

Dear Senator Bingaman:

Our farm is in Frederick County, Maryland, an area being considered for Allegheny's PATH powerline right-of-way to New Jersey and New York. We don't dispute that the power grid needs upgrading, but we do know that there are alternative ways of delivering power without spoiling the environment and adding more pollution to the Chesapeake Bay.

As Chairman of the Senate Energy Committee I wonder if you have looked into less intrusive ways of delivering electricity to the country. There is a proven technology that allows long distance lines to be buried, avoiding unsightly towers and deforested rights-of-way. High-voltage direct-current (HVDC) lines don't suffer the energy loss of AC lines and don't run hot, so they can be buried. Disruption to property and the environment is minimized, and for distances over 300-400 miles they are economically competitive with above-ground lines. Since the first HVDC project in 1999 (in Gotland, Sweden), HVDC has been used in over 100 projects worldwide. Those in the U.S. include a line under Long Island Sound, with another planned under the Chesapeake Bay. This technology should become increasingly attractive to power companies as a way to minimize public resistance, increase transmission efficiency, and ensure greater security and reliability.

Natural-gas lines are routinely buried and we are hardly aware of them, though they cover vast distances. Buried HVDC lines are similarly unobtrusive. They need a right-of-way of about 20 feet, versus the 200-foot right-of-way for PATH, as proposed. If, however, PATH used buried HVDC technology the narrow right-of-way would allow the line to be largely routed along roads, railroads, or even under existing above-ground transmission lines. Where the route must cross woodlands it would have far less adverse impact on wildlife, streams, and runoff to the Chesapeake Bay. Once the HVDC line is buried, visual impact would be minimal or non-existent; there would be no 130-foot high colossi looming over homes and historic sites or spoiling views of our countryside, and no electromagnetic radiation to cause concern.

Buried lines would be highly secure from tampering, an important consideration for power destined for metropolitan areas. They would be safe from lightning strikes and other natural hazards. Transmission efficiency would be much improved over HVAC, since HVDC, with only two conductors and no skin effect, has minimal energy loss.

A concern raised by those not familiar with HVDC transmission is the possibility of line problems and repair time. The Cross (Long Island) Sound Submarine Cable has operated since 2002 with no faults and the underground MurrayLink Land Cable (Australia) has operated since 2002 with only one fault, from an external source. HVDC is a practical technology that includes methods for locating and repairing faults in a timely fashion, should they occur.

The relative capital costs for buried HVDC lines and tower-supported HVAC lines need to be carefully compared for each project. An independent study may well show that the overall cost of a buried HVDC line would be roughly comparable to that for an overhead line, as the cost of land for the right-of-way would be greatly reduced. If so, factors such as safety, security, reliability, and environmental impact would strongly favor a buried HVDC line. Moreover, the Federal Energy Regulatory Commission is guaranteeing a 14.3% profit for the PATH project, providing even more reason that cost alone should not be the deciding factor.

Allegheny Energy may be reluctant to try a technology with which it is not familiar. This would be shortsighted, however, and would forgo the opportunity to gain experience in what looks to be an increasingly important technology. It is time for an impartial study of the relative merits of underground HVDC versus aboveground HVAC for the PATH project. Before you give FERC jurisdiction over all projects of 345 kilovolts or higher, I would encourage you to ask Allegheny Power to do a study

Sincerely yours,  
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