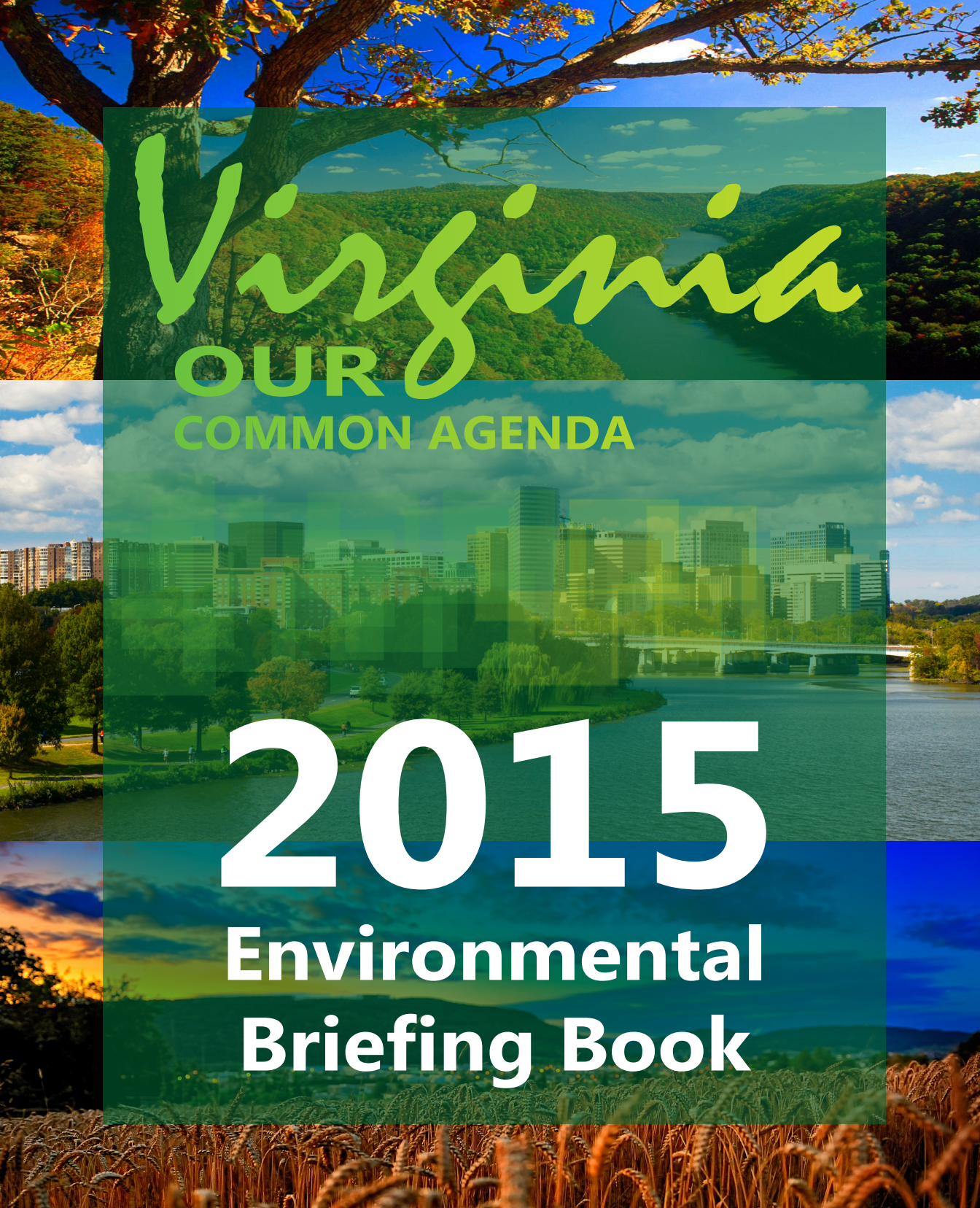

Virginia OUR COMMON AGENDA

2015 Environmental Briefing Book

The 2015 Environmental Briefing Book is a collection of white papers researched and written by Virginia's environmental experts and the partners of Virginia Conservation Network. Learn about the prominent issues that will be addressed in the 2015 Virginia General Assembly, and then make your voice heard.

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Contact Your Legislator

- Schedule an individual meeting with a lawmaker
- Attend public meetings in your area
- Send personal letters and make phone calls to lawmakers
- Write a letter-to-the-editor and call into a local radio talk show

Find more information, use the General Assembly's "Who's My Legislator" website at: **whosmy.virginiageneralassembly.gov**

Join the Conversation

Join us on social media, and follow/utilize the hashtags presented in this book in order to:

- **Keep up to date** on important 2015 General Assembly happenings,
- **Discuss** Virginia's most prominent environmental issues through statewide conversation, and
- **Show your support** for sound policies that promote a clean, healthier, and more sustainable Virginia.

#VaGA2015

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Table of Contents

The General Assembly

The Virginia General Assembly is one of the oldest democratically-elected legislative bodies in the world. Each January, lawmakers convene in the Capitol to review potential legislation. In 2015, the General Assembly will meet for forty-five days, beginning January 14th.

The Chambers

The General Assembly is composed of two chambers: the *State Senate* and *House of Delegates*. Forty senators serve four-year terms, while one hundred delegates are re-elected every two years. In order to review the many bills presented each year, each chamber uses *committees*. Energy bills are typically presented before the Commerce and Labor Committees. Bills on rail, roads, and similar issues go before the Transportation Committees. Most other conservation issues stand before the Agriculture and Natural Resource Committees.

The Passing of a Bill

A bill must pass through a committee before being considered by the full chamber in a *floor vote*. It then crosses over into the other chamber to go through the same process. Once passed by both chambers, the bill goes to the Governor for signing. The Governor can *amend* or *veto* legislation. The General Assembly reconvenes each April for a veto session to accept or override the Governor's actions.

Learn More

Citizens will find a wide array of legislative information on the Legislative Information Services website: **lis.virginia.gov**. Included is general information about the legislative process, as well as full text, summaries, status history, resolutions, and schedules of activity related to specific bills. You can also visit **vcnva.org** for up-to-date bill tracking and committee activity during session.

Healthy Rivers

All Virginians benefit from the protection of our streams, rivers, and wetlands. Clean water is vital for a healthy environment and thriving communities.

Healthy rivers help provide safe drinking water and allow people to enjoy the benefits of water-based recreation. Clean water is imperative to the protection of our wildlife and ecosystems, including commercial fisheries. Virginia's business community—including the tourism, wine, beer, and fishing industries—depends on clean water.

Providing sound policies and funding that protect and restore our streams and rivers is essential to Virginia's continued prosperity.

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Hear in this section from Virginia's experts about:

1. Storing Coal Ash
2. Funding the Cost Share Program
3. Addressing Impacts of High-Volume Fracking
4. Reducing Stormwater
5. Regulating Toxic Chemicals in Virginia

Coal Ash and Our Commonwealth's Water Supplies

#RememberTheDan

Introduction

Coal ash—the waste product generated when coal is burned for energy—poses a danger to Virginians' health, drinking water, and environment. Coal ash contains a long list of harmful heavy metals, including arsenic, mercury, nickel, lead, cadmium, and selenium. Exposure to these metals, even at low levels, has been linked in scientific studies to cancer, respiratory problems, neurological difficulties, and gastrointestinal diseases.

In Virginia, as in most places, operators of coal-fired power plants have typically disposed of coal ash on site at the power plant where it was produced. Because coal-fired power generation requires large quantities of water, these coal ash disposal sites are almost always located in close proximity to rivers, creeks, and streams; additionally, because many of these plants predate both modern state and federal solid waste disposal safeguards, a large number of the coal ash waste sites are not lined or capped.

"The Dan River spill was a dramatic reminder of the dangers of coal ash; however, it is far from the only instance of coal ash pollution in Virginia."

The Virginia General Assembly should reject any legislation from industry-backed lobbyists that would seek to shield industrial polluters from the obligation to clean up these toxic sites.

Background

Despite the dangers associated with coal ash, it remains both ever-present and under-regulated. Coal ash is the second largest industrial waste stream in the United States. Virginia power plants generate 2.4 million tons of ash each year, making our Commonwealth the 18th largest coal ash producer in the country.

Vast quantities of poorly-contained ash sit along many of the Commonwealth's most prized rivers, including the James, the New, and the Potomac Rivers. In some cases, coal ash disposal sites are located upstream from public drinking water intakes, and in many cases are located upstream from popular fishing, kayaking, and hunting destinations.

The storage of toxic metals along the banks of some of our most treasured waterways is—simply put—a disaster no longer waiting to happen. In February of 2014, a broken drainage pipe running underneath a coal ash storage pond at the Dan River Power Station in Eden, NC brought the dangers of this toxic industrial waste stream home to Virginia. Duke Energy estimates that 35 million gallons of toxin-laden waste spilled into the Dan River, coating 70 miles of the river's surface with a sludge of concentrated chemicals. Virginia communities downstream from the spill were forced to take immediate action to protect drinking water supplies, and state and federal agencies continue to monitor the long-term impacts of the spill on the health of the river.

The Dan River spill was a dramatic reminder of the dangers of coal ash; however, it is far from the only instance of coal ash pollution in Virginia. As a result of poor disposal practices at coal ash facilities across the Commonwealth, pollutants are escaping

from many coal ash impoundments, either through breaches in containing berms or by leaching into groundwater and contaminating shallow aquifers.

- In August 2014, the Virginian-Pilot documented the presence of arsenic in groundwater at a Chesapeake, VA coal ash site at up to forty times the state's safety standards.
- In September, conservation groups notified Dominion Virginia Power that they intend to bring suit over longstanding illegal discharges from five ash ponds at the Possum Point Power Plant in Prince William County. These sites are almost certainly the rule, not the exception.

Even after some of the oldest and dirtiest coal-fired power plants in the Commonwealth are retired, coal ash will remain in the ground for decades—perhaps centuries—to come. Indeed, water testing at the Possum Point Power Plant shows that metals like arsenic, zinc, and manganese continue to leak from ash ponds nearly fifty years after the last deposit of new waste in some of those ponds. As long as coal ash remains along the banks of our waterways, it will continue to leak dangerous pollutants into state waters.

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Authors:

- **Greg Buppert,** *Southern Environmental Law Center*
- **Deborah Murray,** *Southern Environmental Law Center*
- **Sarah Fort,** *Southern Environmental Law Center*

Recommendations

The General Assembly must not allow any further weakening of existing state protections related to coal ash.

Coal ash impoundments should be subject to strict permitting and siting requirements, and the state should require the removal of all coal ash to dry, lined storage facilities away from our rivers and drinking water supplies.

Funding for Agricultural Best Management Practices at the Local Level

#CleanWater

Virginia's forty-seven Soil and Water Conservation Districts play an indispensable role in controlling and preventing nonpoint source (NPS) pollution in the Commonwealth. NPS pollution is a significant contributor of water quality degradation in Virginia's southern rivers and the Chesapeake Bay. Through the Agricultural BMP Cost Share Program, practices installed on farms during FY14 will result in estimated nitrogen reductions of approximately 3.2 million pounds, phosphorus reductions of approximately 742,862 pounds and sediment reductions of approximately 589,494 tons. To ensure that the Soil and Water Conservation Districts can continue their efforts to meet statewide clean water obligations, the General Assembly must support increasing the Districts' resources in FY2016.

