Table A1: Potential Livestock Organic Waste and the Energy it could Generate Across the Study Area through AD

	Livestock Type	Livestock Population	No. of animals to produce 1 tonne of Organic Waste/day	Available Organic Waste (Tonnes/ Year)	Biogass Yields (m3/tonne)	Available Biogass (m3/year)	100% Collection				15% Collection			
							Electricity only (MW)*	Heat Only (MW)**	CHP Electricity (MW)***	CHP Heat (MW)***	Electricity only(MW)	Heat Only (MW)	CHP Electricity (MW)	CHP Heat (MW)
Rossendale	**Cattle**	**4,210**	**30**	**51,227**	**25**	**1,280,685**	**0.239**	**0.352**	**0.239**	**0.282**	**0.036**	**0.053**	**0.036**	**0.042**
	Pigs	690	275	916	26	23,820	0.004	0.007	0.004	0.005	0.001	0.001	0.001	0.001
	Sheep	**31,508**	**550**	**20,910**	**26**	**543,657**	**0.102**	**0.150**	**0.102**	**0.120**	**0.015**	**0.022**	**0.015**	**0.018**
	Poultry	98,392	8,500	4,225	120	507,007	0.095	0.139	0.095	0.112	0.014	0.021	0.014	0.017
	Totals	**134,801**	**9,355**	**77,278**	**197**	**2,355,169**	**0.440**	**0.648**	**0.440**	**0.518**	**0.066**	**0.097**	**0.066**	**0.078**
Burnley	Cattle	3,809	30	46,344	25	1,158,602	0.217	0.319	0.217	0.255	0.032	0.048	0.032	0.038
	Pigs	**553**	**275**	**735**	**26**	**19,101**	**0.004**	**0.005**	**0.004**	**0.004**	**0.001**	**0.001**	**0.001**	**0.001**
	Sheep	41,512	550	27,549	26	716,275	0.134	0.197	0.134	0.158	0.020	0.030	0.020	0.024
	Poultry	**51,836**	**8,500**	**2,226**	**120**	**267,109**	**0.050**	**0.073**	**0.050**	**0.059**	**0.007**	**0.011**	**0.007**	**0.009**
	Totals	97,711	9,355	76,854	197	2,161,086	0.404	0.594	0.404	0.475	0.061	0.089	0.061	0.071
Pendle	**Cattle**	**11,134**	**30**	**135,463**	**25**	**3,386,579**	**0.633**	**0.931**	**0.633**	**0.745**	**0.095**	**0.140**	**0.095**	**0.112**
	Pigs	847	275	1,124	26	29,223	0.005	0.008	0.005	0.006	0.001	0.001	0.001	0.001
	Sheep	**63,511**	**550**	**42,148**	**26**	**1,095,858**	**0.205**	**0.301**	**0.205**	**0.241**	**0.031**	**0.045**	**0.031**	**0.036**
	Poultry	59,314	8,500	2,547	120	305,644	0.057	0.084	0.057	0.067	0.009	0.013	0.009	0.010
	Totals	**134,807**	**9,355**	**181,283**	**197**	**4,817,305**	**0.901**	**1.325**	**0.901**	**1.060**	**0.135**	**0.199**	**0.135**	**0.159**
Calderdale	Cattle	11,100	30	135,046	25	3,376,142	0.631	0.928	0.631	0.743	0.095	0.139	0.095	0.111
	Pigs	**3,367**	**275**	**4,469**	**26**	**116,183**	**0.022**	**0.032**	**0.022**	**0.026**	**0.003**	**0.005**	**0.003**	**0.004**
	Sheep	62,503	550	41,479	26	1,078,454	0.202	0.297	0.202	0.237	0.030	0.044	0.030	0.036
	Poultry	**81,956**	**8,500**	**3,519**	**120**	**422,313**	**0.079**	**0.116**	**0.079**	**0.093**	**0.012**	**0.017**	**0.012**	**0.014**
	Totals	158,925	9,355	184,513	197	4,993,092	0.934	1.373	0.934	1.098	0.140	0.206	0.140	0.165
Kirklees	**Cattle**	**13,778**	**30**	**167,636**	**25**	**4,190,910**	**0.784**	**1.153**	**0.784**	**0.922**	**0.118**	**0.173**	**0.118**	**0.138**
	Pigs	8,843	275	11,737	26	305,150	0.057	0.084	0.057	0.067	0.009	0.013	0.009	0.010
	Sheep	**39,990**	**550**	**26,539**	**26**	**690,002**	**0.129**	**0.190**	**0.129**	**0.152**	**0.019**	**0.028**	**0.019**	**0.023**
	Poultry	296,622	8,500	12,737	120	1,528,474	0.286	0.420	0.286	0.336	0.043	0.063	0.043	0.050
	Totals	**359,232**	**9,355**	**218,649**	**197**	**6,714,536**	**1.256**	**1.846**	**1.256**	**1.477**	**0.188**	**0.277**	**0.188**	**0.222**
5 Councils	Total	885,475	46,775	738,576	985	21,041,188	3.935	5.786	3.935	4.629	0.590	0.868	0.590	0.694

