IN THE CIRCUIT COURT FOR THE CITY OF RICHMOND
COMMONWEALTH OF VIRGINIA

LAYLA H. by her next friend Maria Hussainzadah; AMAYA T. by her next friend LaKiesha Cook; CLAUDIA SACHS; CEDAR B. by his next friend Shannon Bell; JULIAN SCHENKER; AVA L. by her next friend Margaret Schaefer Lazar; CADENCE R.-H. by her next friend Rebecca Rubin; TYRIQUE B. by his next friend Kiesha Preston; GIOVANNA F. by her next friend Mary Finley-Brook; ELIZABETH M. by her next friend Barbara Monacella; MARYN O. by her next friend Emily Satterwhite; KYLA H. by their next friend Jennifer Hitchcock; and KATERINA LEEDY;

Plaintiffs,

v.

COMMONWEALTH OF VIRGINIA; GLENN YOUNGKIN, in his official capacity as Governor; VIRGINIA DEPARTMENT OF ENERGY; JOHN WARREN, in his official capacity as Director of the VIRGINIA DEPARTMENT OF ENERGY; VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY; and MICHAEL ROLBAND, in his official capacity as Director of the VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY;

Defendants.

CASE NO.

COMPLAINT FOR DECLARATORY AND INJUNCTIVE RELIEF

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COMPLAINT FOR DECLARATORY RELIEF,
AND IF NECESSARY AND PROPER, INJUNCTIVE RELIEF

1. Plaintiffs, Layla H. by her next friend Maria Hussainzadah; Amaya T. by her next friend LaKiesha Cook; Claudia Sachs; Cedar B. by his next friend Shannon Bell; Julian Schenker; Ava L. by her next friend Margaret Schaefer Lazar; Cadence R.-H. by her next friend Rebecca Rubin; Tyrique B. by his next friend Kiesha Preston; Giovanna F. by her next friend Mary Finley-Brook; Elizabeth M. by her next friend Barbara Monacella; Maryn O. by her next friend Emily Satterwhite; Kyla H. by their next friend Jennifer Hitchcock; and Katerina Leedy (collectively "Youth Plaintiffs"), bring this action against Defendants, Commonwealth of Virginia; Glenn Youngkin, in his official capacity as Governor of Virginia; Virginia Department of Energy; John Warren, in his official capacity as Director of Virginia Energy; Virginia Department of Environmental Quality ("DEQ"); and Michael Rolband, in his official capacity as Director of DEQ, and respectfully allege as follows:

NATURE OF THE ACTION

2. For decades, Defendants have implemented a policy and practice of approving permits for fossil fuel infrastructure in the Commonwealth of Virginia, including permits for the production, transport, and burning of fossil fuels.[1] Defendants' historic and ongoing permitting of fossil fuel infrastructure has, and continues to, cause dangerous levels of greenhouse gas ("GHG") pollution, including carbon dioxide ("CO_2"). This GHG pollution causes and contributes to the ongoing climate crisis and causes grave harm to these thirteen Youth Plaintiffs.

3. Plaintiffs bring this action, and allege herein, that the challenged affirmative governmental actions of Defendants' historic and ongoing permitting of fossil fuel infrastructure violate Plaintiffs' fundamental and inalienable *jus publicum* (public trust doctrine) and substantive

[1] "Production" is used throughout to include the exploration, development, and extraction of fossil fuels.

due process rights, secured by Virginia's Constitution and the common law. As children and minors, Plaintiffs are relying on this independent judiciary to safeguard them from Defendants' actions that deprive them of their fundamental and inalienable constitutional rights.

4. The climate crisis, which Defendants' permitting of fossil fuel infrastructure causes and contributes to, is already having profound impacts in Virginia and is causing grave harm to these Youth Plaintiffs. Increasing temperatures, sea level rise, more frequent and destructive extreme weather events, and increased incidences of vector-borne illnesses are among the climate impacts imperiling these children. Plaintiffs are experiencing significant physical and mental health injuries, significant damage to their homes and personal property, economic deprivations, and disruptions to their religious, family, and cultural practices and foundations (see *infra* ¶¶ 16–77). As children, Plaintiffs are uniquely vulnerable and disproportionately injured by the climate crisis. Given their youth, their government should not be knowingly and proactively exposing them to life-long hardships.

5. Virginia has recognized that "[c]limate change is an urgent and pressing challenge for the Commonwealth" and that "[s]wift decarbonization and a transition to clean energy are required to meet the urgency of the challenge."[2] However, Defendants continue to permit fossil fuel infrastructure, which cause dangerous levels of GHG pollutants, causes and contributes to the climate crisis, and injures these children.

6. Pursuant to the *jus publicum* (also referred to as the public trust doctrine), the Commonwealth of Virginia has the sovereign duty to hold the public domain for the benefit of the public.[3] Defendants cannot "relinquish, surrender, alienate, destroy, or substantially impair" the

[2] Va. Code § 45.2-1705(4).
[3] *VMRC v. Chincoteague Inn*, 287 Va. 371, 382 n.2 (2014); *id.* at 382 (citing *G.L. Webster Co. v. Steelman*, 172 Va. 342, 357 (1939)).

rights of the people inherent to the *jus publicum* unless authorized by the Virginia Constitution.[4] The Conservation Article of Virginia's Constitution recognizes that protection of Virginia's atmosphere, lands, and waters from pollution, impairment, or destruction is part of the *jus publicum*.[5]

7. Virginia's Constitution also recognizes that citizens and their posterity have certain inherent and enumerated rights, including the fundamental right to be free from government actions that harm life, liberty, and property.[6] Additionally, the right to an atmosphere, lands, and waters free from pollution, impairment, or destruction is an unenumerated liberty interest that is fundamental to our scheme of ordered liberty and is deeply rooted in Virginia's history and traditions.[7]

8. The importance of Virginia's atmosphere, lands, and waters to securing life and liberty has long been recognized. In 1818, James Madison, a drafter of Virginia's 1776 Constitution, gave a speech to the Agricultural Society of Albemarle, Virginia, in which he extolled the import of nature and warned against its vulnerability to exploitation and destruction by humans.[8] Madison described the delicate balance between nature and humans and cautioned that nature was not "subservient" to the use of humans. In his speech Madison also explained the importance of the atmosphere, which he viewed as a vital foundation of life and country, and of course his home state, Virginia. Madison viewed the atmosphere as having a "destined purpose, of supporting the life and health of organized beings." According to Madison:

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[4] *Commonwealth v. City of Newport News*, 158 Va. 521, 547–48 (1932); *see also VMRC v. Chincoteague Inn*, 287 Va. 371, 383 (2014).
[5] Va. Const. art. XI, § 1.
[6] Va. Const. art. I, §§ 1, 11.
[7] *See McCabe v. Commonwealth*, 274 Va. 558, 562 (2007) (citing *Washington v. Glucksberg*, 521 U.S. 702, 721 (1997)).
[8] *Address to the Agricultural Society of Albemarle, 12 May 1818*, Founders Online, National Archives, http://founders.archives.gov/documents/Madison/04-01-02-0244.

> Animals, including man, and plants may be regarded as the most important part of the terrestrial creation. They are pre-eminent in their attributes; and all nature teems with their varieties and their multitudes, visible and invisible. To all of them, the atmosphere is the breath of life. Deprived of it, they all equally perish. But it answers this purpose by virtue of its appropriate constitution and character.

9. In 1971, 153 years after Madison's speech, Virginians, recognizing the increasing degradation of their atmosphere, lands, and waters, amended their Constitution and added the Conservation Article.[9] According to the Commission on Constitutional Revision, the Conservation Article was proposed "in recognition of the growing awareness that among the fundamental problems which will confront the Commonwealth in coming years will be those of the environment."[10] The Conservation Article was proposed to ensure that Virginians achieve "a good life, an opportunity to enjoy the things we have acquired; a place of pleasure, dignity, and permanence which we can pass on to future generations with satisfaction and pride."[11]

10. Over 200 years after James Madison's words on the import of the atmosphere and the delicate balance between humans and nature, and over 50 years after Virginia codified the Conservation Article into its Constitution, the need to restore and protect Virginia's atmosphere, lands, and waters—resources essential to Plaintiffs' health, safety, dignity, liberties, and lives—could not be more pressing. Unfortunately, Madison's concerns about the ability of humans to "exhaust the atmosphere of its unrenewed capacity to keep alive animal or vegetable nature [plants]," are being borne out today with devastating consequences that threaten children's lives and our constitutional democracy.

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[9] Va. Const. art. XI.
[10] A.E. Dick Howard, *State Constitutions and the Environment*, 58 Va. L. Rev. 193, 205-06 (1972) (citing The Commission on Constitutional Revision).
[11] A.E. Dick Howard, *Commentaries on the Constitution of Virginia* 1140 (1974) (citing The Commission on Constitutional Revision).

11. Though Madison, and later the drafters of Virginia's 1971 Constitution, may not have contemplated the full scope of humans' ability to disrupt the "appropriate constitution and character" of the atmosphere, that is precisely what has transpired at the hands of Defendants' ongoing affirmative government conduct to permit fossil fuel infrastructure.

12. As such, Plaintiffs bring this action to the only branch of government capable of awarding these youth declaratory relief, seeking a declaration of law that sections 45.2-1602(1), (2), (5) and 45.2-1614(A)(1), (A)(2), (A)(4), (B)(6) in the Virginia Gas and Oil Act, which direct Defendants to maximize the exploration, development, and production of coal, oil, and gas resources, violate Plaintiffs' *jus publicum* and due process rights and are unconstitutional. Plaintiffs also seek declaratory relief that Defendants' historic and ongoing policy and practice of exercising their statutory discretion in favor of permitting fossil fuel infrastructure substantially impairs their *jus publicum* rights and infringes upon their due process rights. Without this Court's check on the political branches, these children will be without any recourse for the ongoing injuries caused by these Defendants. If necessary and proper, Plaintiffs further ask the Court for appropriate injunctive relief.

13. Plaintiffs ask this Court to exercise its jurisdiction to hear and decide the important *jus publicum* and constitutional questions raised herein. The judiciary has a vital and urgent constitutional duty to protect Virginia's children from affirmative government conduct that harms them and the endurance of the Commonwealth.

JURISDICTION & VENUE

14. The Circuit Court has subject matter jurisdiction over this matter under sections 8.01-184, 8.01-620, and 17.1-513 of the Code of Virginia. Plaintiffs seek declaratory relief under

the laws and Constitution of Virginia, and such injunctive relief as this Court may deem just and proper.

15. Venue in this Court is proper under section 8.01-261(2) of the Code of Virginia because Defendants are one or more officers of the Commonwealth, sued in an official capacity, and their official offices are located in Richmond, Virginia.

PARTIES

A. PLAINTIFFS

16. Plaintiff **Layla H.** is a 17-year-old high school student who lives in Vienna, Virginia. Climate-induced extreme precipitation events have flooded Layla's home and caused significant financial hardship for Layla's family. An extreme precipitation event in 2018 inundated the basement in Layla's home, causing water damage and mold growth that cost approximately $17,000 to remediate. Layla's family rents their basement out as an apartment, and the flood damage forced their tenants to relocate immediately, resulting in lost rental income for several months until after repairs were completed. In an effort to mitigate the damage and financial impacts from future flooding events, Layla's family paid $5,000 to install a drainage system on their property. Even with this new system, the drains overflow during extreme precipitation events and flood her house.

17. More frequent and intense storms are also causing trees and branches to frequently fall on Layla's property, requiring her family to incur significant expenses to remove and cut down the damaged trees. For example, in November 2021, Layla's family paid $3,500 to remove ten trees on their property at risk of falling during the next storm. Many of the trees on Layla's property are close to her house and pose an ongoing threat to her home and safety during storms.

18. Extreme precipitation events also impede Layla's ability to safely travel and complete her school work. Layla often receives storm alerts advising residents not to leave their homes. In the summer of 2021, Layla experienced five power outages linked to storms. During power outages, Layla completes her homework by candlelight and cannot work on assignments that require a computer. Climate change continues to cause extreme precipitation events and more frequent hurricanes that impede Layla's ability to complete the most basic of tasks, including traveling, studying, and safely being on her property.

19. Increasing temperatures from climate change are physically harming Layla. Layla walks about a half mile to school each morning and with more frequent extreme temperatures she struggles to stay hydrated during these uncomfortable walks and sometimes overheats. After a walk around her neighborhood in June 2021, Layla experienced heat exhaustion and heat rash. Layla's heat rash symptoms lasted for three days—she developed deep, red lumps, and felt intensely and painfully itchy like she was on fire. Hotter temperatures in Virginia continue to put Layla at increased risk of suffering from recurrences of heat exhaustion and heat rash. Consistent with Layla's Muslim faith, she wears conservative clothing covering much of her body. Consequently, the increasingly hot temperatures make her more vulnerable to adverse impacts from extreme heat.

20. Layla has a deep religious and spiritual connection to Virginia's environment and natural resources, which are actively being harmed by climate change. As a Muslim, Layla believes God intended for people to be stewards of his creation and vested humans with a responsibility to protect the Earth. Layla fosters her connection to her faith by caring for all creatures and humans in her community, from building leaf bridges for ants to cross flooded sidewalks when she was younger, to training to become an Emergency Medical Services provider today. The destruction

of Virginia's environment and natural resources and the human suffering from climate change harms her religious interests, and impedes her ability to connect to the natural environment around her.

21. Layla is also experiencing increased stress, anxiety, depression, and an existential dread over climate change. Layla is often consumed with anxiety over how her family will afford to continue paying for damage caused by severe storms. She experiences stress and fear of sudden storms potentially causing trees to fall and damage her home, harming her or her family. Layla is fearful that she may suffer again from debilitating heat exhaustion or heat rash in Virginia's increasingly hotter temperatures. Layla's stress and anxiety is compounded by her government's betrayal—Layla thought she could trust Defendants to protect her future but knows they continue to take actions that make climate change worse.

22. Plaintiff **Amaya T.** is a 13-year-old resident of Richmond, Virginia. Amaya was diagnosed with asthma when she was 3 years old, and must take a steroid inhaler twice a day, and use another inhaler if she begins to have an asthma attack. Declining air quality due to climate change and pollution from the burning of fossil fuels triggers Amaya's asthma. When Amaya has an asthma attack, she feels tightness in her chest and her airways constrict as she immediately begins searching for her inhaler while focusing on taking deep breathes. Amaya regularly monitors her local air quality because she is more likely to have an asthma attack on days with worse air quality. Climate change and GHG pollution will continue to worsen and exacerbate her asthma.

23. Rising temperatures caused by climate change prevent Amaya from participating in outdoor sports, which are important to her health and wellbeing. In 2021, several of her spring track meets were canceled because of the extreme heat. On the days when she can train and compete, the heat often feels unbearable, and the shade offers little respite. Amaya has experienced

overheating due to extreme heat and her performance at track events has suffered. Extreme heat is also making it difficult for Amaya's family to maintain their garden, an important source of sustenance and nutrition for Amaya because she lives in a food desert. During recent summers, Amaya's family must water their garden significantly more compared to past summers to keep their plants alive.

24. As climate change causes increased incidences of extreme precipitation and flooding, places along the James River, where Amaya regularly recreates, including Pony Pasture and Brown's Island, become flooded and impassible. Thus, climate change has, and continues to, thwart Amaya's ability to safely access and recreate along the James River.

25. Amaya regularly eats local crab, shrimp, and crawfish as an important part of her diet and family culture. However, ocean acidification, caused by GHG pollution, is harming and degrading shellfish in the ocean and Chesapeake Bay, reducing Amaya's ability to access shellfish and causing an increase in prices. GHG pollution will continue to decrease her ability to access this important food source.

26. Climate change is also decreasing Amaya's ability to catch fish and recreate in Virginia's waterways. Amaya regularly goes boating and fishes near Virginia Beach, Yorktown, Hampton, and Chesapeake Bay inlets. Climate change is warming Virginia's coastal waters, stressing fish, reducing dissolved oxygen, and increasing fish-killing dead zones. Amaya used to be able to catch 10–12 spot and croaker fish each time she went fishing, but when she fishes now she is catching 4 or fewer.

27. Amaya is Christian and believes that God entrusted people to protect the land, waters, and air. She often attends church service outdoors and feels most connected to God's creation outside. The continued damage she's witnessing and experiencing to Virginia's land,

waters, and air from Defendants' actions exacerbating climate change harms her religious interests by degrading the resources she is spiritually connected to and entrusted with protecting. Amaya is deeply concerned about the disproportionate impacts of climate change and fossil fuel infrastructure in black and brown communities, such as the community where she lives. The climate crisis is a constant source of stress for Amaya, who feels her childhood has been spent worrying about the Earth deteriorating when instead she should be planning her future.

28. Plaintiff **Claudia Sachs** is an 18-year-old from Richmond, Virginia. Increasing summer temperatures from anthropogenic climate change are harming Claudia's ability to perform her job and causing economic losses. Over the summers, Claudia works at an outdoor restaurant in Richmond as a hostess. During hot days, which are increasingly common, Claudia has become delirious and confused, struggles to communicate properly, makes more mistakes, and struggles to maintain her balance at work. The hot summer days also deter customers from frequenting the business, resulting in lost income for Claudia. Claudia also works at a youth outdoor summer camp in Richmond as a counselor. She educates the children at the camp about nature and leads recreation activities in the woods and near the James River. However, in the last 3 years, Claudia was often unable to complete simple activities with the children, like hiking or going to a local park, because the extreme heat made it dangerous for them to exert themselves outdoors.

29. Climate change is impeding Claudia from engaging in recreational activities throughout the Commonwealth. Claudia plays tennis and often visits the James River to swim, kayak, and paddleboard, but is no longer able to participate in these activities between 10am to 5pm during the summer because of the risk of heat exhaustion. Claudia used to cool off on hot summer days in the James River, a staple in her Richmond childhood, but the rocks and beach by the river are now too hot to safely sit on during the day. More frequent flash flooding is also

occurring in the James River because of climate change, and Claudia must avoid the river entirely for several days until the flood waters recede.

30. Claudia used to go camping in Shenandoah National Park every summer with her family. This was an important family tradition where she would spend quality time with her loved ones. Now, she is only able to visit in the spring and the fall because of unbearably hot summer temperatures. When she does visit, she sees that the beautiful mountain ranges she viewed as a young child are now ravaged by strips of deforestation to make way for fossil fuel infrastructure. Claudia has lost both the scenic views she once cherished and an important family tradition because of Virginia's continued development of fossil fuel infrastructure.

31. Claudia is Jewish and her religion fuels her passion to fight climate change. She follows the Jewish teaching of tikkun olam, meaning "repair the world." However, climate change fills Claudia with an overwhelming sense of dread that has been mentally debilitating, sapping her of time and energy she wants to channel towards solving this crisis.

