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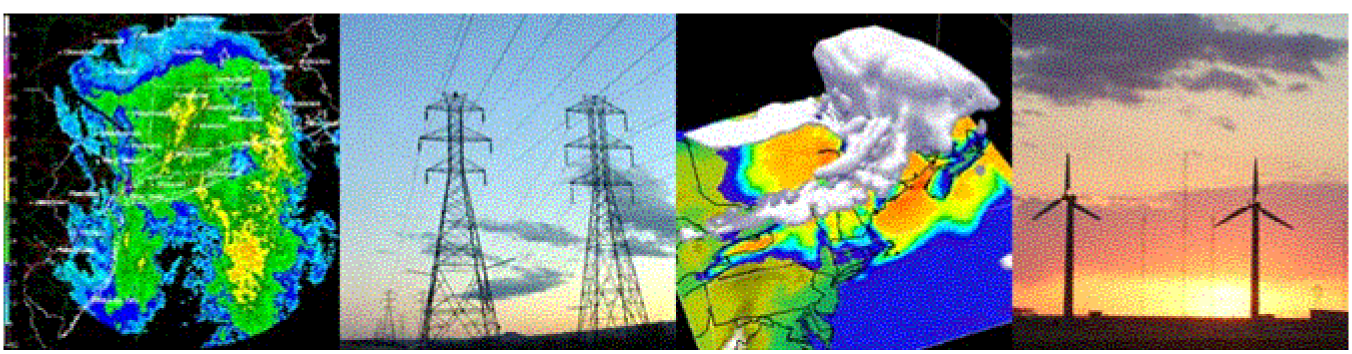
BKA Group, LLC

Coal River Mountain Area, West Virginia

Regional Prospecting Analysis

August 30, 2006

CONFIDENTIAL MATERIAL ENCLOSED



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Executive Summary

1. INTRODUCTION

1.1 Study Objective
The purpose of this analysis is to gain an initial understanding of the wind regime at 80 m above ground level (AGL) for an area located in southern West Virginia. The results of the study are best used to compare the relative windiness of different areas within the prospecting domain. A detailed wind resource assessment at any given site within this area would utilize detailed windfield modeling and significantly higher resolution terrain information which would resolve small-scale features that could exert a significant influence on the wind speeds.

1.2 Project Description
The WindLogics modeling system was used to gather statistics and information covering the entire prospecting site. Using data from the WindLogics Weather Archive, WindLogics executed a detailed, twelve-month modeling process. This complete dataset was then normalized to reflect long-term values using forty years of additional WindLogics data. Finally, these results were used to generate the conclusions and details in this report.

2. SUMMARY OF RESULTS

2.1 Annual Wind Speed, Gross Capacity Factor and Gross Energy Production
The annual average wind speed at 80 m AGL was between 3.8 and 8.9 m/s across the area of study, corresponding to annual gross capacity factor values between 6.1 and 50.6% and annual gross energy production values between 796 and 6653 MWh for the GE 1.5SLE turbine at that hub height.

Note: All capacity factor and energy production values in this report are gross values. Net values will depend on losses from project-specific characteristics such as availability, array effects, icing, airfoil soiling, line losses, control losses and other factors.

2.2 Meteorological Overview
The wind resources in West Virginia are affected by a combination of the larger scale weather patterns and the local terrain.

During the cold season, the winds in West Virginia are driven primarily by synoptic scale weather systems (large areas of high and low pressure), which are generally steered by the upper-level, jet stream winds. These upper-level winds are generally from the west, but considerable variation in surface wind direction occurs as weather systems move through the area. During the summer, the jet stream weakens, and the weather systems have less of an impact on the wind resource. The prevailing winds are from the southwest and are driven by the circulation around the Bermuda High, which resides off the southeast coast of the United States.

The local terrain has a considerable impact on the wind resource in the region. The mountains act as a point of constriction on the flow, causing it to speed up at the ridge tops, but also causing it to slow down at upwind locations. In general, the fastest wind speeds can be found at the tops of the highest mountain ranges, which lie to the east of the modeled area. However, there are a number of smaller mountaintops in the modeled area that likely also have locally high wind speeds. Due to the complexity of the terrain in the modeled area, it is particularly important to use fine scale modeling and tower wind measurements to characterize the wind resource.

3. METHODOLOGY AND DATA

3.1 Methodology Overview

The WindLogics Weather Data archive and modeling system were used to model the wind activity of the site and generate statistics of the study region. The data archives were used as input to the MM5 mesoscale modeling system with an inner grid resolution of 2 km (see Appendix A, Page 1). The output from the MM5 modeling was then used as input to the detailed windfield modeling system consisting of a grid with a resolution of 90 m (see Appendix A, Page 2).

Hourly time series were run for the entire period and statistics were accumulated on a monthly and annual basis. The results were then normalized to long-term climatic means using forty years of data from the WindLogics NCEP/NCAR Reanalysis data archive (see Section 3.6 for the long-term normalization description).