"To meet statewide water quality goals by 2025, the State Department of Conservation & Recreation (DCR) estimates that $1.55 billion may be required from state and federal funds, as well as farmer financial contributions."

With this state funding, the Districts deliver high-value technical and financial assistance to local farms and construction projects. This historical partnership incentivizes protection of local water quality through reduction of stormwater and control of NPS pollution and environmental contamination. These reductions are a direct result of funding for:

1. The Ag Cost Share program,
2. District technical assistance programs, and
3. District financial assistance programs.

These programs provide significant support in restoring the health of the Chesapeake Bay—and what is good for the Bay, is good for Virginia. Investments in agricultural conservation practices lead to job creation and economic benefits. In the Commonwealth, implementing agricultural practices at the levels necessary to restore the Bay would create nearly 12,000 jobs of approximately one year's duration. A 2014 peer-reviewed study reported that every $1.00 invested in Bay restoration will generate $4.00 in return. The Agricultural Cost Share Program is the tool to create these jobs and stimulate economic activity; however, success is dependent on dedicated funding from the General Assembly, beginning in 2015.

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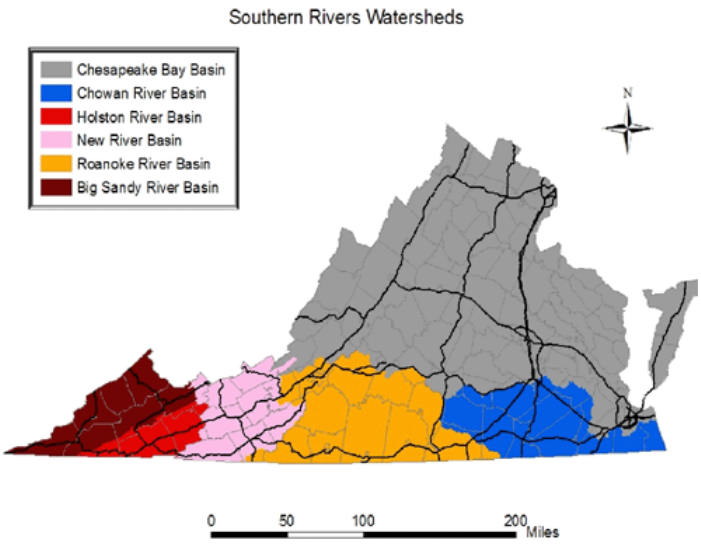
Author:

- **Emily Russell,** *Virginia Conservation Network*

Proportion of agricultural producers—by region—who agreed with the following statements:

Survey Statement	Bay Basin	Southern Rivers
Water pollution can be best controlled through educational programs that encourage farm operators to adopt BMPs	90%	85%
Government should pay a greater share of the costs associated with BMP implementation	60%	60%
Farm practices designed to protect water quality reduced farm profits	35%	38%
The best way to control pollution is through enforcement of strict regulations	31%	44%

Benham, et al. "Comparison of Best Management Practice Adoption Between Virginia's Chesapeake Bay Basin and Southern Rivers Watersheds," Journal of Extension, April 2007, Vol. 45, No. 2, available at http://www.joe.org/joe/2007april/rb3.php.



Recommendations

To increase conservation planning and improve water quality, Virginia's Soil and Water Conservation Districts require adequate funding from the General Assembly. To meet statewide water quality goals by 2025, the state Department of Conservation & Recreation (DCR) estimates that $1.55 billion may be required from state and federal funds as well as farmer financial contributions. The vast majority of these funds will be provided through the Virginia Agricultural Cost Share Program; therefore, it is imperative that the General Assembly:

- Fully fund the Agricultural Best Management Practices Cost Share Program for FY16 in accordance with DCR's Agriculture Needs Assessment Report.
- Ensure implementation of the Cost Share Program in FY16 by providing approximately $2 million in additional technical assistance funding to Districts.

Protect Communities from High-Volume Fracking Impacts

An increasing number of communities around the United States are being rushed to decide whether drilling for natural gas using high-volume hydraulic fracturing with horizontal drilling is compatible with their community's vision. Let's not rush that decision in Virginia.

High-volume hydraulic fracturing is a drilling technique where millions of gallons of water, sand, and chemicals are forced—under very high pressures—underground to break up rock and release captured oil or gas. Horizontal drilling is a technique where a drill turns 90 degrees and runs parallel to the surface of the ground, allowing greater access to rock horizontally. By combining high-volume hydraulic fracturing with horizontal drilling, we are presented with today's high-volume fracking boom. Oil and gas companies are using these techniques to recover gas and oil that was previously unreachable with conventional drilling methods (see Figure 1).

"Contamination of groundwater and surface water are significant concerns that must be addressed before high-volume fracking begins in Virginia."

Modern fracking is an intense industrial activity. In the Marcellus Shale region in Pennsylvania, an average well uses 4.2 million gallons of water each time it is fracked. That water is delivered by the truckload resulting in thousands of truck trips along rural roads—a single heavy truck causes the same amount of road damage as 9,000 cars. Once the frack water returns to the surface, it is a waste byproduct held in open pits nearby until it is trucked offsite, adding more wear and tear to local roads. Each fracked well must be connected to gathering gas pipelines, which connect to compressor stations. These miles of pipelines cut across properties and visually dissect rural communities. Noise pollution and light pollution are also a serious concern for residents living in communities near fracking sites. These industrial operations run twenty-four hours per day, seven days per week (see Figure 2 for fracking impacts).

Contamination of groundwater and surface water are significant concerns that must be addressed before high-volume fracking begins in Virginia. The negative community impacts to local residents and local governments must also be addressed.

Specifically:

- Contaminated wastewater from fracking sites must be managed safely;
- Air pollution from wells and compressor stations must be minimized;
- Erosion and sediment control standards must be enforced; and
- All chemicals used during fracking must be disclosed.

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Author:

- **Emily Francis,** *on behalf of Southern Environmental Law Center and Friends of the Rappahannock*

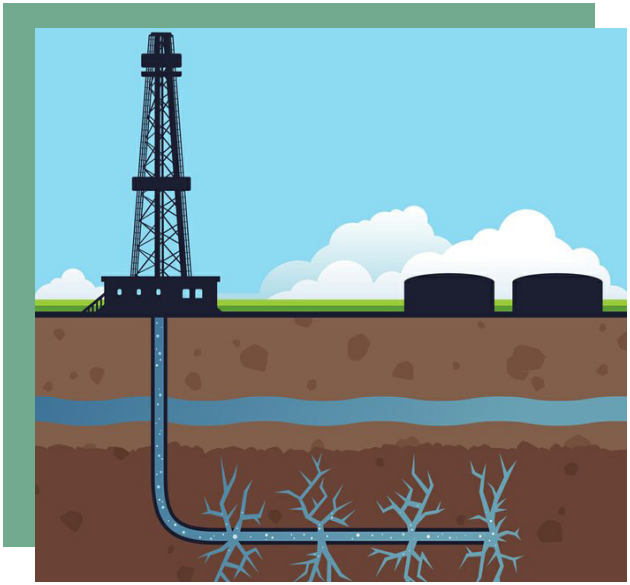

Figure 1.
Horizontal hydraulic fracking

Figure 2.
Unexpected drought from fracking

Recommendations

Before permitting any new wells using high volume hydraulic fracturing with horizontal drilling, the Commonwealth should undertake a comprehensive study to investigate the impacts that this new drilling technology has on public health, local economies, and the environment.

Additionally, robust regulations should be developed that account for the significant differences between modern fracking and conventional drilling. These regulations should effectively protect residents and their property from the damaging impacts of fracking.

Residents, communities, and state regulators must have critical information prior to deciding if and how to proceed with high-volume fracking in Virginia. As of now, there are too many questions about the impacts of this industrial activity.

Let's not rush this important decision.

Continued Need for Stormwater Reductions

#Stormwater

Today, just as in Captain John Smith's era, Virginia's waterways support and enhance our lives in myriad ways—providing drinking water for millions; resources for commercial and industrial facilities; and opportunities for recreation, aesthetic enjoyment, and prosperous communities. Together, with ongoing participation in regional Chesapeake Bay Agreements, the Virginia Constitution and the State Water Control Law recognize Virginia's work in support of clean, healthy waterways. Improvements in wastewater treatment and agricultural operations show early successes. In recent years, the Commonwealth has recommitted to improving water quality with the federal Total Maximum Daily Load and state Watershed Implementation Plans (together, referred to as the Chesapeake Bay Blueprint); the restoration plan for the Bay watershed; and the Virginia Stormwater Management Program (VSMP), which addresses polluted runoff across the state.

"Polluted stormwater is the only major source of pollution on the rise."

Reducing polluted runoff from urban and suburban areas proves most challenging. Polluted runoff—rainwater that washes over dirty, impervious surfaces, such as roads, buildings, and lawns—is a major source of pollution in local waterways and the Bay. It is a growing threat to future prosperity. Polluted stormwater is the only major source of pollution on the rise, due in part to increasing development in the Bay watershed and across the Commonwealth. It delivers a toxic soup of pollutants, including pathogens, nitrogen, phosphorus, and sediment, that damages the ecosystems of our rivers and of the Chesapeake Bay. Polluted runoff can be a great human health hazard. If left unaddressed, polluted runoff will undermine the value of our shared resources and diminish the public's wellbeing. Projects that develop green infrastructure, however, have a ripple effect of commercial and environmental benefits.

Virginia's state and local governments have the responsibility to address the precipitous increase of polluted runoff. Their obligations stem from the Blueprint, associated water quality permits (such as the MS4 permits issued to the Commonwealth's larger localities), and VSMP programs for new development. These programs and regulations will largely determine the future health of the Commonwealth's critical water resources. Robust implementation is necessary to ensure continued progress towards healthy waterways while simultaneously accommodating future growth.

