

To: Governor Northam
From: Advisory Council on Environmental Justice
Re: Environmental Justice Review of Virginia's Gas Infrastructure
Date: August 16, 2018

Dear Governor Northam:

The Advisory Council on Environmental Justice (ACEJ) was established to provide advice and recommendations to the Governor to improve equity in decision-making and improve public health in marginalized communities, among other goals listed in Executive Order 73 (EO 73) from October of 2017.¹ We appreciate the opportunity to communicate our first formal set of environmental justice concerns to the Executive Branch since our inauguration six months ago. Investigating and evaluating the proposed MVP and ACP pipeline and its' associated infrastructure has raised a myriad of issues (legal, scientific, technical, environmental, cultural, political, economic and social justice) that challenge our complete comprehension and integration. Consequently, we vigorously recommend the Governor use this situation as an opportunity to engage and encourage our state agencies to collaborate proactively to educate themselves and the public on the complex links and impacts of fossil fuel use on human health and quality of life. These links are many, both historic and current and the potential future impacts are likely to be felt most severely by our poor, minority and marginalized communities and community members. The people who have to live with the consequences of a decision should get to make that decision or at least have meaningful involvement in the decision-making process.

Historically the term environmental justice has meant ensuring that vulnerable populations including low income and/or minority populations are not disproportionately affected by environmental exposures that have known adverse effects. The Environmental Protection Agency defines environmental justice as the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. The term has its roots in Civil Rights law, specifically Title VI of the 1964 Civil Rights Act, which prohibits discrimination on the basis of race, color, and national origin in programs and activities receiving federal financial assistance. For states like Virginia with significant diversity, it is necessary to examine the use of state-level policy mechanisms, such as eminent domain, to ensure their use does not result in discriminatory acts against its citizens.

The Council's examination of evidence submitted from the Union Hill in Buckingham County community has revealed to us that this community, like many others within the state,

¹ The duties of the Governor's Advisory Council are to provide advice and recommendations to the Executive Branch on the following: Integrating environmental justice considerations throughout the Commonwealth's programs, regulations, policies, and procedures; 2. Improving the environment and public health in communities disproportionately burdened by environmental pollution and risks; 3. Ensuring transparent, authentic, and equitable engagement in decision-making, building capacity in disproportionately burdened communities, and promoting collaborative problem-solving for issues involving environmental justice; 4. Strengthening partnerships on environmental justice among governmental agencies, including Federal, State, Tribal, and local governments; 5. Enhancing research and assessment approaches related to environmental justice; 6. Receiving comments, concerns, and recommendations from individuals throughout the Commonwealth; and 7. Developing resources and strategies to provide and disseminate information to the public. See <https://www.naturalresources.virginia.gov/media/governorvirginiagov/secretary-of-natural-resources/pdf/eo-73-establishment-of-an-advisory-council-on-environmental-justice.pdf>.

has a significant population fitting the environmental justice criteria. Many of Buckingham's residents, because of their race or color, have been the historical recipients of unequal treatment, for which the above-listed Executive Order was signed to serve as a remedy. Therefore, we encourage that these recommendations (and others that may be directed to the Governor from this Commission in the future) be viewed through this lens so that the state of Virginia can ensure policies, programs and practices will not have unintended consequences that harm citizens who have a history of disenfranchisement. Additionally, the Council recognizes the lack of bottom up participation and consultation among Virginia's Indigenous Peoples regarding "Free, Prior, and Informed Consent" (FPIC), as defined in the United Nation's Declaration on the Rights of Indigenous Peoples (UNDRIP) in 2007.²

In order to move Virginia forward ensuring its place as a leader in environmental justice, addressing the global climate crisis, and building a 21st Century clean energy economy we recommend that the governor direct state permitting agencies to prioritize renewable energy solutions, and quickly transition away from fossil fuels. The Governor's Advisory Council on Environmental Justice (ACEJ) recommends that the 401 Clean Water Act certifications for the Atlantic Coast Pipeline (ACP) and the Mountain Valley Pipeline (MVP) be rescinded immediately. Likewise ACEJ recommends that the Governor direct DEQ to suspend the permitting decision for the air permit for the Buckingham compressor station pending further review of the station's impacts on the health and the lives of those living in close proximity. We also recommend that a review of permitting policies and procedures take place and that the governor direct the Air Pollution Control Board, DEQ, and DMME to stay all further permits for ACP and MVP to ensure that predominately poor, indigenous, brown and/or black communities do not bear an unequal burden of environmental pollutants and life-altering disruptions. These actions would ensure that environmental justice has meaningful influence in all current and future energy projects.

