

VIRGINIA CONSERVATION BRIEFING BOOK 2013



Our Common Agenda

TABLE OF CONTENTS

Our Common Agenda

Healthy Rivers

Uranium Mining and Milling	3
Achieving Water Quality	5
River Access	7
Nutrient Pollution Trading	8
Atlantic Menhaden	10

Green Communities

Land Conservation	13
Smart Growth	15
Transportation Funding	17
Public-Private Transportation Act	19
Intercity Passenger Rail	21
Confronting Climate Change	23

Clean Energy

Renewable Energy Standards	27
Solar Energy	29
Offshore Wind Energy	31
Energy Planning	33
Mountaintop Removal Mining	35
Net Metering.	37

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ABOUT THIS BRIEFING BOOK



VIRGINIA
CONSERVATION
NETWORK

Virginia Conservation Network: The Voice of Conservation

Representing 150 environmental, preservation and community organizations active throughout the commonwealth, Virginia Conservation Network (VCN) is the nonprofit, nonpartisan voice of conservation in Virginia.

The network sponsors educational conferences and workshops, including the annual Virginia Environmental Assembly and a General Assembly Preview Workshop prior to each session of the Virginia General Assembly.

VCN monitors state legislation relevant to the environment, keeping members and citizen activists informed through the VCN E-Newsletter, the website www.vcnva.org, and action alerts.

Workgroups

By networking together community-based groups and larger regional or national nonprofits, VCN brings both scientific expertise and community values to bear in solving some of the toughest questions facing the commonwealth. Through a special partnership with the National Wildlife Federation, VCN also works on federal environmental policy issues that directly affect Virginians.

VCN workgroups are the cornerstone of the network's policy research and advocacy. The network's five workgroups—air and energy, water, land use and transportation, land conservation, and uranium mining—provide open forums for experts to discuss conservation issues. In addition, the VCN

workgroups evaluate proposed legislation and identify policy solutions for the commonwealth.

Through an open, deliberative process, these workgroups draft white papers, which are reviewed by VCN's legislative committee and board, then compiled in the annual Conservation Briefing Book.

A Common Agenda

The recommendations contained in this Briefing Book have been thoroughly vetted. Scientists, advocates and environmental educators throughout Virginia helped write and review its content.

The Briefing Book lays out a “common agenda” for conservationists. VCN and its affiliated nonprofits put that agenda into action by educating opinion leaders, by monitoring legislation and endorsing or opposing bills when appropriate, and by helping concerned citizens engage the legislative process.

Get Involved

VCN and the Virginia League of Conservation Voters Education Fund jointly administer the Legislative Contact Team (LCT) program, which mobilizes activists to serve as citizen lobbyists, promoting conservation issues to their state senator or delegate. To learn more or sign up, visit www.vcnva.org and click “get involved.”

Each January, hundreds of concerned Virginians also take part in Conservation Lobby Day. They hear from lawmakers and environmental experts before meeting with legislators to express support for conservation priorities. Sponsored by VCN and the Garden Club of Virginia, the 2013 Conservation Lobby Day will take place on January 28, 2013. Visit www.vcnva.org for details and registration.

Healthy Rivers



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URANIUM MINING AND MILLING

Authored by: Dan Holmes, Cale Jaffe, Katie Preston

Statement of the Issue

For 30 years, Virginia has maintained a ban prohibiting uranium mining in-state.¹ Virginia Uranium, Inc. (VUI) is now asking lawmakers to repeal that long-standing ban. VUI's efforts have focused on a major uranium deposit in Southside Virginia, known as Coles Hill. The potential for uranium exploration, however, exists statewide. As a senior VUI executive explained, "Talking to the lead geologist, he's insistent to this day that Coles Hill is the first of more major discoveries in Virginia."² If uranium is mined and milled in Virginia, the resulting "yellowcake" would have to be shipped out-of-state to an enrichment facility. What would be left behind in Virginia is the waste. According to VUI, the Coles Hill deposit has an average grade of 0.06 percent yellowcake.³ By contrast, the average grade of the McArthur River mine, in northern Saskatchewan, is more than 15 percent—254 times richer than Coles Hill.⁴ This means that Coles Hill would produce significantly more waste per pound of yellowcake produced.

To date, more than 40 governmental organizations—cities, counties, towns, and regional councils of government in Virginia and North Carolina—have passed resolutions in support of the ban. In Virginia these include the towns of Halifax, Hurt, Clarksville and South Boston; the counties of Orange, Floyd and Roanoke; and the cities of Virginia Beach, Norfolk, Chesapeake, Suffolk and Portsmouth. Joining these communities are the Virginia State Conference of the NAACP, Virginia Organizing, the Virginia Conference of the United Methodist Church, the Halifax County (Va.) Farm Bureau, American Rivers, and the National Wildlife Federation, among many other groups. A full listing is at www.keeptheban.org

Background

A Threat to Public Health: According to the National Academy of Sciences, "about 85 percent of the original radioactivity in the ore remains [in the waste material] after the uranium is extracted."⁵ These waste materials include Thorium-230, which has a radioactive half-life of 77,000 years, and Radium-226, with a half-life of 1,600 years. The National Academy has explained that these radionuclides "are common components of leached materials and airborne dusts from uranium ore tailings and waste piles" and "can pose a health hazard if inhaled or ingested." Exposure to toxic radiation from uranium

mining, milling, and waste disposal is linked to higher incidence rates of childhood leukemia, respiratory disease, and kidney disease. These threats are not limited to the area directly surrounding the mining sites. They also affect downwind and downstream communities, including the Hampton Roads area.

A Threat to Our Drinking Water: According to the National Academy of Sciences, waste from uranium milling operations "can—if not controlled adequately—contaminate the local environment under certain conditions, in particular by seeping into water sources ... This, in turn, can lead to a risk of cancer from drinking water."

The city of Virginia Beach retained the Michael Baker Corporation, a global engineering firm, to research the potential for contamination of Lake Gaston from uranium waste during a major precipitation event, such as a hurricane. Lake Gaston is in the Roanoke River watershed, downstream from the Coles Hill mining and waste disposal sites. The cities of Virginia Beach and Chesapeake rely on Lake Gaston for up to 60 million gallons of water per day.⁶ Baker concluded that a catastrophic failure of uranium waste landfill sites ("containment cells") at Coles Hill would potentially lead to radioactivity concentrations in Lake Gaston at 10–20 times greater than those allowed by the Safe Water Drinking Act. It could take from two months to two years to flush radioactive contaminants out of the water.⁷

There are potential impacts to other watersheds in Virginia, if mining is pursued statewide. In the 1970s and 80s, prior to the imposition of the ban, the industry obtained more than 1,200 exploratory leases affecting three watersheds: the Roanoke River; the Occoquan River; and the Rappahannock River. Although these leases have expired, they provide an indication of where exploration would resume if Virginia's ban is repealed.

A Threat to our Economy: Southside Virginia has a growing economy, thanks in part to revivals in agriculture, tourism, and fishing. If the ban is lifted, Virginia would risk harming these valuable industries. A socioeconomic study sponsored by the Coal and Energy Commission found that in the best-case scenario—if the price of uranium stayed high and there were no adverse impacts—a mine might provide a \$6 billion net benefit to the state. But in the worst-case scenario, the industry would cost Virginia a net \$11 billion loss. As the authors of the report explained, "the adverse economic impact under the worst-case scenario is nearly twice as great as

URANIUM MINING AND MILLING RECOMMENDATION

The General Assembly should heed the findings of the National Academy of Sciences and maintain the moratorium on uranium mining and milling that has for 30 years protected the lives, livelihoods, and property of Virginians.

the corresponding positive impact in our best-case scenario.”⁸ The report’s baseline analysis also assumed a price of \$60 per pound for yellowcake throughout the life of the mine. As of November 5, 2012, the spot price for uranium was \$42.50.

The National Academy of Sciences Confirms Evidence of Risk: In 2008, after the industry proposed plans to mine uranium and dispose of the radioactive waste in-state, the Coal and Energy Commission contracted with the pre-eminent authority, the National Academy of Sciences (NAS), to conduct a rigorous, unbiased analysis. Following release of its report on December 19, 2011, the National Academy of Sciences conducted public outreach sessions to in Danville, Fairfax, Charlottesville, Richmond, and Virginia Beach, concluding on May 31, 2012. During past sessions of the General Assembly, many lawmakers said they would “wait for the study” before taking a stance on uranium mining. With the NAS report and public outreach complete, that wait is over.

The NAS report validates the core concerns of environmental groups and downstream localities. Specifically, the NAS report finds:

- “Significant potential environmental risks are associated with extreme natural events and failures in management practices. Extreme natural events (e.g., hurricanes, earthquakes, intense rainfall events, drought) have the potential to lead to the release of contaminants if facilities are not designed and constructed to withstand such an event, or fail to perform as designed.”
- “In a hydrologically active environment such as Virginia, with relatively frequent tropical and convective storms producing intense rainfall, it is questionable whether currently-engineered tailings repositories could be expected to prevent erosion and surface and groundwater contamination for 1000 years”
- “The decay products of uranium provide a constant source of radiation in uranium tailings for thousands of years, substantially outlasting the current U.S. regulations for oversight of processing facility tailings.”

In presenting the report to the Virginia General Assembly on December 19, 2011, Dr. Paul Locke, Chair of the NAS Committee and a professor of public health at Johns Hopkins University, stated,

“Internationally accepted best practices ... are available to mitigate some of the risks involved. However, there are still many unknowns ... The report did not say you can mitigate all risks ... It said you can mitigate some risks.”¹⁰

Gov. McDonnell’s Uranium Working Group: Although Governor McDonnell has assembled his own Uranium Working Group, the process for that group has been controversial, with limited opportunities for stakeholders to weigh in. The researchers retained by the governor’s group have very close ties to the uranium mining industry and pro-mining interests. The final report of the governor’s group will not be independently peer-reviewed. In contrast to the Uranium Working Group, the NAS unquestionably represents the “gold standard.” The NAS process was transparent, and their report peer-reviewed. In fact, in 2011 Walter Coles, Sr., President and CEO of Virginia Uranium, Inc., wrote: “The NAS will release the findings of its study in December ... We should all have full faith and confidence in the Academy to deliver an independent, scientifically based assessment, and we all should fully commit to abiding by its findings.”¹¹

1. The ban was codified in 1982, and can be found at Virginia Code § 45.1-283
2. Walter Coles, Jr., Virginia Energy Resources, Inc., “Building North America’s Uranium Supply,” Americas’ Resources Investment Congress, London, U.K., Feb. 1, 2011, transcript on file with Southern Environmental Law Center
3. Virginia Energy Resources, Corporate Presentation, at www.santoy.ca/i/pdf/VAE_CorporatePresentation.pdf
4. Cameco Corp., “McArthur River: Summary,” at www.cameco.com/mining/mcarthur_river/
5. National Academy of Sciences, *Uranium Mining in Virginia: Scientific Technical, Environmental, Human Health and Safety, and Regulatory Aspects of Uranium Mining and Processing in Virginia*, 2012, at www.nap.edu/catalog.php?record_id=13266
6. www.vbgov.com/government/departments/public-utilities/about-pu/lake-gaston/Pages/default.aspx
7. Baker, *Phase II Assessment Potential Impacts of Uranium Mining in Virginia on Drinking Water Sources*, Feb., 2012, www.vbgov.com/government/departments/public-utilities/pages/uranium-mining.aspx
8. Chmura Economics and Analytics, *The Socioeconomic Impact of Uranium Mining and Milling in the Chatham Labor Shed, Virginia*, Nov., 2011, <http://dls.virginia.gov/commissions/cec.htm?x=std>
9. 1000 years is the maximum levels required by Nuclear Regulatory Commission Regulations, 10 CFR Part 40
10. Rex Springston, *Richmond Times-Dispatch*, “Report sees potential problems with uranium mining,” Dec. 20, 2011
11. Walter Coles, Sr., “No End-Run Around The Study,” *Danville Register & Bee*, March 28, 2011

ACHIEVING CLEAN WATER

Authored by: Jacob Powell

Statement of the Issue

The Federal Clean Water Act, The Constitution of Virginia, and numerous laws, regulations, and multistate agreements charge our leaders with protecting and restoring the streams and rivers of the commonwealth. Achieving those goals will require a commitment to water quality, and an investment in our future and the future of our children.