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Authors:

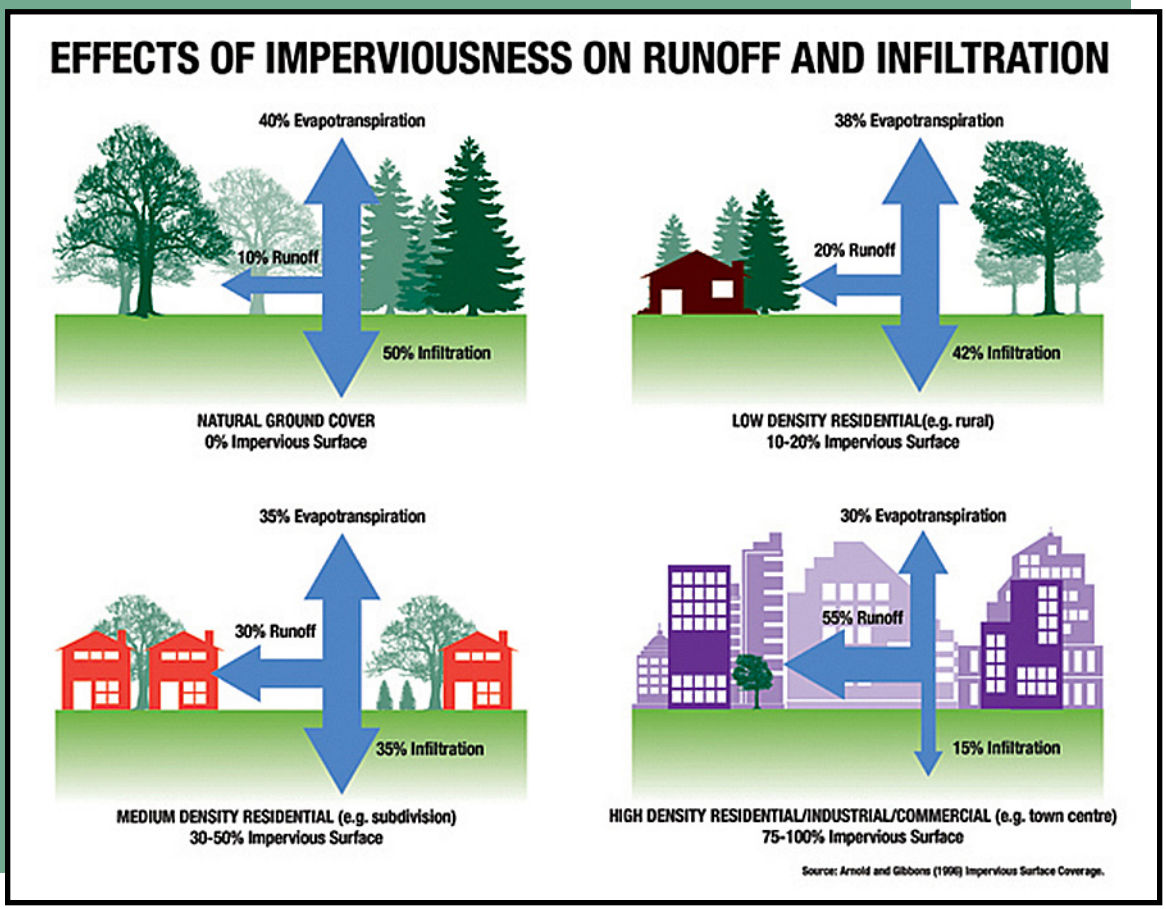
- **Peggy Sanner,** *Chesapeake Bay Foundation*
- **Adrienne Kotula,** *James River Association*

Recommendations

The General Assembly must act in 2015 and the years that follow to continue funding of the Stormwater Local Assistance Fund (SLAF).

Virginia must invest at least $50 million annually in combating stormwater. Recent research has revealed that more cost-effective options to address stormwater are available; therefore, goals can be achieved more easily than before.

In 2013, the General Assembly created the SLAF, demonstrating its support for localities in their endeavor to meet their stormwater management obligations. In 2015, money from this fund will provide localities with matching grants to plan, design, and implement stormwater best management practices. It is imperative that funding for this critical program is continued at levels that will help Virginia meet its commitments under the Blueprint and restore local streams and rivers across the Commonwealth. Continuing to provide SLAF funding will ensure that safeguarding our waterways for future generations goes a long way.



Protecting Virginians from Toxic Chemicals

#DangerousSilence

Throughout Virginia, toxic chemicals in the environment receive relatively little attention, especially when compared to high-profile environmental issues, such as the Chesapeake Bay, land use, and transportation. Legislators and the media rarely discuss where toxic chemicals are stored and released within the Commonwealth. There is a dangerous silence about the daily exposure of Virginians to toxic chemicals.

A new strategy is urgently needed to protect Virginians from toxic chemicals. These chemicals are in the air we breathe, the water we fish in, and the land we live on—exposure is significant. Over two million Virginians live in communities that fail at least one federal health-based standard for air pollution. Toxic contamination of fish remains so high that the Department of Health maintains fish consumption advisories for most of the major waterways in Virginia. The health impacts of exposure fall particularly hard on children—there are over sixty schools in the Commonwealth that are in the top five percent of schools nationwide exposed to toxic air pollution.

In 2014, a number of incidents in Virginia and neighboring states have illustrated our vulnerability to accidents involving toxic substances. This past January, leaking chemical storage tanks on the Elk River in Charleston, WV shut down the water supply for the 300,000 residents of the city for days and resulted in school, restaurant, and business closures. Last February, at a Duke Energy Coal Plant in Eden, NC, a toxic coal ash spill contaminated as many as 70 miles of the Dan River in Virginia, a mess that officials are still struggling to clean up. On April 30, 2014, CSX rail tank cars carrying volatile Bakken Shale oil tumbled into the James River and caught on fire—many believe that, had the rail cars derailed on land, downtown Lynchburg would have been engulfed in substantial blaze.

"As [the events of 2014] demonstrate, there is a critical need for proper storage, handling, and release of toxic chemicals in Virginia."

As these incidents demonstrate, there is a critical need for proper storage, handling, and release of toxic chemicals in Virginia. Our drinking water supply is at risk. We need to act to ensure that similar events do not occur in the future.

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Author:

- **Glen Besa,** *Virginia Chapter of the Sierra Club*

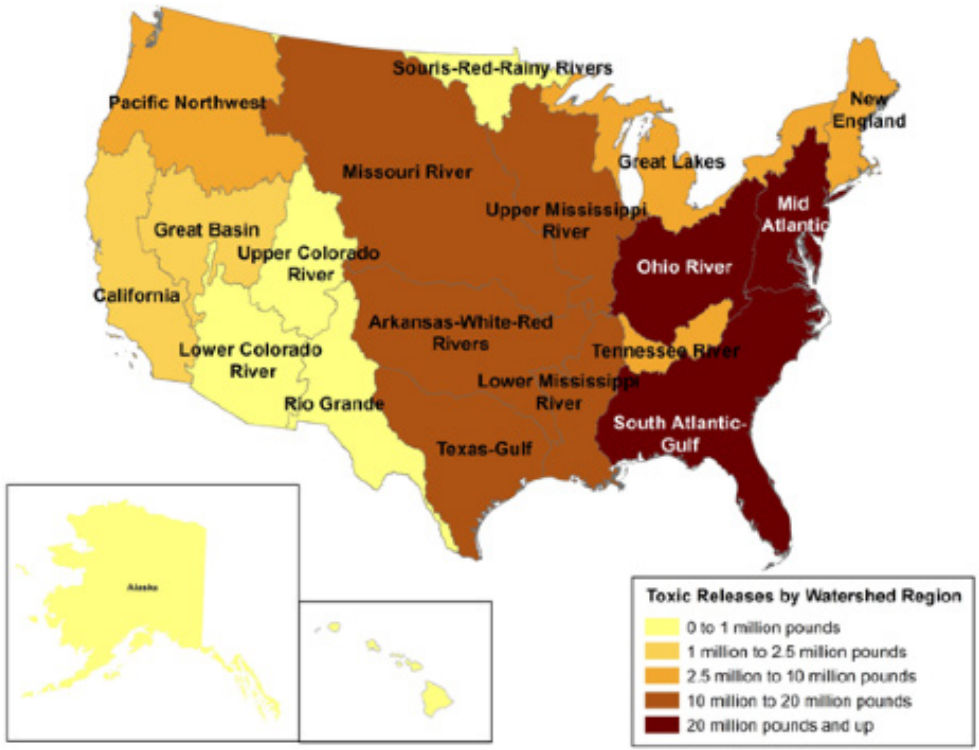
Recommendations

The management of the majority of chemicals in Virginia is not covered by any regulatory program, despite the need for these toxic chemicals to be properly overseen.

Chemicals handled in close proximity to waterways should have stricter standards to ensure that leakage does not occur.

The adoption of such standards is vital to the future health of Virginia's waterways and the citizens that rely on them. The actions that West Virginia has taken in response to the chemical spill on the Elk River serve as a perfect example of how these necessary protections can be accomplished.

Figure ES-1. Industrial Discharges of Toxic Chemicals to Waterways by Watershed Region



Healthy Rivers
Points of Contact

Coal Ash and Our Commonwealth's Water Supplies
Southern Environmental Law Center: *(434) 977-4090*

Funding for Agricultural Best Management Practices at the Local Level
Emily Russell: emily@vcnva.org

Protect Communities from High-Volume Fracking Impacts
Emily Francis: taylorsvillebasin@gmail.com

Continued Need for Stormwater Reductions
Peggy Sanner: psanner@cbf.org
Adrienne Kotula: akotula@jrava.org

Protecting Virginians from Toxic Chemicals
Glen Besa: glen.besa@sierraclub.org

Virginia Conservation Network supports initiatives that promote energy efficiency and renewable energy.

Renewable options, such as solar and wind energy, are extremely valuable to Virginians by providing power during peak use, cost savings, local employment opportunities, and reduction to carbon pollution.

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Hear in this section from Virginia's experts about:

1. Complying with EPA's Clean Power Plan
2. Incentivizing Energy Planning & Energy Efficiency
3. Proposed Natural Gas Pipelines
4. Sharing the Benefits of Renewable Energy with Net Metering
5. Reforming the Renewable Portfolio Standard (RPS)
6. Valuing Solar Energy in Virginia

EPA's Proposed Clean Power Plan: A Win for Virginia

#CleanPowerPlan

In June of 2014, the Environmental Protection Agency (EPA) announced its long-awaited Clean Power Plan, the first-ever standards to reduce carbon pollution from existing power plants. This proposed regulation would result in a 30% reduction in nationwide carbon emissions by 2030. The plan sets out a flexible, achievable approach to carbon pollution reductions that will be a big win for Virginia—combatting climate change while generating more clean energy jobs, lowering electricity bills, and improving public health.

As stated in *Confronting Climate Change* (pg. 32), the Commonwealth is already feeling the tremendous effects of climate change on our coastlines, in our pocketbooks, and beyond. In the face of these present and growing risks, Virginians have an urgent need for real, enforceable carbon pollution reductions.

"Virginia is already well on its way to compliance with the Clean Power Plan."

The Clean Power Plan is a big step forward in reducing carbon emissions and the consequences of climate change. The plan sets carbon reduction goals for each state by combining four building blocks that provide potential emissions reductions at a reasonable cost:

1. Heat rate improvements at coal-fired power plants;
2. Fuel switching from coal to natural gas;
3. New carbon-free generation from renewable resources and nuclear generation; and
4. Greater levels of demand-side energy efficiency.

Using these four building blocks, EPA calculated reduction goals for each state based on the state's existing mix of generation. In Virginia, the Clean Power Plan sets a target emissions rate of 810 lbs/MWh in 2030, which is a 38% reduction in carbon pollution under 2012 levels.

Even though EPA has set a specific target for emissions reduction in Virginia, the Clean Power Plan gives Virginia the flexibility to design its own implementation plan for meeting these targets. This sensible approach allows Virginia the autonomy to determine how to achieve its carbon reduction target in a way that promotes job creation and helps build economic opportunities in Virginia.

Virginia is already well on its way to compliance with the Clean Power Plan. In recent years, Virginia's utilities have independently decided to shut down many of their oldest, dirtiest, and most expensive coal-fired units. At the same time, the state has laid the foundation for additional investments in energy efficiency and renewable resources like solar power and offshore wind. Indeed, if the state were to meet its existing voluntary goals of achieving 15% (of non-nuclear generation) from renewable resources by 2025 and decreasing consumption by 10% (of non-nuclear generation) through energy efficiency programs by 2022, the state would actually *overcomply* with EPA's emission reductions targets.

