

## **FRIENDS of BLUE RIDGE MOUNTAINS**

### **Submission to DOE on its Request for Public Comments: NATIONAL INTEREST ELECTRIC TRANSMISSION CORRIDORS**

Friends of Blue Ridge Mountains (Friends) submits the following comments on the DOE's proposal to create a two mile wide National Interest Electric Transmission Corridor (NIETC) crossing the Blue Ridge Mountains somewhere between the Potomac River and Snickers Gap (VA-7) [its geolocation purposefully left vague by DOE] which would link Jefferson County, WV or Clarke County, VA, situated west of the Blue Ridge Mountains, with Loudoun County, VA, situated east of the Blue Ridge Mountains. Friends, a 501(c)(3) non-profit organization, submits these comments on behalf of its more than 600 members and followers who support Friends' mission "to PRESERVE, enhance and celebrate the Blue Ridge Mountains as a valuable resource and treasured space for present and future generations" (emphasis added).

Friends is puzzled by the DOE's nomination of this particular NIETC in the mid-Atlantic region, as it does nothing to advance the Nation's goal to rapidly decrease our reliance on fossil fuels to generate our electric energy supply. On the contrary, if it were to be approved, this proposed NIETC could significantly prolong such reliance by the mid-Atlantic region for several decades. It would do little to nothing to link newly developed wind and solar electric generating resources to the regional grid, which is stated as an important principle thrust of the NIETC program.

This proposed reversal of our national energy policy to rapidly transition from fossil fuels to non-carbon emitting electrical generating sources would materially affect our Nation's ability to comply with its national and international obligations to decarbonize our energy sector on an expedited time line. It would encourage substantial capital investments whose economic and technological lifetimes would extend for many decades into the future. It would signal to the energy and financial markets that they can freely ignore national energy policy as they commit to funding the energy infrastructure of the future. The ability of DOE, using its authority under the Administrative Procedures Act or other authorities to override national energy policy in this manner, is open to question.

DOE solicits public input on the potential impacts that a proposed NIETC might have on a number of identified resources and public values. Friends responds by identifying the following resources and values that could be adversely affected by this particular proposed NIETC to cross the Blue Ridge Mountains.

## **1. GEOGRAPHIC BOUNDARIES**

The portion of the Blue Ridge Mountains proposed to be crossed by this NIETC in an east-west direction appears to be situated somewhere between the Potomac River on the north and Snickers Gap (VA-7) on the south. Friends' interest in this region, and reported on in these comments, extends north-south along the entire extent of the DOE proposal, and from (and including) the Blue Ridge foothills that border the Shenandoah Valley to the west, easterly across the ridgeline of the Blue Ridge to (and including) its foothills in Loudoun County to the east that border the Piedmont. In the following reports and analysis we refer to the entirety of this land area as the "BR Regime".

## **2. WATER USE and QUALITY**

The BR Regime's natural land cover is an eastern hardwood forest ecosystem, and on elevated terrain throughout the BR Regime this land cover is primarily intact, as it is on many lowland areas throughout the BR Regime. The forest cover is a maturing second growth forest of mostly closed canopy with a well developed understory with sufficient soil structure to absorb nearly all precipitation as it falls. This sponge-like matrix efficiently controls runoff, channeling its groundwater to form numerous springs that then feed headwater streams on both sides of the main massif's ridgeline. These streams are an important component of the Chesapeake Bay watershed, collecting into larger water courses such as the Shenandoah River which then drain into the Bay by means of the Potomac River.

Wetlands are also abundant throughout the BR Regime in areas of geomorphic depressions or those with low slope. Wetlands are hydrologically valuable, as they act to further control runoff rates and improve water quality. They also support desirable biodiversity. Because they provide these critical services, they are accorded special Federal and State protection from developments that would reduce their extent or disturb their functioning.

The entirety of this intact, complex hydrological system is critical to establishing base flow in the principle downstream rivers, so as to maintain therein ecologically sustainable aquatic populations and necessary water withdrawals for domestic use during periods of low precipitation. A closed canopy forest with its undisturbed understory and soil structure is an essential component of maintaining this valuable hydrological system. Its removal over hundreds of

acres, particularly on steep mountain slopes, would result in putting these critical water supply and quality environmental services at risk.