32. Claudia feels the stress of climate change's impacts on her life. Despite wanting children, Claudia worries it is unsafe for her to bring more children into the world in the future, where they would come of age when some of the worst climate impacts are projected to occur. Claudia would not want another being to suffer from heat stress or food insecurity because of her choices.

33. Plaintiff **Cedar B.** is a 10-year-old from Blacksburg, Virginia. Climate change is contributing to the rapid spread of blacklegged ticks (*Ixodes scapularis)* to Southwest Virginia, and in the summer of 2021, Cedar contracted Lyme disease from a tick in the woods behind his house. For about a week, Cedar suffered from nausea, vomiting, fever, headaches, and rashes. Cedar was so weak and drained of energy he could barely sit up and was unable to play or even

read a book. After four visits to three different physicians, Cedar was finally diagnosed with early disseminated stage Lyme disease. Cedar continued to feel weak for several weeks during his treatment with antibiotics, and as his doctor told his family, it would take months until Cedar was back to his previous levels of physical activity and energy. Climate change continues to put Cedar at risk for contracting Lyme disease again. Even though his family conducts tick checks every evening and Cedar avoids leaf litter, where these ticks often shelter, being outside in his local woods poses a threat to Cedar's health and well-being.

34. Cedar's health is also impacted by his seasonal allergies, which results in symptoms including a cough and congestion. As a result of climate change, there is an increase in airborne pollen, which exacerbates allergies.

35. Cedar's safety is threatened by ash trees in his neighborhood that have been decimated by emerald ash borers, an invasive beetle that thrives in higher temperatures brought on by climate change. The infected ash trees become brittle and can unpredictably fall. Cedar cannot go into the woods when it's windy because of the risk of a tree or branch suddenly falling. Cedar's community has also spent a significant amount of money to remove many of these hazardous trees near their property.

36. Increasing drought conditions in Virginia due to climate change have reduced fruit yields in the community orchard Cedar's family has invested and bought into. Droughts have also made it harder for Cedar and his family to forage for mushrooms in their local woods, which thrive in moist conditions. Hotter conditions are also reducing water levels in Poverty Creek during the summer, where Cedar plays, catches crawdads, and looks for fish. The lower water levels reduce Cedar's ability to recreate in the creek.

37. Plaintiff **Julian Schenker** is a 19-year-old student who lives in Blacksburg on his family's 2-acre certified organic vegetable farm, Greenstar Farm. The family farm has been in business since 1991 and Julian's family primarily makes a living by selling produce at the Blacksburg Farmers market and to local restaurants and grocery stores. Climate change is threatening Julian and his family's livelihood and self-sufficient homestead. The onset of earlier and warmer springs caused by climate change disrupts the spring harvests of overwintering vegetables, like spinach and radish. The vegetables flower early and become bitter and unsellable, which results in lost income for Julian and his family.

38. Climate change is altering insect populations in Appalachia and on Julian's family farm. Changing weather patterns, including warming temperatures, are contributing to widespread declines of pollinators, such as bees and butterflies, including monarchs and swallowtails, that are essential for the success of Julian's family farm. For example, three out of the seven bee hives on Julian's family farm died in the winter of 2020, substantially reducing the quantity of honey they were able to sell at market. Warming temperatures are also creating more favorable environments for pests in Julian's family farm, including cucumber beetles, flea beetles, and harlequin bugs. Fungal diseases, mildew, and insect blights, exacerbated by climate change, are causing crop failures, reducing crop yields, and making other crops inedible and unsellable.

39. Increasing dry periods have dried out the farm's soil, depleting plants of the necessary moisture, increasing the need for irrigation. In 2020, one of the farm's wells that Julian's family relies on for drinking water and irrigation completely dried up for the first time. At the same time, extreme precipitation events are increasing in frequency, damaging plants and causing flash floods and increased water runoff, leading to erosion and depletion of organic matter in the soil. The resulting less healthy soils have decreased crop yields on Julian's family farm and resulted in

lost income. Extreme precipitation also causes flash floods that have washed out the driveway at Julian's house twice in the past 5 years, requiring them to re-gravel their driveway each time.

40. Julian has anxiety about his family's ability to generate revenue from the farm each year in the face of crop failures and decreasing crop yields, and laments the uncertainty of his family legacy to provide organic and nutritious food to his local community. Climate change threatens the very viability of Julian's family farm, their income, and entire way of life.

41. Climate change is harming Julian's health as more pollen enters the air for longer durations each year. In 2019, Julian began experiencing frequent congestion from allergies for the first time due to the increased pollen. Julian continues to experience congestion from allergies each spring and summer.

42. The emerald ash borers, whose populations are increasing due to climate change, are decimating the ash trees in the forest around Julian's family farm, where Julian frequently recreates, and causing trees and branches to fall without warning. Julian now feels unsafe in the woods that were once his haven. Julian also watches the creek through his property dry up earlier and earlier each year forcing his family to carefully ration the decreasing water flow, which is a source of irrigation water, and causing the frogs and other wildlife important to Julian to disappear each summer.

43. Plaintiff **Ava L.** is a 17-year-old high school student from Blacksburg. Ava has grown up in her family's Appalachian culture in which nature and the environment play a foundational role in her life. Nature is a sanctuary for her and she is suffering psychological harm seeing her outdoor traditions that are crucial for her cultural, physical, and mental wellbeing, become more challenging and impossible to enjoy due to climate change. Each winter, Ava works with her family and community to build an igloo as part of a family and cultural tradition.

However, due to rising temperatures, snow is increasingly rare and in the 2019–2020 winter, Ava's family was unable to build the annual igloo for the first time in Ava's memory. Ava has also been unable to go cross-country skiing and ice skating outdoors in recent winters due to the lack of snow and ice in increasingly warming temperatures. Climate changes causes Ava to feel disconnected from her culture, community, and long-standing family traditions.

44. Ava regularly recreates in the forest behind her house which has a significant amount of ash trees. Emerald ash borers are weakening the ash trees, causing trees and branches to abruptly fall. Because Ava spends a lot of time in the forest, the increase in dead and falling trees is an imminent risk to her health and safety. In one instance, Ava was walking in the woods and narrowly avoided a falling ash tree. The increased danger has inhibited Ava's ability to access and spend time in the woods. Ava's family has had to remove dead and dying ash trees around her house at great expense to her family, and there is a high likelihood that Ava's family will incur additional expenses removing the remaining ash trees. These trees would ordinarily live a longer life span were it not for the effects of climate change.

45. Ava's father, Peter, is a developer and over the last several years, severe flooding associated with climate change has created notable delays in his projects, thereby harming Ava's family's financial security and causing her psychological distress. Extreme weather events continue to disrupt Ava's father's work and harm her family's financial security. Flooding has also resulted in Ava's school being closed several days a year.

46. Ava's physical and mental health is harmed by climate change. Ava has asthma and also experiences seasonal allergies, which greatly deteriorate her quality of life in the spring. Because of an extended warm season and earlier spring, the season for allergies has grown, making Ava experience allergies not only more severely, but for a longer period of time each year.

Additionally, Ava has chronic knee pain which is sensitive to changes in barometric pressure. She cannot walk for long periods of time and in eighth grade, she began using a wheelchair on some days. Her knee pain has been worsening in recent years due to increasing vapor pressure and humidity caused by rising temperatures. Ava's mental health also suffers as a result of climate change. She experiences constant anxiety about climate change and although she has always seen herself becoming a mother, she is now questioning whether she should bring more children into a world where they will bear the burden of a worsening climate crisis.

47. Plaintiff **Cadence R-H.** is a 10-year-old resident of Fredericksburg, Virginia. Drought, induced by climate change, is drying up the creeks that Cadence views and plays in such as at Alum Springs Park in Fredericksburg. Climate change is also inhibiting Cadence from safely recreating in the Virginian rivers and lakes where she swims. In the summer of 2021, Cadence could not safely swim in Rappahannock River because the water oscillated between being too low from drought, which causes degraded water quality, or too high from extreme precipitation, which causes dangerous currents. Cadence has also frequently been unable to swim in the waters of the Potomac at Colonial Beach over the past 2 years. Climate change has warmed the waters of the Potomac, drawing more jellyfish to the area which can leave swimmers with painful stings. There are times when Cadence's family goes to Colonial Beach to swim, only to not swim or depart quickly when the presence of jellyfish becomes obvious. Cadence has also been unable to swim in Lake Anna as much as she used to because frequent harmful algae blooms, exacerbated by climate change, now often inundate portions of its waters. Cadence could not swim in Lake Anna at all in 2021 due to an extended harmful algae bloom advisory.

48. More extreme storms caused by climate change can block Cadence's access to recreation areas, stores, and her main route to school. For example, in 2021, a large storm downed

hundreds of trees in the Fredericksburg National Battlefield Park near her house, blocking off access to numerous bike and hiking trails where Cadence recreates. Cadence's main route to school has been made impassible by flash flooding over the road. Her family must either find a new route around the flood zones, or wait until after the storm has passed and the flood waters retreat. Extreme storms continue to threaten Cadence's ability to travel.

49. Increasingly hot summers due to climate change make it difficult for Cadence to recreate outside without overheating, and staying safely hydrated is a greater challenge. In 2021, Cadence had to spend more time indoors after feeling exhausted from being in the heat for short periods of time. During the school year, if Cadence does not hydrate adequately, which is harder to do in the increasingly hot temperatures, she gets headaches when it's hot inside her classrooms which hinders her ability to focus in class. Extreme weather events and heat pose an ongoing threat to Cadence's safety and health. The increasing prevalence of disease-carrying ticks in Virginia also poses an imminent threat to Cadence's health. Cadence has been bit by a tick, and while a blood test revealed she did not have Lyme disease, ticks continue to pose a danger to her health and safety.

50. Cadence is worried about how climate change will impact her safety and well-being. As climate change increases the number of tornadoes in Virginia, Cadence and her family have received numerous tornado warnings. During these warnings, Cadence began bringing a suitcase with pictures of her friends and stuffed animals into her basement where her family seeks shelter. Eventually she decided to leave the suitcase in the basement altogether, due to her ongoing anxiety about severe weather. Cadence is afraid to unpack her suitcase because she does not want to be rushed to gather her most cherished items as more frequent tornado and other severe storm warnings cause her family to frequently dash to the basement. Cadence is often terrified during

these tornado warnings that the things she loves that she cannot fit in her suitcase—like her home—will be lost. Cadence has anxiety that when she gets older Virginia will continue to get hotter and more dangerous for herself, her family, and the people she loves, and that the natural places she loves and recreates in will become increasingly degraded and may eventually disappear.

51. Plaintiff **Tyrique B.** is a 14-year-old resident of Roanoke, Virginia. In 2019, Tyrique was diagnosed with alpha-gal syndrome, an allergy to red meat and products made from mammals, including beef, pork, and cow's milk, that is triggered by the bite of a lone star or blacklegged tick. Tyrique has allergic reactions after eating red meat, including watery eyes, sneezing, and wheezing, and had to change his diet dramatically after his diagnosis. Tyrique now carries an EpiPen with him everywhere he goes and must always be vigilant when eating to ensure that there is no cross-contamination with anything used to prepare red meat and his food. Tyrique used to eat beef and pork, and now feels cut off from an important part of his life and family culture. Climate change is contributing to the spread of ticks in Virginia, which can carry the alpha-gal allergy. These ticks continue to jeopardize Tyrique's safety and put him at risk for many other vector-borne diseases.

52. Tyrique also suffers from seasonal pollen allergies to trees and grasses that are lasting longer and becoming worse each year as climate change extends the warm seasons and increases pollen production. Tyrique's allergies result in frequent sneezing, congestion, and itchy, watery, and swollen eyes. Tyrique is required to purchase over-the-counter and prescription medication, which he takes for his allergy symptoms, but still struggles to sleep at night during the spring and summer, often waking up wheezing with phlegm blocking his nose and throat.

53. Climate change is creating extreme precipitation events that flood the Roanoke River Greenway where Tyrique and his family regularly recreate, closing the area down for several

days until the floodwaters subside. In 2021, flooding cut off Tyrique's access to the majority of the path he and his family use on three different occasions, and his access to Wasena Park, located along the trail.

54. Rising summer temperatures from climate change have made it dangerous for Tyrique to recreate outdoors. Tyrique lives walking distance from Wasena Park and Smith Park, and on summer days he will walk to them with his family, but it is increasingly too hot to safely recreate at the park. Tyrique has suffered from heat rash on hot days, sapping his energy and creating an intensely itchy feeling all over his skin. Tyrique worries if nothing changes, he will not be able to safely spend time outside in the summer because of extreme heat due to climate change.

55. Plaintiff **Giovanna F.** is a 13-year-old middle school student, descendant of the Miskito people, native to Central America, and a life-long resident of Chesterfield County, Virginia. In 2018, Giovanna became very ill, with what was eventually diagnosed as Lyme disease. She was light-headed, dizzy, nauseous, chronically fatigued, anemic, vitamin D deficient, and became vision-impaired. About a year after the onset of these symptoms, Giovanna was diagnosed with Lyme disease, which is increasingly common in Virginia as ticks have expanded rapidly due to climate change. While treatment with antibiotics eventually eased many of Giovanna's symptoms, her vision is permanently impaired and she still struggles with fatigue that has prevented her from participating in the sports she loves, including soccer. Giovanna is haunted by the memories of ticks she has found on her—waking up to one on her neck and finding a bloody tick on her leg—and continuously checks for them and avoids tall grass to try to prevent getting bit. Nevertheless, Giovanna remains at risk of getting bitten by another tick in Virginia as climate change creates favorable environments for ticks, which can carry a number of vector-borne diseases including Lyme disease.

56. Giovanna's ongoing fatigue symptoms are exacerbated in the summer by rising temperatures due to climate change. On the increasingly hot summer days she becomes exhausted and cannot participate in outdoor activities with her family and friends. Inside, Giovanna's family must carefully monitor their use of air conditioning because of the high cost of energy; Giovanna often cannot fully escape the extreme heat even indoors.

57. Increasing droughts in Virginia brought on by climate change have reduced the residential water sources Giovanna relies on, causing water restrictions and increased water prices. Giovanna's family has a garden that they use for sustenance. However, her family must let the garden wither every August instead of paying exorbitant rates for the extra water required to maintain it, thereby losing an important food source.

58. Many coastal places that Giovanna regularly visits and recreates are being lost to sea level rise, caused by climate change. Giovanna visits Virginia Beach, Huntington Beach in Newport News, Chincoteague Island, and Assateague Island, where Giovanna swims, fishes, and watches wild horses. These beach and coastal areas are being inundated as sea levels rise and Chincoteague and Assateague Islands, which are low-lying barrier islands, may be entirely lost to sea level rise within Giovanna's lifetime. Knowing that these areas may soon be lost forever due to sea level rise is distressing to Giovanna.

59. Plaintiff **Elizabeth M.** is a 15-year-old life-long resident of Vienna, Virginia. Climate change is causing increasingly hotter summer temperatures that are making it difficult for Elizabeth to safely spend time outside. When Elizabeth does go outside, she often becomes exhausted and over-heated, even without engaging in physical activity. Elizabeth has suffered heat exhaustion from being outdoors in the summer—experiencing nausea and vomiting. When Elizabeth was 12 years old, she was walking outdoors and blacked out from heat exhaustion. When

she regained awareness of her surroundings, Elizabeth was sitting down with no memory of how she got there. Hotter temperatures continue to put Elizabeth's health and safety at risk.

60. Climate change is thwarting Elizabeth's ability to safely engage in life-long activities. Elizabeth has been riding horses 1–2 times each week year-round since she was 5 years old. However, Elizabeth had to forgo riding horses for most of summer 2021 when frequent thunderstorms, alternating with hot days, made it dangerous for Elizabeth to be outdoors. Elizabeth has also skied since she was 2 years old and is on a race team. Warmer winter temperatures due to climate change shortened the ski season and Elizabeth is not able to ski and race for as many days in the winter as she used to.

61. Elizabeth's stress and anxiety over climate change impacts her daily life. Elizabeth feels a loss of motivation to focus on accomplishing her goals of going to college and finding her dream job because of the existential dread she feels knowing that her future will be plagued by severe climate events. Elizabeth's feelings of hopelessness from climate change compound her depression, and make it harder for her to recover. Elizabeth feels betrayed by her government's ongoing permitting of fossil fuel projects, despite the overwhelming evidence of climate change's impacts on Virginia and its youth.

62. Plaintiff **Maryn O.** is a 12-year-old middle-school student who lives in Blacksburg, Virginia. Maryn regularly observes wildlife and understands the complex interactions within an ecosystem that allow each plant and animal to function. Maryn used to visit an Elliston-area creek to catch crawdads and view wildlife and forage in the area for plants with medicinal properties, berries, and other edible vegetation. Maryn can no longer access the area to do these activities because this area was decimated to make way for the Mountain Valley Pipeline. Ongoing fossil fuel permitting approvals in Virginia continue to threaten the wild places where Maryn recreates

and forages, as blasting ridges, digging trenches, boring tunnels, placing pipe, and maintaining a treeless 50-foot easement will further degrade some of Maryn's favorite woodlands and waterways.

63. Maryn's ability to safely recreate in Virginia's forests is harmed by the increasing presence of ticks, which has spread and grown dramatically in Virginia due to climate change. As Maryn grew up, she took precautions to wear long pants and do tick checks after recreating in the forests in the spring and summer, and found embedded ticks in her skin again when she was 3, 5, and 11 years old. Maryn was treated for Lyme disease when she was 5 years old after showing symptoms of Lyme disease, including nausea and vomiting. Maryn has noticed more ticks in recent years and now diligently does tick checks in the fall and winter as warmer temperatures allow ticks to thrive for longer. The increasing presence of ticks in areas where Maryn recreates poses an ongoing and imminent threat to her health and safety.

64. Maryn also recreates at Pandapas Pond near Blacksburg, fishing and watching wildlife there. In the summer of 2021, Maryn had to avoid the area entirely after the State and local health district advised a harmful algal bloom invaded the pond. Climate change continues to increase the incidence of harmful algal blooms in Virginia, which threaten Maryn's ability to safely access and recreate in Virginia's waterways.

65. Climate change is causing increasingly frequent and intense storms that threaten Maryn's personal safety and security. For example, on September 1, 2021, Hurricane Ida created two tornadoes in Maryn's county and a third funnel cloud almost touched down on Maryn's street. Maryn and her family took shelter in their basement after receiving the tornado warnings. More frequent tropical storms and hurricanes which regularly spawn tornados on their outer edges, continue to threaten Maryn's safety, home, and family. Flooding from increasingly severe storms

also inundates roadways, preventing buses and other vehicles from using the streets and in 2015, 2017, 2019, and 2020, even forced Maryn's school to close.

