



**Department of Transportation**  
**Division of Finance & Management**  
**Office of Local Transportation Programs**  
700 East Broadway Avenue  
Pierre, South Dakota 57501-2586  
**OFFICE: 605/773-3574**  
**FAX: 605/773-4870**

April 13, 2010

Tina Bartunek  
Iberdrola Renewables  
1125 NW Couch Street, Suite 700  
Portland, OR 97209

RE: South Dakota Aeronautical Hazard Permit: #2010-1954  
Location: Astoria  
FAA Airspace #: See Attached

Dear Ms. Bartunek:

*105 TURBINES / 1 MET TOWER  
Ref*

Enclosed is a single permit for your Wind Energy Project of ~~124~~ turbines located near Astoria, SD approved by the South Dakota Aeronautics Commission on March 31, 2010

Sheet 2 of the permit needs to be completed and returned to the Office of Aeronautics within five days after all turbines are completed.

If you have any questions, please contact me at (605) 773-4430 or email me at [jennifer.clements@state.sd.us](mailto:jennifer.clements@state.sd.us).

Sincerely,

Jennifer Clements, Aeronautics Program Assistant

# SOUTH DAKOTA AERONAUTICAL HAZARD PERMIT

PERMIT NO. 2010-1954

Date of Aeronautics Commission Approval: March 31, 2010

**Approval is Hereby Given To:**

Iberdrola Renewables  
1125 NW Couch Street, Suite 700  
Portland, OR 97209

Nearest City: Astoria

Latitude                      Longitude  
44d29m25.01sN    096d35m16.51s

FAA Aeronautical Study: 10-WTE-1954-OE (3355)

Structure Height: 428 ft.    AMSL 2383 ft.

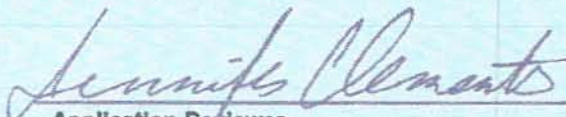
Proposed Structure: 428 ft. WIND FARM

~~Includes 124 turbines/met towers~~ Pol  
INCLUDES 105 TURBINES / 1 MET TOWER

As per FAA aeronautical study 10-WTE-1954-OE, any marking and lighting requirements are shown here:

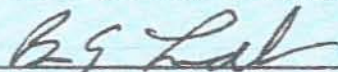
Marking or Lighting Required: Standard Red Light & Paint

This approval is not to be interpreted to constitute an approval of structural design or materials, but merely in the matter of location, height, marking and lighting of the structure. This approval is subject to such further requirements as the South Dakota Aeronautics Commission may prescribe relating to marking, lighting and safety to the flying public as may from time to time be adopted by the Commission. This approval in no way implies that the Commission will approve an extension in height above top elevation(s) of said structure. The attached application is included as an integral part of this approval.



4/13/10

Application Reviewer  
South Dakota Aeronautics Commission



4/13/10

Bruce Lindholm, Program Manager, Air Rail and Transit  
SD Department of Transportation  
Office of Aeronautics

Please note: If the construction has not been completed and sheet 2 of this Permit completed and returned, this Permit will expire within one (1) year of date of issuance.

Extensions of this permit may be requested in writing to this office, before expiration of Permit.

Please complete and return this sheet within 5 days after structure is built

**TO:**

South Dakota Aeronautics Commission  
DEPARTMENT OF TRANSPORTATION  
Becker Hansen Building  
700 E Broadway Avenue  
Pierre, South Dakota 57501-9989

**SUBJECT: Certification of Construction**

Permit No. 2010-1954, Commission Hearing on 03/31/2010  
Federal Airspace Case Number 10-WTE-1954-OE

**Location: Astoria**

I, RAYMOND FLETCHER do hereby certify that I have examined the completed structure described in the subject application to the South Dakota Aeronautics Commission and find it to have been constructed at the location, to the height of \_\_\_\_\_' and marked and lighted as specified in the subject application and according to the Special Conditions of the referenced Approval Permit as prescribed by the Aeronautics Commission as a part of their approval.

It is agreed by the owner that the future lighting and marking standards adopted by the South Dakota Aeronautics Commission will be adhered to within six months after being directed to do so by the Aeronautics Commission.