The result could be non-compliance with Federal and State water quality standards because of insufficient flows during dry periods, or because of greatly increased run-off of nutrients and sediments resulting from soil disturbance. Such large disturbances would also adversely affect progress to meet the Chesapeake Bay Programs' targets to achieve a restored Chesapeake Bay.

### **3. FISH, WILDLIFE, and VEGETATION**

As stated in 2. WATER USE and QUALITY above, the nearly entire land cover of the mountainous slopes within the BR Regime is a maturing second growth eastern hardwood forest with closed canopy. This is an intact ecosystem with a mature understory and well developed soil structure. Scattered throughout this predominant ecosystem are canopy openings, riparian corridors, wetlands, historic agricultural fields, and other local land cover anomalies. These support a variety of ecosystems that further increase the great biological diversity of the BR Regime. This complex of ecosystems provides habitats that supports robust populations of wildlife. Black bear, white tailed deer, red fox, bobcats, possums, etc., are abundant, as are smaller mammals, song birds, amphibians, benthic organisms, etc. The full range of vegetative species native to the eastern hardwood forest ecosystem and other smaller ecosystems are also abundant throughout the BR Regime, creating the rich mosaic of biodiversity for which the Blue Ridge Mountains are renown.

The BR Regime in general, and particularly the upper elevations of the Blue Ridge Mountains, host an important south-north migration corridor for wildlife. As the climate warms this migration corridor takes on increasing importance. Maintaining its intact integrity is a critical climate adaptation measure to ensure the survival of some species. This migration corridor is also important for some bird species in their seasonal migrations. Efforts are currently focused on enhancing the Appalachian National Scenic Trail corridor traversing the crest of the Blue Ridge (see section 10. LAND USE, RECREATION and AESTHETICS) to encourage its expanded usage as a wildlife migration corridor.

### **4. CULTURAL RESOURCES**

The principle living cultural resource found in the BR Regime is its settlement pattern that reflects the Jeffersonian ideal of rural yeoman occupying the land, living in harmony with little dependence on government. While a minority of BR

Regime landholders are in some manner dependent upon their land for their livelihood, for the majority the major part of their income is derived from other sources. As Jefferson advocated, this population forms a solid citizenry base of support for promoting the ideals of democracy through individual responsibility balanced by advancing shared community interests. While predominately independent as landholders, they form a cultural community that values their lack of dependency on government, and who are inclined to unite to repel government interference in their lives.

The physical cultural resources of the BR Regime are found in its small historical community settlements that are residual patterns and elements of its historical agricultural and mercantile development; in its many historical structures, some more than 250 years old; and in the sites of the numerous skirmishes and full scale battles that it experienced throughout the Civil War.

Geographically, Civil War sites of conflict range from those experienced in and around Harpers Ferry, especially where Confederate forces occupied Bolivar and Loudoun Heights with artillery units resulting in the capture of over 12,000 Union soldiers stationed in the Harpers Ferry garrison, to the Battle of Cool Springs crossing the Shenandoah River below Snickers Gap, a less intensive battle, but an opening chapter to the Union's success in destroying the Confederate's control of its Shenandoah Valley breadbasket.

Between these two geographical extremes, Union and Confederate units frequently skirmished, as they coveted the visual reconnaissance available from the heights of the Blue Ridge Mountains and the control over the movement of troops and supplies the elevated terrain of the Blue Ridge Mountains provided. Throughout the BR Regime, population centers and militarily important strong points frequently changed hands as a result of small raiding actions to major force conflicts. Memorializing some of this action resulted in the creation of the John Mosby Heritage Area which includes portions of the BR Regime. The history of the entire BR Regime is colored by the events leading to, during, and following the Civil War. The marks of this history remains on the land and in the core of its culture today.

Massive troop movements occurred when following Gen. Early's failed Confederate advance on Washington, D.C., Gen. Sheridan brought his newly re-organized Union army across Snickers Gap into the Shenandoah Valley. Here, after regrouping in the area between Harpers Ferry and Halltown, Sheridan's forces advanced on Early's in Winchester, winning a decisive victory at the Battle of Third Winchester, resulting in Union control of the Shenandoah Valley for the

remainder of the war. Much of the early part of this critical campaign to bring the Civil War conflict to an end occurred in the BR Regime.

