

**PUBLIC SERVICE COMMISSION  
OF WEST VIRGINIA  
CHARLESTON**

At a session of the PUBLIC SERVICE COMMISSION OF WEST VIRGINIA in the City of Charleston on the 2<sup>nd</sup> day of April, 2003.

CASE NO. 02-1189-E-CN

NEDPOWER MOUNT STORM LLC  
5160 Parkstone Drive, Suite 260  
Chantilly, Virginia 20151

Application for a Certificate of Convenience and Necessity to Authorize Construction and Operation of a Wholesale Windpower Electric Generating Facility and Related Interconnection Transmission Facilities in Grant County, West Virginia.

**COMMISSION ORDER**

This case is pending before the Commission for a final decision on NedPower Mount Storm LLC's (NedPower's) application for a certificate of convenience and necessity to construct and operate a wholesale windpower electric generating facility and related interconnection transmission facilities in Grant County, West Virginia. By this Order, the Commission conditionally grants NedPower's application as to the Central and Northern Phases of its proposed project. The Commission withholds certification for the proposed Southern Phase.

**Background**

On August 8, 2002, pursuant to *W.Va. Code* §24-2-11, NedPower Mount Storm LLC (“NedPower”) filed an application for a certificate of convenience and necessity to authorize construction and operation of a wholesale windpower electric generating facility and related interconnection transmission facilities in Grant County (“Application”). As proposed, the facility would generate electricity exclusively for sale at wholesale in the competitive wholesale market.

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By Notice of Filing issued August 13, 2002, the Commission ordered NedPower to publish notice of its Application and the fact that the Application and Exhibits were

available for public inspection at the Commission's offices at 201 Brooks Street, Charleston, West Virginia. The notice provided a thirty (30)-day protest period from the date of publication. The Commission also granted NedPower a waiver of the statutory thirty-day notice requirement for the filing of the Application as set forth in *W.Va. Code* §24-2-11.

On August 13, 2002, Commission Staff (Staff) filed its "Initial Joint Staff Memorandum Including Request for Expedited Treatment." This memorandum contained suggestions for setting a procedural schedule. In addition, Staff agreed with NedPower's request that the requirement that NedPower file a financial exhibit, in accordance with Rule 42 of the Commission's *Rules for the Construction and Filing of Tariffs (Tariff Rules)*, be waived on the basis of the Commission's February 22, 2002, decision in *Mt. Storm Wind Force, LLC*, Case No. 01-1664-E-CN, which held that cost of service ratemaking issues are not before the Commission for EWGs whose rates are subject to regulation by the FERC pursuant to the Federal Power Act.

On August 21, 2002, NedPower filed a letter concurring with Staff's August 13, 2002, memorandum.

By Order issued August 30, 2002, the Commission required Staff to file a proposed procedural schedule on or before September 17, 2002, and granted NedPower a waiver of Rule 42 requirements.

On September 4, 2002, the West Virginia State Building and Construction Trades Council, AFL-CIO (Council) filed a petition to intervene in this case and protest of the application.

On September 6, 2002, NedPower filed an Affidavit of Publication from the *Grant County Press* evidencing publication of a Notice of Filing for this case on August 20, 2002.

On September 9, 2002, NedPower filed a letter stating that it does not oppose the Council's petition to intervene, but would oppose the Commission's reconsideration of the *Tariff Rule 42* waiver, granted in the August 30, 2002, Order. Also, NedPower restated its request that formal hearing be waived if the Council and NedPower reached agreement on the issues between them, and in the absence of substantial protest.

On September 10, 2002, NedPower filed additional letters of support of the project from three public officials.

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On September 12, 2002, Staff filed a Joint Motion to Adopt Procedural Schedule.

On September 16, 2002, counsel to NedPower filed a letter stating that NedPower had been in discussions with a potential intervenor, the West Virginia Highlands Conservancy (Conservancy). Due to that entity's meeting schedule, NedPower asked the Commission to extend the intervention deadline as to the Conservancy only. NedPower represented that Staff did not oppose such an extension.

On September 19, 2002, Friends of the Allegheny Front (FAF) filed a protest and request for public hearing in this case. FAF cited fear of negative impacts on residents, tourists, endangered species, wetlands, habitats, and bird migration, resulting from this project. The FAF opined that a Federal Environmental Impact Study should be conducted.

On September 24, 2002, NedPower filed an "Endangered Species Status and Phase I Avian Risk Assessment" for the proposed project.

By Order issued September 25, 2002, the Commission adopted a procedural schedule to culminate in a hearing on November 18, 2002; granted the petition to intervene filed by the Council; and extended the deadline to intervene until October 31, 2002, for the West Virginia Highlands Conservancy only.

On October 1, 2002, Barbara Sargeant of the West Virginia Division of Natural Resources filed a copy of a letter she had written to Potesta & Associates, NedPower's environmental consultant, regarding this project.

On October 2, 2002, NedPower responded to the FAF's protest and request for hearing, filed on September 19, 2002. NedPower stated that it presumes that the FAF's letter will be deemed a request for intervenor status. NedPower did not formally oppose the FAF's request to intervene. NedPower alleged that the FAF's concerns have already been addressed by NedPower's information provided to the Commission and to Staff in this case. NedPower urged the FAF to thoroughly review the case filings and, if it has remaining concerns, to contact NedPower for a meeting to discuss remaining concerns.

On October 17, 2002, NedPower filed the direct testimony of Hieronymus (Jerome) Niessen, James Alexander, Timothy P. Heinle, Dr. Laidley E. McCoy and Dr. Ronald A. Canterbury.

On October 23, 2002, NedPower filed a letter advising that NedPower and the Council had reached an agreement (the Council Agreement) which resulted in the Council's full support for the project. NedPower attached a copy of the Council Agreement to its letter. Under the Council Agreement, NedPower will require its

engineering, procurement and construction contractor(s) to use local union labor in the construction of the project. The letter stated that NedPower and the

Council both request that the Commission approve the Council Agreement in any order ruling on the application that is the subject of this case. Alternatively, if NedPower, the Council, Staff, and any other party reach a joint stipulation that incorporates the Council Agreement, then NedPower and the Council would request the Commission to adopt such a joint stipulation including the terms relating to the Council Agreement. The letter indicated that the Council would not be filing pre-filed testimony in this case, but would like to reserve the rights to: (1) make a statement in support of the project at the scheduled hearing, and (2) cross-examine witnesses if warranted.

On October 31, 2002, Staff filed direct, pre-filed testimony of Darrell W. Preece and Wayne M. Perdue.

Also on October 31, 2002, the FAF filed direct pre-filed testimony of Donna T. Cook, John W. Cooper, and Linda Cooper.

On November 6, 2002, NedPower issued data requests to the FAF and requested that the FAF respond by November 15, 2002, instead of in twenty days as would normally be required by the Commission's Rules.

Also on November 6, 2002, NedPower filed a motion *in limine* that the Commission preclude the FAF from calling as witnesses the authors of certain reports attached to the direct testimony of the FAF's witness, Linda Cooper. NedPower asserted that Linda Cooper's testimony was of little substance and was used simply to introduce six comment letters from persons in academic and regulatory fields. Further, Ms. Cooper admitted that FAF will attempt to have these persons testify at the hearing. NedPower noted that the Commission required witnesses to pre-file testimony. NedPower opposed a conversion of the comment letters into witness testimony when the FAF was well aware of the pre-filed testimony requirement. NedPower wondered whether the commentators were even aware that their comments would be attached as pre-filed testimony. In support of its argument that allowing these persons to testify would be unfair, NedPower argued, among other things, that it should not have to go to the expense to file rebuttal testimony for witnesses who may or may not appear at the hearing. Rather, the comment letters should merely be considered public comment.

On November 7, 2002, the Council filed the pre-filed direct testimony of Steve White.

Also on November 7, 2002, NedPower filed an Endangered Species Status Report. NedPower explained that the report summarized two Species Surveys performed in

connection with the project, including one on the West Virginia Northern Flying Squirrel (WVNFS), and a second on Inventories for Cheat Mountain Salamanders.

On November 8, 2002, the Council filed rebuttal testimony of Steve White.

On November 12, 2002, the FAF filed a response opposing NedPower's request that the FAF respond to data requests by Friday, November 15, 2002. The FAF stated that the data request "seeks information that NedPower can fully explore during its cross-examination of our witnesses at hearing on November 18. Most of the Data Request is directed at testimony offered by John Cooper and Donna Cook, who will testify appear [sic] at the hearing. Questions 8 and 9 are directed to Professor Peter Weigl. I do not know if Dr. Weigl will attend the hearing. I will attempt to obtain the information NedPower has requested from Dr. Weigl and will forward it to NedPower upon receipt." The FAF indicated that it believed it should focus its efforts on preparing for the hearing, rather than on responding to cumbersome and distracting data requests.

Also on November 12, 2002, NedPower filed a motion to compel the FAF to respond to NedPower's First Data Request. NedPower asserted that the FAF has offered no legitimate excuse for its refusal to respond prior to the hearing date. NedPower argued that it is entitled to the information sought just as the Commission is entitled to a streamlined, well-developed presentation of the parties' respective positions, unhindered by the parties' need to conduct discovery during the hearing. NedPower asked that the Commission issue an order compelling responses by Friday, November 15, 2002, the last business day prior to the hearing on Monday, November 18<sup>th</sup>. NedPower noted that the Commission has not yet granted the FAF intervenor status, and, if the FAF does not respond to data requests by the 15<sup>th</sup>, NedPower will move the Commission to deny the FAF intervenor status.

On November 13, 2002, the FAF filed a letter indicating that Dr. Robert C. Whitmore would be standing in as a witness in lieu of Dr. J. James Murray, Jr., whose written comments were attached to the testimony of Linda Cooper.

The Commission held a hearing in this case on November 18 and 19, 2002. At the conclusion of the hearing on November 19, 2002, and following closing arguments by counsel, the case was submitted for decision.

Following the filing of the hearing transcript on December 2, 2002, the court stenographer, Philip S. Dye, C.C.R., delivered a letter to Chairman James D. Williams stating that he accidentally recorded over portions of the hearing transcript and that those portions were irretrievable.

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On December 5, 2002, the FAF, an intervenor in this proceeding, filed a Motion to Submit Post-Hearing Brief and Motion for Further Hearing pursuant to Rules 18.3 and 19.2 of the Commission's *Rules of Practice and Procedure*.

On December 13, 2002, the West Virginia Division of Natural Resources (DNR) filed a letter requesting that NedPower be required take certain actions:

- . File evidence that the United States Army Corps of Engineers has approved and accepted the wetlands delineation study;
- . obtain West Virginia Public Lands Corporation right-of-entry approvals for any stream access road crossings;
- . be directed to comply with the Endangered Species Act, the Migratory Bird Treaty Act and the National Environmental Policy Act of 1969 in both the construction and the operation of the project and coordinate all activities required by these laws, including any mitigation, with the DNR;
- . be directed to file evidence that the United States Fish and Wildlife Service has accepted and approved the endangered species studies and any mitigation plans that it may think is required;
- . notify the Commission, should any authorized governmental agency and/or court of competent jurisdiction find that NedPower is not complying with any one of the above three Federal Acts, within 10 days of any such finding;
- . file with the Commission the results of any post-construction studies, including, but not limited to, assessing the mortality of both birds and bats, including the effect of lighting for all phases of the project and provide the results to DNR; and
- . file the results of any such studies within 90 days of completion with the Commission and provide copies to DNR.

The DNR further noted the requests made by United States Fish and Wildlife in its December 3, 2002, letter and requested copies of any information provided to that agency.

On December 16, 2002, NedPower filed a letter opposing the FAF's motions to file a post-hearing brief, and for further hearing.

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By Order issued December 20, 2002, the Commission required the parties to stipulate to a summary of the missing testimony and any missing exhibit references.

On December 31, 2002, the FAF filed a letter amending its prior motion to request that post-hearing briefs be permitted, and that the filing date therefor be 20 days following the date the summary stipulation of evidence is filed.

On January 17, 2003, the parties filed a Joint Stipulation Regarding Missing Testimony.

By Order issued January 23, 2003, the Commission granted the FAF's motion to allow the filing of post-hearing briefs. Simultaneous post hearing briefs were due on or before February 6, 2003, and reply briefs on or before February 13, 2003. In the same order, the Commission denied the FAF's motion for a further hearing.

On February 6, 2003, NedPower, Staff and the FAF filed briefs.

On February 13, 2003, NedPower, Staff, and the FAF filed reply briefs.

On February 19, 2003, U.S. Congressman Mollohan filed a letter expressing concerns regarding the project and requesting that the Commission require NedPower to file certain reports, including: (1) a report on the impacts on the local economy including property values and the recreation/tourism industry; (2) a map showing the visual impact of the project, during both daylight and night; (3) a noise study of the turbines taking into account turbine size, location, cumulative impact of all turbines, and changing weather conditions; (4) an analysis of the impact on birds and other wildlife, including any endangered wildlife, in cooperation with the U.S. Fish and Wildlife Service. In connection with this request, the Congressman notes that the Notice of Violations sent to NedPower on February 3, 2003, by the Defenders of Wildlife and Friends of the Blackwater suggested that an incidental take permit must be completed; (5) an analysis of the impacts on water quality and soil erosion. Congressman Mollohan stated that he supports "the [DNR]'s call for NedPower to comply with all provisions of the Endangered Species Act, the Migratory Bird Treaty Act, the National Environmental Policy Act, and the Department of Energy's National Wind Technology Center's handbook outlining studies that should be done to provide adequate consideration."

On March 3, 2003, counsel for NedPower filed a letter asking the Commission to rule on the Application by granting a conditional certificate.

Lodged in the case file are numerous letters both in opposition to, and in support of, this project from individuals, government organizations, citizens' groups,

environmental groups, etc. The Commission will not name each of these letters and filings, but has considered the concerns expressed therein in rendering this decision.

## **Summary of Pre-filed Testimony and Comments:**

WEST VIRGINIA HIGHLAND CONSERVANCY'S LETTER OF CONDITIONAL SUPPORT - On November 6, 2002, the West Virginia Highlands Conservancy filed a "Letter of Conditional Support of Wind Power." That letter stated that the Conservancy believes that wind power development can possibly provide reasonable alternatives to the many environmental and other societal costs of the mining, transportation and burning of coal to generate electricity. The Conservancy also acknowledged that fossil fuels are a limited resource, while renewable energy resources, such as wind, may offer a longer term alternative to fossil fuels.

However, the Conservancy insists that the Commission, "as the only existing permitting agency for West Virginia wind power generating facilities, needs to develop and implement full, comprehensive and objective siting criteria for wind turbines." The criteria should include, at least, consideration of visual and noise effects on certain public recreation areas and other recognized special places, consideration of the habitats and populations of rare and endangered species of plants and animals, consideration of the effects of wind power facilities on known flyways for local and migratory birds, and consideration of impacts on stream headwaters by earth disturbances caused by roads and other construction.

Before the Commission issues a certificate, the Commission should ensure that construction and operation of these facilities will comport in all respects with the Federal Endangered Species Act and Migratory Bird Act.

The Commission or the Consumer Advocate should employ experts on ecological studies and reports necessary to effect good wind turbine siting. Such experts should be qualified to assess avian assessments, rare and endangered species and wetlands surveys and sight and sound analyses. The Commission should hire these experts in light of the disparity between the wind power developers' budgets and that of citizen environmental organizations. The pool of local ornithologists and endangered species experts is small. Once those persons are retained by the developers, there is no one left who is qualified and available to review reports, etc. on behalf of citizens. As an alternative, the Commission could commission the applicable studies itself, but require NedPower to fund the work. This way, the work product would be more impartial and credible.

The Conservancy further believes that Commission policies relating to wind turbine siting, as well as applications of the policies to specific projects, should include

full public input and fair consideration of that input. The expedited procedural schedule the Commission allows for wind projects provides very limited opportunities for the public to learn about and consider the effects of projects. A

lengthened schedule would allow better public understanding.

### Applicant's Pre-filed Direct Testimony

TESTIMONY OF HEIRONYMUS (JEROME) NIESSEN - President of NedPower Mount Strom LLC - Has seven years experience developing wind power projects worldwide. NedPower is a Delaware limited liability company. Its membership interests are jointly owned by two Delaware limited liability companies: NedPower Mount Storm Investment, LLC (NedPower Investment) and Magellan WindPower LLC (Magellan WindPower). NedPower Investment is a wholly-owned subsidiary of NedPower US LLC (NedPower US), which is a Delaware limited liability company. Magellan WindPower is a wholly-owned subsidiary of Magellan Carbon Fuels, LLC, also a Delaware limited liability company (Magellan).

#### *The project:*

This project is to be located along the Allegheny Front in Grant County. It will consist of up to 200 wind turbines and have a generating capacity of up to 300 MW. The turbines will be erected in two to three rows along the ridge line, and will be no closer than 600 to 800 feet apart. Each turbine will have a nameplate capacity of between 1.5 MW and 1.8 MW, and will be approximately 100 meters (328 feet) tall. The turbine nacelle, which consists of the generators, gearbox and drive train, is mounted onto a tubular steel tower. The steel tower will have a diameter of approximately 4.5 meters (15 feet) and will be approximately 65 to 70 meters (213 to 230 feet) high. Each turbine will have three blades, which will be at least 25 meters (82 feet) off the ground. This will allow cattle grazing and logging to continue safely. The turbines will be connected by an underground electrical infrastructure that will transmit the electric energy generated by the turbines to a new substation to be constructed on the project site.

Maps of the project have been supplied to Staff.

The project will be on a narrow strip of land two miles east of the Mount Storm power plant and Mount Storm Lake. The project area is approximately 14 miles long, with an average width of one-half mile, running southwest to northeast. NedPower will lease 8,000 acres for the project, but the project facilities will physically occupy only 3% of those acres. At the time this testimony was filed, NedPower had secured leases for approximately 3/4 of the 8,000 acres from individual landowners.

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The turbine locations are either Class 4 or Class 5 wind resources. The high quality wind resource was the key factor in NedPower's decision to develop the site. NedPower will benefit from the fact that cleared areas and haulage roads have been left by prior

surface mining and timber operations in the area. Only limited residential areas are in the project vicinity.

*Visibility:*

NedPower has conducted viewshed analyses for the project. The project will not be visible from any visitor areas or places of significant public interest with tourist traffic, such as Canaan Valley, Blackwater Canyon and Lodge, and readily accessible areas of the Dolly Sods Wilderness Area.

*Noise:*

With regard to noise, the project should not have a negative impact on residences or businesses. Wind turbines are very quiet machines, generating less than 30 dBA, comparable to people whispering in a quiet room. If noise will burden any particular residence or if a turbine will be less than 250 meters from a residence, NedPower will move it.

*Order of development:*

The project will be developed in three phases. The middle 4,000 acres, known as the Central Phase, will be developed first with operation to begin by December 2003. The Central Phase will include that majority of the turbines (approximately 100), with an approximate aggregate nameplate capacity of 150 to 170 MW. The other two phases are the Northern and Southern Phases. It is likely that they will be completed after the Central Phase. All three phases will transmit energy to the APS system through the same interconnection facilities.

*Who will construct what?:*

NedPower is responsible for all construction and operation, except for construction of the substation. APS will be responsible for construction of the substation.

NedPower may choose to transfer certain rights under its Commission certificate to construct and operate the Northern and Southern Phases, to a third-party project company, in order to facilitate the funding of construction of those phases. In light of Staff reservations regarding NedPower's original request that the Commission pre-authorize

such transfer of rights, NedPower has withdrawn that request. NedPower will seek prior Commission approval if it intends such a transfer in the future.

*Production Tax Credit and need for expedited treatment:*

Section 45 of the Internal Revenue Code allows a renewable electricity production tax credit (PTC) as a general tax credit against a taxpayer's federal income tax liability. For any year, the PTC is available where electricity is produced from a "qualifying facility" during the ten-year period beginning on the date the facility was placed into service and sold by the taxpayer to an unrelated person during the year. "Qualifying facility" includes any wind power facility that is "originally placed in service" after December 31, 1993, and before January 14, 2004.

PTC is a critical factor in financing new wind power facilities, both for NedPower and other developers. Without PTC, construction of wind power facilities is not feasible. In the past, Congress has not acted fast enough to renew the PTC, and turbine purchases and siting commitments have had to be delayed, i.e. the PTC expired at the end of 2001 and Congress did not act until March, 2002, to extend it from December 31, 2001 to December 31, 2003. Currently, a wind power project must be operational before January 1, 2004, to qualify for PTC. This is why NedPower has requested expedited treatment. This is also why NedPower must have Commission approval for the entire project in hand.

*Cost and financing:*

The total cost will be in excess of \$300 million. This includes substation construction of \$11.5 million. NedPower is responsible for obtaining all of the financing to cover development, land acquisition, permitting, financing, construction, marketing, operation and maintenance. The project will be financed through a combination of equity contribution and private debt financing through one or more third party lenders. No public funds will be used. NedPower will bear all financial risk for the project and West Virginia ratepayers will not bear any risk.

*Economic benefit and local support:*

The project will increase Grant County's annual *ad valorem* tax revenues by at least \$500,000 per year. Local landowners will receive \$600,000 annually in lease payments. The project will purchase certain local goods and services supporting the local economy. Pursuant to NedPower's agreement with local labor, NedPower's contractors will employ local workers during construction and operation where the needed skills can be sourced locally on a timely, cost-effective basis. Also, NedPower has created public-

private partnerships with Maysville Elementary School and Union Educational Complex to provide annual funds to support scholastic and extracurricular activities.

NedPower has community support from local legislative delegation and local political and economic development officials, as well as grass-roots support. NedPower has been open with the community about its plans. NedPower has

communicated with both supporters and non-supporters, including environmental groups. NedPower will continue to address legitimate concerns. NedPower believes it has already addressed most of the FAF's concerns.

*Agreement with local labor:*

NedPower has an agreement with the West Virginia Building and Construction Trades Council, AFL-CIO (Building Trades) whereby Building Trades will provide the labor force used in the construction of the project. Building Trades will, in turn, support the project.

*Rebuttal testimony:*

In his rebuttal testimony, Mr. Niessen characterizes the FAF as a group of discontented former members of the Conservancy who are more radical and outside the mainstream. He also noted that some of the FAF's witnesses do not live in the Allegheny Front area. Noting that one witness attached a petition signed by local residents, Mr. Niessen indicated that NedPower would be contacting those individuals directly to answer their questions.

In response to assertions that NedPower did not offer sufficient public notice of its project plans, Mr. Niessen stated that much of the Grant County community and its leadership was aware of the project long before Ms. Cook learned about it in mid- September 2002. Mr. Niessen speculated that Ms. Cook's residency in Fairfax, Virginia, and work in Washington, DC may have played a role in her delayed information. He reviewed all the contacts, presentations, advertisements, meetings, press coverage, etc.

Mr. Niessen stated that the FAF's position on this project is difficult to discern. Ms. Cook stated in testimony that the FAF would reevaluate its position on this project once NedPower met certain procedures and the Commission set siting guidelines. In interviews on West Virginia Public Radio, however, Ms. Cook has stated the FAF's adamant opposition to the project.

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Mr. Niessen countered Ms. Cook's assertion that this project could be built elsewhere in the state by attaching a map showing that the best wind resources are in Grant and Tucker County.

Mr. Niessen states that NedPower is following all appropriate regulatory procedures falling under the Endangered Species Act. NedPower has taken steps to lessen the project's impact on the WVNFS by relocating a turbine, access roads and other facilities. NedPower may apply for an incidental take permit accompanied by a Habitat Conservation Plan. NedPower would not oppose the PSC's issuance of a certificate conditioned upon NedPower's compliance with the Endangered Species Act. Mr. Niessen is unclear about what

Staff witness Perdue means when he recommends that the Commission condition its approval on “evidence of approval and/or acceptance of the . . . final endangered species study with any mitigation plans.” NedPower does not anticipate that the U.S. Fish and Wildlife Service or the WVDNR will have a formal role in approving NedPower's studies or efforts relating to the Endangered Species Act.

NedPower would not oppose the PSC's issuance of a certificate conditioned upon regulatory approval from other state agencies. This is what the Commission did in the Backbone Mountain case, Case No. 00-1209-E-EN and in the Mt. Storm case, Case No. 01-1664-E-CN. NedPower is seeking the PSC's approval first because it is the most important approval needed and because a PSC certificate lends credence and viability to a project.

In response to Ms. Cook's position that the State should establish clear criteria for siting wind power projects, Mr. Niessen notes that the West Virginia legislature has not enacted such policies, and no criteria exists for wind power projects other than the PSC certificate of convenience and necessity. NedPower believes that the Commission's certificate process under *W.Va. Code* § 24-2-11 is adequate to evaluate wind power facilities. The FAF's efforts to establish new standards for wind power siting in this case would be unfair.

Mr. Niessen contends that environmental concerns are only one facet of the PSC's balancing test. NedPower continues to believe that the project will have minimal impact on the environment in the Allegheny Front area. NedPower disagrees with the FAF's other assertions regarding benefits to the local economy and tax revenues. Mr. Niessen acknowledged that the turbines will be visible but believes that they will not constitute a significant impairment to important scenic and cultural resources. The turbines will be visible from only a small area of Dolly Sods which is difficult to reach. The turbines should be seen only minimally from the Jordan Run Road trail and wildlife viewing area. The FAF's testimony that tourism will be negatively affected is speculative.

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TESTIMONY OF JAMES ALEXANDER - President of Magellan WindPower LLC, one of the two members of NedPower, NedPower Mount Storm LLC; also Senior Vice-President of NedPower.

*Electrical infrastructure:*

All electrical components associated with the turbine unit will be out of view and safe from tampering. Electricity will be generated at the top of each tower and carried by enclosed wiring to a single step-up transformer mounted on a concrete pad at the base of each turbine. The power is collected through underground connections. Each transformer will boost the power generated by each turbine from several hundred volts to 34.5 kV. The underground power

collection system will transfer the power from all turbines to a step-up transformer that will boost the voltage from 34.5 kV to 500 kV for delivery to a new substation. The substation will be funded by NedPower and constructed by APS. The substation will house the protective relaying, metering and communications equipment. The substation will be interconnected to an existing 500 kV APS transmission line that extends across the project site.

Each turbine will be connected to the project's operations facility through underground fiber-optic cable. This will allow each turbine to be monitored and controlled remotely. NedPower plans to construct an operations and maintenance facility onsite to house the office, system control and data acquisition system as well as spare parts and maintenance equipment.

NedPower has consulted with engineers and constructors in designing the project.

Initial construction activities will be grading and construction access roads and turbine sites for all-weather use and surfacing access roads to minimize erosion. Roads will be 20-30 feet in width. Turbine sites will be 4,000 to 5,000 sq. feet in size.

Second, will be preparing foundations at each turbine site. This will involve geotechnical assessments for excavation and construction of each tower foundation. The design will be poured concrete with reinforcing steel, 45 feet in diameter and 25-30 feet deep. Both pad-mounted transformer foundations and underground power and communication connections will be installed at the same time.

Next, tower bases and top tower sections will be added. Turbine nacelles (the wind turbine/generator assembly to be placed on top of the tower) will arrive on site as complete units and be hoisted into place atop the completed towers.

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NedPower will contract with a qualified contractor to prepare the site and complete all construction and assembly activities at the site. The Building Trades agreement will provide access to a qualified and experienced workforce. The Building Trades' workers' experience with the Tucker County wind farm will have a positive impact on completion of the project.

#### *Operation and maintenance:*

Once operational, a staff of ten to fifteen persons will operate and maintain the project. Safety is important. Scheduled maintenance will occur on a periodic basis in accordance with manufacturers' instructions. Unscheduled maintenance will occur on an as-needed basis with utmost care and efficiency.

*Decommissioning:*

After a long useful life, and acknowledging that more efficient units could be developed in the future, NedPower recognized that it may choose to decommission the project at some time in the future. If this occurs, NedPower will remove all turbines and towers as required by covenants and lease agreements with landowners.

TESTIMONY OF TIMOTHY P. HENLE - Vice President of NedPower and Vice President of Magellan Windpower LLC.

*Preparation for interconnection with the transmission grid:*

A feasibility study was completed in May 2002. The study concluded that the APS transmission system was capable of accommodating the project without reinforcements to the system.

PJM is currently conducting a system impact study to identify any system constraints that may relate to the project's interconnection. This study will also refine the cost estimates related to any local, network or facilities upgrades required to accommodate the project's interconnection. This project should be complete in November 2002.

