Marble River Wind Farm
Town of Ellenburg Summary

I. Description of Proposed Action

Marble River, LLC (the Applicant) has prepared this Supplemental Draft Environmental Impact Statement (SDEIS) for a proposed action known as the Marble River Wind Farm (the Project). The project is located in the Towns of Clinton and Ellenburg in Clinton County, New York. Eighty eight of the turbines are proposed to be located in the Town of Clinton and 21 in Ellenburg.

In accordance with the regulations and guidelines governing the State Environmental Quality Review Act (SEQRA), this SDEIS is intended to supplement the Draft Environmental Impact Statement (DEIS). The DEIS (submitted in March 2006) described the purpose and need of the Project, its potential environmental impacts and proposed mitigation measures. This SDEIS has been updated to reflect project layout revisions, to provide new information that has become available since the DEIS filing, and respond to certain comments that were received regarding the DEIS submittal.

At the request of the Town Board of Ellenburg, the Co-Lead agency for the SEQRA process, the Applicant has prepared the following summary section that describes the Marble River Wind Farm along with its associated actions, impacts and mitigation strategies, from the perspective of the Town of Ellenburg.

II. Introduction

Marble River, LLC is proposing to develop a wind-powered electric generating facility of 21 turbines (each generating a capacity of up to 2.0 megawatts) within the Town of Ellenburg, Clinton County, New York. The proposed wind turbines are the model G87 manufactured by Gamesa Eólica (or equivalent machines). Each turbine consists of a 78-meter (256-foot) tall tubular steel tower; an 87-meter (285-foot) diameter rotor consisting of three 42.5-meter (139-foot) long composite blades; and a nacelle which houses the generator, gearbox, and power train. Each turbine has a maximum height of 399 feet above ground level when a rotor blade is oriented in the twelve o'clock position.

In addition to the 21 wind turbines, the Project will involve construction of 6.4 miles of gravel access roads, and 10.8 miles of underground electric collection cable in the Town of Ellenburg.

The Project area in the Town of Ellenburg is approximately 1,624 acres. The Applicant has entered into option lease agreements with 20 landowners (representing 1,450 acres) within the Town of Ellenburg. The Project layout runs east to west and is located due south of the NYPA 230-kV Transmission line along the Clinton–Ellenburg town border and north of the Adirondack Park's northern boundary. The entire portion of the Project within Ellenburg can be characterized as primarily agricultural, intermingled with rural residences along the Star Road.

III. Summary of Potential Impacts to the Town of Ellenburg

The following section provides a brief summary of the potential impact to the Town of Ellenburg as a result of the Marble River Wind Farm. Each conclusion is a result of scientific studies and field review

that are further elaborated on in Section 3.0, and appendices, of this document. Specific mitigation strategies are not detailed in this section as appropriate mitigation is being proposed at a Project level. Mitigation strategies are set forth in Section 3.0 of this document.

Soils, Topography and Geological Resources

Soils, topography and geologic resources are as described in the DEIS, with the following exceptions:

Approximately 118 acres of surface soils will be disturbed during Project construction in Ellenburg. Of this area, approximately 22 acres will be permanently occupied by Project structures. Approximate areas of temporarily and permanent impacts to surface soils are detailed in Section 3.1.2 of this document.

Water Resources

Within the Marble River Project site, protected streams in the Town of Ellenburg include the headwaters and tributaries of the Marble River and English River. This area also includes 317 acres of NYSDEC–regulated wetlands, and 52 acres of wetlands as mapped by the National Wetland Inventory. The majority of these wetlands are scrub-shrub or emergent.

During construction, the proposed Project will impact 2.1 acres of state and/or federally-regulated wetlands. Most of the wetland impacts will be temporary in nature, with permanent wetland filling totaling approximately 0.7 acres within the Town of Ellenburg.