***electricity only: 1.7 kWh of electricity (assumed conversion efficiency 30%) (British Biogen)**
**** heat only: 2.5 kWh of heat (assumed conversion efficiency 70%)(British Biogen)**
*****combined heat and power: 1.7 kWh of electricity and 2 kWh heat (British Biogen)**

Table A2: Existing and Planned Large Scale Plant RLC Capacity and Generation for Each Council

Council	Site	Type	Capacity (MWe)	Load Factor	Estimated Actual Generation (MW)	Approximate date of first power generation	Council Generation (wind only) (MW)	Council Generation (MW)
Burnley	Hameldon Hill	Wind	6	0.27	1.62	Feb-07		
	Coal Clough	Wind	9.6	0.27	2.592	Dec-92	4.212	
	Queens Park Energy	Landfill gas	1.85	0.64	1.184	Unknown		5.396
Calderdale	Ovenden Moor	Wind	9.2	0.27	2.484	Jun-93		
	Crook Hill (in Calderdale)*	Wind	15	0.27	4.05	Consented	6.534	
	Atlas Power	Landfill Gas	1.136	0.64	0.72704	Jul-07		7.26104
Kirklees	Syngenta CHP Plant	Natural Gas CHP	16	0.64	10.24	Unknown		
	Huddersfield Incinerator	Municipal Solid Waste Incinerator	10	0.85	8.5	Dec-89		
	Honley Wood	Landfill Gas	1	0.64	0.64	01/01/2003		
	Mitchel Laithes STW	Animal Slurry	0.66	0.85	0.561	Unknown		
	Emley AD	Anaerobic Digestion	0.3	0.85	0.255	01/01/2009		20.196
Pendle	Burnley CHP at Burnley	Sewage gas	0.25	0.4	0.1	Unknown		0.1
Rossendale	Scout Moor (in Rossendale)	Wind	27.50	0.27	7.43	Sep-08		
	Reaps Moss**	Wind	9	0.27	2.43	Consented	9.86	
	Rossendale Power Horncliffe Quarry Landfill	Landfill gas	1.44	0.64	0.91904	Unknown		10.77

*Includes 5 of the 12 Turbines planned for Crook Hill
**Including all 3 turbines planned for Reaps Moss

Table A3: Total Theoretical RLC Electricity Maximum Capacity (MW)

