



September 15, 2010

Via Personal Delivery

Katherine Forrence, Chair of the Planning Commission
and Planning Commission Members
12 E. Church St.
Frederick MD 21701

Re: PATH-Kempton Substation Review – Finding of Consistency.

Dear Chair Forrence and Planning Commission members:

I write on behalf of Sierra Club to comment on Potomac Edison's request for a finding that the Kempton Substation is consistent with Frederick County's 2010 Comprehensive Development Plan. Sierra Club is the nation's oldest grassroots organization. It has more than 620,000 members nationwide, with nearly 14,000 members in Maryland. More than 500 Frederick County residents are Sierra Club members. Sierra Club is dedicated to the protection and preservation of the natural and human environment. The organization and its members have a long-standing interest and expertise in the development and use of natural resources and in air quality issues nationwide, as well as local land use issues.

A number of Sierra Club members will be directly impacted by the construction and operation of the Kempton Substation. Sierra Club member Anne M. de Guzman owns property within a mile of the proposed substation site at 12207 S. Debkey Court, Monrovia, and will be living there as of October 2010. She and her husband are moving to the area for its peaceful, rural character. If the substation is built, they will be adversely affected by devaluation of their property, the change in the rural character of the neighborhood, and noise from the substation and associated transmission lines. They also worry about the concentration of electromagnetic fields and potential for groundwater contamination, fires, or explosions at the substation. Sierra Club member Ricky Young lives across the street from the substation site, on Bartholows Road, and is likewise concerned about the adverse health, aesthetic, and economic impacts of the substation. Other Sierra Club members also live nearby.

We urge the Planning Commission to find that the substation is inconsistent with the Comprehensive Plan. The proposed substation's permanent adverse impacts on the surrounding community and rural character of the land are not

consistent with the goals or policies expressed in the Comprehensive Plan, nor justified by any clear need for the substation to serve the region's electricity needs. In addition, by facilitating the transport of electricity from some of the dirtiest coal plants in the country to eastern population centers, the substation and its associated transmission lines will worsen both air and water quality for Maryland residents, increase Maryland's dependence on non-renewable energy, and contribute to global warming. These concerns are explained in more detail below.

I. The Kemptown Substation is Proposed as Part of a Transmission Project That is Not Needed and Will Increase Maryland's Reliance on Distant Coal-Fired Power Plants.

Potomac Edison stated in its application to the Board of Zoning Appeals ("BOA") that it is seeking to build the substation as the terminus of the Potomac-Appalachian Transmission Highline project ("PATH"), and the "first substation in Maryland to interconnect to any 765 KV lines."¹ BOA Application, p. 8. Although the Commission is reviewing the substation only at this time, the larger context of the PATH project bears on the company's claim that the substation will provide a necessary and beneficial utility service that furthers the County's Comprehensive Plan. *See, e.g.*, BOA Application p. 3. The claim that the substation is necessary is heavily disputed and is properly evaluated by the Maryland Public Service Commission ("PSC"). For this reason, any finding of consistency should be conditioned on Potomac Edison receiving a Certificate of Public Convenience and Necessity ("CPCN") from the PSC.

A. The Potomac-Appalachian Transmission Highline Project.

PATH is a 765 kilovolt (kV) transmission line proposed to begin in the heart of coal country in southern West Virginia and connect with the east coast power grid in Maryland. The express intent of the PATH project is to reduce transmission congestion in order to bring coal-fired power from the Midwest and Appalachia to lucrative markets in the East.² With PATH in service, coal would displace cleaner-

¹ While the substation is currently proposed as part of the PATH project, Sierra Club does not concede that the substation is "integral" to the PATH transmission line.