66. Maryn is also experiencing increasing levels of stress from the climate crisis. Maryn must not only cope with dangerous weather events that are becoming increasingly more common, she is also very concerned for the plants and wildlife she loves and their ability to survive a rapidly changing environment. Maryn aspires to be a Conservation Officer to protect ecological resources, but worries that many of the wild places and animals she would be protecting will be harmed by climate change and she may not have a job to protect them. This ongoing stress is negatively impacting Maryn's mental well-being and is exacerbated by her government's betrayal of her generation by continuing to permit fossil fuel infrastructure.

67. Plaintiff **Kyla H.** is a 16-year-old resident of Springfield, Virginia. Growing up, Kyla loved watching monarch butterflies in the spring time, but due to changing climate conditions, to which monarch butterflies are particularly vulnerable, they rarely see them anymore.

68. The frequency and severity of extreme precipitation events, due to climate change, have caused harm to Kyla's property and threaten their safety. Kyla's property is regularly impacted by flash flooding, causing their driveway and road to flood and making it impossible for Kyla to leave their house. Some of the flooding events have caused damage to Kyla's driveway. Most recently, the heavy rainfall from Hurricane Ida further eroded their driveway and caused a sinkhole. Extreme precipitation and wind events have also caused trees to fall on Kyla's property, and in 2021 one tree fell on powerlines. Repairing their damaged driveway and removing fallen trees has cost Kyla's family a significant amount of money. The increasing frequency and severity of extreme weather events continues to pose an imminent and ongoing risk to Kyla's personal safety, well-being, and property.

69. Kyla's ability to safely participate in outdoor activities, including sporting events, has been increasingly difficult due to climate change. In recent years, Kyla has experienced extreme heat during track meets. At one track meet, Kyla overheated and had a hard time breathing, and could barely move for a half hour following the race. Rising temperatures will continue to impact Kyla's ability to safety participate in sporting events and other outdoor recreational activities. Kyla and their family make an annual visit to Corolla Beach in the Outer Banks. On their most recent visit, Kyla was unable to swim in the ocean, as they have in the past, because of the presence of sea lice, which are now thriving in the warmer waters. Even after brief swims, Kyla would be itchy due to the sea lice for an hour or more. Kyla has developed anxiety as they become more impacted by climate change and more concerned about their future.

70. Plaintiff **Katerina Leedy** is an 18-year-old life-long resident of Blacksburg, Virginia. Katerina hikes, camps, and kayaks in Southwest Virginia. Rising temperatures, especially during the summer, have made it difficult for Katerina to be outside for long periods of time. Katerina often must stay indoors, sedentary in her home, instead of participating in the outdoor activities she loves and that help her stay healthy because of the increasingly intolerable heat.

71. Katerina is a competitive athlete, playing on soccer and track teams year-round. Katerina's soccer games include frequent and mandated water breaks to keep the athletes hydrated. In August 2019, Katerina was playing in a competitive soccer game in high temperatures and, despite being properly hydrated, she began experiencing symptoms of heat exhaustion. Katerina felt weak, nauseated, and broke into a cold sweat necessitating she leave the field. As temperatures continue to rise in Virginia, Katerina is at an ongoing increasing risk of developing heat exhaustion again.

72. Katerina also suffers from symptoms of sports-induced asthma which are exacerbated by both increasing temperatures due to climate change and particulate matter in the air from burning fossil fuels. When Katerina was 11 years old, she began experiencing shortness of breath, wheezing, and chest tightness when exercising. Now each time before she exercises, Katerina uses an inhaler her doctor prescribed her to try to prevent these symptoms. Strenuous exercise still triggers Katerina's asthma symptoms in the summer, and Katerina experiences symptoms more frequently due to rising temperatures.

73. Katerina has stress, anxiety, and fear that she will become increasingly unable to participate in the activities she loves in the future as the planet continues to warm. Climate change continues to impact Katerina's mental health and overall well-being and is a core factor in her future plans and decision-making.

74. As described above, Plaintiffs are being harmed in uniquely, individual, and particularized ways by Defendants' policy and practice of approving permits for fossil fuel infrastructure in the Commonwealth of Virginia, including permits for the production, transport, and burning of fossil fuels. Plaintiffs are experiencing economic, property, aesthetic, cultural, and physical, mental, and psychological health injuries due to Defendants' conduct. Plaintiffs are also being injured because Defendants continue to put them at greater risk of even more injuries than they already experience, as Defendants' policy and practice of approving permits for fossil fuel infrastructure continues and the climate crisis worsens. Defendants' conduct places Plaintiffs at great risk of sustaining additional irreversible economic, property, aesthetic, cultural, and physical, mental and psychological health injuries. Defendants' conduct hastens the irreversibility and worsening of the existing injuries and that hastening in and of itself is an injury to Plaintiffs.

75. If Defendants' policy and practice of approving permits for fossil fuel infrastructure is not declared unconstitutional, Plaintiffs, given their youth, will disproportionately and irrevocably suffer from the worsening injuries caused by Defendants' conduct and the hastening irreversibility of them. If Defendants' policy and practice of approving permits for fossil fuel infrastructure is declared unconstitutional, on information and belief, Defendants will take corrective action and change and/or cease their unconstitutional policies and practices. If Defendants' policy and practice of approving permits for fossil fuel infrastructure is declared unconstitutional and Defendants thereafter abide by this Court's declaratory judgment, it is substantially likely that Plaintiffs' injuries will be minimized by the Commonwealth, reduced to some meaningful extent, or in some cases abated entirely. The hastening of the irreversibility of these injuries will also slow or cease.

76. Until the Court resolves this constitutional controversy, these young Plaintiffs will continue to be harmed and put at extreme risk by the GHG pollution caused by Defendants' policy and practice of approving permits for fossil fuel infrastructure. Defendants will be free to continue approving permits for fossil fuel infrastructure that cause harmful GHG pollution in an unconstitutional manner, avoiding the constitutional check of the judiciary and undermining the separation of powers.

77. Declaratory judgment will eliminate the current and substantial legal controversy and inform the parties of the unlawfulness or lawfulness of Defendants' policy and practice of approving permits for fossil fuel infrastructure and whether Defendants' conduct causes a deprivation of rights secured by the Constitution. That declaratory judgment will have immediate practical consequences and will provide meaningful redress because, upon information and belief,

Defendants will abide by any declaratory judgment order and bring their policy and practice of approving permits for fossil fuel infrastructure into constitutional compliance.

B. DEFENDANTS

78. Defendant **Commonwealth of Virginia**, as state sovereign, holds the public domain, including Virginia's atmosphere (air), lands, and waters in trust for the benefit of the public. Defendant Commonwealth of Virginia cannot act in a manner that infringes upon Plaintiffs' *jus publicum* or substantive due process rights. The Commonwealth of Virginia has created, and continues to operate, a statewide statutory framework under which Defendant agencies permit fossil fuel infrastructure, which causes dangerous levels of GHG pollution, causes and contributes to the climate crisis, and causes grave harm to Youth Plaintiffs in violation of their *jus publicum* and due process rights.

79. Defendant **Governor Glenn Youngkin** is sued in his official capacity as Governor of the Commonwealth of Virginia. Pursuant to the Virginian Constitution, "[t]he Governor shall take care that the laws be faithfully executed."[12] Defendant Youngkin is the "chief planning and budget officer of the Commonwealth."[13] Defendant Youngkin appoints all administrative departments heads,[14] and has "authority and responsibility for the formulation and administration of the policies of the executive branch . . . ."[15] Defendant Youngkin provides direction and control over Defendant agencies.[16] Under Governor Youngkin's direction and control Defendants exercise their statutory authority and discretion to permit fossil fuel infrastructure, which causes dangerous

[12] Va. Const. art. V, §§ 1, 7.
[13] Va. Code § 2.2-103(C).
[14] Va. Const. art. V, § 10.
[15] Va. Code § 2.2-103(A).
[16] *See, e.g.,* Va. Code §§ 45.2-104, 10.1-1185.

levels of GHG pollution, causes and contributes to the climate crisis, and causes grave harm to Youth Plaintiffs in violation of their *jus publicum* and due process rights.

80. Defendant **Virginia Department of Energy ("Virginia Energy")** is an agency of the Commonwealth of Virginia and includes the Division of Gas and Oil and the Division of Mines. Virginia Energy is required to protect the health, safety, and general welfare of Virginia's citizens and is required to protect Virginia's environment, including its atmosphere, lands, and waters, from pollution, impairment, or destruction. Virginia Energy implements the Commonwealth's energy policy, including the unconstitutional statutory mandate to maximize production of Virginia's coal, oil, and gas resources. Virginia Energy has a long-standing policy and practice of exercising its statutory directives and discretion to permit fossil fuel infrastructure, including the production and transport of fossil fuels, which causes dangerous levels of GHG pollution, causes and contributes to the climate crisis, and causes grave harm to Youth Plaintiffs in violation of their *jus publicum* and due process rights.

81. Defendant **John Warren** is the Director of Virginia Energy and is sued in his official capacity. As the Director of Virginia Energy, Defendant Warren is required to protect the health, safety, and general welfare of Virginia's citizens and is required to protect Virginia's environment, including its atmosphere, lands, and waters, from pollution, impairment, or destruction.[17] Defendant Warren implements Virginia energy policy and carries out the unconstitutional statutory mandate to maximize production of Virginia's coal, oil, and gas resources.[18] Under Defendant Warren's directive, Virginia Energy permits fossil fuel infrastructure, including the production and transport of fossil fuels, which causes dangerous levels

[17] Va. Code § 45.2-1629.
[18] Va. Code § 45.2-1602.

of GHG pollution, causes and contributes to the climate crisis, and causes grave harm to Youth Plaintiffs in violation of their *jus publicum* and due process rights.

82. Defendant **Virginia Department of Environmental Quality ("DEQ")** is an agency of the Commonwealth of Virginia.[19] Defendant DEQ is required to promote the health, safety, and general welfare of the citizens of the Commonwealth of Virginia. Defendant DEQ has an obligation to protect the Commonwealth's environment and natural resources, including the atmosphere, lands, and waters from pollution, impairment, or destruction.[20] Defendant DEQ has a long-standing policy and practice of exercising its statutory directives and discretion to permit fossil fuel infrastructure, including the transport and burning of fossil fuels, which causes dangerous levels of GHG pollution, causes and contributes to the climate crisis, and causes grave harm to Youth Plaintiffs in violation of their *jus publicum* and due process rights.

83. Defendant **Michael Rolband** is the Director of DEQ and is sued in his official capacity. As the Director of DEQ, Defendant Rolband is required to protect the health, safety, and general welfare of Virginia's citizens and is required to protect Virginia's environment, including its atmosphere, lands, and waters, from pollution, impairment, or destruction.[21] Defendant Rolband has supervisory and management powers over DEQ, including the actions the agency takes with respect to DEQ's permitting decisions.[22] Under Defendant Rolband's directive, the DEQ permits fossil fuel infrastructure, including the transport and burning of fossil fuels, which causes dangerous levels of GHG pollution, causes and contributes to the climate crisis, and causes grave harm to Youth Plaintiffs in violation of their *jus publicum* and due process rights.

[19] Va. Code § 10.1-1183.
[20] Va. Code § 10.1-1183(B)(1); Va. Const. art. XI, § 1.
[21] Va. Code § 45.2-1629.
[22] Va. Code § 10.1-1185.

STATEMENT OF THE FACTS

I. The Commonwealth of Virginia has Admitted that Climate Change is an Urgent and Pressing Crisis that Requires Swift Decarbonization.

84. The Commonwealth of Virginia has known of the dangers of climate change since at least 1986 when Virginia established the Coastal Zone Management Program ("CZMP") under the federal Coastal Zone Management Act ("CZMA").[23] The CZMA states in part: "Because global warming may result in a substantial sea level rise with serious adverse effects in the coastal zone, coastal states must anticipate and plan for such an occurrence."[24] The CZMP has been re-authorized by every Virginia Governor since 1986.[25]

85. The Commonwealth of Virginia has known since at least 1991 that fossil fuels are the primary driver of dangerous climate change.[26] In 1998, a Senate Joint resolution warned of "disastrous effects" from the burning of fossil fuels.[27]

86. Virginia's General Assembly has found that "[c]limate change is an urgent and pressing challenge for the Commonwealth. Swift decarbonization and a transition to clean energy are required to meet the urgency of the challenge."[28]

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[23] NOAA Office for Coastal Management, *Coastal Zome Management Programs*, https://coast.noaa.gov/czm/mystate/#virginia.
[24] 16 U.S.C. § 1451(l).
[25] Governor Ralph S. Northam, *Letter to Constitute the Virginia Coastal Zone Management Program in Perpetuity* (2018), https://www.deq.virginia.gov/Portals/0/DEQ/CoastalZoneManagement/DescriptionBoundary/VA_CZM_Letter_to_Continue_Program_in_Perpetuity_9-4-18.pdf.
[26] *See, e.g.*, *Joint Subcommittee Studying the Use of Vehicles Powered by Clean Transportation Fuels, Report to the Governor and the General Assembly of Virginia*, H.D. 50, 1991, Reg. Sess. at 76 (Va. 1991), https://rga.lis.virginia.gov/Published/1991/HD50/PDF (reporting fuels such as methanol and natural gas contributed to "greenhouse problem," while fuels like electric and hydrogen had "big greenhouse advantage").
[27] S.J. Res. 58, 1998, Reg. Sess. (Va. 1998), https://lis.virginia.gov/cgi-bin/legp604.exe?981+ful+SJ58+pdf (declaring a rise in global temperatures caused by human combustion of fossil fuels "could have disastrous effects on the earth's environment . . . .").
[28] Va. Code § 45.2-1705(4).

II. Defendants Permit Fossil Fuel Infrastructure.

87. Notwithstanding Defendants' longstanding knowledge of the dangers of fossil fuels, GHG pollution, and climate change, Defendants continue approving permits for fossil fuel infrastructure in the Commonwealth of Virginia, including permits for the production, transport, and burning of fossil fuels.

88. Defendant Virginia Energy is statutorily directed to maximize the exploration, development, and production of coal, oil, and gas resources.

89. Pursuant to sections 45.2-1602(1), (2), and (5), the "purposes" of the Virginia Gas and Oil Act include to:

> [F]oster, encourage and promote the safe and efficient exploration for and development, production, utilization, and conservation of the Commonwealth's gas and oil resources; . . .
>
> [M]aximizing exploration, development, production, and utilization of gas and oil resources; . . .
>
> To maximize the production and recovery of coal without substantially affecting the right of a gas or oil owner proposing to drill a gas or oil well to explore for and produce gas or oil[.]

90. Pursuant to sections 45.2-1614(A)(1), (A)(2), (A)(4), and (B)(6), the Virginia Gas and Oil Board "shall":

> Foster, encourage, and promote the safe and efficient exploration for and development, production, and conservation of gas and oil resources located in the Commonwealth;
>
> Administer a method of gas and oil conservation for the purpose of maximizing exploration, development, production, and utilization of gas and oil resources; . . .
>
> Promote the maximum production and recovery of coal without substantially affecting the right of a gas owner proposing a gas well to explore for and produce gas; and . . .
>
> Provide for the maximum recovery of coal.

91. Pursuant to these statutory directives, Defendant Virginia Energy exercises its statutory authority and discretion contained in other statutes to facilitate and promote the permitting of fossil fuel infrastructure in the Commonwealth of Virginia. For example:

a. Defendant Virginia Energy exercises its statutory discretion to permit the production of fossil fuels, including the exploration, development, and extraction.[29]

b. Defendant Virginia Energy exercises its statutory discretion to permit the construction and operation of pipelines and related infrastructure to transport gas and oil.[30]

92. Defendant DEQ also implements its statutory authority and discretion to implement laws in a manner to facilitate and promote the permitting of fossil fuel infrastructure in the Commonwealth of Virginia. For example:

a. Defendant DEQ exercises its statutory discretion to issue key permits necessary for the construction and operation of pipelines and related infrastructure, including compressor stations, to transport gas and oil.[31]

b. Defendant DEQ exercises its statutory discretion to permit the burning of fossil fuels for power generation and other purposes.[32]

93. Defendants Commonwealth of Virginia and Governor Youngkin have created and supervise the execution of the laws that Defendants Virginia Energy and DEQ are implementing in such a manner as to continue permitting fossil fuel infrastructure. Defendant Commonwealth of Virginia and Governor Youngkin are exercising their direction, control, and supervision to further the permitting of fossil fuel infrastructure in the Commonwealth of Virginia.

[29] Va. Code § 45.2-1013 (coal mining permit); Va. Code § 45.2-1631 (gas and oil exploration and drilling permit).
[30] Va. Code § 45.2-1631 (gathering pipeline permit).
[31] Va. Code §§ 10.1-1183(B), 10.1-1322, 62.1-44.15:20.
[32] Va. Code § 10.1-1322.

94. Individually and collectively, Defendants have a longstanding policy and practice of exercising their statutory directives, discretion, and authorities in favor of permitting fossil fuel infrastructure, and upon information and belief will continue permitting fossil fuel infrastructure.

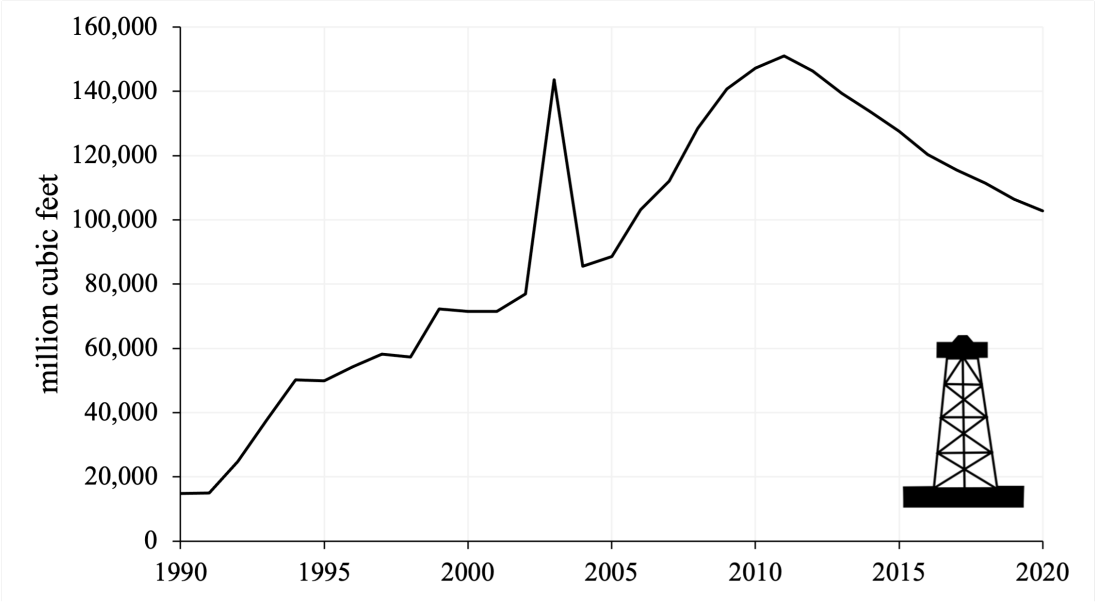
III. Defendants' Historic and Ongoing Policy and Practice of Permitting Fossil Fuel Infrastructure Causes Dangerous Levels of GHG Pollution and Causes and Contributes to the Climate Crisis.