NedPower will then execute a facilities study agreement with APS and/or PJM. PJM will then conduct a facilities study and give NedPower a good faith final estimate of any local, network or facilities upgrades necessary to manage the requested interconnection. The facilities study should be complete by February 2003.

NedPower requests that the Commission issue a certificate for the project contingent upon NedPower's later filing of an executed Interconnection Agreement.

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*Exempt Wholesale Generator (EWG) status:*

NedPower has sought and received EWG status from the FERC. This status is required to avoid certain restrictions imposed by the PUCA of 1935.

*Sales on the wholesale market:*

The generated electricity will be sold exclusively on the wholesale market. There will be no sales either at retail or to West Virginia utility ratepayers. Wholesale rates are set by FERC. NedPower intends to file market-based rates with FERC. NedPower will compete with other wholesale generators, including

power marketers, regulated public utilities, EWGs and other independent power producers. NedPower will not compete with regulated public utilities in West Virginia. NedPower will not be in the business of transmitting or distributing electric energy. Although NedPower does not believe that this Commission needs to consider whether additional generating capacity is needed, NedPower believes that there is such a need. ECAR will face decreased capacity reserve margins and will be increasingly dependent upon an aging generation fleet if projects such as this one do not come on-line. ECAR's capacity should be diversified with renewable energy sources, such as wind power. Other markets served by APS transmission, such as the PJM power pool, lack diversity.

TESTIMONY OF LAIDLEY E. McCOY - Vice President Potesta & Associates, Inc.

NedPower retained Potesta to assist in various aspects of the project, including site assessment and environmental permitting. Potesta prepared a preliminary report dated September 23, 2002, and filed it with the Commission. Potesta also assisted NedPower in identifying and taking necessary action to secure regulatory permits and authorizations needed to construct and operate the project.

*The Potesta report - wildlife impact:*

NedPower is serious about conducting investigations to determine whether the project will have adverse environmental impact. NedPower asked Potesta to contact the U.S. Fish and Wildlife Service and the West Virginia Department of Natural Resources to inquire about rare, threatened and endangered species that might occur on the project site. The Service identified four federally listed species that could occur in the project area: the Indiana bat, the Virginia big-eared bat, the WVNFS, and the Cheat Mountain salamander. The Service made recommendations with respect to each species, including: (1) a habitat survey for the Cheat Mountain salamander and the West Virginia northern flying squirrel to determine whether the project includes areas with potential habitat. If so, then the Service recommended that species surveys be completed. (2) Two options

intended to identify summer foraging and roosting habits for the Indiana bat. One option permitted tree clearing during a period in which the Indiana bat is hibernating. (3) A Take assessment of the Virginia big-eared bat, that would be associated with the project. To the extent a take of this species caused from construction and operation of the project cannot be avoided, then the Service recommended a Habitat Conservation Plan and the preparation of an Incidental Take Permit.

In response to the Service's recommendations, NedPower hired a WVU consultant who prepared a habitat survey for the WVNFS. There are isolated areas within the project site where a suitable habitat for this species exists. The

consultant recommended that additional species survey be performed to find out if the squirrels are actually present.

A habitat assessment was performed related to the Cheat Mountain salamander. In one of the four project sub-areas, a potential habitat exists for the salamander. The consultant recommended that a species survey be performed to find out if the salamander is actually present.

NedPower directed Potesta to commission species surveys for the squirrels and the salamanders. These were to be completed in October 2002. If either the squirrels or the salamanders are present, NedPower will modify the expectant turbine sites, utility corridors and secondary road construction to minimize impact.

Potesta understands that NedPower will direct it to commission a habitat survey for the Indiana bat and an assessment of the potential for an incidental take of the Virginia Big-eared bat in the near future.

A Phase I Avian Risk Assessment was also performed and that scientist is filing testimony in this proceeding.

*Permits and authorizations:*

Exhibit 8 of the Application is a matrix describing the status of NedPower's efforts to obtain required permits for the project.

The testimony summarizes each of the following potentially applicable permits: USACE - Section 404 Nationwide Permit; Wetlands Delineation Approval Letter; WVDEP/Office of Water Resources - Section 401 Water Quality Certification; WVDEP/Office of Water Resources - NPDES General Stormwater Construction Permit and Soil and Sedimentation Control Plan; U.S. Fish and Wildlife Service - Threatened and Endangered Species; WVDNR/Public Lands Corporation - Right of Entry Approval; WVDCH - Archeological and Historical Review; FAA - Notice of Proposed Construction

or Alteration. The project should not require a federal environmental impact study because NedPower expects that the USACE will issue the project a Section 404 NWP.

*Rebuttal testimony:*

In his rebuttal testimony, Mr. McCoy states that FAF witness Cook's statement that NedPower is not complying with Endangered Species Act requirements is not true. Mr. McCoy notes that the Initial Potesta Report described the U.S. Fish and Wildlife Service's recommendations for studies. The November 7, 2002, supplement report prepared by Potesta attached follow-up

species studies of the squirrel and salamander. The sole purpose of these reports was to further NedPower's compliance with the Endangered Species Act.

Mr. McCoy then summarized the species survey performed by NedPower's consultants on the salamander and squirrel. Based on those surveys, NedPower does not need to change any siting for the salamander, but will change some things around to accommodate the squirrel.

Mr. McCoy says that NedPower does not need to apply for an incidental take permit with respect to the salamander. NedPower may apply with respect to the squirrel.

TESTIMONY OF RONALD A. CANTERBURY - Professor of Biology at Concord College in Athens, West Virginia. Ornithology (the study of birds) is the emphasis of his scholarship and research.

*Avian / Risk Assessment:*

Dr. Canterbury prepared a Phase I Avian Risk Assessment for Potesta dated September 20, 2002. The purpose of the Avian Assessment is to provide a general examination of potential impacts of the project on birds and, if impacts are noted, to suggest ways to minimize degradation of avian populations. In conducting the study, Dr. Canterbury traveled to the site and toured the site and surrounding area by car. He also walked portions of the project area. He examined the habitat and topography of the project area and recorded all birds that were seen or heard. He did not intend the visit to be a quantitative study or inventory of birds, rather, he intended to gain an understanding of the habitat and topography features and assemble potential target lists of birds that could be in the area. Next, he reviewed literature addressing the impact of wind turbines on avian populations. Third, he interviewed biologists, conservation officers, environmentalists and academics to gain insight on Grant County avian life and parties' concerns and recommendations with regard to siting. Dr. Canterbury concluded that there are two major concerns with the project: (1) the potential effect of project construction on

the habitat of the Golden-winged Warbler and (2) turbine lighting considerations. Overall, the project is projected to have minimal impact on avian life.

Dr. Canterbury offered six recommendations to NedPower: (1) Use modern wind turbine technology, including tubular tower structures and low-RPM blades; (2) relocate turbines from close proximity to the Stony River Reservoir; (3) minimize turbine lighting to the extent possible; (4) Minimize and reduce the risk to the Golden-winged Warbler through careful planning and consideration of habitats in micro siting of turbines; (5) consider a migration study and/or post-construction mortality monitoring; and (6) use existing roads to the extent possible.

*Further studies:*

Further studies are not necessary prior to the Commission's consideration of the Application. Dr. Canterbury has recommended that NedPower consider undertaking some additional investigations during and after the project construction: First, pre- and post- turbine studies to minimize the impact on nocturnal migrants to help the scientific and wind energy development communities to get a better understanding of the subject for future wind farms. Second, pre-and/or post-construction studies to assess how impacts on the Golden-winged Warbler would help with phases of conservation plan development for this species. These recommendations should not detract from the Avian Assessment's conclusion that the project is projected to have minimal impacts on birds.

*Comments filed in Backbone Mountain case:*

Certain comments that Dr. Canterbury wrote in an email criticizing a migration study performed by another scientist were offered by the Highlands Conservancy as expert testimony without Dr. Canterbury's knowledge. When Dr. Canterbury wrote the email, he believed that he was responding to an invitation from the Commission for public comment. If he had been officially requested to evaluate that project, he would have performed more work, including a detailed review of the other scientist's study.

The work Dr. Canterbury has performed in this case is much more detailed. He believes it would be a mistake to compare the brief comments offered in Backbone Mountain to the extensive analysis prepared for this case.

*Rebuttal testimony:*

In his rebuttal testimony, Dr. Canterbury focuses on the comments of Dr. Evans, attached to the FAF witness' testimony. Dr. Canterbury asserts there is no empirical evidence to back up the FAF's avian comments, except for bird banding data submitted

by Dr. Eddy. The lack of scientific support is in stark contrast to Dr. Canterbury's analysis.

Dr. Canterbury summarizes the methodology he used to prepare his Phase I study and noted that his methodology is generally accepted in the avian and wind communities. Dr. Canterbury then responded to each of the criticisms of his work put forth by the FAF commentators. In conclusion, Dr. Canterbury stated that if NedPower implements his recommendations set forth in his testimony and in his Phase I report, then the project will have minimal impact on birds.

REBUTTAL TESTIMONY OF EDWIN D. MICHAEL - Dr. Michael did not submit direct testimony. The purpose of his rebuttal is to respond to criticisms contained in Peter Weigl's comments submitted as an attachment to Linda Cooper's FAF testimony.

Dr. Michael conducted a habitat survey for the WVNFS and the project in August 2002. His report was filed by Potesta on September 23, 2002. He concluded that a small WVNFS population exists at one site in the project area. He refutes all of Dr. Weigl's criticisms of his work. He concluded that the Endangered Species Act does not require that NedPower seek and obtain any permits with regard to the WVNFS.

REBUTTAL TESTIMONY OF DALE STRICKLAND - Dr. Strickland did not submit direct testimony. The purpose of his rebuttal testimony is to rebut criticism of Dr. Canterbury's Phase I Avian Risk Assessment. Dr. Strickland approves of Dr. Canterbury's methodology and conclusions. He concluded that the data supports Dr. Canterbury's conclusions and that his recommendations are sound.

REBUTTAL TESTIMONY OF MICHAEL REEL - Grant County Development Authority and Grant County resident. Mr. Reel did not submit direct testimony. The purpose of his rebuttal testimony is to rebut Ms. Cook's and Mr. Cooper's representations regarding economic issues. Mr. Reel expects hundreds of thousands of dollars to be infused into the local economy as a result of the project. He itemizes his expectations in the rebuttal testimony, including tax revenues, lease revenues, local purchases, and job creation. He disagrees with the FAF's fears regarding tourism, and believes the turbines create no threat to tourism. He believes there is great local support for the project.

#### Staff's Pre-filed Direct Testimony

TESTIMONY OF DARRELL W. PREECE - Utility Analyst Supervisor for the Public Service Commission.

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The project will consist of up to 200 wind turbines and have a generating capacity of up to 300 Megawatts. The project is divided into three phases; the first, or Central Phase, is expected to include approximately 100 turbines with a nameplate capacity of approximately 164 mW. The turbines will be erected in two to three rows along a ridge line approximately two miles east of the Mount Storm power plant and Mount Storm Lake, all in Grant County. The turbines will be no closer than 600 - 800 feet apart and will be approximately 328 feet tall. The project area is approximately 14 miles long, with an average width of ½ mile, and runs south-west to north-east. Construction of the Central Phase is expected to begin by the second quarter of 2003, with operation to begin in December 2003.

The project has been granted EWG status by FERC. All sales must be exclusively to the wholesale market. Rates will be under the exclusive jurisdiction of FERC.

The cost of the total project is in excess of \$300 million, including costs to construct the substation and related interconnection facilities to the APS grid. Funding is not complete at this time. Normally funding is completed after certificates are granted. The normal funding for this type project is 70% debt and 30% equity. NedPower expects funding for this project to be in a range between 50% debt and 50% equity, to 80% debt and 20% equity. NedPower does not intend to apply for public funds.

Without consideration of environmental or engineering factors, Mr. Preece believes there is no reason to deny the certificate based on either financial or rate making considerations.

TESTIMONY OF WAYNE M. PERDUE - Technical Analyst in the Commission's Engineering Division.

Because this is a EWG, as opposed to a regulated utility, the main focus of the engineering review process is oriented toward environmental, project site, and electrical interconnection concerns. The economics of the project will not directly affect West Virginia ratepayers.

The basic technical concerns for this project are: First, environmental issues regarding wetland relocation, noise production and site constriction. Second, electrical interconnection concerns including system impact/stability and the need for equipment upgrades. Approval of the certificate should be contingent upon a final interconnection agreement between the project developer and the transmission and distribution company.

The total acreage of leased land will be approximately 8,000 acres. Only 3% of those acres will actually be used for the turbines. Surface mining and timbering operations

have been conducted on the land for many years, leaving large cleared areas and wide haul roads. These factors will help to minimize the environmental impact of this project.

*Wetlands Survey from the US Army Corp of Engineers (USACE):*

Potesta was to meet with USACE on October 23, 2002. After the meeting NedPower expected USACE to approve the preliminary delineation of any wetland areas in late October 2002. Once the project's site development was complete, another wetlands delineation would be submitted to the USACE with final approval expected no later than March 2, 2003.

*Rare, Threatened, or Endangered Species (RTES) Study from U.S. Fish and Wildlife Service and West Virginia Division of Natural Resources (WVDNR):*

All studies are not complete and Staff will review them as they become available. Four federally listed species could occur in the area, including the Indiana bat, the Virginia big-eared bat, the WVNFS, and the Cheat Mountain Salamander.

For the Cheat Mountain salamander and the WVNFS, the U.S. Fish and Wildlife Service recommended habitat surveys. Those have been scheduled for late October 2002. For the Indiana bat, the U.S. Fish and Wildlife Service recommended identification of summer foraging and roosting habitats for the purpose of permitting tree clearing during the hibernating season. For the Virginia big-eared bat, the U.S. Fish and Wildlife Service recommended a survey for the potential take of the species from construction and/or operation. If take is unavoidable, then U.S. Fish and Wildlife Service recommends a Habitat Conservation Plan and the preparation of an Incidental Take Permit. NedPower expects to modify turbine sites, utility corridors and secondary road construction locations to minimize impact on the four species.

*Avian Risk Assessment:*

The Phase I Avian Risk Assessment was to determine the degree of risk at a particular site and how impacts or potential impacts need to be studied in more detail. Overall, the project is expected to have minimal impact on birds, except that the Golden-winged Warbler species appears to be on the decline. The study recommended that NedPower take this species habitat into consideration in the turbine layout. Also, to avoid the attraction of nocturnal migration birds, turbine lighting associated with avian mortality should be avoided. Lighting visibility in the view shed should also be considered. NedPower will discuss lighting with the Federal Aviation Association.

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*Historical/Archaeological Study from West Virginia Division of Culture and History (WVDCH):*

Potesta has contacted the WVDCH to discuss. Due to the large area and small portion to be disturbed, the entire project area will not be assessed. Rather, NedPower and Potesta, with the WVDHG's concurrence, will perform selective excavations. When the final project design is complete, NedPower will meet with WVDCH for a final review. The study should be complete by April 2003.

*Residence proximity and viewshed:*

The nearest neighborhood in Bismark, WV, is 6/10 of a mile from the project area, and one mile from the nearest turbine. A number of turbines will be visible

from Bismark. Exhibit 1, Appendix C contains a topographical viewshed analysis. From certain locations, it appears that all of the 200 turbines would be visible. From major tourist areas, up to 120 turbines may be seen from the highest elevations in the Dolly Sods Recreational Area and Monongahela National Forest. The Canaan Heights and Brown Mountain areas may have from 1 to 20 turbines visible at a distance of approximately 6 miles. Exhibit 1, Appendix D is a photograph scaling the wind turbines to appear at the size they would appear if viewed from a distance of 2.5 miles. This image would be reduced by 40% to determine the size of the turbines visible from 6 miles away. From a visibility perspective the turbines would be very small from 6 miles away.

*USACE Section 404 Nationwide permit:*

If there is no impact on streams or wetlands, a Section 404 will not be needed. Potesta is in the process of determining whether there will be any streams or wetlands affected by construction. If there are minimal impacts, NedPower should qualify for a Section 404 permit. NedPower intends to relocate road construction, utility corridors, and turbine sites to minimize stream and wetland disturbance. This permit process should be complete in January 2003.

*WVDEP Section 401 Water Quality Certificate:*

Section 401 approval is automatic if a Section 404 permit is granted.

*WVDEP NPDES General Stormwater Construction Permit and Soil and Sedimentation Plan:*

This permit is generally required for storm water runoff during construction. Potesta is completing a storm water pollution prevention plan and a groundwater protection plan. These should be filed by January 2, 2003, with a permit issued by February 2, 2003.

*Noise:*

There is no negative impact expected from noise on local residences or businesses. Past a 900 yard distance, a wind turbine's noise is less than 30 dBA, comparable to people whispering in a quiet room. At 250 yards, the turbine is no louder than a kitchen refrigerator. Bismark is approximately one mile away from the nearest turbine and it is unlikely that turbine noise will be noticeable there.

*Interconnection Study:*

APS has completed a Feasibility study which indicated that the APS transmission system can accommodate this project without reinforcement. PJM Interconnection, LLC is currently conducting this project's System Impact Study

to refine the cost estimates related to any local, network, or facilities upgrades required to accommodate the interconnection. This study should be complete in November 2002. By February, PJM expects to have completed its Facilities Study which will give NedPower a good faith estimate of any local, network or facilities upgrades need for interconnection. NedPower asks that the Commission certificate be issued contingent upon the signing of a final Interconnection Agreement.

*Site visit:*

Staff visited the site in September 2002. It was impossible to examine the entire project area, but Staff visited areas in the Central, Northern, and Southern phases as well as Bear Rock at the Dolly Sods Recreation Area.

*Land leases:*

NedPower has leases for 3/4 of the needed land. There will not be right-of-way issues because NedPower has a lease for the land on which the substation will be built. The APS transmission line crosses this leased property.

*Recommendation:*

Engineering Staff recommended approval of the project and the grant of a certificate of convenience and necessity. NedPower should be required to submit the following items prior to operation:

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- 1) Copies of the final Interconnection Agreements between NedPower and PJM.
  - 2) Copies of all necessary environmental permits and/or certifications.
  - 3) Evidence of approval and/or acceptance of the wetlands delineation.
  - 4) Final endangered species study with any mitigation plans.
  - 5) Historical/archeological significance study with any mitigation plans.

FAF's Pre-filed Direct Testimony

TESTIMONY OF DONNA T. COOK - President of FAF, a citizens group formed in September 2002 to address concerns about the wind power projects along the Allegheny Front.

Ms. Cook grew up on a farm east of the Allegheny Front. Her mother still lives on that farm, and Ms. Cook and her husband purchased the adjacent farm.

She currently resides in a suburb of Washington DC but will retire to her West Virginia farm.

The FAF does not oppose wind power development, but believes that the Commission should not issue the certificate until it follows procedures to ensure that the project will not harm endangered species and migratory birds, as well as determined that the siting is appropriate.

There are no conclusive findings about the effects of the project on protected species, yet NedPower seeks expedited consideration of its certificate application. There are too many unanswered questions right now to make a decision. Procedures required by the Endangered Species Act have not been followed in this case.

The State has not established any kind of a process or guidelines to determine where and how wind power projects should be sited. The process should consider whether projects: 1) offer a balance between development and protection of mountain ranges; 2) should be required to set aside an equivalent amount of land for permanent protection and preservation; 3) affect native vegetation, soils and streams. The state should also think about how many turbines it will allow on the Allegheny Front.

Ms. Cook believes the project will hurt tourism in the area because the Allegheny Front is visible from several major attractions. Furthermore, the project will affect scores of adjacent property owners to the east and lead to property devaluation. Other concerns are noise levels, bird mortalities, destruction of wildlife habitat and endangered species.

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The neighborhood has not been adequately informed about the project. There was little public notice and no proper local hearing by government officials. Many area residents are opposed. A petition with signatures from local residents is attached to Ms. Cook's testimony.

**TESTIMONY OF JOHN W. COOPER - Attorney, involved citizen of Tucker County, member of many local environmental groups.**

Tucker County's economy has suffered significant coal mining, and shoe plant job losses since the mid-1980's. The only significant growth in the economy has been in tourism. The population has declined and the number of persons living below the poverty level, and on fixed incomes has increased proportionately. Tourism is the single most- important facet of the county's economy. With the completion of Corridor H in the next few years, the influx of tourists should increase. That growth could be stymied by wind power projects. The "wilderness experience" sought by tourists will be compromised.

Grant County's economy is slightly better than Tucker County's, and its population has increased slightly. Both counties have been the victims of flooding. The three underground coal mines located in the vicinity have closed. Two hundred jobs were lost recently with the closing of a chicken processing plant. Tourism has become a substantial part of Grant County's economy. The turbines may make vacationers less inclined to visit the area.

Mr. Cooper has viewed the initial stages of the Tucker County FPL, Energy, LLC project and is of the opinion that the pristine vista will be forever damaged by that project. Those turbines do not yet have their rotary blades attached, which will raise them up an additional 100 feet, yet they are clearly visible from tourist areas. There are currently no guidelines to establish distances between windmills, or excluded areas. The natural beauty of the Canaan Valley is its primary draw for tourists. He argued that we cannot afford to deface this natural landmark with industrial structures.

The tax incentives for these projects will hurt the counties. Mr. Cooper notes that the state legislature, in 2001, enacted *W. Va. Code* §11-6A-5a, which limits taxation of the turbines to their "salvage valuation." The result is that county school boards and county commissions will be deprived of the tax revenues which these unsightly behemoths would have otherwise placed in their coffers. The generated energy will go to customers outside the state. The economic benefit accruing to the people of Tucker County or Grant County will be minimal, while the indirect adverse affects on tourism will be substantial, irreparable and permanent.

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The application should not be granted. Future projects should not be approved without specific rules and guidelines regarding 1) the number of projects and location of projects and individual units within a defined geographic area; 2) the location and distances between the erection of individual windmill units; and 3) designation of certain protected areas in which no units should be constructed to assure the protection of viewsheds in and surrounding highly sensitive areas. Furthermore, the Commission should issue rules ensuring that school boards and county commissions receive direct and substantial economic benefits as compensation to offset the adverse visual impacts.

TESTIMONY OF LINDA COOPER - Member of the Board of Directors of Friends of Blackwater, assisting the FAF in efforts regarding NedPower's project.

Attached to her testimony are reports and comments received from various scientists and professors. The FAF stated that it would attempt to have these persons present to testify at the hearing on November 18<sup>th</sup>, 2002.

Dr. Murray contradicted NedPower's expert testimony regarding the impact of the project on birds, impact on bats, impact on the WVNFS, and impact on the Cheat Mountain Salamander. Dr. Murray concludes that there are gaps in the

available information on the ecology of the area proposed for construction. Construction without additional research would most probably result in a take of one or more federally endangered species. NedPower's reports underestimate the importance of Allegheny ridges as migration pathways for bird species, especially in the size classes of thrushes and warblers. NedPower's reports discount the likelihood of bat mortality resulting from the attraction of insects to lighting. The NedPower reports do not adequately address the need for further surveys and studies.

Dr. David H. Pistole agrees that there is a need for further surveys and plans regarding bats before construction begins on this project. Dr. Pistole characterizes the information provided by NedPower as very vague and insufficient.

Dr. Peter Weigl comments that extensive surveys and site planning are required to avoid significant take of the WVNFS. He believes that an incidental take permit is necessary to avoid an illegal take.

The Brooks Bird Club comments that migrating birds occur in large number along the Allegheny Front and that they are vulnerable to attraction by lights on windmills. Windmill kills result from lighted towers on foggy nights and low clouds. This type of weather is common on Dolly Sods, especially during the Fall and Winter months. The best type of lights to avoid avian attraction may be flashing strobes. The FAA should require or only permit projects that use safe lights.

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William R. Evans criticizes Dr. Canterbury's conclusions in the Phase I Avian Risk Assessment submitted by NedPower. He asserts that there are no valid grounds for Canterbury to have concluded that the project will have "minimal impact" on bird migration. The authors of NedPower's filing are a bit reckless to have made such an assumption. Much more research is needed to make any determination regarding the affect of the project on nocturnal avian migration.

#### Council's Pre-filed Direct Testimony

TESTIMONY OF STEVE WHITE - Director of Affiliated Construction Trades Foundation, a division of the W.Va. State Building and Construction Trades Council, AFL-CIO.

Mr. White rebuts testimony filed by the FAF arguing that the economies of the local areas will be stymied by the project.

Mr. White believes that the project will have a significant positive economic impact on the local area and the State. He believes the project will result in \$25

million in new business sales, 331 new jobs (including 200 construction jobs) which will generate \$7.6 million in wages and benefits and \$2.8 million in taxes.

### **Hearing Evidence**

The hearing convened as scheduled on November 18, 2002, and reconvened on November 19, 2002. Citations to the transcript from November 18, 2002 will be cited as Tr. I, p. \_\_\_, and citations to the transcript from November 19, 2002, will be cited as Tr. II, p. \_\_\_.

NedPower appeared by counsel, Christopher Callas, Esquire, and Stephanie Mullet, Esquire. The Council appeared by counsel, Vincent Trivelli, Esquire. The FAF appeared by counsel, John Barrett, Esquire. Staff appeared by counsel, Leslie Anderson, Esquire, and Caryn Watson Short, Esquire.

The Commission heard public comment from Darwin Snyder, President of the North Central West Virginia Building and Construction Trades Council, who spoke in favor of NedPower's application. William Fouch, Editor of the *Grant County Press*, also spoke in support of the project. Jeff Barger, a Grant County Commissioner, spoke in favor of the project. Doreen Kitzmiller, of Mount Storm, also supports the project. Ruby Kline Allison, of Mount Storm also supports the project. Judy Rodd, of Moatsville, opposes the project. Frank Young, President of the Highlands Conservancy, does not oppose project, and stated that the Highlands Conservancy filed a position letter to that effect with the

Commission. Charles Thomas of Alexandria, Virginia, who owns a vacation home in Grant County, opposes the project. Robert F. Hurley, of New Creek, also opposes the project. Peter Shoenfeld, of Silver Spring, Maryland, who owns a home in Canaan Valley and is a member of the West Virginia Highlands Conservancy, also opposes the project. Julian Martin, of Charleston, also spoke in opposition to the project. Rick Hicks, of Augusta, and Principal of Union Educational Complex in Mount Storm, spoke in support of the project. Daniel Jones of Maysville, spoke in opposition to the project. Mike Ross, State Senator, spoke in favor of the project. Walt Helmick, State Senator, also spoke in favor of the project. Jamie Willis of Maysville, spoke in opposition to the project. This concluded the public comments.

At the outset of the evidentiary portion of the hearing, the Chairman ruled that reports attached to pre-filed testimony would be permitted to be introduced into evidence if the experts who authored the reports, or who adopted the reports as their own testimony, were present at the hearing to testify. Reports whose authors or adopters were not present would be lodged in the case file as public comment. Tr. I. p. 93. The Commission ruled that Dr. Whitmore, who adopted the pre-filed report of Dr. Murray, would be permitted to testify based on the pre-filed report, but would not be permitted to expand his testimony to other areas. Tr. I. p. 96-97.

The first witness to testify was Hieronymus J. Niessen for NedPower. Mr. Niessen has been the primary contact with the local community regarding plans for the project. Tr. I. p. 99. Mr. Niessen's pre-filed direct and rebuttal testimonies were marked and received into evidence as Exhibits HN-1 and HN-2. Tr. I. p. 100-101. NedPower is a Delaware corporation and all of the owners are Americans except for Mr. Niessen who is a United States resident. NedPower's sister corporations in Europe has developed projects in Germany, Ireland and Greece, and India on a smaller scale than the project proposed in West Virginia. Tr. I. p. 103-104. NedPower's 200 turbine proposal in West Virginia will be the largest windfarm in eastern North America. Tr. I. p. 104. After completion, NedPower expects to sell energy to entities such as Green Mountain Power in the PGM West market. Mr. Niessen has no way of saying whether the power produced will serve customers in West Virginia. Tr. I. p. 105-106.

From top to bottom each wind turbine will measure approximately 315 feet. NedPower's Federal Aviation Administration application stated a height of 430 feet to avoid stating a height that ends up too low. NedPower expects the total height to be 315- 325 feet, and not to exceed 400 feet, including the blades. Tr. I. p. 106-107; 117. The height of each individual turbine may vary depending upon whether the turbine is built high on a ridge or lower on a ridge. Tr. I. p. 117. The 325 feet stated by Mr. Niessen was later corrected by counsel to 100 meters, which equals 328 feet. Tr. I. p. 133. NedPower

would not object to a Commission order which placed a height limit of 400 feet on each turbine. Tr. I. p. 133-134.

