

**American Chestnut Land Trust • Calvert Citizens for Safe Energy  
Chesapeake Bay Commercial Fishermen's Association  
Chesapeake Bay Foundation • Choptank Riverkeeper  
Dorchester Citizens for Planned Growth  
Dorchester Citizens for Safe Energy  
Dorchester County Seafood Harvesters Association  
Eastern Shore Land Conservancy • Friends of the Nanticoke River  
Maryland Chapter Sierra Club • Patuxent RiverKeeper**

March 23, 2011

Honorable Martin O'Malley  
State House  
100 State Circle  
Annapolis, Maryland 21401

**RE: Ensuring Submerged, Extra-High Voltage Transmission Cables Are  
Compatible With Chesapeake Bay & River Restoration Goals**

Dear Governor O'Malley:

We, the undersigned organization representatives, applaud you for your long and deep commitment to restoring the Chesapeake Bay. We are concerned that a proposal to place two extra-high voltage transmission cables beneath 39 miles of the Chesapeake Bay and Choptank River may impede restoration effects. The proposed Mid-Atlantic Power Pathway (MAPP) project would be the first to place transmission cables beneath the Chesapeake Bay, from western shore to eastern. This action could set a precedent leading to similar projects in the future. There are clear, viable alternatives to this action. We are concerned that reviewing agencies will lack the information needed to determine if the benefits of this action outweigh the negative consequences to the Chesapeake. Therefore, before this precedent is set, we urge you to convene a panel of independent, leading Bay scientists to:

1. Identify potential impacts;
2. Determine what data is needed to form a judgement as to the magnitude of each impact;
3. Review existing data to determine if it is sufficient to reach a judgement regarding impact magnitude;
4. Recommend additional independent research needed to fully understand each potential impact;
5. Once sufficient data becomes available, make a determination as to whether

- individual and cumulative impacts will jeopardize Chesapeake Bay and river restoration goals and, if not;
6. Recommend criteria for determining how and where submerged, extra-high voltage transmission cables can be placed without causing significant adverse effects; and
  7. Consider the cumulative impact of installing additional cables, pipelines, etc. across the Bay once the precedent is set.

Again, we are concerned that without such an independent evaluation the Maryland Public Service Commission, the Maryland Department of the Environment, the Maryland Department of Natural Resources, and the Maryland Wetlands Administration will lack the information essential to a thorough review.

### **PROPOSED TRANSMISSION PROJECT**

On November 12, 2010, Baltimore Gas & Electric Company, Delmarva Power & Light Company, and Potomac Electric Power Company filed a Supplemental Application with the Maryland Public Service Commission regarding the proposed Mid-Atlantic Power Pathway (MAPP). Part of the proposal includes placing transmission cable beneath 39 miles of the Chesapeake Bay and Choptank River.

According to the application<sup>1</sup>, the placement would begin on the western shore three miles north of the Calvert Cliffs Nuclear Power Plant, cross beneath 16 miles of the Chesapeake Bay to the mouth of the Choptank River, continue 23 miles upriver to Goose Creek, and come ashore about a mile south of the Town of Secretary. Along this 39-mile route two 320 kilovolt Direct Current (DC) circuits would be buried in separate trenches a minimum of six-feet beneath the Bay and River bed. The trenches would be excavated with a jet plow. Each would be two-to three-feet wide and a minimum of 80 feet apart. A three-foot wide depression would also be created along both sides of each trench as jet-plow skids are dragged along. Each trench would hold one DC circuit consists of two 5.25-inch cables. Prior to laying the cables grapnel anchors would be dragged along the 39-mile route to remove obstructions buried to a depth of two- to three-feet beneath the Bay and River bed. Additional bottom disturbance may result from other activities, such as moving kedging anchors. Maintenance and other activities may result in additional physical disturbance of the Bay and River bottom throughout the service life of the project. The application indicates that a number of vessels will be operating during cable installation. These vessels include: freighter transporting cable, main lay barge, river lay barge, and tug boats.

The MAPP transmission line is also proposed to cross over the Nanticoke River just upstream of the Route 50 bridge. The Nanticoke River is one of the most pristine and biologically diverse of the Chesapeake Bay tributaries; it is free of dams and supports robust fisheries. Its watershed provides habitat for many threatened plants and animals. It has the northernmost stands of bald cypress on the Atlantic Coast, and the highest concentration of bald

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<sup>1</sup> See Section 2.3.4, of *Environmental Review Document Chalk Point to Maryland/Delaware State Line*, which is posted under Case 9179, Item 116, on the [Maryland Public Service Commission](#) website.

eagles in the northeastern United States. It is a strategic target for land preservation by both private and governmental interests. The river shore has properties on the National Register of Historic Places, and the Nanticoke is a major component of the Captain John Smith National Historic Water Trail. The transmission line crossing would be made with the cables supported on 90-foot towers. Presently the viewshed to the north of the Route 50/Nanticoke crossing is that of a wide river meandering past extensive wetlands and a few farms. The overhead cables would despoil this view. This would be true for where the transmission lines cross the River and for the area several miles to the east and west of the Nanticoke where the lines would still be visible. If the independent review recommended in this letter shows that the cables can be submerged without undue impact and other possible River impacts are resolved, then we would like consideration given to placing the transmission line underground and submerged from the Choptank River to a point east of the Nanticoke outside the river viewshed.