Assessment	Commercial Scale Wind Energy	Small Scale Wind Energy	Energy Crops	Municipal Anaerobic Digestion	Waste Wood	Farm Anaerobic Digestion	Woodfuel	Potential for Solar Energy (PV)	Hydropower	SUM	SUM Excluding Commercial Wind
Units/description	Potential Maximum Installed Capacity (see Table 4-13)	Potential Maximum installed capacity (MW) (see Table 4-17)	100 % land Conversion Energy Produced (MW) (see Table 4-19)	Potential Energy Source (MW) (see Table 4-21)*	(see Table 4-22)	Electricity only (MW) (see Table A1)	Electricity Only (MW) (see Table 4-25)	(See Table 4-31)	(Table 4-39)		
Burnley	147.96	5.01	1.88	0.27	1.14	0.40	0.07	42.00	0.95	199.69	51.73
Calderdale	263.97	22.04	3.81	0.71	2.46	0.93	0.39	94.00	2.33	390.65	126.68
Kirklees	119.61	26.73	13.70	1.53	4.96	1.26	0.95	185.00	1.58	355.31	235.70
Pendle	197.19	7.11	1.60	0.28	1.14	0.90	0.13	40.00	1.01	249.36	52.17
Rossendale	259.29	5.68	0.00	0.21	0.84	0.44	0.11	36.00	8.88	311.45	52.16
Total	**988.02**	**66.58**	**20.99**	**3.00**	**10.55**	**3.94**	**1.65**	**397.00**	**14.74**	**1506.46**	**518.44**

Table A4: Total Theoretical RLC Heating Maximum Capacity (MW)

-	Energy Crops	Waste Wood	Farm Anaerobic Digestion	Woodfuel	Solar Energy	Potential for Domestic and commercial Ground Source Heating	.
Authority	100% of Grade Three Agricultural Land (see Table 4-19)	(see Table 4-22)	(see Table A1)	(see Table 4-25)	(see Table 4-32)	Total Conservative Uptake (MW) (See Table 4-38)	SUM
Burnley	6.02	2.04	0.59	0.25	35.00	68.83	112.73
Calderdale	12.19	4.38	1.37	1.29	77.00	177.54	273.78
Kirklees	43.84	8.85	1.85	3.15	156.00	333.31	547.00
Pendle	5.12	2.03	1.33	0.44	34.00	61.99	104.91
Rossendale	0.00	1.49	0.65	0.36	31.00	69.02	102.52
Total	**67.17**	**18.79**	**5.79**	**5.49**	**333.00**	**710.70**	**1140.94**

Table A5: Total Pragmatic RLC Electricity Capacity (MW)

-	Commercial Scale Wind Energy	Small Scale Wind Energy	Energy Crops	Anaerobic Digestion	Waste Wood	Farm Anaerobic Digestion	Woodfuel	Potential for Solar Energy (PV)	Hydropower
Authority	Potential Pragmatic Installed Capacity (see table 4-14)	Potential Pragmatic installed capacity (MW) (see Table 4-17)	5 % land Conversion Energy Produced (MW) (see Table 4-19)	Potential Energy Source (MW) (see Table 4-21)*	(see Table 4-22)	Electricity only (MW) (see Table A1)	Electricity Only (MW) (see Table 4-25)	(See Table 4-31)	16% are win-win sites (Table 4-39)
Burnley	106.86	5.01	0.09	0.27	0.60	0.06	0.07	27.00	0.15
Calderdale	190.65	22.04	0.19	0.71	1.20	0.14	0.39	61.00	0.37
Kirklees	86.39	26.73	0.68	0.00	2.50	0.19	0.95	117.00	0.25
Pendle	142.42	7.11	0.08	0.28	0.60	0.14	0.13	26.00	0.16
Rossendale	187.27	5.68	0.00	0.21	0.40	0.07	0.11	23.00	1.42
Total	**713.59**	**66.58**	**1.04**	**1.47**	**5.30**	**0.59**	**1.65**	**254.00**	**2.36**
*Waste Feedstock for Kirklees is assumed to be already utilised by the incinerator									

Table A6: Total Pragmatic RLC Heating Capacity (MW)