Mr. Niessen dismissed Mr. Barrett's question whether NedPower would remove the turbines in the event it no longer wished to operate them, by saying that it is inconceivable that if NedPower went out of business, no other operator would step in to run the windfarm. Tr. I. p. 107-108. Mr. Niessen stated that NedPower has assured the landowners that if the technology becomes obsolete, then NedPower would dismantle the turbines. Tr. I. p. 109. Mr. Niessen expects that NedPower's lenders will require as a term of the loan, that NedPower remove the turbines after so many years. Tr. I. p. 109.

NedPower first approached landowners in Grant County in January 2001. NedPower first notified the U.S. Fish and Wildlife Service about the project in June 2002. Tr. I. p. 110. One reason for the delay was that NedPower didn't want to contact the Service until it was sure of the location of the project. Tr. I. p. 111.

The total cost of the project is \$300 million plus. Tr. I. p. 111. NedPower requested expedited treatment of its certificate application because each turbine must be operational by January 1, 2004, in order to take advantage of a federal tax credit which may expire on December 31, 2003. Tr. I. p. 113; 127-128. This tax credit has been extended by congress from time to time and the last

extension was a 2-year extension. The wind industry hopes that Congress will extend the credit again but there is no guaranty. Tr. I. p. 113; 126-128.

NedPower has estimated that Grant County will receive \$500,000 in tax as a result of the project, but that number is only an estimate and is dependent upon all 200 turbines being built. Tr. I. p. 114-115. The construction jobs that the project will create will be temporary and will last from 6 - 12 months. Tr. I. p. 115. The 6 - 12 months does not include "down-time" when work is not possible due to inclement weather. Tr. I. p. 116.

NedPower has leased 5,500 acres of the total 8,000 it needs to complete both phases of the project. The un-obtained leases pertain to the northern phase of the project. Tr. I. p. 118. NedPower's leases to date involve approximately 25 separate landowners. Tr. I. p. 119. Mr. Neissen estimates that it will negotiate with approximately 5 to 6 additional landowners for the remaining leases. *Id.*

Some of the project area has in place haulage roads and clearings due to prior timber operations and surface mining. Tr. I. p. 120. Due to uncertainty as to the location of endangered species, and the possible need to move the project area to avoid species habitat, Mr. Neissen cannot say what percentage of the final project area is already cleared. Tr. I. p. 120-122.

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NedPower's proposed location took into consideration viewshed issues and low population. Tr. I. p. 122-123. The American Wind Energy Association of turbine manufacturers states that beyond a distance of 900 yards, or 2,700 feet, the noise generated by a typical wind turbine is less than 30 decibels. Tr. I. p. 129-130. Thirty decibels is comparable to persons whispering in a room. Tr. I. p. 130. NedPower will relocate a turbine that is found to be sited within 820 feet of a permanent residence. *Id.* At 820 feet, a turbine would produce noise equivalent to a kitchen refrigerator. Tr. I. p. 138.

Mr. Neissen believes there is a current need for additional power on the United States' transmission grid. There is a clear demand for renewable energy, particularly on the east coast. Tr. I. p. 124-135. Mr. Neisson acknowledged that there are opponents to windpower in Europe but disagrees with assertions that European countries regret the construction of wind power turbines. Tr. I. p. 135-136.

Approximately one-half of NedPower's project will be financed by equity and one-half by bank loans. Investors are attracted to the project because of the federal production tax credit. Tr. I. p. 136-137. NedPower intends to built up the debt reserves required by its lenders during its first year of operations, in lieu of paying dividends. Tr. I. p. 143. NedPower would object to a bonding requirement. Tr. I. p. 143-144.

NedPower's transmission lines will be built underground and will not require herbicide spraying for maintenance to the same extent that power lines generally require. Tr. I. p. 139-140. The life expectancy for each turbine is 25 years, but more advanced technology could lead to an earlier replacement. Tr. I. p. 140.

NedPower intends to minimize turbine lighting in the interest of birds and bats. Tr. I. p. 141-142.

The next witness to testify on behalf of NedPower was Timothy P. Heinle, who works in energy project development. Mr. Heinle's pre-filed direct testimony was marked and admitted into evidence as TH-1. Tr. I. p. 146-147. Mr. Heinle expected to complete a system in-house study of the interconnection with APS by November 2002. Mr. Heinle expected a facilities study with APS to be completed by February 2003. Tr. I. P. 149. NedPower would not object to filing with the Commission its executed interconnection agreement with APS. *Id.* NedPower will not compete with regulated electric utilities in West Virginia. Rather, NedPower will compete in the wholesale market with other wholesale generators. Tr. I. p. 150. The ECAR has stated that without new electric generation projects, it will face reduced capacity reserve margins and an aging generation fleet. Tr. I. p. 152.

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The next witness to testify was James Alexander, President of Magellan Wind Power and Senior Vice President of NedPower. Tr. I. p. 155; 167. Mr. Alexander's pre- filed testimony was marked and admitted into evidence as JA-1. Tr. I. p. 156; 159. Magellan is a privately owned development company involved in a number of energy ventures. Tr. I. p. 164; 165-66. The NedPower project is Magellan's first venture in wind power and Magellan is a 50% partner with NedPower on this project. Tr. I. p. 165; 166.

Mr. Alexander sponsored the introduction into evidence of a memorandum agreement between NedPower and Building Trades, as Applicant's Exhibit No. 1. NedPower requests that the Commission include in any Order granting this certificate application, language making all representations and commitments in the memorandum agreement binding. Tr. I. p. 158-160.

Mr. Alexander stated that the substation will be built adjacent to the Allegheny power line and will be located on land that NedPower has leased from a private landowner. Tr. I. p. 101-161.

Mr. Alexander stated that in the event the turbines are decommissioned, the dismantling process would take everything back down to ground level. The foundations would not be removed from the ground, but everything above ground would be removed as would any related facilities. Tr. I. p. 161. Mr. Alexander believes, but is not certain, that the lease agreements specify that only objects above ground will be removed. Tr. I. p. 162. Mr. Alexander cannot say whether the turbines, once dismantled, would have any salvage value. *Id.* Mr. Alexander

believes that the lenders for the project will place appropriate requirements regarding the availability of financing for potential future decommissioning of the turbines, and that this Commission should not feel the need to place any such requirements on NedPower. Tr. I. p. 169-170.

The computerized SCADA system for the project will be located on site in an operations building. Tr. I. p. 163. The project will not be interconnected to the VEPCO power line referred to by the public commentator, Daniel Jones.

The next witness to testify for NedPower was Eli McCoy, Ph.D. Vice President of Potesta & Associates. Potesta was engaged by NedPower to perform certain environmental and engineering tasks. Tr. I. p. 170-171. Mr. McCoy's pre-filed direct and rebuttal testimonies were marked and admitted into evidence as LEM-1 and LEM-2. Tr. I. p. 171-172. In the course of his work for NedPower, Potesta reviewed the federal Endangered Species Act, 16 USC §1531, the Migratory Bird Treaty, and the National Environmental Policy Act of 1969. Tr. I. p. 190-191. Potesta also contacted the U.S. Fish and Wildlife Service and the West Virginia Department of Natural Resources to give

those agencies an overview of the project and request information on species and issues of concern. Tr. I. p. 191.

Dr. McCoy testified that NedPower was currently consulting with the U.S. Army Corps of Engineers on whether it needs a Clean Water Act Section 404 fill permit. Tr. I. p. 173-174. The Corps visited the site the week prior to the hearing, a meeting was held, and NedPower showed the Corps the wetlands delineated within the project. Dr. McCoy believes the Corps were satisfied that as long as NedPower could "stay within the requirements of the nationwide general permit, [the Corps] didn't see any reason why one could not issued." Tr. I. p. 175.

Nationwide general permits (NWP) are issued by the Corps for certain categories of activities, and entities engaging in those activities register for the appropriate permit. *Id.* Dr. McCoy has no reason to believe that the Corps will not issue a NWP to NedPower for this project. Tr. I. p. 200. If a NWP is issued, then NedPower would have no obligation to consult with any other federal agency regarding potential impact on endangered species. Tr. I. p. 201. If an entity cannot obtain a NWP, it must then obtain an individual permit from the Corps. Tr. I. p. 176. An individual permit is more difficult to obtain. The Corps first makes an environmental assessment of the potential environmental impact of the project on water, air, land use, and species. If the Corps makes a finding of no significant impact (a FONSI determination), then the Corps proceeds with permitting. If the Corps finds a significant impact, then it does a more in- depth assessment of that impact. This step would require consultation with the U.S. Fish and Wildlife Service. Tr. I. p. 178.

A finding of significant impact would necessitate the gathering of additional information to determine whether the project would involve the Endangered Species Act which is found at 16 U.S.C. §1531. Tr. I. p. 178-179; 190.

A habitat conservation plan is a term used by the Fish and Wildlife Service referring to a mitigation plan to minimize the effects of human activities on a certain species. Tr. I. p. 185. An incidental take permit is pursuant to Section 10 of the Threatened and Endangered Species Act. An applicant obtains this permit when activities may result in the loss of certain species. Tr. I. p. 185. Section 9 of the Act prohibits taking endangered species. Tr. I. p. 185-186. If a developer does its best to avoid any endangered species and has no reason to believe that such species will be harmed by construction, then there is no reason to apply for an incidental take permit, nor is there a legal requirement to do so. Tr. I. p. 206-207.

Dr. McCoy stated that there is no legal requirement for an entity to submit a habitat conservation plan to Fish and Wildlife Service. Whether to do so is left to the developer's

discretion. Tr. I. p. 186. The stronger incentive to take environmental precautions is to avoid violating the federal Endangered Species Act, which could impose substantial legal and civil penalties. Tr. I. p. 188. The Endangered Species Act does not require NedPower to receive approval of an endangered species study from DNR prior to commencing construction. Tr. I. p. 189.

Despite NedPower's belief that it will be awarded a NWP by the Corps of Engineers, NedPower has voluntarily consulted with the U.S. Fish and Wildlife Service regarding its windpower project. Tr. I. p. 200-201.

The U.S. Fish and Wildlife Service, in response to a letter NedPower sent asking for information on threatened and endangered species in the project area, identified the Virginia big-eared bat as having habitat in the area. Tr. I. p. 179. The Service suggested that habitat and/or mist-netting surveys of the bat be conducted. As of the hearing date, NedPower has not conducted those surveys because by the time it received the suggestion from the Fish and Wildlife Service, the bat netting season had ended or was ending. Tr. I. p. 179-181. NedPower was then in the process of engaging a researcher to conduct a future habitat survey for the Indiana bat and the Virginia big-eared bat. Tr. I. p. 181-182; 205. If the endangered species are found in the project area, Potesta has recommended, and NedPower has agreed, to submit plans to the U.S. Fish and Wildlife Service on how NedPower will address those species in its construction plans. Tr. I. p. 192-193.

With respect to the Indiana bat, the Fish and Wildlife Service suggested two options to NedPower. One was to clear the project site during the bats' hibernaculum and the other was to review the percent of available habitat relative

to the overall project area. In NedPower's opinion only a small percentage of the project area will be disturbed. Tr. I. p. 187-188. NedPower plans further studies on both the Indiana bat and the Virginia big-eared bat to be completed prior to the project going into operation. Tr. I. p. 198-199. The studies will include normal biological assessment to determine species protection and consultation with Fish and Wildlife for input. Tr. I. p. 199.

NedPower had engaged Dr. Ed Micheal to survey the project area and attempt to capture and identify the WVNFS subspecies. Dr. Michael identified a small area habitat area within the project boundaries and captured some of the subspecies in October of 2002. Dr. McCoy did not know whether Dr. Michael's information had been provided to either the U.S. Fish and Wildlife Service or to the West Virginia Division of Natural Resources. Tr. I. p. 182-184. NedPower's construction will avoid the habitat and ensure that corridors are available to the species. Tr. I. p. 195. Dr. McCoy believes there is no reason for NedPower to request an incidental take permit from the U.S. Fish and Wildlife Service. Tr. I. p. 196; 203. On August 30, 2002, NedPower received a letter from U.S. Fish and Wildlife pertaining to the WVNFS and making certain recommendations. Tr. I.

p. 201. NedPower has followed all of those recommendations. Tr. I. p. 202. Unless the project changes, there is no additional legal requirement or obligation that NedPower continue to consult with the U.S. Fish and Wildlife Service with respect to the WVNFS. Tr. I. p. 203.

With respect to the Cheat Mountain Salamander, NedPower contracted with Dr. Pauley who found three areas where the species might potentially be located. Dr. Pauley did not, however, find any salamanders at the three potential sites. Tr. I. p. 196-197. NedPower does not plan to take any further action with respect to the Cheat Mountain Salamander. Tr. I. p. 198. NedPower does not expect any further input on this species from the U.S. Fish and Wildlife Service. Tr. I. p. 204.

NedPower has not conducted a noise level study and Potesta does not have expertise in that field. Tr. I. p. 184.

Dr. McCoy believes the project would benefit the State and noted that Magellan has a strong commitment to environmental compliance. See January 17, 2003, Joint Stipulation Regarding Missing Testimony (Testimony Stipulation), at p. 1. Dr. McCoy believes that the experts hired by NedPower to conduct the environmental studies, who are all noted in their respective fields, would have arrived at the same results if they had been hired instead by the Commission. *Id.* p. 2.

The next witness to testify on behalf of NedPower was Dr. Ronald A. Canterbury, NedPower's ornithology consultant. Dr. Canterbury's pre-filed direct and rebuttal testimony was adopted and entered into the record as RAC-1 and RAC-2. Dr. Canterbury also sponsored the following exhibits which were

accepted into evidence: Applicant's Exhibit 2 - Endangered Species Status and Phase I Avian Risk Assessment, September 24, 2002 for the Project; Applicant's Exhibit 3 - Endangered Species Status Report for a Proposed Wind Farm in Grant County, West Virginia, Supplemental Report, November 7, 2002. *Id.* p. 2-3.

Dr. Canterbury conducted a Phase I Avian Risk Assessment with respect to the impact of the NedPower project. A Phase I requires three things, the first two of which are (1) a site visit and (2) examination of available literature. Tr. I. p. 232-233. Dr. Canterbury estimated that the actual bird mortality rate for the Project would be approximately four bird deaths per turbine per year, and up to 25 deaths per turbine per year would be considered minimal. *Id.* at 3. Twenty-five birds, multiplied by 200 turbines per year would yield 5,000 bird deaths per year. *Id.*

The life span of a nocturnal migrating songbird traveling along the Allegheny Front is approximately 1 to 2 years; Most songbird migration occurs at nights. Most bird

migration in the area takes place in the Fall. Dr. Canterbury did not conduct a Fall migration study at NedPower's proposed project site. Dr. Canterbury is not aware of any significant avian mortality studies within 500 miles of the NedPower project site involving wind turbines. *Id.*

Dr. Canterbury spent only one day at the project site but he has conducted research in the general area for many years. Phase I Avian Risk Assessment standards require only one day. *Id.* p. 3-4. The purpose of a Phase I is to determine whether a migration study is needed. Based on his Phase I and his years of experience, Dr. Canterbury concluded that a migration study is not needed. Tr. I. p. 224.

The Allegheny Front Migration Observatory is located at Red Creek in Dolly Sods, approximately 3 miles from the NedPower project site. Dr. Canterbury has no reason to disagree with Dr. Greg Eddy of the Brooks Bird Club that the Observatory is located on one of the most important migration routes for neotropical migrant birds in Eastern North America. Dr. Canterbury has visited that Observatory and believes that the migration patterns there are unique to that area due to the manner in which the birds are funneled through the Red Creek valley while flying across the Allegheny Front. This pattern concentrates the birds and the Red Creek location is uniquely suited for bird banding. Since 1963, 163,000 birds have been tagged at that location. Testimony Stipulation, p. 4. Dr. Canterbury estimates that up to 50,000 birds migrate through that one area each year. Tr. I. p. 236. Bird migrating over the entire State on an annual basis could number in the millions. Tr. I. p. 236-237.

Dr. Canterbury did not conduct a Fall migration study at the project site and does not believe that such a study would change his conclusions based on his

experience studying avian life; his study of the available literature; and the fact that he followed accepted protocols to conduct the Phase I Avian Risk Assessment. Testimony Stipulation, p. 4-5. The beginning and end date of Fall migration varies according to species. Tr. I. p. 226. The peak migration date is mid-September, but varies from year to year. Tr. I. p. 227. Dr. Canterbury does not believe the NedPower turbines will be directly in the path of migrants in the same way that structures on Dolly Sods would be. Tr. I. p. 225.

Spring migration in the area usually occurs in late March to early June, depending upon species. Tr. I. p. 227. The Spring migration peaks in mid-May. Tr. I. p. 228.

Dr. Canterbury is familiar with the "Wiley Report" from 1966, which observed that a 100 foot unlit tower killed 73 birds, including 21 species, in one night. Dr. Canterbury did not cite this report in his Phase 1 Risk Assessment because citation was not warranted in his opinion, partly because the subject tower had a lattice structure which differs from the turbine structure to be used in the NedPower project. Dr. Canterbury did not at first

recall the location of the tower that was the subject of the "Wiley Report" but later confirmed that the tower was located at Coopers Rock in West Virginia. Testimony Stipulation, p. 5; Tr. I. p. 210; 239.

In preparing the Phase I Risk Assessment, Dr. Canterbury did not rely on information regarding bird kills by towers in the west. Dr. Canterbury could not state with confidence that 73 bird kills will not occur in one night at a NedPower tower. Tr. I. p. 209-210. Dr. Canterbury did review studies conducted on wind turbines in the east conducted in Pennsylvania and Vermont. Tr. I. p. 219-220. The number of studies in the east is limited because wind farming is fairly new to the eastern part of the country. Tr. I. p. 220. The studies cited by Dr. Canterbury concluded that impacts on migrants are minimal. Tr. I. p. 221.

A letter submitted by Dr. Canterbury to the West Virginia Highlands Conservancy in 2000, regarding a wind project known as Backbone Mountain, was introduced into evidence as FAF Exhibit 1. Tr. I. p. 241. The purpose of the letter was to evaluate only Dr. Kerlinger's migration report performed for that project. Tr. I. p. 210-211. Dr. Canterbury was not asked to, and did not evaluate Dr. Kerlinger's Phase I Risk Assessment for the Backbone Mountain Project. Tr. I. p. 234. The Backbone Mountain project also involved the construction of wind turbines in the Grant County region. Tr. I. p. 211. Dr. Kerlinger's report for Backbone Mountain concluded, based on previous Phase I's, Dr. Kerlinger's migration study and an additional Phase I, that the take impacts to birds would be moderate or minimal. Tr. I. p. 213.

Dr. Canterbury's letter expressed concerns that Dr. Kerlinger did not perform bird banding for the Backbone Mountain report. Bird banding involves the

stringing of mist- nets in the flight path of birds to capture and tag the birds. Tr. I. p. 212. Dr. Canterbury did not do bird banding for his NedPower report because he was conducting a Phase I migration report.

Dr. Canterbury also criticized Dr. Kerlinger for not conducting a visual snapshot count of birds. A snapshot visual count involves spending a few days counting the number of migrants traveling through a defined area. Tr. I. p. 212. For Dr. Canterbury's Phase I, he spent one day on the site and did not conduct a visual snapshot count. Tr. I. p. 213.

Dr. Canterbury also criticized Dr. Kerlinger for not dealing with temporal and spatial variation in avian migration. Dr. Canterbury's work for NedPower also did not include this subject because a Phase I does not require it. Tr. I. p. 214.

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Dr. Canterbury's work for the NedPower project involved only a Phase I, while Dr. Kerlinger's work for the Backbone Mountain project involved a Phase I and a migration study. Tr. I. p. 214.

Dr. Canterbury also criticized Dr. Kerlinger for not doing “more studies on the site over a long period of time.” Dr. Canterbury did not spend more than one day at the NedPower site because that is all that is required by a Phase I. Tr. I. p. 213.

Dr. Canterbury has devoted his life to the study of the Golden-winged warbler. The Golden-winged warbler has adapted so that its habitat is disturbed lands such as abandoned farms and strip mines. Its current status in West Virginia is that it is being evaluated by U.S. Fish and Wildlife for endangered status. Tr. I. p. 223. He estimates that the population is declining by about 10% a year in West Virginia. *Id.* The species is listed as endangered in the states of Ohio and Massachusetts and others, but not in West Virginia. Tr. I. p. 235. Dr. Canterbury observed the Golden-winged warbler at the NedPower project site. *Id.* He has also studied the cerulean warbler. Tr. I. p. 214-215. Both of these are important birds in the State of West Virginia. The cerulean warbler is not yet considered an endangered species but the U.S. Fish and Wildlife Service is now taking comments on whether the species should be evaluated. Tr. I. p. 215.

Dr. Canterbury's 2000 letter regarding Backbone Mountain recommended that more detailed studies should be produced before wind turbines are built. Tr. I. P. 215; FAF Exh. 1. Dr. Canterbury stated that he wrote that letter before he had ever conducted a Phase 1 study. Dr. Canterbury now characterizes a Phase I Avian Risk Assessment study as “fairly detailed” and noted that the study includes a one day site visit, as well as interviews of experts and evaluation of literature. Tr. I. p. 215-216

Dr. Canterbury acknowledged that Dr. Murray, Dr. Eddy and Mr. Evans have criticized his work on the NedPower project. Tr. I. p. 217. Dr. Canterbury's pre-

filed testimony distinguishes his work on West Virginia specific ornithology from the work of the other experts. *Id.* Dr. Canterbury would agree that Dr. Whitmore, who has also criticized Dr. Canterbury's work, is an expert on West Virginia specific ornithology. Tr. I. p. 218. Dr. Canterbury stated that he interviewed Dr. Whitmore while conducting the Phase I, and that Dr. Whitmore did bring up any concerns. Tr. I. p. 219.

The leading cause of bird kills is cats which kill billions of birds in the country each year. The second leading cause is birds hitting windows. Tr. I. p. 229. In West Virginia, cats kill millions of birds each year. Tr. I. p. 230.

With the conclusion of Dr. Canterbury's testimony, NedPower completed its case in chief.

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The first witness to testify on behalf of FAF was Mr. Bill Evans who wrote a review of Dr. Canterbury's Phase I which was attached to Linda Cooper's pre-filed testimony. Tr. I. p. 242-243. Mr. Evan's review was introduced into evidence as FAF Exhibit 2. Tr. I. p. 243. Mr. Evans bases this opinion in this case on his 17 years studying the nocturnal migration of birds in eastern North American. Tr. I. p. 249-150. Mr. Evans has worked on four smaller wind power projects. When commissioned by power companies or the U.S. Fish and Wildlife Service, he has set up acoustic monitoring stations to monitor the number and quantity of bird calls occurring over potential project sites. Tr. I. p. 251. The NedPower project would be the largest in eastern North American with more turbines than all other eastern wind farms combined. Tr. I. p. 252. The NedPower turbines will be higher than those Mr. Evans has previously studied. Tr. I. p. 256.

Mr. Evans testified that there are only a handful of studies on wind turbines and bird impact in the east. Tr. I. p. 244-245. These studies conclude that construction of turbines has an impact on bird habitat and that birds are killed by colliding with the built turbines. Tr. I. p. 245. To date, the studies indicate that the number of birds killed by colliding with the turbines is minimal. *Id.* The fact that the turbines are high structures built on ridge tops causes Mr. Evans concern. The altitude of bird migration ranges over a large spectrum, but he believes that the height for most species ranges between 300 feet and 2,500 feet above ground level. Tr. I. p. 246-247. The altitude of migration over high ridges could be lower than the altitude over flat ground. *Id.*; Tr. I. p. 262.

West Virginia is located in the middle of a major migratory path. Mr. Evans agrees with Dr. Canterbury that the Allegheny Front has the potential to channel and concentrate the number of low altitude migratory birds. Tr. I. p. 248. While Mr. Evans cannot say that bird kills by NedPower wind turbines will be significant, he cannot agree that kills will be minimal. *Id.* Ridges that run east to west cause less concern than those running north to south. The ridge in question lies southwest to northeast leading Mr. Evans to conclude that the channeled birds

will be more severely impacted. Tr. I. p. 249; 252-253. Mr. Evans believes that because of the geography, and the number of turbines, the NedPower project cause more mortalities than any other area studied to date. *Id*; Tr. I. p. 254.

Mr. Evans believes that birds are killed by turbines because they are flying low due to a low cloud ceiling and do not see the turbines at night. He does not believe that many birds are chopped up in the turbine blades. Tr. I. p. 257. Mr. Evans stated that strobe lighting is not sure to reduce bird mortality. Tr. I. p. 258. There is some evidence that red lighting temporarily blinds nocturnal migrating birds and causes more mortalities. Tr. I. p. 259; 260. Strobe lighting is believed to be more bird-friendly than other lighting. Tr. I. p. 260.

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Mr. Evans notes that estimating kills based solely on banded birds is unfair because banded bird killed by a cat or a window is more likely to be found than is a banded bird killed by a tower. Tr. I. p. 150

The next witness to testify on behalf of the FAF was Dr. Robert Whitmore, a Professor of Wildlife Ecology at West Virginia University. Dr. Whitmore adopted the majority of the pre-filed testimony of Dr. J. James Murray which was moved into evidence as FAF Exhibit 3. Tr. I. p. 264-266.

Dr. Whitmore disagreed with two points made by Dr. Murray and could not confirm one additional statement. First, Dr. Whitmore disagreed with Dr. Murray's statement that "the proposed towers are likely to represent little threat to populations of local residents." Dr. Whitmore believes the nature of site preparation and tower construction as well as construction of other buildings such as maintenance sheds, etc. leads to an extreme likelihood that there will be fragmentation of the habitat which will lead to population declines in local bird populations. Tr. I. p. 267-268. Second, Dr. Whitmore disagreed with Dr. Murray's conclusion that the project should be limited and would instead recommend that the project not commence until after the parties can study data resulting from the completed Backbone Mountain project. Tr. I. p. 269-270. Third, Dr. Whitmore could not support nor negate Dr. Murray's statement regarding the Indiana bat and Dr. Murray's communications with a Dr. Kate Jones because Dr. Whitmore had no personal knowledge of that communication. Tr. I. p. 268. At this point, the Commission adjourned the hearing for the day.

When the hearing reconvened on the morning of November 19, 2002, the Commission ruled that Dr. Whitmore would be permitted to retake the stand later in the day for the purpose of providing rebuttal testimony to the testimony provided by Dr. Canterbury. Tr. II, p. 13.

The FAF's next witness to take the stand was Mr. John Cooper. Mr. Cooper is a resident of the Canaan Valley, is Davis, West Virginia. Tr. II. p. 15. Mr. Cooper has been involved in the tourism industry in the north central part of West

Virginia since 1981. *Id.* Mr. Cooper's pre-filed testimony was moved into the record as FAF Exhibit 4. Tr. II, p. 16. Mr. Cooper believes that the NedPower project will negatively effect the tourist industry in Grant County and in Tucker County. Tr. II, p. 17. Mr. Cooper stated that he was originally a supporter of the Backbone Mountain project, but changed his mind after learning about a newly enacted tax credit affecting wind farms, Tr. II, p. 19, and after seeing the actual size of the wind turbines. Tr. II, p. 43. Mr. Cooper characterized the turbines as unsightly and huge. Tr. II, p. 51. When asked to compare the wind turbines to ski lift towers, Mr. Cooper noted that ski lift towers are approximately 75 feet high, and

normally not at the top of ridges, while the wind turbines will be 300 plus feet high and will sit on ridge tops . Tr. II, p. 51.

Citing significant job losses in the poultry and coal industries for both Grant and Tucker Counties, Mr. Cooper believes tourism is the most promising growth area for the economies there. Tr. II, p. 21-22. Tucker County has enjoyed a growth in the second home industry from 400 to 1,100. Tr. II, p. 22. This has raised the tax base for both Tucker and Grant Counties. Tr. II, p. 22-23. Mr. Cooper believes that the NedPower project combined with other wind farm projects in Grant County, Tucker County and Preston County will result in second home areas being encircled by turbines and that will stall growth. Tr. II, p. 21.

Mr. Cooper acknowledged that there are many groups in Grant County, including the Grant County Commission, that support the NedPower project. Tr. II, p. 24-25. Mr. Cooper believes that once citizens in Grant County realize the extent of the NedPower project, they will change their minds. Tr. II, p. 26. Mr. Cooper believes that the Backbone Mountain project was misrepresented to the citizens of Tucker County. *Id.*; 56. Mr. Cooper was originally under the impression that the project would create many jobs and that the turbines would be less obtrusive. Tr. II, p. 56-57. Mr. Cooper conceded that the towers were built to the height specified in the Backbone Mountain application for a certificate of convenience and necessity. Tr. II, p. 57.