Our concerns fall into seven areas:

- 1) Residents of Buckingham have provided comment to the Council that raise questions about the need for the pipeline given decreasing domestic demand
- 2) The Council recommends that if there is a change in demand that renewables be prioritized over natural gas.
- 3) Residents have provided comment to the Council about the potential for civil rights violations.
- 4) Union Hill Compressor Station in Buckingham County (ACP CS-2) may have a disproportionate impact on this predominately African American community and could be perceived as exhibiting racism in siting, zoning, and permitting decisions and public health risk;
- 5) Federal and state review of assessments of risk for cultural and historical resources as a result of the Mountain Valley Pipeline (MVP) and the Atlantic Coast Pipeline (ACP) are incomplete;
- 6) The Council has concluded that federal and state reviews of water quality risks from the MVP and the ACP have not adequately assessed potential impacts for vulnerable populations; and

² US support of UNDRIP was announced in 2010.
http://www.un.org/esa/socdev/unpfii/documents/DRIPS_en.pdf

- 7) Methane from gas infrastructure has the potential to contribute significantly to climate change at a time when Virginian's climate impacts are increasing clear and contribute to vulnerability and inequality.

TOPIC ONE: CONCERNS OVER CIVIL AND HUMAN RIGHTS VIOLATIONS

Energy development is possible without infringement of civil rights and human rights.³ It is our hope that our current energy systems will take into account vulnerable and marginalized communities who may be impacted by developments and that this will be influence when production, processing, and transportation projects are undertaken. Specific civil rights concerns for Union Hill (Buckingham County), in Native American territories, and in rural counties along the pipeline path, are discussed in detail in subsequent sections below.

A controversial aspect of pipeline construction in Virginia involves interpretation of public good for property takings under eminent domain. There is considerable activity in local, state and federal courts and examination of current policies appears necessary and should involve public input.

In counties with pipeline surveying and pre-construction, many property owners assert their property rights are violated and they are mistreated during forced entry. There are a growing evidence of stressful and sometimes traumatic encounters in recorded videos, photographs, and other documentation. There is also a lack of certainty about landowner rights, since eminent domain taking is negatively viewed by most landowners. Stress is amplified by concerns over property value and the potential for a negative impact on public health. Homeowners who may feel that their quality of life has been negatively impacted may be unable to find a buyer, if they wish to leave.

Recommendations:

- 1) We recommend that the Governor's office examine the role of state agencies to ensure that policies with the potential to negatively impact vulnerable communities take the health of those residents into consideration as policies are considered for implementation.

TOPIC TWO: PUBLIC HEALTH CONCERNS WITH COMPRESSOR STATIONS AND RACISM IN THE SITING DECISION FOR ACP CS-2 IN UNION HILL

ACP construction requires three compressor stations: one is located within Virginia and the other two are located near to the state's border. MVP construction has the potential to contribute additional emissions to the existing Transco Pipeline Zone 5 Compressor Station 165 in Pittsylvania County, Virginia.

³ Sovacool, B.K. and Dworkin, M.H. 2015. Energy justice: Conceptual insights and practical applications. *Applied Energy*. 142: 435-444.

The Council would like to highlight the potential for disproportionate impact for this community of Buckingham. For federal permitting, ACP used countywide statistics of 29.1 people per mile. We are informed by the community that nearly all the 99 households living within two miles of CS-2 were not taken into account within the FERC application. The majority (85%) of these households are African American, which is also much higher than the county average reported in the federal application. We believe these citizen concerns are warranted. Table 1 demonstrates annual releases from the proposed >53,000 horsepower compressor station, which would receive gas not only from the ACP, but also from the William's Transcontinental (Transco) Pipeline and its feeder lines. These emission levels are based on information available in the 2015 permit application and 2017 supplement. At the ACEJ meeting on May 30, 2018, we were informed of a new air permit application for ACP CS-2 for which the details were recently made available at:

<https://www.deq.virginia.gov/Programs/Air/BuckinghamCompressorStationAirPermit.aspx> a.