² In testimony submitted to the Federal Energy Regulatory Commission ("FERC"), the President of the Western Region of PJM Interconnection (the regional grid operator for 13 states including Maryland) noted that "there remain certain physical constraints on the transmission system that have limited further flows of coal based generation to markets in the east." (emphasis added). *See* Testimony of Karl Pfirrmann, *Promoting Regional Transmission Planning And Expansion to Facilitate Fuel Diversity Including Expanded Use of Coal-Fired Resources*, FERC Docket No. AD05-3-000, attached hereto as Exhibit 1. Mr. Pfirrmann proposed "Project Mountaineer," a series of west-to-east transmission lines as a solution to this "problem." "Project Mountaineer" would use "[h]igh voltage transmission to move power from the coal fields of Ohio, Kentucky and West Virginia to markets along the eastern seaboard." In response to PJM's proposal for "Project Mountaineer", AEP proposed what was to become the PATH line. *See AEP Interstate Project Proposal, A 765 kV Line from West Virginia to New Jersey* (Jan. 31, 2006), attached hereto as Exhibit 2, ("The AEP Interstate Project will provide the needed transmission capacity to enable power resources to traverse the AEP System and reach the eastern markets."); *see also* p. 3 (referencing "Project

burning natural gas and further discourage new renewable generation projects in the East. This will promote dependence on dirty power plants that are the country's largest contributors to global warming and increase harmful air and water pollution.³ Increased production at these plants translates into increased emissions of sulfur dioxide, nitrogen oxides, fine particulates, and hazardous air pollutants including mercury, all of which harm the public health and environment.⁴

Experts estimate conservatively that the PATH line would result in increased carbon dioxide emissions of 15.5 million tons per year, effectively canceling out the environmental gains of the Regional Greenhouse Gas Initiative, of which Maryland is a member.⁵ Global warming will have a particularly harsh environmental and economic impact on Maryland, due to its effects on coastal areas and agriculture.⁶

Eleven eastern state governors, including Governor O'Malley, recognized in a recent letter to Congress that the build-out of west-to-east transmission lines would harm their states' ratepayers and emerging clean energy economies.⁷ Yet, the project's proponents insist it must be built to maintain the region's electric grid.

B. The Disputed "Need" For the Substation and Transmission Line.

While PATH's proponents insist that the \$2.2 billion line and substation are needed to ensure the electric grid's reliability, mounting evidence shows that the predictions of grid failure are inaccurate. Sierra Club does not seek that the Planning Commission make a finding on the technical "need" for the PATH

Mountaineer"). The AEP Interstate Project was an earlier incarnation of PATH; the only significant difference is that the project originally proposed by AEP continued one segment further from Doubs to New Jersey.

³ Direct Testimony of Christopher A. James on Behalf of the Sierra Club, *In Re: Path Allegheny Virginia Transmission Corporation: Application for Approval of Electric Facilities Under the Utility Facilities Act*, Virginia State Corporation Commission, Docket No. PUE-2009-00043 (filed Oct. 14, 2009) (hereinafter "James Testimony"), attached hereto as Exhibit 3, and available at <http://www.earthjustice.org/news/press/2009/experts-raise-concerns-about-new-transmission-line-from-coal-country-to-eastern-grid>.

⁴ See Lockwood, A., et al., *Coal's Assault on Human Health* (Nov. 2009) (noting that health effects from coal combustion contribute to four of the top five leading causes of death in the U.S.: heart disease, cancer, stroke, and chronic lower respiratory diseases). The Executive Summary is attached as Exhibit 4. The full report is available at <http://www.psr.org/resources/coal-assault-on-human-health.html>.

⁵ See James Testimony, pp. 8-10, 12-13, 17-20; Union of Concerned Scientists, *Importing Pollution* (Dec. 2008), attached as Exhibit 5, and available at www.ucsusa.org/importingpollution.

⁶ R. Docksai, *Maryland Could Pay Heavy Price for Global Warming, Researchers Warn*, Southern Maryland On-Line (Oct. 16, 2007), attached as Exhibit 6. See also US Economic Impacts of Climate Change and the Costs of Inaction, A Review and Assessment by the Center for Integrative Environmental Research (CIER) at the University of Maryland (October 2007) available at <http://www.cier.umd.edu/documents/US%20Economic%20Impacts%20of%20Climate%20Change%20and%20the%20Costs%20of%20Inaction.pdf>.

