 2019), <https://www.governor.pa.gov/wp-content/uploads/2019/10/Executive-Order-2019-07-Commonwealth-Leadership-in-Addressing-Climate-Change-through-Electric-Sector-Emissions-Reductions.pdf> [<https://perma.cc/CD2X-PWCL>]. For a detailed look at cap and trade policies and RGGI, *see How Cap and Trade Works*, ENV'T DEF. FUND, <https://www.edf.org/climate/how-cap-and-trade-works> [<https://perma.cc/BYV4-Q9LR>]; *infra* Part III. In September of 2020, the Environmental Quality Board voted to initiate the public comment period, which runs from November 7, 2020, through January 14, 2021. Mandy Warner, *Pennsylvanians, Make Your Voice Heard on a Major Climate Rulemaking*, ENV'T DEF. FUND (Nov. 9, 2020), <http://blogs.edf.org/climate411/2020/11/09/pennsylvanians-make-your-voice-heard-on-a-major-climate-rulemaking/> [<https://perma.cc/EJ2M-97Y3>]; *Public Participation in the Regulatory Process*, ENV'T QUALITY BD., <https://www.dep.pa.gov/PublicParticipation/EnvironmentalQuality/Pages/default.aspx> [<https://perma.cc/9HGV-Y2P4>].

26. Bruce Ho, *The Regional Greenhouse Gas Initiative Is a Model for the Nation*, NRDC (Sept. 8, 2020), <https://www.nrdc.org/resources/regional-greenhouse-gas-initiative-model-nation> [<https://perma.cc/3ES2-TX28>].

for implementing a cap and trade program and has since continued through the regulatory rulemaking process.²⁷ Despite this progress, the Commonwealth has not yet articulated how it will use the funds generated from RGGI's allowance auctions.²⁸ This Note argues that the Commonwealth not only has a duty to combat climate change by reducing carbon emissions but also has a duty under the ERA to invest the funds it earns through carbon allowance auctions into the conservation and protection of Pennsylvania's environment.

Part I examines the ERA's purpose and early history. Part II analyzes recent court decisions that have established both the contours of Pennsylvanians' environmental rights and the Commonwealth's duties under the ERA. Part III explains the functionality of cap and trade systems generally and how RGGI currently operates. Part IV discusses how the Commonwealth's duties under the ERA inform the administration of a cap and trade program and how Pennsylvania courts can enforce the fulfillment of those duties. Part V anticipates and addresses potential counterarguments regarding enforcement in light of separation of powers concerns and the sufficiency of RGGI in fulfilling the Commonwealth's duties.

I. GOING GREEN: THE HISTORY OF THE ENVIRONMENTAL RIGHTS AMENDMENT

For a commonwealth named after its woods, Pennsylvania has a long record of abusing its natural resources.²⁹ The Commonwealth's history of environmental mistreatment from the eighteenth through the mid-twentieth centuries has been summarized as follows: "We seared and scarred our once ... pleasant land with mining operations. We polluted our rivers.... We poisoned our 'delicate, pleasant and wholesome' air ... with the fumes of millions of automobiles....

27. HAYLEY L. BOOK, PA. DEP'T OF ENV'T PROT., PENNSYLVANIA'S PROPOSED CO₂ BUDGET TRADING PROGRAM 4-16 (2020), [http://files.dep.state.pa.us/Air/AirQuality/AQPortalFiles/Advisory%20Committees/Air%20Quality%20Technical%20Advisory%20Committee/2020/2-13-20/AQTAC%20PA%20CO₂%20Budget%20Trading%20Program_February%202020.pdf](http://files.dep.state.pa.us/Air/AirQuality/AQPortalFiles/Advisory%20Committees/Air%20Quality%20Technical%20Advisory%20Committee/2020/2-13-20/AQTAC%20PA%20CO2%20Budget%20Trading%20Program_February%202020.pdf) [<https://perma.cc/B885-BLPA>].

28. See, e.g., McKinstry & Dernbach, *supra* note 7, at 108; Mark Szybist, *Governor Wolf Says PA Will Join RGGI. Now What?*, NRDC (Oct. 11, 2019), <https://www.nrdc.org/experts/mark-szybist/governor-wolf-moving-forward-rggi-what-now> [<https://perma.cc/FAZ3-PRK4>].

29. Robinson Township v. Commonwealth, 83 A.3d 901, 960 (Pa. 2013).

We uglified our land and we called it progress.”³⁰ This Part provides a brief history of the ERA’s ratification and early court decisions that marked a departure from the intended purpose of the amendment.

In 1971, the Pennsylvania General Assembly amended the Commonwealth’s Declaration of Rights to add section 27, which states:

The people have a right to clean air, pure water, and to the preservation of the natural, scenic, historic and esthetic values of the environment. Pennsylvania’s public natural resources are the common property of all the people, including generations yet to come. As trustee of these resources, the Commonwealth shall conserve and maintain them for the benefit of all the people.³¹

Proponents introduced the amendment on the first Earth Day, April 14, 1970, as part of a movement toward environmental awareness and protection.³² Both houses of the General Assembly passed the amendment unanimously in 1971 and Pennsylvanians overwhelmingly voted in support of it in a referendum that spring.³³ With this amendment, advocates intended to give Pennsylvanians a constitutional basis to object to environmental abuse and to “force those who would adversely affect the environment to consider the impact of their actions before acting.”³⁴

However, early judicial decisions in ERA cases departed from both the ERA’s text and purpose.³⁵ In *Payne v. Kassab*, the Pennsylvania Commonwealth Court established a test that set a low bar for adherence to the ERA and had little to do with the actual text of the amendment.³⁶ The analysis only required compliance with applicable regulations and legislation designed to protect the environment, a showing of “reasonable effort to reduce” environmental impact,

30. *Id.* at 961 (quoting PA. H. JOURNAL 2270 (1970)).

31. PA. CONST. art. 1, § 27; *see* Kury, *supra* note 21, at 123-24.

32. Kury, *supra* note 21, at 123.

33. *Id.* at 123-24.

34. *Id.* at 124.

35. *See* Commonwealth v. Nat’l Gettysburg Battlefield Tower, Inc., 302 A.2d 886, 894-95 (Pa. Commw. Ct.), *aff’d*, 311 A.2d 588 (Pa. 1973) (holding that the construction of a tower overlooking the Gettysburg Battlefield did not violate the ERA); *Payne v. Kassab*, 312 A.2d 86, 94 (Pa. Commw. Ct. 1973), *aff’d*, 361 A.2d 263 (Pa. 1976) (establishing a weak three-pronged standard that did little to protect environmental interests).

36. *See Payne*, 312 A.2d at 94.

and a demonstration that the benefits from the action outweigh the environmental harm.³⁷ At first blush, the language of the analysis suggests that the test would provide robust protection for the environment. In reality, however, *Payne* did little to defend either the commonwealth's natural resources or Pennsylvanians' environmental rights.³⁸ The *Payne* test remained the standard of review for government action under the ERA for over four decades.³⁹ In that time, only one case successfully raised a section 27 challenge.⁴⁰

II. CONTOURS OF SECTION 27: DEFINING RIGHTS AND DUTIES UNDER THE ENVIRONMENTAL RIGHTS AMENDMENT

For the forty years following *Payne*, adherence to section 27 required minimal environmental considerations.⁴¹ Only in 2013 did courts begin to enforce the ERA with the kind of force the amendment's drafters originally intended.⁴² Section A reviews the Pennsylvania Supreme Court's analyses of the ERA's text in *Robinson Township v. Commonwealth* and *Pennsylvania Environmental Defense Foundation v. Commonwealth (PEDF)*. In both cases, the court articulated the scope of individual environmental rights and defined the duties imposed on the Commonwealth. Section B explains how the principles and analyses developed in those cases implicate a duty on the Commonwealth to combat climate change.

37. *Id.*

38. John C. Dernbach & Marc Prokopchak, *Recognition of Environmental Rights for Pennsylvania Citizens: A Tribute to Chief Judge Castille*, 53 DUQ. L. REV. 335, 344 (2015) ("In the overwhelming majority of reported court cases ... individuals or organizations seeking vindication of their environmental rights lost.").

39. *Id.*

40. *Id.*; see *Marcon, Inc. v. Pa. Dep't of Env't Res.*, 462 A.2d 969, 971-72 (Pa. Commw. Ct. 1983) (holding that the denial of a permit was proper because the proposed development failed the *Payne* test).

41. See, e.g., *Payne*, 312 A.2d at 94 (widening a road and reducing a public park's acreage did not violate section 27); *Commonwealth v. Nat'l Gettysburg Battlefield Tower, Inc.*, 311 A.2d 588, 594-95 (Pa. 1973) (building a tower near Gettysburg Battlefield did not violate section 27); *Pa. Env't Mgmt. Servs. v. Pa. Dept. of Env't Res.*, 503 A.2d 477, 480 (Pa. Commw. Ct. 1986) (holding that under section 27, a municipal waste landfill permit should not be denied even though it failed to protect against leachate discharge into a nearby stream).