3.2 Turbine Model & Power Curve

The gross energy production results were calculated for the GE 1.5SLE turbine. The WindLogics modeling system calculates energy production using time-dependent air density and hourly wind speed values produced from the models.
Please note also:

1) The power curve used in this study was created from documentation supplied by GE (See Appendix B).
2) The standard GE power curve used in the study was modified on an hour-by-hour basis according to the air density values.
3) The WindLogics modeling process uses the standard GE power curve at 1.225 kg/m^3. Energy production is calculated using the actual air density (from the modeling process) at the site/point location for each hour in order to adjust the wind speed that is applied to the power curve for that hour.
4) The formula for the air density adjusted wind speed is: $WS*(AD/1.225)^{(1/3)}$, where WS is the modeled wind speed and AD is the modeled air density at that hour.

3.3 Topography Data

90-meter resolution topography data acquired from USGS (United States Geological Survey) was used as input to the WindLogics modeling system along with USGS land-use and roughness information.

3.4 Vegetative and Land Cover Data

1) WindLogics took into account several sources (satellite imagery, USGS land cover information, etc.) to assess the overall land cover of the region.
2) The land cover over the area is primarily comprised of evergreen and deciduous forest, interspersed with low and high intensity residential areas, along with industrialized areas. Given this land cover, a displacement height of 15 m was used for areas of evergreen and deciduous forest, along with industrialized areas, while low and high intensity residential areas used displacement heights of 5 and 10 m, respectively. The displacement height was zero for all other categories.

3.5 WindLogics Archive Data for Detailed Analysis

The continuous modeling process used data from the WindLogics North American Archive, consisting of hour-by-hour assimilated weather data at a 20 km horizontal spacing between grid point columns. This data is a physics-based assimilation from many sources, both direct measurement and remote sensing (e.g. satellite) sources, and was initially created by The National Centers for Environmental Prediction (NCEP) as a starting point for their Rapid Update Cycle forecast model. It is a complete, physically-consistent matrix of the atmospheric conditions and includes wind, temperature, pressure and many other weather variables. WindLogics has collected and organized this data and now has more than six years of this North American data online.

3.6 WindLogics Weather Archive for Long-Term Normalization

WindLogics also has an online archive of more than 55 years of worldwide weather data used for normalizing the results of the mesoscale modeling to reflect long-term values and for studying the inter-annual variation of the wind resource. The National Centers for Environmental Prediction (NCEP) and National Center for Atmospheric Research (NCAR) have cooperated in this “Global Reanalysis” project to produce a retroactive record of atmospheric weather data fields in support of the needs of the research and climate monitoring communities. This effort involved the recovery of land surface, ship, rawinsonde, aircraft, satellite and other data; ensuring strict quality control of all data; and assimilating all data with a data assimilation system that is kept unchanged over the complete period. Most data fields are saved four times per day (every 6 hours) and the horizontal resolution is approximately 210 km. WindLogics has developed special technology to maintain this complete dataset online and obtain wind data from the archive at turbine hub height over the entire planet.

By characterizing the model year wind resource difference with the long-term average (forty year) at Reanalysis grid points adjacent to the study location, a ratio is obtained that is applied to the results from the WindLogics modeling process. For example, if the nearby Reanalysis grid point exhibited 5% faster monthly wind speeds (based on the model year) than the long term (forty year) average, the WindLogics modeled wind speeds over the entire grid would be decreased by 5% to adjust to the long term average.

SECTION 1

MAP IMAGES

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Extended Legend - United States Data

Appearance of base data on any map is dependent on the scale specified in each item's title and / or whether or not that data layer was specifically included in any particular map. Specific data layers may be excluded from individual maps to maintain readability of the map.

WindLogics Data Archive Points (All Scales)
- WindLogics Data Archive Points

METAR Stations (All Scales)
- METAR Stations

Transmission Lines (All Scales)

Kilovolts
- 115 - 243
- 345 - 372
- 500

Airports (1:1,500,000 - 1:200,001)
- Airport Area

Airports (>= 1:200,000)
- Runway
- Airport Area

State Boundaries (1:25,000,000 - 1:1,500,001)
- State Boundaries

State Boundaries (>= 1:500,000)
- State Boundary
- International
- Shore

County Boundaries (1:25,000,000 - 1:1,500,001)
- County Boundaries

County Boundaries (>= 1:1,500,001)
- County Boundary

Freeway System (1:50,000,000 - 1:1,500,001)
- Freeway System

Roadways (1:1,500,000 - 1:20,001)
- Limited Access
- Highway
- Major Road
- Local Road
- Minor Road
- Other Road
- Ramp
- Ferry
- Pedestrian Way