Mr. Cooper stated that because of a tax credit passed in the State Legislature in 2001, instead of receiving \$554,000.00 in the first year of the Backbone Mountain project operation, Tucker County will realize only \$27,500.00. Tr. II, p. 27. The statute provides that instead of taxing towers and turbines at 60% of their assessed value, they will be taxed based on salvage value, or at 5% of assessed value. Tr. II, p. 39-40; 54. Mr. Cooper opined that the tax credit should be repealed for the benefit of local schools. *Id.* In Grant County, the same tax credit will result in a reduction of tax revenues resulting from the NedPower project from what would have been \$3,000,000.00, down to only \$500,000. Tr. II, p. 28; 42. The effect of the statute will be felt in all counties where wind farms are built. Tr. II, p. 42.

Mr. Cooper does not dispute that construction of the turbines will create a temporary economic boom because of related construction jobs. Tr. II, p. 29-30. Mr. Cooper doubts the 10-12 permanent jobs that would result from the NedPower construction will adequately offset damage to the tourist economy. Tr. II, p. 30. Mr. Cooper approves of NedPower's royalty partnership with two local schools. Tr. II, p. 31.

Mr. Cooper testified that he is familiar with the Mount Storm Lake, a man-made lake built for the purpose of cooling for the Mount Storm electric generation plant. Mr.

Cooper has used the lake for recreational purposes. The lake and the Mount Storm plant smoke stacks are visible from tourist areas in Grant County, Dolly Sods and other tourist areas. Tr. II, p. 34-35. Mr. Cooper believes the presence of the Mount Storm Lake has been helpful to the local economy in Grant County. Tr. II, p. 35-36.

Mr. Cooper sponsored a topographic map of the project area, which was marked into evidence as FAF Exhibit 5. Tr. II, p. 47-48. FAF Exhibit 5 was not moved into evidence. Tr. II, p. 60-61. Mr. Callas offered a larger, clearer map for Mr. Cooper's use in explaining the location of various wind farm projects, including Backbone Mountain, MegaEnergy, WindForce, Dominion Resource, and a potential project in Harman, Randolph County. Tr. II, p. 48-50. Mr. Cooper stated that the Canaan Valley will sit in the middle of a semi-circle of wind farms. Tr. II, p. 50.

Following Mr. Cooper's testimony, the FAF moved into evidence a letter from Professor Pistole at the Indiana University of Pennsylvania as FAF Exhibit 6; comments from Dr. Greg Eddy, a member of the Brooks Bird Club as FAF Exhibit 7; comments from Professor Peter Weigl, a Professor of biology at Wake Forest University as FAF Exhibit 8; and a letter from Jeffrey Towner of the U.S. Fish and Wildlife Service as FAF Exhibit 9. Tr. II, p. 61-62.

The next witness to testify on behalf of the FAF was Ms. Donna Cooke, President of the FAF. Ms. Cook's pre-filed testimony was moved into evidence as FAF Exhibit 10. Tr. II, p. 53-64. FAF was organized in mid-September 2002 to respond to the NedPower application. Tr. II, p. 64-65. As of the hearing date, the FAF did not have any corporate status or formal member roster. The co-founders of the FAF include Ms. Cook, Ray Stone, Jr., a landowner, Charlie Glick, resident of the area, and Donald Shreve, a landowner. Tr. II, p. 66-67. The FAF have no paid staff. *Id.*

Ms. Cook did not intend her pre-filed testimony to represent to the Commission that the project area is an undisturbed sanctuary. She would disagree, however, with a statement that much of the project areas has been surface mined and timbered, and is laced with haulage roads and high voltage

transmission lines. Tr. II, p. 69-70. Ms. Cook believes that the Commission should establish guidelines regarding the location of wind farms, with mountain range protection requirements. Tr. II, p. 70. The guidelines should limit the number of wind farms within designated areas and protect native vegetation and soils. Tr. II, p. 71. Ms. Cook is not certain whether this Commission or the State Legislature should be the responsible body for establishing siting guidelines. Tr. II, p. 71-72.

Ms. Cook is not a wildlife biologist or environmental attorney familiar with the Endangered Species Act. Tr. II, p. 73.

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Ms. Cook believes that the local residents of Grant County were unaware of the NedPower project until a very late date. Tr. II, p. 74. Ms. Cook did not know whether NedPower followed the Commission's directives regarding public notice. Tr. II, p. 74-75. Ms. Cook acknowledged that NedPower held an informational open house in Grant County regarding the project on October 14, 202, but she does not believe that an open house is appropriate way to inform the public. Tr. II, p. 75-76; 85. Ms. Cook acknowledged that many Grant County officials and residents support the project. Tr. II, p. 76.

Ms. Cook did not intend her testimony regarding the Jordan Run Road to imply that it was a federally or state protected road. Rather, it may be designated as a non- motorized recreational trail by a private organization by the name of American Discovery Trail. Tr. II, p. 77-78.

Ms. Cook does not object to wind power in general but objects to the NedPower project on the basis of the impact to tourism, the potential effect on squirrels, bats and birds, tax issues, and inadequate notice. Tr. II, p. 78-79.

Ms. Cook worked together with Ms. Cooper to gather the letters from experts attached to Ms. Cooper's pre-filed testimony. Tr. II, p. 79-80.

Ms. Cook reviewed the map filed with NedPower's avian assessment survey and believes the project will be visible from parts of Dolly Sods. Tr. II, p. 82-83. She also believes the turbines will be visible from Seneca Rocks. Tr. II, p. 83. She has a great concern regarding visibility from Jordan Run Road, which is the gateway to the Dolly Sods area. Tr. II, p. 84. Jordan Run Road enjoys a lot of tourist traffic and is a paved road running about ten miles from Route 42 through Jordan Run to Route 220 which connects to North Fork. Tr. II, p. 87.

Ms. Cook believes that residents of the area at first believed that the NedPower wind turbines would be hidden from view. Now residents are learning they will see and hear the turbines. Another concern is that previously remote area will be bulldozed over. Tr. II, p. 88.

Following the conclusion of Ms. Cook's testimony, the Council presented its only witness, Mr. Steve White. Mr. White is employed by the Council. Mr. White's pre-filed testimony was moved into evidence as Building Trades Exhibit 1. Tr. II, p. 92-93. The Council is made up of approximately 20,000 construction labor union members from West Virginia and surrounding counties, from 12 different craft unions. Tr. II, p. 95. The Council has had good relations with NedPower and has reached an agreement regarding this project. *Id.* Mr. White confirmed that the Council expects that the project will result

in the creation of 200 one-year construction jobs. Tr. II, p. 96. There is also a prediction that 131 one-year service related spin-off jobs will be created. Tr. II, p. 99-100.

On the date of the hearing, members of the Council were employed on the Backbone Mountain project. Because wind turbines are not constructed in West Virginia, most parts are shipped from other states. Tr. II, p. 97. All construction jobs are temporary by definition. A one-year job is a good job, and construction careers are built on temporary jobs. The Backbone Mountain project has been a positive job creation experience for the Council's members. Tr. II, p. 98.

The Council's analysis of the NedPower project did not focus on long-term economic benefits of the project. Tr. II, p. 100. Mr. White does expect that turbine part replacements and technological changes may result in job creation down the road. Tr. II, p. 100-101.

Staff called as its witness Mr. Daryl Preece, an auditor for the Commission's Utilities Division. Mr. Preece's pre-filed testimony was moved into evidence as Staff Exhibit 1. Tr. II, p. 102-105. Mr. Preece confirmed that the NedPower project would have a southwest to northeast orientation. Tr. II, p. 105-106.

Staff's second witness was Mr. Wayne M. Perdue, an investigator of utility customer complaints, and a gatherer of information pertaining to applications for certificates of convenience and necessity. Mr. Perdue's pre-filed testimony was moved into evidence as Staff Exhibit 2. Tr. II, p. 106-108. Mr. Perdue's pre-filed testimony recommended that the Commission approve NedPower's application subject to certain conditions, including acceptance of a final endangered species report with any mitigation plans. Tr. II, p. 109-110. Mr. Perdue explained that when he wrote his pre-filed testimony, he did not know whether NedPower would be required to submit any mitigation plans to another agency. If NedPower were required to do so, then Staff wanted to review those submissions. Tr. II, p. 110. Mr. Perdue was not comfortable interpreting NedPower's obligations to the U.S. Fish and Wildlife Service. Tr. II, p. 111.

Staff did not perform its own viewshed analysis of the NedPower project, but rather relied on NedPower's analysis. Tr. II, p. 114. Staff did, however, conduct an on-site visit. Tr. II, p. 122. Staff did not perform a sound study, a water quality

study, an avian study, a salamander study, a bat study or a squirrel study. NedPower did not perform a sound or water quality study. Staff is relying upon NedPower's avian, salamander, bat and squirrel studies. Tr. II, p. 114-115. Staff's role with respect to environmental issues has been to request that NedPower provide information showing that it is complying with environmental laws. Staff relies on other agencies to enforce compliance. Tr. II, p. 120. The Commission does not employ environmental compliance experts. Tr. II, p. 121.

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During Mr. Perdue's testimony, NedPower offered for explanatory use three maps. The first map has three red circled areas showing the three phases of the project and was attached to NedPower's application as Appendix A. The second map shows a preliminary layout of turbine locations. The third map, is a topographic map showing the Kingwood, West Virginia / Maryland area which shows the various project areas in the four county region. Tr. II, p. 125-126.

Staff plotted the actual and proposed wind projects on a topographical map and has an idea where they exist and where tourist sites and points of interest are. Tr. II, p. 116. Mr. Perdue does not know what percentage of the project area has been previously surface mined or timbered. Tr. II, p. 124. Staff's field visit included four separate sites. Staff used a global positioning satellite navigator to show the sites visited on a map generated by Staff using computer software known as Maptech. See Staff Exhibit 3; Tr. II, p. 126-127; 132-134. Of the four sites, one had been cleared by strip mining Tr. II, p. 128.

Mr. Perdue stated that the Mt. Storm power plant stack is approximately 1,100 feet tall and is visible from the tourist location known as Bear Rock in Dolly Sods. Tr. II, p. 136. Mr. Perdue does not believe that an AEP 500 KV power line tower is visible from Bear Rock. He estimates that a KV tower is typically 150 - 200 feet tall. Tr. II, p. 137- 138.

The U.S. Fish and Wildlife Service contacted Mr. Perdue to discuss a letter dated August 30, 2002, from Jeffrey Towner. Mr. Perdue believes that the Fish and Wildlife Service would like NedPower to perform more work on endangered species, including mist-net studies for bats and migratory studies in the Fall and Winter for birds. Tr. II, p. 117-118. Mr. Perdue believes that Fish and Wildlife will not require NedPower to file a habitat conservation plan for bats if NedPower takes other protective measures such as construction while bats are hibernating. *Id.* Staff requested that Fish and Wildlife copy the Commission on any correspondence with NedPower. Staff would rely on the Fish and Wildlife's findings and recommendations with respect to endangered species. Tr. II, p. 118-119.

Mr. Perdue's impression of NedPower is that it is willing to move turbine sites

or even eliminate turbines to prevent endangerment of wildlife. Tr. II, p. 123. NedPower has been cooperative in providing Staff with information. Tr. II, p. 124.

NedPower put Mr. Michael Reel on the stand as a rebuttal witness. Mr. Reel is a vocational consultant who has worked with the Grant County Commission for two years. Mr. Reel is President of the Grant County Development Authority. Tr. II, p. 139-142. Mr. Reel also owns and operates a private business in Petersburg, West Virginia. Mr. Reel's

pre-filed rebuttal testimony was moved into evidence as NedPower Exhibit MR-1. Tr. II, p. 142.

In a recent conversation with Mr. Burns of the Tucker County Development Authority, Mr. Reel learned that Authority still supports the Backbone Mountain project. Tr. II, p. 142-143.

Mr. Reel is not experienced in the tourism industry. Apart from his membership on the County Development Authority, Mr. Reel has no experience in economic development. Tr. II, p. 143. Mr. Reel's personal opinion is that the NedPower project poses no threat to local tourism. Tr. II, p. 143-144; 145. Mr. Reel believes that residents believe the wind turbines will be more attractive than the Mt. Storm power plant facilities. Tr. II, p.146. Most residents also feel that the project will have the potential to create tourism jobs through tours, and eco-educational centers. Tr. II, p. 146-147. Mr. Reel believes that NedPower has committed to grant two schools in Grant County between \$32,000 to \$36,000 each. This amount is over and above tax revenues. Tr. II, p. 147-148.

The next witness to testify was Dr. Whitmore, on behalf of the FAF, who took the stand to rebut Dr. Canterbury's pre-filed and hearing testimony. Tr. II, p. 149-151. Dr. Whitmore summarized his credentials and ornithological experience and research. Tr. II, p. 159-161.

Based on Dr. Canterbury's published research, Dr. Whitmore questioned whether Dr. Canterbury is an expert on the geographic area of Grant County contemplated for the project. Tr. II, p. 152. Dr. Whitmore also disagreed with Dr. Canterbury's questioning whether Dr. Eddy is sufficiently knowledgeable to have rendered his opinions on avian life that were attached to Linda Cooper's pre-filed testimony. *Id.*

Dr. Whitmore criticized the Phase I avian assessment based on its reliance on a single site visit coupled with Dr. Canterbury's statement regarding the cerulean warbler, along the lines of, "if it had been there, I would have seen it." Dr. Whitmore notes that the Phase I does not indicate Dr. Canterbury's bird sampling, i.e. point counts, variable circular plots, or transects. Nor does the Phase I indicate the time of day. Tr. II, p. 154. He also stated we "do know, however, that the sampling date was outside the window set forth by U.S. Fish

and Wildlife for conducting bird surveys for breeding routes. Birds are less active later in the Summer.” Tr. II, p. 154-155. Dr. Whitmore acknowledged that one-day sampling is all that is allowed by a Phase I, but asserts that the outcome of the survey is affected by the short time frame outside of the recommended sampling window. *Id.* Dr. Whitmore opined that the data collected by Dr. Canterbury cannot be considered empirical data. Tr. II, p. 157.

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Dr. Whitmore further criticized the fact that the Phase I report fails to address differences or conditions that are site specific for each wind power project, such as location, weather patterns, migration corridors and lighting. Tr. II, p. 157.

Dr. Whitmore additionally disagrees with Dr. Canterbury's defense of his Phase I report's comparisons with migration studies performed in western North America. Dr. Whitmore asserts that the migration patterns of birds in the west are totally different than those in West Virginia. Migration in the west is much more broadly dispersed because flight is not confined by ridges. Comparisons of data from one area is not applicable to the other. Tr. II, p. 157-158.

Dr. Whitmore next responded to Dr. Canterbury's summarization of studies to indicate that modern wind technology at wind farms minimizes a project's effects on avian life. Dr. Whitmore countered that a project's effect on avian life should not merely minimize effects, but should eliminate all effects, in light of all other negative impacts on avian life in the United States and the world. Dr. Whitmore later conceded, however, that it would not be practical for his personal preference for zero mortality to guide the siting of a wind farm location. Tr. II, p. 178. Dr. Whitmore also noted that there are no studies of wind farms that have been done in West Virginia upon which Dr. Canterbury could base his statement. Tr. II. 162-163.

Dr. Whitmore disagreed with Dr. Canterbury's conclusion that a migration study is not required on grounds that the area is encompassed in the “most exciting migration point in the Appalachians,” noting that everyone in the ornithologic community visits there to band birds, view birds, and teach about migration. Tr. II, p. 163. Dr. Whitmore believes both a spring and fall migration study should be performed. Dr. Whitmore characterized as a “scary thing” the concept of building the towers first, and then studying migration impacts. Tr. II, p. 164-165. Dr. Whitmore believes that the Backbone Mountain project's impact on avian life should be assessed before this project is built. Tr. II, p. 179- 180; 187.

Dr. Whitmore explained the role of a leading line ridge as funneling birds out of Canada toward the Gulf. The ridges of the Allegheny Front provide valuable migration cues for the birds. Birds migrate at night and use the day to get back on course for the next night. The birds follow the ridges northeast to southwest to the Gulf states. One expert has opined that migrants are known to follow leading lines such as shore lines, rivers, and ridges that are oriented in the direction the

birds are heading. Tr. II, p. 166-167. Dr. Whitmore believes the Allegheny Front is a significant leading line for migrating birds in North American. Tr. II, p. 184. When birds are caught for banding at the Allegheny Front Migratory Bird Observatory, they are caught with nets that are parallel to the ridge,

catching birds that are crossing the ridge face-on. This will be the same orientation of the wind turbines. Tr. II, p. 167.

Dr. Whitmore asserts that Dr. Canterbury may have conducted extensive research on migration patterns, but he has not done so in the project area. Rather he has studied Guyandotte River, Guyandotte Mountain, Raleigh, Boone and Wyoming County, Bolt Mountain. Tr. II, p. 171; 174. Dr. Whitmore stated that Dr. Canterbury gave no citation to studies to support his assertion that he had empirical data from West Virginia studies to support his conclusions while Dr. Evans and Dr. Murray do not. Tr. II, p. 172;174.

Dr. Whitmore would agree with Dr. Canterbury's statement that NedPower collect pre-construction data on migration towers. Tr. II, p. 173. Dr. Whitmore criticizes Dr. Canterbury's statement that his research is complete. Tr. II, p. 175.

Finally, Dr. Whitmore noted his concerns regarding the cerulean warbler, and stated that he is in favor of an incidental take permit and a habitat conservation plan for the project, with respect to all endangered species in the project area. Tr. II, p. 176.

The next witness to testify was Dr. Edwin Michael, was a Professor of wildlife; wildlife management wildlife ecology at West Virginia University until his retirement in 1997. Since that time Dr. Michael has been conducting flying squirrel surveys. Tr. II, p. 191. Dr. Michael's pre-filed rebuttal testimony was moved into the record Applicant's Exhibit No. EM-1. Tr. II, p. 193-194; 197. The WVNFS is a subspecies of the northern flying squirrel. The subspecies was found to be endangered because it is isolated from all other northern flying squirrels who live Prince Edward Island, Nova Scotia, New Brunswick, across Canada, through Alaska, Washington and Oregon and a pocket in California and one in North Carolina. Tr. II, p. 201-203.

To avoid the WVNFS habitat discovered by Dr. Michael, NedPower has committed not to disturb areas within 150 feet of the habitat. NedPower is not required to obtain any further approvals with regard to the northern flying squirrel. Tr. II, p. 205-206.

In August, at the request of Potesta & Associates, Dr. Michael spent seven days walking the 14 miles of the project site in both directions to determine if potential flying squirrel habitat existed. Tr, II, p. 191. Dr. Michael identified three sites that he considered to be potential flying squirrel habitat. In October, Dr. Michael conducted a ten-day trapping survey to determine if northern flying

squirrels did in fact live at those three sites. At two of the sites, no flying squirrels were found. At a third, six individual squirrels were trapped. Tr. II, p. 192.

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Dr. Michael has a collecting permit from the State of West Virginia to conduct live trapping. Tr. II, 194-195. Following the trapping study commissioned by NedPower, Dr. Michael notified the DNR non-game endangered species biologist, Craig Styler, of the capture results. *Id.* Dr. Michael also informed Linda Smith and Shane Jones of the U.S. Fish and Wildlife Service of the results. Tr. II, 195-196.

The U.S. Fish and Wildlife Service recommends that endangered species trapping studies be conducted in more than one season but Dr. Michael's study was performed only in the Fall. Tr. II, p. 197-198.

Following the trapping of flying squirrels at one location at the project site, Dr. Michael recommended that NedPower consult with the U.S. Fish and Wildlife Service and consult informally with DNR. Dr. Michael made no other recommendations. Tr. II. p. 199-200.

The next witness to testify for NedPower was Dr. M. Dale Strickland. President and Senior Ecologist of West, Incorporated. Dr. Strickland has studied bird issues and wind power. Tr. II, p. 208-209. Dr. Strickland's pre-filed testimony was moved into evidence as Applicant's Exhibit No. DS-1. Tr, II, p. 210; 212. Dr. Strickland co-authored a report, published by the National Wind Coordinating Committee entitled, *Avian Collisions with Wind Turbines, a summary of existing studies and comparisons to other sources of avian collision mortality in the United States*. Tr. II, p. 233-234; Staff Exhibit No. 4.

Dr. Strickland has prepared Phase I avian risk assessments which he characterized as the first effort by wind companies. Dr. Strickland has also conducted more detailed mortality and lighting studies at wind facilities. Tr. II, p. 209. Dr. Strickland noted that studies of larger wind plants and avian life has occurred primarily in the west because that's where the larger wind plants are. The eastern wind farms are all smaller. The studies that have occurred indicate that the average mortality rate is 1.7 birds per turbine per year. Other research indicates that wind power does not come close to the bird mortalities caused by other factors, such as buildings, windows, and cats. Tr. II, p. 217; 237-238. Dr. Strickland opined that it would be unscientific to use information from a single event such as bird mortality on one night at a fire tower in Cooper's Rock, West Virginia, to estimate annual fatalities that might result from a wind turbine. Tr. II, p. 217-218.

Based on Dr. Strickland's experience, it is not realistic to expect to completely eliminate the possibility of bird fatalities when building anything, be it house, skyscraper, or wind tower. The expectation of regulatory bodies is that a

company will do what they can to avoid fatalities, but not to eliminate fatalities. Tr. II, p. 219.

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Dr. Strickland does not believe a migration study is needed to confirm that the Allegheny Front is a significant migration flyway. Tr. II, p. 221. That fact, and the closest comparable study conducted at Buffalo Mountain, Tennessee, where there were four bird fatalities per turbine per year, indicate that fatalities to the NedPower project could exceed the 1.7 bird per turbine per year national average. Tr. II, p. 221-222; 225-226. Dr. Strickland has not visited the Allegheny Front Migration Observatory. Tr. II, p. 227. Dr. Strickland does not have empirical data on the number of birds that migrate over Buffalo Mountain, TN, compared to those that migrate over the Allegheny Front. Tr. II, p. 228-229.

Dr. Strickland believes that if NedPower's certificate is granted, he will be conducting mortality and lighting evaluations for NedPower in the future as well as a Spring migration study for NedPower. Tr. p. 222-225; 233. Dr. Strickland does not expect the Spring migration study to contradict Dr. Canterbury's findings of minimal risk. Tr. II, p. 231. Dr. Strickland stated that it would be unusual to find a large number of birds migrating at 200-300 feet. He conceded, however, that low clouds can affect migration height. Tr. II, p. 232.

The next rebuttal witness called by NedPower was Jerome Neissen who also testified the previous day. Mr. Neissen provided additional explanation of maps, the project area, the location of Jordan Run Road, the Preserve community, the Mount Storm power plant, the location of 500 Kv transmission lines, former strip mines, Canaan Valley, Stack Rock, Cabin Mountain, Blackwater Falls State Park, Dolly Sods Wilderness Area, Raven Ridge, Mount Storm WindForce project; Backbone Mountain project; and Dominion Mount Storm project. Tr. II, p. 244-254; Applicant's Exhibit Nos. 6, 7, and 8.

Mr. Neissen stated that NedPower did not lobby for the West Virginia wind power tax incentives that are currently in effect. He stated that the incentives are reductions in property taxes. West Virginia is not the only state that has put incentives into place. The federal government also has incentives for wind power as renewable energy. Tr. II, p. 259-260.

Mr. Neissen stated that NedPower's land leases do not include landowners Western Pocahontas Property or Coastal Energy. The landowners are local individuals many of whose families have owned the land for generations. Tr. II, p. 261-262.

Mr. Neissen stated that NedPower's commitment to the local schools boils down to \$350 per turbine, or \$70,000.00 total. This amount is divided between two schools based on the number of students enrolled. NedPower chose the two schools closest in vicinity to the project site. Tr. II, p. 262-263.

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Mr. Neissen sponsored a letter dated November 19<sup>th</sup>, from the Tucker County Development Authority stating that Authority believes that development of wind power is an economic asset to the State and the counties in which they locate and provide appropriate jobs and tax base. The Authority specifically supports NedPower's application. Tr. II, p. 264; Applicant's Exhibit No. 9.

Mr. Neissen stated that if NedPower's application is not granted by the Commission by mid-January, it would be very difficult for NedPower to complete the project in 2003. Tr. II, p. 265.

Mr. Neissen characterized the FAF as a small group of people, mostly from outside Grant County but who have second homes in Grant County. Tr. II, p. 266.

Mr. Neissen stated that NedPower intends to follow Dr. Canterbury's recommendations to use tubular tower structures and low RPM blades; relocate turbines from close proximity to the Stony River Reservoir; minimize turbine lighting; minimize and reduce the risk to the Golden-winged warbler by careful planning and consideration of habitats and micro siting turbines; and use existing roads to the extent possible. Tr. II, p. 267-270. NedPower plans to conduct a post-construction mortality and lighting study for both Phase I and Phase II of the project. Tr. II, p. 269; 270-272. NedPower would not oppose a requirement that the results of the post-construction mortality and lighting studies be filed with the Commission within 90 days of the end of each study. Tr. II, p. 272.

NedPower intends to continue consultation with the U.S. Fish and Wildlife Service regarding the endangered species - the Indiana bat and the Virginia big-eared bat. Tr. II, p. 273-274. NedPower will not build turbines on the WVNFS habitat and expects to establish a buffer zone around that habitat. Tr. II, p. 275. NedPower will take the recommendations of the U.S. Fish and Wildlife Service, with respect to the flying squirrel, into serious consideration. Tr. II, p. 276. NedPower intends to comply with all environmental statutes and would not object to a Commission requirement that if any governmental agency or court finds that NedPower is not in compliance, NedPower must notify the Commission within ten days. Tr. II, p. 277-278.

Mr. Neissen stated that 200 turbines, producing 300 megawatts is required in order for the project to be financially viable. Tr. II, p. 279-280.

The hearing concluded with closing remarks by each of the parties. NedPower urged the Commission to grant the certificate application. The Building Trades also urged Commission approval to result in the creation of construction jobs.

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The FAF argued that the Commission did not yet have before it sufficient information to make a decision on this application. The Commission should use this case to establish procedures to be followed in siting wind farms. NedPower should be required to conduct a noise study; a property value study; a tourism study; and a general economic impact study. The Commission needs more information regarding the impact on migratory birds. With respect to endangered species, NedPower should be required to come up with a habitat conservation plan and apply for an incidental take permit. The Commission has an obligation not to certificate an activity that may result in a violation of federal law. The Commission is the only regulatory authority standing between project construction.

Commission Staff stated that it believes NedPower will work with other governmental agencies and that this Commission cannot supplant those agencies' authority regarding environmental issues. Staff recommended that the Commission grant the certificate with certain conditions, including:

1. NedPower's filing of proof that the U.S. Army Corps of Engineers has approved and/or accepted the wetlands delineation study;
  2. NedPower's filing of evidence that the U.S. Fish and Wildlife Service and or the DNR, has accepted or approved NedPower's endangered species studies and any mitigation plans;
  3. NedPower's filing of evidence that the West Virginia Division of Culture and History has accepted or approved its historical or archeological significance study and any mitigation plans;
  4. NedPower's filing of evidence of all other required environmental permits and or certifications such as an NPDES general storm water construction permit and the soil and sedimentation control plan;
  5. NedPower's filing of the interconnection agreement with PJM;
  6. NedPower's compliance with the Endangered Species Act, the Migratory Bird Treaty Act, and the National Environmental Policy Act of 1969 in both the construction and the operation of the project;
  7. In the event a governmental agency or court of competent jurisdiction find that NedPower is not in compliance with federal environmental laws, then NedPower must notify the Commission within ten days of such finding;
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8. NedPower's filing of all post-construction studies, which should take place over a full year, assessing the mortality of birds and bats, and including lighting assessments for all phases of the project, within 90 days of study completion.

Staff further recommended that the Commission approve the memorandum agreement between NedPower and the Building Trades dated October 5, 2002, with certain notations.