In Clarke County, forty-one historic properties and districts are listed on the National Register of Historic Places. Two of these districts, Cool Spring Battlefield and Bears Den Rural Historic District, are situated entirely or mostly within the BR Regime. In Jefferson County, eighty-five historic properties and districts are listed on the National Register of Historic Places. Two of these districts, Harpers Ferry Historic District and Harpers Ferry National Historic Park, are situated within the BR Regime. In Loudoun County, ninety-eight historic properties and historic districts are listed on the National Register of Historic Places. Two of these districts, Hillsboro Historic District and Round Hill Historic District are situated within the BR Regime. As noted in the following, the Appalachian National Scenic Trail, along with its corridor lands, located in all three BR Regime counties, is eligible for listing on the National Register of Historical Places.

Numerous other historical properties are found throughout the BR Regime, including many graveyards having historical interest. Its early settlement by Scots-Irish and German settlers coming through the Cumberland Valley began three centuries ago, thereby giving many opportunities to cover the BR Regime with a wealth of European historical enterprises. Their enterprise is documented today by the infrastructure and the homes that they created out of the abundant resources locally available. Other emigrants from Virginia's James River and Quakers from Pennsylvania in the eighteenth century further enriched the historical tapestry found on the land throughout the BR Regime today.

## **5. SOCIOECONOMICS**

There is a wide range of socioeconomic status within the BR Regime which because of its diversity, is not appropriately describable here.

## **6. TRIBAL RESOURCES**

Native Americans used the BR Regime extensively prior to the arrival of the Europeans who displaced them, leaving behind on the land scattered remnants of their culture. On the Blue Ridge Mountains itself its year-round use by groups of Native Americans was primarily by hunting parties. Additionally, it was crossed by routes used by trading parties. Permanent and seasonal villages occupied the lower elevation foothills and their interspersed valleys. An indication of the extent over many centuries of Native American settlement and seasonal use in the BR

Regime is found, for example, in the assemblage of Native American artifacts collected by a inquisitive monk at Holy Cross Abbey near Cool Springs.

Much archaeological work needs to be done to document the extent of, and settlement patterns of this pre-European human use and settlement of the BR Regime. It would be important to complete a comprehensive survey of early Native American settlement activity throughout the BR Regime before considering the authorizing of large construction projects in the region.

## **7. COMMUNITIES of INTEREST**

Three primary communities of interest inhabit the BR Regime: those who live in scattered villages; those who have established homes throughout the region on rural estates or farms; and a few special communities whose purpose is to maintain a unique rural retreat life style, often of a communal nature.

Scattered present day human settlements are found throughout the lower elevations within the BR Regime, both east and west of the major mountain massif. Populations of these range from the residents of a few homes remaining today from a thriving historical crossroads in the past to more populous communities of a thousand or more residents enjoying today a thriving, robust economy. Examples of these on the eastern side include Round Hill to the south to Hillsboro and Neersville to the north; and on the western side include Pine Grove to the south and Harpers Ferry and Bolivar to the north. A portion of the Harpers Ferry/Bolivar community hosts the Harpers Ferry National Historic Park where the National Park Service (NPS) protects, restores and interprets the land and buildings where seminal events in American History occurred.

The second identified class of communities of interest is comprised of the many families residing on farms, rural estates and homes throughout the BR Regime. Lot sizes vary from a fractional acre to many hundreds of acres. This dispersed community of interest shares, on the whole, a desire to live lives that are less constrained by government imposed requirements, supporting but not strongly under the control of neighborly relationships, and predominately seeking to live closer to and in harmony with Nature. This is the idealized Jeffersonian rural yeoman culture, and it covers much of the BR Regime today.

The values of this rural resident culture incline it to repel developments that would diminish or threaten the rural ambiance it is enmeshed within. It seeks

privacy, including its privacy to be left alone. It is reactionary to forces that would challenge its preferred style of living, or intrude upon its bucolic environment.

The third identified class of communities of interest is comprised of a few uniquely organized communities resident within the BR Regime which adhere to a unified belief system of which living a communal rural lifestyle is an essential part, or which foster the facilities to allow their clients to experience a retreat for a time from the stresses of modern life in a rural setting.