Impacted populations will need sufficient time to consider technical applications. During the 30-day comment period, if abundant public health concerns about emissions arise, the state should consider a delay in providing permits until an independent review can take places.

Table 1: Proposed Annual Releases from CS-2

Pollutant	Annual Air Releases Requested in the 2018 Air Permit Application	Public Health Implications of Pollutants (https://www.epa.gov/criteria-air-pollutants)
Nitrogen Oxides (NO_x)	43.4 tons	Inflammation of the airways, decreased lung function, increased risk of respiratory conditions, and increased response to allergens.
Carbon monoxide (CO)	51.6 tons	Vital organs, such as the brain, nervous tissues and the heart, do not receive enough oxygen to work properly; people have trouble concentrating, lose coordination, and feel tired.
Volatile Organic Compounds (VOCs)	7.69 tons	VOCs can irritate the eyes, nose and throat, can cause difficulty breathing and nausea, and can damage the central nervous system as well as other organs.
Particulate Matter (PM)	43.2 tons	Exposure to PM can lead to premature mortality, aggravation of respiratory and cardiovascular disease, decreased lung function growth, exacerbation of allergic symptoms, etc.
Sulphur Dioxide (SO_x)	8.30 tons	Exposure to SO ₂ can harm the human respiratory system and make breathing difficult; SO ₂ contributes to acid rain.
Carbon dioxide equivalent (CO₂e)	295,686 tons	Contribute to climate change with related health impacts, such as increases in distribution and/or intensity of mosquitoes and ticks, allergens, natural disasters, etc.
Methane	70.9 tons	Methane is a potent greenhouse gas; methane gas exposure can cause headaches, dizziness, weakness, nausea, vomiting, and loss of coordination.
Hazardous Air Pollutants (HAPs)	5.3 tons	More than 30 HAPs (e.g., arsenic, benzene, toluene, xylene, etc.) would be released from the proposed compressor station. The levels of formaldehyde and hexane are significant. Formaldehyde: irritation of the skin, eyes, nose, and throat. High levels of exposure may cause some types of cancers. Hexane: dermatitis

		and irritation of the eyes and throat occur with acute and ongoing exposure
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State decisions for infrastructure with significant social and ecological risks, like compressor stations, should not be made hastily, particularly in places like Union Hill where the everyday experiences of residents are shaped by historical experience of racial injustice for a population whose ancestry is rooted in slavery.

During public testimony provided by Buckingham residents, the potential benefits to landowners of the compressor station site when contrasted with potential property value losses for the Freeman Community of Union Hill presents a stark contrast. The slave cemetery on the former Variety Shade Plantation lacks official protection as a historical site. Yet residents regard it as such and received formal recognition in 2016 by Preservation Virginia, a nonprofit who has specialized in Virginian historical preservation for more than a century. In 2017, Union Hill initiated a process for state recognition by filing paperwork with the Department of Historic Resources.

In rural counties in the path of the ACP and MVP pipelines, there is widespread concern that residents shoulder disproportionate risks because of their rural residency. For example, MVP selected to not add the chemical odorant (Mercaptan) as an emergency alert to nearby citizens if a leak occurs, a common precaution in urban areas. Rural populations may not benefit from the pipeline gas, so the absence of protections similar to those provided to urban residents seems unfair given the lack of benefits to balance the potential harms.

Specific examples below go further to suggest discrimination against rural populations based on low population density. For example, the planned width of the pipeline walls is thinner than what would be used if the pipes were located in urban areas. The number of cut-off values is reduced to cut construction costs, sending a message that rural lives value less.

Federal standards allow emergency responsibility to be placed with the Buckingham First Responders. Since this area is zoned for agricultural and residential use, the compressor required a Special Use Permit. Buckingham County First Responders are inadequately prepared for industrial explosions, leaks, and fires. As proposed, a brief training financed by the ACP with an annual refresher may not adequately assure safety.

Alarmingly, monitoring of CS-2 will occur remotely from West Virginia with on-site supervision only during week days for the first year. Control of the station with highly pressurized and toxic materials will occur by Wi-Fi tower transmission, in spite of the potential for disruption by storms and other hazards. Less risky fiber-optic cables are more reliable. With these cost-savings measures that do not employ existing technology, it seems inaccurate to define the CS-2 as 'using Best Available Technology' as suggested by the owner and operator during permit applications.

