

Decommissioning Budget for Sheffield Wind Project

Sept 21, 2006

Facility is completed, disassembly & disposal afterwards

<u>Work Item</u>	<u>Quantity U/M</u>	<u>Unit Price</u>	<u>Extension</u>	<u>Multiplier</u>	<u>Total</u>
1. Disassembly of turbine generators and towers ¹		see estimate detail in Note 1 below		\$	470,000
2. Truck turbine components to disposal/reclamation site	10 truck per	\$ 2,000	\$ 20,000	16 \$	320,000
3. Disassembly of substation & interconnection facilities ²		see estimate detail in Note 2 below		\$	180,000
4. Truck substation components to disposal/reclamation site	20 truck trips	\$ 1,500	\$ 30,000	1 \$	30,000
5. Removal of WTG foundations to 2' below grade	3 days each	\$ 750	\$ 2,250	16 \$	36,000
6. Transport of rubble & disposal (approx. 18 cu yd / foundation)	5 trucks each	\$ 1,000	\$ 5,000	16 \$	80,000
7. Removal of pad-mount foundations & cut cables	1 each	\$ 1,000	\$ 1,000	16 \$	16,000
8. Re-grading of individual turbine sites	8 hours each	\$ 250	\$ 2,000	16 \$	32,000
9. Remove and dispose of substation & interconnect foundations	200 cu yds	\$ 400	\$ 80,000	1 \$	80,000
Expected removal costs					\$ 1,244,000
<i>less salvage values</i>					
10. Presumed salvage value of WTGs ³	1% original cost	\$42,586,000	\$ 425,860	-1 \$	(425,860)
11. Presumed salvage value of substation & interconnection steel	25 tons	\$ 10.00	\$ 250	-1 \$	(250)
11. Presumed salvage value of 2.5 MW pad-mount transformers	10% original cost	\$ 16,500	\$ 1,650	-16 \$	(26,400)
11. Presumed salvage value of substation & interconnection gear ⁴	2% original cost	\$ 1,200,000	\$ 24,000	-1 \$	(24,000)
Salvage recovery					\$ (476,510)
Net removal expenses					\$ 767,490

Notes:

1. Disassembly costs for wind turbine generators based on:

$$5 \text{ men} \times 40 \text{ hours per turbine} \times 16 \text{ turbines} = 3,200 \text{ mh} \times \$50 / \text{man-hour}^5 = \$ 160,000$$

$$\text{Crane rental (0.25 weeks per turbine)} = 4 \text{ weeks} \times \$60,000 / \text{month} = \$ 60,000$$

$$\text{Crane mobilization / demobilization} = 2 \text{ trips} \times \$125,000 / \text{trip} = \$ 250,000$$

$$\text{Total disassembly estimate} = \$ 470,000$$

2. Disassembly costs for substation and interconnection facilities based on:

$$5 \text{ men} \times 8 \text{ weeks} = 1,600 \text{ mh} \times \$50 / \text{man-hour}^5 = \$ 80,000$$

$$\text{Rental equipment allowance} = 1 \text{ ls} \times \$100,000 = \$ 100,000$$

$$\text{Total disassembly estimate} = \$ 180,000$$

3. Salvage value conservatively estimated at 1% original turbine procurement costs - comparable to scrap value.

4. Cost basis for original conservatively estimates physical product as 50% of total EPC costs.

5. Wage rates are estimated from 20 Sep 2004 version of Bulletin 459, "Wage Rate Schedule" published by the Research and Statistics Office of the Department of Labor and Industrial Relations.

Removal of Facilities - Sheffield UPC-VT Wind Project

Scenario

Facilities installation (roadways, substation, electrical gathering, WTG foundations & erection) complete; subsequent dismantling of facility. Roadway left in place.

Required Activities

- 1 Disassemble turbines - includes crantage, labor, etc.
- 2 Truck turbines to disposal/reclamation site
- 3 Disassemble substation
- 4 Truck substation components to disposal/reclamation site
- 5 Mechanical removal of foundations to 2' below finish grade.
- 6 Load rubble from foundations in dump trucks - 18 cu yds per foundation - haul off & dispose.
- 7 Remove pad-mount transformers, foundations, & cut cable 2' below finish grade; dispose of same.
- 8 Re-grade individual turbine sites - uses on-site material from erosion control berms & crane pads
- 9 Remove foundations from substation/interconnection facilities area - allowance of 200 cu yd concrete.
- 10 Less salvage value of turbines
- 11 Less salvage value of substation steel
- 12 Less salvage value of pad-mount transformers
- 13 Less salvage value of substation primary equipment