Streets (>= 1:20,000)
- Limited Access
- Highway
- Major Road
- Local Road
- Minor Road
- Other Road
- Ramp
- Ferry
- Pedestrian Way

Water (1:10,000,000 - 1:200,001)
- Lake
- Swamp or Marsh
- Reservoir
- Stream
- Glacier
- Bay or Estuary or Ocean
- Lake Intermittent
- Lake Dry
- Reservoir Intermittent
- Canal

Water (>= 1:200,000)
- Lake / Pond
- Stream / River
- Artifical Basins
- Wash
- Playa
- Glacier
- Canal / Ditch
- Complex Channels

Rivers (>= 1:1,500,000)
- Stream
- Intermittent Stream
- Canal
- Dam

National Parks (1:20,000,000 - 1:1,500,001)
- National Parks
- National Forests

Parks (>= 1:1,500,001)
- National Park or Forest
- State Park or Forest
- Local Park or Recreation Area

Landmarks (1:1,500,000 - 1:200,001)
- Military Installation

Landmarks (>= 1:200,000)
- Educational Institution
- Golf Course
- Cemetery
- Military Installation
- Stadium or Arena
- Federal or State Prison
- Amusement Center
- Government Center

Urban Areas (1:10,000,000 - 1:1,500,001)

POPULATION
- <= 100,000
- 100,001 - 500,000
- 500,001 - 1,000,000
- 1,000,001 - 5,000,000
- >= 5,000,001

Urban Areas (1:1,500,000 - 1:200,001)

POPULATION
- 700 - 242,000
- 242,000 - 1,009,000
- 1,009,000 - 2,986,000
- 2,986,000 - 8,299,000
- 8,299,000 - 17,340,000

Places (>= 1:200,000)

POPULATION
- 0 - 55,000
- 55,000 - 362,000
- 362,000 - 1,518,000
- 1,518,000 - 3,695,000
- 3,695,000 - 8,008,000

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SECTION 1A

MAP OF NORMALIZED ANNUAL WIND SPEED AVERAGES (in m/s)

80 METERS

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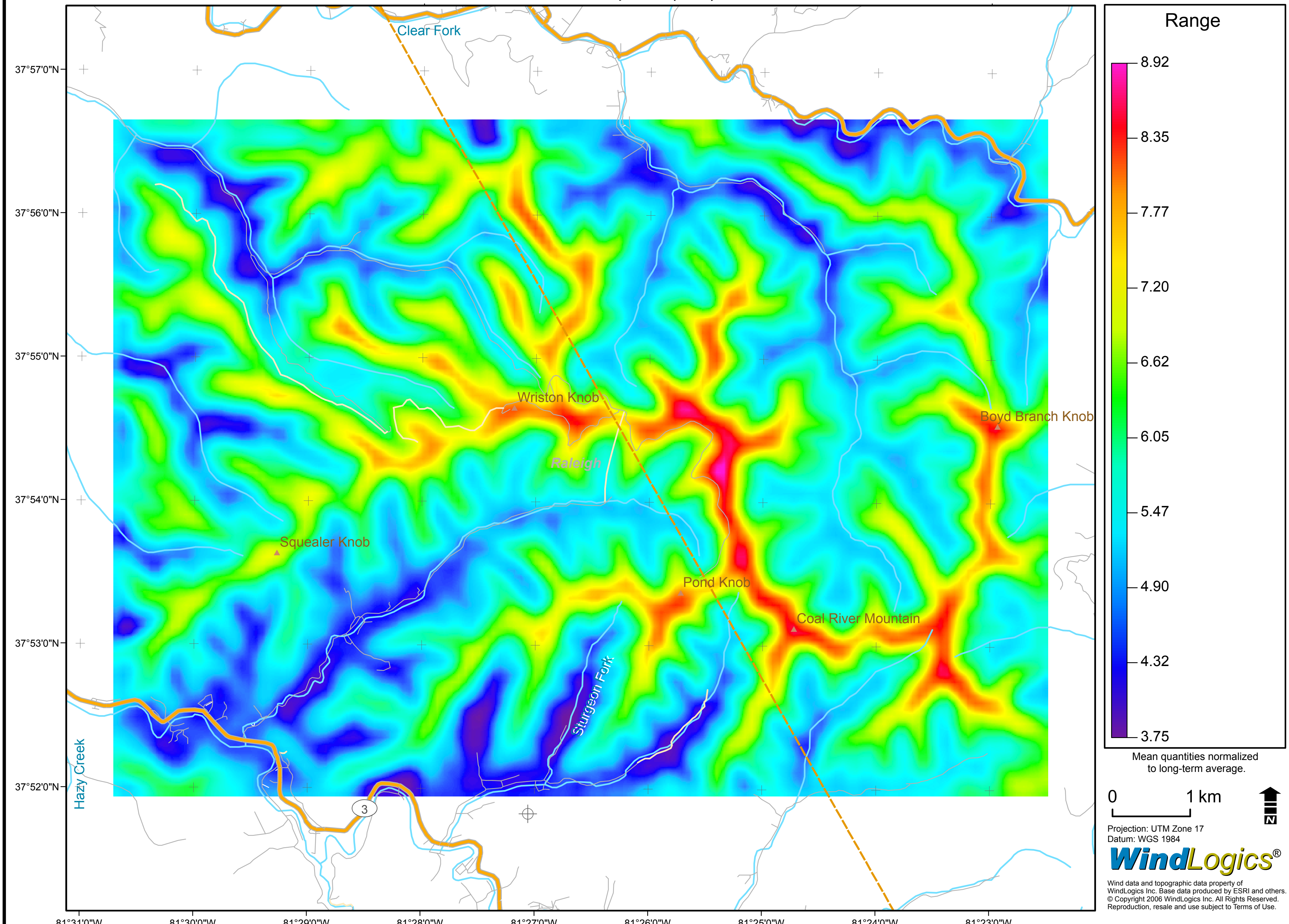
80 m Wind Speed (m/s) - Annual