42. *Robinson Township v. Commonwealth*, 83 A.3d 901, 950 (Pa. 2013).

A. *Return to the ERA's Text in Robinson Township and Pennsylvania Environmental Defense Foundation*

In both *Robinson Township* and *PEDF*, the Pennsylvania Supreme Court revived the ERA and clarified the rights and duties the amendment establishes.⁴³ Recognizing that *Payne* had led ERA case law astray, the court emphasized the importance of correcting course by reanalyzing the amendment's text.⁴⁴ To better understand the ERA's language, both courts looked to "the occasion and necessity for the provision; ... the mischief to be remedied;" and "the object to be attained."⁴⁵

1. Robinson Township: *Reviving the ERA*

In *Robinson Township*, a plurality of the Pennsylvania Supreme Court challenged the *Payne* test for the first time.⁴⁶ The case centered on amendments to the Oil and Gas Act, which regulated production of those resources.⁴⁷ In 2012, Governor Tom Corbett enacted several laws that promoted alternative gas development methods and limited local governments' ability to regulate fracking.⁴⁸

In deciding whether the modifications violated the constitution, the court interpreted each of the ERA's three provisions.⁴⁹ Through its analysis, the court provided new interpretive guidelines, established the contours of Pennsylvanians' environmental rights, and defined the Commonwealth's duties.⁵⁰ Under section 27, the

43. *Id.* at 913; Pa. Env't Def. Found. v. Commonwealth (*PEDF*), 161 A.3d 911, 916 (Pa. 2017).

44. *Robinson Township*, 83 A.3d at 946 (describing how the *Payne* decision "obscured the manifest intent of [section 27] as expressed in its plain language" (citing *Holt v. Legis. Reapportionment Comm'n*, 38 A.3d 711, 759 n.38 (Pa. 2012))).

45. *Id.* at 945 (citations omitted).

46. *Id.* at 913.

47. *Id.* at 915.

48. *Id.* Extraction of these resources typically requires drilling vertically to access pools of oil or gas. *Id.* However, to reach the abundance of natural gas located in the Marcellus Formation, the largest shale strata in the Commonwealth, companies had to use alternative mining techniques, including hydrofracturing, which drastically changed the landscapes where it was used. Dernbach & Prokopchak, *supra* note 38, at 351-52.

49. *Robinson Township*, 83 A.3d at 951-59.

50. *Id.*

Commonwealth must prevent both direct and indirect harm to the people's environmental rights, prohibit direct and indirect harm to Pennsylvania's natural resources, and act affirmatively through legislation to protect environmental rights.⁵¹

Significantly, the court did not define the particular steps necessary to preserve and maintain the environment.⁵² The court simply instructed that the phrase "conserve and maintain implicates a duty to prevent and remedy the degradation, diminution, or depletion of" the environment and natural resources.⁵³ Accordingly, the Commonwealth must determine how best to fulfill that duty, so long as its discretion comports with the purpose of the ERA.⁵⁴ The court also emphasized that section 27 was not intended to prohibit all development or give such weight to environmental concerns that they per se outweigh other interests.⁵⁵ Rather, the amendment instructs that those interests cannot come at the unreasonable expense of the environment.⁵⁶

The court stressed that the amendment's language should not be construed to narrow its scope.⁵⁷ Thus, while section 27 specifically lists several natural elements to which Pennsylvanians have a constitutional right, the text "implicates a holistic analytical approach" and protects aspects of the environment not specifically enumerated in the text.⁵⁸ The court further emphasized that the breadth of protection could expand over time, especially in light of changing "legal and societal concerns."⁵⁹

From the first clause of section 27, the court drew an implied duty that requires the Commonwealth, at all levels, to consider how its actions affect the air, water, and other environmental values.⁶⁰ While the first clause, which establishes the people's environmental rights, does not explicitly impose a duty on the Commonwealth,⁶¹

51. *Id.* at 951-52, 957-58.

52. *Id.* at 957.

53. *Id.*

54. *See id.*

55. *Id.* at 958.

56. *Id.* at 954.

57. *Id.* at 955.

58. *Id.* at 951.

59. *Id.* at 955.

60. *Id.*

61. *Id.* at 913 ("The people have a right to clean air, pure water, and to the preservation of the natural, scenic, historic and esthetic values of the environment." (quoting PA. CONST.

“the right articulated [therein] is neither meaningless nor merely aspirational.”⁶² Thus, the government’s analysis for any project must weigh its impact, both in the long- and short-term, on the environment.⁶³ Based on that analysis, any actions “that unreasonably impair the right [to a clean environment] are unconstitutional.”⁶⁴

The trustee-beneficiary relationship, established in clauses two and three,⁶⁵ imposes the Commonwealth’s second duty.⁶⁶ The Commonwealth must “refrain from permitting or encouraging the degradation, diminution, or depletion of public natural resources.”⁶⁷ This “prohibitory” duty applies both when state action directly depletes the resources and when state inaction indirectly allows the same.⁶⁸

As trustee, the Commonwealth has a third duty, also drawn from clauses two and three, “to act affirmatively to protect the environment, via legislative action.”⁶⁹ The court emphasized the importance of legislation to specify and allocate responsibilities, provide standards, and help manage logistical issues that arise with implementing and executing environmental protections.⁷⁰ In articulating this duty, the court did not dictate the type of legislation to be passed; it simply instructed that the General Assembly would need to pass legislation on environmental issues.⁷¹ The court made clear, however, that the amendment was self-executing and that no additional legislation was necessary to “confer[]” its rights and duties.⁷² Through this decision, the court took a critical step in

art. 1, § 27)).

62. *Id.* at 952.

63. *Id.*

64. *Id.* at 951.

65. *Id.* at 913 (“Pennsylvania’s public natural resources are the common property of all the people, including generations yet to come. As trustee of these resources, the Commonwealth shall conserve and maintain them for the benefit of all the people.” (quoting PA. CONST. art. 1, § 27)).

66. *Id.* at 957.

67. *Id.*

68. *Id.*

69. *Id.* at 958 (citing *Geer v. Connecticut*, 161 U.S. 519, 534 (1896)).

70. *Id.*

71. *See id.*

72. *Id.* (“[A]dministrative details are appropriately addressed by legislation.... The call for complementary legislation, however, does not override the otherwise plain conferral of rights upon the people.” (footnote omitted) (citing Jose L. Fernandez, *State Constitutions, Environmental Rights Provisions, and the Doctrine of Self-Execution: A Political Question?*, 17 HARV.

breathing new life into the ERA. By defining the contours of section 27, the court provided citizens with a meaningful weapon with which they could enforce their environmental rights.

2. Pennsylvania Environmental Defense Foundation: *Defining the Commonwealth's Duties as Trustee*

The Pennsylvania Supreme Court's 2017 *Pennsylvania Environmental Defense Foundation (PEDF)* decision cemented the analysis put forward in *Robinson Township* and elaborated on the Commonwealth's duties as a trustee.⁷³ The case centered on legislation directing payments made to the Commonwealth's General Fund in consideration for access to oil and gas on public lands.⁷⁴ Typically, proceeds earned through leasing state-owned lands were required to go toward preserving natural resources within the Commonwealth.⁷⁵ However, legislation passed in 2009 limited the amount of money that could go to such projects and diverted the rest of the funds toward projects unrelated, and often in direct opposition, to environmental protection.⁷⁶ In determining the funding scheme's constitutionality, the Pennsylvania Supreme Court affirmed the analysis conducted in *Robinson Township*, focusing on the applicable trust law principles.⁷⁷

In *PEDF*, the court looked to the text of section 27 and trust law to outline the contours of the Commonwealth's duties as trustee.⁷⁸ In the absence of appropriate, Pennsylvanian public trust law, the court turned to private doctrine, which "provide[d] ... the necessary tools to properly interpret the trust created by [s]ection 27."⁷⁹ The Commonwealth's powers and duties were constrained by the

ENV'T L. REV. 333, 352 (1993))).

73. 161 A.3d 911, 930-33 (Pa. 2017).

74. *Id.* at 919-20.

75. *Id.* at 921-22.

76. *See id.* at 921.

77. *Id.* at 932-33.

78. Kenneth T. Kristl, *The Devil Is in the Details: Articulating Practical Principles for Implementing the Duties in Pennsylvania's Environmental Rights Amendment*, 28 GEO. ENV'T L. REV. 589, 596-97 (2016); *see also PEDF*, 161 A.3d at 933, 935.