Compliance will boost Virginia's local economy and bring tremendous health benefits to the state. According to NRDC modeling, limits on carbon pollution could create more than 5,600 new jobs in Virginia by 2020 alone. A recent study from Harvard University found that the Clean Power Plan could also significantly reduce premature deaths from air quality-related ailments, and that Virginia ranks

Recommendations

Compliance will boost Virginia's local economy and bring tremendous health benefits to the state. Limiting carbon pollution in Virginia will:

- Create more than 5,600 new jobs by 2020 alone;
- Significantly reduce premature deaths from air quality-related ailments (currently, Virginia ranks in the top ten states in the nation in the number of avoided premature deaths);
- Reduce the average customer's bill through increased investments in energy efficiency. Virginia consumer's electricity bills could decrease between 6% and 8% by meeting the level of energy efficiency set forth in the Clean Power Plan.

To comply with the Clean Power Plan, Virginia should:

- Place greater emphasis on the energy efficiency and renewable energy building blocks, and
- Consider regional approaches to meet the CPP, such as joining RGGI.

in the top ten states nationwide in the number of avoided premature deaths. Moreover, increased investments in energy efficiency would likely reduce the average customer's bill. Independent analysis from ICF revealed that our electricity bills could decrease between 6% and 8% by meeting the level of energy efficiency set forth in the Clean Power Plan.

The Clean Power Plan is expected to be finalized in June of 2015. Once the plan is finalized, Virginia will need to submit a state plan to EPA by June of 2016; although, there is the potential for a one or two-year extension depending on how the state chooses to comply. Given the tremendous economic and health benefits associated with reducing carbon emissions, this process will present tremendous job-creating opportunities for Virginia. The General Assembly should support timely and effective compliance with the final Clean Power Plan targets.

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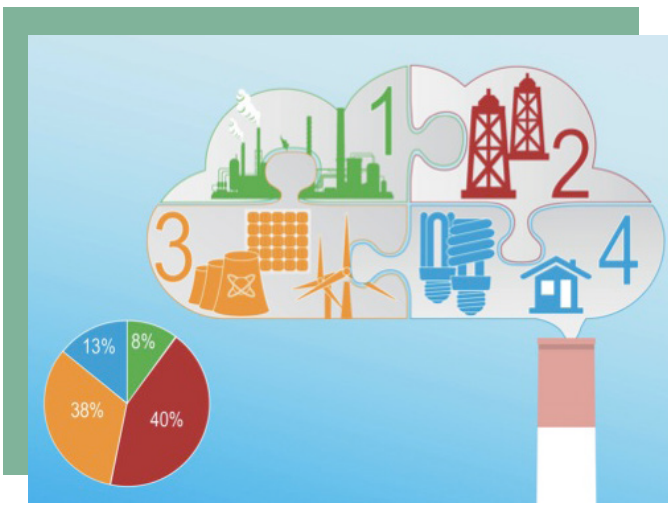
Authors:

- **Angela Navarro,** *Southern Environmental Law Center*
- **Sarah Fort,** *Southern Environmental Law Center*
- **Dawone Robinson,** *Chesapeake Climate Action Network*



The 4 EPA building blocks and how much the EPA calculated for each one in order for Virginia to meet its carbon pollution reduction goal.

Energy Planning and the Role of Energy Efficiency

Critical decisions about the energy and environmental concerns affecting our communities are identified in long-range planning documents prepared by the electric utility companies. Under Virginia law, these Integrated Resource Plans (IRP) are filed by the utilities every two years with the State Corporation Commission (SCC) and are required to look forward fifteen years. The IRP must include a forecast of a utility's future electricity needs and establish how those needs will be reliably met at the lowest reasonable cost for consumers.

The IRP process is especially important given the fact that Virginia's utilities will have to comply with EPA's recently released Clean Power Plan, which limits carbon pollution from existing fossil fuel generators.

The SCC regulates electric utilities and reviews whether the IRP sets forth a plan that will meet customer demands in a manner that "promote[s] reasonable price[s], reliable service, energy independence, and environmental responsibility." When developing an IRP, the SCC's guidelines require utilities to evaluate supply-side resources (e.g. power plants) on an equal basis with demand-side resources (e.g. energy efficiency). An open and competitive analysis of various resources is critical in formulating a low-cost and low-risk plan.

The two largest investor-owned utilities in Virginia, Dominion Virginia Power and Appalachian Power Company, filed their first IRPs in 2009 and the SCC granted public hearings to review the plan analyses. After advocates raised concerns regarding the failure to incorporate the cost of environmental control standards affecting coal-fired power plants (e.g. EPA's regulations for toxic mercury pollution), the SCC required these issues to be considered in future IRPs. The 2011 IRPs included environmental compliance costs assessments, leading to their decisions to retire some of the oldest and dirtiest coal-fired power plants in Virginia. While these retirements were still reflected in the 2013 IRPs, the utilities did not adequately evaluate options for compliance with the Clean Power Plan. The SCC directed Dominion to take these requirements into account in future IRPs. This will have a significant impact on the utility's energy mix, especially given the fact that just 4% of Dominion's generation in 2013 came from renewable resources.

"Utilities should analyze greater levels of energy efficiency over traditional generation given the consistent cost advantages."

In addition, the utilities unnecessarily limited the level of energy efficiency programs they would support in their 2013 IRPs. The American Council for an Energy Efficient Economy evaluated energy efficiency scenarios that each state can reasonably achieve, noting that "[s]everal states have achieved or set the goal of an energy efficiency savings target of 2% new savings each year compared to the previous year's electricity sales. In our scenario, all states are assumed to achieve savings that ramp up to 1.5% annually, in spite of the fact that higher savings could be cost effectively achieved." EPA's Clean Power Plan uses the goal of 1.5% annual energy savings as an achievable target that would reduce carbon pollution from fossil-fired power plants.

Utilities should analyze greater levels of energy efficiency over traditional generation given the consistent cost advantages. In Virginia, there is a voluntary goal for utilities to reduce retail customer energy consumption by 10% by 2022; however,

Dominion's 2013 IRP includes a level of energy efficiency that fails to reach even half of this goal, and Appalachian Power's plans would reach just one-third of it.

Additionally, the IRP is an important opportunity for public engagement. This may be a citizen's best means of advocating for greater investments in cost-effective, low polluting options, such as wind, solar, and energy efficiency. After all, the only way to ensure that Virginia enjoys a cleaner energy future is to begin planning for it now.

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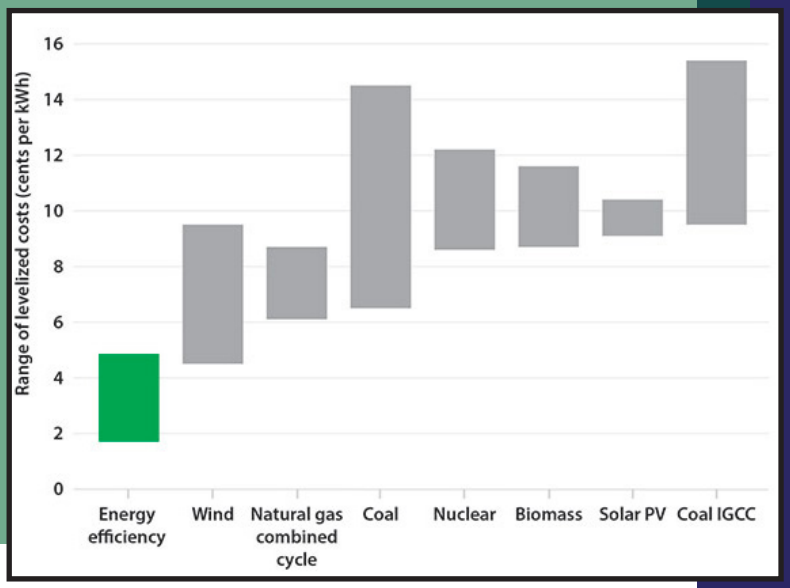
Author:

- **Angela Navarro,** *Southern Environmental Law Center*



Levelized costs of electricity resource options

Recommendations

Should the General Assembly revisit the IRP statute, it should:

- Direct investor-owned utilities to evaluate the potential for higher levels of energy efficiency and renewable resources going forward, including at levels set forth in EPA's proposed Clean Power Plan.

Doing so will enable the development of an IRP that meets the IRP Guidelines' directive to "comparably evaluate various supply-side technologies and demand-side programs and technologies on an equivalent basis."

Natural Gas Pipelines

Natural gas pipelines have recently become a big issue in Virginia, with the announcement of new proposed projects that would intersect the Commonwealth. Crossing mountains, forests, fertile farm fields, and potentially unstable geology, a gas pipeline has the potential to harm our citizens and to disrupt our environment. If gas pipelines must be located within Virginia, they should be carefully sited, affected areas should be adequately compensated, and their inevitable long-term impact should be fully mitigated. Serious questions have been raised about the proposed routes, the environmental impacts, and the need for multiple pipelines.

Due to increased hydraulic fracturing in the Marcellus and Utica shale formations in nearby states, natural gas producers are seeking to expand their markets throughout the country through buried transmission pipelines. In response to falling gas prices and increased regulation of carbon pollution, more electric utility companies are switching over to natural gas to generate electricity.

"If gas pipelines must be located within Virginia, they should be carefully sited, affected areas should be adequately compensated, and their inevitable long-term impact should be fully mitigated."

The following natural gas pipelines have been announced:

- **Atlantic Coast Pipeline** - a joint venture between Dominion, Duke Energy, Piedmont Natural Gas, and AGL Resources, this 550-mile pipeline would originate in West Virginia, run south through Virginia and into eastern North Carolina, transporting 1.5 billion cubic feet of natural gas daily. Three compressor stations are also planned along the route, with two of them located in Virginia. A pipeline extension is also planned to deliver natural gas to Hampton Roads (see map for the proposed route).
- **Mountain Valley Pipeline** - proposed by Mountain Valley Pipeline LLC, would span approximately 300 miles extending from northwestern West Virginia, south to Pittsylvania County, VA, transporting 2 billion cubic feet of natural gas daily. This project will require a 75-foot permanent easement around the pipeline with a total easement of 125 feet during construction. Four compressor stations are proposed for this pipeline (see map for the proposed route).

The project partners for these proposals confirm that the natural gas being transported through these pipelines is fracked gas from the Marcellus and Utica shale formations in nearby states. While the natural gas being transported through these pipelines will initially come from other states, the pipelines could potentially become an incentive to open areas of Virginia to new natural gas drilling using hydraulic fracturing technology.

These projects, if built, will cross sensitive public and private lands including national parks, national forests, historic resources, and conserved lands. Local residents who have received notices from pipeline companies that their property is being considered for a pipeline are concerned about their rights being trampled on, as well as pipeline safety and property values. Localities along proposed routes are concerned about potential for explosions, spills, or other unforeseen disasters.

The Federal Energy Regulatory Commission (FERC) has the primary responsibility for permitting new gas pipelines under the federal Natural Gas Act. Each pipeline will undergo a National Environmental Policy Act (NEPA) review process that will include multiple opportunities for the public to weigh in. Since the permitting process for natural gas pipelines lies solely with FERC, it is imperative that the Commonwealth and local governments engage in this process at every step of the way. Pipeline companies have the power of eminent domain and can locate a gas pipeline on private property without the consent of the landowner. As a result, state officials, localities, and affected residents have raised concerns about where and how these lines might affect the Commonwealth.