*Summary of briefs:*

Staff's briefs may be summarized as supporting the granting the certificate with certain conditions as follows:

(1) NedPower filing evidence of all necessary environmental permits and/or certifications that it has not already filed with the Commission that NedPower is required by law to obtain prior to commencing construction;

(2) NedPower filing evidence of approval and/or acceptance of the wetlands delineation by the U.S. Army Corp. of Engineers; final endangered species study with any mitigation plans by the U.S. Fish & Wildlife Services and/or the West Virginia Division of Natural Resources, whichever is the more appropriate entity; and historical/archeological significance study with mitigation plans by the West Virginia Division of Cultural and History prior to commencing construction. Additionally, Staff recommends that NedPower be directed to file evidence of any other necessary environmental permits and/or certifications, such as the NPDES general storm water construction permit and the soil and sedimentation control plan, that NedPower is required to obtain prior to beginning construction;

(3) NedPower filing copies of the final Interconnection Agreements between NedPower and PJM prior to commencing operation;

(4) NedPower complying with the Endangered Species Act (16 USC § 1531 *et seq.*), the Migratory Bird Treaty Act (16 USC § 701 *et seq.*), and the National Environmental Policy Act of 1969 (42 USC § 4321 *et seq.*) in both the construction and operation of the Project. Should any authorized governmental agency or court with competent jurisdiction find that NedPower is not complying with any one of the

above three acts in either the construction or the operation of the Project, then NedPower must notify the Commission in writing in this case of any such finding within ten (10) days of any such finding being made. Furthermore, the Commission may seek any legal remedies it has jurisdiction to seek, including injunctive relief, to address any such findings;

(5) NedPower filing the results of a Post-Construction Study conducted for one year assessing the mortality of both birds and bats for all phases of the project. (This requirement is consistent with Commission orders entered on December 28, 2002, in Case No. 00- 1209-E-CN, Backbone Mountain Windpower, LLC and on August 29, 2002, in Case No. 01-1664-E-CN,

Mt. Storm Wind Force, LLC). The results of such study shall be filed with the Commission 90 days after the phase of the project has been in operation for one year; and

(6) NedPower filing the results of a lighting study that is conducted for one year at each phase after each phase begins operations. The results of such study shall be filed with the Commission 90 days after the phase of the project has been in operation for one year.

Staff recommends that the Commission approve the Memorandum Agreement between NedPower and the Trades Council that was entered into on October 5, 2002, between those two parties. The Staff recommends that the Commission include in its order the following language which was found in the Commission's orders of January 31, 2002, in Case No. 01-0030-E-CN, Marshall Power LLC and of August 29, 2002, in Case No. 01-1664-E-CN, Mt. Storm Wind Force, LLC: "that all representations and commitments made by the parties herein be kept by the parties." Staff recommends that the Commission note that the submission and acceptance of this agreement by the Commission does not mean the Commission is the proper forum to resolve any disputes which may arise from operating under such Agreement.

In Staff's reply brief, Staff states that it continues to recommend those same conditions as listed in its initial brief.

The FAF's brief opposes the grant of a certificate for the following reasons: NedPower should obtain incidental take permits with respect to the WVNFS because NedPower has failed to demonstrate that its project will not take the WVNFS. In order to obtain an ICP, NedPower must develop and submit a habitat conservation plan; NedPower has not surveyed the site for bat habitat or identification of species; NedPower has failed to demonstrate that its project will not take endangered bat species such as the Virginia

Big-eared bat and Indiana bat; NedPower's salamander survey only included a portion of potential habitat so NedPower has failed to demonstrate that its project will not take the endangered Cheat Mountain Salamander; the Commission should deny the CN until NedPower has applied for and obtained the incidental take permits; the Commission should deny the CN until NedPower completes avian research and modifies the project to mitigate avian risk; the hearing evidence established that the project may pose extreme risk to migratory birds; and the Commission should deny the CN until the Commission develops siting criteria, assesses the long-term economic impacts, and completes an on-site noise study.

The FAF's reply brief disagrees with NedPower's assertion that it has overwhelming public support for the project. FAF noted the opposition to the project from the National Wildlife Federation, concerns expressed by the West

Virginia Chapter of the Sierra Club and the Potomac Valley Audubon Society. The FAF criticizes NedPower's belittling of the FAF members.

In response to NedPower's boast that it will not use public funding for the project, FAF notes that the project is almost entirely dependent on preferential tax treatment. In response to the claims of positive economic impact for Grant County, FAF notes that NedPower relies only on forecasts of short-term economic gain. FAF disagrees with NedPower contention that there will be no negative impacts on viewshed or tourism.

FAF characterizes NedPower's avian impact work as woefully incomplete and continues to criticize the endangered species research. FAF distinguishes the PSC's prior CN cases for Mt. Storm Wind Force LLC and Backbone Mountain Windpower LLC as not involving avian and environmental issues to the same extent as this case. This case is the only case where an applicant has captured endangered species on site and where the Fish and Wildlife Service has indicated grave concerns regarding harm to migratory birds and endangered species. This is the only case where an intervenor has provided expert rebuttal testimony to the extent and quality that FAF has provided. This project is also far bigger.

NedPower's brief states that NedPower has demonstrated that the project will be an economically beneficial, environmentally responsible windpower facility. The project will not use public financing and will satisfy the need for additional generating capacity. The project will increase *ad valorem* tax revenues in Grant County by at least \$500,000 per year. Landowners will receive approximately \$600,000 annually in lease payments. NedPower will purchase local goods and services thus supporting the local economy. NedPower's contractors will employ local workers during construction and operation creating 331 new jobs, 200 of which are construction, to generate \$5.6 million in wages and \$2.8 million in taxes. NedPower will assist certain schools in public/private

partnership to support scholastic and extra-curricular activities. NedPower asserts that the project enjoys overwhelming local support. NedPower states that the project will have no negative impacts on viewshed, tourism, or noise.

NedPower asserts that the project will have a minimal impact on birds. NedPower will not construct within a 150 foot buffer zone around any WVNFS habitat. No salamanders were found on the site. NedPower will undertake a bat biological assessment to: assess the potential impact on bats, including the likelihood of an incidental take of the Indiana Bat and the Virginia Big-eared bat, determine what future studies or research might be necessary, and address concerns raised by the U.S. Fish and Wildlife regarding bats. NedPower will submit its findings to both the U.S. Fish and Wildlife and the DNR for review and comment. NedPower is aware of, and pledges to comply with all requirements of the Endangered Species Act. NedPower accepts Staff's recommended condition

that NedPower comply with the Migratory Bird Treaty Act and the National Environmental Policy Act of 1969 in both construction and operation of the project.

NedPower agrees with all of Staff' conditions expressed in closing statements except the one that "NedPower be directed to file evidence that the U.S. Fish and Wildlife Service and/or DNR, whichever is the most appropriate agency, either has accepted and/or approved any kind of endangered species studies and any mitigation plans that they may think is required." NedPower believes that the law does not bestow any authority on these agencies to issue any formal acceptance or approval of such studies.

In NedPower's reply brief, it continues to agree with all of the Staff conditions for approval save the one. NedPower asserts that no matter how much information it provides, the FAF members will never support the project. NedPower believes that the FAF's goal in arguing that NedPower must obtain incidental take permits, is to delay the project by a year or more. NedPower asserts that obtaining an ICP is discretionary for the project developer. NedPower again describes its continuing communications with U.S. Fish and Wildlife regarding protection of endangered species. With respect to avian issues, NedPower has agreed to the FAF suggestion that it conduct a migration study prior to construction to determine heavy migration areas; areas where birds descend to feed, etc. for use in final micro siting of turbines. NedPower has also agreed to a post-construction study on lighting. NedPower has further agreed to commission Dr. Canterbury to undertake a Golden-winged Warbler habitat study prior to construction to aid micro siting.

NedPower discounts Mr. Schleede's post-hearing letter as a non-credible back-door attempt to introduce evidence regarding economic impact, that should not be permitted.

As to FAF's suggestion that the Commission adopt siting criteria for windpower projects, NedPower argues that there is no basis for the Commission to change the law

mid-course. As to noise, NedPower noted that FAF had no evidence of its own on the issue while NedPower introduced the studies conducted by the American Wind Energy Association. As to viewshed, NedPower states that FAF's description of Jordan Run Road as an American Discovery Trail is an attempt to imply that the road should be protected for its natural beauty. Rather, NedPower notes, an American Discovery Trail is one that connects the country from coast to coast, providing diverse experiences, through country and city alike.

NedPower argues that the Commission cannot be held vicariously liable for any unauthorized take by NedPower for a number of reasons, and suggests

language for the order that would protect the Commission from any such assignment of liability.

## DISCUSSION

At the outset, the Commission notes that *W. Va. Code* § 24-2-11 provides, in pertinent part, as follows:

(a) No public utility . . . shall begin the construction of any plant . . . for furnishing to the public any [utility] service . . . unless and until it shall obtain from the public service commission a certificate of convenience and necessity requiring such construction . . . Upon the filing of any application for such certificate, and after hearing, the commission may, in its discretion, issue or refuse to issue, or issue in part and refuse in part, such certificate of convenience and necessity[.]

Furthermore, in considering a certificate application, the Commission must assess whether the general public convenience will be served and assess the public necessity for the project. *Sexton v. Public Serv. Comm'n*, 188 W.Va. 305, 423 S.E.2d 914 (1992).

### *Convenience and Necessity of the Project:*

Turning to the specifics of this Application, we note that this case differs from the two prior windpower project certificate applications granted by the Commission. First, this project is larger than the prior projects. [See FootNote 1](#) Furthermore, in this case an endangered species, the WVNFS, has been located and captured within the project area. See Tr. I. p. 182-184. Testimony of Dr. Edwin Michael. Also in this case, the U.S. Fish and Wildlife

Service has made comprehensive requests for action by NedPower to reduce potential harm to migratory birds and endangered species. See FAF Exhibit 9 (December 3, 2002, Letter from U.S. Fish and Wildlife). Tr. II, p. 61-62. Also, the intervenor, FAF, has provided expert testimony rebutting NedPower's evidence regarding the economic and environmental impact of the proposed project. Finally, this project includes a proposal to locate wind turbines within 2,000 meters from a designated Wilderness Area.

The Commission concludes, after reviewing the record as a whole, that NedPower should be granted a certificate of convenience and necessity with respect to the Central and Northern Phases of its project. The Commission withholds certification for the Southern Phase of the project for the reasons stated later in this discussion.

NedPower has requested expedited treatment in consideration of possible sunset of the Production Tax Credit (PTC) provided in Section 45 of the Internal Revenue Code. See Application; pre-filed direct testimony of Heironymus (Jerome) Niessen. To take advantage of the current PTC, the NedPower turbines must be placed in service before January 1, 2004. If NedPower cannot take advantage of the PTC, its windpower project will not be financially feasible. *Id.*

NedPower has represented that the project will not use public financing. In determining the public convenience and necessity of windpower projects, the Commission is required to consider the use of public financing. See *Affiliated Construction Trades Foundation v. Public Service Commission of West Virginia and Big Sandy Peaker Plant, LLC*, 211 W.Va. 315, 565 S.E.2d 778 (2002). [See FootNote <sup>2</sup>](#)

The record of evidence in this case supports a conclusion that the project will be an economically beneficial, environmentally responsible, windpower facility. The project will increase *ad valorem* tax revenues in Grant County by at least \$500,000 per year. Landowners will receive approximately \$600,000 annually in lease payments. NedPower will purchase local goods and services, thus supporting the local economy. NedPower's contractors will employ local workers during construction and operation creating 331 new jobs, 200 of which are in construction, to generate \$5.6 million in wages and \$2.8 million in taxes. NedPower will assist local schools in public/private partnership to support scholastic and extra-curricular activities. Although public support for the project is not unanimous, the record reflects substantial local support.

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Furthermore, the evidence shows a need for additional electric generating capacity and indicates that this project will address that need. The East Central Electric Reliability Coordination Agreement region summer peak demand is projected to increase by approximately 15,400 MW from 2001 to 2010 and, without capacity additions, reserve margins are projected to decline from a high of 9.7% in 2001 to a low of -3.3% in 2010. See ECAR pub. 01-GRP-57. The NedPower project will address the need for additional generating capacity and will help diversify the generation mix by adding a competitive renewable energy source to the ECAR region's supply. Thus, the Commission finds that NedPower has shown that the project, as modified herein, is needed.

### *Endangered Species*

In view of the scope of this project, and the concerns expressed on the record in this case, the authority granted herein will be accompanied by a number of conditions designed to minimize risk to migratory birds and endangered species. The Commission will require NedPower to conduct those studies and surveys as soon as possible.

*The West Virginia Northern Flying Squirrel; Cheat Mountain Salamanders;  
Indiana Bats and Virginia Big-Eared Bats*

On the record, and in its brief, NedPower agreed not to construct within a 150 foot buffer zone around any WVNFS habitat. No salamanders were found on the site. NedPower represents that it will undertake a bat biological assessment to: assess the potential impact on bats, including the likelihood of an incidental take of the Indiana Bat and the Virginia Big-eared bat; determine what future studies or research might be necessary; and address concerns raised by the U.S. Fish and Wildlife regarding bats. NedPower will submit its findings to both the U.S. Fish and Wildlife and the DNR for review and comment. NedPower is aware of, and pledges to comply with all requirements of the Endangered Species Act. NedPower accepts Staff's recommended condition that NedPower comply with the Migratory Bird Treaty Act and the National Environmental Policy Act of 1969 in both construction and operation of the project. See NedPower's post-hearing brief.

The Commission agrees with the U.S. Fish and Wildlife Service that NedPower shall make the decision whether or not to conduct a habitat conservation plan and/or obtain an ICP(s) for any of the endangered species at its own risk. The Commission believes that NedPower will continue communications with U.S. Fish and Wildlife regarding protection of endangered species.

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*Migratory Birds*

The Commission interprets the hearing evidence to indicate some risk to migratory birds. While the Phase I migration study concluded that the project would have minimal impact on birds, we find the value of the study to be limited by the fact that it was not conducted during either a Spring or Fall migratory season. Therefore, additional avian research should be required. We approve of NedPower commitments to: (1) commission Dr. Canterbury to undertake a Golden-winged Warbler habitat study prior to construction to aid micro siting; and (2) conduct a migration study prior to construction to determine heavy migration areas; areas where birds descend to feed, etc. for use in final micro siting of turbines. See NedPower's post-hearing brief.

In view of the possible sunset of the PTC, as noted above, we do not believe that avian research over and above that listed in the foregoing paragraph should be required prior to the commencement of construction. Although the following will not be required to be completed prior to the commencement of construction, the Commission will condition the authority granted herein upon NedPower's conducting the following with respect to the project area, as suggested by the

U.S. Fish and Wildlife Service: (1) both a Spring and Fall migration study during all local climatic conditions and all daily temporal periods; (2) a determination of the spacial patterns of nocturnal migrating birds; (3) avian studies to determine raptor behavior during the breeding season and for winter residents; and (4) continued avian and bat mortality studies for three years. See December 3, 2002, Letter from U.S. Fish and Wildlife Service. NedPower's authority will be further conditioned on NedPower's performance of a post-construction study on lighting. See NedPower's post-hearing brief.

NedPower agrees with all of Staff's conditions expressed in closing statements except the one that "NedPower be directed to file evidence that the U.S. Fish and Wildlife Service and/or DNR, whichever is the most appropriate agency, either has accepted an/or approved any kind of endangered species studies and any mitigation plans that they may think is required." NedPower believes that the law does not bestow any authority on these agencies to issue any formal acceptance or approval of such studies. The Commission concludes that the other conditions it will place on NedPower's authority address the environmental concerns raised on the record in this proceeding regarding endangered species in the project areas, and that this condition may be eliminated. Instead we include in the conditions set forth below, requirements that NedPower conduct several studies that were requested by the U.S. Fish and Wildlife Service in its December 3, 2002, letter.

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*Public Opinion and Siting Criteria*

The Commission has given careful consideration to the disparate public opinion on whether this project is in the public interest. The Commission takes seriously the assertions that the project's close proximity to the treasured State wilderness locations may adversely affect the development of tourism and the second home economy in Grant County. As further explained below, the Commission has special concern regarding the Southern phase of the project. The Commission also takes seriously the opinions of those who believe that growth in employment related to the project as well as increased tax revenues and partnership benefits to local schools, are in the public interest. The Commission has weighed the disparate interests in deciding this case.

The Application proposes the project to be built in three phases: Central, Northern, and Southern Phases. The original application indicates flexibility in the location of the southern portion of the turbines. Thus, the Commission will incorporate said flexibility in its decision.

The proposed Southern Phase, to be built as the last phase, would be in close proximity to the Dolly Sods Wilderness Area, which consists of 10,215

acres of high elevations of 2,600 to over 4,000 feet of wind-swept plains on the Allegheny Plateau. See, Applicant Exhibit 7. The area was designated as a wilderness preserve by Congress in 1975. The record contains concerns relating to locating wind turbines 2,000 meters, or approximately 1.24 miles, from Bear Rocks, within Dolly Sods. NedPower anticipated these concerns in its Application, stating that turbines originally intended for the Southern Phase may be relocated into the Central Phase. See Application. The concern expressed about the close proximity of the proposed Southern Phase to the Dolly Sods Wilderness Area, without overriding evidence that the Southern portion as depicted by the map (Applicant's Exhibits 6 and 7) is absolutely vital to the viability of this project, is reason enough for this Commission to withhold approval of the Southern Phase unless NedPower can demonstrate to the Commission that the 200 turbines cannot be located within the Central and Northern Phases, and that such inability will cause the project to become financially unfeasible. Thus, the Commission, in an attempt to meet all its responsibilities and to balance all interests, in a manner that is consistent with the public good, will authorize up to 200 turbines, in the Central and Northern Phases only as conditioned below.

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The FAF and the West Virginia Highlands Conservancy suggest that siting criteria for windpower projects should be established. [See FootNote <sup>3</sup>](#) The Commission has based its decision on the record established in this case. We believe the record supports our decision. The Commission will conduct an internal analysis of the need to establish criteria by rulemaking.

### **Conclusion**

In conclusion, the Commission will grant a certificate of convenience and necessity to NedPower to construct and operate the Central and Northern Phases, but not the proposed Southern Phase, of a wholesale wind power generating facility and related interconnecting transmission facilities in Grant County as described in the Application. The Commission will grant the authority requested with the following conditions, which include modification to the Staff recommended conditions, as well as recommendations from the WV DNR and the U.S. Fish and Wildlife Service, as follows:

- (1) NedPower shall file evidence of all necessary environmental permits and/or certifications that it has not already filed with the Commission that NedPower is required by law to obtain prior to commencing construction. See Staff brief;
- (2) NedPower shall file evidence of approval and/or acceptance of the wetlands delineation by the U.S. Army Corp. of Engineers. *Id*;
- (3) NedPower shall file an historical/archeological significance study with

mitigation plans by the West Virginia Division of Cultural and History prior to commencing construction. *Id*;

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(4) NedPower shall file evidence of any necessary environmental permits and/or certifications, such as the NPDES general storm water construction permit and the soil and sedimentation control plan, that NedPower is required to obtain prior to beginning construction. *Id*;

(5) NedPower shall file copies of the final Interconnection Agreements between NedPower and PJM prior to commencing operation. *Id*;

(6) NedPower shall comply with the Endangered Species Act (16 USC § 1531 *et seq.*), the Migratory Bird Treaty Act (16 USC § 701 *et seq.*), and the National Environmental Policy Act of 1969 (42 USC § 4321 *et seq.*) in both the construction and operation of the Project. Should any authorized governmental agency or court with competent jurisdiction find that NedPower is not complying with any one of the above three acts in either the construction or the operation of the Project, then NedPower must notify the Commission in writing, referencing this case number, of any such finding within ten (10) days of any such finding being made. Furthermore, the Commission may seek any legal remedies it has jurisdiction to seek, including injunctive relief, to address any such findings. *See* Staff brief; December 13, 2002, Letter from WV DNR;

(7) NedPower shall not construct facilities within a 150 foot buffer zone around any existing WVNFS habitat. *See* NedPower brief;

(8) NedPower shall conduct a bat biological assessment to: assess the potential impact on bats, including the likelihood of an incidental take of the Indiana Bat and the Virginia Big-eared bat, determine what future studies or research might be necessary, and address concerns raised by the U.S. Fish and Wildlife regarding bats. NedPower will submit its findings to both the U.S. Fish and Wildlife and the DNR for review and comment. *See* NedPower brief;

(9) Prior to construction, NedPower shall conduct a Golden-winged Warbler habitat study to aid micro siting. *See* NedPower Reply brief;

(10) Prior to construction, NedPower shall conduct a migration study to determine heavy migration areas; areas where birds descend to feed, etc. for use in final micro siting of turbines. *Id*;

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(11) Prior to or after commencing construction, NedPower shall conduct both a Spring 2003, and a Fall 2003, migration study during all local climatic conditions and all daily temporal periods. *See* December 3, 2002, Letter from U.S. Fish and Wildlife Service;

(12) Prior to or after commencing construction, NedPower shall conduct studies to determine the spacial patterns of nocturnal migrating birds and to determine raptor behavior during the next breeding season after this Order issues, and for Winter 2003-2004 residents. *Id.*;

(13) For a three-year period, NedPower shall conduct six month post-construction studies for each phase of the project assessing the mortality of both birds and bats. The first of such studies shall be filed with the Commission 60 days after each phase of the project has been in operation for six months. Thereafter, the studies shall be filed 60 days following the expiration of each subsequent six month period. NedPower is on notice that the results of the initial studies may affect siting of not-yet-constructed turbines. *See* Staff brief; December 13, 2002, WV DNR Letter.

(14) For a one-year period, NedPower shall conduct six-month post-construction lighting studies at each phase after each phase begins operations. The first of such studies shall be filed with the Commission 60 days after the phase of the project has been in operation for six months. Thereafter, the studies shall be filed 60 days following the expiration of the subsequent six- month period. NedPower is on notice that the results of the initial studies may affect siting of not-yet-constructed turbines. *Id.*

The Commission will approve the Council Agreement between NedPower and the Trades Council that was entered into on October 5, 2002, between those two parties. All representations and commitments made by the parties herein shall be kept by the parties. Submission and acceptance of this agreement by the Commission does not mean the Commission is the proper forum to resolve any disputes which may arise from operating under such Agreement.

Should the scope of the project change from the description found in the Application, as modified by this order or the Council Agreement discussed above, then the Applicant will need to seek approval of any such changes from the Commission.

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### **FINDINGS OF FACT**

1. On August 8, 2002, pursuant to *W. Va. Code* §24-2-11, NedPower Mount Storm LLC (“NedPower”) filed an application for a certificate of convenience and necessity to authorize construction and operation of a wholesale windpower electric generating facility and related interconnection transmission facilities in Grant County (“Application”). As proposed, the facility would generate electricity exclusively for sale at wholesale in the competitive wholesale market.

2. By Notice of Filing issued August 13, 2002, the Commission ordered NedPower to publish notice of its Application and the fact that the Application and Exhibits were available for public inspection at the Commission's offices at 201

Brooks Street, Charleston, West Virginia. The notice provided a thirty (30)-day protest period from the date of publication. The notice was published as ordered. See affidavit of publication filed September 6, 2002.

3. On September 4, 2002, the West Virginia State Building and Construction Trades Council, AFL-CIO (Council) filed a petition to intervene in this case and protest of the application.

4. On September 10, 2002, NedPower filed additional letters of support of the project from three public officials.

5. On September 16, 2002, counsel to NedPower filed a letter stating that NedPower had been in discussions with a potential intervenor, the West Virginia Highlands Conservancy. Due to that entity's meeting schedule, NedPower asked the Commission to extend the intervention deadline as to the Conservancy only. NedPower represented that Staff did not oppose such an extension.

6. On September 19, 2002, Friends of the Allegheny Front filed a protest and request for public hearing in this case. FAF cited fear of negative impacts on residents, tourists, endangered species, wetlands, habitats, and bird migration, resulting from this project. The FAF opined that a Federal Environmental Impact Study should be conducted.

7. On September 24, 2002, NedPower filed an "Endangered Species Status and Phase I Avian Risk Assessment" for the proposed project.

8. By Order issued September 25, 2002, the Commission adopted a procedural schedule to culminate in a hearing on November 18, 2002; granted the petition to intervene filed by the Council; and extended the deadline to intervene until October 31, 2002, for the West Virginia Highlands Conservancy only.

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9. On October 23, 2002, NedPower filed a letter advising that NedPower and the Council had reached an agreement (the Council Agreement) which resulted in the Council's full support for the project.

10. On November 7, 2002, NedPower filed an Endangered Species Status Report. NedPower explained that the report summarized two Species Surveys performed in connection with the project, including one on the WVNFS, and a second on Inventories for Cheat Mountain Salamanders.

11. The Commission held a hearing in this case on November 18 and 19, 2002. At the conclusion of the hearing on November 19, 2002, and following closing arguments by counsel, the case was submitted for decision.

12. On December 2, 2002, the court stenographer delivered a letter to Chairman James D. Williams stating that he accidentally recorded over portions of the hearing transcript and that those portions were irretrievable.

13. On December 13, 2002, the West Virginia Division of Natural Resources (DNR) filed a letter requesting that NedPower be required take certain actions. The DNR further noted the requests made by United States Fish and Wildlife in its December 3, 2002, letter and requested copies of any information provided to that agency.

14. By Order issued December 20, 2002, the Commission required the parties to stipulate to a summary of the missing testimony and any missing exhibit references.

15. On January 17, 2003, the parties filed a Joint Stipulation Regarding Missing Testimony.

16. By Order issued January 23, 2003, the Commission granted a motion by FAF to allow the filing of post-hearing briefs. In the same order, the Commission denied the FAF's motion for a further hearing.

17. On February 19, 2003, U.S. Congressman Mollohan filed a letter expressing concerns regarding the project and requesting that the Commission require NedPower to file certain reports.

18. On March 3, 2003, counsel for NedPower filed a letter asking the Commission to rule on the Application by granting a conditional certificate.

19. Lodged in the case file are numerous letters both in opposition to, and in support of, this project from individuals, government organizations, citizens' groups,

environmental groups, etc. The Commission will not name each of these letters and filings, but has considered the concerns expressed therein in rendering this decision.

20. On November 6, 2002, the West Virginia Highlands Conservancy filed a "Letter of Conditional Support of Wind Power."

21. NedPower Mount Strom LLC is a Delaware limited liability company. Its membership interests are jointly owned by two Delaware limited liability companies: NedPower Mount Storm Investment, LLC (NedPower Investment) and Magellan WindPower LLC (Magellan WindPower). NedPower Investment is a wholly-owned subsidiary of NedPower US LLC (NedPower US), which is a Delaware limited liability company. Magellan WindPower is a wholly-owned

subsidiary of Magellan Carbon Fuels, LLC, also a Delaware limited liability company (Magellan). See prefiled testimony of Heironymus (Jerome) Niessen.