Recommendations:

- 1) We recommend that the Governor encourage state agencies complete comprehensive social, ecological, and comprehensive health impact assessment for CS-2 based on local

demographic context.⁴ We also recommend that testing occur to assure CS-2 noise levels no higher than 55 decibels (daytime) and 40 decibels (night) and explore protocols to limit the number of blowdowns of CS-2 in addition even further (currently ~10 per year) in addition to adding silencers.

- 2) DEQ's comprehensive Air Dispersion Models for the three ACP compressor stations and for emission increases to Pittsylvania Compressor station due to the MVP should include acute emissions in addition to annual averages. Annual averages can mask short term exposures that may be high enough to have an adverse impact on human health. We recommend that emission information be shared with the impacted community in a public forum with opportunities to ask questions.
- 3) We recommend that the Governor encourage state agencies to work with ACP to complete a Quantitative Risk Assessment (QRA) for CS-2 to protect the health and well-being of local populations and to examine emergency response plans for deficiencies.
- 4) We recommend that the Virginia Department of Health train a current staff member or hire an existing expert to build capacity and knowledge within the state about the potential health impacts of gas infrastructure.

TOPIC THREE: MARGINALIZED GROUPS AND CULTURAL RESOURCES

Federal cultural resource assessments for the ACP and the MVP have not adequately incorporated African American and Native American histories. There are important historical sites along the routes of the pipelines that have not received protected or landmark status.

Native American tribes in the state of Virginia are increasingly recognized on state and federal levels. On January 29, 2018, there was long overdue federal recognition of the Chickahominy, Eastern Chickahominy, Upper Mattaponi, Rappahannock, Nansemond, and Monacan Nations. ACP and MVP consultation with tribes was woefully inadequate during FERC permitting, particularly since federal recognition occurred after FERC approval. State agencies have an opportunity to fill this regulatory gap before issuing permits. Tribal leaders at a federal level have communicated a preference to consult with government intermediaries rather than negotiate directly with energy companies.⁵ Tribes may not want to share locations of cultural resources, such as burial grounds and spiritual sites.

The MVP cultural resource plan was incomplete, and the risks are high. In Virginia, the MVP identified 138 pre-historic and historic sites within a mile and 97 within 0.5 mile. There are 8 sites of an unknown time period, suggesting these have not been adequately studied. The 97 sites within a half mile of the project had not been evaluated for their potential to be eligible to the National Registry of Historic Places (NRHP) before MVP made their cultural resource plan in 2015. MVP noted there were "cemeteries, many not mapped, related to Native Americans, enslaved African Americans, and Euroamericans (including possible Civil War-era burials) that may be in the path of the Project."⁶

⁴ For example, Dr. Lakshmi Fjord, an Anthropologist at the University of Virginia, has collected household data in the 2-mile blast radius of CS-2.

⁵ Lovells, H. 2017. The Federal Energy Regulatory Commission Issues Guidelines for Reporting on Cultural Resources Investigations for Natural Gas Projects: A Summary of the Tribal Engagement Provisions <https://www.jdsupra.com/legalnews/the-federal-energy-regulatory-82749/>.

⁶ Mountain Valley Pipeline. 2015. Resource Report 4: Cultural Resources.

The ACP will uncover Native American settlements or artifacts during construction across hundreds of miles on the lands and along rivers of Powhatan, Monacan, Meherrin, Tuscarora, Nottoway, Cheroenhaka, Nansemond, Lumbee and other nations.⁷ ACP's scattershot dispersal technique to share project information covered mostly non-impacted groups in states other than Virginia. ACP received input from a small number of groups, perhaps due to inadequate consultation techniques relying largely on two form letters and a singular multi-tribe information sessional.

The ACP Pipeline and Compressor Station Two (CS-2) are in the immediate vicinity of slave cemeteries, historical school and churches at the Freedman settlement in Union Hill in Buckingham County. The ACP has not undertaken required Section 106, Historic Preservation Act cultural resource reports for the former Slave/Freedmen community of Union Hill. The ACP does not recognize Union Hill's historical importance and current Freedmen descendant population.

