

Memorandum

Date:	April 2, 2010
To:	Sandra Rivera
Cc:	Altamont Pass Wind Resource Area Scientific Review Committee
From:	The Monitoring Team
Subject:	Altamont Pass Wind Resource Area Hazardous Turbine Ratings

In 2007 the entire SRC visited the APWRA to survey and rank selected groups of turbines with high concentrations of documented fatalities to characterize perceived hazard to birds using the area. During that visit, not all turbines in a string were assigned a ranking, but only those turbines determined to be hazardous. Consequently, a number of turbines that were assessed in 2007 were not assigned a ranking.

On March 8–10, 15 and 17, 2010, two members of the SRC, Jim Estep and Shawn Smallwood, accompanied by Brain Karas of the Avian Monitoring Team, systematically examined turbines in the APWRA for the purpose of ranking turbines that had not been previously assessed.

During the most recent effort, the SRC subcommittee assigned rankings to turbines of 10 to 7 in 0.5 increments, assigning a rank of 6.99 to any turbines whose rank was less than 7.

A total of 2,763 turbine addresses were assigned a rank during the recent visit (Table 1). One hundred and fifteen of these addresses were vacant (i.e. without a tower or blades). Table 2 presents the number of turbine addresses in each ranking category, but includes only complete turbines or vacant towers (i.e. towers without a nacelle or blades). A total of 2648 complete turbines or vacant towers were ranked in 2010.

Table 1. Number of Surveyed and Ranked Turbine Addresses in 2010 Site Visit

Company	Ranking								Total
	6.99	7	7.5	8	8.5	9	9.5	10	
AES SeaWest	408	69	48	20	11	0	1	0	557
Altamont Winds	267	53	76	20	8	4	0	1	429
enXco	350	53	60	44	6	3	0	1	517
NextEra	832	165	129	75	41	12	1	5	1260
Total	1857	340	313	159	66	19	2	7	2763

Table 2. Number of complete Turbines and vacant towers Ranked in 2010 Site Visit.

Company	Ranking								Total
	6.99	7	7.5	8	8.5	9	9.5	10	
AES SeaWest	404	69	48	20	10	0	1	0	552
Altamont Winds	250	48	72	14	4	3	0	0	391
enXco	346	53	59	44	6	3	0	1	512
NextEra	774	159	127	75	41	12	1	4	1193
Total	1,774	329	306	153	61	18	2	5	2648

A total of 599 turbine addresses were assigned a rank during the 2007 visit (Table 3). A number of these ranked turbine addresses no longer have complete turbines or vacant towers. Table 4 present the number of turbine addresses in each ranking category ranked in 2007, but includes only those addresses with complete turbines or vacant towers. A total of 347 complete turbines or vacant towers that were ranked in 2007 are still extant.

Table 3. Number of Surveyed and Ranked Turbine Addresses in 2007 Site Visit

Company	Ranking								Total
	6.99	7	7.5	8	8.5	9	9.5	10	
AES SeaWest	10	2	6	2	2	0	2	0	24
Altamont Winds	61	9	14	18	36	20	9	18	185
enXco	30	23	14	10	6	9	5	10	107
NextEra	59	9	33	48	51	33	23	27	283
Total	160	43	67	78	95	62	39	55	599

Table 4. Number of complete Turbines and vacant towers Ranked in 2007 Site Visit.

Company	Ranking								Total
	6.99	7	7.5	8	8.5	9	9.5	10	
AES SeaWest	10	2	2	2	2	0	0	0	18
Altamont Winds	53	9	13	16	34	15	6	8	154
enXco	30	22	14	0	0	0	0	0	66
NextEra	46	8	28	24	1	0	2	0	109
Total	139	41	57	42	37	38	8	8	347

A total of 3225 turbine addresses were assigned a rank during the 2007 and 2010 visits combined (Table 5). Two hundred and sixty-five of these turbine addresses no longer have complete turbines or are vacant towers. Table 6 presents the total number (i.e. turbine addresses ranked in 2007 and 2010) of turbine addresses in each ranking category, but includes only those addresses with complete turbines or vacant towers. A total of 2960 complete turbines or vacant towers that were ranked in either 2007 or 2010 are still extant. It should be noted that in a few cases, the ranking of turbines ranked in 2007 was changed in 2010 due to new turbine configurations or other factors. Numbers presented in Tables 5 and 6 present the final overall rankings based on the 2010 site visit.

Table 5. Number of Surveyed and Ranked Turbine Addresses in 2007 and 2010 Site Visit

Company	Ranking								Total
	6.99	7	7.5	8	8.5	9	9.5	10	
AES SeaWest	416	69	54	20	11	0	3	0	573
Altamont Winds	325	62	90	38	42	24	9	19	609
enXco	377	71	74	54	12	12	5	11	616
NextEra	883	170	159	123	91	45	24	32	1527
Total	2001	372	377	235	156	81	41	62	3225

Table 6. Number of complete Turbines and vacant towers Ranked in 2007 2010 Site Visit

Company	Ranking								Total
	6.99	7	7.5	8	8.5	9	9.5	10	
AES SeaWest	412	69	50	20	10	0	1	0	562
Altamont Winds	300	57	85	30	36	18	6	8	540
enXco	373	71	73	44	6	3	0	1	571
NextEra	812	163	152	99	42	12	3	4	1287
Total	1897	360	360	193	94	33	10	13	2960