The Holy Cross Abbey located on 1200 acres west of Blue Ridge Mountains in Clarke County is one such example of this class of a community of interest. This community of Trappist monks is organized so as to support its members to live a life devoted to spiritual awareness, praise, and stewardship. It is self governing to meet its sustainability needs, yet is well integrated into supporting through its actions Clarke County's community imperative to preserve its rural environment. A fuller presentation of Holy Cross' culture, challenges and accomplishments is found at "Saving Place, Saving Grace" on YouTube. [this video also documents some of the natural beauty of BR Regime's landscapes.]

## **8. GEOLOGICAL RESOURCES**

The Blue Ridge Mountains are the remaining eroded core of one of Earth's most ancient mountain ranges. As such it has interest for further geological research studies, perhaps on seeking answers to questions we, at present, do not even know how to ask. It also serves as a teaching resource for new generations of geology students.

No active commercial extraction of mineral resources within the BR Regime exists at present.

## **9. SOILS**

Soils found throughout the BR Regime are highly diverse because of its complex geology, land use history, and differing hydrological regimes. The distribution of soil types has been mapped by the US Dept of Agriculture, and these maps are readily available from county agricultural extension service staff. Generally, soils are thinner at higher elevations, and richer along riparian corridors and flats, where some prime agricultural soils can be found.

## **10. LAND USE, RECREATION, AESTHETICS**

Land use patterns within the BR Regime are strongly determined by county-specific comprehensive plans and zoning ordinances. Some of these are quite detailed regarding allowable uses of the Blue Ridge Mountains' ridgeline.

As indicated in sections 2. WATER USE and QUALITY and 3. FISH, WILDLIFE, and VEGETATION above, the land cover of the BR Regime is predominately a closed canopy eastern hardwood forest. This cover is broken in places by clustered human settlements as outlined in section 7. COMMUNITIES OF INTEREST above. Additionally, single-family homes are dispersed throughout the region, making generally small breaks in the canopy, with a few larger clearings for agricultural purposes.

At lower elevations, a few wineries with agritourism interest exist, grassland cattle grazing, cemeteries, and a state park all exist in harmony with the landscape.

A significant number of conservation easements exist on parcels within the BR Regime. Each easement in perpetuity restricts changes in land usage on the eased parcel. Because there exists insufficient case law on how to resolve the competing interests where eminent domain to route a new transmission line is attempted to be used to override restrictions found in a conservation easement, finding a judicial or legislative solution to this issue will likely require substantially more time than would implementing alternative solutions that do not involve such a resolution. Prudence indicates the value of not locating NIETCs where this issue exists, as doing so will do nothing in the near term to strengthen grid reliability and resilience.

Of substantial importance, the Appalachian National Scenic Trail (ANST) traverses the entire BR Regime, close to or along its main massif's principle ridgeline. The ANST's inception dates back more than a century to a seminal proposal by Benton MacKaye, who envisioned such a trail as part of a comprehensive project which could provide emotional and physical rejuvenation for the struggling masses of industrial laborers along the eastern seaboard.

Built over succeeding decades by volunteer and CCC labor, in 1968 the ANST was designated by Congress as the nation's first National Scenic Trail. It is the world's longest intact footpath at nearly 2200 miles from Georgia to Maine. Based on its national significance and history, the ANST is eligible for listing on the National Register of Historic Places, and efforts are currently underway to secure such listing.

The ANST's overall management is under the auspices of the National Park Service (NPS), and consequently the ANST is de facto a national park unit. Its maintenance is coordinated through a comprehensive memorandum of



understanding entered into by the NPS, the Appalachian Trail Conservancy, and more than thirty individual trail clubs. The trail club responsible for the section of the ANST that traverses the BR Regime is the Potomac Appalachian Trail Club (PATC). The PATC engages hundreds of its member volunteers in maintaining the 240 miles of ANST under its responsibility.