The ACP intersects 140 acres of the Great Dismal Swamp (GDS) (National Wildlife Refuge). ACP is a site of ecological diversity and an important historical area. In the early 1600s, Native Americans fleeing the colonial frontier took refuge in what would become GDS. Details about Native American sites in this area remain incomplete. GDS was a survival oasis, a "thriving refuge" for escaped slaves.⁸ In 2003, the Underground Railroad Network to Freedom Program established a refuge to commemorate the importance of the Great Dismal Swamp as an escape route and place of safety for former slaves. There are active archeological sites in portions of the GDS. Thousands of artifacts have been uncovered, but many areas remain without analysis.⁹

Recommendations:

- 1) With hundreds of archeological sites located within a mile of the ACP and the MVP without historical designation, we recommend that the Governor assess the potential impacts of the ACP and MVP on areas of cultural significance to Native Americans and African Americans. to protect and categorize important cultural sites.
- 2) We recommend that the Governor insure that private and public sector entities improve channels of communication with tribal councils while supporting self-determination. In particular, infrastructure projects like the ACP and MVP should consult tribes about impacts to their land and people. Since tribes were awaiting decision on their federal recognition application, they may not have felt free to communicate concerns about proposed pipeline projects. The global standard established to respect indigenous rights is Free, Prior and Informed Consent. These pipeline projects are currently in pre-construction without FPIC, even from federally recognized tribes.

TOPIC FOUR: STATE REVIEW UNDER THE CLEAN WATER ACT

⁷ Native Land. Our home on native land. <https://native-land.ca/>.

⁸ Grant, R. 2016. Deep in the swamps, Archeologists are finding how fugitive slaves kept their freedom. *Smithsonian Magazine*. <https://www.smithsonianmag.com/history/deep-swamps-archaeologists-fugitive-slaves-kept-freedom-180960122/>.

⁹ Hausman, S. 2014. Fleeing to Dismal Swamp, slaves and outcasts found freedom. *National Public Radio*. <https://www.npr.org/2014/12/28/373519521/fleeing-to-dismal-swamp-slaves-and-outcasts-found-freedom>

ACEJ recognizes clean water is part of the public trust. UN Resolution 64/292, passed in 2010, acknowledged that clean drinking water is essential to the realization of all human rights. Several United States acts, including the Clean Water Act and the Safe Drinking Water Act, protect access of American citizens to clean drinking water. Disruption or contamination of water supply is an environmental justice issue because low-income populations can least afford to purchase water or filtration systems and cannot pay higher taxes for improved infrastructure.

To assure water quality, ACEJ recommends that the state of Virginia review federally permitted projects like the ACP and the MVP to certify that they will comply with state water standards. Pipeline construction will involve crossing 1,556 waterbodies and impact large areas of the state. Based on the best available information, the ACP would cross near intakes of water assessment areas of the (1) City of Staunton-Middle River, (2) City of Norfolk-Western Branch Reservoir, (3) City of Norfolk-Lake Prince, and (4) City of Emporia-Meherrin River.¹⁰ The MVP would cross two source water assessment areas: (1) Western Virginia Water Authority-Spring Hollow, and (2) Town of Rocky Mount-Blackwater River.

Individualized analysis of current conditions and expected impacts is important at every crossing, but especially in areas where water quality is already impaired, in areas of seismic activity or geologic instability, and in zones that are sources of drinking water. In rural areas like Bath, Buckingham, and Nelson Counties, where residents rely on wells, streams, rivers, and reservoirs, citizens are worried and alarmed about potential groundwater pollution from pipeline construction and use.

Independent Geographic Information System (GIS) analysis has identified that the proposed pathway is in proximity to stream crossing and water intakes;¹¹ therefore we recommend state agencies conduct environmental justice review of impacts on water bodies to assure risk to water is carefully assessed. The ACP would cross the Blackwater River approximately 4.5 miles from the City of Franklin (Southampton County). Of the 33 HDD water crossings within two miles of Franklin, most lie proximate to neighborhoods with a majority of people of color.¹²

The legal and regulatory record below suggests the potential for significant ecological harm and the need for additional state review:

- MVP: The DEQ has taken enforcement action against MVP since the start of pre-construction.¹³ Federal regulators halted MVP construction in August of 2018 due to

¹⁰ Hansen, et al. 2018. Threats to Water Quality from the Mountain Valley Pipeline and Atlantic Coast Pipeline Water Crossings in Virginia. https://www.nrdc.org/sites/default/files/threats-to-water-quality-from-mountain-valley-pipeline-and-atlantic-coast-pipeline-water-crossings-in-virginia_2018-02-26.pdf.

