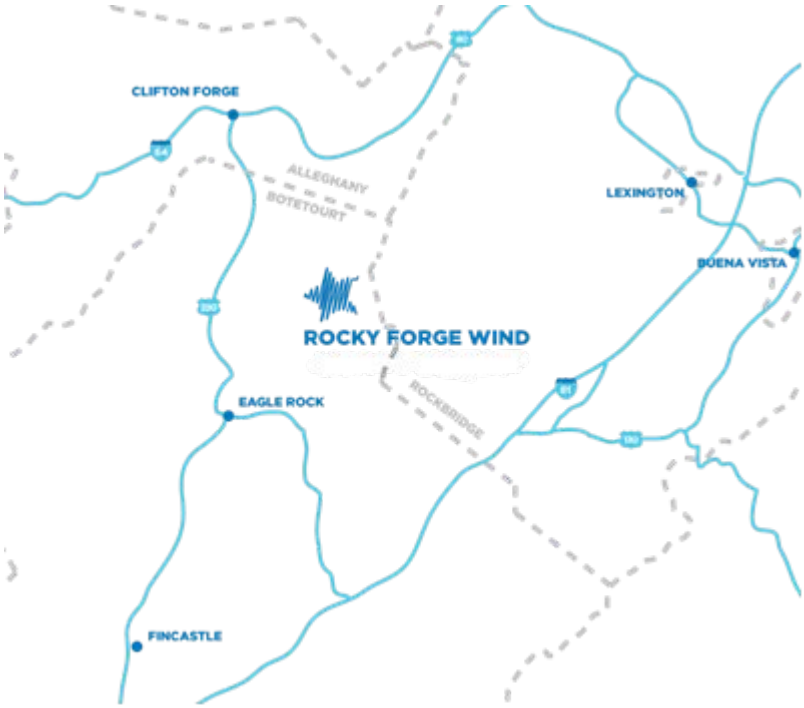
ROCKY FORGE WIND, LLC

Small Renewable Energy Projects (Wind) Permit by Rule Application

Date: May 3, 2016



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I. INTRODUCTION AND OVERVIEW

The demand and uses for energy continue to grow. A report issued in 2008 by the Board on Energy and Environmental Systems and the National Research Council found that sources and types of energy will need to change in order to maintain affordable energy and because the known supplies of fossil fuels are limited.[1] To address those issues, the way energy is produced is changing.

Trends in society "are driving the transition to a world powered by clean electricity. Wind and solar energy have become large global industries whose products are scaling up now and changing the way power is generated and delivered. They are compelling sources of energy that have been enabled by technology. They produce no carbon emissions, they consume no water, and they are now cost competitive. Renewable energy resources are making an important contribution to meeting the needs of our energy-driven lifestyles."[2] Wind energy is already widely used in 39 states and has become a main stream source of electricity.[3] In 2015, Iowa produced over 31% of its electricity with wind energy, South Dakota produced over 25%, and ten other states produced over 10% of their electricity with wind.[4]

There is also a need to provide a more diverse mix of energy sources to protect ratepayers from overexposure to energy sources with variable fuel costs and to find ways to address state and federal energy policies to produce electricity from non-emitting energy sources.

Virginia has a strong renewable energy policy and goal, focusing on solar, wind, geothermal, hydropower, ocean, waste, and biomass power. The Commonwealth's renewable portfolio goal is 15% of 2007 sale by 2025.[5] While this is a voluntary goal, the state has implemented programs (such as the Small Renewable Energy Projects (Wind) Permit by Rule) to help facilitate goal achievement.

In addition, the 2014 Virginia Energy Plan calls for a more diverse mix of energy sources, with certain emphasis on renewable sources. Regarding wind power generation, the Plan notes that Virginia has an "onshore wind resource potential of 1,793 MW at an 80 meter 'hub height' capable of providing clean renewable power to thousands of Virginia homes and businesses." The Plan further notes that "the most promising onshore wind resources are in the Western part of the State along mountain ridges."

Most of the country's population is located in the east where energy demand is the greatest. Wind turbine technology has become more efficient to allow turbines to be located closer to these demand centers, as opposed to only being located in the traditionally windy regions of the country. Locating energy production closer to its demand results in more efficiency by reducing the amount of energy that is lost when transported over long distances by high-voltage transmission lines. In turn, reducing the amount of electricity imports by self-generating electricity in the Commonwealth of Virginia helps retain the associated economic benefits.

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[1] What You Need to Know About Energy. Board on Energy and Environmental Systems (BEES), National Research Council, with Curt Suplee. http://www.nap.edu/catalog/1222504.html.
[2] http://www.apexcleanenergy.com/our-philosophy.
[3] http://www.awea.org/resources/statefactsheets.aspx?itemnumber=890&navItemNumber=5067.
[4] http://powerofwind.org/statefacts.
[5] Va. Code Ann. § 56-585.2.

1. About the Project

Rocky Forge Wind, LLC (Rocky Forge), is proposing a wind project in Botetourt County, Virginia, and is applying for a permit for the project under the Small Renewable Energy Projects (Wind) Permit by Rule (PBR). The property proposed for the Rocky Forge Wind Project (Project) consists of two privately-owned parcels (Tax Map Numbers 13-2 and 20-3) (together, the Property) located in the northeast corner of Botetourt County. Rocky Forge has secured rights to all of the 7,355 acres of the Property. Approximately 200 acres located within the boundaries of that Property will be utilized for the Project wind turbines, access roads, electrical collection system, laydown area, O&M building, Project collector substation, interconnection switchyard, and other related facilities (the Project Area). This comprises less than 3% of the Property.

The Property itself is situated on the southernmost portion of North Mountain, a mountain ridge running northeast to southeast for approximately 17 miles along the northeastern side of Botetourt County and extending northeast (see the context maps in Attachment 11). North Mountain is west of the Blue Ridge Mountains and is along the eastern front of the Allegheny/Appalachian Mountains. North Mountain varies in elevation from 1,200 to 3,440 feet with steep slopes, long ridges, and continuous valleys that are typical of this part of the Appalachians. The nearest community to the Project is Eagle Rock, approximately 4.2 miles to the southwest. Near the southern boundary of the Property is Mill Creek, a creek that joins the James River in Eagle Rock.

The Applicant proposes to install a series of turbines along approximately 3.5 miles of the southernmost portion of North Mountain (the Project Area). The majority of the Project Area is dominated by mature hardwood forest with some areas of younger growth hardwood forest where previous timber harvests have occurred. Several open fields are present along the access routes and ridgeline within the Project Area. Currently, three temporary meteorological (MET) towers are located along the ridgeline to collect continuous wind data, with a fourth tower being installed within the next month. A natural gas easement operated by Columbia Gas and existing Virginia Electric and Power Company overhead transmission lines run parallel to a portion of Mill Creek along the southern and eastern boundary of parcel 20-3. The Project Area is accessible by existing access roads, which will have to be improved to accommodate construction and operation of the Project.

The particular location for the Project was chosen because it:

- is located at high elevations that provide access to a verified wind resource;
- has a ridgeline orientation perpendicular to the predominant wind direction;
- has onsite access to existing high-voltage transmission lines;
- is a large, privately-owned tract of land that can host the Project entirely;
- has nearby access to state highways; and
- is situated in an area with limited populations and residential areas.

The Project will consist of up to 25 turbines, which is enough energy to power up to 20,000 average sized homes each year. The power generated by the Project will be linked to the electric transmission grid operated by PJM via the existing transmission lines that traverse the Property.