Over the years, we have made progress, but pollution from wastewater treatment plants, urban centers, suburban developments, and agricultural land still amounts to more than our streams and rivers can bear. Virginia already has the basic framework of agencies and programs in place to deliver the needed resources in order to reduce this pollution. Lawmakers in Richmond must now only provide the authority and adequate funding.

Background

The three areas the General Assembly must concentrate on to ensure clean water for the citizens of Virginia are: funding for point source grant commitments, Virginia's stormwater regulations, and agricultural cost-share needs.

Point Sources: Allocations from Virginia's Water Quality Improvement Fund are the source for much of the commonwealth's progress on clean water to date. For example, it is a source of grants that help local governments install nutrient removal technologies at wastewater treatment plants. Over the past few years Virginia has pledged to fund upgrades in several localities, and these technologies are a cornerstone of the Chesapeake Bay Watershed Implementation Plan to which Gov. McDonnell has committed Virginia.

An analysis from the U.S. Conference of Mayors, on the value of investing in water and sewer infrastructure concluded that these investments typically yield greater returns than most other types of public infrastructure. For example, every \$1 of water and sewer infrastructure investment increases private output (Gross Domestic Product) in the long-term by \$6.35. Furthermore, adding a job in the water and sewer industry creates 3.68 jobs to support that one.¹

Stormwater Regulations: Urban stormwater pollution is a growing threat to the health of Virginia's waters because development is outpacing restoration progress. The U.S. Environmental Protection Agency

Chesapeake Bay Program Bay Barometer: *A Health and Restoration Assessment of the Chesapeake Bay and Watershed* in 2009, showed that while progress has been made in reducing pollution, stormwater pollution threatens to offset any gains that are made. In Virginia, pollution from wastewater discharges and agriculture have declined over the past 20 years, but urban stormwater pollution is increasing as urban and suburban land conversion continues. Urban stormwater pollution now accounts for over 15 percent of Virginia's nitrogen and phosphorus pollution to the Chesapeake Bay.



We must address the upward trend of urban stormwater pollution in order to fulfill Virginia's commitments to water quality and safeguard its waterways for future generations. Virginia's stormwater regulations will determine in large part the future health of its critical water resources. Local implementation of these regulations is necessary in order to achieve healthy, clean waterways while accommodating future growth.

Agricultural Cost-Share: Agricultural runoff accounts for much of the nutrient excess entering Virginia's rivers and the Chesapeake Bay. Approximately 20% of the nitrogen, 42% of phosphorus and 41% of the sediment load comes from Virginia agriculture. Farming practices including nutrient management plans, forest and grass riparian buffers, stream bank fencing to block livestock access, cover

ACHIEVING CLEAN WATER RECOMMENDATIONS

Unfortunately, our waters are suffering the cumulative effects of pollution from lawns, farms, and cities. Polluted runoff carries animal waste and bacteria into streams. It erodes stream banks, degrading habitats and increasing the risk of flooding. Aging storm sewers and sewage treatment plants overwhelm our streams and rivers creating vast algae blooms. Clean water should be the birthright of every Virginian and it is incumbent upon state lawmakers to make it a priority.

- Effective local implementation of Virginia's stormwater regulations is necessary in order to achieve healthy, clean waterways while at the same time accommodating future growth. Feasible incentives should be considered to assist localities, but no backsliding on program implementation must be allowed.
- There is a funding shortfall for existing Water Quality Improvement Fund point source grant commitments. Assisting local governments with \$100.7 million needed to fulfill Virginia's water quality commitments is important.
- It is important to connect water quality protections with successful farming operations, debunking the long-standing myth that the agricultural community must choose between environmental protections and a successful business. A strong financial commitment to the state's water quality goals is a commitment to the agricultural community. By fully funding agricultural cost-share needs and the technical assistance to administer it, crucial near-term investments in agricultural pollution reductions can be achieved.

crops, continuous no-till, and many others can prevent these pollutants from reaching surface and ground waters.

Across the commonwealth, farmers actively seek to adopt these practices, and many have already done so. However, installation costs and adequate technical assistance are major barriers. Unlike other regions of the country dominated by large agricultural production operations, the average Virginia farm size is 171 acres, and the average annual farm income is about \$61,000 per year. Given the inherent risks associated with farming (weather, commodity prices, etc.), farmers do not always have a predictable income; one year's profits may cover future years when the farm operates at a loss. Cost-share is the necessary bridge that farmers need so they can do their part to protect Virginia's water resources. These programs must be consistently and adequately funded every year, and not contingent on a budget surplus.

The costs of not fully addressing this challenge are considerable. Our rivers have played an integral role in the development of Virginia. Today, that critical role continues, with rivers serving as a primary source of drinking water for millions of Virginians, a source for commercial and industrial facilities that utilize the river and as a vital asset to our quality of life that is so important to our future prosperity.

1. <http://www.usmayors.org/urbanwater/documents/LocalGovt%20InvInMunicipalWaterandSewerInfrastructure.pdf>

Our waters are suffering the cumulative effects of pollution from lawns, farms, and cities. Clean water should be the birthright of every Virginian and it is incumbent upon state lawmakers to make it a priority.

RIVER ACCESS

Authored by: Jacob Powell

Statement of Issue:

The bays, rivers, streams and creeks of the commonwealth are held in trust for all Virginians. These waters are conserved for us to be places of solitude, peaceful settings for swimming, fishing, surfing and boating. However, recently public access to these waters has been cast in doubt. With water access being one of the recreation resources in greatest demand throughout the commonwealth, maintaining and improving that access should be a priority.

Background

The Constitution of Virginia supports its citizens' right to use and enjoy its water resources, and it is the commonwealth's policy to protect those waters for the general welfare of the people.¹ To better serve those needs, Virginia surveys its citizens to ascertain the types of outdoor recreation they participate in and associated services they need, informing the Virginia Outdoors Plan. Survey results in 2011 indicated "more than nine in ten [Virginians] consider access to outdoor recreation to be 'very important' or 'important.'" 60% of those surveyed also identified "public access to state waters for fishing, swimming, and beach use" to be "most needed".²

Clearly access to public waters is something that is worth supporting for Virginians. However, Virginia also benefits from the tourism dollars, small businesses, and local economies that support outdoor recreation like fishing and boating. The waters of the state are important to Virginia in many ways, and access to them is critical.

Over the years fishing gear has become more advanced, boats have become lighter, and now people are able to float and fish in areas where they

have not traditionally been. These recreational activities put folks in direct contact with the water and, especially in the case of fly fishing, the river bottom. The river bottoms within Virginia are also, "property of the commonwealth and may be used as a common by all the people of the commonwealth",³ except in certain rare cases.

Unfortunately in Virginia, river bottom ownership is now uncertain. This is due to the fact that those rare ownership exceptions which date back to colonial times which are hard to verify. Only a judge can make a determination of ownership, and there is no good information as to where such claims exist. Additionally, people who own such claims along smaller-streams may have come accustomed to not seeing anyone float the adjoining stretch, and are now surprised to see it in use by boaters and anglers.

This is now casting doubt on public access in some areas and could have a detrimental effect on recreation statewide. Currently these matters are to be solved in the courts. As an example, folks who take to a river from a public boat launch are subject to being charged for trespass if they stop to wade in the wrong stretch of river. They are then required to bear the burden of proof, and legal costs associated with the ownership determination. Recreational access suffers now, and if this persists it will only be a matter of time before the local economies surrounding these areas suffer in turn.

1. Virginia Constitution, <http://constitution.legis.virginia.gov/constitution.htm#11S1>

2. 2011 Virginia Outdoors Demand Survey, prepared for DCR by the Weldon Cooper Center for Public Research at the University of Virginia, http://dcr.cache.vi.virginia.gov/recreational_planning/documents/vosexecsum11.pdf

3. Virginia Code § 28.2-1200, <http://lis.virginia.gov/cgi-bin/legp604.exe?000+cod+28.2-1200>

RIVER ACCESS RECOMMENDATION

With water access being one of the recreational resources in greatest demand throughout the Commonwealth, improving and maintaining certainty of access is a priority.

NUTRIENT POLLUTION TRADING

Authored by: Jacob Powell

Statement of Issue

Virginia has operated a nutrient pollution trading program since 2005, but in 2012 a law was passed expanding the program in an effort to meet the reductions required in the Chesapeake Bay Total Maximum Daily Load (TMDL) at reduced cost of compliance. This expansion carries both potential opportunities and concerns. As regulations are now being drafted to promulgate this expansion it is important to ensure they uphold the delivery of verifiable, enforceable, and cost-effective pollution reductions that restore and protect water quality consistent with the federal Clean Water Act.



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Background

Pollution trading is a market-based strategy intended to more rapidly and cost-effectively meet environmental quality goals. Trading programs establish permanent pollution goals, or “caps,” for sources of pollution. The program then allows one source (the “buyer”) to meet their regulatory obligation by paying another (the “seller”) who has reduced its discharge below their own cap. Trading may involve either the acquisition of “credits” to help *comply with a permit cap*, or the acquisition of “offsets” to compensate for new pollution that *exceeds a cap*. Trading allows flexibility to capitalize on differential efficiencies (economic, physical space, time, etc.) among and between sources to

help meet pollution goals more effectively. Trading is a supplement to traditional regulatory (e.g., “end-of-pipe” limits) and non-regulatory (e.g., federal “cost-share” programs) means to control pollution.

The 2005 Virginia General Assembly established the first pollution trading program in Virginia. It created the Chesapeake Bay Watershed Nutrient Credit Exchange Program (SB 1275, §62.1-44.19:12) to help “point sources” (i.e., municipal and industrial wastewater treatment facilities) meet Chesapeake Bay nitrogen and phosphorus reduction goals in the most cost-effective manner and help the commonwealth accommodate new facilities that support economic development without harming water quality. This program allows point sources to acquire credits from other point sources to comply with assigned nutrient loading permit caps *and* acquire offsets from point and nonpoint sources (such as farmers, private landowners) to compensate for pollution loads from a new or expanding facility that exceeds a cap. This program is focused on meeting and maintaining “aggregate” nutrient pollution loading caps in each of the five large river basins that make up the Bay watershed in Virginia, rather than individual facility load caps. The premise here is that the total nutrient loading drives the current water quality impairment in the tidal rivers and the Bay.