10/29/10 Raymond Fletcher SITE MANAGER  
Date Signature and Title of Authorized Individual

**Buffalo Ridge II Wind Project**

**Datum: NAD 83**

**Closest City: Astoria, SD (1.5 miles)**

**Closest Public Facility: Brookings Municipal Airport (13.6 miles)**

Turbine Numbers	Latitude	Longitude	Latitude			Longitude			Ground Elev. (ft.)	Structure Height (ft)	Total Height (ft)	FAA Marking and Lighting	
	DD	DD	Deg	Min	Sec	Deg	Min	Sec					
A-1	44.55394335	-96.6922601	44	33	14.20	96	41	32.14	1895	428	2323	Y	WPSRL
A-2	44.55393759	-96.688822	44	33	14.18	96	41	19.76	1903	428	2331	N	WP
A-3	44.55393971	-96.6853848	44	33	14.18	96	41	7.39	1906	428	2334	N	WP
A-4	44.55409725	-96.6804623	44	33	14.75	96	40	49.66	1926	428	2354	Y	WPSRL
A-5	44.55407988	-96.676048	44	33	14.69	96	40	33.77	1944	428	2372	N	WP
A-6	44.55408218	-96.6714645	44	33	14.70	96	40	17.27	1963	428	2391	Y	WPSRL
A-7	44.55407725	-96.6669582	44	33	14.68	96	40	1.05	1959	428	2387	N	WP
A-8	44.55406857	-96.6599801	44	33	14.65	96	39	35.93	1968	428	2396	Y	WPSRL
B-1	44.54889048	-96.6503012	44	32	56.01	96	39	1.08	1957	428	2385	N	WP
B-2	44.54890073	-96.6449967	44	32	56.04	96	38	41.99	1953	428	2381	Y	WPSRL
B-3	44.54734435	-96.6393553	44	32	50.44	96	38	21.68	1959	428	2387	N	WP
B-4	44.54735297	-96.6346773	44	32	50.47	96	38	4.84	1971	428	2399	Y	WPSRL
B-5	44.54832443	-96.6304709	44	32	53.97	96	37	49.70	1983	428	2411	N	WP
B-6	44.54901613	-96.6256119	44	32	56.46	96	37	32.20	1988	428	2416	Y	WPSRL
C-1	44.53256405	-96.7005032	44	32	43.72	96	37	0.00	1824	428	2252	Y	WPSRL
C-10	44.53914313	-96.659923	44	32	43.75	96	36	46.36	1965	428	2393	N	WP
C-11	44.53912842	-96.6563663	44	32	43.72	96	36	32.72	1963	428	2391	N	WP
C-12	44.53949516	-96.6522676	44	32	43.59	96	36	19.06	1955	428	2383	N	WP
C-13	44.53946877	-96.6482915	44	33	16.19	96	35	58.48	1945	428	2373	Y	WPSRL
C-14	44.5394982	-96.6411288	44	33	16.16	96	35	45.68	1939	428	2367	Y	WPSRL
C-15	44.53949863	-96.637057	44	33	16.13	96	35	32.77	1955	428	2383	N	WP
C-16	44.54073792	-96.6335867	44	33	18.00	96	35	17.90	1967	428	2395	Y	WPSRL
C-2	44.53254807	-96.6969368	44	33	18.04	96	35	3.97	1846	428	2274	N	WP
C-3	44.53350811	-96.6930056	44	33	18.03	96	34	44.59	1861	428	2289	Y	WPSRL
C-4	44.53347618	-96.6888778	44	31	57.23	96	42	1.81	1880	428	2308	N	WP