-	Energy Crops	Waste Wood	Farm Anaerobic Digestion	Woodfuel	Solar Energy	Potential for Domestic and commercial Ground Source Heating (low figure)	.
Authority	5% of Grade Three Agricultural Land (see Table 4-19)	(see Table 4-22)	(see Table A1)	(see Table 4-25)	(see Table 4-32)	Total Conservative Uptake (MW) (See Table 4-38)	SUM (MW)
Burnley	0.29	1.02	0.09	0.25	20.00	64.00	85.65
Calderdale	0.61	2.19	0.21	1.29	44.00	154.00	202.29
Kirklees	2.18	4.42	0.28	3.15	89.00	292.00	391.03
Pendle	0.26	1.02	0.20	0.44	19.00	53.00	73.91
Rossendale		0.75	0.10	0.36	18.00	64.00	83.20
Total	**3.33**	**9.40**	**0.87**	**5.49**	**190.00**	**627.00**	**836.08**

Note - All units in Appendix A are in MW unless otherwise stated

Table A7: Total Theoretical RLC Electricity Maximum Generation (MW)

Assessment	Commercial Scale Wind Energy	Small Scale Wind Energy	Energy Crops	Municipal Anaerobic Digestion	Waste Wood	Farm Anaerobic Digestion	Woodfuel	Potential for Solar Energy (PV)	Hydropower	SUM	SUM Excluding Wind
Units/descriptio	Potential Maximum Installed Capacity	Potential Maximum installed capacity (MW)	100% of Grade Three Agricultural Land	Potential Energy Source (MWe)	Theoretical Maximum Capacity (MW) (Electricity Only)	Electricity only (MW)	Electricity Only (MW)	Total generation (commercial and domestic) MW	Electricity Only (MW)		
Burnley	39.95	0.50	1.60	0.23	0.97	0.34	0.06	3.36	0.43	47.44	6.99
Calderdale	71.27	2.20	3.24	0.60	2.09	0.79	0.33	7.52	1.05	89.10	15.63
Kirklees	32.29	2.67	11.65	1.30	4.22	1.07	0.81	14.80	0.71	69.52	34.55
Pendle	53.24	0.71	1.36	0.24	0.97	0.77	0.11	3.20	0.45	61.05	7.10
Rossendale	70.01	0.57	0.00	0.18	0.71	0.37	0.09	2.88	4.00	78.81	8.24
Total	**266.77**	**6.66**	**17.84**	**2.55**	**8.96**	**3.34**	**1.40**	**31.76**	**6.63**	**345.92**	**72.50**

Table A8: Total Theoretical RLC Heating Maximum Generation (MW)

-	Energy Crops	Waste Wood	Farm Anaerobic Digestion	Woodfuel	Solar Energy	Potential for Domestic and commercial Ground Source Heating	.
Authority	100% of Grade Three Agricultural Land					Total Maximum Uptake (MW)	SUM
Burnley	5.11	1.73	0.50	0.21	8.75	17.21	33.52
Calderdale	10.36	3.72	1.17	1.10	19.25	44.39	79.99
Kirklees	37.26	7.52	1.57	2.68	39.00	83.33	171.36
Pendle	4.35	1.73	1.13	0.37	8.50	15.50	31.58
Rossendale	0.00	1.27	0.55	0.31	7.75	17.25	27.13
Total	**57.09**	**15.97**	**4.92**	**4.67**	**83.25**	**177.68**	**343.58**

Table A9: Total Pragmatic RLC Electricity Generation (MW)