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SECTION 1B

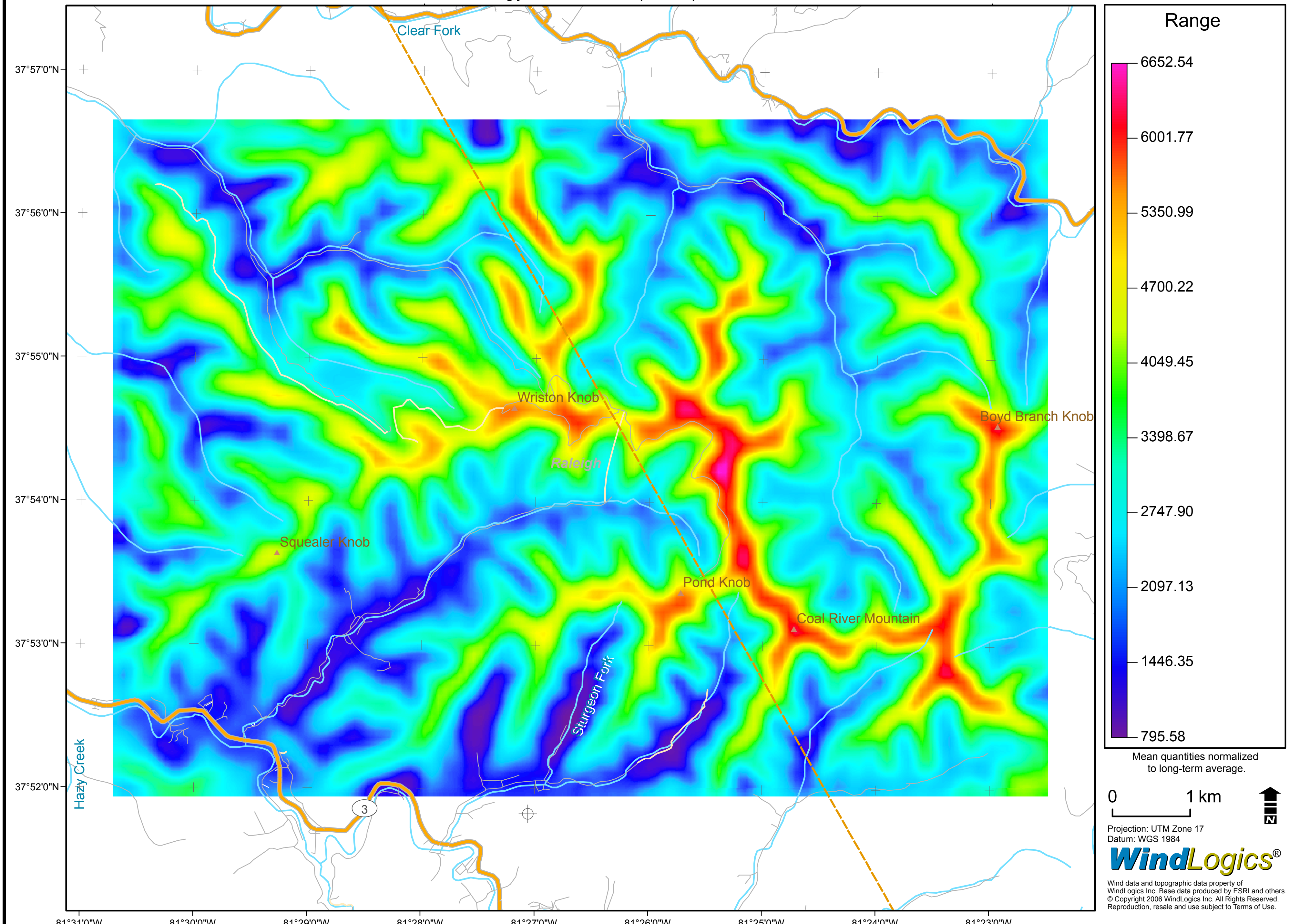
MAP OF
NORMALIZED ANNUAL
GROSS ENERGY PRODUCTION (in MWh)

80 METERS

GE 1.5SLE TURBINE

BKA Group, LLC - Coal River Mountain Area, West Virginia

80 m Energy Production (MWh) GE 1.5SLE - Annual



Mean quantities normalized to long-term average.