In 2009, the General Assembly authorized a statewide Nonpoint Nutrient Offset Program (HB 2168, §10.1-603.8:1) to help new development activities meet the “no-net-increase in pollution” goal included in stormwater regulations that will take effect in 2014. Offsets acquired from point or nonpoint sources may be acquired to meet this regulatory requirement when on-site practices cannot practicably achieve necessary pollution reductions. A preference for offsets within the local watershed (8-digit Hydrologic Unit Code) is also included. Legislation in 2011 (SB 1102, §62.1-44.19:15D) prescribed some rules for the generation of credits or offsets by animal waste-to-energy and waste reduction projects.

Virginia’s Watershed Implementation Plan proposed a role for an expanded nutrient trading program in meeting the Bay TMDL. In particular, it envisioned using trading to help achieve pollution reduction goals and address growth from challenging pollution sources, such as from existing urban

Provided below are principles and recommendations to assist in the evaluation of any nutrient trading legislation advanced in the 2012 General Assembly session. These items address rules that should be maintained in the existing program, as well as new concepts that could move forward in legislation.

- Protection of local water quality must be paramount. Specifying how compliance with “local water quality limitations,” an existing statutory requirement, will be measured and achieved is a critical part to any successful trading program. Trades should be regulated so that no transaction will harm local waters.
- Only credits or offsets that constitute quantifiable net pollution reductions may be traded. The existing requirement in statute that new or expanding point sources may only acquire nonpoint source offsets generated by the installation of best management practices that exceed a specified “baseline” level of performance must be maintained. The baseline represents the amount of reductions a source is expected to achieve under the total maximum daily load before it can generate credits by doing more than required.
- Point sources that choose to acquire nonpoint source offsets must acquire two pounds of nonpoint source reduction for every pound of reduction they are seeking to offset. As more trades involve nonpoint sources such as farm best management practices, it is imperative that Virginia maintains the 2:1 trading ratio that currently exists for trades that include nonpoint sources.
- The trading program must be transparent to the public, subject to appropriate verification, enforcement, and provide a reliable and transparent method for determining how new and emerging pollution reduction technologies are allowed to enter the trading marketplace. Making Virginia’s program more transparent and open to the public to see what trades and offsets are being offered and made will improve the public’s acceptance of the trading program. Virginia should establish a rigorous review process based on the best available science to assist the agencies in making these determinations.

development and septic systems built in the past without adequate pollution controls.

Nutrient trading in Virginia has promise, particularly in its potential to deliver pollution reductions at a reduced cost. However, expansion of the program must be done carefully and with consideration to a number of issues and principles such as those outlined in the recommendations section so as to avoid the development of an improperly designed trading program that would result in further degradation or increased uncertainty of pollution

reductions. Without appropriate rules, elements of an expanded nutrient trading program could (1) fail to meet its goal of assisting the Bay cleanup, (2) negatively impact local water quality, or (3) run afoul of federal Clean Water Act programs that underlie all state water quality programs.

Careful consideration and review of any future legislation is critical to ensure Virginia maintains a nutrient trading program that will help meet water quality goals, reduce costs, provide accountability and transparency and offer surety for participants that the program can withstand legal scrutiny.

ATLANTIC MENHADEN

Authored by: Ann Jurczyk, Chris Moore

Statement of the Issue

Atlantic menhaden abundance (based upon the total number of menhaden) has declined steadily since a population peak was observed in the early 1980s and recruitment (new fish entering the population) has been relatively low during the same time period¹. The latest stock assessment indicates that the menhaden population is at its lowest recorded level since 1955. The Virginia General Assembly will have to react to new management measures for menhaden during the 2013 session.



Background

Since colonial times menhaden have supported one of the largest commercial fisheries on the Atlantic coast. Omega Protein, whose Virginia operations are based in Reedville operates an industrial scale fishery that catches menhaden that are eventually “reduced” to fish meal and oil. The Chesapeake Bay is also home to a large component of the menhaden bait fishery which has become increasingly important from North Carolina to New England. The bait fishery supplies commercial fishermen with bait for species such as blue crab and American lobster. Menhaden are also used widely in recreational fisheries as bait for a variety of sport fish. Most impor-

tantly, the species serves as a forage fish to larger fish, marine mammals, and avian predators in the marine and estuarine ecosystems.

Menhaden are managed through a partnership between the commonwealth of Virginia and the Atlantic States Marine Fisheries Commission. The commission is composed of 15 Atlantic coast states and partnering federal agencies that provide technical support and set the coast-wide framework for managing species that migrate along the near-shore waters of the Atlantic Coast. The Atlantic States Marine Fisheries Commission seeks to promote responsible stewardship of marine fisheries resources and also, “...serves as a forum for the states to collectively address fisheries issues under the premise that as a group, using a cooperative approach, they can achieve more than they could as individuals. The Commission does not promote a particular state or a particular stakeholder sector².”

As indicated by the peer-reviewed 2010 The Atlantic States Marine Fisheries Commission stock assessment³, menhaden have been historically overfished along the entire Atlantic Coast, including the Chesapeake Bay, and the population is currently at historic lows. The Atlantic States Marine Fisheries Commission has determined that menhaden have been overfished for 32 of the last 54 years resulting in a current menhaden population that is only eight-percent of what it would be if there was no pressure from fishing.

In response to these concerns, in November 2012 the Atlantic States Marine Fisheries Commission adopted new reference points on fishing mortality that seek to reduce harvest pressure and increase the menhaden population. After adoption of the new reference points, The Atlantic States Marine Fisheries Commission Menhaden Management Board initiated development of Amendment 2 to the fishery management plan to establish menhaden management measures for all fishing sectors and gear types to achieve the new fishing mortality reference points. Atlantic States Marine Fisheries Commission initiated a public comment period and held public hearings in the fall of 2012 in order to obtain public input on these management measures. The Atlantic States Marine Fisheries Commission will meet in

ATLANTIC MENHADEN RECOMMENDATION

Virginia's General Assembly should pass legislation necessary during the 2013 session in order to bring Virginia into compliance with Atlantic States Marine Fisheries Commission's coast wide management plan for menhaden. Virginia's coastal fisheries are dependent upon a healthy menhaden population to ensure the long-term viability of the fishery and the local and regional economies that are dependent upon them.

December 2012, after this publication goes to print, to vote on revisions to the fishery management plan for menhaden. Each state will then be responsible for coming into compliance with the coast wide management plan adopted by The Atlantic States Marine Fisheries Commission. Since Virginia's menhaden fishery is regulated directly by the legislature, the General Assembly will have to pass legislation to bring Virginia into compliance.

1. ASMFC Atlantic Menhaden Public Information Document. February 2012
2. ASMFC Website www.atlanticmcc.com
3. Stock assessment—a compilation of biological and fisheries data used by fisheries managers to manage a fish species.

The Atlantic States Marine Fisheries Commission has determined that menhaden have been overfished for 32 of the last 54 years resulting in a current menhaden population that is only 8 % of what it would be if there was no pressure from fishing.

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LAND CONSERVATION

Authored by: Heather Richards, Nikki Rovner

Statement of the Issue

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: the Virginia Land Preservation Tax Credit program, state matching funds for local purchase of development rights (PDR) programs through the Virginia Department of Agriculture and Consumer Services (VDACS) Office of Farmland Preservation, and competitively awarded land preservation funds from the Virginia Land Conservation Foundation.

Without significant and reliable funding for these programs, Virginia will not achieve conservation results at a large enough scale to: maintain the quality of life that attracts businesses and tourists to the commonwealth, conserve the land base which supports our two largest industries – forestry and agriculture, meet its commitment to restore the Chesapeake Bay, access available federal and private conservation dollars that require matching funds, and ensure that future generations can enjoy the beautiful, diverse Virginia that we know today.

Background

If current trends continue, over the next 40 years Virginia will lose as many acres of farms, forests, and natural lands to development as have been lost in total in the 400 years since the commonwealth was settled by Europeans. The rate we are losing rural land is accelerating; we are now losing land at more than two times our rate of population growth. Vitaly important prime farmland is being consumed at the greatest rate, with forestland loss close behind. In addition, we are regularly losing irreplaceable, critical wildlife habitat, important historic sites, and economically valuable scenic resources.

Virginians have said repeatedly in surveys, polls, and at the ballot box that they are willing to invest in the protection of open space. 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: The Land Preservation Tax Credit 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 percent 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. Before the implementation of the tax credit, just 19 counties had more than 1,000 acres of land protected by conservation easements. Just ten years after implementing this program, that number has rocketed to more than 80 localities with more than 1,000 acres of land protected by conservation easements.

An examination of the donated conservation easements demonstrates that 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 acres which 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 nationally identified prime agricultural soils; Over 624,000 acres (86%) are within the Chesapeake Bay watershed and add to the commonwealth's commitments under the Chesapeake Bay 2000 Agreement; 136,000 acres are protecting corridors along state designated Scenic Roads; and over 97,500 acres of these protected lands are within state and nationally designated historic districts.

This program is an efficient and effective way for Virginia to encourage private landowners to conserve the most important lands in the commonwealth. The land conservation community strongly recommends that the General Assembly make no changes that would reduce the impact and availability of this important land conservation tool.

Local Purchase of Development Rights Programs: In 2007, Virginia made a commitment to working farms and forestland through an invest-

LAND CONSERVATION RECOMMENDATIONS

Virginia needs to make a substantial financial commitment to land conservation by:

- Continuing the Land Preservation Tax Credit Program in its current form.
- Allocating \$11 million dollars per year over the next two years for the State Office of Farmland Preservation's matching fund for local PDR programs.
- Allocate \$31.5 million dollars per year over the next two years for the Virginia Land Conservation Foundation.

ment of \$4.25 million for farmland preservation at the local level. Localities responded to the state investment by pledging 10 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 14 localities in Virginia. Since these matching funds became available, 20 localities have adopted local PDR programs. There are now 20 localities that realize the importance of preserving working farmland in Virginia. In order for these localities to keep the PDR programs strong; reliable and consistent funding is needed to maximize the potential of this conservation partnership.

In 2005, the Virginia Farmland Preservation Taskforce set a goal of establishing 30 PDR programs in Virginia by 2010. Virginia is well on the way to meeting that goal and localities need a financial commitment by the state in order to keep the programs running. The Taskforce also set a funding goal of \$30 million per year in farmland preservation funding. For the 2011-2012 biennium, Virginia invested \$1.2 million in matching funds for local purchase of development rights programs,. The Commonwealth needs to support its partnership with localities to conserve working farm and forest land through continued consistent funding of local purchase of development rights programs,. It is critical that in these difficult financial times, the state continue to make investments in PDR funding to ensure that the commonwealth's largest industry – agriculture and forestry – continue to have the land on which to operate.

For the next biennial budget, we urge the governor and General Assembly to allocate \$11M per year to this program in order to achieve both the governor's 400,000 acre land conservation goal, as well as Over the long term, and in order to meet program demand and best preserve Virginia's incomparable natural resources, the commonwealth should invest \$30 million annually in the Office of Farmland Preservation's state PDR program.

Virginia Land Conservation Foundation: The Virginia Land Conservation Foundation (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 and forest preservation.

Like the Office of 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 FY 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.

VLCF was allocated a total of \$4 million over the 2009-2010 biennium, and just half of that for the 2011-2012 biennium. For the next budget, we urge the governor and General Assembly to allocate \$31.5M per year in order to achieve the governor's 400,000 acre land conservation goal.