¹¹ Detailed route maps are available at the [Pipeline Compliance Surveillance Initiative](https://dpmc-gis.maps.arcgis.com/apps/webappviewer/index.html?id=bad99995a7674146903a3aacb83bd879) (CSI). See in particular <https://dpmc-gis.maps.arcgis.com/apps/webappviewer/index.html?id=bad99995a7674146903a3aacb83bd879>;

Hansen, et al. 2018. Threats to Water Quality from the Mountain Valley Pipeline and Atlantic Coast Pipeline Water Crossings in Virginia. https://www.nrdc.org/sites/default/files/threats-to-water-quality-from-mountain-valley-pipeline-and-atlantic-coast-pipeline-water-crossings-in-virginia_2018-02-26.pdf.

¹² Ibid.

¹³ DEQ. Regulatory activities related to the Atlantic Coast and Mountain Valley pipelines in Virginia. https://www.deq.virginia.gov/lists/?action=show_list&id=38&page=1; Lopez, T. 2018. DEQ, MVP broke the

repeated incidents of erosion violations.¹⁴ In August of 2018, the Fourth Circuit Courts vacated the Forest Service and Bureau of Land Management permits for the MVP due to evidence of insufficient environmental review before approval.¹⁵

- ACP: Along with dozens of local organizations, the Southern Environmental Law Center submitted a legal case in 2017 requesting rehearing of FERC review given limitations in review prior to approval. While this court decision is still pending, Senator Kaine has repeatedly requested a new FERC review.¹⁶ ACP has since been cited for erosion violation in West Virginia¹⁷ and violations of tree felling in Virginia.¹⁸ ACP pre-construction was halted in May of 2018 to protect endangered species when protections were found insufficient.¹⁹ In August of 2018, the Fourth Circuit Court vacated National Park Service permit for the ACP due to the permit's fundamental contradiction with the NPS mission.²⁰

Recommendations:

- 1) We recommend that Governor communicate with the State Water Board (SWB) and the Department of Environmental Quality (DEQ) about state review power under Section 401 of the Clean Water Act to assure necessary site-specific assessment.
- 2) We recommend that the Governor embrace site-based stream-by-stream assessment to protect Virginia citizen's right to clean water and ensure safeguards are in place for low-income and vulnerable populations.
- 3) We recommend that the Governor delay MVP pipeline pre-construction and construction until the potential impacts can be more thoroughly reviewed with disproportionate impacts taken into consideration. We also recommend that the state exercise state

law, has inadequate erosion controls. WSLs 10 News. <https://www.wsls.com/news/virginia/deq-mvp-broke-the-law-has-inadequate-erosion-controls>.

¹⁴ Hammack, L. 2018. Federal agency order stop on the entire Mountain Valley Pipeline. *The Richmond Times Dispatch*. https://www.richmond.com/news/virginia/updated-federal-agency-orders-work-to-stop-on-the-entire/article_47640162-9399-5ca1-81b5-4d38bc2417a4.html.

¹⁵ Weber, M. 2018. US Court vacates US Forest Service and BLM permits for Mountain Valley Pipeline. *S&P Global Platts*. <https://www.spglobal.com/platts/en/market-insights/latest-news/natural-gas/072718-us-court-vacates-us-forest-service-blm-permits-for-mountain-valley-pipeline>.

¹⁶ Kaine, T. 2018. Kaine calls for FERC rehearing on Mountain Valley and Atlantic Coast Pipelines. <https://www.kaine.senate.gov/press-releases/kaine-calls-for-ferc-rehearing-on-mountain-valley-and-atlantic-coast-pipelines>.

¹⁷ Miskin, K. 2018. WV DEP pipeline developers failed to control erosion, fall the water quality rules. *WV Gazette Mail*. https://www.wvgazettemail.com/news/wvdep-pipeline-developers-failed-to-control-erosion-follow-water-quality/article_70da3076-0ec4-531f-b4bd-7d3f2b2c1fb0.html.