0 1 km

N

Projection: UTM Zone 17
Datum: WGS 1984

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SECTION 1C

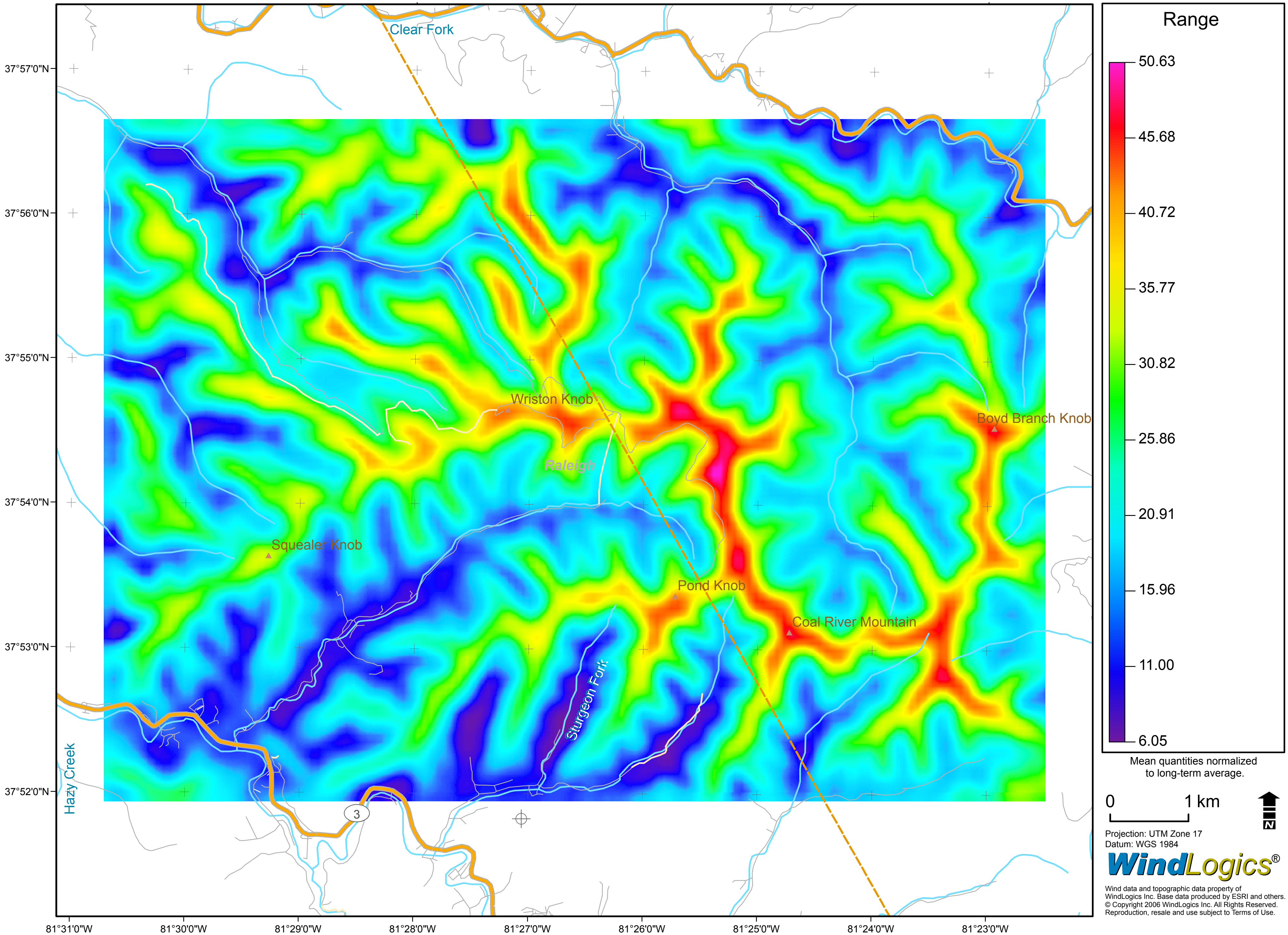
MAP OF
NORMALIZED ANNUAL
GROSS CAPACITY FACTOR (in %)