Authored by: Dan Holmes, Trip Pollard, Stewart Schwartz

Statement of the Issue

Despite the economic downturn, 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.¹ 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 in recent years. But during the last two sessions of the General Assembly these state initiatives were weakened and the Virginia Department of Transportation has directed the record funds borrowed for transportation toward mega-projects that will result in more sprawling development, rather than on fixing aging roads, bridges and congestion within existing communities.

Background

Smart growth offers the opportunity to meet changing market demand, and link growth, quality of life, infrastructure savings, and economic competitiveness. The market wants more alternatives to sprawl as changing demographics—young professionals, empty nesters, retirees, and more 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 for our scenic and natural beauty, 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.² These approaches will save taxpayers money, strengthen our communities, save energy, reduce traffic congestion, and protect our farmland, health, and environment.

Compact and traditional cities, towns and neighborhoods—typically consume less land, and cost much less for roads, utilities, and housing than does sprawling development. These approaches will save taxpayers money, strengthen our communities, save energy, reduce traffic congestion, and protect our farmland, health, and environment.



1. See, for example, Joe Cortright, CEOs for Cities, “Driven to the Brink.” http://www.ceosforcities.org/work/driven_to_the_brink
2. See Transportation Cooperative Research Report 39, “Costs of Sprawl,” http://www.trb.org/Publications/Blurbs/Costs_of_Sprawl_2000_160966.aspx and TCRP Report 74, Costs of Sprawl—Revisited, <http://pubsindex.trb.org/view.aspx?id=540975>

SMART GROWTH RECOMMENDATIONS

Target scarce public tax dollars. Prioritize state infrastructure funds to existing communities and designated growth areas, including economic development, transit/bike/pedestrian/local street investment, schools and water/sewer. Support the revitalization of cities, towns and older suburban communities.

Ensure new development pays its fair share. A fair balance must be struck between what the public taxpayer and the private developer each pay toward the cost of infrastructure. 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 but should also cover a range of other community service such as parks and open space, water quality and water supply protections, libraries and other civic institutions. Any system should be constructed so that it creates the incentive to develop within designated growth areas.

Oppose actions that would weaken local community planning. The General Assembly should reject efforts to diminish local planning efforts, 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, etc.), the state should respect local planning efforts and require comprehensive environmental assessments; studies of need, alternatives and location; consultation with local governments and residents, and context sensitive design.

Strengthen the partnership between state and local efforts to plan for the future and guide growth. Good planning is as important to our local communities as it is to successful businesses.

- 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.

Improve data collection on land development and infrastructure costs.

- 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 plan 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 scenarios (business-as-usual and re-development).
- The state and localities should work together to compile estimates of the total maintenance and replacement needs of bridges, roads, water/sewer, schools, libraries, and other facilities.

TRANSPORTATION FUNDING

Authored by: Trip Pollard

Statement of the Issue

Transportation funding and VDOT remain at the forefront of policy debates in Virginia. A multi-billion backlog to fix structurally deficient bridges and repave highways, a projection that there will be no state funds for highway construction by 2017, the lack of money for secondary or urban road construction, anger over the toll rates imposed under the Midtown/Downtown Tunnel deal, a reduced state share of transit funding, and the need to identify a dedicated source of funds for passenger rail are among the recent topics of debate. Elected and state officials acknowledge the need to reform VDOT, to better link land use and transportation to reduce the rising costs of transportation, and to provide funding for more transportation choices. Yet the state continues to focus heavily on highway construction and slights both transportation alternatives and land use impacts. This approach is costly to taxpayers, increases energy dependence, destroys natural and rural areas, spurs sprawl, increases air and water pollution, contributes to global climate change, and limits transportation choices, while doing little to relieve congestion in the long run.

Background

Transportation has been a central issue in General Assembly sessions for years. The governor's proposed \$4 billion funding package was largely adopted by the legislature in 2011, and elements of a complicated omnibus bill passed in 2012, including earmarking a greater share of any surplus for transportation.

Meanwhile, our transportation challenges are increasing. Gas prices are volatile, transit services have been cut and/or fares hiked, gridlock is getting worse, many existing roads and bridges are in poor condition, and transportation and land use decisions are rarely coordinated. Transportation also has been the leading—and fastest rising—source of carbon dioxide in the state.

Virginia spends billions of taxpayers' dollars on transportation each year. This spending and the long range transportation plan continue to focus overwhelmingly on roads. For FY13, the commonwealth Transportation Fund budget is just under

\$4.7 billion, and VDOT's budget accounts for almost \$4.2 billion of that. Yet evidence indicates that new and wider highways generate significant new traffic without providing long-term congestion relief because they cause development to spread out and the amount of driving to increase. Despite significant congestion within the metropolitan areas of the state, VDOT is advancing major rural highways and bypasses that divert scarce resources, increase sprawl, and fail to target areas of greatest need. In addition, VDOT's focus on privatizing highways and tolls is limiting input by the public and by public officials, undermining environmental review, slighting transit, and advancing unneeded projects and speculative development.



Gov. McDonnell, Speaker Howell, and General Assembly members of both parties have recognized the need to reform VDOT and to improve our transportation policies. Some positive steps have been taken. But these are relatively minor steps in light of the magnitude of the problems we face, and any benefits they produce will be more than outweighed by proposed new highway projects. The need for more transportation funding is also widely recognized, but we must be sure to spend the money we do have more wisely.

TRANSPORTATION FUNDING RECOMMENDATIONS

Support a more balanced transportation system. Any legislation or budget provision that provides or relates to transportation funding should advance five key goals:

- First, use our resources more efficiently by focusing on repairing our existing transportation system and on improving local street networks before spending billions of dollars on major new roads.
- Second, shift funding to alternatives to driving, such as public transit, passenger and freight rail, walking, and bicycling. These alternatives are cheaper and can reduce congestion, energy consumption, and pollution; moreover several provide better services for elderly, disabled, and low income citizens. Providing new funds and flexing existing funds to passenger and freight rail improvements in the I-95, I-81, and I-64 corridors should be a particularly high priority.
- Third, tie transportation funding to measurable performance criteria, such as reduced air pollution from vehicles and reduced per capita vehicle miles traveled.
- Fourth, transportation funding allocation formulas need to be changed from a single state-wide formula in order to give regions flexibility to determine the funding levels for various transportation modes – above certain minimum levels – that best meet their needs.
- Fifth, do not raid the General Fund to pay for transportation, taking resources from other needs such as land conservation and clean water programs.

Provide dedicated funding for passenger rail. A dedicated source of funding should be provided for the Virginia Intercity Passenger Rail Operating and Capital fund the Assembly created in 2011. Other changes may be needed to ensure or enhance Virginia's ability to qualify for federal rail funds.

Support transportation process reform. There have been numerous efforts in recent sessions to reform various aspects of state transportation planning. Any action that will reduce the environmental impacts of transportation projects, enhance public involvement in planning, improve the Public Private Transportation Act, or seriously reform VDOT planning and CTB oversight should be supported.

Support stronger performance standards for transportation planning. 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.

Support improving the link between transportation and land use, and providing incentives for smarter growth. Potential measures include: target transportation spending to existing communities and congested areas, tie transportation funding to land use changes that reduce travel demand, target economic development assistance to existing communities and locations with adequate pre-existing transportation infrastructure, work with localities to conduct build-out analyses of their land use plans, and provide technical assistance to localities to promote transit-oriented development. Any effort to weaken or rollback recent reforms should be opposed.

Authored by: Trip Pollard

Statement of the Issue

Virginia's Public-Private Transportation Act of 1995 (PPTA) has become the primary means for constructing large transportation projects, expanding beyond its original purpose and 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 public 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 the Dulles Greenway and Route 28 interchanges in Northern Virginia and the Pocahontas Parkway (Route 895) and Route 288 in Richmond.

The number of PPTA projects is expanding rapidly. There are 10 additional PPTA projects currently underway, under contract, or under consideration, including the Downtown/Midtown Tunnel, a new 460, the Coalfields Expressway, 495 HOT lanes, 95 HOT lanes, Dulles Rail, and privatization of the Port of Virginia. The McDonnell Administration has created an Office of Transportation Public-Private Partnerships (OTPP), directed some multimodal funds to this office, made it clear that it views the PPTA as a key element of its strategy for delivering new transportation projects, and made billions of dollars worth of PPTA deals.

The track record of PPTA projects raises serious questions and highlights the fact that the primary concern of PPTA developers is maximizing profit, not the public interest. Among other things, potential costs and liabilities to taxpayers have often been underestimated or not provided to the public. The current proposal to build a new 460 would pour \$1.1 billion of state funds into this project, for example, which was originally projected to cost tax-

payers little or nothing. Bonds for the Pocahontas Parkway previously were downgraded and placed on a watch list by credit agencies since traffic and toll revenues have been lower than expected. In addition, tolls imposed and private sector profits can be staggering. 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.



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 and making a claim on state revenues at the expense of other projects.
- 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

PUBLIC-PRIVATE TRANSPORTATION ACT RECOMMENDATIONS

Support PPTA reform. Legislation to improve the PPTA is needed. Potential measures 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 each proposal (such as public disclosure of a cost-benefit (value for money) analysis prior to moving to procurement and holding public hearings at an early stage of review and 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 significant private sector equity contributions and giving priority to proposals that retain public control of any public asset involved.
- Requiring evaluation of the impacts of proposed projects on land development patterns.
- Requiring projects to incorporate context sensitive design, pedestrian and bicycle facilities, low impact development, and other measures to avoid and minimize adverse environmental impacts.

Oppose additional taxpayer funding until the PPTA is reformed. The General Assembly should not provide any additional funds for specific projects or for the Transportation Partnership Opportunity Fund it created to support PPTA projects until the PPTA is reformed. Moreover, project developers should not be allowed to receive anticipated future general fund revenues under any circumstance.

the prioritization and advancement of a proposal 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.

- It creates incentives for sprawl, driving, and environmental damage. Most PPTA projects built or proposed thus far have been highway construction that will subsidize sprawl and increase motor vehicle dependence, destroying open space and increasing air and water pollution.

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.

INTERCITY PASSENGER RAIL

Authored by: Daniel Plaughter, Trip Pollard

Statement of Issue

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 and the General Assembly created the Intercity Passenger Rail Operating and Capital (IPROC) Fund in 2011 and put some money into the fund last year. However, IPROC has no dedicated funding source. Funding is needed to keep Virginia's regional trains operating, match federal intercity and high speed passenger rail funds, and expand passenger rail service.