¹⁸ Zullo, R. 2018. Atlantic Coast Pipeline gets violation notice from state over tree felling. *The Richmond Times Dispatch*. https://www.richmond.com/news/virginia/atlantic-coast-pipeline-gets-violation-notice-from-state-over-tree/article_cde8db97-2e9a-58fa-ad09-93a1ff643ed2.html.

¹⁹ Zullo, R. 2018. Federal appeals court nullifies key permit of the Atlantic Coast Pipeline. *The Richmond Times Dispatch*. https://www.richmond.com/news/virginia/federal-appeals-court-nullifies-key-permit-for-atlantic-coast-pipeline/article_c3da09e8-df8d-56d5-a9dd-3499737b1a14.html

²⁰ Lavoie, D. 2018. Appeals Court Tosses Key Permits for Atlantic Coast Pipeline. *The Washington Post*. https://www.washingtonpost.com/national/energy-environment/appeals-court-tosses-key-permits-for-atlantic-coast-pipeline/2018/08/06/63064dfa-99ca-11e8-a8d8-9b4c13286d6b_story.html?noredirect=on&utm_term=.2f28ca0c4875

authority under SB698 and SB699 to delay construction until this review has taken place.²¹

TOPIC FIVE: METHANE GAS, CLIMATE CHANGE, SEA LEVEL RISE

Methane (CH₄), a potent greenhouse gas, leaks into the earth's atmosphere through the production of gas pipelines across the US.²² Gas systems contribute to climate change more than coal and methane emissions are on the rise. A recent NASA study concluded that fossil fuel development is the source of approximately 68% of the recent rise in methane levels in the atmosphere.²³ The potential cumulative impacts of new gas infrastructure are significant.²⁴

Virginians are already experiencing climate change impacts, such as heat waves, seasonal drought, sea level rise, and intensification of storms. Climate disruption often exacerbates inequalities, creates and reinforces environmental injustice, and causes the greatest harm to poor and vulnerable populations.²⁵ Climate justice advocates assert harm from climate change disproportionately affects communities of color, low-income populations, and the elderly and children. Sea level rise and recurrent flooding are contributing to missed school and work in low-lying areas of the eastern shore and coastal zones (i.e., in Norfolk).²⁶ Hampton Road owners have lost homes when they can no longer obtain or afford flood insurance.²⁷ The perception that low income residential areas and communities of color may not receive equal attention when evacuation and storm recovery plans are made, influences the recommendations made below. Due to recurrent flooding, a percentage of the low-income populations from Tidewater Garden and other public housing projects in Norfolk are to be relocated to new housing through a voucher system by 2020.²⁸ In addition to demonstrating inequality in housing access, climate impacts draw attention to Virginia's unequal medical coverage and to existing gaps in health care access. Climate change can result in increases in pollen and earlier rises in pollen contributing to allergies, increase in vector borne diseases from increases in the populations of ticks and mosquitos, higher potential for heat stroke,

²¹ <http://lis.virginia.gov/cgi-bin/legp604.exe?181+sum+SB698>; <http://lis.virginia.gov/cgi-bin/legp604.exe?181+cab+SC10205SB0699+RCSB3>.

²² Brandt, A.F. et al. 2014. Methane Leaks from North American Natural Gas Systems. *Science*. <http://science.sciencemag.org/content/343/6172/733>

²³ NASA (National Aeronautics and Space Administration). 2018. NASA-led study solves methane puzzle. <https://www.nasa.gov/feature/jpl/nasa-led-study-solves-a-methane-puzzle>.

²⁴ Mayfield, D. 2017. Would the Atlantic Coast Pipeline increase the threat of sea level rise in Hampton Roads? *The Virginian Pilot*. https://pilotonline.com/news/local/environment/article_a949fc72-c07b-5d08-a329-463b1ccc32fl.html

²⁵ *United Nations News*. 2016. Inequalities Exacerbate Climate Impacts on Poor and Vulnerable Populations. <https://news.un.org/en/story/2016/10/541743-inequalities-exacerbate-climate-impacts-on-poor-vulnerable-populations-new-un>; Leichenko, R. and O'Brien, K. 2008. *Environmental change and globalization: Double exposures*. Oxford University Press.

²⁶ Kusnetz, N. 2018. Norfolk wants to remake itself as sea level rises, but who will be left behind? *Inside Climate News*. <https://insideclimatenews.org/news/15052018/norfolk-virginia-navy-sea-level-rise-flooding-urban-planning-poverty-coastal-resilience>.