Ecological Resources

Ecological communities within the Town of Ellenburg portion of the Marble River Project site include nearly equal acreage of forest and agriculture, along with smaller areas of successional communities. Within the Town of Ellenburg portion of the Project site, temporary and permanent impacts to ecological communities are summarized in Table 1 below:

Table 1: Impacts to Vegetative Communities in the Town of Ellenburg

Community	Total Disturbance (Acres)	Temporary Disturbance (Acres)	Permanent Loss (Acres)
Agricultural Land	68	55	13
Successional Old Field	0	0	0
Successional Shrubland	16	13	3
Forest land	34	28	6
Disturbed/Developed	0	0	0
TOTAL	**118**	**96**	**22**

Traffic and Transportation

Subsequent to the DEIS, an updated material and equipment delivery route assessment was conducted based on the current project layout. The Project within Ellenburg is proposed generally around Star Road within Ellenburg. Star Road is listed as a moderately high traffic State Road. The physical characteristics of Star Road are sufficient to handle the proposed component and material delivery loads.

The local roads included in the proposed delivery routes within the Town of Ellenburg include the Brandy Brook Road, Sancomb Road, Ryan Road, Patnode Road, and Route 190. The additional traffic of 2,242 materials and components deliveries anticipated for Wind Energy Conversion System (WECS) construction within the Town of Ellenburg (19 WECS's x 118 trips per WECS) is split roughly evenly amongst these five local roads, and thus each local road can expect additional construction traffic of approximately 448 trips during the construction period in 2008 and 2009.

The anticipated impact of Project-related traffic on local roads may be classified as moderate to significant and has the potential to result in temporary delays and road damage. Prior to the commencement of construction, the Applicant will consult closely with the Town of Ellenburg's Highway superintendent as well as the local New York State Department of Transportation to reach a "Road Use Agreement." The Road Use Agreement is a mechanism that will be used by the Applicant and the Town to formalize the transportation relationship and provide a process and agreed upon compensation for specific road wear and usage.

Among the important constraints considered while planning the preferred delivery and transportation routes for the Marble River Wind Farm were local school bus routes. To assure minimal impact to local bus routes the Applicant will make the effort to avoid scheduling deliveries along school bus routes during school bus hours. In the case a delivery will coincide with a school bus route during school bus hours the Applicant will notify proper Northern Adirondack School Committee officials at least 1 day ahead of time. School bus routes will continue to be taken into account during all construction activities to minimize any interference.

Land Use and Zoning

Project development and operation will be guided by the Town of Ellenburg Wind Energy Facilities Law (Local Law No. 4 of 2005). The requirements of this law are summarized in the DEIS.

The current Project layout has developed to comply with the Town of Ellenburg's Local Law No.4 which requires setbacks from turbines as outlined in Table 3.5.1.2-1 of the DEIS. Figure S4, Revised Setback Map identifies the required setback for the Town of Ellenburg.

The proposed Project is compatible with existing land uses within the Project area (e.g., active agricultural and forest management), although the turbines may be construed to change community character in some locations.

Cultural Resources

As presented in the DEIS, a Phase 1A cultural resources survey was conducted in the Project site within the Town of Ellenburg to identify previously recorded archeological or historic sites that may be affected by the construction and/or operation of the proposed Project. Except for the Adirondack Forest Preserve, there are no structures or properties presently listed on, or determined eligible for listing on, the State and/or National Registers of Historic Places within 5 miles of the proposed Project.

Subsequent to the DEIS, a Phase IB archeological survey was conducted to determine the presence or absence of previously unrecorded archeological deposits within the Project site of physical disturbance. In addition, a historic architectural resources survey was conducted to identify and document historically significant structures that may be located in the Project viewshed within five miles of the limits of the Project site.

No Native American prehistoric sites were identified within the Town of Ellenburg during the Phase 1B archeological survey. However, the Phase 1B archeological survey resulted in the identification of two historic archeological sites within the Town of Ellenburg. These two sites have been designated Patnode Road Site 1 and 2 and represent an abandoned farmstead and cabin, respectively. Neither of these sites will be impacted by Project components.