Another disturbing issue that has arisen is that Virginia code allows natural gas companies to enter onto a property owner's property without permission to survey land for a potential pipeline project. This statute should be repealed.

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Authors:

- **Rob Marmet,** *Piedmont Environmental Council*
- **Glen Besa,** *Virginia Chapter of the Sierra Club*

Recommendations

The Commonwealth and impacted localities must be actively engaged during the FERC permitting process to help minimize environmental impacts and pressure them—along with the pipeline developers—to demonstrate the actual need for duplicative, competing gas pipeline proposals.

The State should repeal § 56-49.01. Natural gas companies; right of entry upon property. This statute authorizes gas companies to survey land for potential pipeline projects without express permission from property owners. Property owners should have a right to say who can or cannot enter their own property.

Net Metering
#VASolar

Statement of the Issue

Net metering is shorthand for a legislative policy requiring utilities to offer an electricity purchase program to customers who have their own (usually renewable) generating facility. This includes rooftop solar panels or small wind turbines, which purchases their excess generated electricity at the same price as the retail power they buy. In simple terms, when a generating facility produces more power than the customer is using, their meter will run backwards, because the facility is putting power into the electric grid rather than removing it. Virginia permits customers with renewable energy to net meter, but the state generally restricts the benefits to a single meter on the property where the electricity is generated. Changing the law to allow multiple customers to share the benefits of a system would give Virginians greater access to renewable energy and create new business opportunities.

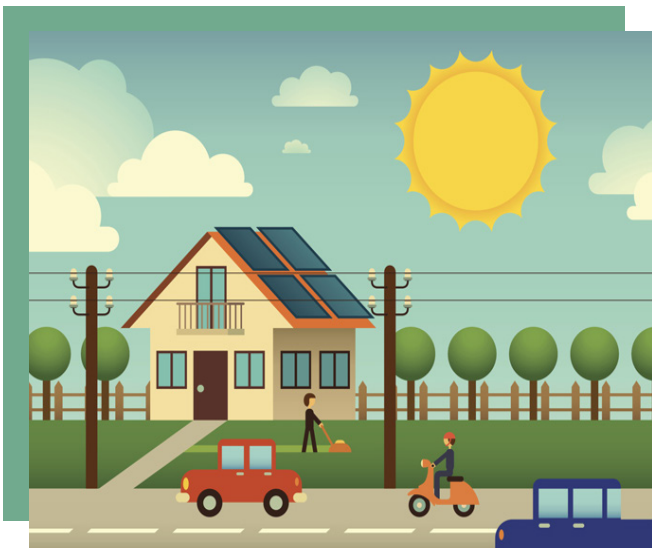
"Changing the law to allow multiple customers to share the benefits of a system would give Virginians greater access to renewable energy and create new business opportunities."

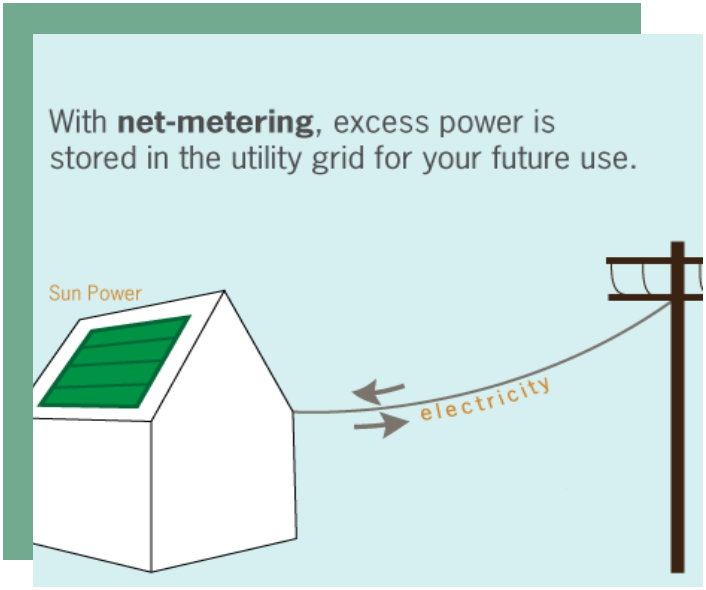
Background

Community net metering has become popular in other states as a means for allowing utility customers to work together to install a renewable energy system that will benefit all members of the group. Where solar energy is involved, community net metering arrangements are sometimes referred to as solar gardens. An example might be a solar system installed on a church where the electricity generated is attributed to the homes of the congregants who use it to offset their own electric bills. Virginia law currently does not allow these arrangements.

Virginia law does, however, provide for a more limited approach to sharing renewable energy known as agricultural net metering. This allows a single customer with multiple electric meters to attribute the electricity generated by one renewable energy system to all of the meters. An example would be a farm with separate meters installed in the house, barn, and stables. To qualify, the renewable generating facility must be operated as a part of an agricultural business and be on land that is owned or controlled by the agricultural business; however, this law does not allow a farm with an ideal location for a solar array to be connected to neighboring farms that lack access to adequate solar exposure.

Most utilities operating in the Commonwealth have resisted expansion of the net metering provision, and indeed have sought to limit the use of net metering altogether. Utilities argue that distributed





generation systems involve costs to other customers from interconnection and use of the transmission/ distribution network. Bowing to utility demands, the 2011 General Assembly passed a bill allowing the State Corporation Commission to approve a standby charge for residential net metering customers with renewable generation facilities between 10 kW and 20 kW. This charge theoretically reimburses the utility for the claimed costs of serving a net metering customer. In practice, however, it has simply limited the market for larger home systems, which undermines the value of NEM. [This issue is discussed further in *The State of Solar in Virginia* on page 28.]

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Authors:

- **Dan Holmes,** *Piedmont Environmental Council*
- **Rob Marmet,** *Piedmont Environmental Council*

Recommendations

Customer-generated renewable energy offers significant benefits to the public, as well as to individual owners of systems. These systems provide power directly where it is used, reducing line losses and the need for new utility generation. They also strengthen the electric grid, relieve grid congestion, and reduce our reliance on fossil fuels that pollute the air and water. These systems are increasing in popularity, spurring the growth of new businesses and creating jobs in a 21st century economy.

The General Assembly should:

- Take steps to support and increase the availability of options for customers to install renewable energy systems, including through the use of community net metering and all policies that encourage distributed solar generation;
- Pass legislation to exempt community net metering from standby charges that would otherwise be applicable to large residential systems; and
- Resist efforts to expand standby charges further and instead roll back the existing charges.

Renewable Portfolio Standard (RPS) Reform

Statement of the Issue

Virginia's Renewable Portfolio Standard (RPS) is a voluntary program designed to spur development of renewable energy in Virginia. Utilities are able to meet the goals of the program by generating their own energy, by purchasing energy from non-utility generators (NUGs), or by purchasing renewable energy certificates (RECs).

In order to encourage participation, the RPS originally included a ratepayer-funded performance incentive for utilities that met the goals; however, the incentive was repealed by the General Assembly during the 2013 session. The goals remain in place (as well as the ability to recoup incremental costs for meeting them), but the system itself remains voluntary and now includes no incentive.

"Currently, there is no requirement that utilities use any non-emitting sources of renewable energy for RPS purposes."

Left unchanged is the extremely low bar for meeting the RPS goals. Virginia law allows the unlimited use of old, out-of-state RECs to comply with the RPS. RECs represent the environmental benefits attributable to renewable energy generation and can be sold separately from the underlying electricity. These RECs can be banked, or saved, for up to five years and used to comply with RPS goals in future years. Utilities have taken advantage of the law's weakness to comply with the program without building any new renewable projects.

Dominion has successfully complied with the RPS since the program's inception without using any wind or solar power and without using a single MWh from a facility built after the law was passed for the purpose of RPS compliance. They rely heavily on the purchase and banking of RECs. The utility uses NUGs to fulfill the remainder of the goals. NUGs used by Dominion to fulfill past RPS goals primarily came from emitting renewables, such as biomass and municipal solid waste. Currently, there is no requirement that utilities use any non-emitting sources of renewable energy for RPS purposes.

While a mandatory RPS is the ultimate goal, for now, we need to reform Virginia's RPS program to maintain the spirit of the law. Virginia's families and businesses stand to benefit numerous economic and environmental benefits if the Commonwealth passed and maintained a strong RPS.

Background

In 2007, the General Assembly enacted RPS legislation to entice utilities to invest in renewable energy in Virginia. We hoped that meeting these goals would help lower air pollution while creating good jobs for Virginians; however, the RPS has not worked as it was intended. Both Dominion and Appalachian Power are able to meet the RPS goals by purchasing old, cheap RECs from out of state.

The development of actual renewable energy facilities is not required, or even preferred, in the law. In 2012, Dominion purchased more than 1.4 million RECs as part of its RPS compliance plan. Of the RECs purchased, only 0.12% came from Virginia facilities. No REC purchases came from facilities built in this century and none were from wind or solar facilities.

If Virginia's RPS was reformed, the benefits to Virginians from new investments in renewable sources would be tremendous. The Virginia Coastal

Energy Research Consortium (VCERC) estimates that developing just part of Virginia's offshore wind resource could create approximately10,000 career-length jobs and meet 10% of our energy needs. Solar energy, which is one of the fastest growing sectors of the U.S. economy today, could eventually meet 19% of Virginia's electricity demand.

With these economic benefits come reductions in smog, soot, and carbon pollution. Wind and solar power facilities reduce our reliance on fossil fuels, and mitigate some of the environmental and public health impacts of dirty coal-fired generation. These investments are especially critical for Virginia. The Hampton Roads region is the second most vulnerable in the nation (only behind New Orleans) to rising sea levels linked to climate change. Failing to develop clean, renewable energy facilities within our borders means many lost opportunities for Virginians.

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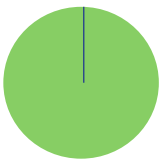
Authors:

- **Dawone Robinson,** *Chesapeake Climate Action Network*
- **Chelsea Harnish,** *Virginia Conservation Network*
- **Angela Navarro,** *Southern Environmental Law Center*

Virginia Renewable Portfolio Standard Compliance Report:

Fuel Type



How much is from Virginia?

- Virginia
- Outside Virginia (100%)

Date of Service

- 1950-1989
- pre-1930

Data source: Dominion's 2013 Virginia Renewable Portfolio Standard Compliance Report

Recommendations

The General Assembly should amend Virginia's RPS law to:

- Limit the percentage of purchased RECs that can be used to successfully comply with the RPS program;
- Remove the double and triple credits for wind and solar and eliminate RPS credit for research and development; and
- Reaffirm that successful compliance with the RPS program is within the public interest.

The General Assembly should also:

- Consider removing municipal solid waste and landfill gas from the definition of renewable energy since these energy sources do release emissions and are not truly renewable;
- Adopt a mandatory RPS statute to spur the development of renewables in Virginia; and
- Incorporate electric cooperatives and municipal utilities into Virginia's renewable energy goals so that their customers and service territories realize the benefits of diversifying and localizing electricity generation.