95. Defendants' longstanding policy and practice of permitting fossil fuel infrastructure, including the production, transport, and burning of fossil fuels, has, and continues to, cause dangerous levels of GHG pollution which cause and contribute to the climate crisis.

A. Fossil Fuel Production

96. Defendant Virginia Energy, Division of Gas and Oil, has permitted 8,601 producing gas wells in Virginia.[33] Virginia's gas production has increased five-fold since 1990, and despite a slight decline in the past 10 years, it remains dangerously high (see Figure 1) at over 100,000 million cubic feet a year.[34] In 2020, coalbed methane accounted for 84% of Virginia's natural gas production.[35] Virginia contains the third largest amount of coalbed methane proved reserves of any state[36] and in 2020 accounted for 10.5% of the nation's coalbed methane production.[37]

[33] Virginia Department of Energy, *Natural Gas*, https://energy.virginia.gov/geology/NaturalGas.shtml; Va. Code § 45.2-1631.
[34] U.S. EIA, Virginia Natural Gas Gross Withdrawals, https://www.eia.gov/dnav/ng/hist/n9010va2a.htm.
[35] U.S. EIA, Virginia Natural Gas Gross Withdrawals and Production, https://www.eia.gov/dnav/ng/ng_prod_sum_dc_sva_mmcf_a.htm.
[36] U.S. EIA, Natural Gas Coalbed Methane Proved Reserves, https://www.eia.gov/dnav/ng/ng_enr_coalbed_dcu_SVA_a.htm.
[37] U.S. EIA, Virginia Natural Gas Gross Withdrawals and Production, https://www.eia.gov/dnav/ng/ng_prod_sum_dc_sva_mmcf_a.htm.



97. **Figure 1:** Virginia gas gross withdrawals between 1990 and 2020.[38]

98. Between 1967 and 2020, Defendant Virginia Energy has permitted the production of 3,051,002 million cubic feet ("MMcf") of gas in Virginia.[39] Once burned, that is the equivalent of 168 million metric tons ("MMT") of CO_2 emissions.[40]

99. Defendant Virginia Energy, Division of Mines, has issued permits to Virginia's 41 operating coal mines, which could not operate but for the issuance of these permits. These permits are renewed annually by Virginia Energy.[41] In 2020, these 41 mines produced 9.7 million short tons of coal.[42] Virginia's coal resources are combusted for energy production, thereby polluting Virginia's atmosphere, lands, and waters and exacerbating the climate crisis.[43]

[38] U.S. EIA, Virginia Natural Gas Gross Withdrawals, https://www.eia.gov/dnav/ng/hist/n9010va2a.htm.
[39] *Id.*
[40] U.S. EIA, Carbon Dioxide Emissions Coefficients, https://www.eia.gov/environment/emissions/co2_vol_mass.php.
[41] Va. Code § 45.2-1205.
[42] U.S. EIA, Annual Coal Report, Table 1. Coal Production and Number of Mines by State and Mine Type, 2020 and 2019, at 2 (2020).
[43] U.S. EIA, Annual Coal Distribution Report by Coal Origin State (2019); U.S. EIA, U.S. Domestic and Foreign Coal Distribution by State of Origin (2019).

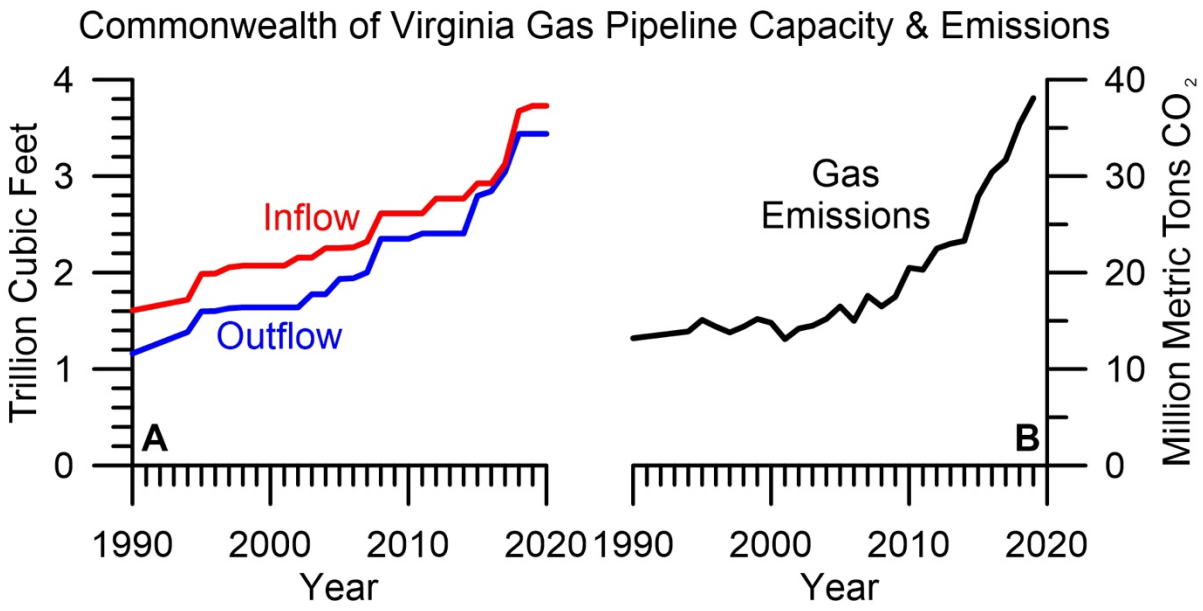
100. Between 1960 and 2020, Defendant Virginia Energy, Division of Mines, permitted the extraction of 1,934,252 thousand short tons of coal from Virginia.[44] Once burned, that is the equivalent of 3,530 MMT of CO_2 emissions.[45]

101. Defendant Virginia Energy, Division of Gas and Oil, continues to permit fossil fuel production, including the exploration, development, and extraction, and upon information and belief will continue to do so. In the 22 months since Governor Northam signed into the law the bill establishing Virginia's net-zero GHG emissions reduction policy, the Virginia Energy, Division of Gas and Oil, has approved 82 new permits for fossil fuel extraction and infrastructure projects, renewed 9 permits, approved 59 permits modifications, and 8,887 supplemental permits.[46]

B. Fossil Fuel Transport

102. Defendant Virginia Energy and Defendant DEQ have issued permits that allowed over 43,000 miles of gas pipelines to be constructed in Virginia for the transport of gas. As of 2020, these pipelines had the capacity to import 3.73 trillion cubic feet of gas and export 3.44 trillion cubic feet of gas.[47] Since 1990, the import capacity of Virginia's gas pipelines has more than doubled and the export capacity has tripled (see Figure 2). As the number of gas pipelines and infrastructure permitted by Defendants has increased in the past three decades, Virginia's CO_2 emissions from gas have also increased (see Figure 2).

[44] U.S. EIA, State Energy Production Estimates 1960 Through 2019, at 106 (2021), https://www.eia.gov/state/seds/sep_prod/SEDS_Production_Report.pdf (2020 data from U.S. EIA, Coal, Annual Coal Production by State, https://www.eia.gov/coal/production/weekly/).
[45] U.S. EIA, Carbon Dioxide Emissions Coefficients, https://www.eia.gov/environment/emissions/co2_vol_mass.php.
[46] Data available at DMME Permit Issuance Statistics, https://www.dmme.virginia.gov/dgoinquiry/frmMain.aspx?ctl=53.
[47] U.S. EIA, Natural Gas, Pipelines, U.S. State-to-State Capacity, https://www.eia.gov/naturalgas/data.php#pipelines.



103. **Figure 2:** A (left side) shows the total inflow (red) and outflow (blue) capacity of Virginia's gas pipelines. B (right side) shows how, as pipeline capacity has increase in the past three decades, Virginia's CO_2 emissions from the burning of gas have also increased.

104. In 2019, pipelines permitted by Defendants transported 718 trillion British thermal units ("BTUs") of gas for consumption in Virginia, most of which (606 trillion BTUs) was imported from out-of-state. Once combusted, this amount of gas results in 38 MMT CO_2 emissions.

105. Virginia is entirely reliant on imported refined petroleum, with no in-state refineries and minimal crude extraction within the state. The refined petroleum products are mostly supplied by two pipelines, the Colonial and PPL pipelines, with a small amount imported through Virginia ports. Defendants have issued key permits allowing the Colonial Pipeline and the PPL Pipeline to operate and import refined petroleum into the state.[48] Together the Colonial and PPL pipelines have the capacity to transport 2,110,000 barrels of petroleum products every day to Virginia.[49]

[48] U.S. EIA, Virginia Profile Overview, Natural Gas Interstate Pipeline Map Layer, https://www.eia.gov/state/?sid=VA.
[49] U.S. EIA, Petroleum & Other Liquids, Movements, https://www.eia.gov/petroleum/data.php#movements.

This imported petroleum is ultimately burned in Virginia with the vast majority, 88%, being used in the transportation sector. The rest is used in the industrial sector (6%), commercial sector (4%), and residential sector (3%).[50]

106. In 2019, Virginia imported 835 trillion BTUs of refined petroleum products almost exclusively via the Colonial and PPL pipelines. Once burned, this resulted in 58.4 MMT CO_2 emissions in 2019. By way of comparison, the 2019 emissions from Virginia's imported-petroleum usage alone was greater than all 2019 CO_2 emissions from Portugal, Sweden, or Switzerland, which all have larger populations than Virginia.[51]

107. Once combusted, the petroleum that Defendants have permitted to be imported in the past four decades resulted in cumulative emissions of around 2,160 MMT CO_2.[52] By way of comparison, these cumulative emissions are the same that would be produced by driving a car on 11-million round trips to the Moon.[53]

108. Permits enabling expansions of pipelines and related infrastructure, including compressor stations, are pending approval, and upon information and belief, will be granted. The import, export, and transportation of gas and petroleum throughout Virginia would not occur but for Defendants' permitting.

C. Fossil Fuel Burning

109. Since 2001, Defendant DEQ has issued hundreds of permits to fossil fuel power plants, compressor stations, coal cleaning and sorting facilities, petroleum storage facilities, and industrial facilities. These facilities burn and/or distribute fossil fuels, including coal, oil, and gas,

[50] U.S. EIA, Table F16: Total Petroleum Consumption Estimates, 2019, https://www.eia.gov/state/seds/data.php?incfile=/state/seds/sep_fuel/html/fuel_use_pa.html&sid=US&sid=VA.
[51] Our World in Data, CO_2 emissions by region, https://ourworldindata.org/co2-emissions#co2-emissions-by-region.
[52] U.S. EIA, Energy-Related CO_2 Emission Data Tables, Petroleum Energy-Related Carbon Dioxide Emissions, https://www.eia.gov/environment/emissions/state/.
[53] Calculated using data from U.S. EPA, Greenhouse Gas Emissions from a Typical Passenger Vehicle, https://www.epa.gov/greenvehicles/greenhouse-gas-emissions-typical-passenger-vehicle.

thereby causing significant GHG pollution, polluting the atmosphere, lands, and waters, and exacerbating the climate crisis.[54] The facilities could not operate without Defendant DEQ issuing them a permit.

110. Applications for fossil fuel infrastructure continue to be submitted to Defendant DEQ and many are in various stages of approval. For example, as of January 27, 2022, Defendant DEQ had received and was processing 32 permit applications for fossil fuel electric power generation; 7 permits for biomass electric power generation; 12 permits for the pipeline transportation of natural gas; 1 permit for pipeline transportation of refined petroleum products; and 4 permits for bituminous coal mining.[55] Additionally, Virginia's energy companies are planning to build additional gas power plants in coming years.[56]

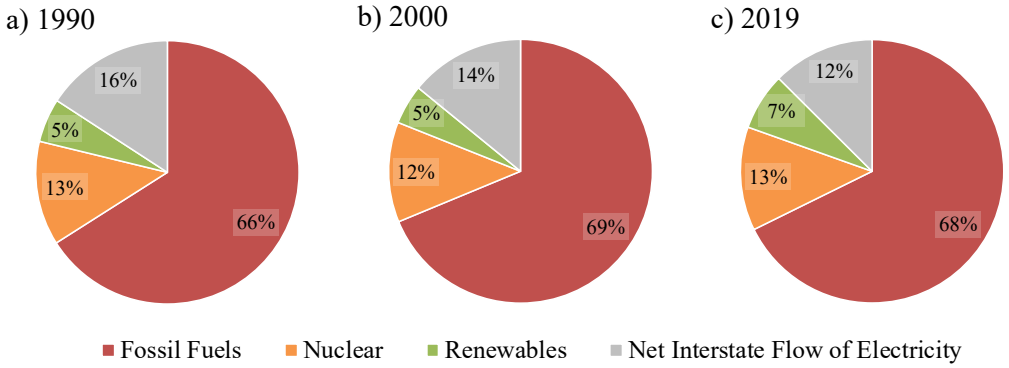
D. Total GHG Emissions Resulting from Defendants' Actions

111. By and through Defendants' historic and ongoing policy and practice of permitting of fossil fuel infrastructure, including the production, transport, and burning of fossil fuels, Defendants control Virginia's energy system, which relies primarily on fossil fuels as an energy source. Virginia's fossil fuel-based energy system results in dangerous GHG pollution.

112. In 2019, the latest year with complete data available, only 7% of Virginia's total energy consumption came from renewable energy sources (including biomass) while approximately 80% continued to come from fossil fuels (see Figure 3) (nearly all of the Net Interstate Flow of Electricity is generated by fossil fuels, predominantly coal).[57] Virginia's energy

[54] Data available at Virginia DEQ, *Issued Title V Permits*, https://www.deq.virginia.gov/permits-regulations/permits/air/issued-air-permits.
[55] Virginia DEQ, *Air: Active Air Permit Application List*, https://www.deq.virginia.gov/permits-regulations/permits/air.
[56] *See, e.g., Virginia Electric and Power Company's Report of Its Integrated Resource Plan: Before the Virginia State Corporation Commission and North Carolina Utilities Commission* 87 (May 1, 2020) (Dominion "is evaluating sites and equipment for the construction of gas-fired CT [combustion turbines] units.").
[57] U.S. EIA, *State Energy Data 2019: Consumption*, Table CT2. Primary Energy Consumption Estimates, Selected Years, 1960–2019, Virginia, https://www.eia.gov/state/seds/sep_use/total/pdf_cb/use_tot_VAcb.pdf.

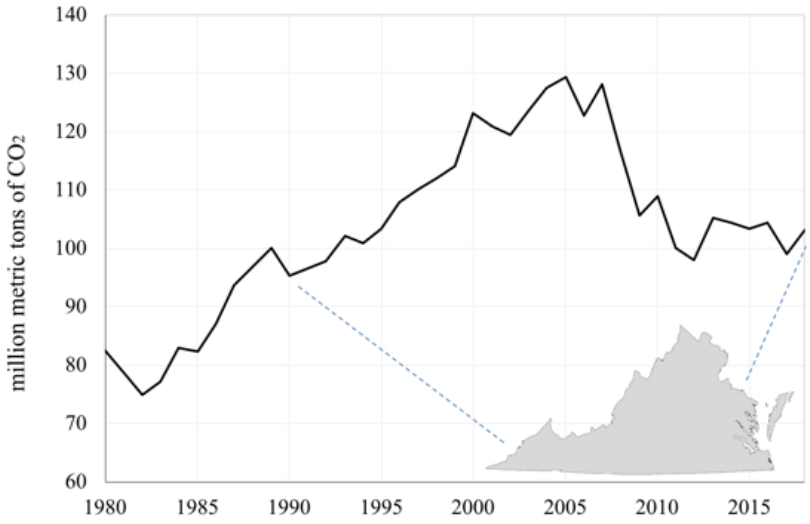
consumption profile has changed little over the past 30 years, with fossil fuels continuing to account for the overwhelming majority of energy consumption in Virginia. In 1990, 5% of Virginia's total energy consumption came from renewable energy sources (including biomass) while approximately 82% came from fossil fuels.



113. **Figure 3:** Percentage of Virginia primary energy consumption by source: a) 1990; b) 2000; c) 2019.[58]

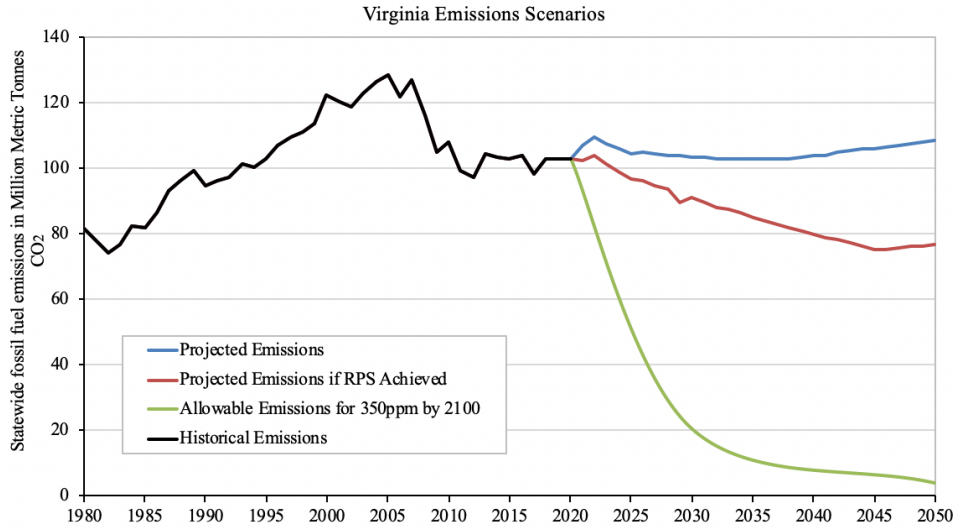
114. In the past three decades, Virginia's CO_2 emissions from fossil fuel burning, which Defendants permit, have increased from 95.4 MMT CO_2 in 1990 to 103.2 MMT CO_2 in 2018, the most recent year for which data is available (see Figure 4). In 2018, Virginia emitted more CO_2 than 33 other states.[59] While Virginia's emissions have declined from their peak in 2005, they have been relatively steady for the past 10 years and remain dangerously high.