⁷ Letter from Governor D. Patrick, et al. to Senators Reid and McConnell, July 12, 2010, attached hereto as Exhibit 7.

transmission line; the Commission does not have jurisdiction to make such a finding. However, the issue remains in sufficient doubt to put into question the company's claims that the Kemptown Substation "is necessary to ensure reliable services to . . . customers in central and western Maryland" and that it would advance the County's goal to "maintain the adequacy of public facilities." BOA Application p. 3, 8. The necessity of the line and substation remain heavily disputed. Sierra Club and many others are in the process of challenging these claims before the Maryland PSC. Thus, should the Planning Commission decide that the proposal is otherwise consistent with the Comprehensive Plan, the Planning Commission should condition its approval on a finding by the PSC that the line and substation are needed.

Potomac Edison cites Goal SC-G-02 of the Comprehensive Plan, to "Maintain Adequacy of Public Facilities and Services Relative to Existing and Projected Targeted Populations," and asserts that without the PATH line, "key 500 kV lines and substations, including the Doubs Substation and the Mt. Storm-Doubs, Bedington-Doubs and Doubs-Brighton 500 kV transmission lines, all of which are located in Frederick County" will face "voltage collapses and line overloads." BOA Application p. 3. These assertions ignore the numerous viable alternatives that could satisfy future demand for electricity and avoid such "collapses" and "overloads" without disrupting land and communities with hundreds of miles of high-voltage wire and the enormous Kemptown Substation. For example, demand response and energy efficiency programs have been shown to reduce demand very dramatically. Last December, modeling ordered by the Hearing Examiner in the Virginia CPCN proceedings revealed that available demand side management ("DSM") resources were sufficient to eliminate the alleged need for the PATH line in 2014.⁸ This year, demand response and energy efficiency capacity has increased by 32 percent in PJM, which should eliminate any alleged need for the PATH line for several additional years to come. Continued emphasis on DSM and energy efficiency could eliminate the need for the PATH line entirely.

Frederick County itself has set energy conservation goals consistent with a future of using less energy, rather than importing it from dirty-coal fired power plants: Comprehensive Plan Goal NR-G-04 aims to "promote a reduction in per capita consumption of energy in Frederick County," and Goal NR-G-02 "[e]ncourage(s) the use of local, non-polluting, renewable and recycled resources (water, energy, food, material resources)."

⁸ See Order Granting Withdrawal, p. 2, *Application of PATH Allegheny Virginia Transmission Corp. for Approval and Certification of Electric Transmission Facilities under Va. Code § 56-46.1 and the Utility Facilities Act, Va. Code § 56-265.1 et seq.*, Case No. PUE-2009-00043 (Va. SCC Jan. 27, 2010) (attached as Exhibit 8). Demand side management, or "DSM," includes both energy efficiency programs to reduce overall energy consumption, and "demand response" programs. Demand response includes mechanisms that encourage consumers to reduce demand at key high use periods, thereby reducing the peak demand for electricity. Electrical systems are generally sized to correspond to peak demand. Lowering peak demand can increase reliability and reduce the need for additional generation, and in turn the need for transmission.

To the extent that the grid is in need of maintenance, there are many less expensive, less disruptive alternatives that would avoid the need to build PATH. Tailored upgrades of existing transmission infrastructure, or more modest transmission proposals, such as those recently put forward by Dominion Virginia and Northeast Power, would address grid reliability issues without the investment of billions of dollars on a project that may turn out to be unnecessary – and will cause all sorts of adverse impacts in the meantime. For example, Dominion proposed to address all of the reliability issues identified by PJM (the regional grid operator) for a total cost of \$620 million, instead of \$2.22 billion for PATH.⁹ In other words, PATH is a more than \$1.5 billion overpriced solution – assuming a problem even exists. At its most recent meeting of the Transmission Expansion Advisory Committee, PJM staff acknowledged they are still considering alternatives to PATH, such as rebuilding the Mt. Storm-Doubs line, that would address reliability.¹⁰ In short, the issue of whether PATH and its associated substation are needed is very much in flux. The Planning Commission cannot simply assume that the substation is a necessary public improvement.