Seventy three historic properties were identified within the Project's 5-mile viewshed during the historic architectural resources survey (Appendix J, Historic Architectural Resource Survey Table 2, Figure 1). Of these, 29 properties were within the Town of Ellenburg.

Within the Town of Ellenburg, 6 properties are expected to incur significant adverse impacts visual impacts (i.e., likely to have some portion of their visual context affected on a year-round basis). An additional thirteen properties within the Town of Ellenburg will be adversely affected to a lesser extent (e.g., effects will be moderated by distances, and/or the presence of intervening forest cover, and/or landscaping and/or structures), and ten properties within the Town of Ellenburg will not be adversely affected because views of these properties from public rights-of-way will not include views of the Project. Views of and from the one NRHP/SRHP listed property within the study area (portions of the Adirondack Forest Preserve) will not be adversely affected by the Project.

Visual Resources

Subsequent to the DEIS, a supplemental visual impact assessment (SVIA) and revised shadow flicker study were conducted based on the current Project layout. Landscapes within the Town of Ellenburg

portion of the visual study area include rural/agricultural, village/hamlet, forestland, and water/waterfront zones. Visually-sensitive resources within the Town are as described in the DEIS, plus 72 sites that may be eligible for listing on the National Register of Historic Places.

The SVIA (Appendix K) concluded that topography in the area will offer very little project screening. However, factoring vegetation into the viewshed analysis significantly reduces potential Project visibility. Within the 5-mile radius study area (excluding Canada), vegetation, in combination with topography, will serve to screen the Project from approximately 69% of the area (i.e., potential visibility is limited to 31% of the area). Visibility will essentially be restricted to open field and wetland areas, which are concentrated in the immediate vicinity of the turbines and in a northeast-southwest oriented band on the east side of the study area (from south of Ellenburg Center to north of Ellenburg Depot). Almost the entire 5 to 10 mile ring (95%) is shown as being screened from view of the Project by vegetation and topography. Most of the sensitive sites within 5 miles of the Project are indicated as being screened from view by vegetation and topography, except the hamlets of Ellenburg Corners and Ellenburg Center, Roxanne Lake, isolated State Forest Preserve parcels, and significant portions of Route 11. Sensitive sites within 10 miles, including all Forest Preserve land in the Adirondack Park are indicated as being fully screened from view by vegetation and topography.

The cumulative topographic viewshed analysis of the proposed Marble River and Noble projects indicates that within the area of overlapping 10-mile radius viewsheds, approximately 69% of the area has the potential to see one or more turbines from each project. Areas completely screened from views of all turbines by topography alone are limited to the valleys and backside of hills in the southwestern portion of the overlapping study areas (in the Adirondack Park) and steep ravines and river valleys in the western portion of the study area. Factoring vegetation into this analysis reduces potential cumulative visibility (i.e., areas where at least one turbine from each project can be seen) to 9% of the overlapping 10-mile study areas. These areas of potential cumulative visibility are concentrated in open fields and wetlands in close proximity to the projects, and in some broader open areas to the northwest and southeast (similar to the results of the vegetation viewshed for the Marble River Project alone).

Areas of actual visibility within the visual study area are anticipated to be much more limited than indicated by the viewshed analyses. This is due to the slender profile of the turbines (especially the blades, which make up the top 139 feet of the turbine), their light color, and screening provided by structures, street trees, and hedgerows, which are not considered in the viewshed analyses.

Supplemental field work concluded that sensitive sites in the Town of Ellenburg with clear views of the Project include portions of Ellenburg Center and the Adirondack Park. Simulations of the Project from several visually sensitive locations within the Town of Ellenburg were prepared as part of this SVIA. Simulations were not prepared from sensitive viewpoints where the turbines would not be visible, or where other simulations better illustrate “worst-case” visual impact from these areas.