²⁷ Jarvis, B. 2017. When rising seas transform risk into certainty. *The New York Times*. <https://www.nytimes.com/2017/04/18/magazine/when-rising-seas-transform-risk-into-certainty.html>.

²⁸ The New Journal and Guide Staff. 2018. Norfolk's urban renewal program gets underway. *The New Journal and Guide*. <http://thenewjournalandguide.com/norfolks-urban-renewal-project-gets-underway/>.

increase in ground level ozone, all of which combine to intensify health conditions such as asthma, other respiratory diseases, and more.²⁹

An important component of environmental justice is mitigating and preventing releases of methane and other greenhouse gases. Reducing methane emissions is especially important for curbing near-term warming. Because methane only lasts for a decade or so in the atmosphere, reducing emissions can have a near-immediate impact on slowing the rate of warming, which is critical for reducing the impacts that we are already seeing, such as sea level rise and worsened extreme weather events.³⁰

Recommendations:

- 1) We recommend that the Governor direct state agencies model greenhouse gas contributions, including methane, of the proposed ACP and MVP comprehensively so the decision-makers and the public have a more accurate understanding of climate impacts.
- 2) We recommend that the Governor ensure that the state includes GHGs in state assessments and should consider rejecting permits for the ACP and the MVP if climate impacts surpasses other energy options. The New York Governor and state resource agencies canceled proposed gas infrastructure using climate justifications, creating a precedent for state level action.³¹
- 3) We recommend that the Governor rigorously work with governmental and independent agencies to revisit initial economic and other calculations related to gas pipelines. Market shifts suggest there may not be a need for additional capacity given the decreasing domestic demand. This will ensure that low income and minority populations are not disproportionately impacted by the proposal and to assess the potential for comprehensive ecological impacts thoroughly.

²⁹ Natural Resources Defense Council. Climate change and health in Virginia.

<https://assets.nrdc.org/sites/default/files/climate-change-health-impacts-virginia-ib.pdf>.

³⁰ Ocoko, I. 2018. New Science Suggests Methane Packs More Warming Power Than Previously Thought. *Environmental Defense Fund*. <http://blogs.edf.org/energyexchange/2018/02/07/new-science-suggests-methane-packs-more-warming-power-than-previously-thought/>; Howarth, R.W. 2015. Methane emissions and climatic warming risk from hydraulic fracturing and shale gas development: implications for policy. *Energy and Emission Control Technologies*. 3: 45-54.

³¹ Kuznetz, N. 2017. Another pipeline blocked for failure to consider climate emissions. *Inside Climate News*. <https://insideclimatenews.org/news/07092017/new-york-pipeline-permit-rejected-natural-gas-valley-lateral-ferc-climate-change>.

CONCLUSION: OUR PROPOSAL

Virginia's Emergency Task Force on Environmental Justice in Gas Infrastructure

ACEJ recommends an **Emergency Task Force on Environmental Justice in Gas Infrastructure** be convened to assess evidence of disproportionate impacts for people of color and for low-income populations due to gas infrastructure expansion. ACEJ recommends that the Governor direct DEQ to suspend the permitting decision for the air permit for the Buckingham compressor station pending further review of the station's impacts on the health and the quality of life of those living in close proximity. We also recommend that a review of permitting policies and procedures take place and that the governor direct the Air Pollution Control Board, DEQ, and DMME to stay all further permits for ACP and MVP to ensure that predominately poor, indigenous, brown and/or black communities do not bear an unequal burden of environmental pollutants and life-altering disruptions. These actions would ensure that environmental justice has meaningful influence in all current and future energy projects.

Proposed Membership:

- State of Virginia: appropriate agencies (i.e., DEQ, VDH, DSS, DMAS, SHPO, etc.)
- Dominion Energy: Environmental Justice Officer or other representative, company archeologist
- Advisory Council on Environmental Justice (ACEJ) representatives
- Impacted urban and rural populations, including members of Native American nations and Freedman communities
- Civil rights attorneys
- Member of State Control Water Board (selected by SWCB)
- Member of State Air Pollution Control Board (selected by PCB)
- Academia: anthropologists, archeologists, historians, geographers