Assessment	Commercial Scale Wind Energy	Small Scale Wind Energy	Energy Crops	Municipal Anaerobic Digestion	Waste Wood	Farm Anaerobic Digestion	Woodfuel	Potential for Solar Energy (PV)	Hydropower	SUM (MW)	SUM Excluding Commercial Wind (MW)
Units/ description	Potential Maximum Installed Generation (MW)	Potential Maximum installed Generation (MW)	Generation (5% of Grade Three Agricultural Land) (MW)	Potential Energy Source (MWe)***	Theoretical Maximum Generation (MW) (Electricity Only)	Electricity only (MW)*	Electricity Only (MW)	Total generation (commercial and domestic) MW	Electricity Only (MW)		
Burnley	28.85	0.50	0.08	0.23	0.51	0.05	0.06	2.16	0.07	32.51	3.16
Calderdale	51.48	2.20	0.16	0.60	1.02	0.12	0.33	4.88	0.17	60.96	7.28
Kirklees	23.33	2.67	0.58	0.00	2.13	0.16	0.81	9.36	0.11	39.14	13.14
Pendle	38.45	0.71	0.07	0.24	0.51	0.11	0.11	2.08	0.07	42.36	3.19
Rossendale	50.56	0.57	0.00	0.18	0.34	0.06	0.09	1.84	0.64	54.28	3.15
Total	**192.67**	**6.66**	**0.88**	**1.25**	**4.51**	**0.50**	**1.40**	**20.32**	**1.06**	**229.25**	**29.92**

Table A10: Total Pragmatic RLC Heating Generation (MW)

-	Energy Crops	Waste Wood	Farm Anaerobic Digestion	Woodfuel	Solar Energy	Potential for Domestic and commercial Ground Source Heating	.
Authority	5% of Grade Three Agricultural Land					Total Pragmatic Uptake (MW)	SUM (MW)
Burnley	0.24	0.87	0.08	0.21	5.00	16.00	22.40
Calderdale	0.52	1.86	0.18	1.10	11.00	38.50	53.15
Kirklees	1.85	3.76	0.24	2.68	22.25	73.00	103.77
Pendle	0.22	0.86	0.17	0.37	4.75	13.25	19.62
Rossendale	0.00	0.64	0.08	0.31	4.50	16.00	21.52
Total	**2.83**	**7.99**	**0.74**	**4.67**	**47.50**	**156.75**	**220.47**

Table A11: Electricity Capacity Factors

Technology	Capacity Factor
Biomass	0.85
Co-firing of biomass with fossil fuel @ 5%	0.9
Biomass and waste using ACT (advanced conversion techniques)	0.85
Hydro (all types)	0.45
Sewage gas	0.4
Landfill gas	0.64
Onshore wind	0.27
Wind ≤ 50kW	0.1
Solar PV ≤ 50kW	0.08
Notes.	
The amount of electricity generated is the installed capacity times the load factor.	
Source Arup, July 2008.	

Table A12 Heating Capacity Factor

Technology	Capacity Factor
Energy Crops	0.85
Waste Wood	0.85
Farm Anaerobic Digestion	0.85
Woodfuel	0.85
Solar Energy	0.25
Potential for Domestic and commercial Ground Source Heating	0.25

Table A9: Total Pragmatic RLC Electricity Generation (MW)

Assessment	Commercial Scale Wind Energy	Small Scale Wind Energy	Energy Crops	Municipal Anaerobic Digestion	Waste Wood	Farm Anaerobic Digestion	Woodfuel	Potential for Solar Energy (PV)	Hydropower	SUM (MW)	SUM Excluding Commercial Wind (MW)
Units/ description	Potential Maximum Installed Generation (MW)	Potential Maximum installed Generation (MW)	Generation (5% of Grade Three Agricultural Land) (MW)	Potential Energy Source (MWe)***	Theoretical Maximum Generation (MW) (Electricity	Electricity only (MW)*	Electricity Only (MW)	Total generation (commercial and domestic)	Electricity Only (MW)		
Burnley	28.85	0.50	0.08	0.23	0.51	0.05	0.06	2.16	0.07	32.51	3.16
Calderdale	51.48	2.20	0.16	0.60	1.02	0.12	0.33	4.88	0.17	60.96	7.28
Kirklees	23.33	2.67	0.58	0.00	2.13	0.16	0.81	9.36	0.11	39.14	13.14
Pendle	38.45	0.71	0.07	0.24	0.51	0.11	0.11	2.08	0.07	42.36	3.19
Rossendale	50.56	0.57	0.00	0.18	0.34	0.06	0.09	1.84	0.64	54.28	3.15
Total	**192.67**	**6.66**	**0.88**	**1.25**	**4.51**	**0.50**	**1.40**	**20.32**	**1.06**	**229.25**	**29.92**

