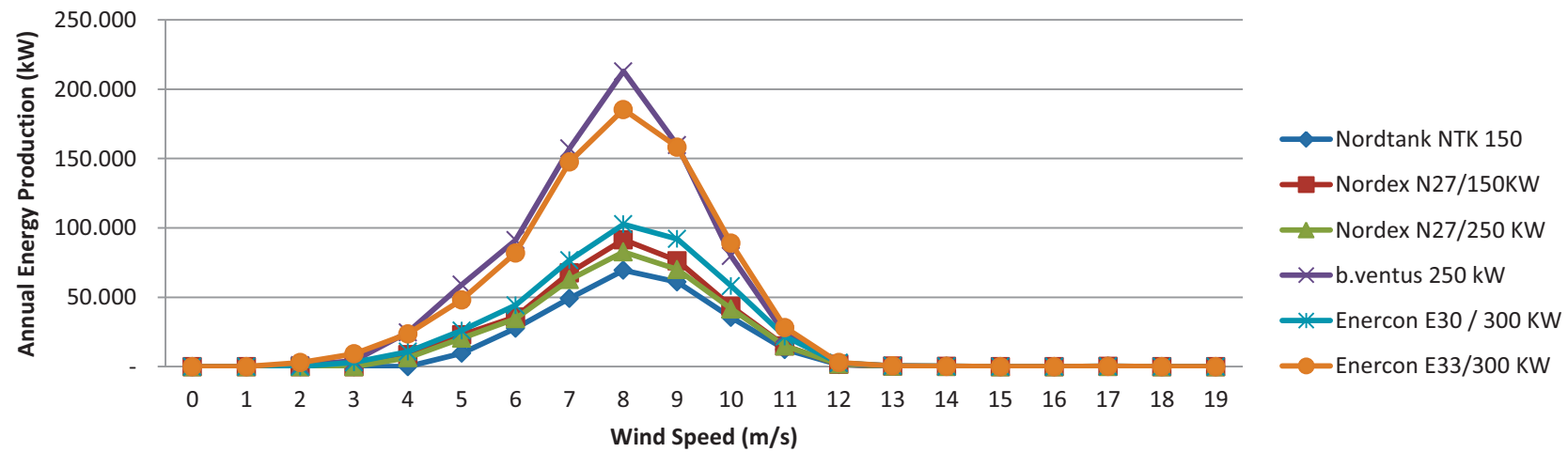


## LAMPIRAN

**Lampiran 1. Data Perbandingan Turbin Angin Tahun 2004**

NO	Wind Speed m/s	2004	Curve Power Output ( KW )						kwh production/year AEP						
		Number of hour wind Speed (h/y)	Nordtank NTK 150 kW	Nordex N27/150 kW	Nordex N27/250 kW	b.ventus 250 kW	Enercon E30 / 300 kW	Enercon E33/300 KW	Nordtank NTK 150 kW	Nordex N27/150 KW	Nordex N27/250 KW	b.ventus 250 kW	Enercon E30 / 300 KW	Enercon E33/300 KW	
1	0	30	0	0	0	0	0	0	-	-	-	-	-	-	
2	1	376	0	0	0	0	0	0	-	-	-	-	-	-	
3	2	584	0	0	0	2	0	5	-	-	-	1.168	-	2.920	
4	3	843	0	0	0	5	3,7	11	-	-	-	4.215	3.119	9.273	
5	4	1074	0	8	6	23	10	22	-	8.592	6.444	24.702	10.740	23.628	
6	5	1205	8	19	17	49	21,6	40	9.640	22.895	20.485	59.045	26.028	48.200	
7	6	1154	24	31	30	79	38,3	71	27.696	35.774	34.620	91.166	44.198	81.934	
8	7	1230	40	55	51	128	62,4	120	49.200	67.650	62.730	157.440	76.752	147.600	
9	8	1103	63	83	75	193	93,1	168	69.489	91.549	82.725	212.879	102.689	185.304	
10	9	694	88	110	101	230	132,6	228	61.072	76.340	70.094	159.620	92.024	158.232	
11	10	320	111	136	130	249	181,6	278	35.520	43.520	41.600	79.680	58.112	88.960	
12	11	94	132	160	158	250	230,5	300	12.408	15.040	14.852	23.500	21.667	28.200	
13	12	10	147	170	186	250	269,3	300	1.470	1.700	1.860	2.500	2.693	3.000	
14	13	2	157	176	206	250	290,5	300	314	352	412	500	581	600	
15	14	1	155	180	233	250	300	300	155	180	233	250	300	300	
16	15	0	149	175	246	250	300	300	-	-	-	-	-	-	
17	16	0	149	164	250	250	300	300	-	-	-	-	-	-	
18	17	1	149	155	248	250	300	300	149	155	248	250	300	300	
19	18	0	149	150	245	249	300	300	-	-	-	-	-	-	
20	19	0	149	145	238	237	300	300	-	-	-	-	-	-	
Total		8721							Kwh Bruto	267.113	363.747	336.303	816.915	439.204	778.451
									Max Output	1.369.197	1.569.780	2.180.250	2.180.250	2.616.300	2.616.300
									CF	20%	23%	15%	37%	17%	30%

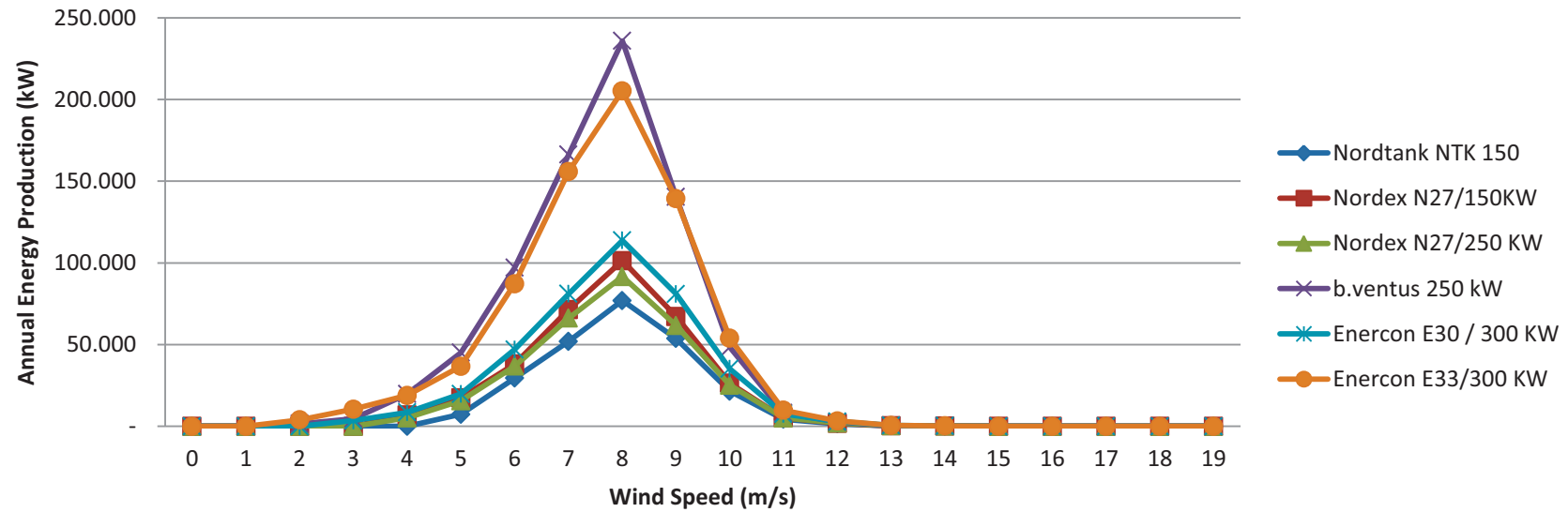
### Grafik Perbandingan Turbin Angin Tahun 2004