79. *PEDF*, 161 A.3d at 934 n.26 ("[W]hile we appreciate that [s]ection 27 establishes a public trust, we also recognize that the 'public trust doctrine' does not set forth universally applicable black letter law and that Pennsylvania has no established public trust principles applicable to [s]ection 27.").

meaning of “trust” and “trustee” at the time the amendment was ratified.⁸⁰ As such, the Commonwealth acted as a fiduciary and owed its beneficiaries a duty to handle the environment “with prudence, loyalty, and impartiality.”⁸¹ When acting with prudence, trustees must “consider[] the purposes, provisions, distributional requirements and other circumstances of the trust and by exercising reasonable care, skill and caution.”⁸² Accordingly, the trustee cannot make decisions regarding the trust in isolation; instead, it must look to how a particular choice fits into the broader purpose of the trust.⁸³

In fulfilling its duty of loyalty while administering the trust, the Commonwealth must act exclusively in the beneficiaries’ interests and cannot “place [itself] in a position that is inconsistent with the interests of the trust.”⁸⁴ When a trustee administers the trust “in a way that constitutes self-dealing or otherwise benefits the trustee personally at the expense of beneficiaries,” the trustee violates its duty of loyalty.⁸⁵

In trusts with multiple beneficiaries, as in the section 27 trust, the trustee owes a duty of impartiality to all of the beneficiaries.⁸⁶ This is not to say that all beneficiaries must be treated equally but “that the trustee must treat all equitably in light of the purposes of the trust.”⁸⁷ In fulfilling its duties, a trustee may exercise discretion, but only within the bounds of the trust’s purpose and terms.⁸⁸

The court then articulated how these obligations and the ERA’s plain language informed the Commonwealth’s allocation of funds from the lease agreements.⁸⁹ Payments made in consideration for natural resources constituted proceeds from the sale of the body of

80. *Id.* at 932.

81. *Id.* (quoting *Robinson Township v. Commonwealth*, 83 A.3d 901, 956-57 (Pa. 2013)).

82. 20 PA. STAT. AND CONS. STAT. ANN. § 7774 (West 2020).

83. John C. Dernbach, *The Potential Meanings of a Constitutional Public Trust*, 45 ENV’T L. 463, 506 (2015).

84. *Estate of McCredy*, 470 A.2d 585, 597 (Pa. Super. Ct. 1983); *see also PEDF*, 161 A.3d at 932.

85. Dernbach, *supra* note 83, at 508.

86. RESTATEMENT (SECOND) OF TRUSTS § 232 (AM. L. INST. 2012).

87. Dernbach, *supra* note 83, at 509.

88. *PEDF*, 161 A.3d at 933 (citing *Robinson Township v. Commonwealth*, 83 A.3d 901, 978 (Pa. 2013)); RESTATEMENT (SECOND) OF TRUSTS § 186 cmt. b (AM. L. INST. 2012).

89. *PEDF*, 161 A.3d at 936.

the trust.⁹⁰ As such, the court held the Commonwealth must reinvest those funds in the trust for conservation and maintenance purposes.⁹¹ The court rejected the argument that the General Assembly had sufficient discretion under section 27 to allocate proceeds to any project that benefited Pennsylvanians.⁹² Rather, section 27's language "for the benefit of all the people" must be read in light of the trust's purpose.⁹³ The trust was established to protect Pennsylvania's natural resources.⁹⁴ The Commonwealth must therefore use trust assets for environmental conservation and maintenance purposes only.⁹⁵

The court did not decide whether all payments made for oil and gas leases must remain in the corpus of the trust.⁹⁶ However, it held that all sale proceeds belong to the trust and that to claim otherwise was to confuse the duties owed as a trustee with those of a proprietor.⁹⁷ Notably, the court held that whatever form of revenue the payments constituted, the Commonwealth nevertheless violates its fiduciary duties if the leases "remove assets from the corpus of the trust or otherwise deprive the trust beneficiaries ... of the funds necessary to conserve and maintain the public natural resources."⁹⁸ By clearly laying out the Commonwealth's duties as trustee of Pennsylvania's environmental trust, the court defined both the procedural and substantive elements of the ERA.

90. *Id.*

91. *Id.* at 933-34.

92. *Id.* at 935.

93. *Id.*

94. *Id.*

95. *Id.* at 934.

96. *Id.* at 935-36. The court remanded the issue of whether the "rental payments" at issue had to go toward the trust in full. *Id.*; *see also* Pa. Env't Def. Found. v. Commonwealth, 214 A.3d 748, 773 (Pa. Commw. Ct. 2019) (holding that bonus and rental payments were not part of the corpus of the trust and therefore could be allocated to the general fund).

97. *PEDF*, 161 A.3d at 932 ("Under [s]ection 27, the Commonwealth may not act as a mere proprietor, pursuant to which it 'deals at arms['] length with its citizens, measuring its gains by the balance sheet profits and appreciation it realizes from its resources operations.'" (second alteration in original) (quoting PA. L. JOURNAL, 154th General Assembly, No. 118, Reg. Sess., 2269, 2273 (1970))).

98. *Id.* at 936.

B. The Environmental Rights Amendment and Climate Change

Climate scientists have articulated the many ways in which climate change will negatively affect Pennsylvania specifically and the planet generally.⁹⁹ Section 27's text, legislative history, and case law all support an expansive interpretation of the Commonwealth's duties to protect Pennsylvanians' rights and Pennsylvania's environment.¹⁰⁰ This Section first explains how climate change poses a direct threat to the environmental qualities protected in the ERA's first sentence, which the Commonwealth has a duty to protect. The Section next shows how the Commonwealth's affirmative and prohibitory duties as trustee require it to take meaningful action to combat climate change.

1. Climate Change as a Threat to the People's Environmental Rights

The effects of climate change have already damaged the Commonwealth¹⁰¹ and continue to endanger the interests specifically enumerated and protected in section 27.¹⁰² Pennsylvanians have a constitutional right to clean air and water.¹⁰³ As pollutants, GHG emissions threaten the right to clean air.¹⁰⁴ GHG emissions also contribute to feedback loops in which warming temperatures cause systemic warmer temperatures.¹⁰⁵ Rising temperatures lead to

99. See, e.g., *Climate Change in PA*, *supra* note 2; U.S. GLOB. CHANGE RSCH. PROGRAM, CLIMATE SCIENCE SPECIAL REPORT 12-15 (2017), https://science2017.globalchange.gov/downloads/CSSR2017_FullReport.pdf [<https://perma.cc/5EJ9-D7Z6>].

100. See *supra* Part II.A.

101. *Climate Change in PA*, *supra* note 2. In 2018 alone, severe weather patterns caused over \$125 million in damage in the commonwealth. *Id.*

102. PA. CONST. art. 1, § 27; see also, e.g., JAMES SHORTLE, DAVID ABLER, SETH BLUMSACK, ALIANA BRITSON, KUAI FANG, ARMEN KEMANIAN, PAUL KNIGHT SR., MARC McDILL, RAYMOND NAJJAR, MICHAEL NASSRY, RICHARD READY, ANDREW ROSS, MATTHEW RYDZIK, CHAOPENG SHEN, SHILONG WANG, DENICE WARDROP & SUSAN YETTER, PA. STATE UNIV., PENNSYLVANIA CLIMATE IMPACTS ASSESSMENT UPDATE 6-14 (2015), <https://www.pennfuture.org/Files/Admin/Pennsylvania-Climate-Impacts-Assessment-Update---2700-BK-DEP4494.compressed.pdf> [<https://perma.cc/W26A-H63F>].

103. See PA. CONST. art. 1, § 27.

104. *Climate Change in PA*, *supra* note 2.

105. *The Study of Earth as an Integrated System*, NASA GLOB. CLIMATE CHANGE, https://climate.nasa.gov/nasa_science/science/ [<https://perma.cc/8L32-M8N8>].

extreme weather patterns such as flooding, which degrades water quality.¹⁰⁶

Although “clean” air and “pure” water are “relative rather than absolute attributes,” the ERA’s language establishes standards with which courts can measure violations.¹⁰⁷ To assist courts in making such a determination, environmental agencies would first make a factual assessment as to whether air or water quality met those standards.¹⁰⁸ Courts would then determine whether the “actual or likely degradation” of those elements constituted a violation of section 27.¹⁰⁹ Climate change, caused by GHG emissions, has clearly degraded, and will continue to degrade, air and water quality.¹¹⁰ Thus, because the Commonwealth has an affirmative duty to prevent such harm to the environment, failure to curb GHG emissions would violate Pennsylvanians’ enumerated environmental rights.

2. The Duty to Fight Climate Change

The Pennsylvania courts’ interpretation of section 27 in both *Robinson Township* and *PEDF* makes clear that the Commonwealth must act affirmatively via legislation to protect natural resources, and it must prohibit unreasonable degradation by both state and private parties.¹¹¹ Because climate change will unreasonably and permanently degrade the quality of the air, water, and other natural resources, the Commonwealth must combat climate change in order to conserve and maintain the environment and to uphold its duties under section 27.¹¹²

106. *Climate Change in PA*, *supra* note 2 (noting that, across the state, precipitation increased between 10 and 20 percent in recent years, leading to more flooding incidents).

107. *Robinson Township v. Commonwealth*, 83 A.3d 901, 953 (Pa. 2013).

108. *Id.* (citing 35 PA. STAT. AND CONS. STAT. § 6026.102(4) (West 2020)). State and federal regulations establish technical air and water standards, and as with any other technical standard, “courts generally defer to agency expertise in making a factual determination whether the benchmarks were met.” *Id.*

109. *Id.* (citing *Mont. Env’t Info. Ctr. v. Dep’t of Env’t Quality*, 988 P.2d 1236, 1249 (Mont. 1999)).