Annually, more than a thousand individuals hike the entire 2200 mile length of the ANST, while it is conservatively estimated that tens of thousands annually enjoy the BR Regime's portion of the ANST on a day-use basis. A popular destination is the Raven Rocks overlook which gives a panoramic view of the Shenandoah Valley below to the more distant Allegheny Mountains beyond. This portion of the ANST is served by the Blackburn Trail Center, owned and operated by the PATC. The PATC also maintains several shelters and camps for backpackers' use on ANST corridor lands which in addition to a place to camp, provide moldering toilets, water sources, and food storage arrangements.

The ANST is not simply a foot path. In the BR Regime, in addition to the actual trail's tread, an integral part of the ANST system is its bordering corridor lands owned by the NPS. This gives the hiker the experience at every step of exploring a wilderness forest whose beauty and wildness are the result of natural forces. The ANST corridor is generally a couple tenths to a half mile wide at any one location. Substantial Federal funds were expended in the purchase of these corridor lands, and they prevent the encroachment of any development to mar the ANST hiking experience of passing through this wilderness-like landscape. There are occasional side paths to overlooks of one of the valleys below.

The ANST, along with its corridor in the BR Regime, is nearly entirely protected by a closed canopy overhead. Walking the trail induces the hiker to feel that she/he is traveling through a wilderness area, where natural forces prevail, nearly untouched by human intervention, as they may have been experienced centuries ago. This experience is available to hundreds of thousands of nearby residents within a few hours drive distant, giving them the opportunity to experience MacKaye's vision of fulfilling our human need to recreate and commune with Nature. Many other visitors come from further away, even from other continents, to experience both the solitude and the camaraderie of The Trail.

This influx of tourists and not-so-distant neighbors provide substantial commercial income to the five designated nearby Trail Communities: Hillsboro, Round Hill, Bluemont, Berryville/Clarke County, and Harpers Ferry/Bolivar. In addition to the increased daily commerce enjoyed, these Trail Communities sponsor community festivals to celebrate the Trail, thereby providing additional Trail related recreation, and community income and cohesiveness. Such events can attract

thousands to celebrate the ANST, while the underlying draw of the ANST for visitors from far and wide is strongly dependent upon its solid reputation as a footpath through untrammelled Nature.

The BR Regime near its northern end is crossed by a five decade old 138kV transmission line now owned by FirstEnergy. Even this modest sized line, relative to the 500kV lines that the proposed NIETC would encourage, creates a discordant discontinuity for users of the ANST and of Sweet Run State Park. Its visual impact of a broad swath of cleared forest land stretching down the mountain side with massive towers and conductors is a shocking discontinuity across this cherished landscape; while up close, its corona discharge noise are at times a disturbing intrusion upon those who came to reconnect with Nature. Its visual intrusion on the historic Between the Hills Region is a major distraction for the park visitor who came to experience the otherwise intact 19th century agricultural landscape, as its massive size dominates the intimate scale of this historic landscape that has been preserved as a Virginia state park.

Its right of way, devoid of trees on a steep mountain side, has disturbed the natural hydrological regime and creates erosion issues. This situation is aggravated by the highly disturbed land making up this corridor which makes it a magnet for invasive species to gain a foothold, from which they can spread over adjoining land, including along the ANST.

The aesthetic intermediate and more distant views of the otherwise intact Blue Ridge Mountain is seriously compromised by this existing 138kV line, established long before preserving the natural state of such vistas became an important public value. One might consider that the establishment of this 138kV line many decades ago lingers on as an experiment or pilot program that serves to experimentally determine the consequences of running a transmission line over the Blue Ridge Mountains. This experiment has demonstrated the considerable harm to public values that such intrusions on the natural characteristics of the Blue Ridge Mountains result in. Creation of additional transmission line corridors or the augmentation of the transmission structure within this existing corridor would substantially mar the remaining Blue Ridge scenic resource, as well as further degrading the ecological and hydrological resources within the BR Regime.

## **11. AIR QUALITY and ENVIRONMENTAL NOISE**

The forest cover with its intact closed canopy found within the BR Regime provides several important environmental services, one of which is to assist with reducing the pollutant concentrations of polluted air masses that waft into the region from other regions ranging from the northwest around to the south where

coal-fired power plants dominate the electrical generating mix. This form of environmental service, the scrubbing of pollutants by the BR Regime's elevated forest, benefits areas downwind, assisting them to remain in compliance with National Ambient Air Quality Standards. Removal or degradation of this existing healthy forest cover within the BR Regime could result in somewhat higher air pollution experienced in areas downwind.