**Lampiran 2. Data Perbandingan Turbin Angin Tahun 2005**

NO	Wind Speed m/s	2005	Curve Power Output ( KW )						kwh production/year AEP						
		Number of hour wind Speed (h/y)	Nordtank NTK 150 kW	Nordex N27/150 kW	Nordex N27/250 kW	b.ventus 250 kW	Enercon E30 / 300 kW	Enercon E33/300 KW	Nordtank NTK 150 kW	Nordex N27/150 KW	Nordex N27/250 KW	b.ventus 250 kW	Enercon E30 / 300 KW	Enercon E33/300 KW	
1	0	73	0	0	0	0	0	0	-	-	-	-	-	-	
2	1	492	0	0	0	0	0	0	-	-	-	-	-	-	
3	2	794	0	0	0	2	0	5	-	-	-	1.588	-	3.970	
4	3	951	0	0	0	5	3,7	11	-	-	-	4.755	3.519	10.461	
5	4	861	0	8	6	23	10	22	-	6.888	5.166	19.803	8.610	18.942	
6	5	920	8	19	17	49	21,6	40	7.360	17.480	15.640	45.080	19.872	36.800	
7	6	1229	24	31	30	79	38,3	71	29.496	38.099	36.870	97.091	47.071	87.259	
8	7	1299	40	55	51	128	62,4	120	51.960	71.445	66.249	166.272	81.058	155.880	
9	8	1222	63	83	75	193	93,1	168	76.986	101.426	91.650	235.846	113.768	205.296	
10	9	611	88	110	101	230	132,6	228	53.768	67.210	61.711	140.530	81.019	139.308	
11	10	194	111	136	130	249	181,6	278	21.534	26.384	25.220	48.306	35.230	53.932	
12	11	33	132	160	158	250	230,5	300	4.356	5.280	5.214	8.250	7.607	9.900	
13	12	11	147	170	186	250	269,3	300	1.617	1.870	2.046	2.750	2.962	3.300	
14	13	2	157	176	206	250	290,5	300	314	352	412	500	581	600	
15	14	1	155	180	233	250	300	300	155	180	233	250	300	300	
16	15	0	149	175	246	250	300	300	-	-	-	-	-	-	
17	16	0	149	164	250	250	300	300	-	-	-	-	-	-	
18	17	0	149	155	248	250	300	300	-	-	-	-	-	-	
19	18	0	149	150	245	249	300	300	-	-	-	-	-	-	
20	19	0	149	145	238	237	300	300	-	-	-	-	-	-	
Total		8693							Kwh Bruto	247.546	336.614	310.411	771.021	401.596	725.948
									Max Output	1.364.801	1.564.740	2.173.250	2.173.250	2.607.900	2.607.900
									CF	18%	22%	14%	35%	15%	28%

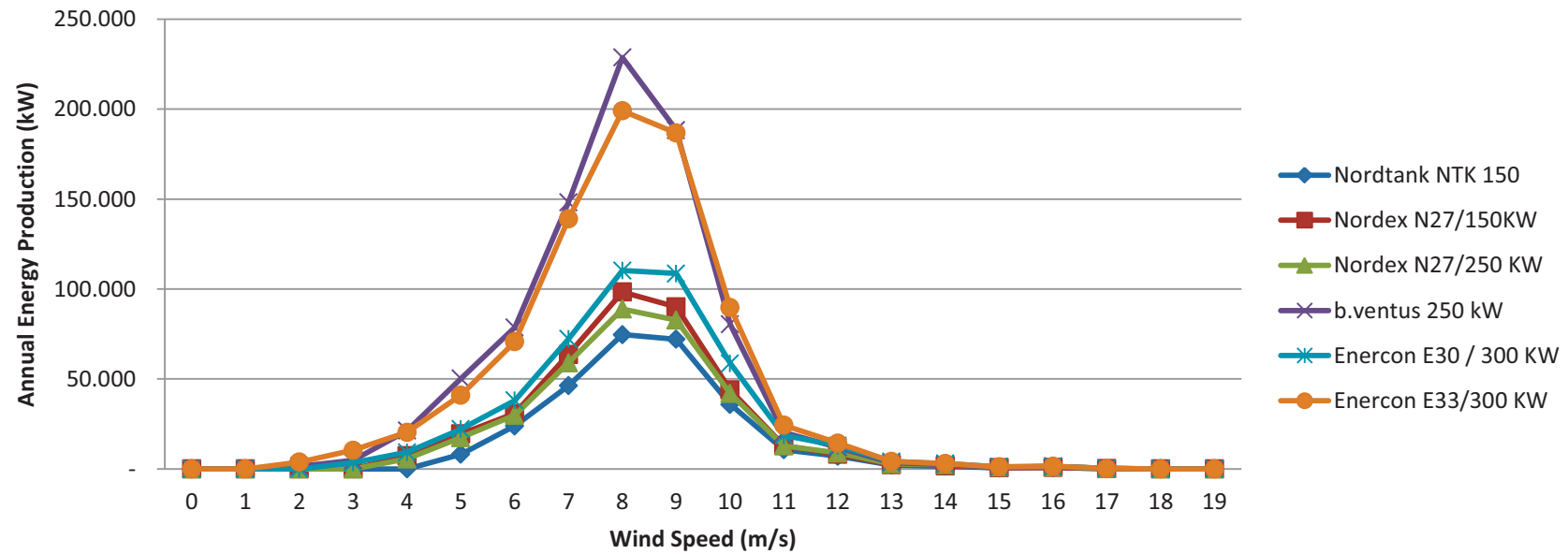
### Grafik Perbandingan Turbin Angin Tahun 2005



### Lampiran 3. Data Perbandingan Turbin Angin Tahun 2006

NO	Wind Speed m/s	2006	Curve Power Output ( KW )						kwh production/year AEP						
		Number of hour wind Speed (h/y)	Nordtank NTK 150 kW	Nordex N27/150 kW	Nordex N27/250 kW	b.ventus 250 kW	Enercon E30 / 300 kW	Enercon E33/300 KW	Nordtank NTK 150 kW	Nordex N27/150 KW	Nordex N27/250 KW	b.ventus 250 kW	Enercon E30 / 300 KW	Enercon E33/300 KW	
1	0	29	0	0	0	0	0	0	-	-	-	-	-	-	
2	1	354	0	0	0	0	0	0	-	-	-	-	-	-	
3	2	770	0	0	0	2	0	5	-	-	-	1.540	-	3.850	
4	3	947	0	0	0	5	3,7	11	-	-	-	4.735	3.504	10.417	
5	4	928	0	8	6	23	10	22	-	7.424	5.568	21.344	9.280	20.416	
6	5	1026	8	19	17	49	21,6	40	8.208	19.494	17.442	50.274	22.162	41.040	
7	6	996	24	31	30	79	38,3	71	23.904	30.876	29.880	78.684	38.147	70.716	
8	7	1158	40	55	51	128	62,4	120	46.320	63.690	59.058	148.224	72.259	138.960	
9	8	1185	63	83	75	193	93,1	168	74.655	98.355	88.875	228.705	110.324	199.080	
10	9	819	88	110	101	230	132,6	228	72.072	90.090	82.719	188.370	108.599	186.732	
11	10	323	111	136	130	249	181,6	278	35.853	43.928	41.990	80.427	58.657	89.794	
12	11	81	132	160	158	250	230,5	300	10.692	12.960	12.798	20.250	18.671	24.300	
13	12	48	147	170	186	250	269,3	300	7.056	8.160	8.928	12.000	12.926	14.400	
14	13	14	157	176	206	250	290,5	300	2.198	2.464	2.884	3.500	4.067	4.200	
15	14	10	155	180	233	250	300	300	1.550	1.800	2.330	2.500	3.000	3.000	
16	15	4	149	175	246	250	300	300	596	700	984	1.000	1.200	1.200	
17	16	5	149	164	250	250	300	300	745	820	1.250	1.250	1.500	1.500	
18	17	1	149	155	248	250	300	300	149	155	248	250	300	300	
19	18	0	149	150	245	249	300	300	-	-	-	-	-	-	
20	19	0	149	145	238	237	300	300	-	-	-	-	-	-	
Total		8698							Kwh Bruto	283.998	380.916	354.954	843.053	464.595	809.905
									Max Output	1.365.586	1.565.640	2.174.500	2.174.500	2.609.400	2.609.400
									CF	21%	24%	16%	39%	18%	31%