Background

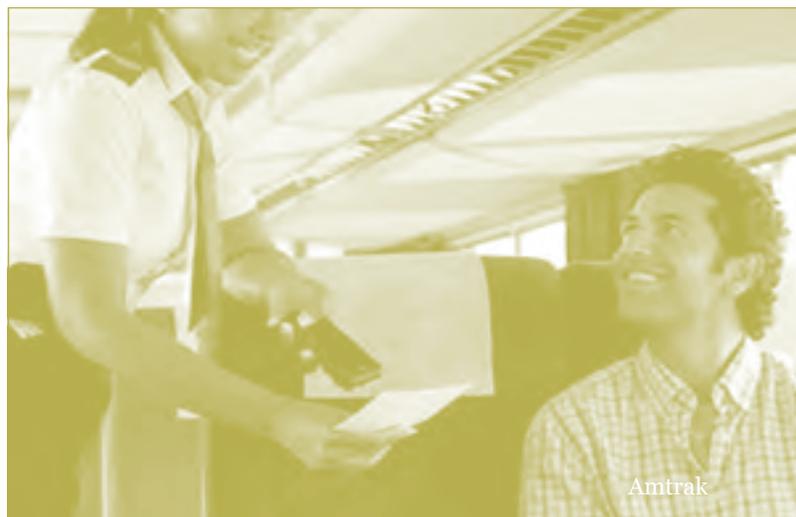
Increased congestion on our roads and in our airways, vulnerability to volatile fossil fuel prices, dependence on foreign oil, and air and water pollution are just some of the problems with our current transportation system that have led many local, state, and federal officials to endorse more sustainable 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 two regional train corridors—the Piedmont (Roanoke/Lynchburg-Charlottesville-Alexandria) and Golden Crescent (Hampton Roads, Richmond, Washington)—serve areas that are home to almost 75% of our population. Further, these corridors serve 46 higher educational institutions, 448,078 students, and represent 82.5% of Virginia's economy. These areas also have many of our most congested roads, with the average commuter wasting 229 hours each year stuck in traffic or commuting to work, costing Virginia commuters \$841 annually in congestion costs.

Public demand for intercity passenger rail is rising rapidly, as is demand for public transit connections to passenger trains. Ridership on Amtrak in Virginia exceeded a million riders for the first time in 2008 and grew 45.16 percent between 2007 and

2011. Moreover, ridership on Virginia's regional trains has grown by over 101.48 percent since 2007. Virginia Railway Express, the commonwealth's commuter rail service, saw its ridership grow by over a million riders between 2008 and 2012 and exceed 20,000 daily passengers for the first time in its 20 year history during the last fiscal year. Further, a bus connection between Roanoke and Virginia's Lynchburg regional train is handling five times as many passengers as originally anticipated.

Yet funding for passenger rail in Virginia is non-existent, and funding pressures are increasing.



In late 2008, Congress passed the Passenger Rail Investment and Improvement Act (PRIIA), which created the framework for federal investment in high speed rail. In recent years, Virginia received \$74.8 million for passenger rail improvements to the Washington-Richmond corridor, and another \$44.3 million to advance the engineering and environmental review for additional improvements to that corridor. Federal guidelines require that states locate a long-term, sustainable funding source for passenger rail operations.

Today, Virginia sponsors one daily roundtrip Amtrak regional train along the Piedmont Corridor (Lynchburg, Charlottesville, and Manassas) and one along the Golden Crescent (Alexandria, Fredericksburg, Richmond, and eventually Norfolk) corridor. In 2013, the commonwealth will be required to take over the operational costs of the two Amtrak regional trains serving Williamsburg and Newport News, as well as the two regional trains that initiate and terminate at Richmond's Staples Mill Station in

INTERCITY PASSENGER RAIL RECOMMENDATIONS

Provide a dedicated, long-term, sustainable funding source for the Virginia Intercity Passenger Rail Operating and Capital Fund that will allow the commonwealth to sustain our current services, invest in our rail infrastructure, and match any federal funds that might become available.

Articulate a long-term vision that integrates intercity rail, freight rail, public transit, roads, and airports to create a sustainable multi-modal system for Virginia's future.

addition to the two daily services it already supports. However, Virginia does not have a dedicated, long-term, and sustainable funding source to pay for the operation of our regional passenger rail services. This lack of funding leaves us vulnerable to losing part or all of our regional passenger rail service.

Nor do we have an adequate mechanism for capital investments in passenger rail. Virginia is investing over \$200 million in state and federal funds to add capacity between Washington and Richmond and to extend Amtrak regional service between Richmond and Norfolk by 2013. Some of the resources currently being invested have come from Virginia's Rail Enhancement Fund, a dedicated source of money for rail infrastructure that receives about \$21 million annually from the car rental fee, but has a 30 percent match requirement. There currently is no state mechanism to match federal funds with Virginia Rail Enhancement Funds, nor fund the operation and expansion of intercity and high speed passenger rail service.

Virginia needs an estimated \$50 million annually to pay for the operation and capital needs of our

regional passenger rail service.

Recognizing the need for funding for intercity passenger rail, the General Assembly requested that the Department of Rail and Public Transportation review and recommend ideas to fund the continued operation of Virginia's passenger trains. The study led the General Assembly to create the Virginia Intercity Passenger Rail Operating and Capital (IPROC) Fund in 2011. During the 2012 General Assembly session, Gov. McDonnell and the legislature directed \$26 million to IPROC to sustain Virginia's regional trains for the next two years, and Senator John Watkins introduced a budget amendment which passed that directed \$28.7 million to capitalize IPROC.

However, IPROC lacks any dedicated funding source. Funding is needed to keep Virginia's regional trains operating, match federal intercity and high speed passenger rail funds, and expand regional passenger rail service.

Authored by: Chelsea Harnish, Skip Stiles

Statement of the Issue

Our planet is experiencing unprecedented changes in climate and human activities are primarily responsible. Scientists warn that we must take immediate, effective action if we are to avoid passing a “tipping point”: a point of no return for preventing the most extreme consequences of global climate change. We must also start preparing for the changes we cannot avoid: those irreversible consequences caused by our actions to date such as rising sea level. The environmental community’s positions on issues like land use, transportation and energy policy provide detailed action plans to address both today’s challenges and the larger challenge of climate change. This paper addresses the broader issue of climate change and how it impacts Virginia.

Background

The scientific consensus about climate change is overwhelming. According to NASA, the first 11 years of the 21st century have been warmer than any of the preceding years of the last century with each year setting new records. In 2012, the months of May, July and September were the warmest on record since record keeping began in 1880. The summer of 2012 was the 3rd hottest summer ever recorded while July 2012 broke all records, being the warmest month in recorded history.

Experts say the Arctic ice sheet could completely disappear during the summer months in just 10 years if this record-breaking heating trend continues. On September 16, 2012, the Arctic ice sheet broke a new record low. According to the National Snow and Ice Data Center, it now measures half the size of what it was in the last century.

As global temperatures rise, so does the frequency and severity of storms and hurricanes. The previous decade, from 2001-2010, saw the highest level of tropical cyclone activity on record for the North Atlantic, according to the World Meteorological Organization. If the last two years are any indication, this decade will break that record. 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 and the Great

Lakes region causing a record-breaking 13.88 ft storm surge in lower Manhattan - a record that has stood since 1888. While the damage to coastal Virginia was minimal, the storm reinforced concerns over sea level rise and “recurrent flooding.”

In recent years, the global ocean temperature has risen to the highest ever recorded and the rate of sea level rise has doubled in recent decades.

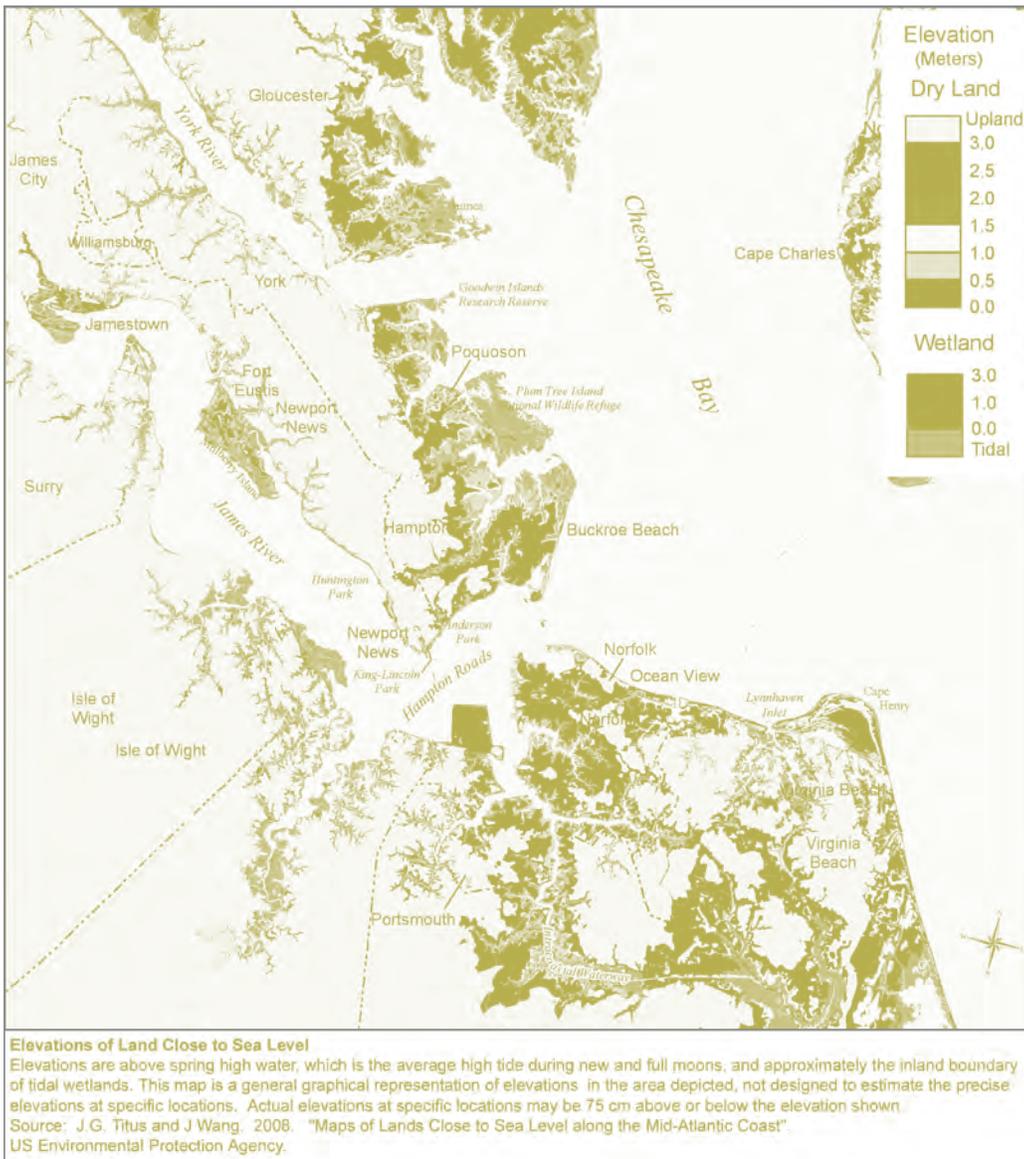
In 1979, well before climate change became a hot-button political issue, a National Academy of Sciences report concluded, “We now have incontrovertible evidence that the atmosphere is indeed changing and that we ourselves contribute to that change. Atmospheric concentrations of carbon dioxide are steadily increasing, and these changes are linked with man’s use of fossil fuels...A wait-and-see policy may mean waiting until it is too late.” We have known about the issue for decades; what we have lacked is the political will to implement solutions. It is clearly time to act.



Impacts to Virginia: Areas of Virginia are feeling the impacts of climate change right now. In 2008, Governor Tim Kaine’s Commission on Climate Change warned that climate change would lead to more frequent and severe droughts, floods, heat waves, and storms. Their predictions have already come true in just four years.