Rocky Forge Wind will use wind turbines that are suited for the area, provide long-term functionality, and are manufactured by companies that have a proven track record in wind turbine production. The chosen turbine will comply with Botetourt County ordinances and PBR requirements and will meet the needs of the Project.

For purposes of this application, Rocky Forge Wind is using the Nordex N131/3000 wind turbine Generation Delta as an example of turbine that is suitable for this area but is not committed to this manufacturer or model. Nordex is a German company with 28 years of experience in wind energy production.

While the Nordex turbine was chosen as the model used for the reports and the Site Plan because it is one of the largest and tallest turbines being considered, the final selection of similar turbines will be chosen prior to completion of final site plans. The Nordex 131/3000 has a rated capacity 3.0 MW for each turbine. Other turbines that could prove to be viable options for the Project may be rated up to 3.6 MW each.

The selected wind turbines consist of i) a rotor (rotor hub, three rotor blades, and a pitch system); ii) nacelle (covering for the rotor shaft, gearbox, generator, rotor brake, manual and automatic speed controls, and yaw drives); iii) the tubular tower on which the rotor and nacelle are attached, and iv) the medium voltage transformer and switchgear. The proposed example wind turbine for Rocky Forge has a hub height of 99 meters (m) or 325 feet (ft) and is projected to be built using three or four tubular steel sections (monopole design) coated for corrosion protection. The coatings (typically non-reflective white in color) are applied at the factory to the tower and turbine blades in accordance with requirements by the Federal Aviation Administration (FAA).

Each of the three 64.4 m (211 ft) rotor blades will be made from glass reinforced and carbon fiber reinforced plastic with lightning protection systems. In this example, the full diameter of the rotors once attached to the tower will be 131 m (430 ft). The exact hub height, tip height, and blade length dimensions of the final selected turbine may vary to some degree, but will meet all FAA requirements and Botetourt County standards.

Wind turbines have a number of auxiliary systems including automatic lubrication units, switch cabinet, water cooling system for the frequency converter, air conditioning units and heaters, plus a chain hoist and overhead crane installed in the nacelle for moving tools and equipment. All access and equipment (with the exception of exterior stairs to reach the tower door and a low-voltage pad mount transformer to interconnect the turbine into the underground collection system) will be located within the tower structure itself with no exterior feature that will allow climbing onto or up the turbine tower.

Rocky Forge Wind, LLC, is pleased to be the developer of the Rocky Forge Wind Project. As envisioned and set out in this application, the Project is in keeping with the Virginia Energy Plan's call for a greater mix of energy sources, particularly renewable sources such as wind power generation in the Western region of the Commonwealth.

2. About Apex Clean Energy and Rocky Forge Wind

Apex Clean Energy Holdings, LLC (Apex), was established in 2009 by a group of energy executives with over a decade's experience in renewable energy. The group wanted to create a new kind of energy company focusing on the production of power from renewable resources that had the capacity to "excel in every phase of project realization, from origination to asset management,

financing to construction." That company has grown to more than 200 experienced and top specialists in the industry, which includes a wide range of professionals such as "meteorologists, wildlife biologists, engineers, project managers, construction professionals, GIS analysts, and financial analysts" who work together "to design and build high-quality projects to meet the nation's growing demand for clean energy."[6] Apex was the market leader for new wind energy capacity additions in the United States in 2015, with 1,042 MW of wind facilities built. The company is actively developing one of the largest wind project portfolios in the industry, with many more projects on track to become operational in the years to come. Rocky Forge Wind, LLC, is a wholly owned subsidiary of Apex GCL, LLC, which is a wholly owned subsidiary of Apex Clean Energy Holdings, LLC.

3. Development Philosophy

Apex knows that development success depends on collaboration. Renewable energy projects can bring great benefits to the communities in which they are located, and Apex always strives to make sure local and state leaders and residents are informed and kept updated on the progress of the projects they are working on in the local communities. An example of this effort is the Project specific website (www.rockyforgewind.com) that makes information about the Project, including visual simulation, available to the general public, as well as, provides contact information for citizens with questions. Regardless of the size of the project, the renewable energy development process is complex. From siting to environmental research, leasing, on-site studies, consultation, permitting, and construction, Apex's experienced team is available to answer questions, participate in community dialogues, and share information about the work and project plans. Apex projects always meet or surpass industry best practices and comply fully with federal, state, and local regulatory requirements.

4. About the Virginia Permit By Rule

In 2009, the Virginia General Assembly enacted legislation directing the Virginia Department of Environmental Quality (DEQ) to develop regulations for the construction and operation of renewable energy projects of 100 MW and less.[7]

The 2009 statute moved authority from the State Corporation Commission to DEQ over protection of natural resources with respect to certain renewable energy projects. The DEQ facilitated a multi-year collaborative process comprising many meetings and including the relevant agencies and organizations, which guided the establishment of the Wind PBR. The PBR is intended to establish regulatory requirements that are stated "up front", rather than case-by-case. In addition, the Virginia Energy Plan makes considerable mention of the PBR, underscoring that its intended purpose is to "offer project developers regulatory certainty and a finite time frame for permit issuance."[8]

The permit by rule for wind projects became effective on December 22, 2010.[9]

The Wind PBR sets out fourteen regulatory requirements, which are detailed in the following section. Through analysis of these fourteen requirements we believe the Rocky Forge Wind Project will be found to meet both the intent and specific requirements of the PBR.

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[6] Apex Clean Energy webpage http://www.apexcleanenergy.com/history.
[7] DEQ Wind Energy webpage http://www.deq.virginia.gov/Programs/RenewableEnergy.aspx.
[8] 2014 Virginia Energy Plan § 4-7.
[9] DEQ Wind Energy webpage http://www.deq.virginia.gov/Programs/RenewableEnergy.aspx.

II. PERMIT BY RULE COMPLIANCE ANALYSIS

The Wind PBR process sets out 14 clear requirements that must be addressed to comply with, and obtain, the PBR. This document and its attachments, comprise the Rocky Forge Wind Project application for PBR approval.

This application is structured to show first the specific PBR Requirement, then explain our analysis of compliance with the PBR requirement. Where appropriate and informative, we also provide additional information intended to help explain the Project and application documents in a useful context.

The 14 requirements of the PBR are summarized as follows, and addressed on the following pages:

1. Notice of Intent
2. Compliance with Local Land Use Ordinances
3. Interconnection Studies
4. Interconnection Agreements
5. Maximum Generation Capacity Certification
6. Analysis of Potential Impact on Air Quality Standards
7. Analysis of Potential Beneficial/Adverse Impacts on Natural Resources
8. Mitigation Plan
9. Certification of Design Incorporating Mitigation Plan
10. Operation Plan Incorporating Mitigation Plan
11. Site Plan and Context Map
12. Certification of Application for Environmental Permits
13. Public Review
14. Permit Fee

1. **NOTICE OF INTENT**

REQUIREMENT (9 VAC 15-40-30.A.1.):

In accordance with § 10.1-1197.6 B 1 of the Code of Virginia, and as early in the project development process as practicable, furnishes to the department a notice of intent, to be published in the Virginia Register, that he intends to submit the necessary documentation for a permit by rule for a small renewable energy project.

COMPLIANCE ANALYSIS:

A notice of intent was provided to the Department of Environmental Quality ("DEQ" or "Department") on June 25, 2015. DEQ then provided notice to the Virginia Register of Regulations and that notice was published in the Virginia Register of Regulations on July 27, 2015.