C-5	44.53427072	-96.6836939	44	31	57.17	96	41	48.97	1892	428	2320	Y	WPSRL
C-6	44.53470875	-96.6793988	44	32	0.63	96	41	34.82	1902	428	2330	N	WP
C-7	44.5351884	-96.6746861	44	32	0.51	96	41	19.96	1929	428	2357	Y	WPSRL
C-8	44.53718189	-96.6686494	44	32	3.37	96	41	1.30	1949	428	2377	N	WP
C-9	44.53915669	-96.6634865	44	32	4.95	96	40	45.84	1981	428	2409	Y	WPSRL
D-1	44.5230899	-96.6763172	44	32	6.68	96	40	28.87	1896	428	2324	Y	WPSRL
D-2	44.52306474	-96.6725679	44	32	13.85	96	40	7.14	1911	428	2339	N	WP
D-3	44.5230158	-96.6687467	44	32	20.96	96	39	48.55	1918	428	2346	Y	WPSRL
D-4	44.52516879	-96.6635705	44	32	20.92	96	39	35.72	1925	428	2353	N	WP
D-5	44.52602581	-96.6589937	44	32	20.86	96	39	22.92	1923	428	2351	Y	WPSRL
D-6	44.52599772	-96.6553347	44	32	22.18	96	39	8.16	1935	428	2363	N	WP
D-7	44.52600862	-96.651863	44	32	22.09	96	38	53.85	1938	428	2366	N	WP
D-8	44.52598065	-96.6483997	44	32	22.19	96	38	28.06	1939	428	2367	Y	WPSRL
E-1	44.55449758	-96.5995788	44	32	22.20	96	38	13.41	1948	428	2376	Y	WPSRL
E-2	44.55448792	-96.5960224	44	32	26.66	96	38	0.91	1962	428	2390	N	WP
E-3	44.55448136	-96.5924362	44	31	54.58	96	37	21.67	1953	428	2381	N	WP
E-4	44.55499925	-96.5883062	44	31	54.65	96	37	6.74	1954	428	2382	Y	WPSRL
E-5	44.55501005	-96.5844348	44	32	24.36	96	36	4.86	1948	428	2376	N	WP
E-6	44.555009	-96.5790526	44	32	24.38	96	35	50.87	1928	428	2356	Y	WPSRL
F-1	44.54547752	-96.6166673	44	32	24.37	96	35	36.92	1990	428	2418	Y	WPSRL
F-2	44.54548674	-96.6128765	44	32	31.17	96	34	46.46	1980	428	2408	N	WP
F-3	44.5454769	-96.6090893	44	32	31.17	96	34	33.00	1978	428	2406	N	WP
F-4	44.54544238	-96.6052955	44	31	53.96	96	34	41.39	1965	428	2393	Y	WPSRL
G-1	44.54009912	-96.6013494	44	32	3.00	96	34	27.86	1973	428	2401	Y	WPSRL
G-2	44.54010541	-96.5974649	44	32	3.03	96	34	14.76	1970	428	2398	N	WP
G-3	44.54010375	-96.5935901	44	32	3.07	96	34	1.29	1954	428	2382	Y	WPSRL
H-1	44.54199302	-96.5795732	44	32	3.22	96	33	48.09	1929	428	2357	N	WP
H-2	44.54199181	-96.5758323	44	31	23.12	96	40	34.74	1916	428	2344	Y	WPSRL
J-1	44.53165487	-96.5781632	44	31	23.03	96	40	21.24	1907	428	2335	Y	WPSRL
J-2	44.53416567	-96.5744048	44	31	22.86	96	40	7.49	1923	428	2351	N	WP
J-3	44.53417444	-96.5707674	44	31	30.61	96	39	48.85	1929	428	2357	Y	WPSRL
J-4	44.53418538	-96.567026	44	31	33.69	96	39	32.38	1924	428	2352	N	WP