80 METERS

GE 1.5SLE TURBINE

BKA Group, LLC - Coal River Mountain Area, West Virginia

80 m Capacity Factor (%) GE 1.5SLE - Annual



Projection: UTM Zone 17
Datum: WGS 1984

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APPENDIX A

MODELING GRID MAPS

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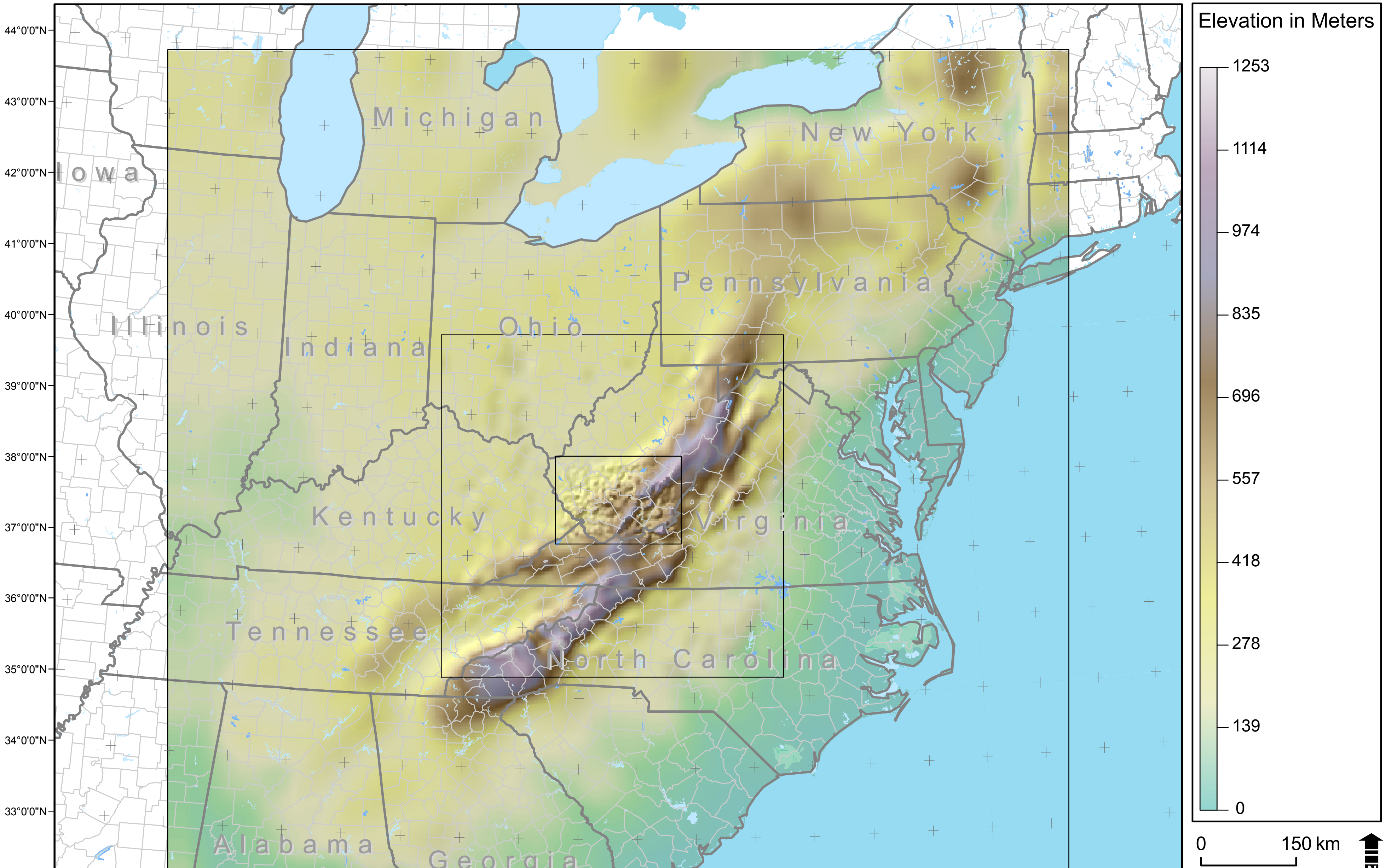
Mesoscale Model - Outer, Intermediate and Inner Grids



Outer Grid: 1422 x 1422 km at 18 km res
Intermediate Grid: 540 x 540 km at 6 km res
Inner Grid: 198 x 138 km at 2 km res
Projection: Lambert Conformal Conic
Datum: Spherical