A copy of the notice of intent provided to the DEQ is included as Attachment 1.

2. COMPLIANCE WITH LOCAL LAND USE ORDINANCES

REQUIREMENT (9 VAC 15-40-30.A.2.):

In accordance with § 10.1-1197.6 B 2 of the Code of Virginia, furnishes to the department a certification by the governing body of the locality or localities wherein the small renewable energy project will be located that the project complies with all applicable land use ordinances.

COMPLIANCE ANALYSIS:

In addition to the PBR, this Project must obtain approvals from Botetourt County, which is the local governing body with jurisdiction over the Project location.

Botetourt County adopted a specific Utility-Scale Wind Energy Ordinance (the "Wind Ordinance") addressing wind energy projects in June 2015. The process began in the winter of 2014 when the Botetourt County Board of Supervisors and the Planning Commission directed staff to begin researching and developing the basic outline of a Wind Ordinance. A Planning Commission work session was held in January 2015, followed by two joint work sessions of the Board of Supervisors and the Planning Commission in February and April 2015. On April 21, 2015, a public forum was held at the Greenfield Education and Training Center. In addition, a public comment survey was conducted and the draft ordinance was posted on the Planning Department's website in order to receive public input regarding the proposed Wind Ordinance. The public comments were also posted on the Planning Department's web site.

The Planning Commission and the Board of Supervisors reviewed comments from the public comment survey and authorized public hearings for June 2015. The Wind Ordinance was recommended for approval by the Planning Commission following their June 8 public hearing and the Board of Supervisors held a public hearing and adopted the ordinance on June 23.

The Ordinance establishes Agricultural and Forest Conservation zoning districts as appropriate for wind energy projects with a Special Exception Permit (SEP). Following the adoption of the Wind Ordinance, Rocky Forge Wind began working on the various reports and the engineering needed to file an application for a SEP. A public hearing for the SEP was held on January 11, and the Planning Commission unanimously recommended approval of the Project. On January 26, 2016, the Botetourt County Board of Supervisors unanimously approved the SEP for Rocky Forge Wind.

Rocky Forge Wind has worked closely with the Botetourt County planning and economic development staff and County leadership to ensure the Project is well suited for the County. The company voluntarily reached out to close neighbors of this Project, civic and environmental groups, and provided required notices. A number of articles were published in local papers about the proposed Project. The company hosted an open house in the community on December 9, 2015. Approximately 58 people attended the open house, including journalists from The Roanoke Times and Botetourt View and news channel WDBJ7.

The following documents are included as Attachments.

- Notice of Approval of the Special Exception Permit (Attachment 2A)
- Land Use Compliance Certification (Attachment 2B)

Please note, the Land Use Compliance Certification is provided in the form that was included within the Wind PBR Guidance as an attachment to Section II Methodology.

3. INTERCONNECTION STUDIES

REQUIREMENT (9 VAC 15-40-30.A.3):

In accordance with § 10.1-1197.6 B 3 of the Code of Virginia, furnishes to the department copies of all interconnection studies undertaken by the regional transmission organization or transmission owner, or both, on behalf of the small renewable energy project.

COMPLIANCE ANALYSIS:

The interconnection study and approval process is managed by PJM, which is the Regional Transmission Organization (a/k/a Grid Operator) for the 13 state region including Virginia, in coordination with Dominion Virginia Power, which is the Transmission Owner (a/k/a Electrical Utility) that owns the electrical transmission system to which the proposed Project will connect.

The study process began on August 13, 2014, with the application for a wind project with 78.2 MW of maximum generation capacity. Since that time, the Project has been reviewed through a multi study process over about 1 ½ years by PJM and Dominion Virginia Power to confirm feasibility, potential impacts to the regional electric grid, and detailed analysis of the facilities required to interconnect the Project.

The studies have concluded that the Project is feasible, no adverse impacts are identified on the electrical network, and that a standard three-ring breaker bus configuration of the substation switchyard will be necessary to interconnect the Project to the regional electric grid. The Facilities Study, which is a detailed cost estimate for the changes and equipment required for the interconnection, is still being completed. This study will be delivered to DEQ upon finalization. All other studies, including the Feasibility Study Report (Attachment 3A) and the System Impact Study Report (Attachment 3B), are included as a part of this application.

4. INTERCONNECTION AGREEMENTS

REQUIREMENT (9 VAC 15-40-30.A.4.):

In accordance with § 10.1-1197.6 B 4 of the Code of Virginia, furnishes to the department a copy of the final interconnection agreement between the small renewable energy project and the regional transmission organization or transmission owner indicating that the connection of the small renewable energy project will not cause a reliability problem for the system. If the final agreement is not available, the most recent interconnection study shall be sufficient for the purposes of this section. When a final interconnection agreement is complete, it shall be provided to the department. The department shall forward a copy of the agreement or study to the State Corporation Commission.

COMPLIANCE ANALYSIS:

The final Interconnection Services Agreement (ISA) and Interconnection Construction Services Agreement (ICSA) are not yet available. However, Rocky Forge Wind LLC and Virginia Electric and Power Company have entered into an Interim Interconnection Services Agreement (Attachment 4). Other recent interconnection studies are provided as Attachments 3A and 3B. When the final interconnection agreement is complete, a copy will be forwarded to DEQ.

5. MAXIMUM GENERATION CAPACITY CERTIFICATION

REQUIREMENT (9 VAC 15-40-30.A.5.):

In accordance with § 10.1-1197.6 B 5 of the Code of Virginia, furnishes to the department a certification signed by a professional engineer licensed in Virginia that the maximum generation capacity of the small wind energy project, as designed, does not exceed 100 megawatts.

COMPLIANCE ANALYSIS:

This Project will not exceed 100 megawatts (MW) and will meet up to the maximum project size to be interconnected to the electrical grid, as stipulated in the interconnect agreements (referenced in section 4 above).

A certification of compliance, signed by a professional engineer licensed in Virginia is included as Attachment 5.

6. ANALYSIS OF POTENTIAL IMPACT ON AIR QUALITY STANDARDS

REQUIREMENT (9VAC 15-40-30.A.6.):

In accordance with § 10.1-1197.6 B 6 of the Code of Virginia, furnishes to the department an analysis of potential environmental impacts of the small renewable energy project's operations on attainment of national ambient air quality standards.

COMPLIANCE ANALYSIS:

Operation of the proposed wind energy Project will not be a detriment to attainment of national ambient air quality standards, as the operations will not have off-gassing or any burning as associated with traditional energy generation. Operation of the Project will not have a negative effect on air quality. In fact it will have an improvement on air quality, as operating the wind Project will over time, and throughout the PJM Grid, reduce the need to operate traditional energy generating facilities that do have a negative impact on air quality.

As planned, the Project will produce power equivalent to the usage of up to 20,000 homes. The Project will not produce carbon emissions, nitrogen oxide, sulfur dioxide, particulates, fly ash or other particulates as associated with conventional energy generation. Thus, energy generation from the proposed Project would offset the following emissions improving the air shed as estimated below:

A. 63,900 tons of carbon dioxide

B. 97,700 tons of nitrogen oxides

C. 204,200 tons of sulfur dioxide

The above calculations are estimates generated based on analysis utilizing the EPA Power Profiler at http://oaspub.epa.gov/powpro/ept_pack.charts#result. This resource is an online calculator last updated in October 2015, which uses eGrid data; also used is the EPA's National Emissions Inventory Data which is updated every few years, and was last updated in 2011, at https://www.epa.gov/air-emissions-inventories/2011-national-emissions-inventory-nei-data.

