PROTECTING VIRGINIANS...

climate

...In a Warming World

Statement of the Issue

Earth is experiencing unprecedented climate change 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 avoiding the most extreme consequences of global climate change. They also stress the need to start preparing for those climate changes we cannot avoid – those consequences "locked in" by our actions to date. VCN's current positions on issues like land use, transportation, coal-fired power plants, and others provide detailed action plans to address both today's challenges and the larger challenge of climate change. This paper looks at the broader climate change issue as it impacts Virginia.

The scientific consensus is overwhelming. In the last 20 years we have seen 14 of the warmest years in history. The Arctic Ice sheet is smaller than at any point since human measurements began. This year the global ocean temperature was the highest ever recorded. The rate of sea level rise has doubled in recent decades. The International Panel on Climate Change and an extensive body of published, peer-reviewed science warn that climate change will lead to more frequent and severe droughts, floods, heat waves, and storms.

The link between man-made green house gases and these climate change indicators is better studied and understood than most areas of science. It is clearly time to act.

Background

Impacts to Virginia

Virginia is likely to experience the worst impacts of climate change of any state along the Atlantic Coast. From Appalachia to the Northern Neck climate change will significantly alter growing seasons, increase severe precipitation events, and result in summertime droughts, severely threatening agriculture, forestry, fisheries, tourism, and many other economic sectors. Unwanted invasive species may proliferate in the changing climate. Heat stress, water and insect-borne infectious diseases, and other public health challenges will emerge.

Rising and warming waters and declining oxygen levels in Chesapeake Bay may eliminate oysters, destroy more than half of Virginia's remaining wetlands, and submerge many of the Bay's historic Islands and shorelines. Warmer water in the Bay is triggering earlier spring spawns and hotter summers, stressing fish populations. Water levels in the Bay and along Virginia's coastline are expected to rise by 2 to 5 feet this century. The Hampton Roads region is the nation's most populated area at the greatest risk from sea level rise outside of New Orleans. Hampton Roads has the tenth largest set of infrastructure and building assets at risk of inundation in the world.

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. Virginia is a serious contributor to climate change— greater than some individual countries— and its role is increasing. Dominion Virginia Power is constructing a new conventional coal-fired power plant in Southwest Virginia that would not be capable of capturing the 5.4 million tons of heat trapping carbon dioxide it would emit each year, equal to the annual carbon emissions from all of the private motorized vehicles in the greater Richmond Metropolitan Area.

Electricity generation is only one part of the problem. Our buildings and transportation account for approximately 75% 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.

StockXchng

Recent Policy Developments

In 2008, the Virginia Commission on Climate Change reported on the need to reduce greenhouse gases and start to prepare for climate change impacts on Virginia. The commission concluded that a greenhouse gas reduction goal in the current State Energy Plan is too weak. The commission recommended that Virginia take stronger actions to use energy more efficiently and to generate more energy from climate-neutral, renewable sources. Numerous other recommendations began to outline a response to climate change for Virginia, including acquiring LiDAR (light detection and ranging) mapping data for coastal communities to use in infrastructure and land use planning; establishing a no-net-loss policy for natural carbon sinks such as forests; and expanding the State's Wildlife Action Plan to encompass habitat shifts due to climate change. Unfortunately, few of the commission's recommendations have been enacted by the General Assembly or acted upon by the Governor.

Much more needs to be done to combat climate change. Local governments are taking action, including joining the Sierra Club's "Cool Cities" and "Cool Counties" programs and the Virginia Municipal League's "Go Green Virginia" initiative, demonstrating that progress can be made.

Alternative energy investments in Virginia are on the rise. Offshore wind generation in particular presents a great opportunity to generate clean energy cost-effectively and create new Virginia-based jobs fabricating and installing wind turbines. Likewise energy conservation work puts building trades back on the job, reviving that sagging employment market. Federal stimulus spending and tax credits will greatly expand the market for home weatherization providers and help Virginia's community colleges establish training programs in that field. Sustaining job growth beyond the two-year window of the stimulus, however, will require state leadership.

> ***"In 2008, the Virginia Commission on Climate Change ... began to outline a response to climate change, including acquiring LiDAR mapping data for coastal communities to use in infrastructure planning; establishing a no-net-loss policy for natural carbon sinks; and expanding the State's Wildlife Action Plan to encompass habitat shifts due to climate change."***

In 2009, the U.S. House of Representatives passed a bill, the American Clean Energy and Security Act, that would establish a cap-and-trade

Recommendations: Climate Change

New laws and regulations on heat-trapping gases are coming. Virginia's businesses need to prepare now to take advantage of the opportunities these changes will bring. We can help prepare them to do so, and move Virginia in the right direction by:

- Expanding effective energy efficiency and conservation programs that not only offset peak demand, but also further reduce generation needs 24 hours a day, 365 days a year;
- Rejecting proposals for conventional-style, coal-fired power plants that would significantly increase global warming emissions, thus exacerbating the Commonwealth's contribution to climate change;
- Promoting the responsible development of low- and no-carbon renewable energy sources;
- Reforming Virginia's land use and transportation policies to promote green building in more compact communities, transit and other alternatives to driving, and more efficient, cleaner vehicles;
- Providing local governments and state agencies with the planning tools (e.g. LiDAR data) 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.

program for greenhouse emissions similar to the successful program used to stop the spread of acid rain. Also in 2009, the U.S. EPA laid the groundwork to regulate carbon dioxide under the Clean Air Act. Whether limits on carbon dioxide and other greenhouse gases come from law or regulation, it is clear that the states that are most energy-efficient and least dependent on fossil fuels will be at a competitive advantage in coming years.

Contacts

Cale Jaffe
Senior Attorney
Southern Environmental Law Center
434.977.4090
cjaffe@selcva.org

Skip Stiles
Executive Director
Wetlands Watch
757.623.4835
skip.stiles@wetlandswatch.org