110. *Climate Change in PA*, *supra* note 2.

111. *PEDF v. Commonwealth*, 161 A.3d 911, 931-33 (Pa. 2017); *Robinson Township*, 83 A.3d at 952.

112. *Cf. Rogelj et al.*, *supra* note 1.

Reducing GHG emissions is critical to combatting climate change.¹¹³ Pennsylvania's carbon emissions amount to roughly 0.5 percent of the world's total emissions, which is more than most countries.¹¹⁴ In light of the threats posed by climate change and the Commonwealth's constitutional duties, Pennsylvania must act by implementing limits on carbon and other GHG emissions.¹¹⁵ It is important to note that the Commonwealth has implemented some measures to that end; both the Pennsylvania Climate Change Act (CCA) and the Air Pollution Quality Act (APQA) have led to the creation of climate change plans and the regulation of air pollution, including GHGs, in compliance with the federal Clean Air Act.¹¹⁶ However, given the imminence and severity of the threats climate change poses, the Commonwealth must take more aggressive action than these current regulations provide.

This Note does not claim that the only way the Commonwealth can fulfill its section 27 duties is to join the Regional Greenhouse Gas Initiative (RGGI); the cap and trade program is simply the means of reducing GHGs that the governor and DEP have proposed.¹¹⁷ From a logistical perspective, RGGI is a convenient choice—it is a pre-existing, successful program in which almost all of Pennsylvania's neighbors participate.¹¹⁸ However, the Commonwealth could similarly fulfill its constitutional duties by reducing

113. *Id.*

114. Justine McDaniel, *Here's What Pennsylvania Is Doing to Address Climate Change—and Why Politics Is Making It Difficult*, PHILA. INQUIRER (Sept. 18, 2019), <https://www.inquirer.com/news/pennsylvania-climate-change-governor-wolf-carbon-state-action-20190918.html> [<https://perma.cc/CWK6-LYH8>].

115. See McKinstry & Dernbach, *supra* note 7, at 78.

116. 42 U.S.C. § 7423; 71 PA. CONS. STAT. §§ 1361.3, 1361.7 (2008); 35 PA. CONS. STAT. § 4004.1 (1996). The federal Clean Air Act establishes the floor for pollution standards, not the ceiling, and therefore allows states to enact more stringent regulations if they so choose. 42 U.S.C. § 7416. Beyond that point, the interaction between federal and state environmental regulations is beyond the scope of this Note. For a more detailed discussion of the relationship between state and federal regulations, see generally Clay Kulesza, Note, *The Devil in NEPA's Details: Amending NEPA to Prevent State Interference with Environmental Reviews*, 62 WM. & MARY L. REV. 1041 (2021).

117. See Pa. Exec. Order No. 2019-07, *supra* note 25.

118. See *Elements of RGGI*, REG'L GREENHOUSE GAS INITIATIVE, <https://www.rggi.org/program-overview-and-design/elements> [<https://perma.cc/ZV7F-YNHA>].

GHG emissions in other ways, including creating its own cap and trade program or by taxing carbon emissions.¹¹⁹

III. CAPPING CARBON: THE REGIONAL GREENHOUSE GAS INITIATIVE

Human-produced GHGs are the leading cause of climate change.¹²⁰ The 2018 IPCC Report shows that to avoid the worst impacts of climate change, “anthropogenic” GHG emissions must “decline by about 45% from 2010 levels by 2030 ... reaching net zero around 2050.”¹²¹ No single measure can instantly achieve carbon neutrality, but humans must take aggressive steps to drastically reduce GHG production by midcentury.¹²² Carbon trading offers one of the most effective tools¹²³ for governments to reach those targets.¹²⁴ This Part first explains how such programs work generally and then goes on to explore how the Regional Greenhouse Gas Initiative (RGGI) operates in particular. Finally, this Part looks to Governor Wolf’s executive order to implement a carbon trading program in Pennsylvania.

119. See Rogelj et al., *supra* note 1, at 152-53 (describing various methods of reducing GHG emissions). These alternative methods of fulfilling section 27 duties are particularly important as efforts to block the implementation of Governor Wolf’s Order continue. See, e.g., Rachel McDevitt, *Wolf Vetoes Bill That Would Keep Pennsylvania Out of RGGI*, STATEIMPACT PA. (Sept. 24, 2020, 4:53 PM), <https://stateimpact.npr.org/pennsylvania/2020/09/24/wolf-vetoes-bill-that-would-keep-pennsylvania-out-of-rggi/> [<https://perma.cc/A4FW-LJJE>] (describing a recent example of legislative attempts to prevent Pennsylvania from joining RGGI).

120. See Solomon et al., *supra* note 3, at 1704.

121. See Rogelj et al., *supra* note 1, at 95. This more ambitious schedule limits global warming to 1.5°C above pre-industrial levels. *Id.* The report also describes more gradual schemes. *Id.* at 97.

122. See *id.*

123. See, e.g., Justin Gerdes, *Cap and Trade Curbed Acid Rain: 7 Reasons Why It Can Do the Same for Climate Change*, FORBES (Feb. 13, 2012, 12:53 PM), <https://www.forbes.com/sites/justingerdes/2012/02/13/cap-and-trade-curbed-acid-rain-7-reasons-why-it-can-do-the-same-for-climate-change/#3de5fed943aa> [<https://perma.cc/L9CM-6L2K>] (discussing the success of President George H.W. Bush’s cap and trade program in drastically reducing acid rain).

124. See Rogelj et al., *supra* note 1, at 95-96, 148-49, 152-53. The report proposes carbon pricing generally, which includes both carbon taxes and cap and trade systems. *Id.* at 152-53. Because Governor Wolf’s executive order did not include carbon taxes, the use of these taxes and their relation to section 27 are beyond the scope of this Note.

A. The Importance of Carbon Trading

In a cap and trade program, participating governments establish a ceiling on the amount of carbon an industry (or an entire economy) can emit per year.¹²⁵ At set intervals, the program lowers that ceiling until industries reach the desired emissions levels.¹²⁶ The total amount of permitted emissions is divided into equal parts, usually one short ton of carbon, called “allowances.”¹²⁷ Participants purchase emissions allowances, typically at auctions, based on their anticipated needs.¹²⁸ Auction organizers set the clearing price of allowances based on the market value.¹²⁹ Essentially, polluters must pay for the ability to emit carbon and other GHGs into the atmosphere.¹³⁰ A secondary market enables participants to purchase additional allowances from companies that emitted less carbon than anticipated and did not use their full allowances.¹³¹ In this market-based system, polluters pay a premium for not investing in clean energy, thereby encouraging polluters to expeditiously develop more sustainable practices and “creat[e] market certainty to drive long-term investments in clean energy.”¹³²

As of 2019, fifty-seven jurisdictions around the world participated in carbon pricing initiatives.¹³³ Of those, twenty-nine used a cap and trade system.¹³⁴ In the United States, outside of RGGI, only California had implemented a cap and trade program.¹³⁵ While none of these programs have achieved carbon neutrality yet, many

125. See *How Cap and Trade Works*, *supra* note 25.

126. See *id.*

127. See *id.*

128. See *id.*

129. See *Cap and Trade Basics*, CTR. FOR CLIMATE & ENERGY SOLS., <https://www.c2es.org/content/cap-and-trade-basics/> [<https://perma.cc/QDF5-M6CE>].

130. See Szybist, *supra* note 28.

131. See *id.*

132. See REG’L GREENHOUSE GAS INITIATIVE, THE INVESTMENT OF RGGI PROCEEDS IN 2017, at 1, 4 (2019), https://www.rggi.org/sites/default/files/Uploads/Proceeds/RGGI_Proceeds_Report_2017.pdf [<https://perma.cc/RG99-F8TZ>]; see also *Cap and Trade Basics*, *supra* note 129.

133. *Carbon Pricing Dashboard*, WORLD BANK (Aug. 1, 2020), https://carbonpricingdashboard.worldbank.org/map_data [<https://perma.cc/GP79-BBGZ>].

134. *Id.*

135. *Id.*

jurisdictions have made significant reductions in their carbon emissions.¹³⁶

B. The Reality of RGGI in Other States

In 2009, nine states in New England and the mid-Atlantic joined together to implement the Regional Greenhouse Gas Initiative (RGGI).¹³⁷ The region committed to reducing carbon emissions through a market-based system of allowances, auctions, trading, and investing.¹³⁸ The states set a collective carbon cap and created the Model Rule to standardize the program's implementation and regulation in each state.¹³⁹ Every quarter, participants bid on allowances at an auction hosted by RGGI.¹⁴⁰ Independent entities monitor and provide reports on these auctions to evaluate the market and ensure that all parties adhere to the program's rules.¹⁴¹

In 2014, based on a 2012 review of the program, RGGI participants set their cap at ninety-one million short tons, which declined by 2.5 percent each year between 2015 and 2020¹⁴² and will decline by 3 percent per year between 2021 and 2030.¹⁴³ States sell their excess allowances through RGGI-operated auctions and invest the proceeds in a variety of energy-related projects.¹⁴⁴ The negotiated

136. See Brad Plumer & Nadja Popovich, *These Countries Have Prices on Carbon. Are They Working?*, N.Y. TIMES (Apr. 2, 2019), <https://www.nytimes.com/interactive/2019/04/02/climate/pricing-carbon-emissions.html> [<https://perma.cc/M53Z-TRBN>] (explaining, for example, the high prices and wide application of Canada's program and that Britain's emissions are at their lowest point since 1890).