[58] *Id.*
[59] U.S. EIA, Rankings: Total Carbon Dioxide Emissions, 2018, https://www.eia.gov/state/rankings/?sid=VA#series/226.



115. **Figure 4:** Virginia CO_2 emissions from fossil fuel consumption (1980–2018).[60]

116. Virginia's GHG emissions are projected to remain dangerously high for the next three decades, even if the Commonwealth meets its statutory requirement to decarbonize the electric sector (see Figure 5).



117. **Figure 5:** Projected emissions under current policies will only limit emissions to near 1980 levels by 2050.

[60] U.S. EIA, Virginia Carbon Dioxide Emissions from Fossil Fuel Consumption (1980-2018), https://www.eia.gov/environment/emissions/state/excel/states/virginia.xlsx.

E. Defendants' Ongoing Permitting of Fossil Fuel Infrastructure Impedes Decarbonization and Exacerbates the Climate Crisis

118. Defendants' ongoing affirmative actions to permit fossil fuel infrastructure will further increase the Commonwealth's supply and dependence on fossil fuels and result in **increases** in GHG emissions at a time when the Commonwealth must achieve steep **reductions** in GHG emissions. Defendants' ongoing permitting of fossil fuel infrastructure will increase GHG emissions and impede Virginia's decarbonization efforts.

119. Defendants' ongoing affirmative actions to permit fossil fuel infrastructure results in embedded infrastructure designed to be used for decades, placing an insurmountable burden on youth and future generations to make the necessary changes to achieve net-zero emissions by 2045.

120. Defendants' policy and practice of embedding fossil fuel infrastructure makes achieving the scientifically requisite GHG emission reductions more difficult and costly because newly constructed fossil fuel infrastructure would need to be abandoned long before its useful lifespan is over to achieve Virginia's net-zero by 2045 goal. Abandoning infrastructure before its useful lifespan imposes additional costs on ratepayers that can be avoided now by constraining Defendants' exercise of their discretion to approve fossil fuel infrastructure that is already more costly than non-polluting energy sources and thus contrary to the public interest.

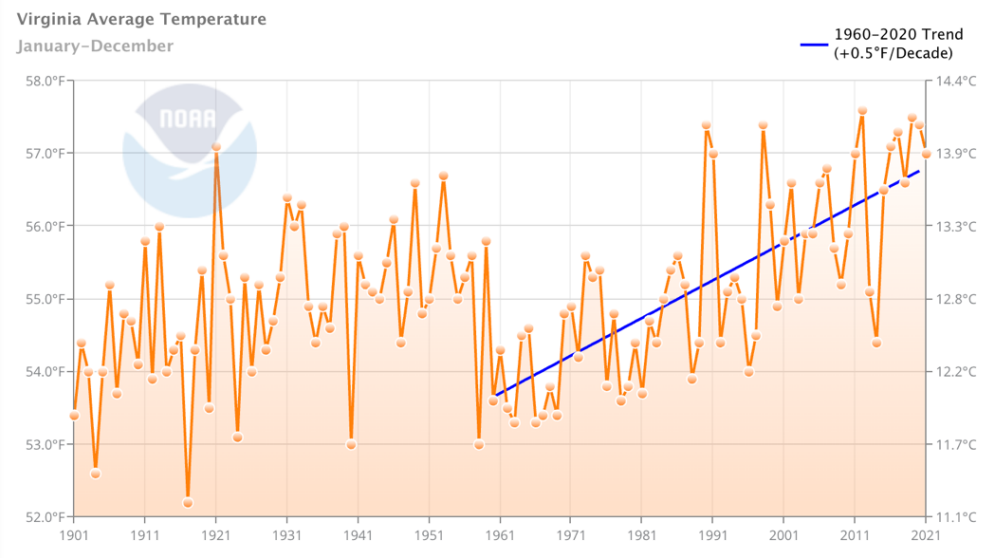
121. If Defendants are allowed to continue their policy and practice of permitting fossil fuel infrastructure, it will further cause and contribute to the climate crisis and exacerbate Youth Plaintiffs' injuries.

122. As the Intergovernmental Panel on Climate Change ("IPCC") recently confirmed in the Sixth Assessment Report, "[e]very tonne of CO_2 emissions adds to global warming," and

with every additional increment of global warming, extreme climate impacts increase in frequency and severity.[61]

IV. The Climate Crisis is Already Harming Plaintiffs, and Without Judicial Intervention, Plaintiffs' Injuries Will Become Increasingly Severe.

123. As a result of anthropogenic climate change, which Defendants' actions cause and contribute to, global average annual temperatures from 2011–2020 were 2°F (1.1°C) higher than 1850–1900 temperatures.[62] Virginia has experienced significant heating over a similar time period: average state annual temperatures from 2011–2021 were 2.4°F (1.3°C) higher than 1900–1920 temperatures (see Figure 6).[63]



124. **Figure 6:** Average annual temperatures in Virginia rose from 53.4°F in 1901 to 57°F in 2021. Since 1960, Virginia's average annual temperatures are rising at a rate of 0.5°F per decade.[64]

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[61] IPCC, *Summary for Policymakers, in* Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change, at SPM-37 (V. Masson-Delmotte et al. eds., 2021).
[62] *Id.* at SPM-5.
[63] NOAA, Climate at a Glance: Statewide Time Series, Virginia Average Annual Temperatures, https://www.ncdc.noaa.gov/cag/statewide/time-series/44/tavg/12/12/1901-2021?trend=true&trend_base=10&begtrendyear=1960&endtrendyear=2020.
[64] *Id.*

125. Anthropogenic climate change has caused temperatures during Virginia's summers to increase to the warmest on record, averaged over 5-year periods, between 2015 and 2020.[65] Plaintiffs Katerina Leedy, Cadence R.-H., Claudia Sachs, and Giovanna F. have had to significantly reduced the time they spend outside in the summers because of the extreme heat.

126. Historically unprecedented heating is projected to continue if GHG emissions continue to pollute the atmosphere. As of 2008, Virginia was projecting that under a moderate emissions scenario, average global temperatures will increase 2.8°C between 2000 and 2099.[66] In Virginia, the increase will be even greater with temperatures expected to increase by 3.1°C (5.6°F) during the same time period.[67] However, temperatures are now on track to increase even more than 3.1°C between 2000 and 2099 in Virginia.

127. Virginia has experienced more than 18 inches of relative sea level rise in the last century.[68] Climate change causes sea level rise through melting glaciers and ice sheets, and the thermal expansion of warming ocean waters.[69] Virginia is experiencing some of the highest rates of sea-level rise in the United States.[70] Sea level rise is already harming Youth Plaintiffs, including Giovanna F.

128. Sea level is projected to rise at an accelerating rate. For example, NOAA predicts sea level at Sewells Point in Norfolk during this century (2000–2100) may rise as high as 6.69 feet.[71] Even moderate sea level rise is expected to take away from private and public use of 250,000

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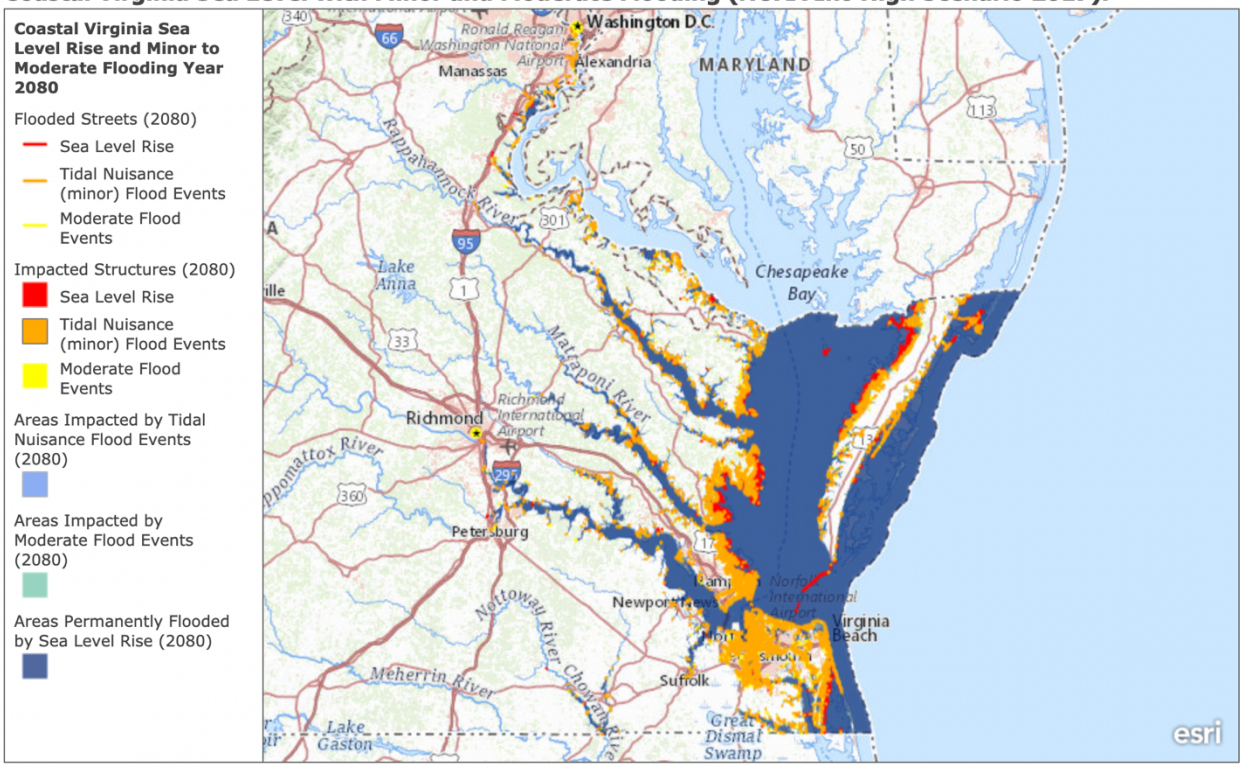
[65] NOAA, Climate at a Glance: Statewide Time Series, Virginia Average Summer Temperatures, https://www.ncdc.noaa.gov/cag/statewide/time-series/44/tavg/3/9/1895-2020?base_prd=true&begbaseyear=2015&endbaseyear=2020&trend=true&trend_base=10&begtrendyear=1895&endtrendyear=2020.
[66] Governor's Commission on Climate Change, *Final Report: A Climate Change Action Plan* 4 (Dec. 15, 2008).
[67] *Id.* at 5.
[68] Office of Governor Ralph S. Northam, *Virginia Coastal Resilience Master Plan: Phase 1* 5 (Dec. 2021).
[69] *Id.* at 44.
[70] Office of Governor Ralph S. Northam, *Virginia Coastal Resilience Master Planning Framework: Principles and Strategies for Coastal Flood Protection and Adaptation* 4, 18 (Oct. 2020).
[71] *Id.* at 4.

acres of land, 1,469 miles of roads, and $17.4 billion worth of property located less than five feet above the high tide line in Virginia.[72]

Coastal Virginia Sea Level with Minor and Moderate Flooding (NOAA Int-High Scenario 2017).

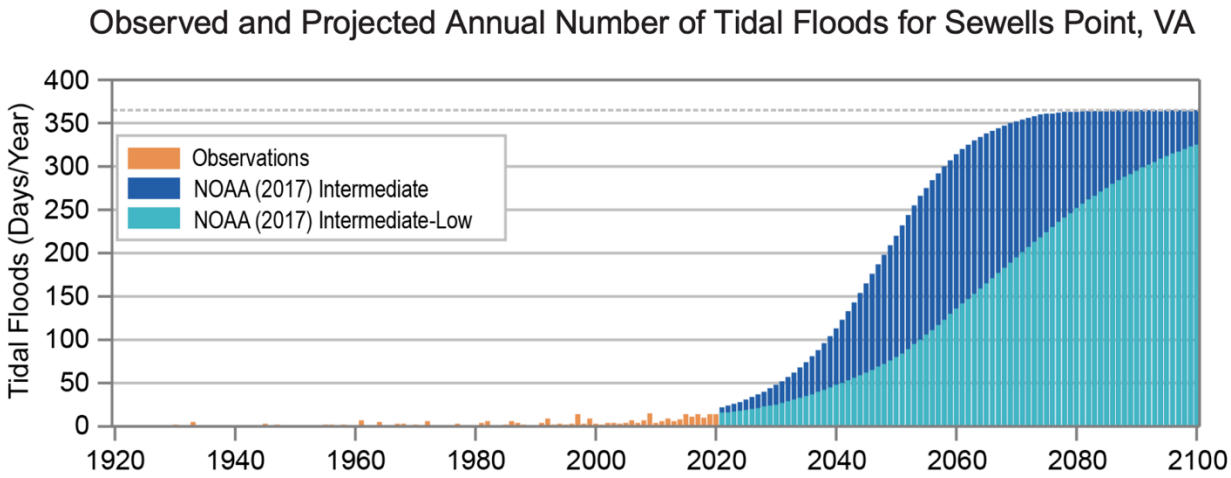


129. **Figure 7:** Projecting coastal impacts to Virginia's 10,000 miles of tidally influenced shoreline in 2080 from sea level rise based on NOAA Int-High Scenario 2017.[73]

130. Sea level rise is causing more frequent and destructive coastal flooding. In Hampton Roads, flooding increased from 1.7 days per year in 1960 to 7.3 days per year in 2014.[74] Hampton Roads may experience 200 days of flooding per year by 2049.[75] Tidal floods at Sewells Point are projected to occur almost daily by 2100 (see Figure 8).[76] Coastal flooding causes road closures,

[72] *Id.* at 3.
[73] CCRFR Sea Level Rise Tool, https://odu-gis.maps.arcgis.com/home/webmap/viewer.html?webmap=36e758f7e2b544a980962faef1faaeb4.
[74] Office of Governor Ralph S. Northam, *Virginia Coastal Resilience Master Planning Framework: Principles and Strategies for Coastal Flood Protection and Adaptation* 4 (Oct. 2020).
[75] *Id.*
[76] NOAA National Centers for Environmental Information, 150-VA, State Summaries 5 (2022).

overwhelms storm drains, and damages homes and businesses in low-lying areas.[77] Anthropogenic climate change is projected to worsen coastal flooding over the coming decades[78] along Virginia's extensive 10,000 miles of shoreline.[79]



131. **Figure 8:** Number of tidal flood days per year for the observed record (orange bars) and projections for two possible futures: lower emissions (light blue) and higher emissions (dark blue) per calendar year for Sewells Point, Virginia.[80] Even these projections may substantially underestimate the real risk of even greater sea level rise and flooding.

132. Virginia's shoreline is chronically eroding due to sea level rise. Virginia increasingly relies on beach nourishment, a process using dredged sand to replenish eroded beach, to maintain its beaches for tourism and to decrease impacts from storms.[81]

[77] *Id.*
[78] Ben Strauss et al., Climate Central, *Virginia and the Surging Sea* 13 (Sept. 2014), https://sealevel.climatecentral.org/uploads/ssrf/VA-Report.pdf.
[79] Office of Governor Ralph S. Northam, *Virginia Coastal Resilience Master Planning Framework: Principles and Strategies for Coastal Flood Protection and Adaptation* 3 (Oct. 2020).
[80] NOAA National Centers for Environmental Information, 150-VA, State Summaries 5 (2022).
[81] City of Virginia Beach, *ISSUE: Why Does the City Replenish the Sand on the Beaches?*, https://www.vbgov.com/government/departments/communications-office/fact-or-fiction/Pages/beach-replenishment.aspx.

133. Excessive CO_2 pollution from the burning of fossil fuels is acidifying the ocean, which has absorbed about one-third of all anthropogenic CO_2 emissions.[82] Ocean acidification is already harming Virginia's $53.3 million shellfish aquaculture industry,[83] and threatens its long-term viability. Acidification of the Chesapeake Bay impedes the ability of calcifying organisms, including oysters and clams, to form shells.[84] Since 1985, the Chesapeake Bay has become increasingly more acidic, at rates exceeding those in the open Pacific Ocean.[85] Ocean acidification is degrading the Chesapeake Bay ecosystem, which relies on oysters, a keystone species, to reduce pollution, sediment, and algae, with each adult oyster filtering up to 50 gallons of water a day.[86] Oysters also create reefs that are essential to support a diversity marine life, including shellfish and fish,[87] and these reefs serve as a breakwater to prevent shoreline erosion.[88] Acidification in Chesapeake Bay is projected to continue increasing absent reductions in CO_2 emissions, undermining the stability of the aquaculture industry that depends on oyster reefs.[89] Plaintiff Amaya T. has already incurred higher costs in purchasing local shellfish as fish becomes scarcer and she catches fewer fish in Chesapeake Bay than she was able to years ago.

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[82] John Guinotte & Victoria J. Fabry*, The Threat of Acidification to Ocean Ecosystems*, 25 J. Marine Educ. 2, 2–6 (2009), https://hahana.soest.hawaii.edu/cmoreserver/oceanacidification/documents/CurrentFINAL_ocean_acidification.pdf.
[83] Karen Hudson, *Virginia Shellfish Aquaculture Situation and Outlook Report*, VIMS 3(Aug. 2019), https://www.vims.edu/research/units/centerspartners/map/aquaculture/docs_aqua/mrr-2019-8.pdf.
[84] *See* John Guinotte & Victoria J. Fabry*, The Threat of Acidification to Ocean Ecosystems*, 25 J. Marine Educ. 2, 2–6 (2009), https://hahana.soest.hawaii.edu/cmoreserver/oceanacidification/documents/CurrentFINAL_ocean_acidification.pdf.
[85] George G. Waldbusser et al., *Biocalcification in the Eastern Oyster (Crassostrea virginica) in Relation to Long-term Trends in Chesapeake Bay pH*, 34 Estuaries and Coasts, 221, 221–231 (2011), https://doi.org/10.1007/s12237-010-9307-0.
[86] Chris Moore & Zachary Sheldon, *Assessing And Enhancing Virginia's Oyster Stock*, Chesapeake Bay Foundation & The Nature Conservancy (Aug. 2019), https://vcnva.org/wp-content/uploads/2019/08/OYSTERS.pdf.
[87] Chesapeake Bay Foundation, *Restoring the "Coral Reefs" of the Chesapeake Bay*, https://www.cbf.org/document-library/cbf-publications-brochures-articles/restoring-the-coral-reefs-of-the-chesapeake-bay.pdf.
[88] Scott Knoche et al., *Estimating Ecological Benefits and Socio-Economic Impacts from Oyster Reef Restoration in the Choptank River Complex, Chesapeake Bay*, NOAA (2020), https://repository.library.noaa.gov/view/noaa/24759.
[89] A. Whitman Miller et al., *Shellfish Face Uncertain Future in High CO_2 World: Influence of Acidification on Oyster Larvae Calcification and Growth in Estuaries*, 4 PLosS ONE e5661 (2009), https://doi.org/10.1371/journal.pone.0005661.

