

UPC SHEFFIELD WINDFARM
COMPARISON OF REVISED PROJECT VS. ORIGINAL PROJECT
(replaces Exhibit UPC-CRV-Reb1)

	1/16/07 Revised Sheffield-Only Clipper Layout	9/25/06 Clipper Layout (Rebuttal Case)	Original Gamesa Layout (Direct Case)
Turbines	Same as 9/25/06 layout	16 turbines on the northern array ➤ 38% fewer turbines total	26 turbines – 20 on northern array, 6 on the southern (Hardscrabble) array
Max. Height	Same as 9/25/06 layout	≈420 ft -- 5% taller	≈399 ft
Project Capacity	Same as 9/25/06 layout	2.5 MW per turbine, 40 MW total	2.0 MW per turbine, 52 MW total
Power Production	115,263 MWh/yr ➤ 3% increase	111,900 MWh/yr ➤ can serve load of 15,350 homes – 100% of Caledonia, 44% of NEK ¹	147,600 MWh/yr ➤ can serve 20,247 homes
Land/Ridgetines	Same as 9/25/06 layout, except: ➤ All turbines in Sheffield	No southern array, 2 turbines in Sutton ➤ On 3 of 48 peaks within 10 mi (6%) or 3 of 193 within NEK (1.5%) ²	Hardscrabble array, 6 turbines in Sutton On 5 of 56 peaks within 10 mi (9%)
Preferred Access Route	Same as 9/25/06 layout	I-91 Exit 25/New Duck Pond Road ➤ Eliminates perceived conflicts on Berry Hill/Hardscrabble/Dareios Roads	I-91 Emergency Exit/Berry Hill Road ➤ Reduces local road use. Does not require passage through any towns.
Distance to Closest Homes³	➤ > 1 mile to north ➤ ≈ 0.9 to 1.2 miles to south ➤ >1¼ miles to east ➤ ≈ ¾ mile to west	½ mile (twice as far away)	< ¼ mile
Land Clearing	63 acres during construction (49 acres allowed to re-vegetate) ➤ 20% less clearing than 9/25/06 layout	79 acres during construction (≈50 acres allowed to re-vegetate) ➤ clearing reduced by 34%	119 acres during construction
New Roads/ Total Roads	5.25 miles new roads (7.6 miles total) ➤ 22% less roads than 9/25/06 layout	5.5 miles of new roads (9.7 miles total) ➤ new roads reduced by 10%	6.1 miles of new road (9.1 miles total)

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Visual	Same as 9/25/06 layout, plus: <ul style="list-style-type: none"> ➤ more compact turbine array – 0.6 miles shorter on eastern side. 	<ul style="list-style-type: none"> ➤ 38% fewer turbines in total ➤ No Hardscrabble array, eliminates views from homes and KGS ➤ 20% less turbines on north array, reduced views from Crystal Lake. ➤ Fewer lights: ≈ 8 instead of 15. 	Shorter overall height than Clipper
Historic Sites	Same as 9/25/06 layout, plus: <ul style="list-style-type: none"> ➤ Turbine array more compact 	Reduced visual impact at Crystal Lake.	No undue adverse impact.
Noise	Levels well below all guidelines. <ul style="list-style-type: none"> ➤ Further reduces noise levels at closest residences east & north. 	Levels well below all guidelines. <ul style="list-style-type: none"> ➤ Further reduces noise levels at closest residences. 	Levels well below all guidelines.
Wetlands, Plants	≈ 0.55 acres <ul style="list-style-type: none"> ➤ >50% less wetland impacts than 9/25/06 layout 	1.16 acres of Class 3 wetland impacts (reduced to 0.74 in December revisions) <ul style="list-style-type: none"> ➤ Beaver wetland avoided. Maintains corridor from wetland to BSB area. ➤ No risk to any RTE plant species. 	0.46 acres of Class 3 wetland impacts Road to have crossed beaver wetland RTE species on Hardscrabble avoided
Wildlife - General	≈20 bear-scarred beech (BSB) <ul style="list-style-type: none"> ➤ 47% reduction from 9/25/06 plan ➤ 88% reduction from 2/21/06 plan 	38 BSB removed <ul style="list-style-type: none"> ➤ Reduces habitat impacts by 77% ➤ Less fragmentation of habitat. 	167 BSB removed
Birds / Bats	Same as 9/25/06 layout	Low risk of fatalities <ul style="list-style-type: none"> ➤ Fewer turbines, less collision risk 	Low risk of fatalities

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		➤ Reduces risk near beaver wetland	
Streams and Stormwater	➤ 25% fewer stream crossings than 9/25/06 layout (17 vs. 23)⁴	Stormwater management greatly simplified by avoiding beaver wetland, and steep grade up to Norris Mtn.	Involves complicated beaver wetland crossing and steep grade up Norris Mtn
Economic Benefits	Same as 9/25/06 layout, except: ➤ payments to Sheffield increase (now \$400,000 to \$550,000) due to shifting of 2 Sutton turbines	≈ \$25 million – State economic output during construction and development ≈ \$1.6 million/yr – VT disposal income 20 new permanent Vermont jobs Between \$350,000 and \$481,250 /yr to Sheffield in taxes and other payments	> \$25 million – State economic output during construction and development ≈ \$2.5 million/yr – VT disposal income 24 new permanent Vermont jobs \$400,000/yr to \$550,000/yr to Sheffield taxes/payments
Air Emissions Avoided (est.)	Same as 9/25/06 layout	CO2 – 130 million lbs/yr SO2 – 262,200 lbs/yr NOx – 76,700 lbs/yr	CO2 – 172 million lbs/yr SO2 – 345,800 lbs/yr NOx – 101,200 lbs/yr
Shadow Flicker	Same as 9/25/06 layout	Potential occurrence very low to none ➤ Eliminates flicker potential at Hardscrabble homes.	Potential occurrence very low

Notes:

¹ Caledonia County – 14,956 housing units, NEK (all 3 counties) – 34,837 (Source: US Census Bureau)
7.29 MWh/yr per residential customer – VT average (Source: DPS)

² Peaks of 1500 feet or taller. Based on GIS data from Vermont Center for Geographic Information.

³ Distance to closest permanent residences (or school dormitories), based upon State 911 data.

⁴ Not all stream crossing result in stream impacts; repair/replacement of some culverts will result in improvements. See prefiled rebuttal testimony of Jeffrey Nelson.