The State of Solar in Virginia

#VASolar

Solar energy is the fastest growing industry in the U.S., yet it makes up a fraction of one percent of Virginia's electricity supply. Solar power decreases our nation's dependence on fossil fuels and helps Virginia meet its goal for reducing carbon pollution under the federal Clean Power Plan, which will be finalized in June 2015.

Solar energy also helps keep power bills low. Many homeowners and businesses are eager to install solar panels on their properties. That private investment benefits all of us by reducing strain on the distribution and transmission grids and avoiding or delaying the need for costly new power plants.

"Our neighbors in North Carolina and Maryland have more than twice as many jobs in the solar industry as we do in Virginia."

Solar energy is a potent job creator. Virginia is just beginning its solar renaissance, with 60% of in-state solar jobs created in the past few years. We have the opportunity to cost-effectively increase solar development ten-fold over the next twenty years—an investment that would generate $8.8 billion in economic output.

A growing body of research demonstrates that power companies consistently undervalue customer-owned and other distributed solar energy. These studies have shown that when residents and businesses make solar investments, all customers save money.

This research, known as a *value of solar* analysis, takes into account benefits such as:

1. The transmission line loss savings that come from producing power closer to where it will be used;
2. The ability of customer-built solar systems to offset some of a utility's wholesale energy purchase needs; and
3. The fuel price savings due to the zero cost of fuel for solar generation.

The Department of Mines, Minerals, and Energy (DMME) and the Department of Environmental Quality (DEQ) jointly convened a Solar Stakeholder Group to work on this kind of analysis, studying the costs and benefits of distributed solar generation and net metering. Participating stakeholders included Virginia's electric utilities, local governments, academic experts, solar industry leaders, and environmental organizations.

Disappointingly, power companies abruptly pulled out of the Solar Stakeholder Group just as it was completing its work. This withdrawal was short-sighted. No business would look at the costs of making an investment but ignore the benefits when deciding its value. Utilities that take such an approach when it comes to customer-owned solar power are arbitrarily limiting a cost-effective resource that benefits all utility customers.

Dominion and Appalachian Power are beginning to make utility-scale solar investments of their own, suggesting they recognize the value that solar electricity provides. But these same utilities are imposing barriers—in the form of size limits and punitive standby charges—when it comes to customers investing their own money to install solar resources on their own, private property. Part of the problem is that Virginia's electric power market is dominated by monopoly utility laws that hinder energy innovation and discourage free-market

competition.

Our neighbors in North Carolina and Maryland have more than twice as many jobs in the solar industry as we do in Virginia. Farther south, Georgia Power is planning to install 735 megawatts of solar capacity by 2017—enough to power more than 120,000 homes—without increasing rates. Georgia's Public Service Commission has stated that "as the cost of coal continues to rise, solar energy has become very competitive with fossil fuels[...]; solar energy provides an outstanding opportunity to supplement our state's fossil fuel and nuclear power sources."

Virginia, in contrast, continues to lag behind. Currently, our Commonwealth only meets one-fifth of one percent (0.2%) of its electricity needs from solar resources. According to an analysis by the Alliance for Solar Choice, if we expanded that to just 2% over the next five years, 14,500 construction jobs would be created.

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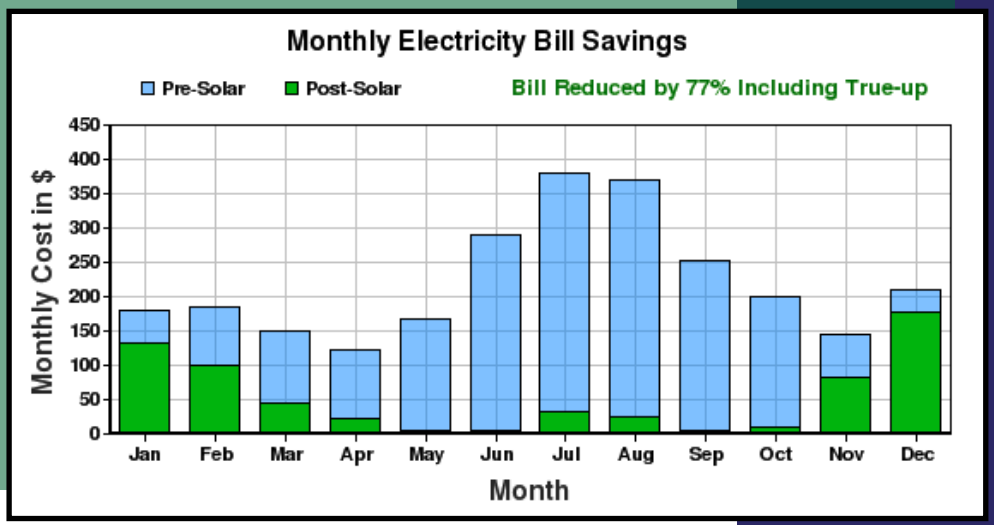
Authors:

- **Cale Jaffe,** *Southern Environmental Law Center*
- **Ivy Main,** *Virginia Chapter of the Sierra Club*



Recommendations

Virginia's General Assembly should support measures that clear the way for innovative solar companies to compete fairly and lower the cost of electricity for us all. These measures include:

- Permitting customers to share the benefits of solar energy through community net metering (see *Net Metering* on page 24 for details);
- Raising the project cap on solar projects that qualify for net metering to at least 2 MW to open up the market for larger projects; and
- Reestablishing and funding the solar grant program to help reduce upfront costs of solar installations on commercial and residential homes.

The General Assembly should also reject efforts by utilities to impose new standby charges on owners of solar arrays. These charges are project killers and threaten the ability of independent solar installers to do business in Virginia.

Clean Energy Points of Contact

EPA's Proposed Clean Power Plan: A Win for Virginia
Angela Navarro: anavarro@selcva.org
Sarah Fort: sfort@selcva.org
Dawone Robinson: dawone@chesapeakeclimate.org

Energy Planning and the Role of Energy Efficiency
Angela Navarro: anavarro@selcva.org

Natural Gas Pipelines
Rob Marmet: rmarmet@pecva.org
Glen Besa: glen.besa@sierraclub.org

Net Metering
Dan Holmes: dholmes@pecva.org
Rob Marmet: rmarmet@pecva.org

Renewable Portfolio Standard (RPS) Reform
Dawone Robinson: dawone@chesapeakeclimate.org
Chelsea Harnish: chelsea@vcnva.org
Angela Navarro: anavarro@selcva.org

The State of Solar in Virginia
Cale Jaffe: cjaffe@selcva.org
Ivy Main: ivy.main@sierraclub.org

Green Communities

Benefits of green communities include increased access to/creation of jobs, lower infrastructure costs, less expensive public services, higher property values, increased crop yields, and protection of wildlife and green spaces.

Green communities embrace smart growth and public transportation, in addition to protecting land for agriculture and recreation. The benefits of green communities enhance Virginian's quality of life in the following ways:

- Considerable economic benefits
- Increased access to/creation of jobs
- Lower infrastructure costs
- Less expensive public services
- Higher property values
- Increased crop yields
- Protection of wildlife and green spaces

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Hear in this section from Virginia's experts about:

1. Confronting Climate Change
2. Investing in Intercity Passenger Rail
3. Conserving Land
4. Reforming the Public-Private Transportation Act
5. Incentivising Smart Growth
6. Reforming Virginia's Transportation

Confronting Climate Change

#ActOnClimate

Our planet is experiencing unprecedented changes in climate, and human activities are responsible. Scientists warn that we must take immediate action if we are to avoid passing a tipping point of no return for preventing the most extreme consequences of climate change.

The consensus on climate change is overwhelming. According to NASA, nine of the ten warmest years—since record keeping began in 1880—have all occurred this century. The summer of 2014 was the warmest on record, and that trend continued into the fall. In April of 2014, we surpassed the 400 parts per million threshold for caron pollution for the first time in human history.

As global temperatures rise, so does the frequency and severity of storms. According to NOAA, anthropogenic climate change will not only cause more hurricanes, but also increase their intensity, leading to more rainfall, greater flooding, and damage to our coastal areas. In October 2012, Hurricane Sandy pummeled the East Coast, costing upwards of $50 billion in damages. The storm, 900 miles wide, wreaked havoc from North Carolina to New York to the Great Lakes causing a record-breaking 13.88-foot storm surge in lower Manhattan—a record that has stood since 1888. While the damage to coastal Virginia was minimal, the storm reinforced concerns of impacts from storm surges on top of already rising seas.

"Our coastal communities will be inundated, severely threatening fisheries, tourism, and many other economic sectors coastal communities rely on for their livelihood."

Areas of Virginia are already feeling the impacts of climate change. Hampton Roads—second only to New Orleans in terms of vulnerability to sea level rise in the U.S.—is seeing more frequent storm surges and higher tides than ever before. Norfolk, which has seen sea levels rise more than 14 inches in the last 80 years, regularly has roads blocked by flooding during high tides and heavy rainstorms. According a 2013 report from the Virginia Institute of Marine Science, seas are expected to rise another 1.5 feet within the next twenty to fifty years. Our coastal communities will be inundated, severely threatening fisheries, tourism, and many other economic sectors coastal communities rely on for their livelihood.

Given the high risk of climate change impacts on Virginia, it is imperative to take immediate steps to combat this problem. The announcement by Dominion Virginia Power (DVP) to retire 918 MW of coal-fired generation by 2015 is a step in the right direction; however, DVP plans to replace those facilities primarily with natural gas plants, instead of zero emission projects like wind and solar. Renewable energy projects must become a priority if we are going to combat climate change.

Using dirty fossil fuels to generate our electricity is only one part of the problem. Our buildings and transportation account for approximately 75% of our energy use. Sprawling suburban development and road-centered transportation policies force increased driving and fuel consumption, thus increasing carbon pollution. Virginia has seen one of the largest increases in carbon pollution from cars in the nation. Additionally, sprawl destroys farmlands, woodlands, and other open space that help store carbon.

Recommendations

We can move Virginia in the right direction to curbing climate change impacts by:

- Expanding energy efficiency programs to help offset peak demand and reduce overall energy consumption;
- Promoting the responsible development of renewable energy sources and by providing funding to help Virginia's community colleges establish training programs in that field;
- Reforming Virginia's transportation and land use policies to promote cleaner transportation alternatives (transit, passenger and freight rail, walking, and bicycling) and more efficient, cleaner vehicles;
- Better linking transportation and land use through steps, such as providing assistance and incentives to localities to promote mixed use and transit-oriented development;
- Providing local governments and state agencies with the planning tools, legal authorities, and funding they need to minimize the effects of climate change on communities and infrastructure;
- Encouraging greater investment in conserving forest, agricultural, and marshlands that can act as carbon sinks; and
- Supporting federal regulations to help mitigate climate change.

Federal Action

The EPA has issued proposed regulations to reduce carbon pollution from new and existing sources. We support these regulations and encourage support from Virginia officials as well (see *EPA's Proposed Clean Power Plan: A Win for Virginia* on page 18).

State and Local Action

Governor McAuliffe has re-established a commission on climate change. By the fall of 2015, the commission will release a report detailing four to six topline recommendations for the Commonwealth to take action on now.