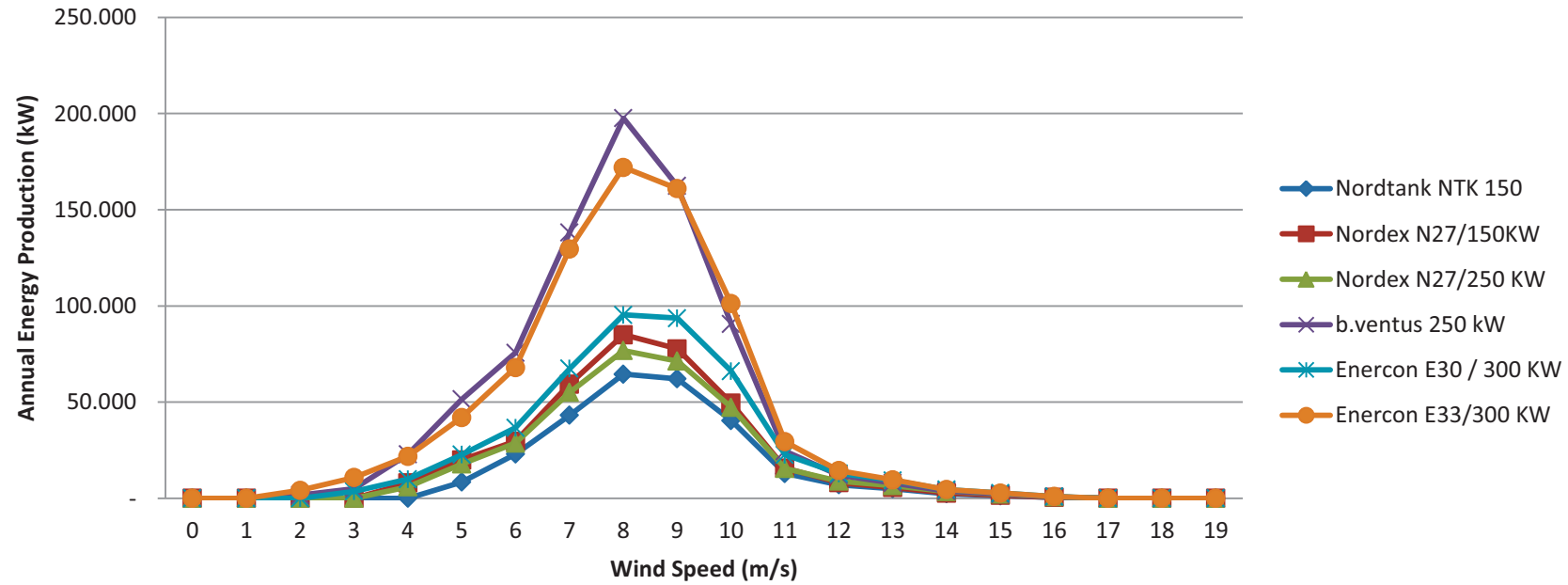
### Grafik Perbandingan Turbin Angin Tahun 2006



**Lampiran 4. Data Perbandingan Turbin Angin Tahun 2007**

NO	Wind Speed m/s	2007	Curve Power Output ( KW )						kwh production/year AEP						
		Number of hour wind Speed (h/y)	Nordtank NTK 150 kW	Nordex N27/150 kW	Nordex N27/250 kW	b.ventus 250 kW	Enercon E30 / 300 kW	Enercon E33/300 KW	Nordtank NTK 150 kW	Nordex N27/150 KW	Nordex N27/250 KW	b.ventus 250 kW	Enercon E30 / 300 KW	Enercon E33/300 KW	
1	0	49	0	0	0	0	0	0	-	-	-	-	-	-	
2	1	454	0	0	0	0	0	0	-	-	-	-	-	-	
3	2	828	0	0	0	2	0	5	-	-	-	1.656	-	4.140	
4	3	979	0	0	0	5	3,7	11	-	-	-	4.895	3.622	10.769	
5	4	992	0	8	6	23	10	22	-	7.936	5.952	22.816	9.920	21.824	
6	5	1051	8	19	17	49	21,6	40	8.408	19.969	17.867	51.499	22.702	42.040	
7	6	957	24	31	30	79	38,3	71	22.968	29.667	28.710	75.603	36.653	67.947	
8	7	1080	40	55	51	128	62,4	120	43.200	59.400	55.080	138.240	67.392	129.600	
9	8	1024	63	83	75	193	93,1	168	64.512	84.992	76.800	197.632	95.334	172.032	
10	9	706	88	110	101	230	132,6	228	62.128	77.660	71.306	162.380	93.616	160.968	
11	10	364	111	136	130	249	181,6	278	40.404	49.504	47.320	90.636	66.102	101.192	
12	11	98	132	160	158	250	230,5	300	12.936	15.680	15.484	24.500	22.589	29.400	
13	12	48	147	170	186	250	269,3	300	7.056	8.160	8.928	12.000	12.926	14.400	
14	13	32	157	176	206	250	290,5	300	5.024	5.632	6.592	8.000	9.296	9.600	
15	14	15	155	180	233	250	300	300	2.325	2.700	3.495	3.750	4.500	4.500	
16	15	9	149	175	246	250	300	300	1.341	1.575	2.214	2.250	2.700	2.700	
17	16	3	149	164	250	250	300	300	447	492	750	750	900	900	
18	17	0	149	155	248	250	300	300	-	-	-	-	-	-	
19	18	0	149	150	245	249	300	300	-	-	-	-	-	-	
20	19	0	149	145	238	237	300	300	-	-	-	-	-	-	
Total		8689							Kwh Bruto	270.749	363.367	340.498	796.607	448.253	772.012
									Max Output	1.364.173	1.564.020	2.172.250	2.172.250	2.606.700	2.606.700
									CF	20%	23%	16%	37%	17%	30%