On March 29, 2016, an informal meeting was held about this Project with representatives from the Blue Ridge Regional Office of DEQ (at the Roanoke office). At that meeting it was discussed and generally acknowledged that the operation of this Project is not expected to have any negative environmental impact on attainment of national ambient air quality standards. The impacts from generators will be very minimal in nature and are not expected to have a significant environmental impact or any impact on attainment of national ambient air quality standards. Other permits that could be required would be air permits with regard to the portable concrete batch plant needed for construction of the turbines. The Applicant plans to use one of the many regional contractors that currently has the necessary permits for use of these plants in Virginia.

7. ANALYSIS OF POTENTIAL BENEFICIAL/ADVERSE IMPACTS ON NATURAL RESOURCES

Please note that as required by the Permit by Rule, the analysis under this section 7 is broken into three sub-sections: A. Wildlife, B. Historic Resources, and C. Other Natural Resources.

REQUIREMENT (9 VAC 15-40-30.A.7.):

In accordance with § 10.1-1197.6 B 7 of the Code of Virginia, furnishes to the department, where relevant, an analysis of the beneficial and adverse impacts of the proposed project on natural resources. The owner or operator shall perform the analyses prescribed in 9VAC 15-40-40. For wildlife, that analysis shall be based on information on the presence, activity and migratory behavior of wildlife to be collected at the site for a period of time dictated by the site conditions and biology of the wildlife being studied, not exceeding 12 months.

A. ANALYSIS OF POTENTIAL BENEFICIAL/ADVERSE IMPACTS ON NATURAL RESOURCES (WILDLIFE)

REQUIREMENT (9 VAC 15-40-40.A):

Analyses of wildlife. To fulfill the requirements of § 10.1-1197.6 B 7 of the Code of Virginia, the applicant shall conduct preconstruction wildlife analyses. The analyses of wildlife shall include the following:

1. *Desktop surveys and maps. . . .*
2. *Breeding bird surveys. . . .*
3. *Field survey of non-avian resources. . . .*
4. *Raptor migration surveys. . . .*
5. *Map and field studies of avian resources in Coastal Avian Protection Zones. . . .*
6. *Bat acoustic surveys. . . .*
7. *Mist-netting or harp-trapping surveys. . . .*
8. *Wildlife report.*

COMPLIANCE ANALYSIS:

1. Desktop Survey and Maps

Reviews of the Virginia Department of Game and Inland Fisheries (DGIF) Fish and Wildlife Information Service (FWIS) database were completed in 2014 and 2015 and discussed with DGIF and USFWS in early stage coordination meetings on October 27, 2014 and April 28, 2015. The reviews indicated the potential for some state and federal listed species and state Species of Greatest Conservation Need (SGCN) to be affected by the Project, and also identified one bat hibernacula within five miles of the Project boundary; Perry's Saltpetre Cave, located approximately 3.7 miles south (See Attachment 7A(1.1).

In response to the above information, a study plan was agreed upon with USFWS and DGIF to assess risk to federal and state-listed threatened or endangered species and Tier 1/Tier 2 SGCN with potential to occur within the Project area. These included breeding bird surveys, general avian and eagle use surveys, raptor migration surveys, and acoustic and mist netting bat surveys.

An additional review of the FWIS database was conducted based on the final disturbance zone (which is the Project Area) prior to meeting with DGIF on March 4, 2016 (see Attachment 7A(1.2)). The March 4, 2016, FWIS database analysis shows that there are ten known or likely to occur state-threatened or endangered species, and 18 additional Tier 1 or Tier 2 SGCN with the potential to occur in or near the proposed Project Area (see Table 1 below), all of which were assessed during site-specific surveys completed during Project development.

As of April 1, 2016 two additional species were listed by the state of Virginia as endangered (tri-colored bat [*Perimyotis subflavus*] and little brown bat [*Myotis lucifugus*]), six avian SGCN were removed from the Tier 1/Tier 2 status designations (bald eagle [*Haliaeetus leucocephalus*], upland sandpiper [*Bartramia longicauda*], red crossbill [*Loxia curvirostra*], yellow-bellied sapsucker [*Sphyrapicus varius*], American black duck [*Anas rubripes*], and winter wren [*Troglodytes hiemalis*]), and three avian SGCN were provided Tier 1/Tier 2 status designations (Swainson's warbler [(*Limnothlypis swainsoni*], Black-billed cuckoo [*Coccyzus erythropthalmus*], and golden eagle [*Aquila chrysaetos*]). All are included in Table 1 below.

Table 1: Federal and state-listed threatened and endangered species and Tier 1/Tier 2 SGCN with potential to occur within the Project Area

Species	Federal Status	State Status	Potential to Occur
AVIAN			
Golden eagle+	Protected	Tier 1	Confirmed
Peregrine falcon		Tier 1/Threatened	Confirmed
Loggerhead shrike		Tier 1/Threatened	Unlikely
Migrant loggerhead shrike		Threatened	Unlikely
Upland sandpiper*		Tier 1/Threatened	Unlikely
Black-throated green warbler		Tier 1	Unlikely
Golden-winged warbler		Tier 1	Unlikely
Northern saw-whet owl		Tier 1	Unlikely
Yellow-bellied sapsucker*		Tier 1	Low
Red crossbill*		Tier 2	Unlikely
American black duck*		Tier 2	Unlikely
Bald eagle*	Protected	Tier 2	Confirmed
Black-billed cuckoo+		Tier 2	Unlikely
Cerulean warbler		Tier 2	Confirmed
Swainson's warbler+		Tier 2	Confirmed
Winter wren*		Tier 2	Low
Yellow-crowned night heron		Tier 2	Unlikely
MAMMAL			
Northern long-eared bat	Threatened	Tier 1/Threatened	Confirmed
Little brown bat[a]		Tier 1/Endangered	Low
Tri-colored bat[a]		Tier 1/Endangered	Low
NON-AVIAN VERTEBRATE			
Spotted-margin madtom		Tier 1/Threatened	Unlikely
Orangefin madtom		Tier 2/Threatened	Unlikely
Roughhead shiner		Tier 1	Unlikely
Northern pinesnake		Tier 1	Unlikely
Peaks of Otter salamander		Tier 1	Unlikely

Species	Federal Status	State Status	Potential to Occur
INVERTEBRATE			
James Spinymussel	Endangered	Tier 1/Endangered	Unlikely
Rubble coil		Tier 1/Endangered	Unlikely
Shaggy coil		Tier 1/Endangered	Unlikely
Green floater		Tier 2/Threatened	Unlikely
Atlantic pigtoe		Tier 2/Threatened	Unlikely
Natural Bridge Cave isopod		Tier 1	Unlikely
Regal fritillary		Tier 1	Unlikely
Virginia pigtoe		Tier 1	Unlikely

[a] Species listed by the state on April 1, 2016.
+ Species that have been upgraded to Tier 1/Tier 2 status as indicated in the *Revised list of Avian Species of Greatest Conservation Need for inclusion in 2015 VA Wildlife Action Plan* provided by DGIF on March 4, 2016.
* Species that have been downlisted from Tier 1/Tier 2 status as indicated in the *Revised list of Avian Species of Greatest Conservation Need for inclusion in 2015 VA Wildlife Action Plan* provided by DGIF on March 4, 2016.