### **POTENTIAL IMPACTS**

Because extra-high voltage DC transmission cables have never been placed beneath the Chesapeake Bay the potential impacts are not completely known. While somewhat similar projects have been carried out elsewhere, shortcomings in monitoring studies and the unique character of the Bay provide a less than complete understanding of impacts. Following are some of the basic effects that could result from this precedent setting action. Further detail may be found in *Mid-Atlantic Power Pathway & The Chesapeake Bay: A Preliminary Review of the Impact of Placing Portions of an Extra-High Voltage Transmission Line Beneath the Chesapeake Bay & Other Waters*<sup>2</sup>.

**Physical Disturbance:** Assuming disturbances are confined to two, three-foot wide trenches and three-foot wide skid areas on each side of the trenches, a minimum of 35 acres of Bay bottom and 50 acres of Choptank River bottom would be disturbed during initial cable installation.

**Turbidity:** Considerable quantities of fine-grained sediments and other particulate matter could be resuspended as the grapnel anchor is dragged through the upper two- to three-feet of the Bay and River bottom. Subsequent trench excavation could further increase turbidity.

**Thermal Effects:** Submerged DC cables are designed to operate at a temperature of up to 158°F. It is possible that adjoining sediments and water could be heated. The heating may then induce current flows through the sediments increasing the release of nutrients and other substances from bottom sediments. It is also possible that waters overlying the cable trenches would heat to some degree with potential negative effects to bottom-dwelling organisms in the vicinity.

**Electromagnetic Field Effects:** The application indicates that electromagnetic field strength will be higher in the vicinity of the cables. There is a possibility that the altered fields could

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<sup>2</sup> This publication is available at: <http://ceds.org/DCSE/SubmergedCablePreliminaryLiteratureReview.pdf>

interfere with the migration of some aquatic species as well as vessel navigation. The effect could alter the behavior of some fish species within 1,000 feet of the cables, which would take in an area of 9500 acres along the 39 mile submerged route. A possibility also exists of effects to bottom sediment chemistry.

**Cable Exposure:** While the application states that the cables will be buried a minimum of six feet below the Bay and River bottom, subsequent exposure of the cable is possible. In fact, the direct current Cross Sound Cable was exposed two years after being placed nine feet beneath the bed of Long Island Sound. Exposed cable could increase temperature and electromagnetic field effects. Also an exposed cable may pose a greater threat to aquatic organisms, commercial fishing activities, anchored vessels, vessels dragging anchor during storm events, and navigation.

The five basic effects listed above may cause the following impacts.

**Nutrient Release:** Nitrogen and phosphorus release could increase from sediments in the vicinity of the cable due to the physical disturbances, increased turbidity, and thermal effects. These nutrient releases would add to the difficulty of attaining the load reductions set forth in the *Chesapeake Bay Total Maximum Daily Load*<sup>3</sup> document.

**Increased Oxygen Demand:** The cable route passes through areas plagued by very low dissolved oxygen concentrations. Oxygen-demanding materials could also be released from Bay and River sediments, which could exacerbate the deficiency.

**Release of Other Pollutants:** There are likely a number of other potential pollutants which could also be released from the sediments.

**Oyster Sanctuaries & Planting Areas:** A number of oyster sanctuary and planting areas are located in the vicinity of the proposed cable route. The project could negatively affect these resources through physical disturbance, increased turbidity, elevated levels of nutrients and other pollutants, reduced oxygen concentrations, and elevated temperature.

**Other Benthic Communities:** In addition to oysters, a number of other organisms - annelids, crustaceans, etc. - inhabit the Bay and River bottom. These organisms are a vital component of the Bay and River ecosystem. As with oysters, the project could negatively affect these organisms through physical disturbance, increased turbidity, elevated levels of nutrients and other pollutants, reduced oxygen concentrations, and elevated temperature.

**Submerged Aquatic Vegetation (SAV):** Grasses and other SAVs provide critical habitat to Bay and River fin and shellfish. These plants are also essential to improving water clarity. SAV beds along the route could be negatively affected through physical disturbance, increased turbidity, and elevated levels of nutrients.