### Grafik Perbandingan Turbin Angin Tahun 2007

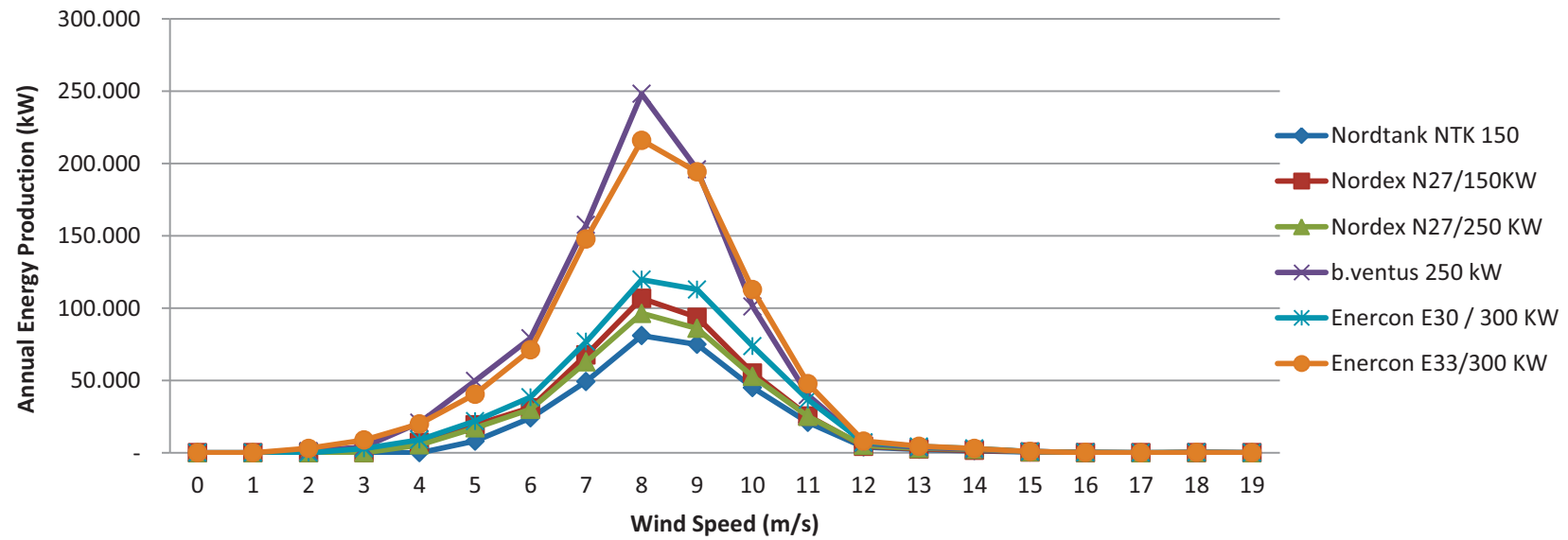




**Lampiran 5. Data Perbandingan Turbin Angin Tahun 2008**

NO	Wind Speed m/s	2008	Curve Power Output ( KW )						kwh production/year AEP						
		Number of hour wind Speed (h/y)	Nordtank NTK 150 kW	Nordex N27/150 kW	Nordex N27/250 kW	b.ventus 250 kW	Enercon E30 / 300 kW	Enercon E33/300 KW	Nordtank NTK 150 kW	Nordex N27/150 KW	Nordex N27/250 KW	b.ventus 250 kW	Enercon E30 / 300 KW	Enercon E33/300 KW	
1	0	32	0	0	0	0	0	0	-	-	-	-	-	-	
2	1	346	0	0	0	0	0	0	-	-	-	-	-	-	
3	2	618	0	0	0	2	0	5	-	-	-	1.236	-	3.090	
4	3	800	0	0	0	5	3,7	11	-	-	-	4.000	2.960	8.800	
5	4	909	0	8	6	23	10	22	-	7.272	5.454	20.907	9.090	19.998	
6	5	1014	8	19	17	49	21,6	40	8.112	19.266	17.238	49.686	21.902	40.560	
7	6	1003	24	31	30	79	38,3	71	24.072	31.093	30.090	79.237	38.415	71.213	
8	7	1232	40	55	51	128	62,4	120	49.280	67.760	62.832	157.696	76.877	147.840	
9	8	1286	63	83	75	193	93,1	168	81.018	106.738	96.450	248.198	119.727	216.048	
10	9	852	88	110	101	230	132,6	228	74.976	93.720	86.052	195.960	112.975	194.256	
11	10	406	111	136	130	249	181,6	278	45.066	55.216	52.780	101.094	73.730	112.868	
12	11	159	132	160	158	250	230,5	300	20.988	25.440	25.122	39.750	36.650	47.700	
13	12	27	147	170	186	250	269,3	300	3.969	4.590	5.022	6.750	7.271	8.100	
14	13	15	157	176	206	250	290,5	300	2.355	2.640	3.090	3.750	4.358	4.500	
15	14	10	155	180	233	250	300	300	1.550	1.800	2.330	2.500	3.000	3.000	
16	15	3	149	175	246	250	300	300	447	525	738	750	900	900	
17	16	1	149	164	250	250	300	300	149	164	250	250	300	300	
18	17	0	149	155	248	250	300	300	-	-	-	-	-	-	
19	18	1	149	150	245	249	300	300	149	150	245	249	300	300	
20	19	0	149	145	238	237	300	300	-	-	-	-	-	-	
Total		8714							Kwh Bruto	312.131	416.374	387.693	912.013	508.454	879.473
									Max Output	1.368.098	1.568.520	2.178.500	2.178.500	2.614.200	2.614.200
									CF	23%	27%	18%	42%	19%	34%

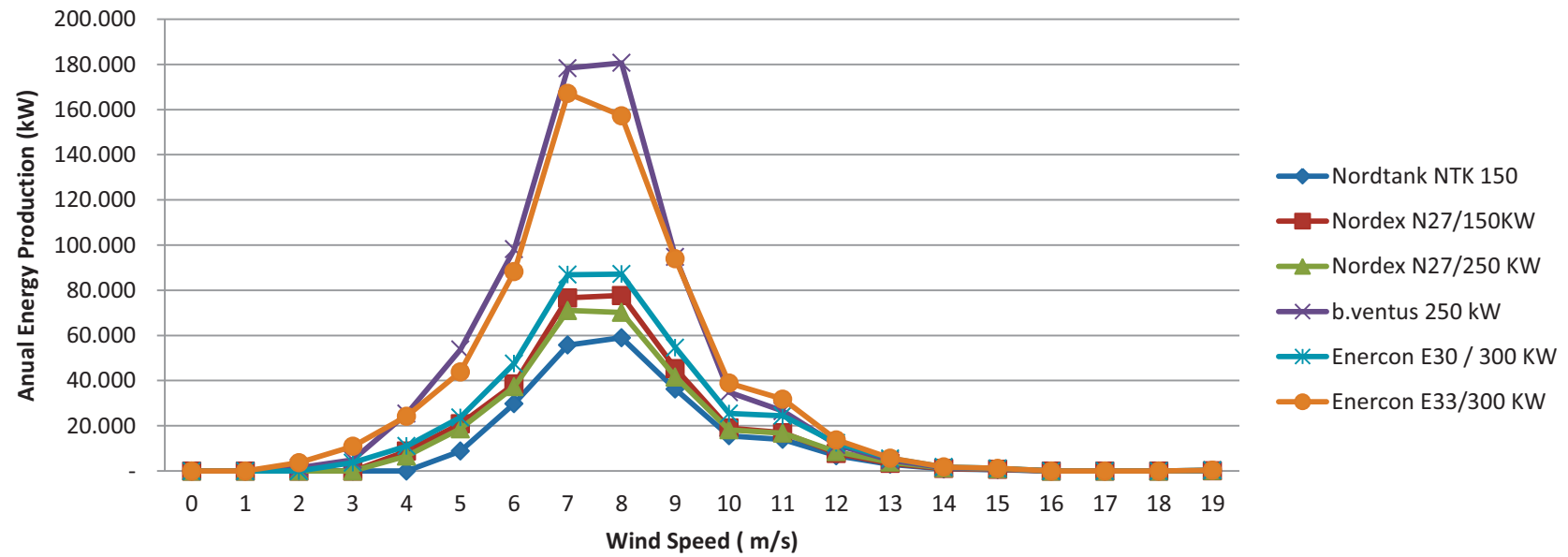
### Grafik Perbandingan Turbin Angin Tahun 2008



**Lampiran 6. Data Perbandingan Turbin Angin Tahun 2009**

NO	Wind Speed m/s	2009	Curve Power Output ( KW )						kwh production/year AEP						
		Number of hour wind Speed (h/y)	Nordtank NTK 150 kW	Nordex N27/150 kW	Nordex N27/250 kW	b.ventus 250 kW	Enercon E30 / 300 kW	Enercon E33/300 KW	Nordtank NTK 150 kW	Nordex N27/150 KW	Nordex N27/250 KW	b.ventus 250 kW	Enercon E30 / 300 KW	Enercon E33/300 KW	
1	0	58	0	0	0	0	0	0	-	-	-	-	-	-	
2	1	402	0	0	0	0	0	0	-	-	-	-	-	-	
3	2	739	0	0	0	2	0	5	-	-	-	1.478	-	3.695	
4	3	994	0	0	0	5	3,7	11	-	-	-	4.970	3.678	10.934	
5	4	1103	0	8	6	23	10	22	-	8.824	6.618	25.369	11.030	24.266	
6	5	1097	8	19	17	49	21,6	40	8.776	20.843	18.649	53.753	23.695	43.880	
7	6	1243	24	31	30	79	38,3	71	29.832	38.533	37.290	98.197	47.607	88.253	
8	7	1393	40	55	51	128	62,4	120	55.720	76.615	71.043	178.304	86.923	167.160	
9	8	936	63	83	75	193	93,1	168	58.968	77.688	70.200	180.648	87.142	157.248	
10	9	412	88	110	101	230	132,6	228	36.256	45.320	41.612	94.760	54.631	93.936	
11	10	140	111	136	130	249	181,6	278	15.540	19.040	18.200	34.860	25.424	38.920	
12	11	106	132	160	158	250	230,5	300	13.992	16.960	16.748	26.500	24.433	31.800	
13	12	46	147	170	186	250	269,3	300	6.762	7.820	8.556	11.500	12.388	13.800	
14	13	19	157	176	206	250	290,5	300	2.983	3.344	3.914	4.750	5.520	5.700	
15	14	6	155	180	233	250	300	300	930	1.080	1.398	1.500	1.800	1.800	
16	15	4	149	175	246	250	300	300	596	700	984	1.000	1.200	1.200	
17	16	0	149	164	250	250	300	300	-	-	-	-	-	-	
18	17	0	149	155	248	250	300	300	-	-	-	-	-	-	
19	18	0	149	150	245	249	300	300	-	-	-	-	-	-	
20	19	1	149	145	238	237	300	300	149	145	238	237	300	300	
Total		8699							Kwh Bruto	230.504	316.912	295.450	717.826	385.770	682.892
									Max Output	1.365.743	1.565.820	2.174.750	2.174.750	2.609.700	2.609.700
									CF	17%	20%	14%	33%	15%	26%