137. Ho, *supra* note 26.

138. See *Welcome*, REG'L GREENHOUSE GAS INITIATIVE, <https://www.rggi.org> [<https://perma.cc/LJL2-WT2C>].

139. See REG'L GREENHOUSE GAS INITIATIVE, MODEL RULE PART XX CO₂ BUDGET TRADING PROGRAM 22-26 (2018), https://www.rggi.org/sites/default/files/Uploads/Design-Archive/Model-Rule/2017-Program-Review-Update/2017_Model_Rule_revised.pdf [<https://perma.cc/H3GR-NEQ6>]; see also *Regional Greenhouse Gas Initiative (RGGI)*, CTR. FOR CLIMATE & ENERGY SOLS., <https://www.c2es.org/content/regional-greenhouse-gas-initiative-rggi/> [<https://perma.cc/MPD8-DE99>].

140. See *Elements of RGGI*, *supra* note 118.

141. See, e.g., *Auction 45*, REG'L GREENHOUSE GAS INITIATIVE, <https://www.rggi.org/Auction/45> [<https://perma.cc/ABA5-58PJ>].

142. *Welcome*, *supra* note 138.

143. Ho, *supra* note 26.

144. *Investments of Proceeds*, REG'L GREENHOUSE GAS INITIATIVE, <https://www.rggi.org/investments/proceeds-investments> [<https://perma.cc/A6AZ-HNWT>]. These projects vary by state but generally include programs dealing with energy efficiency, renewable energy

budget for the current members in 2019 was 80.2 million tons.¹⁴⁵ When a new state joins RGGI, it must renegotiate the cap with other members to accommodate its emissions while adhering to the “stringency” of the prior cap.¹⁴⁶

The program specifically targets emissions from fossil-fuel power plants throughout the region.¹⁴⁷ Since the inception of the program, member states have reduced their carbon emissions by over half.¹⁴⁸ The states have also created \$4.3 billion in economic value in the region, saved their constituents millions of dollars, and created thousands of jobs.¹⁴⁹ Using the RGGI Model Rule, each member state develops its own internal regulations for participation, covering issues such as how to manage proceeds from auctions.¹⁵⁰ In 2017, RGGI states invested 51 percent of auction proceeds in energy efficiency programs, 16 percent in direct bill assistance, 14 percent in clean energy, 14 percent in GHG abatement, and less than 6 percent in administrative costs.¹⁵¹ These investments help to further reduce GHG emissions and consumer costs.¹⁵² The variety of RGGI’s achievements demonstrates the power of cap and trade systems.

Under the RGGI program, states do not achieve lower carbon emissions by simply shutting down high-emissions power plants.¹⁵³ By investing in renewable energy source development and other green initiatives, states have strengthened their economies, lowered energy costs, and created jobs, all while meaningfully tackling climate change.¹⁵⁴

sources, and direct bill assistance. *Id.*

145. Szybist, *supra* note 28.

146. *Id.*

147. *See* Ho, *supra* note 26.

148. *Id.*

149. *Id.*; *see also* REG’L GREENHOUSE GAS INITIATIVE, *supra* note 132, at 3, 6, 9.

150. *See* REG’L GREENHOUSE GAS INITIATIVE, *supra* note 132, at 6-7.

151. *Id.* at 5.

152. *See id.* at 3-11, 14.

153. *Cf.* Ho, *supra* note 26 (explaining limits on emissions and process of purchasing allowances).

154. *See* REG’L GREENHOUSE GAS INITIATIVE, *supra* note 132, at 4-14. In 2017 alone, RGGI investments helped avoid 438,099 short tons of carbon dioxide emissions, prevented the burning of 1,424,199 MMBtu of fossil fuels, and saved consumers \$128,704,015 on energy bills. *Id.* at 6.

C. Governor Wolf's Executive Order

On October 3, 2019, Pennsylvania Governor Tom Wolf signed Executive Order 2019-07, titled “Commonwealth Leadership in Addressing Climate Change Through Electric Sector Emissions Reductions.”¹⁵⁵ Based on a 2019 Pennsylvania Climate Action Plan, Wolf ordered the Department of Environmental Protection (DEP) to “develop and present” a “proposed rulemaking package to abate, control, or limit carbon dioxide emissions from fossil-fuel-fired electric power generators” to the state Environmental Quality Board.¹⁵⁶ The DEP’s proposals must (1) involve an outreach component targeting various stakeholders, (2) create a GHG budget, and (3) establish annual carbon dioxide emission auctions.¹⁵⁷ Wolf’s order requires that all elements of the DEP’s plan comport with RGGI’s standards to allow Pennsylvania to participate in the cap and trade program in the near future.¹⁵⁸

Under section 27, Governor Wolf has not only the power but also the duty to take this kind of executive action.¹⁵⁹ Further, both Pennsylvania’s Air Pollution Control Act¹⁶⁰ and Climate Change Act¹⁶¹ provide the DEP with authority to limit carbon emissions. The question remains, however, as to where proceeds from RGGI auctions could go.¹⁶²

IV. WHERE CAN THE MONEY GO?: APPLYING TRUST PRINCIPLES TO A CAP AND TRADE PROGRAM

Modeling shows that, depending on the exact price, auctioning Pennsylvania’s carbon allowances in RGGI could produce over two hundred million dollars per year between 2021 and 2030.¹⁶³

155. Pa. Exec. Order No. 2019-07, *supra* note 25.

156. *Id.* (citing the Air Pollution Control Act of January 8, 1960, 35 PA. CONS. STAT. §§ 4001-4015, as the source of authorization for such action).

157. *Id.*

158. *Id.*

159. *See supra* Part II.B.2; *see also* McKinstry & Dernbach, *supra* note 7, at 89-90 (discussing additional duties of the Commonwealth to regulate emissions).

160. Air Pollution Control Act, 35 PA. CONS. STAT. §§ 4001-4015 (1960).

161. Pennsylvania Climate Change Act, 71 PA. CONS. STAT. §§ 1361.1-1361.8 (2008).

162. *See Szybist, supra* note 28.

163. *Id.*

Environmental activists disagree about the extent to which the ERA dictates how the Commonwealth could use auction funds.¹⁶⁴ One side of the debate argues that, because emission auctions would operate as a regulatory measure necessary to preserve the environmental trust, auction proceeds would constitute income and would therefore not have to return to the corpus of the trust.¹⁶⁵ Alternatively, if RGGI is understood as a program that sells natural resources, auction revenue would constitute proceeds from the liquidation of trust principal, and basic trust principles would require the state to reinvest all auction proceeds in the corpus of the trust.¹⁶⁶ Both sides urge that their paradigm best achieves the ERA's purpose. This Section first analyzes the implications of both frameworks under the ERA and then lays out the various enforcement options available to Pennsylvania courts.

A. Directing the Funds

If RGGI is a regulatory measure to preserve Pennsylvania's environmental trust, without additional legislation, auction proceeds must go toward the Commonwealth's General Fund.¹⁶⁷ While some budgetary concerns weigh in favor of this approach,¹⁶⁸ to characterize the auction revenue strictly as income ignores the ERA, mischaracterizes the transaction, and departs from standard trust doctrine. Instead, for reasons described in more detail below, allowance auctions are more properly viewed as sales of natural resources. However, this Note argues that, regardless of how one views these auctions, the ERA and basic trust principles require that auction proceeds be used to maintain and preserve Pennsylvania's environment.

164. See, e.g., McKinstry & Dernbach, *supra* note 7, at 107-08; Szybist, *supra* note 28.

165. See McKinstry & Dernbach, *supra* note 7, at 108 ("Instead of being considered the proceeds from the liquidation of the principal of the trust, auction revenues are more properly considered to constitute income from measures to manage the trust corpus, much like income from sustainable harvest of timber. Therefore, the proceeds from these revenues can be used for any purpose, provided the use accrues to the benefit of the trust's beneficiaries."); see also RESTATEMENT (THIRD) OF TRUSTS § 90 (AM. L. INST. 2007).

166. See McKinstry & Dernbach, *supra* note 7, at 109-10.

167. See *id.* at 108; see also 72 PA. CONS. STAT. § 8 (2020) (providing that, unless stated otherwise in additional legislation, all payments go toward Pennsylvania's General Fund).