22. The project is to be located along the Allegheny Front in Grant County. It will consist of up to 200 wind turbines and have a generating capacity of up to 300 MW. The turbines will be erected in two to three rows along the ridge line, and will be no closer than 600 to 800 feet apart. Each turbine will have a nameplate capacity of between 1.5 MW and 1.8 MW, and will be approximately 100 meters (328 feet) tall. The turbine nacelle, which consists of the generators, gearbox and drive train, is mounted onto a tubular steel tower. The steel tower will have a diameter of approximately 4.5 meters (15 feet) and will be approximately 65 to 70 meters (213 to 230 feet) high. Each turbine will have three blades, which will be at least 25 meters (82 feet) off the ground. This will allow cattle grazing and logging to continue safely. The turbines will be connected by an underground electrical infrastructure that will transmit the electric energy generated by the turbines to a new substation to be constructed on the project site. *Id.*

23. The project will be on a narrow strip of land two miles east of the Mount Storm power plant and Mount Storm Lake. The project area is approximately 14 miles long, with an average width of one-half mile, running southwest to northeast. *Id.*

24. NedPower will lease 8,000 acres for the project, but the project facilities will physically occupy only 3% of those acres. At the time the pre-filed testimony was filed, NedPower had secured leases for approximately 3/4 of the 8,000 acres from individual landowners. *Id.*

25. The turbine locations are either Class 4 or Class 5 wind resources. The high quality wind resource was the key factor in NedPower's decision to develop the site. *Id.*

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26. NedPower will benefit from the fact that cleared areas and haulage roads have been left by prior surface mining and timber operations in the area. Only limited residential areas are in the project vicinity. *Id.*

27. NedPower has conducted viewshed analyses for the project. NedPower asserts that the project will not be visible from any visitor areas or places of significant public interest with tourist traffic, such as Canaan Valley, Blackwater Canyon and Lodge, and readily accessible areas of the Dolly Sods Wilderness Area. *Id.*

28. NedPower represents that the project should not have a negative noise impact on residences or businesses. Wind turbines are very quiet machines, generating less than 30 dBA, comparable to people whispering in a quiet room. If

noise will burden any particular residence or if a turbine will be less than 250 meters from a residence, NedPower will move it. *Id.*

29. The project will be developed in three phases. The middle 4,000 acres, known as the Central Phase, will be developed first with operation to begin by December 2003. The Central Phase will include that majority of the turbines (approximately 100), with an approximate aggregate nameplate capacity of 150 to 170 MW. *Id.*

30. The other two phases are the Northern and Southern Phases. It is likely that they will be completed after the Central Phase. All three phases will transmit energy to the APS system through the same interconnection facilities. *Id.*

31. NedPower is responsible for all construction and operation, except for construction of the substation. APS will be responsible for construction of the substation. *Id.*

32. NedPower may choose to transfer certain rights under its Commission certificate to construct and operate the Northern and Southern Phases, to a third-party project company, in order to facilitate the funding of construction of those phases. In light of Staff reservations regarding NedPower's original request that the Commission pre- authorize such transfer of rights, NedPower withdrew that request. NedPower will seek prior Commission approval if it intends such a transfer in the future. *Id.*

33. Section 45 of the Internal Revenue Code allows a renewable electricity PTC as a general tax credit against a taxpayer's federal income tax liability. For any year, the PTC is available where electricity is produced from a "qualifying facility" during the ten- year period beginning on the date the facility was placed into service and sold by the taxpayer to an unrelated person during the year. "Qualifying facility" includes any wind

power facility that is "originally placed in service" after December 31, 1993, and before January 1, 2004. *Id.*

34. PTC is a critical factor in financing new wind power facilities, both for NedPower and other developers. Without PTC, construction of wind power facilities is not feasible. In the past, Congress has not acted fast enough to renew the PTC, and turbine purchases and siting commitments have had to be delayed, i.e. the PTC expired at the end of 2001 and Congress did not act until March, 2002 to extend it from December 31, 2001 to December 31, 2003. Currently, a wind power project must be operational before January 1, 2004, to qualify for PTC. This is why NedPower has requested expedited treatment. This is also why NedPower must have Commission approval for the entire project in hand. *Id.*

35. The total cost will be in excess of \$300 million. This includes substation construction of \$11.5 million. NedPower is responsible for obtaining all of the financing to cover development, land acquisition, permitting, financing, construction, marketing, operation and maintenance. The project will be financed through a combination of equity contribution and private debt financing through one or more third party lenders. No public funds will be used. NedPower will bear all financial risk for the project and West Virginia ratepayers will not bear any risk. *Id.*

36. NedPower represents that the project will increase Grant County's annual *ad valorem* tax revenues by at least \$500,000 per year. Local landowners will receive \$600,000 annually in lease payments. The project will purchase certain local goods and services supporting the local economy. Pursuant to NedPower's agreement with local labor, NedPower's contractors will employ local workers during construction and operation where the needed skills can be sourced locally on a timely, cost-effective basis. *Id.*

37. NedPower has created public-private partnerships with Maysville Elementary School and Union Educational Complex to provide annual funds to support scholastic and extracurricular activities. *Id.*

38. NedPower represents that it has community support from local legislative delegation and local political and economic development officials, as well as grass-roots support. NedPower has been open with the community about its plans. NedPower has communicated with both supporters and non-supporters, including environmental groups. NedPower will continue to address legitimate concerns. *Id.*

39. NedPower has an agreement with the West Virginia Building and Construction Trades Council, AFL-CIO (Building Trades) whereby Building Trades will provide the

labor force used in the construction of the project. Building Trades will, in turn, support the project. *Id.*

40. Mr. Niessen asserts that West Virginia's best wind resources are in Grant and Tucker County. See Pre-filed Rebuttal Testimony of Heironymus (Jerome) Neissen.

41. Mr. Niessen states that NedPower would not oppose the PSC's issuance of a certificate conditioned upon NedPower's compliance with the Endangered Species Act. Mr. Niessen is unclear about what Staff witness Perdue means when he recommends that the Commission condition its approval on "evidence of approval and/or acceptance of the . . . final endangered species study with any mitigation plans." NedPower does not anticipate that the U.S. Fish and Wildlife

Service or the WVDNR will have a formal role in approving NedPower's studies or efforts relating to the Endangered Species Act. *Id.*

42. NedPower would not oppose the PSC's issuance of a certificate conditioned upon regulatory approval from other state agencies. *Id.*

43. All electrical components associated with the turbine unit will be out of view and safe from tampering. Electricity will be generated at the top of each tower and carried by enclosed wiring to a single step-up transformer mounted on a concrete pad at the base of each turbine. The power is collected through underground connections. Each transformer will boost the power generated by each turbine from several hundred volts to 34.5 kV. The underground power collection system will transfer the power from all turbines to a step-up transformer that will boost the voltage from 34.5 kV to 500 kV for delivery to a new substation. The substation will be funded by NedPower and constructed by APS. The substation will house the protective relaying, metering and communications equipment. The substation will be interconnected to an existing 500 kV APS transmission line that extends across the project site. See Pre-filed Testimony of James Alexander.

44. Each turbine will be connected to the project's operations facility through underground fiber-optic cable. This will allow each turbine to be monitored and controlled remotely. NedPower plans to construct an operations and maintenance facility onsite to house the office, system control and data acquisition system as well as spare parts and maintenance equipment. *Id.*

45. Initial construction activities will be grading and construction access roads and turbine sites for all-weather use, surfacing access roads to minimize erosion. Roads will be 20-30 feet in width. Turbine sites will be 4,000 to 5,000 sq. feet in size. *Id.*

46. Second, will be preparing foundations at each turbine site. This will involve geotechnical assessments for excavation and construction of each tower foundation. The

design will be poured concrete with reinforcing steel, 45 feet in diameter and 25-30 feet deep. Both pad-mounted transformer foundations and underground power and communication connections will be installed at the same time. *Id.*

47. Next, tower bases and top tower sections will be added. Turbine nacelles (the wind turbine/generator assembly to be placed on top of the tower) will arrive on site as complete units and be hoisted into place atop the completed towers. *Id.*

48. NedPower will contract with a qualified contractor to prepare the site and complete all construction and assembly activities at the site. The Building Trades agreement will provide access to a qualified and experienced workforce. *Id.*

49. Once operational, a staff of ten to fifteen persons will operate and maintain the project. Safety is important. Scheduled maintenance will occur on a periodic basis in accordance with manufacturers' instructions. Unscheduled maintenance will occur on an as-needed basis with utmost care and efficiency. *Id.*

50. After a long useful life, and acknowledging that more efficient units could be developed in the future, NedPower recognizes that it may choose to decommission the project at some time in the future. If this occurs, NedPower will remove all turbines and towers as required by covenants and lease agreements with landowners. *Id.*

51. A feasibility study was completed in May 2002. The study concluded that the APS transmission system was capable of accommodating the project without reinforcements to the system. See Pre-filed Testimony of Timothy P. Henle.

52. NedPower requests that the Commission issue a certificate for the project contingent upon NedPower's later filing of an executed Interconnection Agreement. *Id.*

53. NedPower has sought and received EWG status from the FERC. This status is required to avoid certain restrictions imposed by the PUCA of 1935. *Id.*

54. The generated electricity will be sold exclusively on the wholesale market. There will be no sales either at retail or to West Virginia utility ratepayers. Wholesale rates are set by FERC. NedPower intends to file market-based rates with FERC. NedPower will compete with other wholesale generators, including power marketers, regulated public utilities, EWGs and other independent power producers. NedPower will not compete with regulated public utilities in West Virginia. NedPower will not be in the business of transmitting or distributing electric energy. *Id.*

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55. NedPower believes that there is a need for additional generating capacity. ECAR will face decreased capacity reserve margins and will be increasingly dependent upon an aging generation fleet if projects such as this one do not come on-line. ECAR's capacity should be diversified with renewable energy sources, such as wind power. Other markets served by APS transmission, such as the PJM power pool, lack diversity. *Id.*

56. NedPower retained Potesta to assist in various aspects of the project, including site assessment and environmental permitting. Potesta prepared a preliminary report dated September 23, 2002, and filed it with the Commission.

Potesta also assisted NedPower in identifying and taking necessary action to secure regulatory permits and authorizations needed to construct and operate the project. See Pre-filed Testimony of Laidley E. McCoy.

57. NedPower asked Potesta to contact the U.S. Fish and Wildlife Service and the West Virginia Department of Natural Resources to inquire about rare, threatened and endangered species that might occur on the project site. The Service identified four federally listed species that could occur in the project area: the Indiana bat, the Virginia big-eared bat, the WVNFS, and the Cheat Mountain salamander. The Service made recommendations with respect to each species, including: (1) a habitat survey for the Cheat Mountain salamander and the West Virginia northern flying squirrel to determine whether the project includes areas with potential habitat. If so, then the Service recommended that species surveys be completed; (2) Two options intended to identify summer foraging and roosting habits for the Indiana bat. One option permitted tree clearing during a period in which the Indiana bat is hibernating; (3) a Take assessment of the Virginia big-eared bat, that would be associated with the project. *Id.*

58. To the extent a take of this species caused from construction and operation of the project cannot be avoided, then the Service recommended a Habitat Conservation Plan and the preparation of an Incidental Take Permit. *Id.*

59. In response to the Service's recommendations, NedPower hired a WVU consultant who prepared a habitat survey for the WVNFS. There are isolated areas within the project site where a suitable habitat for this species exists. The consultant recommended that additional species survey be performed to find out if the squirrels are actually present. *Id.*

60. A habitat assessment was performed related to the Cheat Mountain salamander. In one of the four project sub-areas, a potential habitat existed for the salamander. The consultant recommended that a species survey be performed to find out if the salamander is actually present. *Id.*

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61. NedPower directed Potesta to commission species surveys for the squirrels and the salamanders. If either the squirrels or the salamanders are present, NedPower will modify the expectant turbine sites, utility corridors and secondary road construction to minimize impact. *Id.*

62. The testimony summarizes each of the following potentially applicable permits: USACE - Section 404 Nationwide Permit; Wetlands Delineation Approval Letter; WVDEP/Office of Water Resources - Section 401 Water Quality Certification; WVDEP/Office of Water Resources - NPDES General Stormwater Construction Permit and Soil and Sedimentation Control Plan; U.S. Fish and Wildlife Service - Threatened and Endangered Species; WVDNR/Public Lands Corporation - Right of Entry Approval; WVDCH - Archeological and Historical

Review; FAA - Notice of Proposed Construction or Alteration. The project should not require a federal environmental impact study because NedPower expects that the USACE will issue the project a Section 404 NWP. *Id.*

63. Based on species survey performed by NedPower's consultants on the salamander and squirrel, NedPower does not need to change any siting for the salamander, but will change some things around to accommodate the squirrel. See Pre-filed Rebuttal Testimony of Laidley E. McCoy.

64. Mr. McCoy asserts that NedPower does not need to apply for an incidental take permit with respect to the salamander. NedPower may apply with respect to the squirrel. *Id.*

65. Dr. Canterbury prepared a Phase I Avian Risk Assessment for Potesta dated September 20, 2002. The purpose of the Avian Assessment is to provide a general examination of potential impacts of the project on birds and, if impacts are noted, to suggest ways to minimize degradation of avian populations. See Pre-filed Testimony of Ronald A. Canterbury.

66. Dr. Canterbury concluded that there are two major concerns with the project: (1) the potential effect of project construction on the habitat of the Golden-winged Warbler and (2) turbine lighting considerations. Overall, the project is projected to have minimal impact on avian life. *Id.*

67. Dr. Canterbury offered six recommendations to NedPower: (1) Use modern wind turbine technology, including tubular tower structures and low-RPM blades; (2) relocate turbines from close proximity to the Stony River Reservoir; (3) minimize turbine lighting to the extent possible; (4) minimize and reduce the risk to the Golden-winged Warbler through careful planning and consideration of habitats in micro siting of turbines;

(5) consider a migration study and/or post-construction mortality monitoring; and (6) use existing roads to the extent possible. *Id.*

68. Dr. Canterbury has recommended that NedPower consider undertaking some additional investigations during and after the project construction: First, pre- and post- turbine studies to minimize the impact on nocturnal migrants to help the scientific and wind energy development communities to get a better understanding of the subject for future wind farms. Second, pre-and/or post-construction studies to assess how impacts on the Golden-winged Warbler would help with phases of conservation plan development for this species. These recommendations should not detract from the Avian Assessment's conclusion that the project is projected to have minimal impacts on birds. *Id.*

69. Dr. Canterbury asserts that the methodology he used to prepare his Phase I study is generally accepted in the avian and wind communities. See Pre-filed Rebuttal Testimony of Dr. Canterbury.

70. Dr. Michael conducted a habitat survey for the WVNFS and the project in August 2002. He concluded that a small WVNFS population exists at one site in the project area. He concluded that the Endangered Species Act does not require that NedPower seek and obtain any permits with regard to the WVNFS. See Pre-filed Rebuttal Testimony of Edwin D. Michael.

71. Dr. Strickland approves of Dr. Canterbury's methodology and conclusions. He concluded that the data supports Dr. Canterbury's conclusions and that his recommendations are sound. See Pre-filed Rebuttal Testimony of Dale Strickland.

72. Mr. Reel expects hundreds of thousands of dollars to be infused into the local economy as a result of the project. He itemizes his expectations in the rebuttal testimony, including tax revenues, lease revenues, local purchases, and job creation. He disagrees with the FAF's fears regarding tourism, and believes the turbines create no threat to tourism. He believes there is great local support for the project. See Pre-filed Rebuttal Testimony of Michael Reel.

73. The normal funding for this type project is 70% debt and 30% equity. NedPower expects funding for this project to be in a range between 50% debt and 50% equity, to 80% debt and 20% equity. NedPower does not intend to apply for public funds. See Pre-filed Testimony of Darrell W. Preece.

74. Without consideration of environmental or engineering factors, Mr. Preece believes there is no reason to deny the certificate based on either financial or rate making considerations. *Id.*

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75. The basic technical concerns for this project are First, environmental issues regarding wetland relocation, noise production and site constriction. Second, electrical interconnection concerns including system impact/stability and the need for equipment upgrades. Approval of the certificate should be contingent upon a final interconnection agreement between the project developer and the transmission and distribution company. See Pre-filed Testimony of Wayne M. Perdue.

76. The historical impact of surface mining and timbering operations which have left large cleared areas and wide haul roads will help to minimize the environmental impact of this project. *Id.*

77. The nearest neighborhood in Bismark, WV, is 6/10 of a mile from the project area, and one mile from the nearest turbine. A number of turbines will be

visible from Bismark. Exhibit 1, Appendix C to the Application contains a topographical viewshed analysis. From certain locations, it appears that all of the 200 turbines would be visible. From major tourist areas, up to 120 turbines may be seen from the highest elevations in the Dolly Sods Recreational Area and Monongahela National Forest. The Canaan Heights and Brown Mountain areas may have from 1 to 20 turbines visible at a distance of approximately 6 miles. *Id.*

78. Exhibit 1, Appendix D is a photograph scaling the wind turbines to appear at the size they would appear if viewed from a distance of 2.5 miles. This image would be reduced by 40% to determine the size of the turbines visible from 6 miles away. From a visibility perspective the turbines would be very small from 6 miles away. *Id.*

79. If there is no impact on streams or wetlands, a Section 404 USACE permit will not be needed. Potesta is in the process of determining whether there will be any streams or wetlands affected by construction. If there are minimal impacts, NedPower should qualify for a Section 404 permit. NedPower intends to relocate road construction, utility corridors, and turbine sites to minimize stream and wetland disturbance. This permit process should be complete in January 2003. *Id.*

80. WVDEP Section 401 Water Quality Certificate approval is automatic if a Section 404 permit is granted. *Id.*

81. A WVDEP NPDES General Stormwater Construction Permit and Soil and Sedimentation Plan is generally required for storm water runoff during construction. Potesta is completing a storm water pollution prevention plan and a groundwater protection plan. These should be filed by January 2, 2003, with a permit issued by February 2, 2003. *Id.*

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82. Engineering Staff recommended approval of the project and the grant of a certificate of convenience and necessity. *Id.* Staff included a list of items that NedPower should be required to submit prior to operation.

83. The FAF does not oppose wind power development, but believes that the Commission should not issue the certificate until it follows procedures to ensure that the project will not harm endangered species and migratory birds, as well as determined that the siting is appropriate. See Pre-filed Testimony of Donna T. Cook.

84. The FAF asserts that procedures required by the Endangered Species Act have not been followed in this case. *Id.*

85. The State has not established any kind of a process or guidelines to determine where and how wind power projects should be sited. FAF suggests that the process should consider whether projects: 1) offer a balance between development and protection of mountain ranges?; 2) should be required to set aside an equivalent amount of land for permanent protection and preservation; 3) affect native vegetation, soils and streams. The state should also think about how many turbines it will allow on the Allegheny Front. *Id.*

86. Ms. Cook believes the project will hurt tourism in the area because the Allegheny Front is visible from several major attractions. Furthermore, the project will affect scores of adjacent property owners to the east and lead to property devaluation. Other concerns are noise levels, bird mortalities, destruction of wildlife habitat and endangered species. *Id.*

87. FAF asserts that the neighborhood has not been adequately informed about the project. There was little public notice and no proper local hearing by government officials. Many area residents are opposed. *Id.*

88. Tucker County's economy has suffered significant coal mining, and shoe plant job losses since the mid-1980's. The only significant growth in the economy has been in tourism. The population has declined and the number of persons living below the poverty level, and on fixed incomes has increased proportionately. Tourism is the single most- important facet of the county's economy. With the completion of Corridor H in the next few years, the influx of tourists should increase. That growth could be stymied by wind power projects. The "wilderness experience" sought by tourists will be compromised. See Pre-filed Testimony of John W. Cooper.

89. Mr. Cooper stated that Grant County's economy is slightly better than Tucker County's, and its population has increased slightly. Both counties have been the victims of flooding. The three underground coal mines located in the vicinity have closed. Two

hundred jobs were lost recently with the closing of a chicken processing plant. Tourism has become a substantial part of Grant County's economy. The turbines may make vacationers less inclined to visit the area. *Id.*

90. Mr. Cooper has viewed the initial stages of the Tucker County FPL, Energy, LLC project and is of the opinion that the pristine vista will be forever damaged by that project. Those turbines do not yet have their rotary blades attached, which will raise them up an additional 100 feet, yet they are clearly visible from tourist areas. There are currently no guidelines to establish distances between windmills, or excluded areas. The natural beauty of the Canaan Valley is its primary draw for tourists. The State cannot afford to deface this natural landmark with industrial structures. *Id.*

91. Mr. Cooper believes the tax incentives for these projects will hurt the counties. Mr. Cooper notes that the state legislature, in 2001, enacted *W.Va. Code* §11-6A-5a, which limits taxation of the turbines to their “salvage valuation.” The result is that county school boards and county commissions will be deprived of the tax revenues which these unsightly behemoths would have otherwise placed in their coffers. The generated energy will go to customers outside the state. The economic benefit accruing to the people of Tucker County or Grant County will be minimal, while the indirect adverse affects on tourism will be substantial, irreparable and permanent. *Id.*

92. Mr. Cooper opined that the application should not be granted and that future projects should not be approved without specific rules and guidelines regarding (1) the number of projects and location of projects and individual units within a defined geographic area; (2) the location and distances between the erection of individual windmill units; (3) designation of certain protected areas in which no units should be constructed to assure the protection of viewsheds in and surrounding highly sensitive areas. Furthermore, the Commission should issue rules ensuring that school boards and county commissions receive direct and substantial economic benefits as compensation to offset the adverse visual impacts. *Id.*

93. Dr. Murray concludes that there are gaps in the available information on the ecology of the area proposed for construction. Construction without additional research would most probably result in a take of one or more federally endangered species. NedPower's reports underestimate the importance of Allegheny ridges as migration pathways for bird species, especially in the size classes of thrushes and warblers. NedPower's reports discount the likelihood of bat mortality resulting from the attraction of insects to lighting. The NedPower reports do not adequately address the need for further surveys and studies. See Comments of Dr. Murray, attached to Pre-filed Testimony of Linda Cooper.

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94. Mr. White rebuts testimony filed by the FAF arguing that the economies of the local areas will be stymied by the project. Mr. White believes that the project will have a significant positive economic impact on the local area and the State. He believes the project will result in \$25 million in new business sales, 331 new jobs (including 200 construction jobs) which will generate \$7.6 million in wages and benefits and \$2.8 million in taxes. See Pre-filed Testimony of Steve White.

95. The Commission heard public comment from certain individuals as summarized in the Hearing Evidence section of this Order.

96. At the outset of the evidentiary portion of the hearing, the Chairman ruled that reports attached to pre-filed testimony would be permitted to be introduced into evidence if the experts who authored the reports, or who adopted the reports as their own testimony, were present at the hearing to testify. Reports whose

authors or adopters were not present would be lodged in the case file as public comment. Tr. I. p. 93.

97. The Commission ruled that Dr. Whitmore, who adopted the pre-filed report of Dr. Murray, would be permitted to testify based on the pre-filed report, but would not be permitted to expand his testimony to other areas. Tr. I. p. 96-97.

98. The first witness to testify was Hieronymus J. Niessen for NedPower. Mr. Niessen has been the primary contact with the local community regarding plans for the project. Tr. I. p. 99.

99. NedPower is a Delaware corporation and all of the owners are Americans except for Mr. Niessen who is a United States resident. NedPower's sister corporations in Europe has developed projects in Germany, Ireland and Greece, and India on a smaller scale than the project proposed in West Virginia. Tr. I. p. 103-104.

100. NedPower's 200 turbine proposal in West Virginia will be the largest windfarm in eastern North America. Tr. I. p. 104. After completion, NedPower expects to sell energy to entities such as Green Mountain Power in the PGM West market. Mr. Niessen has no way of saying whether the power produced will serve customers in West Virginia. Tr. I. p. 105-106.

101. From top to bottom each wind turbine will measure approximately 315 feet. NedPower's Federal Aviation Administration application stated a height of 430 feet to avoid stating a height that ends up too low. NedPower expects the total height to be 315- 325 feet, and not to exceed 400 feet, including the blades. Tr. I. p. 106-107; 117.

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102. The height of each individual turbine may vary depending upon whether the turbine is built high on a ridge or lower on a ridge. Tr. I. p. 117. The 325 feet stated by Mr. Niessen was later corrected by counsel to 100 meters, which equals 328 feet. Tr. I. p. 133.

103. NedPower would not object to a Commission order which placed a height limit of 400 feet on each turbine. Tr. I. p. 133-134.

104. Mr. Niessen dismissed Mr. Barrett's question whether NedPower would remove the turbines in the event it no longer wished to operate them, by saying that it is inconceivable that if NedPower went out of business, no other operator would step in to run the windfarm. Tr. I. p. 107-108.

105. Mr. Niessen stated that NedPower has assured the landowners that if the technology becomes obsolete, then NedPower would dismantle the turbines.

Tr. I. p. 109. Mr. Neissen expects that NedPower's lenders will require as a term of the loan, that NedPower remove the turbines after so many years. Tr. I. p. 109.

106. NedPower first approached landowners in Grant County in January 2001. NedPower first notified the U.S. Fish and Wildlife Service about the project in June 2002. Tr. I. p. 110. NedPower didn't want to contact the Service until it was sure of the location of the project. Tr. I. p. 111.

107. The total cost of the project is \$300 million plus. Tr. I. p. 111. NedPower requested expedited treatment of its certificate application because each turbine must be operational by January 1, 2004, in order to take advantage of a federal tax credit which may expire on December 31, 2003. Tr. I. p. 113; 127-128. This tax credit has been extended by congress from time to time and the last extension was a 2-year extension. The wind industry hopes that Congress will extend the credit again but there is no guaranty. Tr. I. p. 113; 126-128.

108. NedPower has estimated that Grant County will receive \$500,000 in tax as a result of the project, but that number is only an estimate and is dependent upon all 200 turbines being built. Tr. I. p. 114-115.

109. The construction jobs that the project will create will be temporary and will last from 6 - 12 months. Tr. I. p. 115. The 6 - 12 months does not include "down-time" when work is not possible due to inclement weather. Tr. I. p. 116.

110. NedPower has leased 5,500 acres of the total 8,000 it needs to complete both phases of the project. The un-obtained leases pertain to the northern phase of the project.

Tr. I. p. 118. NedPower's leases to date involve approximately 25 separate landowners. Tr. I. p. 119. Mr. Neissen estimates that it will negotiate with approximately 5 to 6 additional landowners for the remaining leases. *Id.*

111. Some of the project area has in place haulage roads and clearings due to prior timber operations and surface mining. Tr. I. p. 120. Due to uncertainty as to the location of endangered species, and the possible need to move the project area to avoid species habitat, Mr. Neissen cannot say what percentage of the final project area is already cleared. Tr. I. p. 120-122.

112. NedPower's proposed location took into consideration viewshed issues and low population. Tr. I. p. 122-123.

113. The American Wind Energy Association of turbine manufacturers states that beyond a distance of 900 yards, or 2,700 feet, the noise generated by a typical wind turbine is less than 30 decibels. Tr. I. p. 129-130. 30 decibels is comparable to persons whispering in a room. Tr. I. p. 130. NedPower will relocate a turbine that is found to be sited within 820 feet of a permanent

residence. *Id.* At 820 feet, a turbine would produce noise equivalent to a kitchen refrigerator. Tr. I. p. 138.

114. Mr. Neissen believes there is a current need for additional power on the United States' transmission grid. There is a clear demand for renewable energy, particularly on the east coast. Tr. I. p. 124-135.

115. Approximately one-half of NedPower's project will be financed by equity and one-half by bank loans. Investors are attracted to the project because of the federal production tax credit. Tr. I. p. 136-137. NedPower intends to built up the debt reserves required by its lenders during its first year of operations, in lieu of paying dividends. Tr. I. p. 143. NedPower would object to a bonding requirement. Tr. I. p. 143-144.

116. NedPower's transmission lines will be built underground and will not require herbicide spraying for maintenance to the same extent that power lines generally require. Tr. I. p. 139-140.

117. The life expectancy for each turbine is 25 years, but more advanced technology could lead to an earlier replacement. Tr. I. p. 140.

118. NedPower intends to minimize turbine lighting in the interest of birds and bats. Tr. I. p. 141-142.

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119. Mr. Heinle expected to complete a system in-house study of the interconnection with APS by November 2002. Mr. Heinle expected a facilities study with APS to be completed by February 2003. Tr. I. P. 149. NedPower would not object to filing with the Commission its executed interconnection agreement with APS. *Id.*

120. NedPower will not compete with regulated electric utilities in West Virginia. Rather, NedPower will compete in the wholesale market with other wholesale generators. Tr. I. p. 150.

121. The ECAR has stated that without new electric generation projects, it will face reduced capacity reserve margins and an aging generation fleet. Tr. I. p. 152.

122. Magellan is a privately owned development company involved in a number of energy ventures. Tr. I. p. 164; 165-66. The NedPower project is Magellan's first venture in wind power and Magellan is a 50% partner with NedPower on this project. Tr. I. p. 165; 166.

123. Mr. Alexander sponsored the introduction into evidence of a memorandum agreement between NedPower and Building Trades, as Applicant's Exhibit No. 1. NedPower requests that the Commission include in any

Order granting this certificate application, language making all representations and commitments in the memorandum agreement binding. Tr. I. p. 158-160.

124. Mr. Alexander stated that the substation will be built adjacent to the Allegheny power line and will be located on land that NedPower has leased from a private landowner. Tr. I. p. 101-161.

125. Mr. Alexander stated that in the event the turbines are decommissioned, the dismantling process would take everything back down to ground level. The foundations would not be removed from the ground, but everything above ground would be removed as would any related facilities. Tr. I. p. 161.

126. Mr. Alexander believes, but is not certain, that the lease agreements specify that only objects above ground will be removed. Tr. I. p. 162. Mr. Alexander cannot say whether the turbines, once dismantled, would have any salvage value. *Id.*

127. Mr. Alexander believes that the lenders for the project will place appropriate requirements regarding the availability of financing for potential future decommissioning of the turbines, and that this Commission should not feel the need to place any such requirements on NedPower. Tr. I. p. 169-170.

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128. The computerized SCADA system for the project will be located on site in an operations building. Tr. I. p. 163. The project will not be interconnected to the VEPCO power line referred to by the public commentator, Daniel Jones.