Because of its rural nature the ambient noise levels within the BR Regime are generally low, frequently dominated by the songs of birds, wind blowing through the trees, and dancing water in the streams. These sounds of Nature would be overwhelmed with the crackling corona discharges from 500kV transmission lines, thereby substantially diminishing the recreational value to users of the ANST, and the quality of life for nearby residents.

## **12. ALTERNATIVES**

Augmenting the electrical power inflow into Loudoun County, and particularly for its growing complex of data centers is not dependent upon establishing a NIETC over the BR Regime.

The present DOE NIETC proposals for the mid-Atlantic region seem to closely mirror the PJM Electric Reliability Council's recommendations of last December. These in turn seem to be a compilation of submissions made to PJM by individual utility and transmission line owners in the region. While these were designed to serve the owners' short term reliability and resiliency needs, they also seem to be designed to maximize the individual owner's economic interests. This procedure for planning the expansion of transmission line capacity does not emphasize the national and global need to rapidly phase out fossil fuel fired generation to be replaced by non-carbon emitting generation sources, and provide the means to bring this energy to market. Nor does it result in the most efficient and stable grid structure to serve public needs while minimizing externalities and monetary costs.

It is imperative that DOE comply with the new FERC ruling to plan regional grid development over a twenty year time horizon. In doing so, DOE should reconsider its recent NIETC proposals for the mid-Atlantic region to only focus on those that are most urgent and least damaging while DOE does an in-depth assessment of what is necessary for it to comply with FERC's comprehensive planning procedure that extends over a 20 year planning period. The primary goal here must be to facilitate bringing alternatively generated power to market load centers while at the same time promoting grid reliability and resiliency. Identified alternatives should be considered in this context.

A principle short-term alternative for this NIETC is to re-cable existing transmission lines serving the Loudoun County region with Advanced Composite Core Conductors (ACCC), thereby substantially upgrading the power carrying capacity of these existing lines. ACCC technology is demonstrated technology being used for 500kV transmission by TVA and at several non-US installations, and extensively at somewhat lower voltages in Europe and elsewhere. Upgrading the power transmission capabilities of existing lines into Loudoun County from the east and north would eliminate the immediate need to establish a NIETC through the BR Regime.

Another principle alternative of a short term nature is to only adopt other proposed NIETCs that route the transmission of power into the Loudoun County demand region so that it avoids the need to cross the Blue Ridge Mountains. This can be accomplished by relying on existing transmission corridors from West Virginia north into Maryland through the Doubs substation, and thence south across the Potomac River. This alternative is readily combined with the above identified alternative, thereby greatly increasing the electric power supply to northern Virginia, while protecting the Blue Ridge Mountains from further damaging transmission line development.

Another mid-term alternative would be to rely on the new wind powered generation being developed by Dominion Energy along Virginia's continental shelf to feed the growing data center power demand in northern Virginia. The large generation potential of off shore wind, and its relatively stable reliability makes a good match to serve this region's growing data center driven power demand.

A longer term alternative is to use plasma torch technology to bore a transmission tunnel under the Blue Ridge Mountains. This emerging technology appears to be much cheaper than conventional tunnel boring systems, and is a great deal faster. It must be noted that Dominion Energy planned to drill a tunnel under the Blue Ridge Mountains south of Rockfish Gap using a less economically efficient technology to bring its proposed Atlantic Coast Pipeline underneath the main mountain massive, thus strongly indicating the economic feasibility of this approach.

Other short to long term alternatives must focus on reducing load demand by the implementation of a full range of energy efficiency measures and full implementation of programs that would maximize the implementation of distributed renewable power generation throughout the service region. Continuing nearly sole reliance on distant generation sources to feed electric power into the northern Virginia region is unsustainable if its quality of life is not to be seriously compromised.

### **13. RELIABILITY and SAFETY**

There are important reliability and safety issues relevant to the consideration of the wisdom of routing a transmission line that would cross a mountain ridgeline. The mountain ridgeline environment is subject to more turbulent and higher velocity wind loads. It is also subject to more severe icing conditions, and more frequent lightening strikes. Each of these conditions is experienced along this Blue Ridge Mountains ridgeline.