Hampton Roads, second only to New Orleans in terms of vulnerability to sea level rise in the US, is seeing more frequent storm surges and higher tides

SEA LEVEL RISE VULNERABILITY IN HAMPTON ROADS



than ever before. Norfolk regularly has parts of the city blocked off, due to flooding, during heavy rainstorms and insurance companies are refusing to insure properties within two miles of the coastline. With water levels in the Chesapeake Bay and along Virginia's coastline expected to rise another 2 to 5 feet this century, our coastal communities will be inundated; severely threatening agriculture, forestry, fisheries, tourism and many other economic sectors coastal communities rely on for their livelihood.

Virginia Should Lead: Given the high risk of climate change impacts on Virginia, it is imperative for us to take immediate steps to combat climate change. The announcement by Dominion Virginia Power that it plans to retire 1,071 MW of coal-fired generation by 2015 is a step in the right direction. However, it plans to replace those facilities primarily with new natural gas plants, instead of zero emission projects

like wind and solar. Virginia's utilities and policy-makers should work together to make renewable energy projects a reality for the commonwealth.

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

Federal Action: In response to a 2007 court order from the Supreme Court of the United States, in *Massachusetts v. EPA*, the EPA has promulgated regula-

CLIMATE CHANGE RECOMMENDATIONS

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

- Expanding effective energy efficiency and conservation programs that not only offset peak demand, but also further reduce overall energy consumption;
- Promoting the responsible development of low- and no-carbon renewable energy sources;
- Reforming Virginia's land use and transportation policies to promote green building codes, transit and other alternatives to driving, and more efficient, cleaner vehicles;
- 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, and
- Encouraging greater investment in conserving forest, agricultural, and marshlands that can act as carbon sinks.

tions that will reduce greenhouse gas pollution from both mobile sources (e.g., car and trucks) and stationary sources (e.g., power plants and factories). The new vehicle standards will save more than six billion barrels of oil through 2025 and reduce more than 3.1 billion metric tons of carbon dioxide emissions. The new rules for stationary sources reduce the amount of toxins that power plants can emit, such as mercury, and for the first time ever cap the amount of carbon emissions from new facilities.

State Action: In 2008, the Virginia Commission on Climate Change reported on the need to reduce greenhouse gases and to begin preparations for climate change impacts in Virginia.

Unfortunately, our elected leaders are not taking this threat seriously. Very few of the commission's recommendations have been acted upon and links to the commission's report and homepage have been removed from the state's website entirely. In the 2010 Virginia Energy Plan every mention of the word "climate" was removed.

Despite setbacks and lack of state leadership, there is progress being made to mitigate climate change impacts. In 2012, a study by the Virginia Institute of Marine Science on "recurrent flooding" issues in coastal Virginia was approved by the General Assembly and will most likely be made public soon after this briefing book goes to print. Hopefully the recommendations in the VIMS report will result in mitigation and/or adaptation legislation in future sessions.

Adaptation to a changing climate is a major focus for Virginia's shoreline communities. Tidewater localities are required to include coastal management issues

in their comprehensive plans and all mention climate change impacts, such as sea level rise. Norfolk, whose residents are used to flooding during heavy rainfall, is seeking federal funding for infrastructure upgrades and town officials see it as a national security issue because of the Norfolk Naval Station.

With local governments grappling with how to pay for costly flood mitigation projects, state officials should prioritize efforts to curb climate change.

Hampton Roads, second only to New Orleans in terms of vulnerability to sea level rise in the US, is seeing more frequent storm surges and higher tides than ever before.

One such effort would be to help create a friendly environment for zero-emission renewable energy projects. Offshore wind generation presents a great opportunity to generate clean energy cost-effectively while creating new Virginia-based jobs. Likewise, energy efficiency programs put tradespeople back to work, reviving a sagging employment market. Funding to help Virginia's community colleges establish training programs in that field would go a long way.

Clean Energy



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Making Renewable Energy Goals Work for Virginia Businesses

Statement of the Issue

Virginia's renewable portfolio standard (RPS) is a voluntary program that offers utilities a financial bonus if they meet modest renewable portfolio standard goals. For Dominion Virginia Power, the bonus for 2011 to 2013 amounts to \$76 million awarded over the two-year period. Appalachian Power (American Electric Power) is also receiving a bonus. Both utilities intend to continue to seek renewable portfolio standard bonuses in future years. However, they do not have to build *any* wind or solar facilities to earn the bonuses.

Virginia needs to reform its renewable portfolio standard law to ensure that renewable energy used to meet the renewable portfolio standard goals is actually generated within the commonwealth, or in federal waters adjacent to our coast. Under the current law, utilities are permitted to meet the goals simply by purchasing renewable energy certificates from outside the state. Also, to prevent an over-reliance on unsustainable biomass and waste-to-energy plants, the General Assembly must also include a specified amount (set-asides) for wind and solar energy.

Renewable energy certificates represent the environmental benefits attributable to renewable energy generation, and can be sold separately from the underlying electricity. Because Virginia law allows the use of old, out-of-state renewable energy certificates, it does little, if anything, to create new, clean energy jobs. The law does nothing to promote Virginia businesses participating in the booming renewable energy sector, and Virginia families don't reap any of the benefits that actual, steel-in-the-ground, renewable energy projects would provide.

Background

In 2007, the General Assembly enacted renewable portfolio standard 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 renewable portfolio standard has not

worked as it was intended. Both Dominion and Appalachian Power are able to meet the renewable portfolio standard goals by purchasing old, cheap Renewable Energy Certificates from out-of-state.

The development of actual renewable energy facilities is not required, or even preferred, in the law. In 2010, Dominion purchased more than 1.8 million RECs as part of its renewable portfolio standard compliance plan. The overwhelming majority of renewable energy certificates supplying power generators (18 out of 28) were from aging facilities located outside of Virginia built *before World War II*. No renewable energy certificates purchases came from facilities built this century and none were from wind or solar facilities.

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.

If Virginia's Renewable Portfolio Standard were reformed, the benefits to Virginians from new investments in renewable resources would be tremendous. The Virginia Coastal Energy Research Consortium estimates that developing just part of Virginia's offshore wind resource could create approximately 10,000 career-length jobs and meet 10% of our energy needs.¹ 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.²

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 (behind only New Orleans) to ris-

RENEWABLE ENERGY STANDARDS RECOMMENDATIONS

This session, the General Assembly should amend Virginia's renewable portfolio standard law to:

- Require that renewable energy certificates purchased for the renewable portfolio standard come from sources within the commonwealth or in the waters off its coast.
- Require that a percentage of renewable energy generated or purchased to meet the renewable portfolio standard must come from emission-free sources such as wind, solar geothermal, wave and tidal.

The General Assembly should also consider replacing the double and triple credits now given to solar and wind power, which have proven to be completely ineffective at incentivizing these resources. The extra credit has essentially no impact in the current renewable energy certificates market, where a utility can purchase 50 old hydropower or waste-to-energy renewable energy certificates for the same cost as one solar renewable energy certificates.

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.

The General Assembly should 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.



ing sea levels linked to climate change. Failing to develop clean, renewable energy facilities within our borders means many lost opportunities for Virginians.

1. http://www.vcerc.org/VCERC_Final_Report_Offshore_Wind_Studies_Full_Report_new.pdf

2. http://www.energy.vt.edu/Publications/Incr_Use_Renew_Energy_VA_rev1.pdf

Statement of the Issue

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. A recent analysis of the economic impacts of renewable energy in Virginia, commissioned by the Virginia Conservation Network, shows that 22% of the additional capacity demand needed by 2035, as determined in the 2010 Virginia Energy Plan, can be met with solar photovoltaics.¹

The cost of solar PV technology has fallen tremendously in recent years and continues to decline. According to a September 2012 report released by the Solar Energy Industries Association, the price of solar panels has dropped 47% since the beginning of 2011 and continues to fall. The report cites an increase in demand and manufacturing as the main reasons for this significant drop in prices over the last three years.²

Harnessing solar energy resources will diversify our energy supply, strengthen the transmission grid, provide an economical source of peak power, improve our energy security, and help delay the need for other generation and transmission assets. It will also create jobs and attract new business to the commonwealth.

Virginia should adopt policies that will make utility-owned, customer-owned, and third party-owned solar power a significant portion of Virginia's energy economy.

Background

Solar electricity provides a wide array of benefits to Virginians:

- It provides fuel diversity, reducing our reliance on fossil fuels;
- Distributed PV solar installations alleviate congestion on high-load portions of the transmission system and improve service reliability;
- By generating power closer to where it will be used, distributed solar reduces line losses and defers the need for transmission and distribution system upgrades; Solar power provides significant economic development and job creation benefits;
- And, of course, solar reduces the environmental and public health impacts of dirty, coal-fired generation.

According to the Solar Energy Industries Association, solar energy employs a work force of over 100,000 Americans and continues to grow rapidly. A 30% federal investment tax credit for solar (set to expire at the end of 2016), is partially responsible for growth in this vibrant area of domestic energy production. However, state-level policies also play a critically important role.

North Carolina offers a 35% tax credit for the construction, purchase, or lease of solar projects. The state also has a renewable portfolio standard that includes a "carve-out" for solar energy. North Carolinians installed more than 128 megawatts of solar energy capacity from 2006 to 2011.

Like North Carolina, Maryland has a renewable portfolio standard law with a solar energy "carve-out." Thanks to this policy, cumulative solar capacity in Maryland totaled 35 megawatts in 2011. Solar Energy Industries Association documents more than 108 solar companies at work in Maryland, creating jobs "throughout the value chain."

Virginia, in contrast, lags far behind its neighbors, with only 5 megawatts of solar capacity to date.

Solar industry companies are eager to locate and grow in business-friendly states that promote progressive solar energy policies, including: (1) "carve-outs" for solar electricity in renewable portfolio standards; (2) allowances for third-party (non-utility) financing; and (3) industry best practices on grid interconnection and net metering. Virginia is currently failing in all three of these categories.

Types of Solar Electricity Projects:

- **Utility-owned, centralized solar power:** A large solar facility that produces bulk power on the utility side of the meter and that is transmitted from one location (the solar energy plant) to many users throughout the transmission grid.
- **Utility-owned, distributed generation solar power:** Multiple small-scale solar energy facilities that the utility constructs, owns and operates on utility-owned or customer-owned properties (through a lease agreement).
- **Customer-owned solar, supported through net metering:** The solar installation

SOLAR ENERGY RECOMMENDATIONS

The Virginia Conservation Network and its members encourage the General Assembly to take action this year to:

- Establish a solar energy set-aside as part of the state's voluntary renewable portfolio standard. (See the VCN white paper on renewable portfolio standards for more details on reforms that are needed.)
- Enact legislation to expressly allow for third-party power purchase agreements between solar providers and customers. This financing structure is especially important for universities, houses of worship, and local governments, which are unable to take advantage of existing federal tax credits. A power purchase agreement allows a solar energy company to apply the tax credit and pass savings on to the solar-installing customer.
- Prohibit utilities from imposing unjust stand-by charges on owners of solar arrays, and ensure that any stand-by charges imposed reflect a full and fair cost-benefit analysis that factors in the many benefits that customer-owned solar energy installations provide to utilities and all ratepayers.