2. Breeding Bird Surveys

WEST completed breeding bird surveys within the eastern and southern portions of the disturbance zone from May 17-July 31, 2015 in accordance with PBR Guidance and DGIF recommendations (Attachment 7A(2.1)). No state-listed threatened or endangered species were observed, and only two Tier 2 SGCN were documented in low numbers (cerulean warbler [*Setophaga cerulean*], n=3; Swainson's warbler, n=1). After these surveys were completed, DGIF requested desktop review of the southwestern ridge portion of the site for potential breeding bird habitat for loggerhead shrike [*Lanius ludovicianus*]. This was completed by Rocky Forge Wind on March 29, 2016, and no suitable habitat was identified.

In April 2015, WEST conducted an aerial raptor nest survey to locate bald eagle nests and other raptor nests in or within four miles of the Project to assess potential effects of the Project on breeding eagles and other raptors (Attachment 7A(2.2). No bald eagle nests were documented within 10 miles of the proposed Project during the preflight desktop review, and no bald eagle nests or nests of other raptor species were observed during the survey. The habitat within the survey area is of low suitability for nesting bald eagles based upon the size of trees and location to foraging resources such as water.

The breeding bird and nest survey reports confirm that due to the location and nature of the proposed wind Project, it is not expected to have a significant impact on breeding bird species.

3. Field Survey of Non-Avian Resources

During agency meetings with USFWS, DGIF, and DEQ on April 28, 2015 and May 27, 2015, it was agreed that site-specific field surveys for Tier 1 or Tier 2 non-avian vertebrate resources were not necessary due to the fact that it is unlikely for these species to occur within the Project Area (see Table 1).

4. Raptor Migration Surveys

WEST conducted migratory raptor surveys in spring 2015 (Mar 15 – Jun 15) and fall 2015 (Sep 15 – Nov 15) in accordance with USFWS and DGIF approved protocols (see Attachment 7A(4)). No federally listed species or eagles were observed, and one state-listed threatened species was

recorded (peregrine falcon, (*Falco peregrinus*), n=1). According to WEST, raptor mortality at the Project is expected to "be within the range of rates reported at other facilities in the region, which is typically low and is likely to consist of relatively common and widespread species." These surveys conclude that the Project poses a low risk of impact to migrating raptors overall.

5. Map and Field Studies for Avian Resources in Coastal Avian Protection Zones

The Rocky Forge Wind Project is not located in part or in whole within one or more Coastal Avian Protection Zones, therefore CAPZ field studies were not required.

6. Bat Acoustic Surveys

Acoustic surveys were completed from April 27 to November 1, 2010 using two acoustic Anabat SD-I detectors placed at fixed ground-based stations (Attachment 7A(6)). Bat activity varied throughout the survey period, with monthly detection rates increasing for low frequency species in late May and high frequency species during August. Results from this study were reviewed with the DGIF in developing bat study plans for the Project.

7. Bat Mist-Netting and Additional Acoustic Surveys

Mist-net surveys and additional acoustic surveys were conducted for federal- and state-listed bats from July 6 - August 12, 2015 in accordance with USFWS and DGIF approved protocols (Attachment 7A(7)). Results of the mist-net surveys confirm summer presence of northern long-eared bat (state- and federally-listed threatened species). A total of 12 roost trees were located, with each northern long-eared bat using 5-6 different trees throughout the study. Survey results indicate roost trees are not a limiting factor for northern long-eared bats at this site, and the lack of Indiana bat and little brown bat captures indicates that a large colony is not likely to be roosting near the Project.

<u>ANALYSIS SUMMARY (WILDLIFE REPORT)</u>:

This Section 7A and the relevant attachments constitute the wildlife report. Preliminary discussions and review of existing data indicate that the Project can be constructed with limited risk of impacts to state-listed threatened or endangered species or Tier1/Tier 2 SGCN.

<u>Birds</u>

During the avian surveys, no federally-listed species were observed. One state-listed threatened species (peregrine falcon) was recorded in the 2014-2015 study, indicating risk of take is very unlikely. Very few Virginia Tier 1 and Tier 2 SGCN species (n=5) and Birds of Conservation Concern (n=6) were documented, and only in low numbers, indicating very low risk of significant adverse impacts to these species. Raptor use documented for the site was low compared to other wind project sites in the region, and species documented consisted primarily of common raptors, suggesting low risk of impact (Attachments 7A(2.1), 7A(2.2), 7A(4)). In addition, there were no raptor or eagle nests observed within four miles of the Project, and there are no known eagle nests within 10 miles, so impact to nesting raptors is also unlikely to result from construction or operation of the Project.

Surveys to specifically evaluate eagle use were conducted for one year from December 18, 2014 to December 14, 2015 (See Attachment 7A(4)) in accordance with the USFWS Eagle Conservation Plan Guidance (ECPG). Three bald eagles and eight golden eagle observations were recorded, all from

January 5 to February 7, 2015. No obvious flight paths or migration concentrations areas were documented that would warrant siting of Project features to minimize risk. These surveys conclude that there is low eagle use of the area compared to other Appalachian ridgelines and that the Project poses a low risk of impact to eagles.

USFWS concurred that risk to eagles is low and no take permit is recommended based on the low detection rates, as well as the fact that no bald or golden eagle fatalities have been documented at operating Appalachian ridgeline projects to date. In order to ensure risk to eagles remains low during Project operations, Rocky Forge Wind will incorporate eagle risk minimization measures such as minimizing attractants (e.g., site hygiene/carrion removal) and training of staff to recognize eagles, and will continue to coordinate with USFWS during operations to respond to changed circumstances should they occur.

Bats

Results of the acoustic data analysis and follow up mist-net surveys confirm summer presence of northern long-eared bat (federal and state threatened), and it is likely that migratory risk may be present for these and other federally- and state-listed threatened or endangered or Tier 1/Tier 2 SGCN bats (i.e., Indiana bat, little brown bat, and tri-colored bat). Operational adjustments will be implemented to avoid the potential for take of federally-listed bats resulting from collision with turbines during spring and fall migration, as well as the summer roosting period (see the mitigation plan described in Section 8). While these avoidance measures are intended eliminate the potential for listed bat take, they will also substantially reduce take of all bat species, including state-listed endangered species such as little brown bats and tri-colored bats.

B. ANALYSIS OF POTENTIAL BENEFICIAL/ADVERSE IMPACTS ON NATURAL RESOURCES (HISTORIC RESOURCES)

REQUIREMENT (9 VAC 15-40-40.B):

Analyses of historic resources. To fulfill the requirements of § 10.1-1197.6 B 7 of the Code of Virginia, the applicant shall also conduct a preconstruction historic resources analysis. The analysis shall be conducted by a qualified professional meeting the professional qualification standards of the Secretary of the Interior's Standards for Archeology and Historic Preservation (9VAC 15-40-120 B 2) in the appropriate discipline. The analysis shall include each of the following:

1. *Compilation of known historic resources . . . .*
2. *Architectural survey. . . .*
3. *Archaeological survey. . . .*
4. *Historic resources report.*

COMPLIANCE ANALYSIS:

Dutton + Associates ("Dutton") was retained to conduct the analysis of potential impacts on historic resources. Dutton's staff working on this Project includes qualified professionals meeting the Secretary of the Interior's Standards for Archeology and Architectural History. Dutton is a very experienced and well-respected historical consulting firm based in Midlothian, Virginia, and has completed many historical studies throughout Virginia and neighboring states.