134. Anthropogenic climate change is also increasing the frequency of algae blooms, reducing access to recreational water sources and causing sickness and death in Virginian residents, livestock, and pets.[90] Higher temperatures create conditions where toxic algae blooms can thrive in Virginia's waterways.[91] Harmful algae blooms occur when tiny plant-like organisms, algae and cyanobacteria, grow in abundance during warm weather, creating dense and toxic "blooms."[92] Exposure to toxic algae blooms through swimming or other water sports, breathing in water spray that contains toxins, drinking contaminated water, or eating contaminated seafood can cause illness including: skin, eye, nose, or throat irritation, stomach pain, headache, neurological symptoms, vomiting, diarrhea, liver and kidney damage, and death.[93] Algae blooms in Virginia have impeded Plaintiffs Maryn O. and Cadence R.-H.'s safe access to water for fishing and recreation.

135. The emerald ash borer, an invasive insect, is destroying Virginia's sixteen different native ash tree species[94] and is projected to decimate nearly all ash trees in North America.[95] Previously, emerald ash borer infestations were thwarted by cold temperatures that would significantly reduce their populations.[96] However, as climate change causes temperatures to rise, populations have not been curbed and continue to proliferate in Virginian forests.[97] Once infested, ash trees have a nearly 100% mortality.[98] Infested trees gradually become brittle and susceptible

[90] *See* CDC, *Avoid Harmful Algae and Cyanobacteria*, https://www.cdc.gov/habs/be-aware-habs.html.
[91] Va. Dep't of Health, *Cyanobacteria,* https://www.vdh.virginia.gov/waterborne-hazards-control/harmful-algal-blooms/cyanobacteria/.
[92] *See* CDC, *Avoid Harmful Algae and Cyanobacteria*, https://www.cdc.gov/habs/be-aware-habs.html.
[93] *Id.*; *see also* Va. Dep't of Health, *Cyanobacteria,* https://www.vdh.virginia.gov/waterborne-hazards-control/harmful-algal-blooms/cyanobacteria/.
[94] Va. Dep't of Forestry, *Emerald Ash Borer in Virginia*, https://vdof.maps.arcgis.com/apps/MapSeries/index.html?appid=e2660c30d9cd46cc988cc72415101590.
[95] Ryan D. DeSantis et al., *Effects of Climate on Emerald Ash Borer Mortality and the Potential for Ash Survival in North America*, 178-79 Agric. & Forest Meteorology 120 (2013), https://www.fs.fed.us/nrs/pubs/jrnl/2013/nrs_2013_desantis_001.pdf.
[96] *Id.*
[97] *Id.*
[98] *Id.*

to sudden collapse, creating hazardous conditions for those recreating in Virginia's forests.[99] Plaintiffs Ava L., Julian Schenker, Cedar B., and Layla H.'s families have already incurred significant financial expense to remove hazardous trees that put their property at risk.

136. Climate change is already significantly impacting Virginia's agricultural industry, Virginia's "largest private industry by far" according to the Virginia Department of Agriculture and Consumer Services, which accounts for $70 billion in total industry output and provides more than 334,300 jobs.[100] Spring is arriving earlier due to climate change. For example, in Roanoke spring arrived 7 days earlier in 2019 compared to 1981.[101] An earlier spring causes an earlier flowering of plants, shortening the growth time for overwintering vegetables by causing them to bolt, or flower, before they are ready for harvest. Bolting results in inedible, bitter-tasting vegetables. Plaintiff Julian Schenker's family farm continues to lose crops to bolting as spring arrives earlier each year.

137. Climate change is contributing to the declining honey bee populations;[102] in Virginia honey bees declined by 29.6% from 2020 to 2021.[103] Fewer honey bees on Plaintiff Julian Schenker's family farm are resulting in substantially less honey in their hives and less revenue from honey sales.

[99] Va. Dep't of Forestry, *Emerald Ash Borer in Virginia*, https://vdof.maps.arcgis.com/apps/MapSeries/index.html?appid=e2660c30d9cd46cc988cc72415101590.
[100] Va. Dep't of Agric., *Agric. Facts and Figures*, https://www.vdacs.virginia.gov/markets-and-finance-agriculture-facts-and-figures.shtml.
[101] Climate Central, *Spring Coming Earlier* (2020), https://ccimgs-2020.s3.amazonaws.com/2020EarlySpring/2020EarlySpring_roanoke_en_title_lg.jpg.
[102] Peter Soroye et al., *Climate Change Contributes to Widespread Declines Among Bumble Bees Across Continents*, 367 Science 685, 685–88 (Feb. 7, 2020), https://www.science.org/doi/10.1126/science.aax8591.
[103] Bee Informed Partnership, Map of Colony Loss by State, https://bip2.beeinformed.org/loss-map/.

138. Climate change is increasing the length and severity of droughts in Virginia, reducing soil moisture and water needed for crop irrigation.[104] This includes the crops on Plaintiff Cedar B.'s orchard and Plaintiff Julian Schenker's family farm, whose well ran dry in 2020. By mid-century, half of Virginia's counties, accounting for $472 million in crops, are at risk of water shortages due to warmer and drier conditions.[105] Virginia farmers' livelihoods and the Commonwealth's food supplies will face grave threats from anthropogenic climate change.

139. Drought is also creating abnormally dry conditions in creeks.[106] This is reducing Plaintiff Julian Schenker's access to an important source of irrigation and preventing Plaintiffs Cadence R.-H. and Cedar B. from recreating in the creeks they usually visit. Droughts have also led to water restrictions and increasing water prices. As a result, Plaintiff Giovanna F.'s family lets their garden wilt each August.

140. Extreme weather events, including extreme precipitation and hurricanes, are increasing in Virginia due to anthropogenic climate change. Between 2010 and 2021, Virginia was impacted by 49 weather and climate disaster events that each caused at least a billion dollars in damage (out of 165 in the entire United States), including Hurricanes Sandy (2012), Matthew (2016), Florence (2018), and Michael (2018).[107] Hurricanes and tropical cyclones in the Atlantic

[104] *See* L. Carter et al., *Ch. 19: Southeast, in* Impacts, Risks, and Adaptation in the United States: Fourth National Climate Assessment, Volume II, U.S. Global Change Research Program, 746, 79 (2018), https://nca2018.globalchange.gov/chapter/19/; P. Gowda, et al., *Ch. 10: Agriculture and Rural Communities*, in Impacts, Risks, and Adaptation in the United States: Fourth National Climate Assessment, U.S. Global Change Research Program, 399–400, 413 (2018), https://nca2018.globalchange.gov/chapter/10/.
[105] NRDC, *Water Shortage Risk and Crop Value in At-Risk Counties*, by State, https://www.nrdc.org/sites/default/files/StateSummary.pdf.
[106] *E.g.*, Virginia Drought Conditions Map, https://www.plantmaps.com/interactive-virginia-drought-monitor-map.php; *see generally* USGS Waterflow Data for Virginia, https://waterdata.usgs.gov/va/nwis/rt.
[107] NOAA National Centers for Environmental Information, *U.S. Billion-Dollar Weather and Climate Disasters* (2021), https://www.ncdc.noaa.gov/billions/.

are projected to continue to increase.[108] This is putting the Plaintiffs' lives and homes at continued risk.

141. Precipitation rates will also continue to increase throughout Virginia because of anthropogenic climate change, with more precipitation falling as rain than snow.[109] Increased extreme precipitation events have already flooded Plaintiff Layla H.'s home, damaged Plaintiffs Julian Schenker and Kyla H.'s properties, caused Plaintiff Ava L.'s family to lose income, and blocked safe access to recreation and travel for Plaintiffs Tyrique B., Elizabeth M., Layla H., Amaya T., and Cadence R.-H., and forced school cancelations for Plaintiffs Ava L. and Maryn O.

142. Anthropogenic climate change is putting young Virginians at an increased risk of contracting debilitating and sometimes fatal vector-borne diseases from insects such as ticks. The range of ticks has expanded in Virginia increasing the risk of Lyme disease transmission (see Figure 9).[110] Since 2010, over 9,000 Virginians contracted Lyme disease.[111] Plaintiffs Cedar B. and Giovanna F. are among those. Lyme disease causes flulike symptoms and weeks to months after acquiring the disease, people can experience debilitating muscle and joint pain, memory problems, and heart damage.[112] Tick bites can also cause alpha-gal, an acquired red meat allergy that can manifest in hives, diarrhea, headaches, and anaphylaxis.[113] Plaintiff Tyrique B. has been diagnosed with alpha-gal syndrome.[114]

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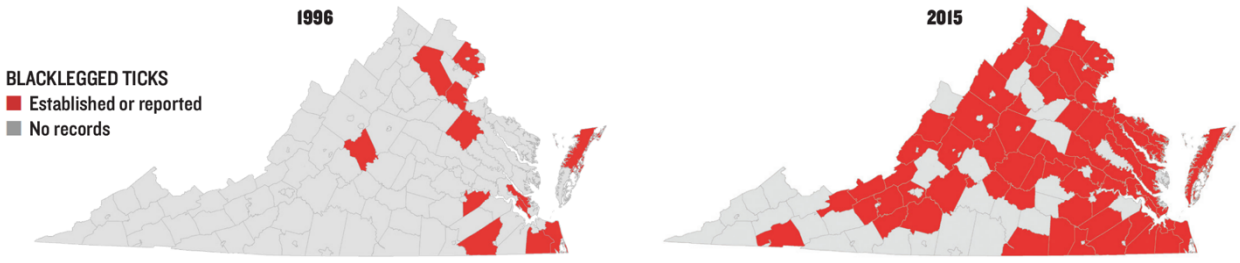
[108] T.R. Knutson et al., *Global Projections of Intense Tropical Cyclone Activity for the Late Twenty-First Century from Dynamical Downscaling of CMIP5/RCP4.5 Scenarios*, 28 J. Climate 7203, 7203–24 (2015).
[109] *See* L. Carter et al., *Ch. 19: Southeast, in* Impacts, Risks, and Adaptation in the United States: Fourth National Climate Assessment, Volume II, U.S. Global Change Research Program, 751 (2018),
[110] Juanita Constible, NRDC, *Climate Change and Health in Virginia* 5 (Apr. 2018).
[111] CDC, *Reported Cases of Lyme Disease by State or Locality, 2009-2019*, https://www.cdc.gov/lyme/stats/tables.html.
[112] Juanita Constible, NRDC, *Climate Change and Health in Virginia* 5 (Apr. 2018).
[113] Va. Dep't of Health, *Acquired Red Meat Allergy Fact Sheet* (Oct. 2018), https://www.vdh.virginia.gov/epidemiology/epidemiology-fact-sheets/acquired-red-meat-allergy/?pdf=5815.
[114] CDC, *Alpha-gal Syndrome*, https://www.cdc.gov/ticks/alpha-gal/index.html (last reviewed Oct. 18, 2021).



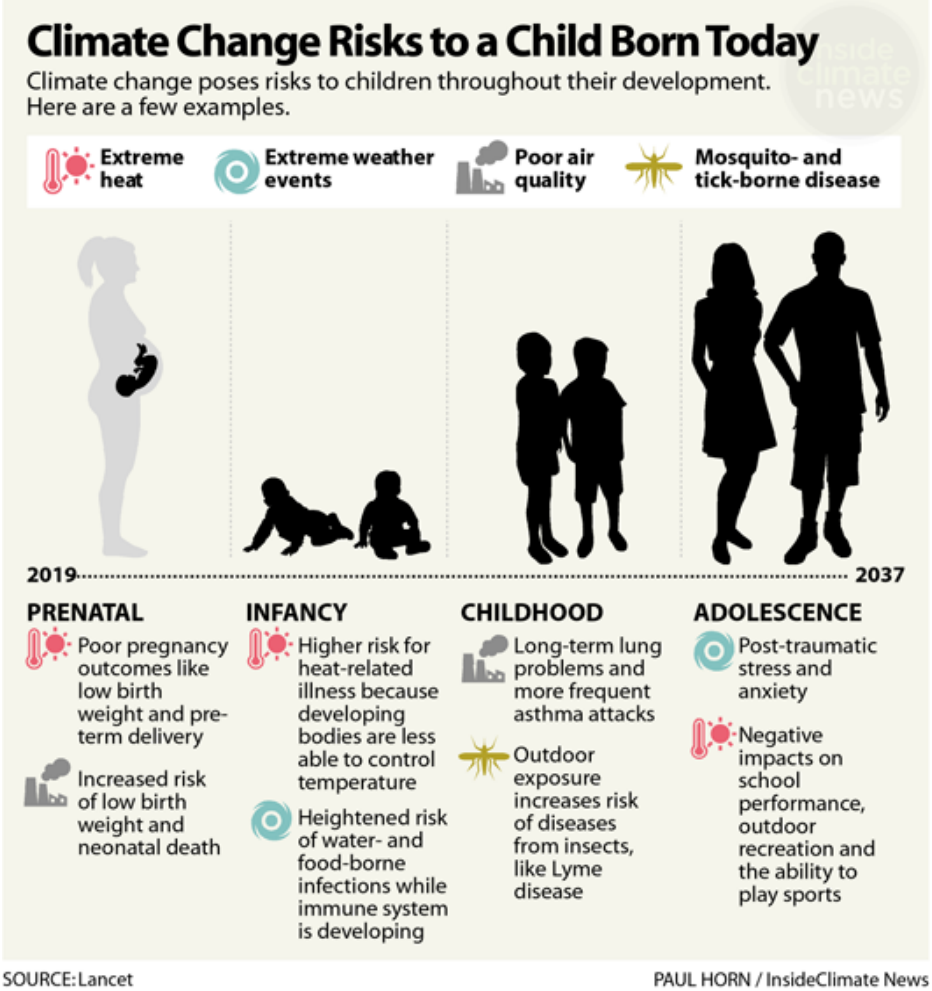
Source: Modified from Eisen et al., *Journal of Medical Entomology* 53 (2016).

143. **Figure 9:** Reports of blacklegged ticks increased from 12 counties in 1996 to 72 counties in 2015.[115]

V. Children, Including these Youth Plaintiffs, are the Most Vulnerable to the Climate Crisis and its Dangerous Impacts.

144. Children are the population worst affected by climate change,[116] facing health impacts that begin in utero and continue during childhood and adolescence, accumulating over time and following them into adulthood.[117]

[115] Juanita Constible, NRDC, *Climate Change and Health in Virginia* 5 (Apr. 2018).
[116] Nick Watts et al., *The 2019 report of The Lancet Countdown on Health and Climate Change: Ensuring that the Health of a Child Born Today is not Defined by a Changing Climate*, 394 The Lancet 1836 (Nov. 16, 2019), https://doi.org/10.1016/S0140-6736(19)32596-6.
[117] Anthony J. McMichael, *Globalization, Climate Change, and Human Health*, 368 New Eng. J. Med. 1335, 1339 (2013).



145. **Figure 10:** Climate change risks to children being in utero and continue throughout adolescence.[118]

146. Children are particularly vulnerable to heat-related illnesses compared to adults.[119] Heat waves make it more difficult for the body to cool itself, and can result in heat-related illnesses such as heat rash, heat exhaustion, and heat stroke.[120] Plaintiffs Katerina Leedy, Layla H., Elizabeth M., and Tyrique B. have each suffered from heat rash or heat exhaustion from

[118] Sabrina Chankman, *The Climate Change Health Risks Facing a Child Born Today: A Tale of Two Futures*, Inside Climate News (Nov. 14, 2019); Anthony J. McMichael, *Globalization, Climate Change, and Human Health*, 368 New Eng. J. Med. 1335, 1339 (2013).
[119] EPA & CDC, *Climate Change and Extreme Heat: What You Can Do to Prepare*, EPA 430-R-16-061, at 8, 9, 12, 13 (Oct. 2016), https://www.cdc.gov/climateandhealth/pubs/extreme-heat-guidebook.pdf; Karla C. Guerra et al., *Miliaria, in* StatPearls [Internet], https://www.ncbi.nlm.nih.gov/books/NBK537176/ (last updated Aug. 13, 2021).
[120] *Id*.

increasingly hotter temperatures. Heat rash can cause itchy red bumps and blisters on the skin. Heat exhaustion can manifest as heavy sweating, dizziness, and fainting.[121] If left untreated, heat exhaustion can progress into heat stroke, which can lead to death without immediate medical intervention.[122] Heat waves, the national leading cause of weather-related fatalities,[123] are projected to increase in Virginia due to anthropogenic climate change from more than 10 days in 2015 to nearly 60 days each year by 2050.[124]

147. Children are at a higher risk for respiratory health impacts because they spend more time playing outdoors, their bodies are still developing, and they breathe more rapidly than adults, inhaling more air per pound of body weight.[125] Climate change is aggravating respiratory illnesses in children and increasing the prevalence of respiratory diseases. As of 2017, an estimated 133,820 Virginian children live with asthma.[126] This includes Plaintiffs Katerina Leedy and Ava L. Ground-level ozone, formed when nitrogen oxides and volatile organic compounds react in the presence of sunlight, is a powerful trigger for asthma.[127] Warmer temperatures, caused by anthropogenic climate change, increase the formation the formation of ground-level ozone.[128] Power plants also

[121] EPA & CDC, *Climate Change and Extreme Heat: What You Can Do to Prepare*, EPA 430-R-16-061, at 9 (Oct. 2016).
[122] *Id.*
[123] National Weather Service, *80-Year List of Severe Weather Fatalities* (2020), https://www.weather.gov/media/hazstat/80years.pdf.
[124] Climate Central, *America's Preparedness Report Card: Virginia* (2015), http://assets.statesatrisk.org/summaries/Virginia_report.pdf.
[125] World Health Organization, *Effects of Air Pollution on Children's Health and Development: A Review of the Evidence* 12 (2005), http://www.euro.who.int/document/E86575.pdf.
[126] American Lung Association, *Incidence of Lung Disease: Virginia*, https://www.lung.org/research/trends-in-lung-disease/prevalence-incidence-lung-disease.
[127] Juanita Constible, NRDC, *Climate Change and Health in Virginia* 3, 4 (Apr. 2018); U.S. EPA, *What Climate Change Means for Virginia* (Aug. 2016); U.S. EPA, *Ground-level Ozone Pollution*, https://www.epa.gov/ground-level-ozone-pollution/ground-level-ozone-basics.
[128] U.S. EPA, *What Climate Change Means for Virginia* (Aug. 2016).

emit pollutants that form ground-level ozone and many other toxic pollutants.[129] In 2016, Virginia power plants caused an estimated 400 premature deaths from air pollution.[130]

148. Rising temperatures are lengthening the pollen season as spring arrives earlier each year.[131] Increasing carbon dioxide concentrations stimulate plant growth, leading to higher concentrations of pollen in the air.[132] Seasonal allergies, another trigger for asthma, are lasting longer and becoming more severe in Plaintiffs Ava L., Julian Schenker, Cedar B., and Tyrique B.[133] Between 2001 and 2010, the oak pollen season increased by four days, and in 2010 asthma triggered by oak pollen caused 8,800 emergency room visits in the Southeast.[134]

149. The impacts from the climate crisis, including heat waves, droughts, air pollution, violent storms and extreme weather events, flooding, loss of coastal areas, and loss of familial and cultural foundations and traditions, also lead to mental health problems in children, like stress, depression, anxiety, suicidality, or PTSD.[135] Plaintiffs Katerina Leedy, Ava L., Kyla H., Maryn O., Layla H., Claudia Sachs, and Elizabeth M. all experience ongoing mental health impacts because of the climate crisis. Hurricanes, extreme heat waves, and floods can also be traumatic events that lead to toxic stress which damage developing brains and bodies and have long-term health impacts.[136] The psychological harms caused by the climate crisis can result in a lifetime of hardships for children.