Virginia Conservation Network and its members further encourage the General Assembly to consider additional measures to promote solar energy, such as:

- Permit customers to share the benefits of solar energy by allowing community net metering, also known as solar gardens, under which output from a single solar facility is attributed to multiple customers, each of whom can use a portion of the solar output to offset their electrical use through net metering.
- Raise the cap on the size of solar installations that qualify for net metering treatment to at least 2 megawatts to satisfy customer demand and open up the market for larger projects.
- Adopt incentives in the form of tax credits to reduce the upfront cost of solar development and installations on commercial and residential homes.

is owned entirely by the customer (residential or commercial) and any electricity generated in excess of that used on-site is provided to the utility to offset electricity that the customer otherwise would have purchased from the utility.

- **Third-party Power Purchase Agreements (PPAs) directly with customers:** A third-party (non-utility, non-customer) builds and owns a solar facility, and the electricity is sold directly to the retail electric customer (i.e., the

homeowner or building owner) through a long-term agreement. The electric utility is not directly involved.

1. *Potential Economic Impacts of Renewable Energy in Virginia*, GMU Center for Regional Analysis, found here: <http://vcnva.org/anx/ass/library/34/vcnrenewablesreport.pdf>
2. *U.S. Solar Market Insight: 2nd Quarter 2012*, Solar Energy Industries Association, found here: <http://www.seia.org/research-resources/solar-market-insight-report-2012-q2>

OFFSHORE WIND ENERGY

Authored by: *Chelsea Harnish*

Statement of the Issue

According to the Virginia Energy Plan, Virginians rely on fossil fuels for more than 60 percent of our electricity and 75 percent of total residential energy use. This heavy reliance on fossil fuels poses serious risks to Virginia's communities and environment, from rising sea level in Hampton Roads to mountaintop removal coal mining in Southwest Virginia. Our addiction to fossil fuels is on an unsustainable path.

With the fourth largest wind capacity potential along the east coast, Virginia has an opportunity to move in a new direction. By aggressively improving energy efficiency and tapping our capacity for renewable energy we can move toward a future powered by clean renewable energy. Investing in renewable electricity now is all the more important if automobiles and mass transit are to migrate onto the grid (and off foreign oil) in the foreseeable future.

Offshore wind is one of the best ways for us to move away from fossil fuels. According to the National Renewable Energy Laboratory, Virginia's total offshore wind resource exceeds our entire energy demand. In the near term, wind power off our coast can provide up to 10 percent of our energy needs, according to a study by the Virginia Coastal Energy Research Consortium (VCERC). We have the resources, but now we need the action of our government officials to make it a reality. The Cape Wind project off the coast of Massachusetts took over ten years to permit and will take another two to construct. Meanwhile, Europe has been operating offshore wind farms for almost two decades and China recently brought their first project online. The U.S. is falling behind, but projects off Virginia's coast could easily make our country a leader in offshore wind and help put folks back to work.

Background

Virginia needs to consume less energy overall and generate more energy from renewable sources. In order to meet our future energy needs without causing environmental harm and health problems for our citizens, we must act quickly.

All energy production has environmental consequences, and renewable energy facilities should be

subject to environmental impact assessments as well as post construction scientific monitoring. Virginia can develop renewable energy responsibly.

Virginia should move now to capitalize on the significant potential for offshore wind energy. The Bureau of Ocean Energy Management (BOEM) has identified a 133 square mile Wind Energy Area (WEA) 23 miles off Virginia's coast, potentially providing up to 2,000 MW of power.



Matthew Palmer

Additionally, the Atlantic Wind Connection, with financing from Google, wants to develop an underwater offshore backbone transmission line that would run from Virginia to New Jersey, connecting offshore wind farms along the coastline to the power grid for greater access. In the future, improvements in technology and the development of deepwater turbine foundations will further allow us to garner even more energy from offshore wind.

Not only is offshore wind abundant, it is competitive. In the VCERC report, offshore wind costs are determined to be equal to or better than new nuclear or coal-fired generation. Furthermore, unlike fossil fuel sources, offshore wind operating costs are not subject to fluctuations in fuel prices, or to increases in costs due to pollution as will likely result from future carbon restrictions and/or tighter controls on conventional pollutants.

OFFSHORE WIND RECOMMENDATIONS

The General Assembly should establish a mandatory renewable portfolio standard to recognize the benefits of clean energy to the state and reward investments in offshore wind. In the absence of a mandatory renewable portfolio standard, however, there remain a number of steps the commonwealth can take that will encourage the growth of renewable energy:

- Amend the state's existing voluntary renewable energy standard to include more power from solar and wind energy generated within Virginia. (See the white paper on the "renewable energy standards.")
- Continue funding the Virginia Offshore Wind Development Authority to investigate the state's coastal and offshore renewable resources potential and to assist regulators, private sector investors, local governments and the Department of Defense.
- Authorize the State Corporation Commission to level the playing field for alternative fuel sources by considering the benefits to consumers from the price stability, economic development, and cleaner air and water that renewable forms of energy provide.
- Provide clear direction to the State Corporation Commission that an offshore wind farm off the Virginia coast is in the public interest.

Finally, by investing in offshore wind, Virginia stands to see economic gains in the form of new jobs from manufacturing and installing wind turbines, which are costly to transport. A 2012 report from the Virginia Economic Development Partnership identified the economic development potential in offshore wind. The shipbuilding trades already based in Hampton Roads, coupled with the region's port infrastructure, make it an attractive location to base wind-energy manufacturing serving the Eastern Seaboard. A joint venture with Poseidon Atlantic, Fugro and other partners was announced in October 2011 to develop a wind turbine test certification center on Virginia's eastern shore. According to their press release, this site will be the first of its kind in the U.S.

In 2010, the General Assembly created the Virginia Offshore Wind Development Authority to assist development of an offshore wind industry in Virginia, and in 2011 passed a nonbinding resolution calling for 3,000 MW of offshore wind by 2025. While these moves are a step in the right direction, Virginia needs to do more to show we are serious about developing offshore wind.

Currently Virginia has only a relatively weak, voluntary renewable energy goal of 15 percent of non-nuclear electric generation by 2025, based on 2007 sales, which translates into about 7 percent of total electric generation in 2025. With offshore wind eligible for triple credit, the goal could actually be satisfied with less than three percent of our total electricity coming from renewables. This is one of the weakest renewable energy targets in the nation, and falls far short of what Virginia can attain. As a result, manufacturers and installers of renewable energy are less confident locating businesses in the state, and those renewable energy generators that do, may find the power they generate undervalued in the market for renewable energy certificates.

The good news is that there is strong support for offshore wind in Virginia. Virginia Beach, other Hampton Roads communities, and Virginians generally support the development of offshore wind projects. Eight developers, including Dominion Virginia Power, have submitted proposals to BOEM to potentially lease waters off Virginia's coast.

ENERGY PLANNING

Authored by: Cale Jaffe, Angela Navarro

Energy Planning and the Role of Energy Efficiency

Statement of the Issue

Critical decisions about the energy and environmental concerns affecting our communities are first laid out 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). The IRP must set forth a forecast of a utility’s future electricity needs and develop a plan to meet those needs at the lowest reasonable cost for customers. In Virginia, IRPs are required to look forward fifteen years.

While an IRP does not commit a utility to pursuing a specific resource in the future, e.g., the fact that a power plant is in an IRP does not in any way obligate the company to build that power plant in the future, the IRP does provide a fundamentally important forum for the public to evaluate a utility’s long-term plans. Review of an IRP is the *principal* time when customers, the power companies, and the SCC evaluate *all* potential energy resource choices holistically and comprehensively. Additionally, the IRP process is intended to be iterative, with criticisms and weaknesses of current IRPs being remedied by the utilities through the development of future IRPs.

Given an IRP’s unique role, transparency and public input are crucial. Stakeholder involvement prior to the filing of an IRP is essential in identifying necessary improvements. These opportunities may be a citizen’s best means of advocating for greater investments in cost-effective, low polluting options such as wind power, solar power, and energy efficiency. After all, the only way to ensure that Virginia enjoys a cleaner energy future is to begin planning for it now.

Background

Virginia’s IRP statute was enacted in 2008. The SCC is charged with regulating electric utilities and reviewing whether a utility’s plans will keep costs low for ratepayers. Arguments in the IRP context must be made with an eye toward the SCC’s primary focus

on minimizing monetary impacts. When developing an IRP, the SCC’s guidelines require utilities to evaluate supply-side resources (e.g. power plants and wholesale energy purchases) on an equal basis with demand-side resources (e.g. energy efficiency and conservation). An open and competitive analysis of various resources is critical in formulating a low cost plan.

The two largest investor-owned utilities in Virginia, Dominion Virginia Power and Appalachian Power, filed their first IRPs in 2009 and the commission provided hearings to review the documents. A number of concerns were raised during each of the hearings, including deficiencies concerning the utilities’ environmental control standards affecting coal-fired power plants (e.g. EPA’s regulations for toxic mercury pollution).



In 2011, the utilities did make improvements to their IRP processes in terms of accounting for necessary environmental pollution controls. However, they unnecessarily limited the amount of energy efficiency programs they would support. The American Council for an Energy-Efficient Economy (“ACEEE”) concluded that a combination of energy efficiency and demand response (peak-shaving) programs could reduce Virginia’s 2025 peak demand to levels below energy use in 2007.¹ This in

ENERGY PLANNING RECOMMENDATIONS

Should the General Assembly revisit the IRP statute, it should direct investor-owned utilities to continue to work with stakeholders, including the environmental community, through an enhanced, consensus-based stakeholder review process. Doing so will enable the development of an IRP that meets the core statutory requirement to “promote reasonable prices, reliable service, energy independence, and environmental responsibility.”² Specifically, an enhanced stakeholder process should lead to an IRP that better evaluates energy efficiency resources *and* considers a variety of renewable energy plan alternatives.

turn would allow a utility to delay the need for new capital investments in power plants and transmission grid expansions. The consistent cost advantages of energy efficiency over traditional generation should prompt the utilities to analyze greater levels of energy efficiency, including modeling up to the voluntary goal adopted by the Virginia General Assembly to reduce retail customer energy consumption by 10 percent by 2022.

The 2011 IRP’s also failed to consider a variety of renewable energy options, including varying amounts of wind and solar power. The Virginia Coastal Energy Research Consortium (VCERC) found that offshore wind power could be cheaper than electricity from new coal-fired power plants, if

the costs of heat-trapping carbon dioxide pollution are factored in. Instead of capturing the cost advantages associated with fuel diversity, the IRP’s continued to rely extensively on fossil fuel fired power plants.

There are opportunities for improvement in the IRPs with regard to how they analyze both energy efficiency and renewable energy options. The stakeholder processes for the 2013 IRPs are underway. Following that process, new IRPs will be filed with the SCC in September 2013.

1. See American Council for an Energy Efficient Economy, *Energizing Virginia: Efficiency First*, Report No. E085, at 45, Fig. 22 (Sept. 19, 2008).
2. See Va. Code § 56-597 (defining the “integrated resource plan”).

MOUNTAINTOP REMOVAL MINING

Authored by: Tom Cormons

Statement of the Issue

Mountaintop removal coal mining is taking a direct and heavy toll on the health of people in Southwest Virginia and is threatening the economic future of the region. It is destroying the forests, waterways and scenic beauty of the most biologically rich region of the commonwealth. Despite widespread opposition to mountaintop removal across the state, the practice continues.¹

Background

Mountaintop removal and other forms of coal strip mining have destroyed 156,000 acres in Southwest Virginia.² An EPA report found that 151 miles of streams in Virginia were destroyed—either buried or mined-over—between 1992 and 2002,³ and more than 67 mountains have been destroyed to date.⁴ While mines can cover thousands of acres, the impacts on humans and wildlife extend far beyond.