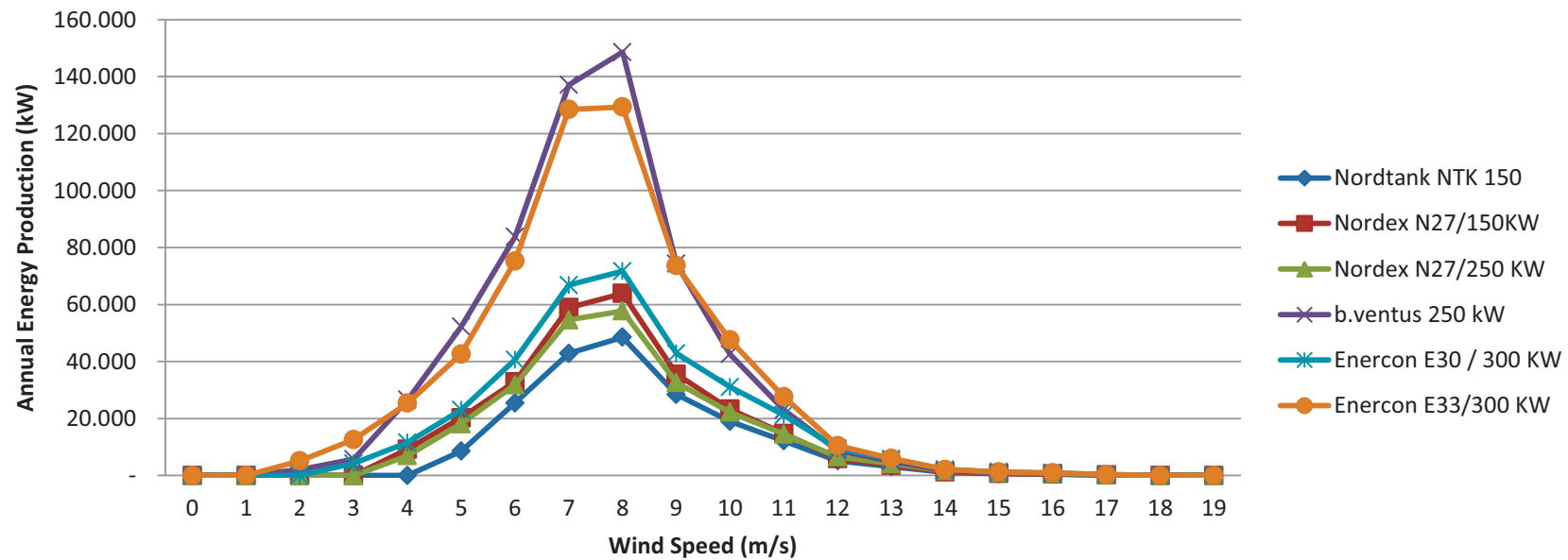
### Grafik Perbandingan Turbin Angin Tahun 2009



### Lampiran 7. Data Perbandingan Turbin Angin Tahun 2010

NO	Wind Speed m/s	2010	Curve Power Output ( KW )						kwh production/year AEP						
		Number of hour wind Speed (h/y)	Nordtank NTK 150 kW	Nordex N27/150 kW	Nordex N27/250 kW	b.ventus 250 kW	Enercon E30 / 300 kW	Enercon E33/300 KW	Nordtank NTK 150 kW	Nordex N27/150 KW	Nordex N27/250 KW	b.ventus 250 kW	Enercon E30 / 300 KW	Enercon E33/300 KW	
1	0	84	0	0	0	0	0	0	-	-	-	-	-	-	
2	1	657	0	0	0	0	0	0	-	-	-	-	-	-	
3	2	1022	0	0	0	2	0	5	-	-	-	2.044	-	5.110	
4	3	1148	0	0	0	5	3,7	11	-	-	-	5.740	4.248	12.628	
5	4	1155	0	8	6	23	10	22	-	9.240	6.930	26.565	11.550	25.410	
6	5	1066	8	19	17	49	21,6	40	8.528	20.254	18.122	52.234	23.026	42.640	
7	6	1060	24	31	30	79	38,3	71	25.440	32.860	31.800	83.740	40.598	75.260	
8	7	1071	40	55	51	128	62,4	120	42.840	58.905	54.621	137.088	66.830	128.520	
9	8	770	63	83	75	193	93,1	168	48.510	63.910	57.750	148.610	71.687	129.360	
10	9	323	88	110	101	230	132,6	228	28.424	35.530	32.623	74.290	42.830	73.644	
11	10	171	111	136	130	249	181,6	278	18.981	23.256	22.230	42.579	31.054	47.538	
12	11	92	132	160	158	250	230,5	300	12.144	14.720	14.536	23.000	21.206	27.600	
13	12	35	147	170	186	250	269,3	300	5.145	5.950	6.510	8.750	9.426	10.500	
14	13	20	157	176	206	250	290,5	300	3.140	3.520	4.120	5.000	5.810	6.000	
15	14	7	155	180	233	250	300	300	1.085	1.260	1.631	1.750	2.100	2.100	
16	15	4	149	175	246	250	300	300	596	700	984	1.000	1.200	1.200	
17	16	3	149	164	250	250	300	300	447	492	750	750	900	900	
18	17	1	149	155	248	250	300	300	149	155	248	250	300	300	
19	18	0	149	150	245	249	300	300	-	-	-	-	-	-	
20	19	0	149	145	238	237	300	300	-	-	-	-	-	-	
Total		8689							Kwh Bruto	195.429	270.752	252.855	613.390	332.764	588.710
									Max Output	1.364.173	1.564.020	2.172.250	2.172.250	2.606.700	2.606.700
									CF	14%	17%	12%	28%	13%	23%