168. See McKinstry & Dernbach, *supra* note 7, at 108-09.

1. Allowance Auctions as Sales of Natural Resources

While the *PEDF* decision did not involve RGGI, it would directly control the use of cap and trade proceeds from an RGGI auction.¹⁶⁹ In *PEDF*, the Pennsylvania Supreme Court held that to comport with the terms of the section 27 trust, the Commonwealth may not allow private entities to deplete natural resources without just compensation.¹⁷⁰ Further, any payments viewed as consideration for those resources constitute proceeds from the sale of trust principal and therefore must be reinvested to conserve and maintain the trust.¹⁷¹

Payments for carbon allowances are properly understood as consideration for the sale of trust principal.¹⁷² When power generating plants pay for carbon allowances, they pay for access to, and use of, air that they can pollute with carbon and other GHGs.¹⁷³ Clean air is specifically listed in section 27's first sentence, and, as a basic necessity for all living things, it is also an invaluable natural resource.¹⁷⁴ Earth's atmosphere can accommodate only so many GHGs before the climate is permanently changed, making air a limited natural resource.¹⁷⁵ The more that humans pollute the air with GHGs, the more they deplete a resource within the ERA's trust.¹⁷⁶ Thus, the payments made for carbon allowances are best

169. *Cf. PEDF v. Commonwealth*, 161 A.3d 911, 935 (Pa. 2017) ("Pennsylvania trust law dictates that proceeds from the sale of trust assets are trust principal and remain part of the corpus of the trust." (citing *In re McKeown's Estate*, 106 A. 189, 190 (Pa. 1919))).

170. *Id.* at 936.

171. *Id.*

172. *See* McKinstry & Dernbach, *supra* note 7, at 109 ("[O]ne can view the auction of allowances as a charge for the sale of a public natural resource, either: (1) the air, (2) the limited capacity of the atmosphere to absorb GHG emissions without disrupting the climate, or (3) the costs that will be imposed on future generations from carbon dioxide emissions (*i.e.* 'ecosystem services'—one of the natural values of the environment).").

173. *See id.*

174. *See* PA. CONST. art. 1, § 27.

175. *See* McKinstry & Dernbach, *supra* note 7, at 69 (noting that, as a practical matter, air has "relative rather than absolute attributes" (quoting *Robinson Township v. Commonwealth*, 83 A.3d 901, 953 (Pa. 2013))).

176. *See* Marie Loiseau, Comment, *Revived Authority in Article I, Section 27 of the Pennsylvania Constitution: The Commonwealth's New Affirmative Duty to Protect the Atmosphere*, 91 TEMP. L. REV. 183, 207-08 (2018).

understood as payments for trust principal.¹⁷⁷ All proceeds from the auction must therefore be invested in the maintenance and conservation of the trust.¹⁷⁸

2. Allowance Auctions as Trust Regulation

Even if auctions are understood as trust regulation, making the auction revenue income, the Commonwealth's duties as trustee require that it reinvest all revenue in Pennsylvania's environmental trust.¹⁷⁹ While using the proceeds from allowance auctions for general purposes would not necessarily harm the beneficiaries directly or immediately, such use would not comport with the purpose of section 27's trust.¹⁸⁰ The failure to invest funds earned through auctions in the trust would therefore constitute a breach of the Commonwealth's fiduciary duties.¹⁸¹

Allowing auction proceeds to remain in the General Fund would alleviate budgetary concerns, serving the Commonwealth's self-interests, and would likely help many beneficiaries by funding state-operated programs.¹⁸² However, depriving beneficiaries of the funds necessary to preserve the interests specifically protected by the ERA violates the Commonwealth's fiduciary duty of loyalty.¹⁸³

Further, climate change threatens to impose enormous financial burdens on the Commonwealth.¹⁸⁴ Directing money away from environmental protection in light of such an imminent threat deviates from the Commonwealth's duty to act prudently.¹⁸⁵ That duty

177. *Cf. PEDF v. Commonwealth*, 161 A.3d 911, 935-36 (Pa. 2017) (holding payments for oil and gas amounted to proceeds from the sale of trust principal).

178. *Id.*

179. *See supra* Part II.A.2.

180. *See Robinson Township*, 83 A.3d at 957-59.

181. *Cf. PEDF*, 161 A.3d at 933, 938 (discussing the Commonwealth's duties to enact legislation to protect the trust and maintain the corpus of the trust).

182. *See McKinsty & Dernbach, supra* note 7, at 108-09.

183. *Cf. PEDF*, 161 A.3d at 932-33 (discussing the Commonwealth's duty of loyalty under section 27); *Estate of McCredy*, 470 A.2d 585, 597 (Pa. Super. Ct. 1983) ("The rule prohibits both self-dealing and conflicts of interest. Thus, the trustee must neither 1) deal with trust property for the benefit of himself or third parties ... nor 2) place himself in a position inconsistent with the interests of the trust." (citing 39 P.L.E. *Trusts* §§ 185-186)).

184. *See Climate Change in PA, supra* note 2.

185. *See* RESTATEMENT (SECOND) OF TRUSTS § 174 (AM. L. INST. 1959) ("The trustee is under a duty to ... exercise such care and skill as a man of ordinary prudence would exercise in dealing with his own property.").

directs the Commonwealth to maintain auction proceeds within the corpus of the trust to fully fund projects necessary to conserve and protect the environment, which would include measures to combat climate change.¹⁸⁶

Absent additional legislation, Pennsylvania law requires that all payments made to the Commonwealth go to its General Fund.¹⁸⁷ The General Assembly would therefore have to enact legislation to ensure that auction payments were reinvested in the environmental trust.¹⁸⁸ The Pennsylvania Supreme Court has specifically held that the Commonwealth has a duty to pass legislation necessary to protect the environment.¹⁸⁹ Separation of powers principles dictate that a court could not tell the General Assembly exactly what legislation to enact or what kind of conservation projects to fund.¹⁹⁰ Courts would, however, have the power to generally ensure that the Commonwealth invested the auction funds in the environmental trust, in compliance with its constitutional duties.¹⁹¹

Protecting the environment from climate change will take significant, coordinated efforts and considerable financial investments from the Commonwealth.¹⁹² Thus, whether the Commonwealth views RGGI auctions as a sale of trust principal that generates proceeds or merely as a regulation of the trust that produces income, as trustee, Pennsylvania must keep the money within the environmental trust.

186. *Cf. id.* cmt. c (explaining that trustees do not use proper care unless they act with an understanding of the terms of the trust and the nature of the trust property).

187. 72 PA. CONS. STAT. § 8 (2020).

188. *Cf. Robinson Township v. Commonwealth*, 83 A.3d 901, 958 (Pa. 2013) (describing examples of legislation passed by the General Assembly to meet its duty to protect the environment).

189. *PEDF v. Commonwealth*, 161 A.3d 911, 933 (Pa. 2017); *Robinson Township*, 83 A.3d at 958.

190. *Cf. PEDF*, 161 A.3d at 933 (“[T]he Commonwealth must act affirmatively via legislative action to protect the environment.” (citing *Robinson Township*, 83 A.3d at 958)).

191. *See infra* Part IV.B.

192. *See generally* PA. DEP’T OF ENV’T PROT., PENNSYLVANIA CLIMATE ACTION PLAN (2018), <http://files.dep.state.pa.us/Energy/Office%20of%20Energy%20and%20Technology/OETDPortalFiles/Climate%20Change%20Advisory%20Committee/2019/PAClimateActionBookletforWeb.pdf> [<https://perma.cc/7E6E-NP73>].

B. Enforcing Section 27 Duties

As of early 2021, Governor Wolf supports taking action against climate change, and opponents do not have the veto-proof majority in the General Assembly necessary to block his environmental policies.¹⁹³ However, that political makeup will inevitably change with time, which could encumber further attempts to enact environmental regulations.¹⁹⁴ This Section explores the mechanisms with which courts could enforce the Commonwealth's affirmative duties under the ERA, particularly against a less environmentally friendly administration. First, recent decisions show the Pennsylvania Supreme Court's willingness to review the Commonwealth's performance in protecting constitutional rights.¹⁹⁵ Second, any legislation or policies obstructing the enactment of Governor Wolf's executive order or the fulfillment of the Commonwealth's ERA duties would be unconstitutional.¹⁹⁶

1. Performance Review for the Commonwealth

While claims regarding government inaction typically raise separation of powers concerns, particularly at the federal level, the Supreme Court of Pennsylvania's decision in *William Penn School District v. Pennsylvania Department of Education* made clear that such concerns do not preclude commonwealth courts from reviewing the Commonwealth's failure to act.¹⁹⁷ In *William Penn*, a group of students and other interested parties claimed that the General Assembly failed to fulfill its constitutional mandate to maintain "a thorough and efficient" public school system.¹⁹⁸ The Commonwealth

193. See, e.g., Logan Hullinger, *Once Interested, House Republicans Blast Wolf over RGGI*, YORK DISPATCH (Oct. 9, 2019, 3:40 PM), <https://www.yorkdispatch.com/story/news/local/2019/10/08/once-interested-house-republicans-blast-wolf-over-rggi/3898783002/> [<https://perma.cc/2TM8-32UW>]; McDevitt, *supra* note 119; *Pennsylvania State Senate Elections, 2020*, BALLOTPEDIA, https://ballotpedia.org/Pennsylvania_State_Senate_elections,_2020 [<https://perma.cc/G28G-NJBY>]; *Pennsylvania House of Representatives Election, 2020*, BALLOTPEDIA, https://ballotpedia.org/Pennsylvania_House_of_Representatives_elections,_2020 [<https://perma.cc/MV7J-8PML>].