129. Potesta reviewed the federal Endangered Species Act, 16 USC §1531, the Migratory Bird Treaty, and the National Environmental Policy Act of 1969. Tr. I. p. 190- 191. Potesta also contacted the U.S. Fish and Wildlife Service and the West Virginia Department of Natural Resources to give those agencies an overview of the project and request information on species and issues of concern. Tr. I. p. 191.

130. Dr. McCoy testified that NedPower was currently consulting with the U.S. Army Corps of Engineers on whether it needs a Clean Water Act Section 404 fill permit. Tr. I. p. 173-174. Dr. McCoy believes the Corps are satisfied that as long as NedPower could “stay within the requirements of the nationwide general permit, [the Corps] didn't see any reason why one could not issued.” Tr. I. p. 175.

131. Nationwide general permits (NWP) are issued by the Corps for certain categories of activities, and entities engaging in those activities register for the appropriate permit. *Id.* Dr. McCoy has no reason to believe that the Corps will not issue a NWP to NedPower for this project. Tr. I. p. 200. If a NWP is issued, then

NedPower would have no obligation to consult with any other federal agency regarding potential impact on endangered species. Tr. I. p. 201.

132. If an entity cannot obtain a NWP, it must then obtain an individual permit from the Corps. Tr. I. p. 176. An individual permit is more difficult to obtain. The Corps first makes an environmental assessment of the potential environmental impact of the project on water, air, land use, and species. If the Corps makes a finding of no significant impact (a FONSI determination), then the Corps proceeds with permitting. If the Corps finds a significant impact, then it does a more in-depth assessment of that impact. This step would require consultation with the U.S. Fish and Wildlife Service. Tr. I. p. 178.

133. A finding of significant impact would necessitate the gathering of additional information to determine whether the project would involve the Endangered Species Act which is found at 16 U.S.C. §1531. Tr. I. p. 178-179; 190.

134. A habitat conservation plan is a term used by the Fish and Wildlife Service referring to a mitigation plan to minimize the effects of human activities on a certain species. Tr. I. p. 185.

135. An incidental take permit is pursuant to Section 10 of the Threatened and Endangered Species Act. An applicant obtains this permit when activities may result in

the loss of certain species. Tr. I. p. 185. Section 9 of the Act prohibits taking endangered species. Tr. I. p. 185-186. If a developer does its best to avoid any endangered species and has no reason to believe that such species will be harmed by construction, then there is no reason to apply for an incidental take permit, nor is there a legal requirement to do so. Tr. I. p. 206-207.

136. Dr. McCoy stated that there is no legal requirement for an entity to submit a habitat conservation plan to Fish and Wildlife Service. Whether to do so is left to the developer's discretion. Tr. I. p. 186. The stronger incentive to take environmental precautions is to avoid violating the federal Endangered Species Act, which could impose substantial legal and civil penalties. Tr. I. p. 188. The Endangered Species Act does not require NedPower to receive approval of an endangered species study from DNR prior to commencing construction. Tr. I. p. 189.

137. Despite NedPower's belief that it will be awarded a NWP by the Corps of Engineers, NedPower has voluntarily consulted with the U.S. Fish and Wildlife Service regarding its windpower project. Tr. I. p. 200-201.

138. The U.S. Fish and Wildlife Service, in response to a letter NedPower sent asking for information on threatened and endangered species in the project

area, identified the Virginia big-eared bat as having habitat in the area. Tr. I. p. 179. The Service suggested that habitat and/or mist-netting surveys of the bat be conducted. As of the hearing date, NedPower has not conducted those surveys because by the time it received the suggestion from the Fish and Wildlife Service, the bat netting season had ended or was ending. Tr. I. p. 179-181. NedPower was then in the process of engaging a researcher to conduct a future habitat survey for the Indiana bat and the Virginia big-eared bat. Tr. I. p. 181-182; 205. If the endangered species are found in the project area, Potesta has recommended, and NedPower has agreed, to submit plans to the U.S. Fish and Wildlife Service on how NedPower will address those species in its construction plans. Tr. I. p. 192-193.

139. With respect to the Indiana bat, the Fish and Wildlife Service suggested two options to NedPower. One was to clear the project site during the bats' hibernaculum and the other was to review the percent of available habitat relative to the overall project area. In NedPower's opinion only a small percentage of the project area will be disturbed. Tr. I. p. 187-188.

140. NedPower plans further studies on both the Indiana bat and the Virginia big-eared bat to be completed prior to the project going into operation. Tr. I. p. 198-199. The studies will include normal biological assessment to determine species protection and consultation with Fish and Wildlife for input. Tr. I. p. 199.

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141. NedPower engaged Dr. Ed Micheal to survey the project area and attempt to capture and identify the WVNFS subspecies. Dr. Michael identified a small area habitat area within the project boundaries and captured some of the subspecies in October of 2002. Dr. McCoy did not know whether Dr. Michael's information had been provided to either the U.S. Fish and Wildlife Service or to the West Virginia Division of Natural Resources. Tr. I. p. 182-184. NedPower's construction will avoid the habitat and ensure that corridors are available to the species. Tr. I. p. 195.

142. Dr. McCoy believes there is no reason for NedPower to request an incidental take permit from the U.S. Fish and Wildlife Service. Tr. I. p. 196; 203. On August 30, 2002, NedPower received a letter from U.S. Fish and Wildlife pertaining to the WVNFS and making certain recommendations. Tr. I. p. 201. NedPower has followed all of those recommendations. Tr. I. p. 202. Unless the project changes, there is no additional legal requirement or obligation that NedPower continue to consult with the U.S. Fish and Wildlife Service with respect to the WVNFS. Tr. I. p. 203.

143. With respect to the Cheat Mountain Salamander, NedPower contracted with Dr. Pauley who found three areas where the species might potentially be located. Dr. Pauley did not, however, find any salamanders at the three potential sites. Tr. I. p. 196- 197. NedPower does not plan to take any further action with

respect to the Cheat Mountain Salamander. Tr. I. p. 198. NedPower does not expect any further input on this species from the U.S. Fish and Wildlife Service. Tr. I. p. 204.

144. NedPower has not conducted a noise level study and Potesta does not have expertise in that field. Tr. I. p. 184.

145. Dr. McCoy believes the project would benefit the State and noted that Magellan has a strong commitment to environmental compliance. See January 17, 2003, Joint Stipulation Regarding Missing Testimony (Testimony Stipulation), at p. 1.

146. Dr. Canterbury conducted a Phase I Avian Risk Assessment with respect to the impact of the NedPower project. A Phase I requires three things, the first two of which are (1) a site visit and (2) examination of available literature. Tr. I. p. 232-233. Dr. Canterbury estimated that the actual bird mortality rate for the Project would be approximately four bird deaths per turbine per year, and up to 25 deaths per turbine per year would be considered minimal. *Id.* at 3. Twenty-five birds, multiplied by 200 turbines per year would yield 5,000 bird deaths per year. *Id.*

147. The life span of a nocturnal migrating songbird traveling along the Allegheny Front is approximately 1 to 2 years; Most songbird migration occurs at nights. Most bird migration in the area takes place in the Fall. Dr. Canterbury did not conduct a Fall

migration study at NedPower's proposed project site. Dr. Canterbury is not aware of any significant avian mortality studies within 500 miles of the NedPower project site involving wind turbines. *Id.*

148. Dr. Canterbury spent only one day at the project site but he has conducted research in the general area for many years. Phase I Avian Risk Assessment standards require only one day. *Id.* p. 3-4. The purpose of a Phase I is to determine whether a migration study is needed. Based on his Phase I and his years of experience, Dr. Canterbury concluded that a migration study is not needed. Tr. I. p. 224.

149. The Allegheny Front Migration Observatory is located at Red Creek in Dolly Sods, approximately 3 miles from the NedPower project site. Dr. Canterbury has no reason to disagree with Dr. Greg Eddy of the Brooks Bird Club that the Observatory is located on one of the most important migration routes for neotropical migrant birds in Eastern North America.

150. Dr. Canterbury has visited that Observatory and believes that the migration patterns there are unique to that area due to the manner in which the birds are funneled through the Red Creek valley while flying across the Allegheny

Front. This pattern concentrates the birds and the Red Creek location is uniquely suited for bird banding. Since 1963, 163,000 birds have been tagged at that location. Testimony Stipulation, p. 4. Dr. Canterbury estimates that up to 50,000 birds migrate through that one area each year. Tr. I. p. 236.

151. Bird migrating over the entire State on an annual basis could number in the millions. Tr. I. p. 236-237.

152. Dr. Canterbury did not conduct a Fall migration study at the project site and does not believe that such a study would change his conclusions based on his experience studying avian life; his study of the available literature; and the fact that he followed accepted protocols to conduct the Phase I Avian Risk Assessment. Testimony Stipulation, p. 4-5.

153. The beginning and end date of Fall migration varies according to species. Tr. I. p. 226. The peak migration date is mid-September, but varies from year to year. Tr. I. p. 227.

154. Dr. Canterbury does not believe the NedPower turbines will be directly in the path of migrants in the same way that structures on Dolly Sods would be. Tr. I. p. 225.

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155. Spring migration in the area usually occurs in late March to early June, depending upon species. Tr. I. p. 227. The Spring migration peaks in mid-May. Tr. I. p. 228.

156. Dr. Canterbury is familiar with the "Wiley Report" from 1966, which observed that a 100 foot unlit tower killed 73 birds, including 21 species, in one night. Dr. Canterbury did not cite this report in his Phase 1 Risk Assessment because citation was not warranted in his opinion, partly because the subject tower had a lattice structure which differs from the turbine structure to be used in the NedPower project. Dr. Canterbury did not at first recall the location of the tower that was the subject of the "Wiley Report" but later confirmed that the tower was located at Coopers Rock in West Virginia. Testimony Stipulation, p. 5; Tr. I. p. 210; 239.

157. In preparing the Phase I Risk Assessment, Dr. Canterbury did not rely on information regarding bird kills by towers in the west. Dr. Canterbury could not state with confidence that 73 bird kills will not occur in one night at a NedPower tower. Tr. I. p. 209-210. Dr. Canterbury did review studies conducted on wind turbines in the east conducted in Pennsylvania and Vermont. Tr. I. p. 219-220. The number of studies in the east is limited because wind farming is fairly new to the eastern part of the country. Tr. I. p. 220. The studies cited by Dr. Canterbury concluded that impacts on migrants are minimal. Tr. I. p. 221.

158. Dr. Canterbury has devoted his life to the study of the Golden-winged warbler. The Golden-winged warbler has adapted so that its habitat is disturbed lands such as abandoned farms and strip mines. Its current status in West Virginia is that it is being evaluated by U.S. Fish and Wildlife for endangered status. Tr. I. p. 223. He estimates that the population is declining by about 10% a year in West Virginia. *Id.* The species is listed as endangered in the states of Ohio and Massachusetts and others, but not in West Virginia. Tr. I. p. 235. Dr. Canterbury observed the Golden-winged warbler at the NedPower project site. *Id.*

159. He has also studied the cerulean warbler. Tr. I. p. 214-215. Both of these are important birds in the State of West Virginia. The cerulean warbler is not yet considered an endangered species but the U.S. Fish and Wildlife Service is now taking comments on whether the species should be evaluated. Tr. I. p. 215.

160. Dr. Canterbury's 2000 letter regarding Backbone Mountain recommended that more detailed studies should be produced before wind turbines are built. Tr. I. P. 215; FAF Exh. 1. Dr. Canterbury stated that he wrote that letter before he had ever conducted a Phase 1 study. Dr. Canterbury now characterizes a Phase I Avian Risk Assessment study

as "fairly detailed" and noted that the study includes a one day site visit, as well as interviews of experts and evaluation of literature. Tr. I. p. 215-216

161. Dr. Canterbury acknowledged that Dr. Murray, Dr. Eddy and Mr. Evans have criticized his work on the NedPower project. Tr. I. p. 217. Dr. Canterbury's pre-filed testimony distinguishes his work on West Virginia specific ornithology from the work of the other experts. *Id.* Dr. Canterbury would agree that Dr. Whitmore, who has also criticized Dr. Canterbury's work, is an expert on West Virginia specific ornithology. Tr. I. p. 218. Dr. Canterbury stated that he interviewed Dr. Whitmore while conducting the Phase I, and that Dr. Whitmore did bring up any concerns. Tr. I. p. 219.

162. The leading cause of bird kills is cats which kill billions of birds in the country each year. The second leading cause is birds hitting windows. Tr. I. p. 229. In West Virginia, cats kill millions of birds each year. Tr. I. p. 230.

163. Mr. Bill Evans wrote a review of Dr. Canterbury's Phase I which was attached to Linda Cooper's pre-filed testimony. Tr. I. p. 242-243; FAF Exhibit 2. Tr. I. p. 243. Mr. Evans bases his opinion in this case on his 17 years studying the nocturnal migration of birds in eastern North American. Tr. I. p. 249-150. Mr. Evans has worked on four smaller wind power projects. When commissioned by power companies or the U.S. Fish and Wildlife Service, he has set up acoustic monitoring stations to monitor the number and quantity of bird calls occurring over potential project sites. Tr. I. p. 251. The NedPower project would be the

largest in eastern North American with more turbines than all other eastern wind farms combined. Tr. I. p. 252. The NedPower turbines will be higher than those Mr. Evans has previously studied. Tr. I. p. 256.

164. Mr. Evans testified that there are only a handful of studies on wind turbines and bird impact in the east. Tr. I. p. 244-245. These studies conclude that construction of turbines has an impact on bird habitat and that birds are killed by colliding with the built turbines. Tr. I. p. 245. To date, the studies indicate that the number of birds killed by colliding with the turbines is minimal. *Id.* The fact that the turbines are high structures built on ridge tops causes Mr. Evans concern. The altitude of bird migration ranges over a large spectrum, but he believes that the height for most species ranges between 300 feet and 2,500 feet above ground level. Tr. I. p. 246-247. The altitude of migration over high ridges could be lower than the altitude over flat ground. *Id.*; Tr. I. p. 262.

165. West Virginia is located in the middle of a major migratory path. Mr. Evans agrees with Dr. Canterbury that the Allegheny Front has the potential to channel and concentrate the number of low altitude migratory birds. Tr. I. p. 248. While Mr. Evans cannot say that bird kills by NedPower wind turbines will be significant, he cannot agree that kills will be minimal. *Id.* Ridges that run east to west cause less concern than those

running north to south. The ridge in question lies southwest to northeast leading Mr. Evans to conclude that the channeled birds will be more severely impacted. Tr. I. p. 249; 252-253. Mr. Evans believes that because of the geography, and the number of turbines, the NedPower project cause more mortalities than any other area studied to date. *Id.*; Tr. I. p. 254.

166. Mr. Evans believes that birds are killed by turbines because they are flying low due to a low cloud ceiling and do not see the turbines at night. He does not believe that many birds are chopped up in the turbine blades. Tr. I. p. 257. Mr. Evans stated that strobe lighting is not sure to reduce bird mortality. Tr. I. p. 258. There is some evidence that red lighting temporarily blinds nocturnal migrating birds and causes more mortalities. Tr. I. p. 259; 260. Strobe lighting is believed to be more bird-friendly than other lighting. Tr. I. p. 260.

167. Mr. Evans notes that estimating kills based solely on banded birds is unfair because banded bird killed by a cat or a window is more likely to be found than is a banded bird killed by a tower. Tr. I. p. 150

168. Dr. Robert Whitmore adopted the majority of the pre-filed testimony of Dr. J. James Murray which was moved into evidence as FAF Exhibit 3. Tr. I. p. 264-266. Dr. Whitmore disagreed with two points made by Dr. Murray and could not confirm one additional statement. First, Dr. Whitmore disagreed with Dr. Murray's statement that "the proposed towers are likely to represent little threat to populations of local residents." Dr. Whitmore believes the nature of site

preparation and tower construction as well as construction of other buildings such as maintenance sheds, etc. leads to an extreme likelihood that there will be fragmentation of the habitat which will lead to population declines in local bird populations. Tr. I. p. 267-268. Second, Dr. Whitmore disagreed with Dr. Murray's conclusion that the project should be limited and would instead recommend that the project not commence until after the parties can study data resulting from the completed Backbone Mountain project. Tr. I. p. 269-270. Third, Dr. Whitmore could not support nor negate Dr. Murray's statement regarding the Indiana bat and Dr. Murray's communications with a Dr. Kate Jones because Dr. Whitmore had no personal knowledge of that communication. Tr. I. p. 268.

169. Mr. John Cooper is a resident of the Canaan Valley, is Davis, West Virginia. Tr. II. p. 15. Mr. Cooper has been involved in the tourism industry in the north central part of West Virginia since 1981. *Id.* Mr. Cooper's pre-filed testimony was moved into the record as FAF Exhibit 4. Tr. II, p. 16. Mr. Cooper believes that the NedPower project will negatively effect the tourist industry in Grant County and in Tucker County. Tr. II, p. 17.

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170. Mr. Cooper stated that he was originally a supporter of the Backbone Mountain project, but changed his mind after learning about a newly enacted tax credit affecting wind farms, Tr. II, p. 19, and after seeing the actual size of the wind turbines. Tr. II, p. 43. Mr. Cooper characterized the turbines as unsightly and huge. Tr. II, p. 51. When asked to compare the wind turbines to ski lift towers, Mr. Cooper noted that ski lift towers are approximately 75 feet high, and normally not at the top of ridges, while the wind turbines will be 300 plus feet high and will sit on ridge tops . Tr. II, p. 51.

171. Citing significant job losses in the poultry and coal industries for both Grant and Tucker Counties, Mr. Cooper believes tourism is the most promising growth area for the economies there. Tr. II, p. 21-22. Tucker County has enjoyed a growth in the second home industry from 400 to 1,100. Tr. II, p. 22. This has raised the tax base for both Tucker and Grant Counties. Tr. II, p. 22-23. Mr. Cooper believes that the NedPower project combined with other wind farm projects in Grant County, Tucker County and Preston County will result in second home areas being encircled by turbines and that will stall growth. Tr. II, p. 21.

172. Mr. Cooper acknowledged that there are many groups in Grant County, including the Grant County Commission, that support the NedPower project. Tr. II, p. 24- 25. Mr. Cooper believes that once citizens in Grant County realize the extent of the NedPower project, they will change their minds. Tr. II, p. 26. Mr. Cooper believes that the Backbone Mountain project was misrepresented to the citizens of Tucker County. *Id.*; 56. Mr. Cooper was originally under the impression that the project would create many jobs and that the turbines would be less obtrusive. Tr. II, p. 56-57. Mr. Cooper conceded that the towers were built to the height specified in the Backbone Mountain application for a certificate of convenience and necessity. Tr. II, p. 57.

173. Mr. Cooper stated that because of a tax credit passed in the State Legislature in 2001, instead of receiving \$554,000.00 in the first year of the Backbone Mountain project operation, Tucker County will realize only \$27,500.00. Tr. II, p. 27. The statute provides that instead of taxing towers and turbines at 60% of their assessed value, they will be taxed based on salvage value, or at 5% of assessed value. Tr. II, p. 39-40; 54. Mr. Cooper opined that the tax credit should be repealed for the benefit of local schools. *Id.* In Grant County, the same tax credit will result in a reduction of tax revenues resulting from the NedPower project from what would have been \$3,000,000.00, down to only \$500,000. Tr. II, p. 28; 42. The effect of the statute will be felt in all counties where wind farms are built. Tr. II, p. 42.

174. Mr. Cooper does not dispute that construction of the turbines will create a temporary economic boom because of related construction jobs. Tr. II, p. 29-30. Mr. Cooper doubts the 10-12 permanent jobs that would result from the NedPower

construction will adequately offset damage to the tourist economy. Tr. II, p. 30. Mr. Cooper approves of NedPower's royalty partnership with two local school. Tr. II, p. 31.

175. Mr. Cooper testified that he is familiar with the Mount Storm Lake, a man-made lake built for the purpose of cooling for the Mount Storm electric generation plant. Mr. Cooper has used the lake for recreational purposes. The lake and the Mount Storm plant smoke stacks are visible from tourist areas in Grant County, Dolly Sods and other tourist areas. Tr. II, p. 34-35. Mr. Cooper believes the presence of the Mount Storm Lake has been helpful to the local economy in Grant County. Tr. II, p. 35-36.

176. Mr. Cooper explained that due to the location of various wind farm projects, including Backbone Mountain, MegaEnergy, WindForce, Dominion Resource, and a potential project in Harman, Randolph County, the Canaan Valley will sit in the middle of a semi-circle of wind farms. Tr. II, p. 48-50.

177. Following Mr. Cooper's testimony, the FAF moved into evidence a letter from Professor Pistole at the Indiana University of Pennsylvania as FAF Exhibit 6; comments from Dr. Greg Eddy, a member of the Brooks Bird Club as FAF Exhibit 7; comments from Professor Peter Weigl, a Professor of biology at Wake Forest University as FAF Exhibit 8; and a letter from Jeffrey Towner of the U.S. Fish and Wildlife Service as FAF Exhibit 9. Tr. II, p. 61-62.

178. Ms. Donna Cooke testified that FAF was organized in mid-September 2002 to respond to the NedPower application. Tr. II, p. 64-65. As of the hearing date, the FAF did not have any corporate status or formal member roster. The co-founders of the FAF include Ms. Cook, Ray Stone, Jr., a landowner, Charlie

Glick, resident of the area, and Donald Shreve, a landowner. Tr. II, p. 66-67. The FAF have no paid staff. *Id.*

179. Ms. Cook did not intend her pre-filed testimony to represent to the Commission that the project area is an undisturbed sanctuary. She would disagree, however, with a statement that much of the project areas has been surface mined and timbered, and is laced with haulage roads and high voltage transmission lines. Tr. II, p. 69-70.

180. Ms. Cook believes that the Commission should establish guidelines regarding the location of wind farms, with mountain range protection requirements. Tr. II, p. 70. The guidelines should limit the number of wind farms within designated areas and protect native vegetation and soils. Tr. II, p. 71. Ms. Cook is not certain whether this Commission or the State Legislature should be the responsible body for establishing siting guidelines. Tr. II, p. 71-72.

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181. Ms. Cook believes that the local residents of Grant County were unaware of the NedPower project until a very late date. Tr. II, p. 74. Ms. Cook did not know whether NedPower followed the Commission's directives regarding public notice. Tr. II, p. 74-75. Ms. Cook acknowledged that NedPower held an informational open house in Grant County regarding the project on October 14, 202, but she does not believe that an open house is appropriate way to inform the public. Tr. II, p. 75-76; 85. Ms. Cook acknowledged that many Grant County officials and residents support the project. Tr. II, p. 76.

182. Ms. Cook did not intend her testimony regarding the Jordan Run Road to imply that it was a federally or state protected road. Rather, it may be designated as a non- motorized recreational trail by a private organization by the name of American Discovery Trail. Tr. II, p. 77-78.

183. Ms. Cook does not object to wind power in general but objects to the NedPower project on the basis of the impact to tourism, the potential effect on squirrels, bats and birds, tax issues, and inadequate notice. Tr. II, p. 78-79.

184. Ms. Cook believes the project will be visible from parts of Dolly Sods. Tr. II, p. 82-83. She also believes the turbines will be visible from Seneca Rocks. Tr. II, p. 83. She has a great concern regarding visibility from Jordan Run Road, which is the gateway to the Dolly Sods area. Tr. II, p. 84. Jordan Run Road enjoys a lot of tourist traffic and is a paved road running about ten miles from Route 42 through Jordan Run to Route 220 which connects to North Fork. Tr. II, p. 87.

185. Ms. Cook believes that residents of the area at first believed that the NedPower wind turbines would be hidden from view. Now residents are learning

they will see and hear the turbines. Another concern is that previously remote area will be bulldozed over. Tr. II, p. 88.

186. Mr. Steve White testified that the Council is made up of approximately 20,000 construction labor union members from West Virginia and surrounding counties, from 12 different craft unions. Tr. II, p. 95. The Council has had good relations with NedPower and has reached an agreement regarding this project. *Id.* Mr. White confirmed that the Council expects that the project will result in the creation of 200 one-year construction jobs. Tr. II, p. 96. There is also a prediction that 131 one-year service related spin-off jobs will be created. Tr. II, p. 99-100.

187. On the date of the hearing, members of the Council were employed on the Backbone Mountain project. Because wind turbines are not constructed in West Virginia, most parts are shipped from other states. Tr. II, p. 97. All construction jobs are temporary

by definition. A one-year job is a good job, and construction careers are built on temporary jobs. The Backbone Mountain project has been a positive job creation experience for the Council's members. Tr. II, p. 98.

188. The Council's analysis of the NedPower project did not focus on long-term economic benefits of the project. Tr. II, p. 100. Mr. White does expect that turbine part replacements and technological changes may result in job creation down the road. Tr. II, p. 100-101.

189. Mr. Daryl Preece confirmed that the NedPower project would have a southwest to northeast orientation. Tr. II, p. 105-106.

190. Mr. Wayne M. Perdue's pre-filed testimony recommended that the Commission approve NedPower's application subject to certain conditions, including acceptance of a final endangered species report with any mitigation plans. Tr. II, p. 109- 110. Mr. Perdue explained that when he wrote his pre-filed testimony, he did not know whether NedPower would be required to submit any mitigation plans to another agency. If NedPower were required to do so, then Staff wanted to review those submissions. Tr. II, p. 110. Mr. Perdue was not comfortable interpreting NedPower's obligations to the U.S. Fish and Wildlife Service. Tr. II, p. 111.

191. Staff did not perform its own viewshed analysis of the NedPower project, but rather relied on NedPower's analysis. Tr. II, p. 114. Staff did, however, conduct an on-site visit. Tr. II, p. 122. Staff did not perform a sound study, a water quality study, an avian study, a salamander study, a bat study or a squirrel study. NedPower did not perform a sound or water quality study. Staff is relying upon NedPower's avian, salamander, bat and squirrel studies. Tr. II, p. 114-115. Staff's role with respect to environmental issues has been to request that NedPower provide information showing that it is complying with environmental

laws. Staff relies on other agencies to enforce compliance. Tr. II, p. 120. The Commission does not employ environmental compliance experts. Tr. II, p. 121.

192. During Mr. Perdue's testimony, NedPower offered for explanatory use three maps. The first map has three red circled areas showing the three phases of the project and was attached to NedPower's application as Appendix A. The second map shows a preliminary layout of turbine locations. The third map, is a topographic map showing the Kingwood, West Virginia/Maryland area which shows the various project areas in the four county region. Tr. II, p. 125-126.

193. Staff plotted the actual and proposed wind projects on a topographical map and has an idea where they exist and where tourist sites and points of interest are. Tr. II, p. 116. Mr. Perdue does not know what percentage of the project area has been previously

surface mined or timbered. Tr. II, p. 124. Staff's field visit included four separate sites. Staff used a global positioning satellite navigator to show the sites visited on a map generated by Staff using computer software known as Maptech. See Staff Exhibit 3; Tr. II, p. 126-127; 132-134. Of the four sites, one had been cleared by strip mining Tr. II, p. 128.

194. Mr. Perdue stated that the Mt. Storm power plant stack is approximately 1,100 feet tall and is visible from the tourist location known as Bear Rock in Dolly Sods. Tr. II, p. 136. Mr. Perdue does not believe that an AEP 500 KV power line tower is visible from Bear Rock. He estimates that a KV tower is typically 150 - 200 feet tall. Tr. II, p. 137-138.

195. The U.S. Fish and Wildlife Service contacted Mr. Perdue to discuss a letter dated August 30, 2002, from Jeffrey Towner. Mr. Perdue believes that the Fish and Wildlife Service would like NedPower to perform more work on endangered species, including mist-net studies for bats and migratory studies in the Fall and Winter for birds. Tr. II, p. 117-118. Mr. Perdue believes that Fish and Wildlife will not require NedPower to file a habitat conservation plan for bats if NedPower takes other protective measures such as construction while bats are hibernating. *Id.* Staff requested that Fish and Wildlife copy the Commission on any correspondence with NedPower. Staff would rely on the Fish and Wildlife's findings and recommendations with respect to endangered species. Tr. II, p. 118-119.

196. Mr. Perdue's impression of NedPower is that it is willing to move turbine sites or even eliminate turbines to prevent endangerment of wildlife. Tr. II, p. 123. NedPower has been cooperative in providing Staff with information. Tr. II, p. 124.

197. Mr. Michael Reel learned that Tucker County Development Authority still supports the Backbone Mountain project. Tr. II, p. 142-143.