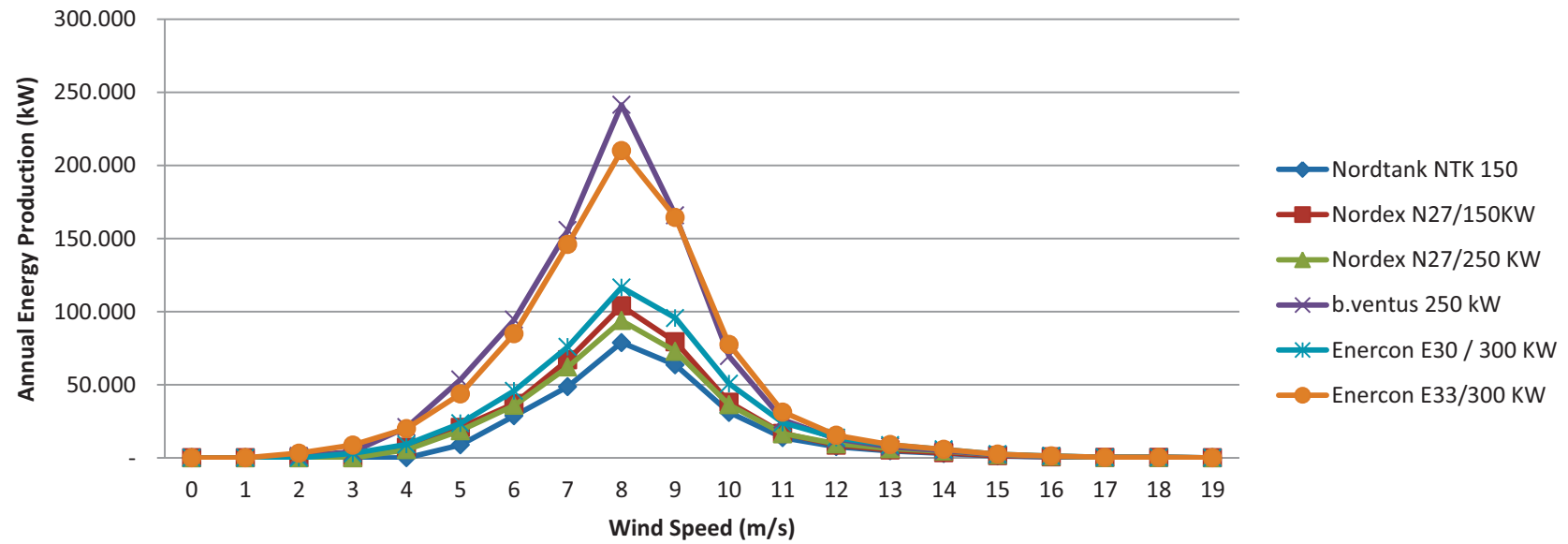
### Grafik Perbandingan Turbin Angin Tahun 2010



### Lampiran 8. Data Perbandingan Turbin Angin Tahun 2011

NO	Wind Speed m/s	2011	Curve Power Output ( KW )						kwh production/year AEP						
		Number of hour wind Speed (h/y)	Nordtank NTK 150 kW	Nordex N27/150 kW	Nordex N27/250 kW	b.ventus 250 kW	Enercon E30 / 300 kW	Enercon E33/300 KW	Nordtank NTK 150 kW	Nordex N27/150 KW	Nordex N27/250 KW	b.ventus 250 kW	Enercon E30 / 300 KW	Enercon E33/300 KW	
1	0	66	0	0	0	0	0	0	-	-	-	-	-	-	
2	1	320	0	0	0	0	0	0	-	-	-	-	-	-	
3	2	634	0	0	0	2	0	5	-	-	-	1.268	-	3.170	
4	3	785	0	0	0	5	3,7	11	-	-	-	3.925	2.905	8.635	
5	4	907	0	8	6	23	10	22	-	7.256	5.442	20.861	9.070	19.954	
6	5	1091	8	19	17	49	21,6	40	8.728	20.729	18.547	53.459	23.566	43.640	
7	6	1195	24	31	30	79	38,3	71	28.680	37.045	35.850	94.405	45.769	84.845	
8	7	1217	40	55	51	128	62,4	120	48.680	66.935	62.067	155.776	75.941	146.040	
9	8	1251	63	83	75	193	93,1	168	78.813	103.833	93.825	241.443	116.468	210.168	
10	9	721	88	110	101	230	132,6	228	63.448	79.310	72.821	165.830	95.605	164.388	
11	10	279	111	136	130	249	181,6	278	30.969	37.944	36.270	69.471	50.666	77.562	
12	11	104	132	160	158	250	230,5	300	13.728	16.640	16.432	26.000	23.972	31.200	
13	12	51	147	170	186	250	269,3	300	7.497	8.670	9.486	12.750	13.734	15.300	
14	13	30	157	176	206	250	290,5	300	4.710	5.280	6.180	7.500	8.715	9.000	
15	14	19	155	180	233	250	300	300	2.945	3.420	4.427	4.750	5.700	5.700	
16	15	8	149	175	246	250	300	300	1.192	1.400	1.968	2.000	2.400	2.400	
17	16	4	149	164	250	250	300	300	596	656	1.000	1.000	1.200	1.200	
18	17	1	149	155	248	250	300	300	149	155	248	250	300	300	
19	18	1	149	150	245	249	300	300	149	150	245	249	300	300	
20	19	0	149	145	238	237	300	300	-	-	-	-	-	-	
Total		8684							Kwh Bruto	290.284	389.423	364.808	860.937	476.310	823.802
									Max Output	1.363.388	1.563.120	2.171.000	2.171.000	2.605.200	2.605.200
									CF	21%	25%	17%	40%	18%	32%