194. See, e.g., McDaniel, *supra* note 114.

195. See *William Penn Sch. Dist. v. Pa. Dep't of Educ.*, 170 A.3d 414, 463-64 (Pa. 2017).

196. Cf. *PEDF v. Commonwealth*, 161 A.3d 911, 938-39 (Pa. 2017).

197. 170 A.3d at 463-64.

198. *Id.* at 417 (quoting PA. CONST. art. III, § 14).

argued that reviewing the General Assembly's decisions would violate separation of powers principles and pose a nonjusticiable political question.¹⁹⁹

While recognizing that such justiciability concerns could, in certain circumstances, preclude courts from reviewing a case, the court maintained that the judiciary should "be skeptical of calls to abstain from a given constitutional dispute."²⁰⁰ Instead, Pennsylvania courts should refrain from hearing and resolving claims only when the power has been "exclusively and finally" granted to other branches of government.²⁰¹ Absent that specific delegation, courts have the capacity to interpret constitutional duties and determine the minimum requirements established therein without infringing on the General Assembly's policy making powers.²⁰² Thus, while the court could not instruct the General Assembly to implement specific policies, it could measure the Commonwealth's fulfillment of its constitutional duties and find that the government fell short of its mandate.²⁰³

Similarly, in the context of the ERA, a court could assess the Commonwealth's compliance with its constitutional duties, particularly in light of the threats posed by climate change.²⁰⁴ The ERA confers its powers and duties on every level of government in the Commonwealth.²⁰⁵ Separation of powers would preclude a court from mandating the implementation of particular policies. It

199. *Id.* at 432-33.

200. *Id.* at 418; *see also* *Robinson Township v. Commonwealth*, 83 A.3d 901, 917 (Pa. 2013) ("In contrast to the federal approach, notions of case or controversy and justiciability in Pennsylvania have no constitutional predicate, do not involve a court's jurisdiction, and are regarded instead as prudential concerns implicating courts' self-imposed limitations." (citations omitted)).

201. *William Penn Sch. Dist.*, 170 A.3d at 438 (first citing *Sweeney v. Tucker*, 375 A.2d 698, 706 (Pa. 1977); and then citing Council 13, *AFSCME ex rel. Fillman v. Rendell*, 986 A.2d 63, 76 (Pa. 2009)).

202. *Id.* at 463-64 ("It is a mistake to conflate legislative policy-making pursuant to a constitutional mandate with constitutional interpretation of that mandate and the minimum that it requires.... [C]ourts have the capacity to differentiate a constitutional threshold, which ultimately is ours to determine, from the particular policy needs of a given moment, which lie within the General Assembly's purview.").

203. *Id.* The case was remanded to the Commonwealth Court, where proceedings on the merits have continued. *William Penn Sch. Dist. v. Pa. Dep't of Educ.*, No. 587 M.D. 2014, 2018 WL 2090329, at *1 (Pa. Commw. Ct. May 7, 2018).

204. *Cf. William Penn Sch. Dist.*, 170 A.3d at 463.

205. *See Robinson Township*, 83 A.3d at 952.

would not, however, bar the judiciary from reviewing existing environmental regulations to ensure that, as a whole, they met the ERA's standards.²⁰⁶ If, as the plaintiffs asserted in *William Penn* regarding education, the amalgamation of policies failed to sufficiently protect the environment, a court could hold that the Commonwealth violated the constitution by failing to uphold its duties.²⁰⁷

2. *Unconstitutional Legislation*

Governor Wolf's executive order mandates the creation and administration of a carbon-reducing cap and trade program.²⁰⁸ This is a critical step in the fulfillment of the Commonwealth's constitutional duties.²⁰⁹ The implementation process will likely outlast Wolf's tenure, which could expose RGGI or a comparable measure to an administration less devoted to environmental protection.²¹⁰ However, *Robinson Township* instructs that legislation inconsistent with the Commonwealth's ERA duties, particularly when enacted to limit measures meant to protect the environment, is unconstitutional.²¹¹

In *Robinson Township*, localities challenged the General Assembly's legislative attempt to preempt fracking regulation at the state level, thereby protecting the fracking industry and preventing local governments from implementing their own restrictions.²¹² The General Assembly had attempted to provide accommodations for "an industry, offering the very real prospect of jobs and other important economic benefits, [that sought] to exploit a Pennsylvania resource," despite the fact that such exploitation, "[b]y any responsible account," would seriously harm the environment.²¹³ This was exactly the sort of scenario the ERA contemplated and that its drafters intended to prevent.²¹⁴ The court emphasized that the action centered on the Commonwealth's "compliance with constitutional

206. See *William Penn Sch. Dist.*, 170 A.3d at 463-64.

207. See *id.*

208. Pa. Exec. Order No. 2019-07, *supra* note 25.

209. See *supra* Part II.B.

210. See Pa. Exec. Order No. 2019-07, *supra* note 25 (laying out a multiyear process).

211. *Robinson Township v. Commonwealth*, 83 A.3d 901, 976, 985 (Pa. 2013).

212. *Id.* at 914-16; see also Tuholske, *supra* note 18, at 248.

213. *Robinson Township*, 83 A.3d at 976.

214. See *id.*

duties,”²¹⁵ not “a dispute over public policy voiced by a disappointed minority.”²¹⁶ The legislation at issue served the interest of the fracking industry, not the beneficiaries of the Commonwealth’s environmental trust.²¹⁷ As such, the exercise of police power in enacting that legislation violated Pennsylvanians’ environmental rights and the Commonwealth’s duties as trustee of the environmental trust.²¹⁸

In *PEDF*, the court held that siphoning off payments made in consideration for the depletion of Pennsylvania’s natural resources for nonenvironmental purposes was “a clear violation of the most basic of a trustee’s fiduciary obligations.”²¹⁹ Similarly, if a future administration attempted to exercise its police power by rolling back GHG emission caps without a comparable replacement, such legislation would violate the ERA and could be struck down.²²⁰ Whether the Commonwealth moves forward with joining RGGI or chooses to use another GHG reduction method, the use of any funds generated through those programs for nonenvironmental purposes would violate the ERA.²²¹

V. COUNTERARGUMENTS

Despite clear support from developing ERA jurisprudence, opponents will likely raise concerns regarding the propriety of courts mandating Commonwealth action and the sufficiency of RGGI as a means to fulfill the Commonwealth’s duties. This Part addresses these counterarguments.

A. *Concerns About Mandating Executive and Legislative Compliance*

Those particularly concerned with separation of powers would question courts’ ability to mandate the investment of auction proceeds in the environmental trust. Proponents of such a view

215. *Id.* at 974.

216. *Id.* at 976.

217. *Id.*

218. *Id.* at 985.

219. *PEDF v. Commonwealth*, 161 A.3d 911, 938 (Pa. 2017).

220. *See Robinson Township*, 83 A.3d at 985.

221. *See PEDF*, 161 A.3d at 938-39.

would likely point to *Funk v. Wolf*, in which a group of young Pennsylvanians sought a writ of mandamus to force the governor and General Assembly to conduct specific studies and implement a particular GHG reduction scheme.²²² The plaintiffs also requested a declaratory judgment stating that the ERA protects a right to an atmosphere with safe levels of GHG and imposes a duty on the Commonwealth to protect that right, and that the Commonwealth had not fulfilled that duty.²²³ Though the court recognized that the ERA imposed certain duties on the Commonwealth, it declined to issue either form of relief.²²⁴ Instead, the court held that the ERA did not “provide[] ... a clear right to the performance of the specific acts,” nor did it mandate the performance of those acts.²²⁵ Critics would likely assert that the decision in *Funk* would preclude a court from issuing any sort of order mandating Commonwealth action.

While *Funk* accurately describes the limited appropriateness of writs of mandamus, it by no means determines whether a court could enforce the Commonwealth’s duties.²²⁶ Firstly, because the Pennsylvania Supreme Court decided *Funk* before *PEDF* overturned *Payne*’s overly deferential test, the court relied on now constitutionally unsound analysis in reviewing the plaintiffs’ claims regarding the Commonwealth’s conduct.²²⁷ In a post-*PEDF* Pennsylvania, a court would view the government’s duties more broadly and with less deference.²²⁸ Further, the court did not rule out the possibility of granting a writ of mandamus in particular administrative situations.²²⁹

Likewise, the *Funk* court’s refusal to grant a declaratory judgment is distinguishable from a scenario in which auction proceeds are not properly invested in the environmental trust. Under Pennsylvania’s Declaratory Judgments Act, beneficiaries can seek a

222. 144 A.3d 228, 232-33 (Pa. Commw. Ct. 2016).

223. *Id.* at 251.

224. *Id.* at 248, 251.

225. *Id.* at 248, 250-51 (emphasis omitted).

226. *See id.* at 248-51.