Field review also indicated that views of the proposed overhead collection line will generally not be available within the Town of Ellenburg. Publicly accessible views of the proposed substation will essentially be limited to a single location where the existing New York Power Authority (NYPA) transmission line crosses Patnode Road. The existing cleared right-of-way (ROW) offers the only view that is not screened by surrounding forest vegetation.

Table 2 in the SVIA summarizes the results of the visibility analyses described above, in regard to aesthetic resources of statewide and local significance. The majority of visually sensitive sites with potential project visibility will only have partial views and/or views from limited areas.

The SVIA included six simulations of the Marble River Wind Farm from viewpoints within the Town of Ellenburg. These representative simulations from the Town are presented in Figure 25. As these simulations show, project visibility and visual impact will be variable, based on the number of turbines visible, their proximity to the viewer, and the extent of screening provided by vegetation and structures. In Ellenburg the greatest impact will occur to those residences at the highest elevations with viewsheds to the North. In these areas (along Moore Road and the Tacey Road) residences will potentially be impacted by the full extent of cumulative visual impact. Elsewhere within the Town views are much more limited due to level topography and tree screening. Visibility of the proposed substation is limited to a single site on Patnode Road where it crosses the cleared ROW of the existing NYPA 230 kV transmission line. However, the substation represents a significant visual change. The SVIA indicates that it will present strong contrast in line, color, texture, form and scale with existing features of the landscape, including even the existing 230 kV transmission line. The extent of the visual impact directly relates to the proximity of the proposed substation to the viewer and the lack of foreground screening to block the view. However, this impact is limited by the fact that the one location on Patnode Road represents essentially the only open, publicly available view of the substation, and is located on a lightly used seasonal Town road.

Based on the results of the Marble River SVIA, it can be concluded that from previously evaluated viewpoints, the revised Project's overall contrast with the visual/aesthetic character of the area will be similar to that reported in the original VIA, and generally low to moderate. The only significant changes (reduction in contrast) were noted in viewpoints where the revised Project layout resulted in the removal of a foreground turbine from the view. Of the new turbine simulations prepared for this SVIA, two (including Viewpoint 36 in the Town of Ellenburg) received a contrast score over 2 on the scale of 1 to 5. The simulation from Viewpoint 36 received a composite score of 3.79. Most of the impact from this viewpoint relates to the proximity, number, and/or density of visible turbines, and their contrast with the existing 37 landscape in terms of line, form, scale, and land use. This is consistent with the findings of the original VIA.

Air Quality

The Applicant is proposing 21 wind turbine sites within the Town of Ellenburg for a total nameplate capacity within the Ellenburg of 42 MW. The operations phase of the Project is expected to generate

a net reduction in in-state air emissions due to the avoidance factor which allows that, for every MWhr generated from the Marble River Wind Farm an associated in-state, fuel fired, power generator will not be required. The positive impact to in-state air emissions from the Ellenburg portion of the Marble River Wind Farm is anticipated to decrease emissions as described in the following table.

Table 2: Estimate Emission Reduction from Wind Turbine Generation in Ellenburg

Compound	Emission Factor (lbs/MWhr)	Total Annual Reductions (tons/year) [1]
Nitrogen oxides	1.363	73
Sulfur dioxide	1.765	94
Carbon dioxide	1,274	68,114
Particulate matter less than 10 microns in diameter	0.041	2
Volatile organic compounds	0.035	2
Mercury	2 E-06	0.0002

[1] Assumes approximately 107,000 MW-hrs of electrical power generated by the Marble River wind turbines located in Ellenburg during an average year.

The construction phase of the Marble River Wind Farm is anticipated to cause some minor impact due to increased emissions and generation of fugitive dust from construction and delivery vehicles traveling on un-paved roads. The increased dust and emissions will not be sufficient to significantly impact local air quality.

Noise

Subsequent to the DEIS, an updated noise modeling study was conducted based on the current Project layout. Existing noise levels and noise modeling techniques used in the revised study within the Town of Ellenburg are as described in the DEIS.