While we wait for the recommendations from that commission, localities are making progress to adapt to rising seas. Tidewater localities are required to include coastal management issues in their comprehensive plans. The city of Virginia Beach requires new buildings to be built two feet above the flood plain and is considering raising this restriction another one to three feet. In Norfolk, city officials are using federal funding to upgrade stormwater drainage systems. The Department of Defense is analyzing the risks of sea-level rise to coastal military installations and is making necessary changes to adapt. This is especially important given that the largest naval base in the world is in Hampton Roads.

With local governments grappling with how to pay for costly flood mitigation projects, state officials should prioritize efforts to help fund these projects, as well as ways to mitigate climate change.

It is time to act on climate change before it is too late.

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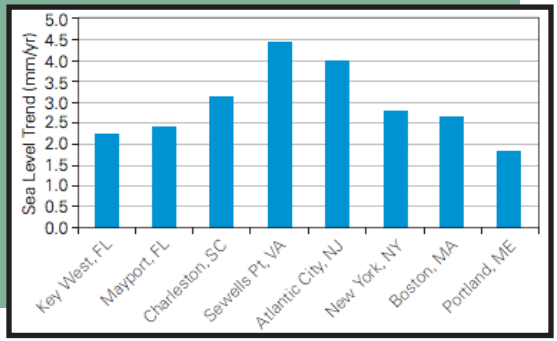
Authors:

- **Chelsea Harnish,** *Virginia Conservation Network*
- **Skip Stiles,** *Wetlands Watch*



Relative sea-level trends along the U.S. East Coast

Intercity Passenger Rail

Passenger rail is essential to reducing congestion, giving people greater transportation choices, increasing energy efficiency, and improving Virginia's economic competitiveness. Rail ridership is at record levels. The General Assembly created the Intercity Passenger Rail Operating and Capital (IPROC) Fund in 2011, and the transportation funding package, approved in 2013, provided a dedicated source of revenue for this fund. It is crucial to build upon this funding for intercity passenger rail—and to improve rail policies—in order to sustain, improve and expand Virginia's intercity passenger rail service.

"Enhanced and high-speed intercity rail can link Virginia's metro regions, giving people needed alternatives to driving."

Increased congestion on our roads and in our airways, vulnerability to volatile fossil fuel prices, and air and water pollution are just some of the problems with our current transportation system that have led many local, state, and federal officials to endorse more sustainable transportation options. Rail plays a critical part in a more sustainable transportation approach, and increased freight and passenger capacity can help maximize the energy efficiency and competitiveness of Virginia's economy, especially in corridors where additional highway projects are prohibitively expensive and/or environmentally detrimental.

Enhanced and high-speed intercity passenger rail can link Virginia's metro regions, giving people needed alternatives to driving. The Commonwealth's regional train corridors—the Piedmont and Urban Crescent—serve areas that are home to over 76% of our population. Further, these corridors serve 46 higher educational institutions, 83% of Virginia's college students, nearly 10% of the nation's active military personnel, and represent 81% of Virginia's economy. Many of our most congested roads are located here.

Public demand for intercity passenger rail continues to grow. Ridership on Amtrak in Virginia exceeded a million riders for the first time in 2008 and grew 56.8% between 2009 and 2013. Moreover, ridership on Virginia's regional trains has grown by 99.83% since 2009. Virginia Railway Express, the Commonwealth's commuter rail service, saw its ridership reach 4.5 million riders in 2014.

The good news is that long-term, sustainable funding became a reality in 2013 due to a strong bi-partisan coalition of legislators. The 2013 transportation package adopted by the General Assembly included provisions that are projected to provide about $308 million over the next six years for investment through the IPROC. That funding will be used to sustain and improve existing regional trains, extend a regional train from Lynchburg to

Roanoke, add more trains to Norfolk, as well as add capacity as part of the Newport News new multi-modal station.

Additionally, Virginia has programmed state funds to help complete the federal Washington D.C. to Richmond Southeast High Speed Rail Project and funds for a second train between Lynchburg and Alexandria.

However, Virginia lacks a long-term vision for the continued investment and expansion of intercity passenger rail. The Commonwealth must take the next steps needed to improve and increase its regional train service and to ensure that the taxpayers' resources are invested wisely.

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Authors:

- **Daniel Plaugher,** *Virginians for High Speed Rail*
- **Trip Pollard,** *Southern Environmental Law Center*

Recommendations

The General Assembly should:

- Articulate and adopt a strong, clear, long-term vision for passenger rail (to date, state rail plans have tended to focus on short-term projects and lack long-term vision);
- Study the potential of a Virginia Rail Authority to help ensure continuity of policies and investments and provide a mechanism for ownership of assets funded by Virginia's taxpayers;
- Protect the baseline of funding recently dedicated to IPROC and secure additional federal, state, and local resources; and
- Ensure that future intercity passenger rail investments are better connected to land use plans.

Land Conservation

#LandConservation

Successful land conservation requires action and initiative at all levels that is geared toward the protection of a diversity of lands. State agencies, local communities, and private individuals need the right tools to protect working farms and forests, scenic landscapes, natural areas, wildlife habitat and game lands, historic resources, and parks and recreational areas for present and future generations of Virginians. Virginia currently has a variety of programs and approaches that deliver lasting results across the Commonwealth.

"Unfortunately, the Commonwealth has failed to consistently provide adequate funding to protect our most important natural, cultural, and historic resources for the benefit of future generations."

Virginians have said repeatedly in surveys, polls, and at the ballot box that they are willing to invest in the protection of open space. In the 2013 General Assembly, HB1398 addressed this need by requiring the Governor to allocate the amount of funding above $100 million that would have been part of the tax credit program to three conservation funding programs. Unfortunately, the Commonwealth has failed to consistently provide adequate funding to protect our most important natural, cultural, and historic resources for the benefit of future generations.

Land Preservation Tax Credit (LPTC)

LPTC is Virginia's most successful, dependable land conservation funding program and is one of the best land conservation tax incentive programs in the nation. This program is an efficient and effective way to encourage private voluntary land conservation by providing taxpayers who make gifts of land or conservation easements tax credits equal to 40% of the value of their donated interest. Landowners with lower incomes who are unable to use all of their tax credits may transfer unused but allowable credits to other taxpayers.

The LPTC program is protecting critically important lands across the Commonwealth. For example, an analysis of the more than 725,000 acres of conservation easements in Virginia shows that: 350,000 acres (48%) are identified by the Department of Conservation and Recreation as ecological core habitat; 420,000 acres (60%) are forested lands; 219,000 acres (30%) are protecting prime farmland; 136,000 acres are protecting corridors along state designated Scenic Roads; and over 97,500 acres of these protected lands are within historic districts.

Local Purchase of Development Rights Programs (PDRs)

In 2007, Virginia made a commitment to working farms and forestland through an investment of $4.25 million for farmland preservation at the local level. Localities responded to the state investment by pledging ten times the amount in matching funds, totaling $45 million. The matching PDR program requires counties to match dollar for dollar the amount that is granted to them by the Commonwealth. Virginia is receiving at least a 50% return on its investment.

The original $4.25 million investment by the Commonwealth will preserve farmland in fourteen localities in Virginia. Since these matching funds became available, twenty localities have realized the importance of preserving working farmland in Virginia and adopted programs. In order for these localities keep the PDR programs strong, reliable,

and consistent, funding is needed to maximize the potential of this conservation partnership.

Virginia Land Conservation Foundation (VLCF)

VLCF provides state matching grants for the preservation of various categories of special lands in the Commonwealth. These grants are awarded on a competitive basis for the protection of open spaces and parks, natural areas, historic areas, and farmland/forest preservation.

Like the farmland preservation, this highly effective program leverages local and federal investment for natural resource conservation by paying no more than 50% of the cost of worthy projects. Grant applications to the VLCF program have consistently far exceeded available funds. Since 2000 over $82 million of grants have been requested of the program while only $28 million have been available. This represents a lost opportunity for the Commonwealth to capture more than $50 million in federal, local, and private matching dollars for land conservation.

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Authors:

- **Heather Richards,** *Piedmont Environmental Council*
- **Nikki Rovner,** *The Nature Conservancy*

Historic waterfront property - Williamsburg, VA

Recommendations

The Land Preservation Tax Credit program is an efficient and effective way for Virginia to encourage private landowners to conserve the most important lands in the Commonwealth. The General Assembly should make no changes that would reduce the impact and availability of this important land conservation tool.

Virginia must also:

- Allocate funds for purchase of easements and land—for FY2016, that amount should be $16.1 million to the state matching funds for the PDR program, the Virginia Land Conservation Foundation, and the Civil War Sites Preservation Fund (as required by HB 1398);
- Allocate at least $1.61 million to the PDR program (as required by HB 1398);
- Invest $30 million annually in the Office of Farmland Preservation's state PDR program; and
- Allocate $12.88 million per year to the Virginia Land Conservation Foundation (as required by HB1398).

Public-Private Transportation Act Reform

Statement of the Issue

Virginia's Public-Private Transportation Act of 1995 (PPTA) has become the primary vehicle for constructing large transportation projects. Expanding beyond its original purpose, it is shifting power to the governor and the private sector. The PPTA allows private entities to enter into agreements with the state to construct, improve, maintain, and operate transportation facilities. Yet, experience with PPTA projects and proposals indicates that the statute is flawed and raises significant doubts about how well it serves the public interest.

Background

The PPTA is designed to facilitate private investment in transportation facilities. It allows both solicited and unsolicited proposals and is viewed by its supporters as a way to make needed improvements and additions to the transportation system sooner, more cheaply, and more efficiently than with public funds alone. Projects undertaken under the PPTA or its predecessor, include:

- In Northern Virginia - the Capital Beltway I-495 High Occupancy Toll (HOT) Lanes and Dulles Greenway and;
- In Richmond - the Pocahontas Parkway (Route 895) and Route 288.

The number of PPTA projects has expanded rapidly. Seven projects are currently underway or under contract, including the Downtown/Midtown Tunnel, a new Route 460, the Coalfields Expressway, I-95 HOT lanes, and Dulles Rail. Another ten projects are under consideration.

The track record of PPTA projects raises serious questions. Among other things, potential costs and liabilities to taxpayers have often been underestimated or not provided to the public. The proposed new Route 460 would pour $1.5 billion of state funds into this project, which was originally projected to cost taxpayers little to nothing. Further, roughly $300 million has been spent on this project without obtaining necessary permits—it now appears those permits cannot be obtained. Under the Midtown/Downtown Tunnel deal, tolls will escalate by 3.5% or more each year through 2070, state taxpayers must compensate the builder for lost revenue if a competing project is built, and the developer can earn a hefty 13.5% profit margin.

"The proposed new Route 460 would pour $1.5 billion of state funds into this project, which was originally projected to cost taxpayers little to nothing."

Although the PPTA could be an innovative tool for getting transportation projects funded and built, there are many problems with the Act and its implementation, including concerns that:

- It undermines sound transportation planning by advancing projects that are not high priorities for the public, depriving more beneficial projects of funds;
- There has been a lack of information about potential costs to taxpayers and potential risk to the state's bond rating, despite amendments to the state code aimed at addressing this;
- Opportunities for public input into the PPTA process are limited, and localities have not been given timely notice of key terms or an opportunity for meaningful input;
- Environmental review of proposals is circumvented or undermined, among other things, due to prioritizing and advancing proposals before alternatives have been

evaluated;

- Requirements for competitive bidding are inadequate, and have allowed a project proponent or bidder in the first phase of a proposal to establish a sole-source arrangement for later phases; and
- It creates incentives for sprawl and driving — most PPTA projects and proposals have been for highway construction projects that would subsidize sprawl, increase motor vehicle dependence, destroy open space, and increase air and water pollution.