For example, earlier this year a severe ice storm struck the Blue Ridge Mountains in Shenandoah National Park (SNP), some 80 miles to the south of the BR Regime. This storm completely closed Skyline Drive throughout the park with a tangle of windfall trees taken down by gale force winds on ice laden trees. It took two weeks of the combined efforts of SNP crews and volunteer sawyer crews from the PATC to reopen Skyline Drive. The potential for such ice storms to strike along the ridgeline of the BR Regime poses reliability and resiliency issues of substantial significance for any proposed transmission line crossing it, and particularly so for a 500kV line with its elevated height above the surrounding forest canopy. Corridors passing through forested land that are needed for roads and transmission lines share a common characteristic. The trees along their edges are subject to windfall because of their greater exposure to straight-line force and eddy winds. These falling, blowing trees and debris in this environment pose an increased risk to the integrity of towers and conductors.

Also relevant, the frequency and intensity of lightening strikes along the ridgeline is greatly enhanced over that experienced at lower elevations. The reliability of transmission lines placed atop ridgelines is compromised because of such meteorological phenomenon.

Placement of a transmission line over a heavily used hiking trail, particularly along a ridgeline, also would pose a potential safety risk to those users of the trail who are caught in a sudden storm in the vicinity of the line. This individual will be responding to her/his urgent desire to escape from the storm, and may be unaware of the safety risk of crossing under the line in these conditions, thus inadvertently placing themselves in a very high risk situation.

### **SUMMARY, CONCLUSIONS and RECOMMENDATIONS**

This Friends' submission identifies a broad range of existing natural and human resources whose ecological and hydrological integrity and human values would be at risk of being compromised by any NIETC designated to cross west-east across

the BR Regime. A decision that would risk substantial degradation of these resources for the potential benefit of increasing the capacity of the PJM managed grid to supply more power to the northern Virginia demand region should only be made following the preparation, and consideration by the public, of a full Environmental Impact Statement (EIS) as is required under NEPA for a major action.

As any activity following the designation of such a NIETC to construct a transmission line across the ANST would require the establishment of an easement across the ANST and its corridor lands, contrary to the Congressional purpose for establishing the ANST, the National Environmental Policy Act (NEPA) would require the preparation of a full Environmental Impact Statement (EIS). The required EIS would have to make a substantially detailed analysis of alternative actions. Such analysis must include identifying alternative power supply sources that would be renewable in nature, and avoiding the unavoidable major net increase of carbon loading of the atmosphere as designation of this proposed NIETC would result in. And, such analysis must carefully consider all alternatives to creating a NIETC which would change the very nature of the ANST as it traverses the BR Regime.

Additionally, such analysis must consider the cumulative adverse impacts on all of the natural and human resources that are identified in this submission. The exact routing of the NIETC and its actual width with the number and type of transmission facilities it would authorize must all be specified by the DOE in its definition of the proposed NEPA action before such analysis could be made in a credible fashion.

Friends submits that the overwhelming preponderance of evidence of probable great harm to natural resources and human values that would result, individually and collectively, from the designation of this specific NIETC, and the availability of several viable alternative actions, combine to suggest that inclusion of this NIETC should be dropped from DOE's further consideration in its Phase 2 analysis. The considerable public investment of resources and the lengthy time required to design and conduct a comprehensive NEPA investigation and analyses, combined with the probable extensive public involvement that would ensue, indicate a substantially prolonged process will result if DOE moves this NIETC beyond its initial Phase 2 evaluation of the public comments it receives. This outcome would not advance the goals that DOE seeks in this round of NIETC evaluations, and thus would not serve the public interest.

Given the contrast between the heterogeneous distribution of a wide variety of valued natural and human resources across the BR Regime, and the extremely

poorly defined geolocation of this proposed NIETC, it is not feasible for this submission by Friends' to be any more detailed than to generally identify issues which require more data gathering and detailed analysis by DOE to evaluate. This submission is not intended to be comprehensive in nature, but only indicative of existing natural resources and human values at risk in response to DOE's request for public comment. Friends reserves the right to augment, expand the scope of, introduce additional issues, and comment on issues raised by others in future opportunities for public comment that may be provided on this matter.