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**Subject: Jordanville Windpower Project
DECOMMISSIONING AND SITE RESTORATION COST REVISED
ESTIMATE (40 turbines)**

This Decommissioning and Site Restoration cost estimate has been prepared in association with the "Decommissioning Plan" developed for the now proposed forty (40) turbine Jordanville Windpower Project.

Facility Dismantling, Removal and Site Restoration

The predicted useful life of a modern wind turbine generator (WTG), including the Gamesa G87 is at least twenty years. Project financing and planning is based on this predicted life span. At the end of the WTG's useful life, the Jordanville Windpower Project will be either repowered or decommissioned. Repowering the facility typically involves replacing the existing WTGs with new turbines that are more efficient. Most of the steps involved in decommissioning the facility may also be part of a repowering to the extent that the existing towers and foundations are not sufficiently engineered to accommodate the replacement WTGs. Thus, in a repowering the original WTGs and their foundations may be required to be removed. However, as part of a repowering, it is possible that other ancillary equipment, such as the underground cabling or substation, may be reused. Nevertheless, to ensure that the Decommissioning Cost Estimate captures all the potential costs of dismantling and removing equipment and restoring the site to its original condition, it is presumed that the facility will be entirely decommissioned and not repowered.

It is expected that the decommissioning process for the project would be as follows:

1. Mobilize crane to the site for each wind turbine.
2. Dismantle and remove the rotor, nacelle and tower and transport the entire WTG off site.
3. An excavator would be brought in to dig a hole about 2/3 of the way around each foundation. Then with an air hammer or comparable equipment, the concrete foundations and transformer pads will be removed to 3' below the surrounding grade and placed into the 10' deep hole.



4. All the metal and cable will be cut off below 3' at each foundation site so that there is nothing left in the ground above 3' below grade level. Where possible, the metal and cable items will be separated and recycled.
5. Backfill the holes with the soil that was excavated and regrade the foundation areas to as close as reasonably possible to the original ground contours. These areas shall be returned as close as reasonably possible to pre-construction conditions suitable for agricultural use.
6. Other than those roads that the landowners wish to retain, all the access roads to the wind turbines would be removed and re-graded as close as reasonably possible to the original ground contours. These areas would be returned as close as reasonably possible to pre-construction conditions suitable for agricultural use. However, for the purposes of this cost estimate it is assumed all the site access roads will be removed.
7. Removal of the Project Substation and short transmission line that connects it to the Utility. It is expected that the Utility Switchyard will remain in service.

In addition to the foregoing, all decommissioned gearboxes, transformers, and hydraulic systems shall be drained of all fluids which shall be put into appropriate containers, and will be transported and disposed of in accordance with all state and federal environmental regulations.

Estimated Costs for Decommissioning and Site Restoration

The following is an estimate of the cost of dismantling the wind power facility and returning the site, as close as reasonably possible, to pre-construction conditions suitable for agricultural use. The estimate is based on the decommissioning approach outlined above and is based on the removal of 40 x 2.0MW wind turbine generators with 78m towers and an 87 rotor diameter, the site roads and the meteorological towers.

Cost Estimate:

The decommissioning cost on a per Wind Turbine is based on the following assumptions:

- The project equipment will be dismantled and cut up for scrap, i.e. not for resale
- The WTGs will be dismantled in pieces that allow a truck mounted heavy lift crane to be used, ie a heavy lift crawler crane as used during construction will not be required.
- The Met towers will be dismantled and removed at the same time as the wind turbines and thus the same equipment and crews will remove them as they pass by the associated wind turbines.
- The scrap values and transportation costs provided in Appendix A
- The Salvage Value of the Substation Equipment greatly exceeds the cost to transport it from site and that 50% of the excess scrap salvage value can be used to offset other decommissioning activities
- The Salvage Value of the WTG Equipment greatly exceeds the cost to transport it from site and that 50% of the excess scrap salvage value can be used to offset other decommissioning activities



The decommissioning costs are summarized below on the following bases:

1. Total Project
2. By Township

1. Total Project Basis

- WTGs (number of) 40
- WTGs Dismantled/week 6
- WTG Foundations Dismantled/week 12
- Substation Dismantling Period (weeks) 2

<u>Item Description</u>	<u>Cost/WTG</u>	<u>40 x Gamesa G87</u>
WTG Dismantling Staff	\$8,360	\$334,400
WTG Equipment Rentals		
Large Erection Crane (300 ton)	\$4,721	\$188,833
Other Equipment	\$2,838	\$113,500
Road Removal	\$15,333	\$613,333
WTG/Transformer Foundation	\$833	\$33,333
Substation	\$2,313	\$92,500
Transline	\$125	\$5,000
Miscellaneous	\$699	\$27,951
Sub Total Costs	\$35,221	\$1,408,851
WTG Scrap Salvage Value		
Scrap/WTG (ton)	192	
Scrap Value (\$)	\$35,599	
Transport (\$/WTG)	\$16,590	
50% of Excess Salvage Value (\$/WTG)	\$9,504	\$(380,176)
Substation Scrap Salvage Value		
Scrap Sub (ton/WTG)	3.1	
Scrap Value (\$/WTG)	\$2,082	
Transport (\$/WTG)	\$263	
50% of Excess Salvage Value (\$/WTG)	\$909	\$(36,371)
Transline Scrap Salvage Value		



Item Description	Cost/WTG	40 x Gamesa G87
Scrap TL (ton/WTG)	1.6	
Scrap Value (\$/WTG)	\$274	
Transport (\$/WTG)	\$87	
50% of Excess Salvage Value (\$/WTG)	\$94	\$(3,757)
Total Costs less 50% Excess Salvage Value	\$24,714	\$988,547

2a Stark Township

- WTGs (number of) 19
- WTGs Dismantled/week 6
- WTG Foundations Dismantled/week 12
- Substation Dismantling Period (weeks) N/A
- Percent of Project Roads 50%

Item Description	Cost/WTG	19 x Gamesa G87
WTG Dismantling Staff	\$8,360	\$158,840
WTG Equipment Rentals		
Large Erection Crane (300 ton)	\$4,721	\$89,696
Other Equipment	\$2,838	\$53,913
Road Removal	\$15,333	\$291,333
WTG/Transformer Foundation	\$833	\$15,833
Substation		\$-
Transline	\$125	\$2,375
Miscellaneous	\$699	\$13,277
Sub Total Costs	\$32,909	\$625,267
WTG Scrap Salvage Value		
Scrap/WTG (ton)	192	
Scrap Value (\$)	\$35,599	
Transport (\$/WTG)	\$16,590	
50% of Excess Salvage Value (\$/WTG)	\$9,504	\$(180,584)
Substation Scrap Salvage Value		
Scrap Sub (ton/WTG)	3.1	
Scrap Value (\$/WTG)	2081.6	



Transport (\$/WTG)	263.1	
50% of Excess Salvage Value (\$/WTG)	\$909	\$(36,371)
Transline Scrap Salvage Value		
Scrap TL (ton/WTG)		
Scrap Value (\$/WTG)		
Transport (\$/WTG)		
50% of Excess Salvage Value (\$/WTG)		
Total Costs less 50% Excess Salvage Value	\$22,495	\$408,312

2b Warren Township

- WTGs (number of) 21
- WTGs Dismantled/week 6
- WTG Foundations Dismantled/week 12
- Substation Dismantling Period (weeks) 2
- Percent of Project Roads 50%

<u>Item Description</u>	<u>Cost/WTG</u>	<u>21 x Gamesa G87</u>
WTG Dismantling Staff	\$8,360	\$175,560
WTG Equipment Rentals		
Large Erection Crane (300 ton)	\$4,721	\$99,138
Other Equipment	\$2,838	\$59,588
Road Removal	\$15,333	\$322,000
WTG/Transformer Foundation	\$833	\$17,500
Substation	\$4,405	\$92,500
Transline	\$125	\$2,625
Miscellaneous	\$699	\$14,674
Sub Total Costs	\$37,314	\$783,584
WTG Scrap Salvage Value		
Scrap/WTG (ton)	192	
Scrap Value (\$)	\$35,599	
Transport (\$/WTG)	\$16,590	
50% of Excess Salvage Value (\$/WTG)	\$9,504	\$(199,593)