J-5	44.53422883	-96.5633575	44	31	33.59	96	39	19.21	1930	428	2358	Y	WPSRL
K-1	44.53182889	-96.6226863	44	31	33.63	96	39	6.71	1955	428	2383	N	WP
K-2	44.53184607	-96.6185381	44	31	33.53	96	38	54.24	1972	428	2400	Y	WPSRL
L-1	44.52240853	-96.6289807	44	30	47.62	96	39	46.46	1926	428	2354	Y	WPSRL
L-2	44.52338789	-96.6224679	44	30	47.53	96	39	33.56	1959	428	2387	Y	WPSRL
L-3	44.52425302	-96.6170108	44	30	47.62	96	39	20.38	1965	428	2393	N	WP
L-4	44.52428299	-96.6128048	44	30	47.58	96	39	7.17	1974	428	2402	N	WP
L-5	44.52430757	-96.6085863	44	30	47.54	96	38	55.06	1980	428	2408	Y	WPSRL
M-1	44.52418691	-96.5999442	44	31	20.67	96	37	44.33	1961	428	2389	Y	WPSRL
M-2	44.52420938	-96.5960565	44	31	24.20	96	37	20.88	1972	428	2400	N	WP
M-3	44.52543973	-96.5921372	44	31	27.31	96	37	1.24	1970	428	2398	N	WP
M-4	44.52546849	-96.5879236	44	31	27.42	96	36	46.10	1965	428	2393	Y	WPSRL
N-1	44.51587146	-96.6024624	44	31	27.51	96	36	30.91	1953	428	2381	Y	WPSRL
N-2	44.51642054	-96.5977422	44	31	27.07	96	35	59.80	1950	428	2378	N	WP
P-1	44.51592376	-96.5823656	44	31	27.15	96	35	45.80	1968	428	2396	Y	WPSRL
P-2	44.51802544	-96.5788608	44	31	31.58	96	35	31.69	1950	428	2378	N	WP
P-3	44.51903043	-96.5757261	44	31	31.69	96	35	16.52	1937	428	2365	Y	WPSRL
Q-1	44.50841015	-96.5927015	44	30	57.14	96	36	8.86	1968	428	2396	N	WP
Q-2	44.5084057	-96.5888167	44	30	59.11	96	35	51.87	1964	428	2392	Y	WPSRL
S-1	44.51322733	-96.6629042	44	30	57.33	96	34	56.52	1884	428	2312	Y	WPSRL
S-2	44.51320185	-96.6593222	44	31	4.89	96	34	43.90	1903	428	2331	N	WP
S-3	44.51322838	-96.6556615	44	31	8.51	96	34	32.61	1924	428	2352	N	WP
S-4	44.51321766	-96.6519907	44	30	5.65	96	39	49.01	1927	428	2355	N	WP
S-5	44.51320503	-96.6486279	44	30	5.57	96	39	34.91	1936	428	2364	Y	WPSRL
T-1	44.50156927	-96.6636126	44	30	5.16	96	39	20.69	1889	428	2317	Y	WPSRL
T-2	44.50154733	-96.6596972	44	30	10.66	96	39	7.17	1913	428	2341	N	WP
T-3	44.50143197	-96.6557478	44	30	10.58	96	38	54.63	1923	428	2351	N	WP
T-4	44.50296241	-96.6519929	44	30	13.69	96	38	31.51	1917	428	2345	Y	WPSRL
T-5	44.5029378	-96.6485076	44	30	13.65	96	38	17.60	1923	428	2351	N	WP
T-6	44.503803	-96.642087	44	30	14.33	96	37	54.94	1909	428	2337	Y	WPSRL
T-7	44.50379285	-96.638222	44	30	14.30	96	37	41.74	1889	428	2317	Y	WPSRL
U-0	44.50398049	-96.6319286	44	30	15.62	96	37	21.77	1858	428	2286	N	WP
U-1	44.50397183	-96.6282621	44	30	15.58	96	37	5.75	1891	428	2319	Y	WPSRL
U-2	44.50433905	-96.622713	44	30	30.28	96	35	33.73	1911	428	2339	N	WP
U-3	44.50432837	-96.6182643	44	30	30.26	96	35	19.74	1916	428	2344	Y	WPSRL
V-1	44.49109705	-96.6638022	44	29	27.95	96	39	49.69	1893	428	2321	Y	WPSRL
V-2	44.4910877	-96.6601322	44	29	27.92	96	39	36.48	1903	428	2331	N	WP
V-3	44.49170907	-96.6566534	44	29	30.15	96	39	23.95	1890	428	2318	N	WP
V-5	44.49167383	-96.6485909	44	29	30.03	96	38	54.93	1910	428	2338	Y	WPSRL
V-6	44.48967481	-96.6430985	44	29	22.83	96	38	35.15	1899	428	2327	N	WP
V-7	44.48967838	-96.6391439	44	29	22.84	96	38	20.92	1890	428	2318	Y	WPSRL
W-1	44.48881511	-96.6166294	44	29	19.73	96	36	59.87	1905	428	2333	Y	WPSRL
W-2	44.48999112	-96.612594	44	29	23.97	96	36	45.34	1918	428	2346	N	WP
W-3	44.49001615	-96.6082518	44	29	24.06	96	36	29.71	1927	428	2355	Y	WPSRL
X-1	44.48889962	-96.5961769	44	29	20.04	96	35	46.24	1956	428	2384	Y	WPSRL
X-2	44.49028119	-96.5918738	44	29	25.01	96	35	30.75	1958	428	2386	N	WP
X-3	44.49029092	-96.5879069	44	29	25.05	96	35	16.46	1957	428	2385	N	WP
X-4	44.49028576	-96.582717	44	29	25.03	96	34	57.78	1950	428	2378	Y	WPSRL
PMT-2	44.55677	96.57059	44	33	24.37	96	34	14.12	1920	262	2182	Y	WPSRL