Dutton was tasked to identify the known historic or cultural resources located within five miles of the Project. The resources were identified using Virginia's DHR database to locate any known sites within a five-mile radius of the proposed wind turbines. The research indicated there are a number of previously surveyed resources but that only a few have been evaluated for listing on the National Register. Of the sites identified, the following sites were reviewed with DHR and various follow-up actions were recommended at the time of state permitting.

1. The Emmanuel Episcopal Church is eligible to be listed on Virginia Landmarks Register and/or National Register of Historic Places (VLR/NRHP). Based on GIS modeling and subsequent site visit confirmation, the Project will not be visible from this site. State forms were updated with new information and photographs.

2. The Bessemer Archaeological Site is a pre-historic village site (Native Americans) in the floodplain of the James River, which is nearly five miles away from the Project Area. It is listed on VLF/NRHP. Photos were taken of the site but the state forms did not need to be updated. The Project will have no impact on this site.

3. The Gala Archaeological Site is a pre-historic village site (Native Americans) in the floodplain of the James River, which is also nearly five miles away. It is listed on VLF/NRHP. Photos were taken of the site but the state forms did not need to be updated. The Project will have no impact on this site.

4. Architectural structures within the construction/operation area or within 1.5 miles of the Project and more than 50 years old were located and recorded. Any resources previously recorded and located within the 1.5 miles radius were revisited and photographed. Recommendations of all of the structures' eligibility for VLR/NRHP listing was made and an official DHR form was prepared where appropriate. The analysis identified that the Project could have a potential visual impact on the Tredegar House (011-0215) (see discussion below).

Areas of proposed ground disturbance associated with the Project were shovel tested and a report prepared regarding any findings of archaeological sites and their potential eligibility for VLR/NRHP listing. Only archaeological site 44BO0617 was identified as potentially eligible for listing (see discussion below).

Dutton's report is included as Attachment 7B.

ANALYSIS SUMMARY (HISTORIC RESOURCES REPORT):

This Section 7B and the relevant attachments constitute the historic resources report.

The historic resources analysis identified that the Tredegar House (011-0215), a property considered eligible for inclusion in the NRHP, could have a potentially adversely affected viewshed as a result of the location of a limited number of the turbines. To take into account potential impacts to the Tredegar House, the Applicant first reviewed options to avoid or minimize the Project impacts through consideration of design and location changes. Given the interconnected nature of the various Project components and their relationship to the Project Area topography, it was determined that design and location changes for the Project were not viable and that meaningful and effective opportunities to avoid or minimize visual impacts to the Tredegar House are not

available. Therefore, the Applicant proposes mitigation for potential visual impacts to the Tredegar House. The mitigation is more completely described in the mitigation plan (Attachment 8).

In addition, the historic resources analysis identified archaeological site 44BO0617 as potentially eligible for inclusion in the NRHP. Given the age of the artifacts identified by shovel tests, their association with the Tredegar House (011-0215), the existing topography, and the proximity of the finds to the overall right-of-way expansion for road construction, controlled site burial of the deposits prior to road construction is proposed. In the event archaeological deposits associated with site 44BO0617 cannot be avoided or buried in accordance with industry accepted standards, the site will be evaluated for NRHP listing. If determined eligible, data recovery will be undertaken on the impacted portion of the site in consultation with the VDHR prior to commencement of construction in the area of site 44BO0617.

The Applicant is in agreement with Dutton and believes that the research to date, along with the nature of the proposed Project and the proposed mitigation, appropriately takes into account any potential adverse impact from the Project on historic resources.

C. ANALYSIS OF POTENTIAL BENEFICIAL/ADVERSE IMPACTS ON NATURAL RESOURCES (OTHER NATURAL RESOURCES)

REQUIREMENT (9 VAC 15-40-40.C):

Analyses of other natural resources. To fulfill the requirements of § 10.1-1197.6 B 7 of the Code of Virginia, the applicant shall also conduct a preconstruction desktop survey of natural heritage resources within the disturbance zone.

COMPLIANCE ANALYSIS:

1. Natural Resources

a) Desktop Surveys

A desktop survey of natural heritage resources within and surrounding the disturbance zone (which is the Project Area) was conducted in accordance with the above requirement. The Applicant submitted a data request to the Virginia Department of Conservation and Recreation (DCR) in accordance with DCR's Environmental Review Services process on March 17, 2016. A report was received on March 24, 2016, which is included as Attachment 7C(1).

The report indicated that "[t]here are no State Natural Area Preserves under DCR's jurisdiction in the project vicinity," and that the proposed activity "will not affect any documented state-listed plants or insects". DCR did identify two natural heritage resources with potential to occur within the Project boundary: the Central Appalachian Pine-Oak/Heath Woodland and piratebush (*Buckleya distichophylla*).

b) Field Surveys

The Applicant has completed the following surveys to further analyze natural resources known to occur within the Project Area.

Ecological Community Groups: Wetland Studies and Solutions, Inc. (WSSI) conducted ecological community surveys from November 16-19, 2015 in accordance with DCR's *Rapid Assessment Field Surveys for Ecological Community Groups within Proposed Wind Energy Project Areas* protocol. Permission to conduct the surveys outside the recommended survey window (May 1 – September 30) was obtained from DCR on November 12, 2015. Five natural ecological community groups were identified during the surveys, one of which (Central Appalachian Pine-Oak/Heath Woodland) was identified as a natural heritage resource and will be mapped and recorded in the DCR Division of Natural Heritage databases.

Rock Outcrops: Based on aerial photographs, DCR identified rock outcrops within the Project footprint, however, DCR does not track or maintain information about these features in its natural resources database. One rock outcrop was identified northwest of the Project, which was surveyed as part of the breeding bird surveys (see Attachment 7A(2.1)).

Wetlands: Timmons Group (Timmons) assessed impacts to wetlands and waters of the U.S. in conjunction with the development of the access road and electrical collection lines for the Project in order to design the facilities to minimize impacts to the extent possible. Overall wetland and stream impacts are expected to be minor.

Invasive Plant Species: Surveys for invasive plant species will be conducted within the disturbance zone in early May in accordance with the protocol provided by DCR on March 10, 2016.

2. Scenic Resources

Hill Studio was retained to conduct a visual assessment analysis to describe and predict potential changes to the visual quality of portions of northern Botetourt County, Virginia, within a five-mile study area around the Project Area. Hill Studio's methodology considered the number of viewers that would experience the change in pre- and post-construction conditions, the relative distance from the viewers to the change in the landscape, and the potential sensitivity of the viewer to this change. The study considered in particular, the visual impact of the Project on federally-designated or state-designated scenic resources. Hill Studio's report is included as Attachment 7C(2).

Pages 8, 9, and 10 of the Hill Studio report describe the visual impact of the Project on scenic resources.

- The report indicates that the presence of the wind turbines is not anticipated to impact the potential individual eligibility of any historic resources eligible for listing on the National Register of Historic Places or the Virginia Landmarks Register.
- A small percentage (2.56%) of the land within the conservation lands category (as defined in the Hill Studio report) is located in the area of potential visual effect.
- An even smaller percentage (1.07%) of the land within five miles of the Project is in conservation easement and located within the area of potential visual effect. The easement on this land is held by Blue Ridge Land Conservancy.
- The U.S. Forest Service's Recreational Opportunity Map indicates that within the 5-mile study area, only "semi-primitive motorized" and "roaded" natural lands are located within the area of potential visual effect in the forests.