Table A13: High Level Electricity Uptake Scenario

	Commercial Scale Wind Energy	Small Scale Wind Energy	Energy Crops	Municipal Anaerobic Digestion	Waste Wood	Farm Anaerobic Digestion	Wood Fuel	Potential for Solar Energy (PV)	Hydropower		Difference from Target (MW)	
Authority	Proportion of Prag	Proportion of Prag	Proportion of Prag	Proportion of Prag	Proportion of Prag	Proportion of Prag	Proportion of Prag	Proportion of Prag	Proportion of Prag	**Totals**	+ve exceeds target, -ve is shortfall	Targets MW
Proportion uptake	0.8	0.5	1	1	1	1	1	0.5	0.5			
Burnley	23.08	0.25	0.08	0.23	0.51	0.05	0.06	1.08	0.03	25.37	16.17	14.6
Calderdale	41.18	1.10	0.16	0.60	1.02	0.12	0.33	2.44	0.08	47.04	18.70	35.6
Kirklees	18.66	1.34	0.58	0.00	2.13	0.16	0.81	4.68	0.06	28.40	-16.20	64.8
Pendle	30.76	0.36	0.07	0.24	0.51	0.11	0.11	1.04	0.04	33.24	17.94	15.4
Rossendale	40.45	0.28	0.00	0.18	0.34	0.06	0.09	0.92	0.32	42.64	38.61	14.8
Totals	**154.94**	**3.83**	**1.88**	**2.25**	**5.51**	**1.50**	**2.40**	**10.66**	**1.03**	**176.70**	**75.22**	

N.B. Proportion of Prag = the proportion of the estimated pragmatic generation potential stated in Table A9 utilised under the scenario

Table A14 Medium Level Electricity Uptake Scenario

Assessment	Commercial Scale Wind Energy	Small Scale Wind Energy	Energy Crops	Municipal Anaerobic Digestion	Waste Wood	Farm Anaerobic Digestion	Woodfuel	Potential for Solar Energy (PV)	Hydropower			Difference from Target (MW)
Authority	Proportion of Prag	Proportion of Prag	Proportion of Prag	Proportion of Prag	Proportion of Prag	Proportion of Prag	Proportion of Prag	Proportion of Prag	Proportion of Prag		**Totals**	+ve exceeds target, -ve is shortfall
	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.2	0.25			
Burnley	14.43	0.25	0.04	0.11	0.26	0.03	0.03	0.43	0.02		15.59	6.39
Calderdale	25.74	1.10	0.08	0.30	0.51	0.06	0.17	0.98	0.04		28.98	0.64
Kirklees	11.66	1.34	0.29	0.00	1.06	0.08	0.40	1.87	0.03		16.73	-27.87
Pendle	19.23	0.36	0.03	0.12	0.26	0.06	0.06	0.42	0.02		20.54	5.24
Rossendale	25.28	0.28	0.00	0.09	0.17	0.03	0.05	0.37	0.16		26.43	22.40
Totals	**96.83**	**3.83**	**0.94**	**1.12**	**2.75**	**0.75**	**1.20**	**4.26**	**0.52**		**108.26**	