Human Impacts: Residents of the coalfields suffer from dramatically elevated occurrences of birth defects, premature death, and health problems such as cancer, heart, lung, and kidney diseases.⁵ Far from being an economic boon, strip mining is closely associated with economic distress. The Appalachian Regional Commission found that “current and persistent economic distress within the Central Appalachian Region has been associated with employment in the mining industry, particularly coal mining.”⁶ Residents also must endure frequent blasting, contaminated drinking water, severe flooding, and the outright destruction of mountains and creeks that have been integral to the local way of life for genera-

Mountaintop removal and other forms of coal strip mining have destroyed 156,000 acres in Southwest Virginia.² An EPA report found that 151 miles of streams in Virginia were destroyed—either buried or mined-over—between 1992 and 2002.³

tions. Finally, mountaintop removal compromises the region’s future by diminishing its desirability as a place to locate small businesses or less destructive industries.

Wildlife Impacts: Mountaintop removal obliterates the unique ecosystem that yields the Appalachian forests that are among the most biologically rich and diverse on the planet. This causes the disruption of wildlife and extensive loss of wildlife habitat. Water pollution from mine operations, including selenium and other toxic metals, ruins mountain streams and kills aquatic life.⁷



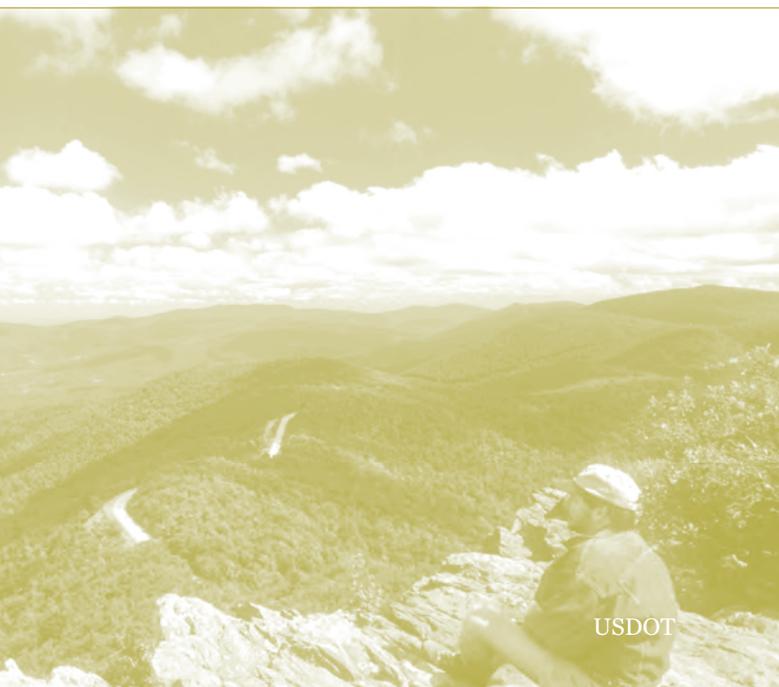
Appalachian Voices

Mining Reform and Virginia’s Energy Future: Between 1990 and 2009, Virginia coal production fell 54% and mining jobs fell 57%; these declines are expected to continue.⁸ Coal now constitutes less than half of Virginia’s energy portfolio, and only about a third of the coal extracted in Virginia is mined through mountaintop removal or other strip mining. Southwest Virginia’s economic future clearly depends on transitioning from coal to more sustainable industries. For example, the Appalachian Regional Commission finds that energy efficiency could generate over 77,000 jobs across Appalachia.⁹

MOUNTAINTOP REMOVAL RECOMMENDATIONS

The General Assembly should protect the state's mountains and waterways by enacting legislation to ban the dumping of mining waste in intermittent, perennial, or ephemeral streams and other waters of the commonwealth.

The General Assembly should rededicate existing tax-payer supported coal industry subsidies to instead support job creation in the coalfields and the development of a vibrant and sustainable regional economy in Southwest Virginia. The Joint Legislative Audit and Review Commission has found these coal subsidies – totaling tens of millions of dollars annually - to be ineffective at promoting employment in the region.¹⁰



1. Lake Research Partners and Bellweather Research, "Survey Findings on Mountaintop Removal Strip Mining" August, 2011, www.appalmod.org/?page_id=307
2. "Extent of Mountaintop Mining in Appalachia," 2009, <http://ilovemountains.org/reclamation-fail/details.php>

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4. "Extent of Mountaintop Mining in Appalachia," 2009, <http://ilovemountains.org/reclamation-fail/details.php>
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9. Appalachian Regional Commission, "Energy Efficiency in Appalachia," 2009, http://www.arc.gov/research/researchreportdetails.asp?REPORT_ID=70
10. Joint Legislative Audit and Review Commission, "Review of the Effectiveness of Virginia Tax Preferences," Nov. 2011, 68-70, 138.

NET METERING

Authored by: Dan Holmes, Rob Marmet

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, such as rooftop solar panels or small wind turbines. In simple terms, when a generating facility produces more power than the customer is using, their meter will run backwards because they are putting power into the electric grid rather than removing it. Current law restricts the benefits of net metering to a single meter on the property where the electricity is being generated. Changing the law to attribute the power to more than one meter on a property, or 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 renewable energy systems 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.

A more limited form of net metering 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 farmhouse, barn and other out-buildings.

In prior legislative sessions members of the General Assembly have introduced agricultural net metering bills. These bills sought to extend net metering from individual customers to eligible community customers and agricultural net metering facilities, neither exceeding two megawatts.

To qualify as an agricultural net metering facility under prior years’ legislation, the renewable generating facility must have been operated as a part of an agricultural business and have been on land owned or controlled by the agricultural business. The bills would have permitted multiple me-

ters and multiple sites to aggregate their usage as part of the net metering agricultural facility. For example, this could allow a farm with an ideal location for a solar array to be connected to neighboring farms that lack access to adequate solar exposure, and the group would be tied together for net metering purposes.

The bill also made eligible a community customer acting on behalf of a group of customers to act collectively to operate a renewable generating facility that would combine their meters to take advantage of a renewable facility. Typically these bills allowed neighbors to join together and share both the cost and benefits of a small renewable energy facility. Current law would not permit a facility to be connected across property lines.



Some utilities operating in the commonwealth have resisted expansion of the net metering provision, and indeed have sought to limit the use of net metering. Utilities argue that distributed generation systems involve costs to other customers from interconnection and use of the transmission/distribution network. In 2011 the General Assembly passed a bill allowing the State Corporation Commission to approve a “stand-by” charge for residential net metering customers with renewable generation facilities between 10 kW and 20 kW.

NET METERING 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 stake steps to support and increase the availability of options for customers to install renewable energy systems, including through the use of agricultural and community net metering.

- The General Assembly should pass legislation allowing agricultural net metering, so that a single farm with multiple meters can aggregate those meters and provide power back to the grid.
- The General Assembly should also pass legislation to allow community net metering and exempt them from stand-by charges that would otherwise be applicable to large residential systems.



Current law restricts the benefits of net metering to a single meter on the property where the electricity is being 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.



USFWS

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The Conservation Fund
Trust for Public Land
Tuckahoe Garden Club of
Westhampton

Valley Conservation Council
Virginia Interfaith Center for
Public Policy
Virginia Native Plant Society
Virginia Recreation and Parks
Society
Wetlands Watch

ASSOCIATE MEMBERS



DOGWOOD AFFILIATE MEMBERS

Albemarle Garden Club	Garden Club of Fairfax	Shenandoah Valley Network
Alliance for Community Choice in Transportation	Garden Club of Norfolk	Shenandoah Valley Pure Water Forum
Alliance for the Chesapeake Bay	Garden Club of the Northern Neck	Sierra Club Blue Ridge Group
Appalachian Voices	Hampton Roads Garden Club	Sierra Club Chesapeake Bay Group
Arlington Coalition for Sensible Transportation	Hands Across the Lake	Sierra Club Falls of the James Group
Ashland Garden Club	Highlanders for Responsible Development	Sierra Club Great Falls Group
Association of Energy Conservation Professionals	Hillside Garden Club	Sierra Club Mount Vernon Group
Audubon Society of Northern Virginia	Hunting Creek Garden Club	Sierra Club New River Group
Augusta Garden Club	Huntington Garden Club	Sierra Club Piedmont Group
Bike Walk Virginia	James City County Citizens Coalition	Sierra Club Potomac Outing Group
Blue Ridge Garden Club	James River Garden Club	Sierra Club Rappahannock Group
Boxwood Garden Club	Last Great Waters Foundation	Sierra Club Roanoke Group
Brunswick Garden Club	Leesburg Garden Club	Sierra Club Shenandoah Group
Cabell Brand Center	Lynchburg Garden Club	Sierra Club Thunder Ridge Group
Cape Henry Audubon Society	Lynnhaven River Now	Sierra Club York River Group
Capital Region Land Conservancy	Martinsville Garden Club	Southern Appalachian Mountain Stewards
Charlottesville Garden Club	Mill Mountain Garden Club	The Flora of Virginia Project, Inc.
Chatham Garden Club	Nansemond River Garden Club	The 500 Year Forest Foundation
Chesapeake Climate Action Network	Nelson County Garden Club	Three Chopt Garden Club
Citizens for a Better Eastern Shore	Northern Neck Audubon Society	Upper Tennessee River Roundtable
Citizens for a Fort Monroe National Park	Northern Shenandoah Valley Audubon Society	Virginia Association of Soil and Water Conservation Districts
Citizens for Fauquier County	Northern Virginia Conservation Trust	Virginia Audubon Council
Civil War Trust	Northumberland Association for Progressive Stewardship	Virginia Beach Garden Club
Clinch Coalition	Partnership for Smarter Growth	Virginia Bicycling Federation
Coastal Canoeists	People Protecting Watershed Headwaters	Virginia Chapter of the Wildlife Society
Coastal Conservation Association	People's Alliance for Clean Energy	Virginia Council of Trout Unlimited
Conservation Park of Virginia	Potomac Conservancy	Virginia Eastern Shore Land Trust
Dolley Madison Garden Club	Preservation Virginia	Virginia Forest Watch
Elizabeth River Project	Rail Solution	Virginia Society of Ornithology
Fauquier and Loudoun Garden Club	Rappahannock League for Environmental Protection	Virginia Sustainable Building Network
Friends of Daniels Run Park	Rappahannock Valley Garden Club	Virginia Wilderness Committee
Friends of Dyke Marsh	Richmond Audubon Society	Western Virginia Land Trust
Friends of Norfolk's Environment	Rivanna Garden Club	Wild Virginia
Friends of Powhatan Creek Watershed	Roanoke River Basin Association	Wildlife Center of Virginia
Friends of Rockfish Watershed	Rockbridge Area Conservation Council	Williamsburg Garden Club
Friends of Stafford Creeks	Rockfish Valley Foundation	Winchester Garden Club
Friends of the North Fork of the Shenandoah	Rural Nelson	Wintergreen Nature Foundation
Friends of the Rappahannock	Scenic 340 Project	
Friends of the Rivers of Virginia		



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