### Grafik Perbandingan Turbin Angin Tahun 2011

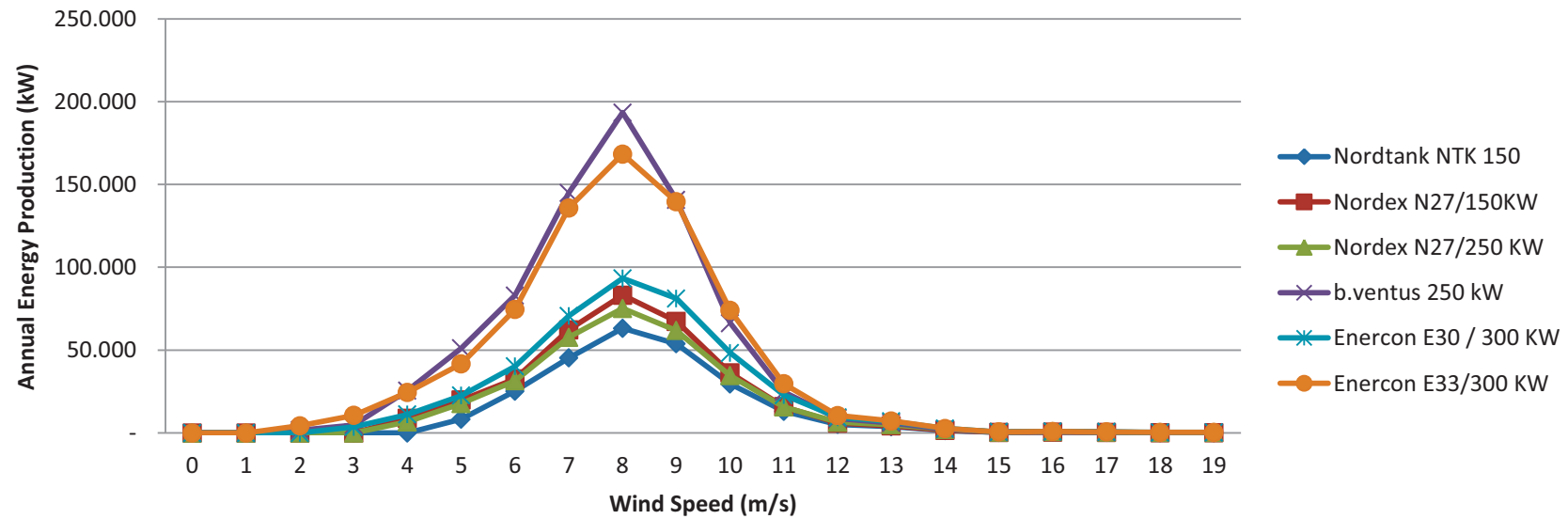




### Lampiran 9. Data Perbandingan Turbin Angin Tahun 2012

NO	Wind Speed m/s	2012	Curve Power Output ( KW )						kwh production/year AEP						
		Number of hour wind Speed (h/y)	Nordtank NTK 150 kW	Nordex N27/150 kW	Nordex N27/250 kW	b.ventus 250 kW	Enercon E30 / 300 kW	Enercon E33/300 KW	Nordtank NTK 150 kW	Nordex N27/150 KW	Nordex N27/250 KW	b.ventus 250 kW	Enercon E30 / 300 KW	Enercon E33/300 KW	
1	0	55	0	0	0	0	0	0	-	-	-	-	-	-	
2	1	446	0	0	0	0	0	0	-	-	-	-	-	-	
3	2	864	0	0	0	2	0	5	-	-	-	1.728	-	4.320	
4	3	962	0	0	0	5	3,7	11	-	-	-	4.810	3.559	10.582	
5	4	1113	0	8	6	23	10	22	-	8.904	6.678	25.599	11.130	24.486	
6	5	1044	8	19	17	49	21,6	40	8.352	19.836	17.748	51.156	22.550	41.760	
7	6	1050	24	31	30	79	38,3	71	25.200	32.550	31.500	82.950	40.215	74.550	
8	7	1132	40	55	51	128	62,4	120	45.280	62.260	57.732	144.896	70.637	135.840	
9	8	1002	63	83	75	193	93,1	168	63.126	83.166	75.150	193.386	93.286	168.336	
10	9	612	88	110	101	230	132,6	228	53.856	67.320	61.812	140.760	81.151	139.536	
11	10	266	111	136	130	249	181,6	278	29.526	36.176	34.580	66.234	48.306	73.948	
12	11	99	132	160	158	250	230,5	300	13.068	15.840	15.642	24.750	22.820	29.700	
13	12	35	147	170	186	250	269,3	300	5.145	5.950	6.510	8.750	9.426	10.500	
14	13	24	157	176	206	250	290,5	300	3.768	4.224	4.944	6.000	6.972	7.200	
15	14	9	155	180	233	250	300	300	1.395	1.620	2.097	2.250	2.700	2.700	
16	15	2	149	175	246	250	300	300	298	350	492	500	600	600	
17	16	3	149	164	250	250	300	300	447	492	750	750	900	900	
18	17	2	149	155	248	250	300	300	298	310	496	500	600	600	
19	18	1	149	150	245	249	300	300	149	150	245	249	300	300	
20	19	1	149	145	238	237	300	300	149	145	238	237	300	300	
Total		8722							Kwh Bruto	250.057	339.293	316.614	755.505	415.452	726.158
									Max Output	1.369.354	1.569.960	2.180.500	2.180.500	2.616.600	2.616.600
									CF	18%	22%	15%	35%	16%	28%

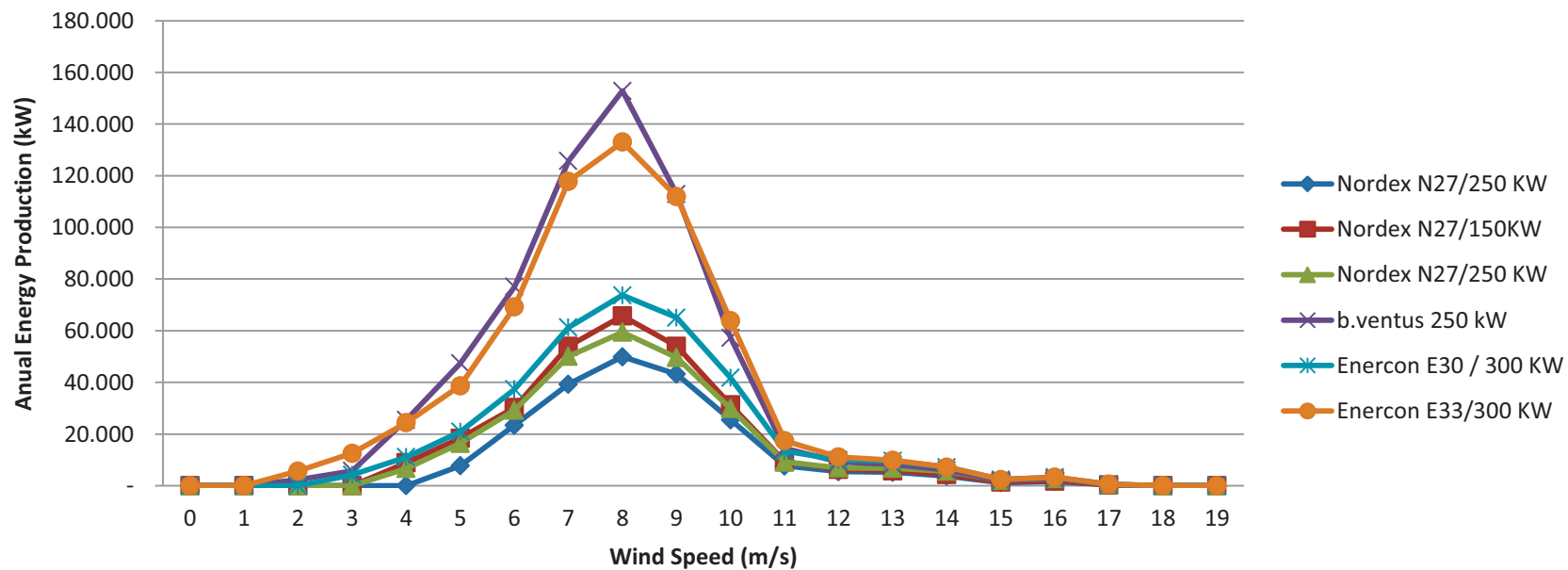
### Grafik Perbandingan Turbin Angin Tahun 2012



**Lampiran 10. Data Perbandingan Turbin Angin Tahun 2013**

NO	Wind Speed m/s	2013	Curve Power Output ( KW )						kwh production/year AEP						
		Number of hour wind Speed (h/y)	Nordtank NTK 150 kW	Nordex N27/150 kW	Nordex N27/250 kW	b.ventus 250 kW	Enercon E30 / 300 kW	Enercon E33/300 KW	Nordtank NTK 150 kW	Nordex N27/150 KW	Nordex N27/250 KW	b.ventus 250 kW	Enercon E30 / 300 KW	Enercon E33/300 KW	
1	0	76	0	0	0	0	0	0	-	-	-	-	-	-	
2	1	622	0	0	0	0	0	0	-	-	-	-	-	-	
3	2	1132	0	0	0	2	0	5	-	-	-	2.264	-	5.660	
4	3	1144	0	0	0	5	3,7	11	-	-	-	5.720	4.233	12.584	
5	4	1110	0	8	6	23	10	22	-	8.880	6.660	25.530	11.100	24.420	
6	5	967	8	19	17	49	21,6	40	7.736	18.373	16.439	47.383	20.887	38.680	
7	6	975	24	31	30	79	38,3	71	23.400	30.225	29.250	77.025	37.343	69.225	
8	7	982	40	55	51	128	62,4	120	39.280	54.010	50.082	125.696	61.277	117.840	
9	8	792	63	83	75	193	93,1	168	49.896	65.736	59.400	152.856	73.735	133.056	
10	9	491	88	110	101	230	132,6	228	43.208	54.010	49.591	112.930	65.107	111.948	
11	10	230	111	136	130	249	181,6	278	25.530	31.280	29.900	57.270	41.768	63.940	
12	11	58	132	160	158	250	230,5	300	7.656	9.280	9.164	14.500	13.369	17.400	
13	12	37	147	170	186	250	269,3	300	5.439	6.290	6.882	9.250	9.964	11.100	
14	13	33	157	176	206	250	290,5	300	5.181	5.808	6.798	8.250	9.587	9.900	
15	14	24	155	180	233	250	300	300	3.720	4.320	5.592	6.000	7.200	7.200	
16	15	8	149	175	246	250	300	300	1.192	1.400	1.968	2.000	2.400	2.400	
17	16	11	149	164	250	250	300	300	1.639	1.804	2.750	2.750	3.300	3.300	
18	17	2	149	155	248	250	300	300	298	310	496	500	600	600	
19	18	0	149	150	245	249	300	300	-	-	-	-	-	-	
20	19	0	149	145	238	237	300	300	-	-	-	-	-	-	
Total		8694							Kwh Bruto	214.175	291.726	274.972	649.924	361.869	629.253
									Max Output	1.364.958	1.564.920	2.173.500	2.173.500	2.608.200	2.608.200
									CF	16%	19%	13%	30%	14%	24%