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Author:

- **Trip Pollard,** *Southern Environmental Law Center*

Recommendations

Support PPTA reform.

Potential measures to improve the PPTA include:

- Limiting proposals under the PPTA to projects contained in state transportation plans and to projects with complete, independent environmental studies;
- Requiring greater public and local government input into proposals (such as disclosure of a cost-benefit analysis prior to procurement and public hearings at an early stage of review, at least 30 days before a comprehensive agreement is signed);
- Requiring approval by the CTB and/or the General Assembly prior to signing a comprehensive agreement;
- Regulating the allowable rate of return;
- Redefining the process to ensure that bidding is competitive;
- Requiring evaluation of the impacts of proposed projects on land development patterns; and
- Prohibiting or severely restricting the use of non-compete clauses in comprehensive agreements.

Oppose additional taxpayer funding for specific projects or for the Transportation Partnership Opportunity Fund until the PPTA is reformed.

Smart Growth
#SmartGrowth

Statement of the Issue

Virginia continues to grapple with the cost of sprawling development. This type of development is costly to taxpayers and has led to longer commutes; greater pollution; and a loss of historic, cultural, and scenic resources. The impact on family budgets from long, costly commutes has been significant and contributed to the real estate collapse in the outer suburbs. These challenges, combined with limited federal, state, and local funds, make smart growth—with its focus on location efficient development—a public policy imperative. Virginia has taken steps to better link land use and transportation; however, during recent General Assembly sessions, these state initiatives were weakened. The Virginia Department of Transportation has continued to focus too heavily on mega-projects that will result in more sprawling development, as opposed to investing more in transit and the local street networks that will more effectively address congestion within existing communities.

"Smart growth offers opportunities to meet changing market demand and to link growth, quality of life, and infrastructure savings. It also can boost economic competitiveness."

Smart growth offers opportunities to meet changing market demand and to link growth, quality of life, and infrastructure savings. It also can boost economic competitiveness. The market wants more alternatives to sprawl as changing demographics and preferences—among young professionals, empty nesters, retirees, and more families—are leading to greater demand for vibrant and walkable cities, towns, and suburbs built more like traditional towns and neighborhoods. The high quality of life of these communities, combined with greater protection of our scenic landscapes and natural resources, enhances economic competitiveness by helping to attract and retain businesses and workers. Further, a summary of 40 years of fiscal impact studies showed that smart growth—compact and traditional cities, towns and neighborhoods—typically consumes less land and costs much less for roads, utilities, and housing than does sprawling development.

We need to:

- **Prioritize state infrastructure funds to existing communities and designated growth areas**, including economic development, transit/bike/pedestrian/local street investment, schools, and water/sewer. We must support the revitalization of cities, towns, and older suburban communities.
- **Strike a fair balance between what the public taxpayer and the private developer each pay toward the cost of infrastructure.** The cost of infrastructure necessitated by new development should not be borne by existing residents. Impact fees and proffers must not be limited to education, roads, and public safety—they should also cover a range of other community service, such as parks and open spaces, water quality and water supply protections, libraries, and other civic institutions. Systems should be constructed so that it creates the incentive to develop within designated growth areas.
- **Reject efforts to weaken local planning tools**, including comprehensive plans and zoning ordinances. Existing local land use authority should not be eroded further. When reviewing infrastructure projects (roads, energy, or telecommunication facilities), the state should respect local planning efforts and require comprehensive environmental assessments;

Recommendations

The General Assembly should:

1. Target scarce public tax dollars;
2. Ensure new development pays its fair share;
3. Oppose actions that would weaken local community planning;
4. Strengthen the partnership between state and local efforts to plan for the future and to guide growth; and
5. Improve data collection on land development and infrastructure costs.

studies of need, alternatives and location; consultation with local governments and residents; and context sensitive design.

- **Strengthen the use of designated growth areas and service districts** through cooperation with nearby towns and cities, supporting interconnected streets and walkable community designs. This will help reduce statewide infrastructure costs and traffic congestion.
- **Ensure property rights while saving tax dollars on infrastructure costs** through Transferrable Development Rights (TDRs), Purchase of Development Rights, conservation easements, and other tools.
- **Require local governments to estimate and report to the Commonwealth** their projected population and employment growth, as well as the buildout potential for residential units and commercial square footage under their existing comprehensive plans and zoning.
- **Provide assistance to localities** in measuring residential and commercial capacity of vacant and underutilized land if (re)developed as compact, mixed-use, walkable development, as well as in estimating infrastructure costs under both a business-as-usual and a re-development scenario.
- **Ensure that the state and localities work together** to compile estimates of the total maintenance and replacement needs of bridges, roads, water/sewer, schools, libraries, and other facilities.

Smart growth will save taxpayers money; strengthen our communities; save energy; reduce traffic congestion; and protect our farmland, health, and environment.

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Authors:

- **Dan Holmes,** *Piedmont Environmental Council*
- **Trip Pollard,** *Southern Environmental Law Center*
- **Stewart Schwartz,** *Coalition for Smarter Growth*

Downtown Charlottesville

Transportation Reform

Statement of the Issue

Virginia's transportation challenges are growing. Many existing roads and bridges are in poor condition, congestion costs are high in many areas, transit services have been cut and/or fares hiked, changing demographics are creating demand for a greater range of transportation choices, and transportation is the leading source of carbon dioxide pollution in the Commonwealth—yet we continue to focus heavily on highway construction, an approach that is costly to taxpayers, communities, and the environment while doing little to relieve congestion in the long run. This costly and destructive approach needs to be changed.

Background

The 2013 Virginia General Assembly passed the most significant transportation funding legislation in almost thirty years (HB2313)—a package that includes replacing the retail gas tax with a wholesale one and increasing the sales tax, shifting billions of general fund dollars to transportation that would have gone to conservation and other needs.Although lagging initial projections, the package was estimated to raise roughly $3.5 billion state-wide over the first five years; additional regional taxes were projected to raise about $1.5 billion in Northern Virginia and $1 billion in Hampton Roads during that time. Some new funding will go to transit and rail, but most of it will go to highway construction. The legislation did not contain any provisions to ensure that the new funds will be spent wisely; however, in 2014, the Assembly passed HB2, requiring development of a funding prioritization process that the Commonwealth Transportation Board must use to select projects beginning July 1, 2016.

The McAuliffe Administration has provided some increased funding for alternatives to driving, and the new Six Year Transportation Plan includes money for additional passenger rail service, extending light rail to Virginia Beach, building the Fairfax-Arlington streetcar, and helping launch Richmond's first bus rapid transit line. The Administration has also conducted reviews of some of the destructive projects it inherited and has shifted funds from the proposed Route 29 Bypass of Charlottesville to a package of more effective improvements in the 29 corridor.

Despite some areas of progress, Virginia's transportation spending is still heavily focused on roads. The Commonwealth Transportation Fund FY2015 budget is just over $4.9 billion; VDOT's budget accounts for almost $4.35 billion of that. Evidence shows that new and wider highways often fail to provide long-term congestion relief since they cause development to spread out and generate significant new traffic. Yet Virginia continues to pursue too many costly highway projects that increase sprawl and driving. In addition, the focus on public-private highway and toll deals in recent years has limited input by citizens and public officials, undermined environmental review, and advanced unneeded projects and speculative development.

"[W]e continue to focus heavily on highway construction—an approach that is costly to taxpayers, communities, and the environment—while doing little to relieve congestion in the long run."

There has been bipartisan recognition of the need to reform VDOT and to improve our transportation

Recommendations

The General Assembly should:

1. Support targeted transportation funding provisions;
2. Support enhanced funding and authority for passenger rail;
3. Support freight rail;
4. Support improved performance standards and priorities for transportation planning;
5. Support transportation process reform; and
6. Support improving the link between transportation and land use, and providing incentives for smarter growth.

policies.

We need to:

- **Improve the 2013 funding package**—either as an amendment or as a supplement to that law—by:
  - Allowing new tax revenues in Hampton Roads to be used for projects other than construction on new or existing roads, bridges, and tunnels;
  - Opposing any amendment to add regional taxes for the Richmond area unless adequate provisions are included regarding governance; integrating transportation and land use; funding for public transit, passenger, and freight rail; walking; and bicycling; and
  - Providing increased funding for transit, bicycle, and pedestrian projects.
- **Protect dedicated funding for passenger rail**, and secure additional federal, state, and local resources. In addition, the state should study the establishment of a Virginia Rail Authority to help ensure continuity of policies and investments and provide a mechanism for ownership of assets funded by taxpayers.
- **Support freight rail** as a preferred means of adding capacity in congested corridors with high truck density, such as I-81 and I-95. In light of the energy and environmental advantages of rail, the public interest is served by maximizing moving mid- to long-distance freight by rail.
- **Expand requirements for the development of performance standards** and require VDOT and large metropolitan areas to meet measures that include reduction in per capita vehicle miles traveled and increased mode share for transit, carpooling, walking, bicycling, and telecommuting. We must oppose any measure modifying funding priorities, and retain environmental quality as a priority.
- **Support any action that will reduce the environmental damage** caused by projects, enhance public involvement in planning, improve the Public Private Transportation Act, or seriously reform VDOT planning and CTB oversight.
- **Target transportation spending** to existing communities and congested areas, **fund and improve** access management and street connectivity projects and policies, **provide technical assistance** to localities to promote transit-oriented development, and **repeal recent requirements** that local land use plans conform to state transportation plans.

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Author:

- **Trip Pollard,** *Southern Environmental Law Center*

Green Communities
Points of Contact

Confronting Climate Change
Chelsea Harnish: chelsea@vcnva.org
Skip Stiles: skip.stiles@wetlandswatch.org

Intercity Passenger Rail
Daniel Plaugher: danny@vhsr.com
Trip Pollard: tpollard@selcva.org

Land Conservation
Heather Richards: hrichards@pecva.org
Nikki Rovner: nrovner@tnc.org

Public-Private Transportation Act Reform
Trip Pollard: tpollard@selcva.org

Smart Growth
Dan Holmes: dholmes@pecva.org
Trip Pollard: tpollard@selcva.org
Stewart Schwartz: stewart@smartergrowth.org

Transportation Reform
Trip Pollard: tpollard@selcva.org

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Green Communities

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Smart Growth

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Virginia Conservation Network

The Virginia Conservation Network combines the voices of environmental organizations across Virginia to conserve our Commonwealth's natural resources and ensure its future prosperity.

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422 East Franklin Street
Suite 303
Richmond, VA 23219
(804) 644-0283
vcn@vcnva.org
www.vcnva.org

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James River Garden Club
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Mill Mountain Garden Club
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Nelson Garden Club
Northern Virginia Conservation Trust
Partnership for Smarter Growth
People's Alliance for Clean Energy
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Virginia Audubon Council
Virginia Chapter of the Wildlife Society
Virginia Council of Trout Unlimited
Virginia Eastern Shore Land Trust
Virginia New Majority Education Fund
Virginia Organizing Project
Virginia Society of Ornithology
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Virginia Wilderness Committee
Western Virginia Land Trust
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Winchester Garden Club