Available information suggests that the true motive behind the substation and transmission line is profit, not grid reliability. By increasing eastern cities' reliance on long-distance transmission lines, PATH will increase the profits of energy companies like Allegheny Power and American Electric Power that operate old coal-fired power plants in Western PJM.¹¹ In addition, the Federal Energy Regulatory Commission has granted PATH's proponents a guaranteed 14.3% rate of return, to be paid by PJM ratepayers.¹² Further confirming the profit motive, Allegheny Power has pointed this rate of return for constructing PATH as a "value driver" for the company.¹³

⁹ Potential alternatives to the PATH line are discussed in more detail in Earthjustice's comments on behalf of Sierra Club to the federal agencies considering PATH's applications for land and stream crossings. See Letter from A. Dillen, Earthjustice to M. Elmer, National Park Service, *Re: Potomac Appalachian Transmission Highline (PATH) Right of Way – Public Scoping*, Aug. 20, 2010 (attached hereto as Exhibit 9).

¹⁰ See PJM, MAAC Alternatives Analysis Update, attached hereto as Exhibit 10, Slide 20.

¹¹ See Direct Testimony of George C. Loehr, *In Re: Path Allegheny Virginia Transmission Corporation: Application for Approval of Electric Facilities Under the Utility Facilities Act*, Virginia State Corporation Commission, Docket No. PUE-2009-00043 (filed Oct. 23, 2009) (hereinafter "Loehr Testimony"), pp. 8, 29, 31-33, 40-41, attached hereto as Exhibit 11 and available at <http://www.earthjustice.org/news/press/2009/experts-raise-concerns-about-new-transmission-line-from-coal-country-to-eastern-grid>. See also Letter from B. Raney, President, West Virginia Coal Association, to S. Squire, Executive Secretary, West Virginia Public Service Commission, May 18, 2009, attached hereto as Exhibit 12 (The construction of PATH "increases the likelihood that new, clean-coal electric fired generation will be constructed in the state" and "could also lead to an increase in West Virginia coal production.").

¹² Order Accepting And Suspending Formula Rates, Subject To Conditions, And Establishing Hearing And Settlement Procedures, 122 FERC ¶ 61,188, *Potomac-Appalachian Transmission Highline, L.L.C.*, Docket No. E R08-386-000 (Feb. 29, 2008), available at <http://www.ferc.gov/EventCalendar/Files/20080229195410-ER08-386-000.pdf>.

¹³ Allegheny Energy, Presentation at Edison Electric Institute Financial Conference, November 9-12, 2008, available at

II. **The Kemptown Substation is Inconsistent with the Comprehensive Plan.**

As explained in the Staff Report, the Planning Commission must address the location, character, and extent of development of the proposed substation. The Planning Commission may consider the following in its finding of consistency:

- Land Use Plan Designation – Consider the designation for the substation site itself and of the surrounding properties.
- Existing Land Uses – Consider compatibility of existing, surrounding land uses with the proposed substation.
- Goals – Each theme/chapter of the 2010 Plan includes goals that provide desired result or a general direction for action related to the respective theme.
- Policies – Each theme/chapter includes policies that provide strategies for achieving the goals. Policies also provide direction for decisions and findings by the Planning Commission or the Board of County Commissioners.

1. **The Kemptown Substation is Inconsistent with the Land Use Plan Designation and Existing Land Uses.**

The land proposed for development is zoned Agricultural (A) while the adjoining properties are zoned either R-1 Low Density Residential or Agricultural. The substation is incompatible with these uses. As described in more detail below, the Kemptown Substation appears to displace agricultural land and facilities comprising two small working farmsteads, including crops, a dairy farm, and grazing land.¹⁴ The adjoining residential areas would be affected by depressed property values, obstructed views, noise, electromagnetic fields, and potential groundwater contamination, fires or explosions.