198. Mr. Reel is not experienced in the tourism industry. Apart from his membership on the County Development Authority, Mr. Reel has no experience in economic development. Tr. II, p. 143. Mr. Reel's personal opinion is that the NedPower project poses no threat to local tourism. Tr. II, p. 143-144; 145. Mr. Reel believes that residents believe the wind turbines will be more attractive than the Mt. Storm power plant facilities. Tr. II, p.146. Most residents also feel that the project will have the potential to create tourism jobs through tours, and eco-educational centers. Tr. II, p. 146-147. Mr. Reel believes that NedPower has committed to grant two schools in Grant County between \$32,000 to \$36,000 each. This amount is over and above tax revenues. Tr. II, p. 147-148.

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199. Dr. Whitmore questioned whether Dr. Canterbury is an expert on the geographic area of Grant County contemplated for the project. Tr. II, p. 152. Dr. Whitmore also disagreed with Dr. Canterbury's questioning whether Dr. Eddy is sufficiently knowledgeable to have rendered his opinions on avian life that were attached to Linda Cooper's pre-filed testimony. *Id.*

200. Dr. Whitmore criticized the Phase I avian assessment based on its reliance on a single site visit coupled with Dr. Canterbury's statement regarding the cerulean warbler, along the lines of, "if it had been there, I would have seen it." Dr. Whitmore notes that the Phase I does not indicate Dr. Canterbury's bird sampling, i.e. point counts, variable circular plots, or transects. Nor does the Phase I indicate the time of day. Tr. II, p. 154. We do know, however, that the sampling date was outside the window set forth by U.S. Fish and Wildlife for conducting bird surveys for breeding routes. Birds are less active later in the Summer. Tr. II, p. 154-155. Dr. Whitmore acknowledged that one-day sampling is all that is allowed by a Phase I, but asserts that the outcome of the survey is affected by the short time frame outside of the recommended sampling window. *Id.* Dr. Whitmore opined that the date collected by Dr. Canterbury cannot be considered empirical data. Tr. II, p. 157.

201. Dr. Whitmore further criticized the fact that the Phase I report fails to address differences or conditions that are site specific for each wind power project, such as location, weather patterns, migration corridors and lighting. Tr. II, p. 157.

202. Dr. Whitmore additionally disagrees with Dr. Canterbury's defense of his Phase I report's comparisons with migration studies performed in western North America. Dr. Whitmore asserts that the migration patterns of birds in the west are totally different than those in West Virginia. Migration in the west is much more broadly dispersed because flight is not confined by ridges. Comparisons of data from one area is not applicable to the other. Tr. II, p. 157-158.

203. Dr. Whitmore next responded to Dr. Canterbury's summarization of studies to indicate that modern wind technology at wind farms minimizes a

projects effects on avian life. Dr. Whitmore countered that a project's effect on avian life should not merely minimize effects, but should eliminate all effects, in light of all other negative impacts on avian life in the United States and the world. Dr. Whitmore later conceded, however, that it would not be practical for his personal preference for zero mortality to guide the siting of a wind farm location. Tr. II, p. 178. Dr. Whitmore also noted that there are no studies of wind farms that have been done in West Virginia upon which Dr. Canterbury could base his statement. Tr. II. 162-163.

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204. Dr. Whitmore disagreed with Dr. Canterbury's conclusion that a migration study is not required on grounds that the area is encompassed in the "most exciting migration point in the Appalachians," noting that everyone in the ornithologic community visits there to band birds, view birds, and teach about migration. Tr. II, p. 163. Dr. Whitmore believes both a spring and fall migration study should be performed. Dr. Whitmore characterized as a "scary thing" the concept of building the towers first, and then studying migration impacts. Tr. II, p. 164-165. Dr. Whitmore believes that the Backbone Mountain project's impact on avian life should be assessed before this project is built. Tr. II, p. 179-180; 187.

205. Dr. Whitmore explained the role of a leading line ridge as funneling birds out of Canada toward the Gulf. The ridges of the Allegheny Front provide valuable migration cues for the birds. Birds migrate at night and use the day to get back on course for the next night. The birds follow the ridges northeast to southwest to the Gulf states. One expert has opined that migrants are known to follow leading lines such as shore lines, rivers, and ridges that are oriented in the direction the birds are heading. Tr. II, p. 166-167.

206. Dr. Whitmore believes the Allegheny Front is a significant leading line for migrating birds in North American. Tr. II, p. 184. When birds are caught for banding at the Allegheny Front Migratory Bird Observatory, they are caught with nets that are parallel to the ridge, catching birds that are crossing the ridge face-on. This will be the same orientation of the wind turbines. Tr. II, p. 167.

207. Dr. Whitmore asserts that Dr. Canterbury may have conducted extensive research on migration patterns, but he has not done so in the project area. Rather he has studied Guyandotte River, Guyandotte Mountain, Raleigh, Boone and Wyoming County, Bolt Mountain. Tr. II, p. 171; 174. Dr. Whitmore stated that Dr. Canterbury gave no citation to studies to support his assertion that he had empirical data from West Virginia studies to support his conclusions while Dr. Evans and Dr. Murray do not. Tr. II, p. 172;174.

208. Dr. Whitmore would agree with Dr. Canterbury's statement that NedPower collect pre-construction data on migration towers. Tr. II, p. 173. Dr. Whitmore criticizes Dr. Canterbury's statement that his research is complete. Tr. II, p. 175.

209. Dr. Whitmore noted his concerns regarding the cerulean warbler, and stated that he is in favor of an incidental take permit and a habitat conservation plan for the project, with respect to all endangered species in the project area. Tr. II, p. 176.

210. Dr. Edwin Michael explained that the WVNFS is a subspecies of the northern flying squirrel. The subspecies was found to be endangered because it is isolated from all

other northern flying squirrels who live Prince Edward Island, Nova Scotia, New Brunswick, across Canada, through Alaska, Washington and Oregon and a pocket in California and one in North Carolina. Tr. II, p. 201-203.

211. To avoid the WVNFS habitat discovered by Dr. Michael, NedPower has committed not to disturb areas within 150 feet of the habitat. NedPower is not required to obtain any further approvals with regard to the northern flying squirrel. Tr. II, p. 205- 206.

212. In August, at the request of Potesta & Associates, Dr. Michael spent seven days walking the 14 miles of the project site in both directions to determine if potential flying squirrel habitat existed. Tr. II, p. 191. Dr. Michael identified three sites that he considered to be potential flying squirrel habitat. In October, Dr. Michael conducted a ten- day trapping survey to determine if northern flying squirrels did in fact live at those three sites. At two of the sites, no flying squirrels were found. At a third, six individual squirrels were trapped. Tr. II, p. 192.

213. Dr. Michael has a collecting permit from the State of West Virginia to conduct live trapping. Tr. II, 194-195. Following the trapping study commissioned by NedPower, Dr. Michael notified the DNR non-game endangered species biologist, Craig Styler, of the capture results. *Id.* Dr. Michael also informed Linda Smith and Shane Jones of the U.S. Fish and Wildlife Service of the results. Tr. II, 195-196.

214. The U.S. Fish and Wildlife Service recommends that endangered species trapping studies be conducted in more than one season but Dr. Michael's study was performed only in the Fall. Tr. II, p. 197-198.

215. Following the trapping of flying squirrels at one location at the project site, Dr. Michael recommended that NedPower consult with the U.S. Fish and Wildlife Service and consult informally with DNR. Dr. Michael made no other recommendations. Tr. II. p. 199-200.

216. Dr. M. Dale Strickland co-authored a report, published by the National Wind Coordinating Committee entitled, *Avian Collisions with Wind Turbines, a summary of existing studies and comparisons to other sources of avian collision mortality in the United States*. Tr. II, p. 233-234; Staff Exhibit No. 4.

217. Dr. Strickland has prepared Phase I avian risk assessments which he characterized as the first effort by wind companies. Dr. Strickland has also conducted more detailed mortality and lighting studies at wind facilities. Tr. II, p. 209. Dr. Strickland noted that studies of larger wind plants and avian life has occurred primarily in the west

because that's where the larger wind plants are. The eastern wind farms are all smaller. The studies that have occurred indicate that the average mortality rate is 1.7 birds per turbine per year.

218. Other research indicates that wind power does not come close to the bird mortalities caused by other factors, such as buildings, windows, and cats. Tr. II, p. 217; 237-238. Dr. Strickland opined that it would be unscientific to use information from a single event such as bird mortality on one night at a fire tower in Cooper's Rock, West Virginia, to estimate annual fatalities that might result from a wind turbine. Tr. II, p. 217- 218.

219. Based on Dr. Strickland's experience, it is not realistic to expect to completely eliminate the possibility of bird fatalities when building anything, be it house, skyscraper, or wind tower. The expectation of regulatory bodies is that a company will do what they can to avoid fatalities, but not to eliminate fatalities. Tr. II, p. 219.

220. Dr. Strickland does not believe a migration study is needed to confirm that the Allegheny Front is a significant migration flyway. Tr. II, p. 221. That fact, and the closest comparable study conducted at Buffalo Mountain, Tennessee, where there were four bird fatalities per turbine per year, indicate that fatalities to the NedPower project could exceed the 1.7 bird per turbine per year national average. Tr. II, p. 221-222; 225- 226.

221. Dr. Strickland has not visited the Allegheny Front Migration Observatory. Tr, II, p. 227. Dr. Strickland does not have empirical data on the number of birds that migrate over Buffalo Mountain, TN, compared to those that migrate over the Allegheny Front. Tr. II, p. 228-229.

222. Dr. Strickland believes that if NedPower's certificate is granted, he will be conducting mortality and lighting evaluations for NedPower in the future as well as a Spring migration study for NedPower. Tr. p. 222-225; 233.

223. Dr. Strickland does not expect the Spring migration study to contradict Dr. Canterbury's findings of minimal risk. Tr. II, p. 231. Dr. Strickland stated that it would unusual to find large number of birds migrating at 200-300 feet. He conceded, however, that low clouds can affect migration height. Tr. II, p. 232.

224. Mr. Jerome Neissen stated that NedPower did not lobby for the West Virginia wind power tax incentives that are currently in effect. He stated that the

incentives are reductions in property taxes. West Virginia is not the only state that has put incentives

into place. The federal government also has incentives for wind power as renewable energy. Tr, II, p. 259-260.

225. Mr. Neissen stated that NedPower's land leases do not include landowners Western Pocahontas Property or Coastal Energy. The landowners are local individuals many of whose families have owned the land for generations. Tr. II, p. 261-262.

226. Mr. Neissen stated that NedPower's commitment to the local schools boils down to \$350 per turbine, or \$70,000.00 total. This amount is divided between two schools based on the number of students enrolled. NedPower chose the two schools closest in vicinity to the project site. Tr. II, p. 262-263.

227. Mr. Neissen sponsored a letter dated November 19<sup>th</sup>, from the Tucker County Development Authority stating that Authority believes that development of wind power is an economic asset to the State and the counties in which they locate and provide appropriate jobs and tax base. The Authority specifically supports NedPower's application. Tr. II, p. 264; Applicant's Exhibit No. 9.

228. Mr. Neissen stated that if NedPower's application is not granted by the Commission by mid-January, it would be very difficult for NedPower to complete the project in 2003. Tr. II, p. 265.

229. Mr. Neissen characterized the FAF as a small group of people, mostly from outside Grant County but who have second homes in Grant County. Tr. II, p. 266.

230. Mr. Neissen stated that NedPower intends to follow Dr. Canterbury's recommendations to use tubular tower structures and low RPM blades; relocate turbines from close proximity to the Stony River Reservoir; minimize turbine lighting; minimize and reduce the risk to the Golden-winged warbler by careful planning and consideration of habitats and micro siting turbines; and use existing roads to the extent possible. Tr. II, p. 267-270.

231. NedPower plans to conduct a post-construction mortality and lighting study for both Phase I and Phase II of the project. Tr. II, p. 269; 270-272. NedPower would not oppose a requirement that the results of the post-construction mortality and lighting studies be filed with the Commission within 90 days of the end of each study. Tr. II, p. 272.

232. NedPower intends to continue consultation with the U.S. Fish and Wildlife Service regarding the endangered species - the Indiana bat and the

Virginia big-eared bat. Tr. II, p. 273-274. NedPower will not build turbines on the WVNFS habitat and expects

to establish a buffer zone around that habitat. Tr. II, p. 275. NedPower will take the recommendations of the U.S. Fish and Wildlife Service, with respect to the flying squirrel, into serious consideration. Tr. II, p. 276.

233. NedPower intends to comply with all environmental statutes and would not object to a Commission requirement that if any governmental agency or court finds that NedPower is not in compliance, NedPower must notify the Commission within ten days. Tr. II, p. 277-278.

234. Mr. Neissen stated that 200 turbines, producing 300 megawatts is required in order for the project to be financially viable. Tr. II, p. 279-280.

235. This case differs from the two prior windpower project certificate applications granted by the Commission. First, this project is larger than the prior projects. Furthermore, in this case an endangered species, the WVNFS, has been located and captured within the project area. See Tr. I. p. 182-184. Testimony of Dr. Edwin Michael. Also in this case, the U.S. Fish and Wildlife Service has made comprehensive requests for action by NedPower to reduce potential harm to migratory birds and endangered species. See FAF Exhibit 9 (December 3, 2002, Letter from U.S. Fish and Wildlife). Tr. II, p. 61- 62. Also, the intervenor, FAF, has provided expert testimony rebutting NedPower's evidence regarding the economic and environmental impact of the proposed project. Finally, this project includes a proposal to locate wind turbines within 2,000 meters from a designated Wilderness Area.

236. NedPower represents that it will undertake a bat biological assessment to: assess the potential impact on bats, including the likelihood of an incidental take of the Indiana Bat and the Virginia Big-eared bat, determine what future studies or research might be necessary, and address concerns raised by the U.S. Fish and Wildlife regarding bats. NedPower will submit its findings to both the U.S. Fish and Wildlife and the DNR for review and comment. NedPower is aware of, and pledges to comply with all requirements of the Endangered Species Act. NedPower accepts Staff's recommended condition that NedPower comply with the Migratory Bird Treaty Act and the National Environmental Policy Act of 1969 in both construction and operation of the project. See NedPower's post-hearing brief.

237. The proposed Southern Phase, to be built as the last phase, would be in close proximity to the Dolly Sods Wilderness Area, which consists of 10,215 acres of high elevations of 2,600 to over 4,000 feet of wind-swept plains on the Allegheny Plateau. See, Applicant Exhibit 7. The area was designated as a wilderness preserve by Congress in 1975. The record contains concerns relating to locating

wind turbines 2,000 meters, or approximately 1.24 miles, from Bear Rocks, within Dolly Sods. NedPower anticipated

these concerns in view of the statement in the Application that NedPower's plans for locating turbines within the Southern Phase were uncertain at the time of its filing, and that turbines originally intended for the Southern Phase may be relocated into the Central Phase. See Application.

### CONCLUSIONS OF LAW

1. In considering this certificate application, the Commission applies the provisions of *W.Va. Code* § 24-2-11, and assesses whether the general public convenience will be served and the public necessity for the project. *Sexton v. Public Serv. Comm'n*, 188 W.Va. 305, 423 S.E.2d 914 (1992).

2. After reviewing the record as a whole, the Commission concludes that NedPower should be granted a certificate of convenience and necessity with respect to the Central and Northern Phases of its project. The Commission withholds certification for the Southern Phase of the project for the reasons stated in the Discussion section and in Conclusion of Law number 12.

3. To take advantage of the current PTC provided in Section 45 of the Internal Revenue Code, the NedPower turbines must be placed in service before January 1, 2004. If NedPower cannot take advantage of the PTC, its windpower project will not be financially feasible. See Application; pre-filed direct testimony of Heironymus (Jerome) Niessen.

4. In determining the public convenience and necessity of windpower projects, the Commission is required to consider the use of public financing. See *Affiliated Construction Trades Foundation v. Public Service Commission of West Virginia and Big Sandy Peaker Plant, LLC*, 211 W.Va. 315, 565 S.E.2d 778 (2002). [See FootNote 4](#) NedPower has represented that the project will not use public financing.

5. The record of evidence in this case supports a conclusion that the project will be an economically beneficial, environmentally responsible, windpower facility.

6. The evidence shows a need for additional electric generating capacity. The NedPower project will address the need for additional generating capacity and will help

diversify the generation mix by adding a competitive renewable energy source to the ECAR region's supply. Thus, the Commission finds that NedPower has shown that the project, as modified herein, is needed.

7. In view of the scope of this project, and the concerns expressed on the record in this case, the authority granted herein will be accompanied by a number of conditions designed to minimize risk to migratory birds and endangered species. The Commission will require NedPower to conduct those studies and surveys as soon as possible.

8. The Commission agrees with the U.S. Fish and Wildlife Service that NedPower shall make the decision whether or not to conduct a habitat conservation plan and/or obtain an ICP(s) for any of the endangered species, at its own risk.

9. The Commission interprets the hearing evidence to indicate some risk to migratory birds. While the Phase I migration study concluded that the project depicts a minimal impact on birds, we find the value of the study to be limited by the fact that it was not conducted during either a Spring or Fall migratory season. Therefore, additional avian research should be required. We approve of NedPower commitments to: (1) commission Dr. Canterbury to undertake a Golden-winged Warbler habitat study prior to construction to aid micro siting; and (2) conduct a migration study prior to construction to determine heavy migration areas; areas where birds descend to feed, etc. for use in final micro siting of turbines. See NedPower's post-hearing brief.

10. In view of the possible sunset of the PTC, as noted above, we do not believe that avian research over and above that listed in the foregoing paragraph should be required prior to the commencement of construction. Although the following will not be required to be completed prior to the commencement of construction, the Commission will condition the authority granted herein upon NedPower's conducting the following with respect to the project area, as suggested by the U.S. Fish and Wildlife Service: (1) both a Spring and Fall migration study during all local climatic conditions and all daily temporal periods; (2) a determination of the spacial patterns of nocturnal migrating birds; (3) avian studies to determine raptor behavior during the breeding season and for winter residents; and (4) continued avian and bat mortality studies for three years. See December 3, 2002, Letter from U.S. Fish and Wildlife Service. NedPower's certificate will be further conditioned on NedPower's performance of a post-construction study on lighting. See NedPower's post-hearing brief.

11. NedPower agrees with all of Staff's conditions expressed in closing statements except the one that "NedPower be directed to file evidence that the U.S. Fish and Wildlife Service and/or DNR, whichever is the most appropriate agency, either has accepted and/or approved any kind of endangered species studies and any mitigation plans that they may

think is required." NedPower believes that the law does not bestow any authority on these agencies to issue any formal acceptance or approval of such studies. The Commission concludes that the other conditions it will place on NedPower's

authority address the environmental concerns raised on the record in this proceeding regarding endangered species in the project areas, and that this condition may be eliminated. Instead we include in the conditions set forth below, requirements that NedPower conduct several studies that were requested by the U.S. Fish and Wildlife Service in its December 3, 2002, letter.

12. The concern expressed about the close proximity of the proposed Southern Phase to the Dolly Sods Wilderness Area, without overriding evidence that the Southern portion as depicted by the map (Applicant's Exhibits 6 and 7) is absolutely vital to the viability of this project, is reason enough for this Commission to withhold approval of the Southern Phase unless NedPower can demonstrate to the Commission that the 200 turbines cannot be located within the Central and Northern Phases, and that such inability will cause the project to become financially unfeasible.

13. In an attempt to meet all of the Commission's responsibilities and to balance all interests in a manner that is consistent with the public good, the Commission will authorize up to 200 turbines, in the Central and Northern Phases only, as conditioned below.

14. The Commission will approve the Council Agreement between NedPower and the Trades Council that was entered into on October 5, 2002. All representations and commitments made by the parties herein shall be kept by the parties. Submission and acceptance of this agreement by the Commission does not mean the Commission is the proper forum to resolve any disputes which may arise from operating under such Agreement.

15. Should the scope of the project change from the description found in the Application, as modified by this order or the Council Agreement discussed above, then the Applicant will need to seek approval of any such changes from the Commission.

### **ORDER**

IT IS THEREFORE ORDERED that NedPower Mount Storm LLC's application for a certificate of convenience and necessity to authorize construction and operation of a wholesale windpower electric generating facility and related interconnection transmission facilities in Grant County is hereby granted and approved with respect to the Central and Northern Phases as described in the Application.

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IT IS FURTHER ORDERED that the certificate and authority granted herein are subject to the following conditions:

(1) NedPower shall file evidence of all necessary environmental permits and/or certifications that it has not already filed with the Commission that NedPower is required by law to obtain prior to commencing construction. See Staff brief;

(2) NedPower shall file evidence of approval and/or acceptance of the wetlands delineation by the U.S. Army Corp. of Engineers. *Id*;

(3) NedPower shall file an historical/archeological significance study with mitigation plans by the West Virginia Division of Cultural and History prior to commencing construction. *Id*;

(4) NedPower shall file evidence of any necessary environmental permits and/or certifications, such as the NPDES general storm water construction permit and the soil and sedimentation control plan, that NedPower is required to obtain prior to beginning construction. *Id*;

(5) NedPower shall file copies of the final Interconnection Agreements between NedPower and PJM prior to commencing operation. *Id*;

(6) NedPower shall comply with the Endangered Species Act (16 USC § 1531 *et seq.*), the Migratory Bird Treaty Act (16 USC § 701 *et seq.*), and the National Environmental Policy Act of 1969 (42 USC § 4321 *et seq.*) in both the construction and operation of the Project. Should any authorized governmental agency or court with competent jurisdiction find that NedPower is not complying with any one of the above three acts in either the construction or the operation of the Project, then NedPower must notify the Commission in writing, referencing this case number, of any such finding within ten (10) days of any such finding being made. Furthermore, the Commission may seek any legal remedies it has jurisdiction to seek, including injunctive relief, to address any such findings. See Staff brief; December 13, 2002, Letter from WV DNR;

(7) NedPower shall not construct facilities within a 150 foot buffer zone around any existing WVNFS habitat. See NedPower brief;

(8) NedPower shall conduct a bat biological assessment to: assess the potential impact on bats, including the likelihood of an incidental take of the Indiana

Bat and the Virginia Big-eared bat, determine what future studies or research might be necessary, and address concerns raised by the U.S. Fish and Wildlife regarding bats. NedPower will submit its findings to both the U.S. Fish and Wildlife and the DNR for review and comment. See NedPower brief;

(9) Prior to construction, NedPower shall conduct a Golden-winged Warbler habitat study to aid micro siting. See NedPower Reply brief;

(10) Prior to construction, NedPower shall conduct a migration study to determine heavy migration areas; areas where birds descend to feed, etc. for use in final micro siting of turbines. *Id*;

(11) Prior to or after commencing construction, NedPower shall conduct both a Spring 2003, and a Fall 2003, migration study during all local climatic conditions and all daily temporal periods. See December 3, 2002, Letter from U.S. Fish and Wildlife Service;

(12) Prior to or after commencing construction, NedPower shall conduct studies for determination of the spacial patterns of nocturnal migrating birds and to determine raptor behavior during the next breeding season after this Order issues, and for Winter 2003-2004 residents. *Id.*;

(13) For a three-year period, NedPower shall conduct six-month post-construction studies for each phase of the project assessing the mortality of both birds and bats. The first of such studies shall be filed with the Commission 60 days after each phase of the project has been in operation for six months. Thereafter, the studies shall be filed 60 days following the expiration of each subsequent six month period. NedPower is on notice that the results of the initial studies may affect siting of not-yet-constructed turbines. See Staff brief; December 13, 2002, WV DNR Letter.

(14) For a one-year period, NedPower shall conduct six-month post-construction lighting studies at each phase after each phase begins operations. The first of such studies shall be filed with the Commission 60 days after the phase of the project has been in operation for six months. Thereafter, the studies shall be filed sixty days following the expiration of the subsequent six- month period. NedPower is on notice that the results of the initial studies may affect siting of not-yet-constructed turbines. *Id.*

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IT IS FURTHER ORDERED that the Council Agreement between NedPower and the Trades Council that was entered into on October 5, 2002, between those two parties, is hereby approved. All representations and commitments made by the parties herein shall be kept by the parties. Submission and acceptance of this agreement by the Commission does not mean the Commission is the proper forum to resolve any disputes which may arise from operating under such Agreement.

IT IS FURTHER ORDERED that should the scope of the project change from the description found in the Application, as modified by this Order or the Council Agreement, then the Applicant will need to seek approval of any such changes from the Commission.

IT IS FURTHER ORDERED that upon entry hereof, this case shall be removed from the Commission's open docket.

IT IS FURTHER ORDERED that the Commission's Executive Secretary shall serve a copy of this order on all parties of record by First Class United States Mail, and upon Commission Staff by hand delivery.

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**SEPARATE OPINION OF CHAIRMAN WILLIAMS**

**DISSENTING IN PART**

For the reasons set forth herein, I respectfully dissent from the majority's decision to exclude from certification the Southern Phase of NedPower windpower project.

The majority states that its concerns are with the proximity of Southern Phase turbines to the Dolly Sods Wilderness area. The majority does not indicate whether it objects to the view from Dolly Sods, the noise that will be produced by turbines near Dolly Sods, or some other "proximity" concern. I submit that the concerns regarding viewshed, noise, lighting, and other impacts that were expressed on the record of this proceeding were not limited to areas near the Dolly Sods Wilderness Area, but rather were expressed by residents and home owners all along the Allegheny Front. It is discriminatory to find that impacts to one location are more or less acceptable than impacts to another area along the Front.

In the event the majority's real concern is that the proximity to Dolly Sods will result in a view that is offensive to the general public, I find it impossible for this Commission to make such a conclusion. An individual's reaction to any view is personal, instinctive and subjective. It is impossible to unanimously conclude, for example, that anyone standing on Bear Rocks, the northernmost point in Dolly Sods, and observing the project's southernmost turbine 1.24 miles in the distance, will be visually or sensibly offended. In my view, the record supports a conclusion that the project will not negatively alter the sanctity, beauty, or unique qualities of the geologic wonder that is the Dolly Sods Wilderness Area. Nor will the proposed siting diminish the experience of those who visit for academic or recreational purposes. Furthermore, testimony on the record reflected that many persons are attracted to views of wind turbines for educational purposes or simple curiosity.

Third, the majority's decision unacceptably threatens the economic viability of the proposed project which would bring significant economic advantage to Grant

County. While the majority states that it has no objection to NedPower's relocation of the turbines that would have been located in the Southern Phase, to other Phases, this Commission does not know whether such relocation is feasible from an engineering, or financial standpoint. The entire project could be jeopardized and its loss would negate the significant economic boon in jobs, tax revenues, and school partnerships, that the surrounding area would otherwise enjoy.

Finally, I note that the adequate protection of endangered species has been a significant issue in this proceeding. The majority's decision fails to take into consideration whether relocation of the Southern Phase turbines into the Central Phase will threaten the

ability of NedPower to maintain the promised buffer zones around the West Virginia Northern Flying Squirrel habitat, or to minimize threats to bats or avian migrants.

For the foregoing reasons, I would have granted the certificate of convenience and necessity to NedPower for all Phases of its project, as described in its Application, subject to the conditions included in the majority's decision.

JML/ljm  
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*Footnote: 1* <sup>1</sup>This project proposes 200 turbines. The Backbone Mountain case, Case No. 00-1209-E- EN proposed 60-90 turbines. The Mt. Storm case, Case No. 01-1664-E-CN, proposed 166 turbines.

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*Footnote: 2* <sup>2</sup>To the extent some might argue that the project is financed in part with public financing because of W.Va. Code §11-6A-5a, which limits taxation of the turbines to their "salvage valuation," the Commission notes that this statute was enacted by the West Virginia Legislature, and not by this Commission.

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*Footnote: 3* <sup>3</sup> Donna Cook of the FAF suggested that criteria: (1) offer a balance between development and protection of mountain ranges; (2) should be required to set aside an equivalent amount of land for permanent protection and preservation; (3) affect native vegetation, soils and streams. The state should also think about how many turbines it will allow on the Allegheny Front. See Pre-filed Testimony of Donna Cook.

*The West Virginia Highlands Conservancy suggest that such criteria include, a consideration of visual and noise effects on certain public recreation areas and other recognized special places, consideration of the habitats and populations of rare and endangered species of plants and animals, consideration of the effects of wind power facilities on known flyways for local and migratory birds, and consideration of impacts on stream headwaters by earth disturbances caused by*

*roads and other construction. See November 6, 2002, "Letter of Conditional Support of Wind Power."*

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*[Footnote: 4](#) <sup>4</sup> To the extent some might argue that the project is financed in part with public financing because of W.Va. Code §11-6A-5a, which limits taxation of the turbines to their "salvage valuation," the Commission notes that this statute was enacted by the West Virginia Legislature, and not by this Commission.*