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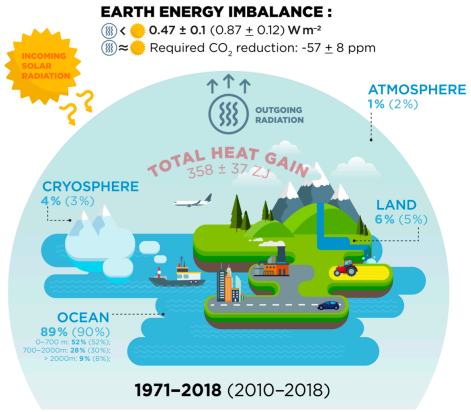
[129] Stefani L. Penn et al., *Estimating State-Specific Contributions to $PM_{2.5}$ and O_3-Related Health Burden from Residential Combustion and Electricity Generating Unit Emissions in the United States*, 125 Envtl. Health Perspectives 324, 327(Mar. 2017).
[130] *Id.*
[131] William R.L. Anderegg et al, *Anthropogenic Climate Change is Worsening North American Pollen Seasons*, 118PNAS e2013284118 (Feb. 16, 2021), https://doi.org/10.1073/pnas.2013284118.
[132] Juanita Constible, NRDC, *Climate Change and Health in Virginia* 4 (Apr. 2018).
[133] *Id.*
[134] *Id.*
[135] Expert Report of Lise Van Susteren, at 2-3, Juliana v. United States, No. 6:15-cv-01517 (D. Or. June 28, 2018), ECF No. 271-1; Harvard School of Public Health, *Climate Change and Mental Health*, https://www.hsph.harvard.edu/c-change/subtopics/climate-change-and-mental-health/.
[136] *Id.*

VI. Swift Decarbonization of Virginia's Energy System and Transitioning Away from Permitting Fossil Fuel Infrastructure is Necessary to Protect Plaintiffs from the Most Catastrophic and Irreversible Climate Impacts.

150. The best available science today prescribes that in order to protect Plaintiffs from the most catastrophic and irreversible climate impacts, the climate system must be stabilized. Stabilizing the climate system requires reducing Earth's energy imbalance to near zero.

151. According to experts, the "Earth energy imbalance (EEI) is the most critical number defining the prospects for continued global warming and climate change."[137] When Earth's energy balance is positive, more energy (i.e., heat) is accumulated in the Earth system causing global warming. Earth's energy imbalance continues and is increasing. The measured EEI from 2010–2018 is $0.87 \pm 0.12 Wm^{-2}$ (watts per square meter) (see Figure 11). By way of analogy, this extra energy being absorbed by Earth could boil 15,740 Chesapeake Bays. Between 2005 and 2019, the EEI doubled, causing unprecedented and rapid warming of our planet.



152. **Figure 11:** As a result of anthropogenic GHG emissions, incoming solar radiation exceeds outgoing radiation, causing a positive Earth energy imbalance, resulting in a significant total heat gain in the Earth system. The oceans have absorbed the majority of the excess heat.[138]

[137] Karina von Schuckmann et al., *Heat Stored in the Earth System: Where Does the Energy Go?*, 12 Earth Syst. Sci. Data 2013, 2014 (2020) (written by 38 international experts, including lead IPCC authors).
[138] Karina von Schuckmann et al., *Heat Stored in the Earth System: Where Does the Energy Go?*, 12 Earth Syst. Sci. Data 2013, 2030 (2020).

153. To stabilize Earth's energy balance and restore the climate system, atmospheric CO_2 concentrations must be restored to no more than 350 parts per million ("ppm") by 2100. A global emission reduction and sequestration pathway back to <350 ppm by 2100 would stabilize long-term global heating at no more than 1°C above pre-industrial temperatures, with a short-term peak of approximately 1.3°C as a global average.

154. There is a scientific consensus that the maximum level of atmospheric CO_2 consistent with protecting humanity and other species is below 350 ppm. No one, including the United States federal government or the IPCC, has published any scientific evidence to counter the finding that 350 ppm is the maximum safe concentration of CO_2.

155. The 2018 IPCC Special Report on 1.5°C stated unequivocally that **allowing a temperature rise of 1.5°C "is not considered 'safe' for most nations, communities, ecosystems and sectors and poses significant risks to natural and human systems as compared to the current warming of 1°C** (*high confidence*)."[139]

156. The current atmospheric CO_2 concentration of 416 ppm (and climbing) is already well above the safe atmospheric CO_2 concentration of no more than 350 ppm, and is causing a significant energy imbalance in climate system.[140]

157. The paleo-climate record shows the last time atmospheric CO_2 levels were over 400 ppm, the seas were 33–66 feet higher than they are today and that heating consistent with CO_2

[139] M.R. Allen et al., *Technical Summary, in* Global Warming of 1.5°C. An IPCC Special Report on the Impacts of Global Warming of 1.5°C Above Pre-industrial Levels and Related Global Greenhouse Gas Emission Pathways, in the Context of Strengthening the Global Response to the Threat of Climate Change, Sustainable Development, and Efforts to Eradicate Poverty 44 (2018) [hereinafter Global Warming of 1.5°C].
[140] Dr. Pieter Tans, NOAA/GML & Dr. Ralph Keeling, Scripps Institution of Oceanography, Mauna Loa CO_2 Annual Mean Data, https://gml.noaa.gov/aftp/products/trends/co2/co2_annmean_mlo.txt.

concentrations of 450 ppm may have been enough to melt almost all of Greenland.[141] The last time the ice sheets were stable was when the atmospheric CO_2 level was < 350 ppm prior to 1988.

158. As the IPCC has noted, "**[t]emperature rise to date has already resulted in profound alterations to human and natural systems,** including increases in droughts, floods, and some other types of extreme weather; sea level rise; and biodiversity loss – these changes are causing unprecedented risks to vulnerable persons and populations."[142] For a coastal state like Virginia, warming of up to 1.5°C (and an atmospheric CO_2 concentration of 425 ppm) would be catastrophic (see *infra* ¶¶ 123–149 describing current climate impacts in Virginia).

159. Two steps are required to restore Earth's energy balance and reduce global atmospheric CO_2 levels to no more than 350 ppm by 2100: 1) rapid CO_2 emission reductions; and 2) sequestering excess CO_2 already in the atmosphere.

160. Rapid CO_2 emission reductions requires a swift transition away from fossil fuels, including fossil fuel infrastructure.[143]

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[141] Declaration of Dr. James E. Hansen in Support of Plaintiffs' Complaint for Declaratory and Injunctive Relief, Juliana v. United States, No. 6:15-cv-01517, 14 (D. Or. Aug. 12, 2015); IPCC, *Chapter 6.3.2: What Does the Record of the Mid-Pliocene Show?, in* 2007 Working Group I: The Physical Science Basis (2007); Harry J. Dowsett & Thomas M. Cronin, *High Eustatic Sea Level During the Middle Pliocene: Evidence from the Southeastern U.S. Atlantic Coastal Plain*, 18 Geology 435 (1990); N.J. Shackleton et al., *Pliocene Stable Isotope Stratigraphy of Site 846*, 138 Proceedings of the Ocean Drilling Program, Scientific Results 337 (1995); James Hansen et al., *Assessing "Dangerous Climate Change": Required Reduction of Carbon Emissions to Protect Young People, Future Generations and Nature*, 8 PLOS ONE e81648, 13 (2013); *see also* James Hansen et al., *Ice Melt, Sea Level Rise and Superstorms; Evidence from Paleoclimate Data, Climate Modeling, and Modern Observations that 2°C Global Warming Could be Dangerous*, 16 Atmos. Chem. & Phys. 3761 (2016).

[142] M.R. Allen et al., *Framing and Context, in* Global Warming of 1.5°C, at 53 (2018).

[143] Mark Z. Jacobson, *Zero Pollution and Zero Carbon From All Energy Without Blackouts at Low Cost in Virginia* (2021), http://web.stanford.edu/group/efmh/jacobson/Articles/I/21-USStates-PDFs/21-WWS-Virginia.pdf; Mark Z. Jacobson et al., *100% Clean and Renewable Wind, Water, and Sunlight (WWS) All-Sector Energy Roadmaps for the 50 United States*, 8 Energy Envtl. Sci. 2093 (2015), http://web.stanford.edu/group/efmh/jacobson/Articles/I/USStatesWWS.pdf; William Shobe et al., *Decarbonizing Virginia's Economy: Pathways to 2050* (2021); Ben Haley et al., Evolved Energy Research, *350 PPM Pathways for the United States* (2019); International Energy Agency, *Net Zero by 2050: A Roadmap for the Global Energy Sector* (2021).

161. The General Assembly created a policy for all of Virginia's energy sectors to achieve net-zero emissions by 2045.[144]

162. Virginia needs to swiftly transition away from permitting fossil fuel infrastructure as the Commonwealth moves forward with decarbonizing its energy system and achieving net-zero emissions by 2045.[145] Net-zero emissions by 2045 will require eliminating nearly all (greater than 90 percent) of Virginia's fossil fuel use and protecting the natural carbon sinks of Virginia to sequester greater amounts of carbon than today.

163. Importantly, experts have already concluded that it is technically feasible and cost-effective to decarbonize all sectors of Virginia's energy system (electric power, transportation, industrial, commercial, and residential) by mid-century without purchasing offsets for GHG emissions.[146] Decarbonizing energy sectors will also promote energy independence and security, thereby minimizing the risk of attacks to fossil fuel infrastructure, such as the cyber-attack on the Colonial Pipeline, which then-Governor Northam described as a "disaster" and proclaimed a state of emergency over.[147]

164. **No additional fossil fuel infrastructure is needed to meet Virginia's current or future energy needs.**

165. Achieving the General Assembly's goal of swift decarbonization and transitioning to clean energy would achieve the Commonwealth's Energy Objectives and Policies, including,

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[144] Va. Code § 45.2-1706.1(A).
[145] M. Jacobson, *Zero Pollution and Zero Carbon From All Energy Without Blackouts at Low Cost in Virginia* (2021) http://web.stanford.edu/group/efmh/jacobson/Articles/I/21-USStates-PDFs/21-WWS-Virginia.pdf; Mark Z. Jacobson et al., *100% Clean and Renewable Wind, Water, and Sunlight (WWS) All-Sector Energy Roadmaps for the 50 United States*, 8 Energy Envtl. Sci. 2093 (2015), http://web.stanford.edu/group/efmh/jacobson/Articles/I/USStatesWWS.pdf; William Shobe et al., *Decarbonizing Virginia's Economy: Pathways to 2050* (2021); Ben Haley et al., Evolved Energy Research, *350 PPM Pathways for the United States* (2019).
[146] *Id.*
[147] Exec. Order No. 78 (2021), https://www.fmcsa.dot.gov/sites/fmcsa.dot.gov/files/2021-05/Virginia%20EO-78-Declaration-of-a-State-of-Emergency-Due-to-the-Shutdown-of-the-Colonial-Pipeline.pdf.

ensuring an adequate and reliable energy supply, minimizing exposure to volatility in energy prices, ensuring energy independence, promoting economic growth, cost savings, creating jobs (any job losses will be more than offset by additional jobs in the fields of renewable energy and energy efficiency), addressing the negative impacts of the climate crisis on disadvantaged communities, saving lives, and promoting the health, safety, and welfare of Virginia's residents.[148]

LEGAL FRAMEWORK

A. The Commonwealth of Virginia's *Jus Publicum*

166. The Commonwealth has a "most solemn duty" to exercise its *jus publicum* for the benefit of the people, and cannot "relinquish, surrender, alienate, destroy, or substantially impair" the *jus publicum*, or the rights of the people inherent to the *jus publicum*, except as authorized by the Constitution of Virginia or the U.S. Constitution.[149] The *jus publicum* is a "limitation" on the power of the legislature and government agencies to "authorize, or permit the use of, the public domain . . . ."[150] It is "a perversion of the Constitution to construe it as authorizing or permitting the legislature or any other governmental agency to relinquish, alienate or destroy, or substantially impair the sovereignty, or the sovereign rights, or governmental powers of the State."[151]

167. *Jus publicum* claims, also referred to as the public trust doctrine, are unique as they rest on the fundamental understanding that government cannot abdicate its core sovereign powers. As an inherent aspect of sovereignty, the *jus publicum* acts as a restraint of the political branches

[148] Va. Code §§ 45.2-1706, 1707; Mark Z. Jacobson, *Zero Pollution and Zero Carbon From All Energy Without Blackouts at Low Cost in Virginia* (2021), http://web.stanford.edu/group/efmh/jacobson/Articles/I/21-USStates-PDFs/21-WWS-Virginia.pdf; Mark Z. Jacobson et al., *100% Clean and Renewable Wind, Water, and Sunlight (WWS) All-Sector Energy Roadmaps for the 50 United States*, 8 Energy Envtl. Sci. 2093 (2015), http://web.stanford.edu/group/efmh/jacobson/Articles/I/USStatesWWS.pdf; William Shobe et al., *Decarbonizing Virginia's Economy: Pathways to 2050* (2021); Ben Haley et al., Evolved Energy Research, *350 PPM Pathways for the United States* (2019).
[149] *VMRC v. Chincoteague Inn*, 287 Va. 371, 383 (2014).
[150] *Commonwealth v. City of Newport News*, 158 Va. 521, 547 (1932).
[151] *City of Newport News*, 158 Va. at 545.

and cannot be legislated away. Virginia's *jus publicum* rights both predate and are secured by the constitution.[152] As such, the *jus publicum* "is a constitutional doctrine that simultaneously empowers and limits the actions of *the Commonwealth* . . . ."[153]

168. "[W]hether an activity is a right of the people inherent to the *jus publicum* is a matter of Virginia common law subject to the Constitution of Virginia and the General Assembly's modification by statute."[154] As the Virginia Supreme Court has stated, whether or not resources or rights are a part of the *jus publicum* depends on two questions:

> (1) Does the State Constitution expressly or impliedly give or guarantee to the people the right to use them for such purpose? If so, it impliedly denies to the legislature the power to take away, destroy, or substantially impair such right. (2) Does the State Constitution expressly or impliedly deny to the legislature the power to take away, destroy or substantially impair the use thereof by the people for such purpose? If so, it impliedly gives and guarantees to the people the right to use them for such purpose. The whole question resolves itself into a question of the construction of the State Constitution.[155]

169. *Jus publicum* rights factors include: 1) the right is commonly-enjoyed and public use does not convert the property to private property; and 2) the public use is related to the preservation of some constitutional right. The scope of the *jus publicum* "changes with time and with the evolving values which society places on certain activities."[156]

170. Article XI, section 1 of Virginia's Constitution states that "it shall be the Commonwealth's policy to protect its atmosphere, lands, and waters from pollution, impairment, or destruction, for the benefit, enjoyment, and general welfare of the people of the Commonwealth."

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[152] *See* Va. Const. art. I, § 17.
[153] *Chincoteague Inn*, 287 Va. at 385 n.5.
[154] *Id.* at 383.
[155] *City of Newport News*, 158 Va. at 544–45.
[156] A.E. Dick Howard, *State Constitutions and the Environment*, 58 Va. L. Rev. 193, 221 (1972); *see also* Sharon M. Kelly, *The Public Trust and the Constitution: Routes to Judicial Overview of Resource Management Decisions in Virginia*, 75 Va. L. Rev. 895, 910 (1989).

171. Article XI, section 1 guarantees Virginia's residents the right to use the Commonwealth's atmosphere, lands, and waters protected from pollution, impairment, or destruction for their benefit, enjoyment, and general welfare. Article XI, section 1 denies the Commonwealth the ability to pollute, impair, or destroy the Commonwealth's atmosphere, lands, and waters.

172. The right to use the Commonwealth's atmosphere, lands, and waters protected from pollution, impairment, or destruction is nonpossessory, non-consumptive, and is a commonly-enjoyed right not reduced to private property through use.[157]

173. The right to use the Commonwealth's atmosphere, lands, and waters protected from pollution, impairment, or destruction is related to the preservation of Plaintiffs' constitutional rights.[158]

174. The Office of the Governor has admitted that: "The Constitution of Virginia states that it is the Commonwealth's policy to 'protect its atmosphere, lands, and waters from pollution, impairment, or destruction, for the benefit, enjoyment, and general welfare of the people of the Commonwealth.' The protection of our natural resources applies equally to all individuals. All deserve to live in a healthy environment. The Commonwealth has a duty to protect our air, water, and land, and to ensure that no community in Virginia is disproportionately impacted by the negative effects of climate change."[159]

175. The General Assembly has affirmed the importance of protecting the Commonwealth's atmosphere, lands, and waters in numerous statutes.

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[157] *See* Sharon M. Kelly, *The Public Trust and the Constitution: Routes to Judicial Overview of Resource Management Decisions in Virginia*, 75 Va. L. Rev. 895, 910–11 (1989).
[158] Va. Const. art. I, §§ 1, 11, 17.
[159] Exec. Order No. 29 (2019).