Potomac Edison's main argument that the substation will be consistent with the land use designation and existing land uses relies on the fact that there are already two 500 kV transmission lines adjacent to and running across the property. Potomac Edison asserts that "[b]y selecting a location already used for the transmission of electricity, the Applicant selected a site on which the Substation will neither have disproportionate adverse impacts on neighboring properties nor detrimental effects above and beyond the inherent ones ordinarily associated with such uses." BOA Application, p. 10. The logic here appears to be that "the transmission of electricity" causes similar impacts, whether a 500 kV line, a 765 kV line, multiple lines, a small substation or a large substation. This is obviously not the case: the Planning Commission is obligated to take into account the "character" and "extent" of the development, as well as the type of development. Md. Ann. Code, Article 66B § 3.08.

http://www.eei.org/meetings/Meeting%20Documents/2008-11-09-Allegheny_Energy.pdf, and attached hereto as Exhibit 13.

¹⁴ It is unclear from the application whether the two existing farmsteads would be able to continue operations during substation construction and after it is built.

It is self-evident that a substation on the scale proposed here would be a drastic change. The company's Forest Stand Delineation describes the site as "consist[ing] primarily of agricultural fields, pastures, and forest areas . . . [F]ields were planted with corn and soybeans, with dairy cows and horses grazing within the fenced pastures. There are two farmsteads on the site, one on each of the two main properties. A small one-story house and several out buildings are located in the center of the property to the south of the power lines. Pastures for horses and cows are located adjacent to the farmstead. . . The farmstead located on the property to the north of the power line . . . supports a dairy operation."

If the substation is approved, the farmsteads will be impacted, 73 acres will be directly disturbed (see BOA application, p. 2), many more, taller towers than exist today will be added to the site, the risk of fire and oil spills will increase, new fences, roads, and other associated facilities will be added, along with new higher-voltage wires. The rural character that exists today would be changed forever. *See* BOA Application, Habitat Assessment and Threatened & Endangered Species Review, Appendix A (Photographs). Yet, Potomac Edison suggests that because there are two existing high-voltage (500 kV) lines on the site, the proposed 73-acre substation development will nevertheless be "in harmony" with the neighborhood. The Planning Commission should not concur, as there is no evidence to support this claim. The existence of two 500 kV lines on or near the property does not make a new substation compatible with existing uses.

Moreover, the company admits that it chose the site not because placement of the substation there would have the least impact the neighboring properties, but because it was most convenient as a crossroads for long-distance high-voltage transmission lines. BOA Application, p.10 ("The Applicant considered other parcels of land but determined the Property was best suited for the Substation since the site was bisected by an existing 500 kV electric transmission line and adjacent to another existing 500 kV electric transmission line."). The Planning Commission should question whether the property is also "best suited" to avoid impacts from the substation on the health, well-being, and property values of its neighbors, on environmentally sensitive areas, and on productive agricultural land.

We also urge the Planning Commission to seek information from Potomac Edison as to whether the existence of a substation handling a 765 kV line would attract other new high-voltage lines to the area, further deteriorating its rural and peaceful character.

2. The Kemptown Substation is Inconsistent with the Goals and Policies in the Comprehensive Plan.

The proposed use of the land for a substation that will "allow [two 500 kV transmissions lines] to be interconnected with PATH" is inconsistent with the purpose and intent of the Comprehensive Plan. Namely, the County sets forth as a goal to "[e]ncourage the use of local, non-polluting, renewable and recycled resources (water, energy, food, material resources" (NR-G-02) (emphasis added). The Kemptown Substation would significantly set back the County's achievement of this

goal, as it encourages reliance on non-renewable (fossil fuel-based) energy imported from hundreds of miles away.

Likewise, the company claims that Goal SC-G-02 (“Maintain Adequacy of Public Facilities and Services Relative to Existing and Projected Targeted Populations”) is furthered by the substation. As shown above, the claim that the substation will provide needed utility service is unreliable, and heavily disputed. PJM itself, described in the Staff Report as “responsible for ensuring reliable electric service and planning for necessary improvements” is currently considering other alternatives. *See* footnote 10.