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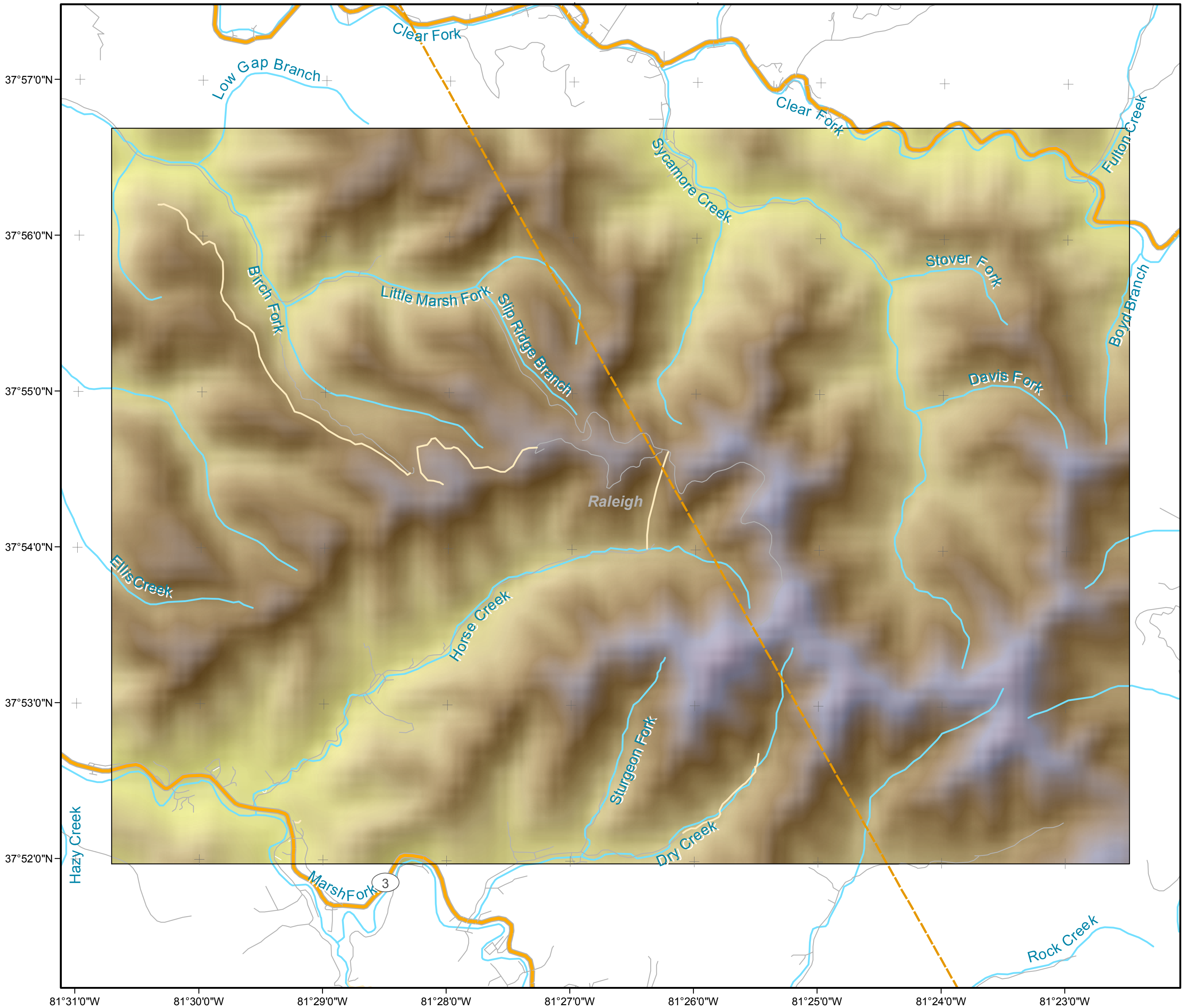
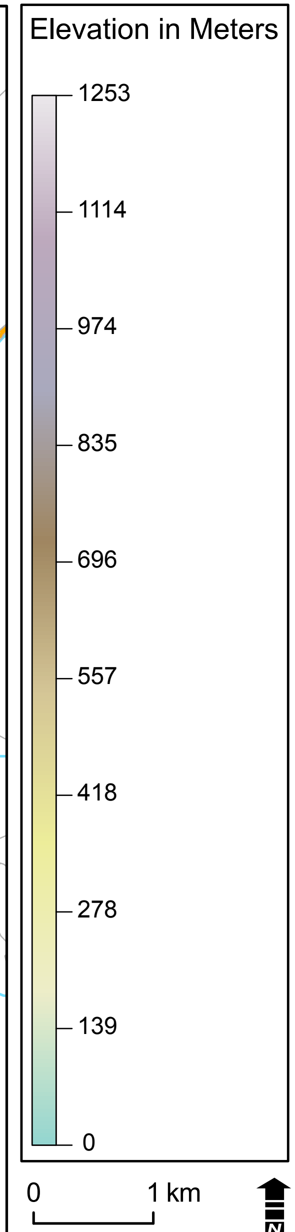
BKA Group, LLC - Coal River Mountain Area, West Virginia