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<sup>3</sup> The *Chesapeake Bay Total Maximum Daily Load* document is available online at: <http://www.epa.gov/reg3wapd/tmdl/ChesapeakeBay/tmdlexec.html>

**Boating Safety:** The vessels used to lay the cable may cause some short term interference with recreational boating. Post-installation effects may include interference with magnetic compasses and limiting areas where boaters feel comfortable anchoring. As mentioned above, the Cross Sound Cable was exposed two years following installation. Perhaps the greatest boating concern would result from the possibility of cable exposure and vessels dragging anchor over the cables during a storm.

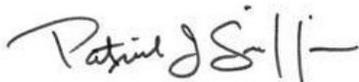
**Commercial Fishing:** Large portions of the 85-acres of Bay and River directly impacted by the project are important commercial fishing areas. Impacts to commercial fishing may result from direct disturbance of oyster or SAV beds, declines in fin and shellfish due to increased pollutant levels, concerns on the part of watermen about working near the cables, and the possibility of anchors, dredges or other equipment coming in contact with exposed cables particular in heavy weather. Additionally, the electromagnetic field emitted from the cables may alter the behavior of some species within 1,000 feet or an area of 9,500 acres in the Chesapeake Bay and Choptank River.

**Cultural Resources:** There may be a number of submerged archaeological or historic features present within the minimum 85-acre area directly impacted by the project. A thorough evaluation of potential impacts should include not only the initial placement but the possibility of future maintenance, cable exposure then lateral movement, and additional cables, pipelines, etc. being placed along the proposed route.

**Unknown Effects:** Again, the preceding is a listing of some of the possible impacts. The proposed panel of leading Bay scientists would likely identify other impacts which are presently unknown.

In closing, we urge you to ensure that the Maryland Public Service Commission, the Maryland Department of the Environment, the Maryland Department of Natural Resources, and the Maryland Wetlands Administration benefit from the findings of the proposed independent review before they are forced to rely upon something less to render a decision on this complex and precedent-setting action.

Sincerely,



Patrick Griffin  
American Chestnut Land Trust, Inc.  
Post Office Box 2363  
Prince Frederick, Maryland 20678



Fred Pomeroy  
Dorchester Citizens for Planned Growth  
5429 Stoney Ridge  
Cambridge, Maryland 21613



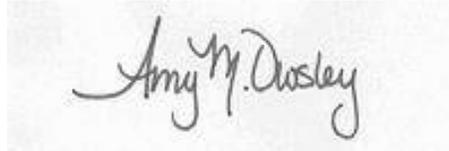
Marcia Tripp  
Calvert Citizens for Safe Energy  
Post Office Box 538  
Port Republic, MD 20676-0538



Libby H. Nagel, President  
Dorchester Citizens for Safe Energy  
4762 Ravenwood Road  
Vienna, Maryland 21869



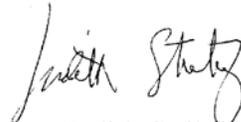
Gibby Dean  
Chesapeake Bay Commercial Fishermen's  
Association  
Post Office Box 161  
Fishing Creek, MD 21634



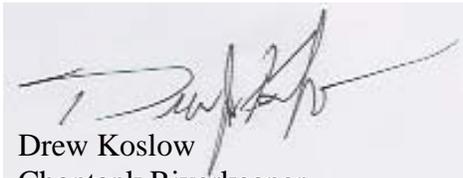
Amy Owsley, Director - Land Use Planning  
Eastern Shore Land Conservancy  
Post Office Box 169  
Queenstown, Maryland 21658



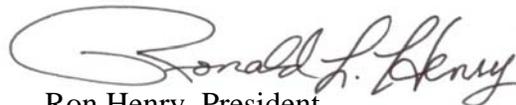
Kim Coble  
Maryland Executive Director  
Chesapeake Bay Foundation  
6 Herndon Avenue  
Annapolis, MD 21404



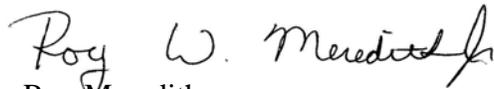
Dr. Judith Stribling  
Friends of the Nanticoke River  
Post Office Box 15  
Nanticoke, Maryland 21840-0015



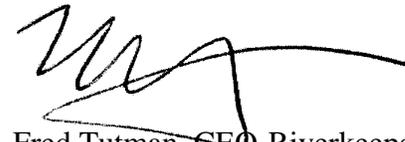
Drew Koslow  
Choptank Riverkeeper  
23 North Harrison Street  
Easton, Maryland 21601



Ron Henry, President  
Maryland Chapter Sierra Club  
7338 Baltimore Avenue, Suite 101A  
College Park, Maryland 20740-3211



Roy Meredith  
Dorchester County Seafood Harvesters  
Association  
2716 Toddville Road  
Toddville, Maryland 21672



Fred Tutman, CEO-Riverkeeper  
Patuxent Riverkeeper  
18600 Queen Anne Road  
Upper Marlboro, Maryland 20774