176. Virginia's history, traditions, and practices, including the constitutional convention and history surrounding the 1971 amendments to Virginia's Constitution, affirm that use of the Commonwealth's atmosphere, lands, and waters protected from pollution, impairment, or destruction is part of the *jus publicum* and that protecting such resources is a constitutional obligation of the Commonwealth.[160]

177. As A.E. Dick Howard, the Executive Director of the 1968 Virginia Commission on Constitutional Revision, stated: "Section 1 of article XI, by proclaiming Virginia's public policy on the environment, makes the protection of the Commonwealth's natural resources, public lands, and historical sites part of the *jus publicum* in Virginia."[161] According to Senator Brault, "section 1's language is to be read as effecting a public trust in Virginia's natural resources and public lands."[162]

B. Substantive Due Process

178. Article I, section 11 of the Virginia Constitution guarantees "no person shall be deprived of his life, liberty, or property without due process of law." Article I, section 1 guarantees that "all men are by nature equally free and independent and have certain inherent rights, of which, when they enter into a state of society, they cannot, by any compact, deprive or divest their posterity; namely, the enjoyment of life and liberty, with the means of acquiring and possessing property, and pursuing and obtaining happiness and safety." The rights to life, liberty, and property have evolved, and the Virginia Constitution recognizes that there are certain liberty interests protected by the Due Process Clause that are not explicitly enumerated in the Bill of Rights.[163]

[160] *See, e.g.,* A.E. Dick Howard, *State Constitutions and the Environment*, 58 Va. L. Rev. 193, 222 (1972).
[161] *Id.* at 221–22.
[162] *Id.* at 222.
[163] Va. Const. art. I, § 17.

179. Virginia has taken an expansive view of liberty rights in their Constitution. "Liberty" in the Virginia Constitution:

> means more than mere freedom from restraint. It means not merely the right to go where one chooses, but to do such acts as he may judge best for his interest, not inconsistent with the equal rights of others; that is, to follow such pursuits as may be best adapted to his faculties, and which will give him the highest enjoyment. The liberty mentioned is deemed to embrace the right of the citizen to be free in the enjoyment of all his faculties; to be free to use them in all lawful ways; to live and work where he will; to earn his livelihood by any lawful calling, and for that purpose to enter into all contracts which may be proper, necessary, and essential to his carrying out to a successful conclusion the purpose above mentioned. These are individual rights, formulated as such under the phrase "pursuit of happiness" in the Declaration of Independence, which begins with the fundamental proposition that all men are created equal; that they are endowed by their Creator with certain inalienable rights; that among these are life, liberty, and the pursuit of happiness.[164]

180. Implicit in the liberties protected by Article I, section 11, read in conjunction with Article I, sections 1 and 17, is the *jus publicum* right to use an atmosphere, lands, and waters protected from pollution, impairment, or destruction for their benefit, enjoyment, and general welfare. Without such a right, the fundamental rights to life, liberty, and property are in peril.

181. Protecting the *jus publicum* right to use the Commonwealth's atmosphere, lands, and waters protected from pollution, impairment, or destruction for their benefit, enjoyment, and general welfare is fundamental to our scheme of ordered liberty and is deeply rooted in Virginia's history and tradition. Indeed, the public trust doctrine has its roots in Roman law, traced through the Magna Carta to the United States, and is deeply rooted in United States jurisprudence.[165] The intergenerational dimension of the *jus publicum*—that is, *jus publicum* rights must be protected for both present and future generations—has been enumerated in the Bill of Rights of Virginia's Constitution since its inception in 1776. As James Madison noted over two hundred years ago, the atmosphere has the "destined purpose, of supporting the life and health of organized beings."

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[164] *Young v. Commonwealth*, 101 Va. 853, 862–63 (1903).
[165] *See, e.g., City of Newport News*, 158 Va. at 541; *Illinois Cent. R. Co. v. Illinois,* 146 U.S. 387 (1892).

CLAIMS FOR RELIEF

COUNT I
The Virginia Gas and Oil Act Directive that Virginia Energy Maximize Exploration, Development, Production, Recovery, and Utilization of Fossil Fuels Substantially Impairs Plaintiffs' *Jus Publicum* Rights

182. Plaintiffs hereby re-allege and incorporate by reference each of the allegations set forth above.

183. The plain language of Virginia Gas and Oil Act sections 45.2-1602(1), (2), (5) and 45.2-1614(A)(1), (A)(2), (A)(4), (B)(6) directs Defendant Virginia Energy to maximize the exploration, development, production, recovery, and utilization of Virginia's coal, oil, and gas resources. Pursuant to this statutory directive, Defendant Virginia Energy has maximized the exploration, development, production, recovery, and utilization of Virginia's coal, oil, and gas resources by and through its historic and ongoing permitting of fossil fuel infrastructure.

184. The plain language directive of Virginia Gas and Oil Act sections 45.2-1602(1), (2), (5) and 45.2-1614(A)(1), (A)(2), (A)(4), (B)(6) has caused, and continues to cause, dangerous GHG pollution, and caused and contributed to the climate crisis, which is substantially impairing the Commonwealth's atmosphere, lands, and waters, and Plaintiffs' ability to use such resources protected from pollution, impairment, or destruction for their benefit, enjoyment, and general welfare. Given their youth, these ongoing impacts will disproportionately burden the Plaintiffs' ability to freely enjoy their *jus publicum* rights.

185. As such, sections 45.2-1602(1), (2), (5) and 45.2-1614(A)(1), (A)(2), (A)(4), (B)(6) in the Virginia Gas and Oil Act substantially impairs Plaintiffs' constitutional and common law *jus publicum* rights.

186. Nothing in the Constitution of Virginia or the U.S. Constitution authorizes or permits Defendants to mandate the substantial impairment of Plaintiffs' *jus publicum* right to use

an atmosphere, lands, and waters protected from pollution, impairment, or destruction for their benefit, enjoyment, and general welfare.

187. There exists an actual and justiciable controversy between the parties as to whether sections 45.2-1602(1), (2), (5) and 45.2-1614(A)(1), (A)(2), (A)(4), (B)(6) of the Virginia Gas and Oil Act violate Plaintiffs' *jus publicum* rights. A declaration of Plaintiffs' rights will establish if the challenged laws are unlawful, and thereby guide the future actions of Defendant Virginia Energy. Thus, the declaration will prevent further infringement of Plaintiffs' *jus publicum* rights and reduce the extent of their injuries.

188. Plaintiffs have no equal administrative remedy. Bringing piecemeal litigation under the Administrative Process Act of Virginia challenging individual agency actions that violate Plaintiffs' rights is not equal to the relief sought in this suit's declaratory judgment action, which seeks to invalidate specific laws and inform Defendants' ongoing and future actions.

189. Plaintiffs are entitled to declaratory relief from this Court pursuant to section 8.01-184 of the Virginia Code and, if necessary and proper, injunctive relief.

COUNT II
The Virginia Gas and Oil Act Directive that Virginia Energy Maximize Exploration, Development, Production, Recovery, and Utilization of Fossil Fuels Violates Plaintiffs' Substantive Due Process Rights in the Virginia Constitution

190. Plaintiffs hereby re-allege and incorporate by reference each of the allegations set forth above.

191. The plain language of Virginia Gas and Oil Act sections 45.2-1602(1), (2), (5) and 45.2-1614(A)(1), (A)(2), (A)(4), (B)(6) directs Defendant Virginia Energy to maximize the exploration, development, production, recovery, and utilization of Virginia's coal, oil, and gas resources. Pursuant to this statutory directive, Virginia Energy has maximized the exploration,

development, production, recovery, and utilization of Virginia's coal, oil, and gas resources by and through its historic and ongoing permitting of fossil fuel infrastructure.

192. The plain language directive of Virginia Gas and Oil Act sections 45.2-1602(1), (2), (5) and 45.2-1614(A)(1), (A)(2), (A)(4), (B)(6) has caused, and continues to cause, dangerous GHG pollution, and caused and contributed to the climate crisis, which is causing grave injuries to Plaintiffs. These Youth Plaintiffs are thereby being deprived of their fundamental rights to life, liberty, and property, including liberty interests such as the right to personal security, the capacity of Plaintiffs to provide for their basic human needs, safely raise families, learn and practice their religious and spiritual beliefs, and maintain their bodily integrity. Given their youth, these ongoing impacts will disproportionately burden the Plaintiffs' ability to freely enjoy their fundamental constitutional rights.

193. Additionally, the plain language directive of Virginia Gas and Oil Act sections 45.2-1602(1), (2), (5) and 45.2-1614(A)(1), (A)(2), (A)(4), (B)(6) is depriving Plaintiffs of their unenumerated fundamental liberty right to use an atmosphere, lands, and waters protected from pollution, impairment, or destruction.

194. As such, sections 45.2-1602(1), (2), (5) and 45.2-1614(A)(1), (A)(2), (A)(4), (B)(6) in the Virginia Gas and Oil Act violate Plaintiffs' substantive due process rights, secured by Virginia's Constitution.

195. The plain language directive of Virginia Gas and Oil Act sections 45.2-1602(1), (2), (5) and 45.2-1614(A)(1), (A)(2), (A)(4), (B)(6) to maximize the exploration, development, production, recovery, and utilization of Virginia's coal, oil, and gas resources cannot and do not operate to secure, and are not narrowly tailored to achieve, a more compelling state interest than

Plaintiffs' fundamental rights to life, liberty, and property. Nor can such laws satisfy intermediate scrutiny or rational basis review.

196. There exists an actual and justiciable controversy between the parties as to the violation of Plaintiffs' rights under Article I, sections 11 and 17 of the Virginia Constitution. A declaration of Plaintiffs' rights will establish if the challenged laws are unlawful, and thereby guide the future actions of Defendant Virginia Energy. Thus, the declaration will prevent further infringement of Plaintiffs' substantive due process rights and reduce the extent of their injuries.

197. Plaintiffs are entitled to declaratory relief from this Court pursuant to section 8.01-184 of the Virginia Code and, if necessary and proper, injunctive relief.

COUNT III
Defendants' Long-Standing Policy and Practice of Exercising their Statutory Discretion in Favor of Permitting Fossil Fuel Infrastructure Substantially Impairs Plaintiffs' *Jus Publicum* Rights

198. Plaintiffs hereby re-allege and incorporate by reference each of the allegations set forth above.

199. All Defendants implement laws that regulate the permitting of fossil fuel infrastructure in the Commonwealth of Virginia (see *supra* ¶¶ 87–94). Where the General Assembly has granted Defendants discretion to use their statutory authority to grant or deny permits for fossil fuel infrastructure, Defendants have a historic and ongoing policy and practice of exercising their statutory discretion in such a manner as to favor the permitting of fossil fuel infrastructure projects, including permits for the production, transport, and burning of fossil fuels. Upon information and belief, Defendants have rarely exercised their discretion to deny or revoke permits for fossil fuel infrastructure, even though they have statutory authority to do so.

200. Defendants historic and ongoing policy and practice of exercising their statutory discretion in such a manner as to favor the permitting of fossil fuel infrastructure projects has

caused, and continues to cause, dangerous GHG pollution, and caused and contributed to the climate crisis, which is substantially impairing the Commonwealth's atmosphere, lands, and waters, and Plaintiffs' ability to use such resources protected from pollution, impairment, or destruction for their benefit, enjoyment, and general welfare. Given their youth, these ongoing impacts will disproportionately burden the Plaintiffs' ability to freely enjoy their *jus publicum* rights.

201. As such, Defendants historic and ongoing policy and practice of exercising their statutory discretion in such a manner as to favor the permitting of fossil fuel infrastructure projects substantially impairs Plaintiffs' constitutional and common law *jus publicum* rights.

202. Defendants' historic and ongoing policy and practice of exercising their statutory discretion in such a manner as to favor the permitting of fossil fuel infrastructure projects that cause dangerous levels of GHG pollution continues, and shows no sign of abating. Upon information and belief, absent a declaration from this Court, Defendants' ongoing policy and practice will continue.

203. Nothing in the Constitution of Virginia or the U.S. Constitution authorizes or permits Defendants to substantially impair Plaintiffs' *jus publicum* right to use an atmosphere, lands, and waters protected from pollution, impairment, or destruction for their benefit, enjoyment, and general welfare.

204. There exists an actual and justiciable controversy between the parties as to the violation of Plaintiffs' rights under Virginia's *jus publicum* doctrine. A declaration of Plaintiffs' rights will establish if Defendants' historic and ongoing policy and practice of exercising their statutory discretion in such a manner as to favor the permitting of fossil fuel infrastructure projects

is lawful, and thereby guide the future actions of Defendants. Thus, the declaration will prevent further infringement of Plaintiffs' *jus publicum* rights and reduce the extent of their injuries.

205. Plaintiffs are entitled to declaratory relief from this Court pursuant to section 8.01-184 of the Virginia Code and, if necessary and proper, injunctive relief.

COUNT IV
Defendants' Long-Standing Policy and Practice of Exercising their Statutory Discretion in Favor of Permitting Fossil Fuel Infrastructure Violates Plaintiffs' Substantive Due Process Rights in the Virginia Constitution

206. Plaintiffs hereby re-allege and incorporate by reference each of the allegations set forth above.

207. All Defendants implement laws that regulate the permitting of fossil fuel infrastructure in the Commonwealth of Virginia (see *supra* ¶¶ 87–94). Where the General Assembly has granted Defendants discretion to use their statutory authority to grant or deny permits for fossil fuel infrastructure, Defendants have a historic and ongoing policy and practice of exercising their statutory discretion in such a manner as to favor the permitting of fossil fuel infrastructure projects in the Commonwealth of Virginia, including permits for the production, transport, and burning of fossil fuels. Upon information and belief, Defendants have rarely exercised their discretion to deny or revoke permits for fossil fuel infrastructure, even though they have statutory authority to do so.

208. Defendants historic and ongoing policy and practice of exercising their statutory discretion in such a manner as to favor the permitting of fossil fuel infrastructure projects has caused, and continues to cause, dangerous GHG pollution, and caused and contributed to the climate crisis, which is causing grave injuries to Plaintiffs. These Youth Plaintiffs are thereby being deprived of their fundamental rights to life, liberty, and property, including liberty interests such as the right to personal security, the capacity of Plaintiffs to provide for their basic human

needs, safely raise families, learn and practice their religious and spiritual beliefs, and maintain their bodily integrity. Given their youth, these ongoing impacts will disproportionately burden the Plaintiffs' ability to freely enjoy their fundamental constitutional rights.

209. Additionally, Defendants historic and ongoing policy and practice of exercising their statutory discretion in such a manner as to favor the permitting of fossil fuel infrastructure projects is depriving Plaintiffs of their unenumerated liberty right to use an atmosphere, lands, and waters protected from pollution, impairment, or destruction.

210. Defendants' historic and ongoing policy and practice of exercising their statutory discretion in such a manner as to favor the permitting of fossil fuel infrastructure projects that cause dangerous levels of GHG pollution continues, and shows no sign of abating. Upon information and belief, absent a declaration from this Court, Defendants' ongoing policy and practice will continue.

211. Defendants' historic and ongoing policy and practice of exercising their statutory discretion in such a manner as to favor the permitting of fossil fuel infrastructure projects cannot and does not operate to secure, and are not narrowly tailored to achieve, a more compelling state interest than Plaintiffs' fundamental rights to life, liberty, and property. Nor can such conduct satisfy intermediate scrutiny or rational basis review.

212. There exists an actual and justiciable controversy between the parties as to the violation of Plaintiffs' rights under Article I, sections 11 and 17 of the Virginia Constitution. A declaration of Plaintiffs' rights will establish if Defendants' historic and ongoing policy and practice of exercising their statutory discretion in such a manner as to favor the permitting of fossil fuel infrastructure projects is lawful, and thereby guide the future actions of Defendants. Thus, the

declaration will prevent further infringement of Plaintiffs' substantive due process rights and reduce the extent of their injuries.

213. Plaintiffs are entitled to declaratory relief form this Court pursuant to section 8.01-184 of the Virginia Code and, if necessary and proper, injunctive relief.

REQUEST FOR RELIEF

Plaintiffs respectfully request that the Court order the following relief:

A. Entry of declaratory judgment that:

1. As to Counts I and III, the right to use an atmosphere, lands, and waters protected from pollution, impairment, or destruction for their benefit, enjoyment, and general welfare is inherent to the *jus publicum*;
2. As to Counts II and IV, Plaintiffs have a constitutional right to life, liberty, and property;
3. As to Counts II and IV, Plaintiffs have an unenumerated liberty right to use an atmosphere, lands, and waters protected from pollution, impairment, or destruction for their benefit, enjoyment, and general welfare;
4. As to Count I, sections 45.2-1602(1), (2), (5) and 45.2-1614(A)(1), (A)(2), (A)(4), (B)(6) in the Virginia Gas and Oil Act substantially impairs Plaintiffs' *jus publicum* rights, and are invalid;
5. As to Count II, sections 45.2-1602(1), (2), (5) and 45.2-1614(A)(1), (A)(2), (A)(4), (B)(6) in the Virginia Gas and Oil Act violate Plaintiffs' substantive due process rights to life, liberty, and property, and are unconstitutional;
6. As to Count II, sections 45.2-1602(1), (2), (5) and 45.2-1614(A)(1), (A)(2), (A)(4), (B)(6) in the Virginia Gas and Oil Act violate Plaintiffs' unenumerated liberty right

to use an atmosphere, lands, and waters protected from pollution, impairment, or destruction for their benefit, enjoyment, and general welfare, and are unconstitutional;

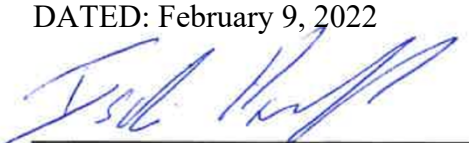
7. As to Count III, Defendants' policy and practice of exercising their statutory discretion in favor of permitting fossil fuel infrastructure projects substantially impairs Plaintiffs' *jus publicum* rights;
8. As to Count IV, Defendants' policy and practice of exercising their statutory discretion in favor of permitting fossil fuel infrastructure projects violates Plaintiffs' substantive due process rights to life, liberty, and property;
9. As to Count IV, Defendants' policy and practice of exercising their statutory discretion in favor of permitting fossil fuel infrastructure projects violates Plaintiffs' unenumerated liberty right to use an atmosphere, lands, and waters protected from pollution, impairment, or destruction for their benefit, enjoyment, and general welfare;

B. If necessary and proper, award injunctive relief;

C. Award Plaintiffs their costs of suit, including reasonable attorneys' fees;

D. Award Plaintiffs such other and further relief as may be just and proper.

DATED: February 9, 2022



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