Windfield Model Grid





Model Grid: 11.97 x 8.64 km at 90 m res
Projection: UTM Zone 17
Datum: WGS 1984

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APPENDIX B

POWER CURVES

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GE 1.5SLE

Wind Speed (m/s)	Power (kW)
3.5	20
4.0	43
4.5	83
5.0	131
5.5	185
6.0	250
6.5	326
7.0	416
7.5	521
8.0	640
8.5	785
9.0	924
9.5	1062
10.0	1181
10.5	1283
11.0	1359
11.5	1402
12.0	1436
12.5	1481
13.0	1488
13.5	1500
14.0	1500
14.5	1500
15.0	1500
15.5	1500
16.0	1500
16.5	1500
17.0	1500
17.5	1500
18.0	1500
18.5	1500
19.0	1500
19.5	1500
20.0	1500
20.5	1500
21.0	1500
21.5	1500
22.0	1500
22.5	1500
23.0	1500
23.5	1500
24.0	1500
24.5	1500
25.0	1500

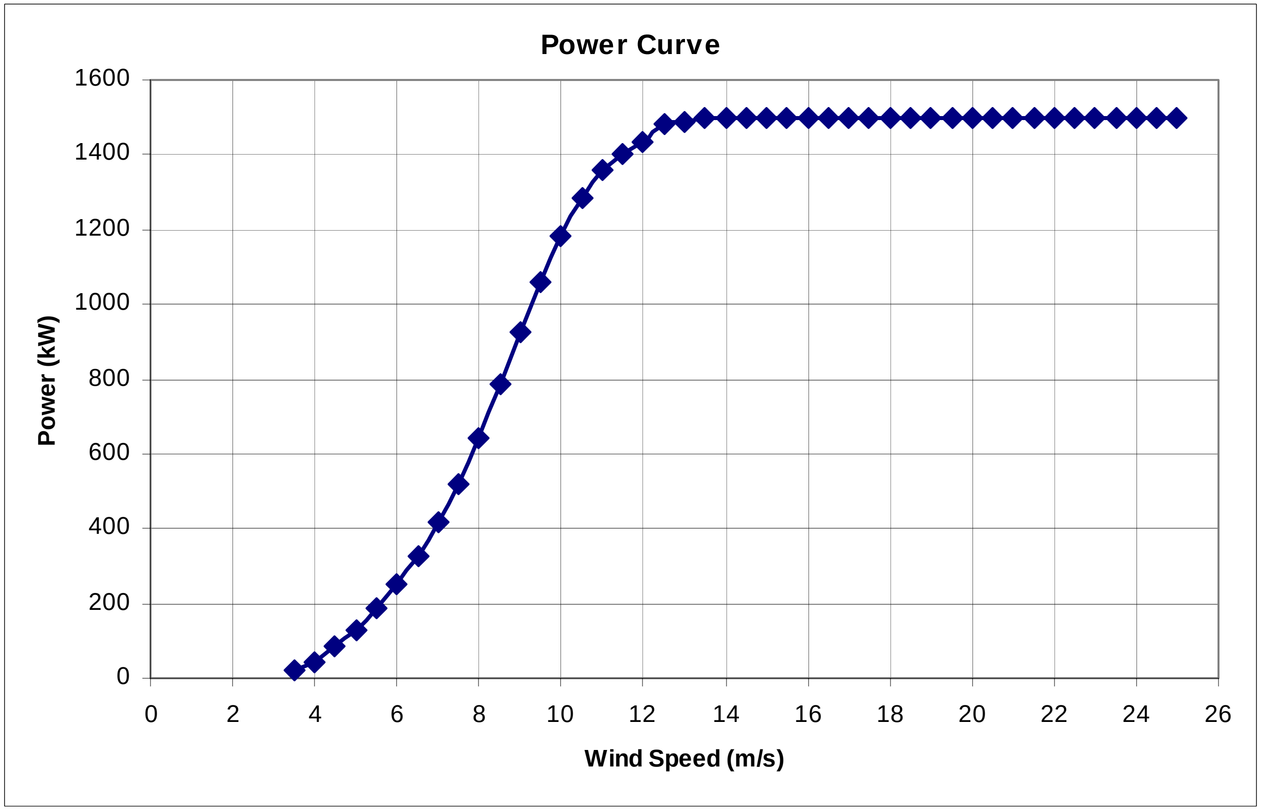
Standard Operational Data	
Cut In Wind Speed	3.5 m/s
Cut Out Wind Speed	25 m/s
Air Density	1.225 kg/m^3
Capacity	1500 kW
Rotor Diameter	77 m

The WindLogics modeling process uses the standard power curve at 1.225 kg/m^3. The modeled air density (for each hour and site/point location) is used to adjust the wind speed that is applied to the power curve for that hour.

The formula that is used to adjust the wind speed is:

Air Density Adjusted Wind Speed = WS * (AD/1.225) $^{(1/3)}$

Where AD is the modeled Air Density and WS is the model estimated Wind Speed at that hour



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