Substation Scrap Salvage Value		
Scrap Sub (ton/WTG)		
Scrap Value (\$/WTG)		
Transport (\$/WTG)		
50% of Excess Salvage Value (\$/WTG)		
Transline Scrap Salvage Value		
Scrap TL (ton/WTG)	1.6	
Scrap Value (\$/WTG)	\$274	
Transport (\$/WTG)	\$87	
50% of Excess Salvage Value (\$/WTG)	\$94	\$(3,757)
Total Costs less 50% Excess Salvage Value	\$27,715	\$580,235

Opinions or estimates of probable construction costs are prepared on the basis of PB's experience and qualifications and represent PB's judgment as a professional generally familiar with the industry. However, since PB has no control over the cost of labor, materials, equipment, or service furnished by others, over contractors' methods of determining prices, or over competitive bidding or market conditions, PB cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from PB's opinions or estimates of probable construction cost.

Sincerely,

PB Power (A Parsons Brinckerhoff Company)

Salvatore Prestano, P.E.
Vice President





Appendix A: Transport Costs and Scrap Value

The value of the scrap metal from the decommissioned project has been determined using the August 2002 U.S. Geological Survey published Version 6.2 of Open-File Report 01-006 "Historical Statistics for Mineral Commodities in the United States" which provides information on the scrap value of Steel from 1934 to 1998, Copper from 1900 to 2000, and Aluminum from 1900 to 2000. Columns A to D in following table summarize the findings:

Column A	Column B	Column C	Column D	Column E
Material	Average Price variation year on year for the last 10 years of record in the USGS 2002 report	Average Price for the last 10 years of record in USGS 2002 report \$/t	Price for the last year of record in USGS 2002 report \$/t	Price Used in this Analysis (1.33 x Column D) \$/t
Iron and Steel	2% increase	128.50	108 (1998)	144
Copper	2% decrease	2,284.73	1944 (2000)	2,586
Aluminum	6% increase	1630.00	1640 (2000)	2,181

Since 2002 the U.S. Geological Survey has published 5 more updates for Open-File Report 01-006 "Historical Statistics for Mineral Commodities in the United States".

However, subsequent to 2002, the scrap value of materials in the US has fluctuated significantly, for example, due to the heavy demand from China and Turkey the value of scrap steel rose to \$132/ton in 2003, \$210 in 2004. It subsequently dropped to \$190 in 2005 and then rose to \$210 in 2006. These values range from approximately 25% to 100% higher than the number in Column D above. Similarly the increase in the price of scrap copper in 2004 was approximately 50% higher than in Column D above, while 2005 and 2006 saw 100% and 200% increases on the values in Column D above.

When the previous Decommissioning Report was prepared, it was believed that the 2003 to 2005 values were significantly higher than the expected long term values, thus it was proposed to use the data in Column D of the table above for the analysis. However, it is now believed that it is unlikely that the scrap values will return to pre-2000 values in the near future, thus the analysis has been based on a 33% increase in the values tabulated in Column D above (ie using the values in Column E). The values used in the analysis are believed to be conservative as they are significantly less than the average price average price for these commodities between 1946 and 2006 adjusted to 1998\$ (the year used by the USGS) and less than the average prices for these commodities for the last 20 years

The transport costs used in this analysis have been derived from the range of prices offered to transport the tower sections for a 78m Hub Height machine 115 miles. This is believed to be a fair comparison as the tower sections make up over 50% of the total weight of a machine, they are long and voluminous. Based on a scrap scenario, during decommissioning, the contractor will cut the tower into sections thus making them easier and less costly to transport.