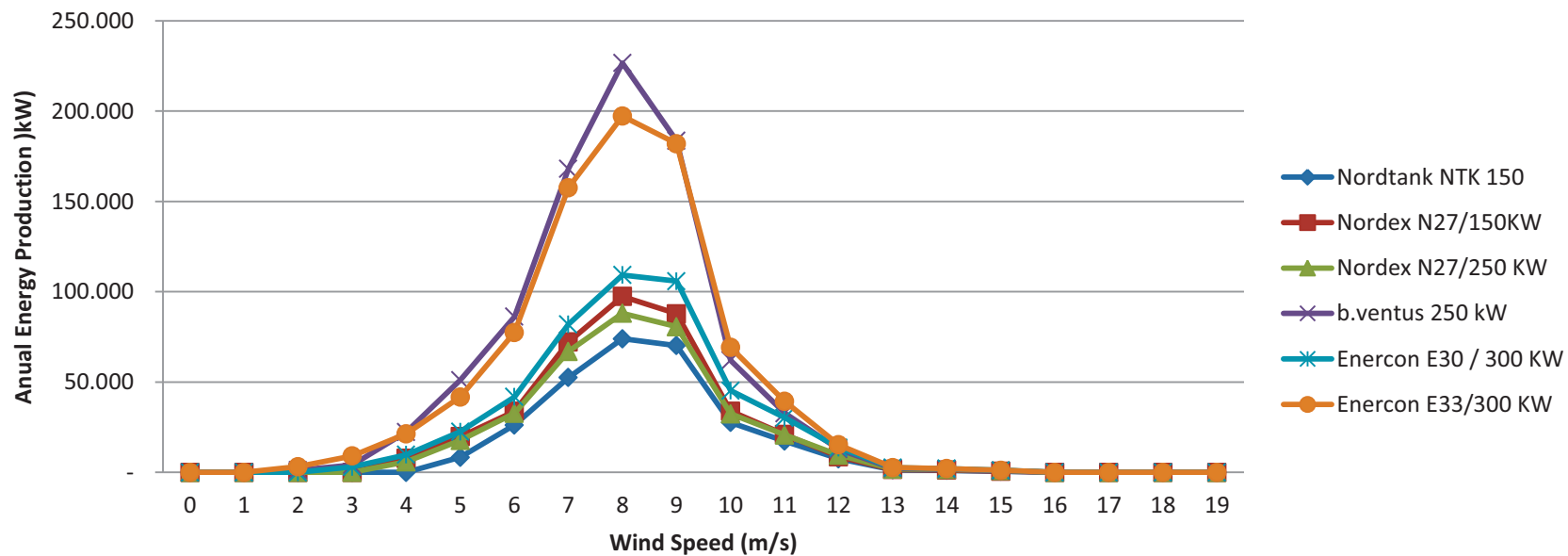
### Grafik Perbandingan Turbin Angin Tahun 2013



**Lampiran 11. Data Perbandingan Turbin Angin Tahun 2014**

NO	Wind Speed m/s	2014	Curve Power Output ( KW )						kwh production/year AEP						
		Number of hour wind Speed (h/y)	Nordtank NTK 150 kW	Nordex N27/150 kW	Nordex N27/250 kW	b.ventus 250 kW	Enercon E30 / 300 kW	Enercon E33/300 KW	Nordtank NTK 150 kW	Nordex N27/150 KW	Nordex N27/250 KW	b.ventus 250 kW	Enercon E30 / 300 KW	Enercon E33/300 KW	
1	0	47	0	0	0	0	0	0	-	-	-	-	-	-	
2	1	352	0	0	0	0	0	0	-	-	-	-	-	-	
3	2	634	0	0	0	2	0	5	-	-	-	1.268	-	3.170	
4	3	824	0	0	0	5	3,7	11	-	-	-	4.120	3.049	9.064	
5	4	973	0	8	6	23	10	22	-	7.784	5.838	22.379	9.730	21.406	
6	5	1043	8	19	17	49	21,6	40	8.344	19.817	17.731	51.107	22.529	41.720	
7	6	1091	24	31	30	79	38,3	71	26.184	33.821	32.730	86.189	41.785	77.461	
8	7	1313	40	55	51	128	62,4	120	52.520	72.215	66.963	168.064	81.931	157.560	
9	8	1174	63	83	75	193	93,1	168	73.962	97.442	88.050	226.582	109.299	197.232	
10	9	798	88	110	101	230	132,6	228	70.224	87.780	80.598	183.540	105.815	181.944	
11	10	249	111	136	130	249	181,6	278	27.639	33.864	32.370	62.001	45.218	69.222	
12	11	131	132	160	158	250	230,5	300	17.292	20.960	20.698	32.750	30.196	39.300	
13	12	51	147	170	186	250	269,3	300	7.497	8.670	9.486	12.750	13.734	15.300	
14	13	9	157	176	206	250	290,5	300	1.413	1.584	1.854	2.250	2.615	2.700	
15	14	7	155	180	233	250	300	300	1.085	1.260	1.631	1.750	2.100	2.100	
16	15	4	149	175	246	250	300	300	596	700	984	1.000	1.200	1.200	
17	16	0	149	164	250	250	300	300	-	-	-	-	-	-	
18	17	0	149	155	248	250	300	300	-	-	-	-	-	-	
19	18	0	149	150	245	249	300	300	-	-	-	-	-	-	
20	19	0	149	145	238	237	300	300	-	-	-	-	-	-	
Total		8700							Kwh Bruto	286.756	385.897	358.933	855.750	469.201	819.379
									Max Output	1.365.900	1.566.000	2.175.000	2.175.000	2.610.000	2.610.000
									CF	21%	25%	17%	39%	18%	31%

### Grafik Perbandingan Turbin Angin Tahun 2014



**Lampiran 12. Data Perbandingan Turbin Angin Tahun 2015**

NO	Wind Speed m/s	2015	Curve Power Output ( KW )						kwh production/year AEP						
		Number of hour wind Speed (h/y)	Nordtank NTK 150 kW	Nordex N27/150 kW	Nordex N27/250 kW	b.ventus 250 kW	Enercon E30 / 300 kW	Enercon E33/300 KW	Nordtank NTK 150 kW	Nordex N27/150 KW	Nordex N27/250 KW	b.ventus 250 kW	Enercon E30 / 300 KW	Enercon E33/300 KW	
1	0	51	0	0	0	0	0	0	-	-	-	-	-	-	
2	1	383	0	0	0	0	0	0	-	-	-	-	-	-	
3	2	694	0	0	0	2	0	5	-	-	-	1.388	-	3.470	
4	3	744	0	0	0	5	3,7	11	-	-	-	3.720	2.753	8.184	
5	4	651	0	8	6	23	10	22	-	5.208	3.906	14.973	6.510	14.322	
6	5	778	8	19	17	49	21,6	40	6.224	14.782	13.226	38.122	16.805	31.120	
7	6	940	24	31	30	79	38,3	71	22.560	29.140	28.200	74.260	36.002	66.740	
8	7	1352	40	55	51	128	62,4	120	54.080	74.360	68.952	173.056	84.365	162.240	
9	8	1488	63	83	75	193	93,1	168	93.744	123.504	111.600	287.184	138.533	249.984	
10	9	965	88	110	101	230	132,6	228	84.920	106.150	97.465	221.950	127.959	220.020	
11	10	457	111	136	130	249	181,6	278	50.727	62.152	59.410	113.793	82.991	127.046	
12	11	188	132	160	158	250	230,5	300	24.816	30.080	29.704	47.000	43.334	56.400	
13	12	49	147	170	186	250	269,3	300	7.203	8.330	9.114	12.250	13.196	14.700	
14	13	8	157	176	206	250	290,5	300	1.256	1.408	1.648	2.000	2.324	2.400	
15	14	5	155	180	233	250	300	300	775	900	1.165	1.250	1.500	1.500	
16	15	3	149	175	246	250	300	300	447	525	738	750	900	900	
17	16	2	149	164	250	250	300	300	298	328	500	500	600	600	
18	17	0	149	155	248	250	300	300	-	-	-	-	-	-	
19	18	1	149	150	245	249	300	300	149	150	245	249	300	300	
20	19	0	149	145	238	237	300	300	-	-	-	-	-	-	
Total		8759							Kwh Bruto	347.199	457.017	425.873	992.445	558.071	959.926
									Max Output	1.375.163	1.576.620	2.189.750	2.189.750	2.627.700	2.627.700
									CF	25%	29%	19%	45%	21%	37%

### Grafik Perbandingan Turbin Angin Tahun 2015