The substation proposal is also inconsistent with the County’s goals to protect the environment and natural resources. In developing the Comprehensive Plan, Frederick County asked citizens what they valued most and the patterns of growth they would like to see in the County. Tellingly, when asked “What do you consider to be the County’s biggest strength/assets?”, the most common response was “Natural beauty of the County.” When asked, “What do you think the County’s priorities should be related to open space and resource protection,” the top response was that “Preservation of Farmland . . . needs much more protection.” Fifty-eight percent of respondents supported increasing efforts to permanently protect farmland from development, and 68 percent supported protecting the agricultural and rural character of the county.¹⁵ By supporting these values, Frederick County ensures the well-being of its residents both from an aesthetic perspective and an economic one. As shown by other evidence submitted to the Planning Commission, adding an eyesore and potential health risk to the area would depress property values. It also would take economically productive agricultural land out of service.

The citizens’ overwhelming desire to preserve the rural nature of the County and its environmental values are reflected in the Comprehensive Plan, which aims to “[p]rotect natural resources and environmentally sensitive areas in Frederick County,” (NR-G-01) and “[m]anage growth and land development in Frederick County in a manner that is in harmony with the conservation and protection of our natural environment” (NR-G-03). In support of these goals, the plan sets policies to “[f]ocus a higher proportion of development within Community Growth Areas to protect green infrastructure land” (NR-P-13), “[c]onsider wildlife and its habitat as a primary component in the County’s approach to its overall land use planning process and development decisions” (NR-P-14), and to “[p]romote and practice invasive and exotic species (flora and fauna) control to help maintain the diversity and health of forestlands and native plant and animal populations.” (NR-P-15)

The property on which the substation would be built contains environmentally sensitive areas such as steep slopes, stream valleys, wetlands, and forests. BOA Application p. 2. Potomac Edison suggests that merely by “avoiding” direct construction or clearing of many of these areas, it has “protect[ed] . . . the environmental features of the subject site” and is therefore consistent with the

¹⁵ Frederick County Comprehensive Plan web-site, Community Survey Results (June 2008) <http://www.frederickcountymd.gov/index.aspx?NID=170> (Community Survey Results link).

Comprehensive Plan. However, the company must address indirect impacts of the construction and operation of the substation as well. For example, has the company considered whether clearing will invite invasive species, impacting even those forests and wildlife habitats that it does not directly clear? The company faces a high hurdle to show that a 73-acre development of an enormous electrical facility, ringed by fences and hosting 175-foot towers, is consistent with the aforementioned goals where the site includes a number of sensitive areas. Furthermore, the Kemptown Substation provides a route for old coal-fired power plants to ramp up production to send more electricity to the east coast, along with more air pollution.¹⁶

The substation is also incompatible with the Comprehensive Plan's many goals and policies related to the preservation of the County's agricultural land and historically rural character: to "[r]etain as a working group those elements of the County's farm landscape that contribute to the aesthetics, historic character, and economy of agricultural areas" (HP-G-04); to "[p]reserve the County's prime agricultural lands for continued production (AG-G-01); to "[p]ermanently preserve through various agricultural programs at least 100,000 acres of agricultural land by 2020 and protect a total agricultural use of 200,000 as a Rural Reserve to support a diversity of agricultural practices" (AG-G-03); to "[m]inimize the development in areas of our best agricultural lands to preserve critical masses of farmland" (AG-P-02); and to "[p]rotect the County's agricultural, cultural, scenic and natural resources in order to facilitate tourism, recreation and related industries" (ED-P-09). As described above, the Kemptown Substation appears to displace agricultural land and facilities comprising two small farmsteads. The County should not give up 73 acres of agricultural land in exchange for a project whose need is heavily contested and for which there are many alternatives that would not require this sacrifice.

Sierra Club urges the Board to keep in mind while making its finding on consistency that the need for the substation to be constructed at all is in serious **doubt given the numerous less-intrusive alternatives available to support the reliability of the electrical grid.** There is no reason that Frederick County must bear the brunt of an ill-conceived project that will do much more to fill the coffers of coal-based energy companies located in Ohio, West Virginia, and Kentucky, than to benefit ordinary citizens.

Thank you for your attention to these important issues.

Sincerely,



Elena Saxonhouse
Staff Attorney
Sierra Club

cc: Mark Depo (by e-mail)

¹⁶ See James Testimony, particularly pp. 8-10, 12-13, 17-20; Loehr Testimony, pp. 8, 29, 31-33, 40-41.

Enclosure