Based on the conservative assumptions used by Hessler Associates to assure that a “worse case” scenario was depicted, the results of the noise study show that the Town of Ellenburg has two residences which have the potential to experience sound levels between 45 and 46 dBA. In general, residences falling between the 45 and 48 dBA contours may hear the turbines at times but because of modeling conservatism and seasonal considerations the probability of a significant adverse impact due to noise alone is low. Continuous audibility seems unlikely given the conservative assumptions inherent in the model. One residence within the Town of Ellenburg with potential to experience sound levels between 45 and 46 dBA is not currently participating as host to the Marble River Wind Farm; but will be offered the means to participate through a neighbor agreement. The noise modeling study further demonstrates that the Town of Ellenburg local law limit of 50 dBA at any residence will not be exceeded and therefore the Project will be in compliance. Table 4 identifies Ellenberg residences where projected sound levels may exceed 45 dBA.

Table 3: Ellenburg Residence Where Project Sound Levels May be Above 45 dBA

Identification Number	Address/Location	Project Participant Status
09	7909 Star Road, Ellenburg, NY	No
10	Star Road, Ellenburg, NY	Yes

Socioeconomics

The Project site within the Town of Ellenburg represents the smaller portion of the proposed Marble River Wind Farm and is approximately 1,624 areas in size. Available land area is limited mainly by the existence of the "blue line" which demarcates the northern boundary of Adirondack Park. Commercial construction such as wind turbines are not allowed in Adirondack Park.

19 turbines are proposed within the Town of Ellenburg. The potential tax revenue can be quantified through three instruments:

1. PILOT: The Town of Ellenburg can expect to receive approximately 32% of the PILOT payments as per the Ellenburg County IDA. This represents an annual payment of approximately $63,000, or $1,500,000 over the life of the Project.

2. Host Community Agreement: The Town of Ellenburg may opt to sign a Host community agreement. Based on precedent within New York State, this agreement pays approximately $1,000 per installed MW. This equates to an additional payment of approximately $40,000 per year or $1,000,000 over the life of the Project.

3. Roads Use Agreement: Given the importance of the local roads to the construction and operations of the Project, the Applicant will propose to enter into a Roads agreement with Ellenburg. The Road Use Agreement is a mechanism that will formalize the transportation relationship and provide a process and agreed upon compensation to the town for specific road wear and usage. Benefits often include road improvement and major upgrades of roads, including culverts, bridges and seasonal roads.

4. Total Direct Municipal Revenue: The total revenue to the town of Ellenburg is estimated to be approximately $103,000 per year or $2,575,000 million over the life of the Project.

Telecommunications

Telecommunication is an issue that is more regional in nature. The Applicant has conducted baseline studies in the Town of Ellenburg of a number of communications systems. In general, the Project

improvements have been sited to avoid known areas of potential interference. In the event that unforeseen interference does arise, the Applicant will be in a position to address any such interference issues that may arise. A complaint resolution process has also been developed to assure that any potential impacts on television reception are identified and corrected.

Marble River, LLC has directed electromagnetic interference consultant Comsearch to proceed with a supplemental notification of the National Telecommunications and Information Administration of the revised turbine locations so that the Interdepartmental Radio Advisory Committee can determine whether there is still no obstruction or interference to federal government links and radars. A reply is expected by August 2007 and will be provided for review as a supplement to the FEIS.

IV. Conclusion

The Applicant has been actively studying the potential impacts of the proposed Marble River Wind Farm since 2002. In that time multiple years worth of wind, environmental and local data has been compiled. Based on the results of the studies in this SDEIS, and based on the Applicant's past experience in developing and constructing Wind Projects in the state of New York, it remains the opinion of the Applicant that the Town of Ellenburg, by virtue of its rural character, agricultural industry base, proximity to transmission line access and excellent wind resource is an excellent location to host a productive wind farm.