227. *Compare id.* at 235 (explaining that compliance with the ERA essentially requires only compliance with the General Assembly’s legislation), *with PEDF v. Commonwealth*, 161 A.3d 911, 933 (Pa. 2017) (discussing the Commonwealth’s duties).

228. *See PEDF*, 161 A.3d at 932-33.

229. *Funk*, 144 A.3d at 243 (discussing the scenarios in which the court could review the Environmental Quality Board’s and Environmental Hearing Board’s decisions to implement proposed and detailed plans).

judgment “[t]o direct ... trustees to do or abstain from doing any particular act in their fiduciary capacity” or “[t]o determine any question arising in the administration of the estate or trust.”²³⁰ Notwithstanding separation of powers concerns, the Act was intended “to be liberally construed and administered.”²³¹ However, while making such declarations, Pennsylvania courts still may not issue judgments that would be merely advisory and “not resolve the controversy ... which spurred the request.”²³²

A declaratory judgment asserting that the ERA protects the right to an atmosphere with safe levels of GHGs and that the Commonwealth violated its duty to protect that right would do nothing to compel the Commonwealth to fulfill its fiduciary duties, rendering such a decision merely advisory.²³³ The same could not be said for a situation in which the General Assembly failed to properly invest auction proceeds. If citizens were to bring an action against the Commonwealth for such a failure, a declaratory judgment ordering the investment of auction proceeds in the environmental trust would resolve the dispute.²³⁴ Further, Pennsylvania case law makes clear that courts are far less concerned with separation of powers issues than many courts at the federal level.²³⁵ Accordingly, while a court could not tell the Commonwealth exactly how to use the funds once in the environmental trust, it could nevertheless ensure that auction proceeds were invested in the trust in the first place.²³⁶

Even in a scenario in which a declaratory judgment would be improper, a court could still strike down any legislation that violated the ERA.²³⁷ Attempts to prevent the implementation of a cap and trade program without a sufficient replacement would plainly violate the Commonwealth’s duties as trustee and Pennsylvanians’

230. 42 PA. CONS. STAT. § 7535(2)-(3) (2020). Pennsylvania courts have consistently relied on private trust doctrine to interpret the ERA. *See PEDF*, 161 A.3d at 934 n.26.

231. *Funk*, 144 A.3d at 251 (quoting *Off. of Governor v. Donahue*, 98 A.3d 1223, 1229 (Pa. 2014)).

232. *Id.* (quoting *Rendell v. Pa. State Ethics Comm’n*, 938 A.2d 554, 559 (Pa. Commw. Ct. 2007)).

233. *See id.*

234. *Cf. id.* at 251-52.

235. *William Penn Sch. Dist. v. Pa. Dep’t of Educ.*, 170 A.3d 414, 435-39 (Pa. 2017).

236. *See supra* Part IV.A.2.

237. *See supra* Part IV.B.

environmental rights, and would therefore be patently unconstitutional.²³⁸

B. How Can RGGI Fulfill the Commonwealth's Duties?

It is important to acknowledge at the outset that there is no perfect response to a threat such as climate change, and RGGI is no exception.²³⁹ However, joining RGGI and continuing to invest in conserving Pennsylvania's environment is currently the most viable option to meet the Commonwealth's constitutionally imposed duty.²⁴⁰ Even still, opponents might argue that participation in RGGI or a similar program would not fulfill the Commonwealth's constitutionally mandated duties. Such challenges would point to the low cost of allowances as evidence that RGGI is too lenient a program to effectively combat climate change and that participation would therefore not fulfill the Commonwealth's duties.²⁴¹ While increased stringency would certainly expedite reductions in carbon emissions, the fact that RGGI is not as strict as possible does not negate its success or the Commonwealth's duty to implement a carbon reduction plan.²⁴²

With a current clearing price of just over five dollars, RGGI's prices are undeniably lower than those of other countries, as most countries charge between fifteen and thirty dollars per ton of carbon emissions.²⁴³ Some environmentalists have suggested that programs should determine the cost of allowances based on carbon's social cost.²⁴⁴ Though the exact methods of calculation vary, "[t]he social cost of carbon is a measure of the future estimated cost or damage resulting from the emission of a metric ton of carbon today."²⁴⁵ Such a price would certainly be more than five dollars and once implemented, would spur accelerated carbon emissions reduction. However, from a practical perspective, such a program would likely

238. See *supra* Part IV.B.

239. See, e.g., Rogelj et al., *supra* note 1, at 95.

240. See *supra* Part III.

241. See McKinstry & Dernbach, *supra* note 7, at 84-86 (asserting the necessity of high prices for carbon allowances).

242. See *supra* Parts II.B.2, III.B.

243. See Plumer & Popovich, *supra* note 136.

244. McKinstry & Dernbach, *supra* note 7, at 89.

245. *Id.* at 85.

face even harsher opposition and would be more difficult to enforce.²⁴⁶ Thus, even if such a program was put in place, it would likely not be as successful as RGGI or a comparable program.

Critics might also challenge the utility of a single state's implementation of a cap and trade program (which obviously cannot fix climate change on its own) while other states and countries continue to emit GHGs at the same rate.²⁴⁷ In other words, why must Pennsylvania's energy sector constrain itself while others continue as they have for the last century? As the United States Supreme Court explained in *Massachusetts v. EPA*, the fact that others continue to emit GHGs does not render attempts to limit emissions meaningless.²⁴⁸ Further, in Pennsylvania's case, the Commonwealth has a constitutional duty to take such steps, regardless of what other states are doing.²⁴⁹ Even more importantly, a majority of Pennsylvanians believe that carbon emissions should be regulated and that their state government should set emissions limits on coal-fired power plants.²⁵⁰ The Commonwealth therefore has both a clear mandate from its constituents and a constitutional duty to take action against climate change, regardless of the course of action other states take.²⁵¹

246. See *id.* at 109-10 (discussing the challenges of finding support with higher allowance prices).

247. See, e.g., *Massachusetts v. EPA*, 549 U.S. 497, 523-25 (2007).

248. *Id.* at 524.

249. See *supra* Part II.B.

250. Jennifer Marlon, Peter Howe, Matto Mildenberger, Anthony Leiserowitz & Xinran Wang, *Pennsylvania, Yale Climate Change Opinion Maps 2020*, YALE PROGRAM ON CLIMATE CHANGE COMM'N (Sept. 2, 2020), <https://climatecommunication.yale.edu/visualizations-data/ycom-us/> [<https://perma.cc/VN3G-5ZDX>] (select "Pennsylvania" from the "Select a State" dropdown menu).

251. It is important to note, however, that an issue referred to as "emissions leakage" means that the extent to which neighboring states regulate their emissions can, to some extent, limit the efficacy of cap and trade programs. For the purpose of this Note, the following example provides a sufficient explanation of emissions leakage: Rather than subjecting themselves to stricter emissions regulations and the associated costs in Pennsylvania, a power plant might decide to relocate to a jurisdiction with fewer regulations where the power plant could produce the same, if not a higher, level of emissions. Though the relocation would result in lower emissions in Pennsylvania, the increase in emissions elsewhere would create a net neutral result. However, RGGI and other cap and trade programs have taken steps to limit carbon leakage. *Offsets*, REG. GREENHOUSE GAS INITIATIVE, <https://www.rggi.org/allowance-tracking/offsets> [<https://perma.cc/HEV3-YS76>]. For a detailed analysis of the problems posed by, and solutions to, emissions leakage, see SHERYL L. MUSGROVE, GEORDI A. TAYLOR, RADINA R. VALOVA & KARL R. RÁBAGO, PACE ENERGY &

CONCLUSION

Over the last decade, Pennsylvania courts have breathed new life into the Environmental Rights Amendment, making it a powerful weapon that both allows individuals to enforce their environmental rights and imposes particular fiduciary duties on the Commonwealth.²⁵² Governor Wolf's executive order mandating the implementation of an emissions reduction scheme is a critical step in tackling climate change and in fulfilling the Commonwealth's constitutional duties.²⁵³ As Pennsylvania carries out the executive order, it must look to the ERA for meaningful guidance or risk running afoul of its constitutional mandate.

Climate change is a global crisis that will require a concerted effort from around the world to properly combat it. While no country or state can sufficiently wage war on climate change on their own, they cannot sit idly by, waiting for the rest of the world to act. Pennsylvania provides a powerful example of how actors at the subnational level can leverage their unique constitutional and statutory schemes to enforce environmental rights and combat climate change.

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CLIMATE CTR., EMISSIONS LEAKAGE IN RGGI: AN ANALYSIS OF THE CURRENT STATE AND RECOMMENDATIONS FOR A PATH FORWARD (2017), <https://peccpubs.pace.edu/getFileContents.php?resourceid=5319719d12c3c3e> [https://perma.cc/FQ97-HPC3].

252. See PEDF v. Commonwealth, 161 A.3d 911, 933 (Pa. 2017); Robinson Township v. Commonwealth, 83 A.3d 901, 913 (Pa. 2013).

253. See Pa. Exec. Order No. 2019-07, *supra* note 25.

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