- The U.S. Forest Service's Scenery Management System indicates that some lands in the high, medium, and low scenic management categories are within the area of potential visual effect, but the higher-priority scenic management lands are not located in the area of potential visual effect. This depends greatly on vantage point given forest cover.
- The portions of the James River designated as scenic are not within the area of potential visual effect, though the wind turbines may be visible, depending on vantage point, from other locations along the river.
- Though parts of I-64 are designated as a scenic road, only glimpses of the turbine blades or blade tips may be visible from a small portion of I-64 within the area of potential visual effect.
- The windfarm may be visible from north of Craig Creek Road, Botetourt Road, Narrow Passage Road, and U.S. 220, portions of which are designated as Virginia Byways.

Photographs showing modeled visual impacts on a variety of nearby buildings, locations, and resources are provided in the Hill Studio report.

ANALYSIS SUMMARY (OTHER NATURAL RESOURCES REPORT):

This Section 7C and the relevant attachments constitute the Other Natural Resources Report.

Preliminary discussions and review of existing data indicate that the Project can be constructed with limited risk of impacts to state natural or scenic resources. There are no State Natural Area Preserves under DCR's jurisdiction in the Project vicinity. One natural heritage resource was identified as occurring and another as potentially occurring within the southern portion of the Project impact area - Central Appalachian Pine/Heath Woodland (approximately 200 acres) and piratebush. The presence of piratebush will be assessed within the evaluation area recommended by DCR during the invasive species surveys planned in early May 2016. The Applicant will minimize impacts to the pine/heath woodland, and avoid areas of known piratebush (if identified), to the extent practicable. The Applicant will additionally protect natural resources by siting the Project to minimize impacts to wetlands and streams and adhering to Soil Erosion and Sediment Control requirements and state stormwater management requirements.

The visual impact assessment of the Project indicates that while there are some visual impacts on resources within the five-mile study area, those impacts are extremely limited.

The Project meets the requirements of the PBR with respect to other natural resources.

8. MITIGATION PLAN

REQUIREMENT (9 VAC 15-40-30.A.8.):

In accordance with § 10.1-1197.6 B 8 of the Code of Virginia, furnishes to the department a mitigation plan pursuant to 9 VAC 15-40-60 that details reasonable actions to be taken by the owner or operator to avoid, minimize, or otherwise mitigate such impacts, and to measure the efficacy of those actions; provided, however, that the provisions of this subdivision shall only be required if the department determines, pursuant to 9 VAC 15-40-50 , that the information collected pursuant to § 10.1- 1197.6 B 7 of the Code of Virginia and 9 VAC 15-40-40 indicates that significant adverse impacts to wildlife or historic resources are likely. The mitigation plan shall be an addendum to the operating plan of the wind energy project and the owner or operator shall implement the mitigation plan as deemed complete and adequate by the department. The mitigation plan shall be an enforceable part of the permit by rule.

COMPLIANCE ANALYSIS:

Beyond the formal mitigation plan as specifically defined by the PBR, this Project implements many measures that would typically be considered forms of mitigation. These mitigative measures include the following.

Mitigative Measures:

- **Specific Site Selection.** The Project has been sited and designed in locations that inherently reduce the likelihood of impact to natural resources by using, where possible, existing clearings, disturbed areas, and roads. For example, the site has miles of existing roads, a portion of which will be redesigned for access for the Project. The Project has also been sited at a distance from the closest homes to minimize impacts on those residents.

- **Avoiding Construction of Transmission Lines.** The Project was sited partially due to the existing electrical transmission line that traverses the Property. Other than an approximately 200-foot radial line necessary to connect to the existing transmission line, the location of this existing line avoids the needs for constructing new, overhead transmission lines to interconnect the Project to the electric grid.

- **Underground Wires.** Wires connecting the turbines to the Project substation will be placed underground, unless an extenuating circumstance, such as constructability constraints with the terrain, require an overhead span to get to the substation.

Formal Mitigation Plan:

The PBR establishes specific guidelines for what to include in the formal mitigation plan. The formal mitigation plan is attached as Attachment 8.

9. **CERTIFICATION OF DESIGN INCORPORATING MITIGATION PLAN**

REQUIREMENT (9 VAC 15-40-30.A.9):

In accordance with § 10.1-1197.6 B 9 of the Code of Virginia, furnishes to the department a certification signed by a professional engineer licensed in Virginia that the project is designed in accordance with 9 VAC 15-40-80.

9 VAC 15-40-80. Small Wind Energy Project Design Standards.

The design and installation of the small wind energy project shall incorporate any requirements of the mitigation plan that pertain to design and installation if a mitigation plan is required pursuant to 9 VAC 15-40-50.

COMPLIANCE ANALYSIS:

A certification by a professional engineer licensed in Virginia is included as Attachment 9.

10. OPERATION PLAN INCORPORATING MITIGATION PLAN

REQUIREMENT (9 VAC 15-40-30.A.10):

In accordance with § 10.1-1197.6 B 10 of the Code of Virginia, furnishes to the department an operating plan that includes a description of how the project will be operated in compliance with its mitigation plan, if such a mitigation plan is required pursuant to 9 VAC 15-40-50.

COMPLIANCE ANALYSIS:

The Project will be operated and maintained by a team of approximately 6-8 personnel, including facility managers, a site manager, and a certified crew of technicians. This team will be located at the Project site or O&M building (the possible locations for the O&M building are identified as Option 1 and Option 2 on the Site Plan) during normal business hours to perform routine checks, respond to issues including those relating to fauna and the mitigation plan, and optimize the performance of the wind farm. The team will have specified personnel on call 24 hours per day, should an issue arise outside of normal business hours.

During operations, the O&M staff will perform scheduled, preventative maintenance on the turbines. This is typically done in conjunction with representatives from the manufacturer for the first 1-3 years to ensure that maintenance protocol for the specific turbine installed is completely understood by the O&M staff.

The O&M building will house offices and associated equipment for the staff. There will likely be a garage for spare components, parts, and tools needed for maintenance. Larger, more specialized components will be ordered specifically for replacement on turbines if needed.

The Project will be built with many safety and control mechanisms in place. These mechanisms are generally monitored using a Supervisory Control and Data Acquisition system (SCADA). SCADA allows for each turbine, which is connected via underground fiber optic cable, to be monitored real-time by the O&M staff. The Project will also be built in a way that is capable to be remotely monitored, thus increasing the personnel managing the Project operations, as well as the performance and reliability of the turbines. Wind projects are designed this way to have repetitive and duplicated forms of control. Not only will the local O&M office have full control of the wind turbines, but a 24/7 remote operations facility will also have control of the individual turbines. These two teams coordinate to ensure the wind turbines operate safely and efficiently. A third mechanism for safety and control are the turbines themselves. Each turbine monitors the wind speed and direction itself to ensure its current position is most efficient to produce electricity. This data is also used for feathering the blades and applying the brakes in high wind speeds, as well as to tell the turbine when the wind is strong enough to begin turning the generator and producing electricity at the "cut-in" wind speed.

Other facilities that will be operated, maintained, and inspected include the onsite collection and substation system (approximate locations shown on Site Plan). The wind turbines will be connected to the Project's 34.5 kV collector system, which will aggregate the energy from the turbines to a collector substation. The Project's collector substation will include a 230kV step-up transformer, a 230kV circuit breaker bay complete with circuit breaker, a switching substation owned by the interconnecting utility, a 230kV dead-end for connection to the adjacent switching station and transmission system, 34.5kV circuit breakers for each collector system circuit along

with isolating disconnect switches, bus, steel, insulators, foundations, and a control building with electronic control devices for protection and control. A radial 230kV line of approximately 200 feet will connect the Project with the transmission system owned by Virginia Electric Power Co. transmission facilities.

The operating plan has incorporated the mitigation plan. The operating plan is included as Attachment 10.

11. **SITE PLAN AND CONTEXT MAPS**

REQUIREMENT (9 VAC 15-40-30.A.11):

In accordance with § 10.1-1197.6 B 11 of the Code of Virginia, furnishes to the department a detailed site plan meeting the requirements of 9 VAC 15-40-70.

9 VAC 15-40-70. Site Plan and Context Map Requirements.

A. The applicant shall submit a site plan that includes maps showing the physical features, topography, and land cover of the area within the site, both before and after construction of the proposed project. The site plan shall be submitted at a scale sufficient to show, and shall include, the following: (i) the boundaries of the site; (ii) the location, height, and dimensions of all existing and proposed wind turbines, other structures, fencing, and other infrastructure; (iii) the location, grades, and dimensions of all temporary and permanent on-site and access roads from the nearest county or state maintained road; and (iv) water bodies, waterways, wetlands, and drainage channels.

B. The applicant shall submit a context map including the area encompassed by the site and within five miles of the site boundary. The context map shall show state and federal resource lands and other protected areas, Coastal Avian Protection Zones, historic resources, state roads, waterways, locality boundaries, forests, open spaces, and transmission and substation infrastructure.

COMPLIANCE ANALYSIS:

A. A site plan has been provided in accordance with 9 VAC 15-40-70.A., which is included as Attachment 11A.

The Botetourt County Special Exception Permit (SEP) allows the Applicant to make the following changes to the Project without amendment to the SEP: (i) relocation of exact turbine sites (or changes in turbine specifications), provided turbines remain along the ridge line; (ii) relocation of the underground cables to correspond to the locations of the turbines; (iii) modifications to the proposed gravel roads for access provided such entrance locations from the public roads remain along those sections of the Dagger Springs Road immediately adjacent to the Property; (iv) relocations to the substations and operations and maintenance buildings provided they are setback at least 200 feet from the Property line; (v) any deletion of project roads, or other cleared areas or reduction in the total number of turbine sites and (vi) any other change that does not constitute a substantial deviation from the SEP.

Since the approval of the SEP, the Project has undergone further engineering. There are now some key differences between the Concept Plan originally submitted to Botetourt County and the current Site Plan provided as Attachment 12A. However, these differences, identified below, all fall within the allowable conditions set forth in the SEP.

- Option 1 for the O&M building is now located within the limits of the laydown yard site This revision is an effort to consolidate and minimize disturbance to the Project Area. Option 2 for the O&M building location has not changed.

- The Project switching and collector substations have moved to the south side of the existing 230 kV transmission line. This change is made to avoid interference with the existing Columbia Gas pipeline that traverses the site.

- The substation access road alignment has shifted to minimize impacts to Mill Creek and its tributaries.

- The location of the underground collection lines has shifted as those lines come to the collector substation to minimize impacts to Mill Creek and its tributaries.

As Project engineering and design continue to be finalized, the Applicant may undertake one or more of the changes permitted by the SEP. The Applicant will notify DEQ if any such changes require state or federal permits not listed on the certification provided as Attachment 12.

Included in the Site Plan are the proposed locations for facilities associated with and needed for the construction and operation of the Project. The substation components are shown as proposed, but are subject to final engineering to determine exact size and components. The proposed substation site locations were included in the total disturbed area to ensure that they were accounted for in the environmental studies, consultation, and review of the Project as a whole.

B. Context maps have been provided in accordance with 9 VAC 15-40-70 B, and are included as Attachment 11B.

12. CERTIFICATION OF APPLICATION FOR ENVIRONMENTAL PERMITS

REQUIREMENT (9 VAC 15-40-30.A.12):

In accordance with § 10.1-1197.6 B 12 of the Code of Virginia, furnishes to the department a certification signed by the applicant that the small wind energy project has applied for or obtained all necessary environmental permits.

COMPLIANCE ANALYSIS:

A certification is included as Attachment 12.

Please note, this certification is provided in the form that was included within the Wind PBR Guidance as an attachment to Section II Methodology.

13. **PUBLIC REVIEW** ***[FULL INFORMATION TO BE PROVIDED AFTER COMPLETION OF THE PUBLIC COMMENT AND PUBLIC MEETING PROCESS]***

REQUIREMENTS (9 VAC 15-40-30.A.13):

Prior to authorization of the project and in accordance with § 10.1-1197.6 B 13 and 14 of the Code of Virginia, conducts a 30-day public review and comment period and holds a public meeting pursuant to 9 VAC 15-40-90 . The public meeting shall be held in the locality or, if the project is located in more than one locality, in a place proximate to the location of the proposed project. Following the public meeting and public comment period, the applicant shall prepare a report summarizing the issues raised by the public and include any written comments received and the applicant's response to those comments. The report shall be provided to the department as part of this application;

COMPLIANCE ANALYSIS:

A public review and comment period will be conducted commencing May 5, 2016, through June 6, 2016. The documents will be made available for public review during this period at the Eagle Rock Library in Botetourt County. A public meeting will be held on May 25, 2016 from 5:00 PM to 7:00 PM at the Eagle Rock Library.

Notice of the public review and comment period and public meeting will be published in the Botetourt View, the Fincastle Herald, and the Lexington News-Gazette on April 20, 2106 and April 27, 2016. A copy of these notices will be provided as soon as they are available and will be labeled as Attachments 13A. Attachment 13A currently includes the *Notice of Public Comment Period and Public Meeting* provided to the newspapers listed above for publication.

A full report of the public review and comment period and public meeting will be provided as soon as it is available and will be labeled as Attachment 13B.

14. **PERMIT FEE**

REQUIREMENT (9 VAC 15-40-110.C.):

In accordance with 9 VAC 15-40-110, furnishes to the department the appropriate fee.

9 VAC 15-40-110. Fees

C. Fee schedules. Each application for a permit by rule and each application for a modification of a permit by rule is a separate action and shall be assessed a separate fee. The amount of the permit application fee is based on the costs associated with the permitting program required by this chapter. The fee schedules are shown in the following table:

Type of Action	*Fee*
Permit by rule application (including first three years of operation)	*$16,000*
Permit by rule modification (after first three years of operation)	*$5,000*

COMPLIANCE ANALYSIS:

Payment of $16,000 is provided with this application as stipulated by the PBR.

III. ATTACHMENTS

1	PBR Notice of Intent for Wind Energy Project
2A	Notice of Approval of the Special Exception Permit
2B	Land Use Compliance Certification
3A	Feasibility Study Report
3B	System Impact Study Report
4	Interim Interconnection Services Agreement
5	Certification of Maximum Generation Capacity
7A(1.1)	Location of Perry's Saltpetre Cave
7A(1.2)	VFWIS Database Information
7A(2.1)	Breeding Bird Survey
7A(2.2)	Aerial Nest Survey
7A(4)	General Avian Use and Raptor Migration Survey
7A(6)	Bat Acoustic Survey
7A(7)	Mist Net and Additional Acoustic Survey
7B	Historic Resources Report
7C(1)	DCR Environmental Review
7C(2)	Visual Assessment Report
8	Mitigation Plan
9	Certification of Design Incorporating Mitigation Plan
10	Operation and Maintenance Plan
11A	Project Site Plan
11B	Context Maps
12	Certification of Environmental Permits Application
13A	PBR Public Review Notice
13B	Report of Public Comment Period and Public Meeting