Table A15 Low Level Electricity Uptake Scenario

Assessment	Commercial Scale Wind Energy	Small Scale Wind Energy	Energy Crops	Municipal Anaerobic Digestion	Waste Wood	Farm Anaerobic Digestion	Woodfuel	Potential for Solar Energy (PV)	Hydropower			Difference from Target (MW)
Authority	Proportion of Prag	Proportion of Prag	Proportion of Prag	Proportion of Prag	Proportion of Prag	Proportion of Prag	Proportion of Prag	Proportion of Prag	Proportion of Prag		**Totals**	+ve exceeds target, -ve is shortfall
	As per no visual	0.1	0.2	0.25	0.25	0.25	0.25	0.01	0.25			
Burnley	11.50	0.05	0.02	0.06	0.13	0.01	0.01	0.02	0.02		11.81	2.61
Calderdale	20.51	0.22	0.03	0.15	0.26	0.03	0.08	0.05	0.04		21.37	-6.97
Kirklees	9.29	0.27	0.12	0.00	0.53	0.04	0.20	0.09	0.03		10.57	-34.03
Pendle	15.32	0.07	0.01	0.06	0.13	0.03	0.03	0.02	0.02		15.69	0.39
Rossendale	20.15	0.06	0.00	0.04	0.09	0.01	0.02	0.02	0.16		20.55	16.52
Totals	**76.77**	**0.67**	**0.18**	**0.31**	**1.13**	**0.13**	**0.35**	**0.20**	**0.27**		**79.99**	

Table A9: Total Pragmatic RLC Electricity Generation (MW)

Assessment	Commercial Scale Wind Energy	Small Scale Wind Energy	Energy Crops	Municipal Anaerobic Digestion	Waste Wood	Farm Anaerobic Digestion	Woodfuel	Potential for Solar Energy (PV)	Hydropower	SUM (MW)	SUM Excluding Commercial Wind (MW)
Units/ description	Potential Maximum Installed Generation (MW)	Potential Maximum installed Generation (MW)	Generation (5% of Grade Three Agricultural	Potential Energy Source (MWe)***	Theoretical Maximum Generation (MW) (Electricity	Electricity only (MW)*	Electricity Only (MW)	Total generation (commercial and domestic)	Electricity Only (MW)		
Burnley	28.85	0.50	0.08	0.23	0.51	0.05	0.06	2.16	0.07	32.51	3.16
Calderdale	51.48	2.20	0.16	0.60	1.02	0.12	0.33	4.88	0.17	60.96	7.28
Kirklees	23.33	2.67	0.58	0.00	2.13	0.16	0.81	9.36	0.11	39.14	13.14
Pendle	38.45	0.71	0.07	0.24	0.51	0.11	0.11	2.08	0.07	42.36	3.19
Rossendale	50.56	0.57	0.00	0.18	0.34	0.06	0.09	1.84	0.64	54.28	3.15
Total	**192.67**	**6.66**	**0.88**	**1.25**	**4.51**	**0.50**	**1.40**	**20.32**	**1.06**	**229.25**	**29.92**

Table A16: High Wind Uptake Basket

Assessment	Commercial Scale Wind Energy	Small Scale Wind Energy	Energy Crops	Municipal Anaerobic Digestion	Waste Wood	Farm Anaerobic Digestion	Woodfuel	Potential for Solar Energy (PV)	Hydropower		Difference from Target (MW)
Authority	Proportion of Prag uptake	Proportion of Prag	Proportion of Prag	Proportion of Prag	Proportion of Prag	Proportion of Prag	Proportion of Prag	Proportion of Prag	Proportion of Prag	**Totals**	+ve exceeds target, -ve is shortfall
	1	1	0.25	0.5	0.5	0.5	0.5	0.05	0		
Burnley	28.85	0.50	0.02	0.11	0.26	0.03	0.03	0.11	0	29.91	20.70
Calderdale	51.48	2.20	0.04	0.30	0.51	0.06	0.17	0.24	0	55.00	26.66
Kirklees	23.33	2.67	0.14	0.00	1.06	0.08	0.40	0.47	0	28.16	-16.45
Pendle	38.45	0.71	0.02	0.12	0.26	0.06	0.06	0.10	0	39.77	24.47
Rossendale	50.56	0.57	0.00	0.09	0.17	0.03	0.05	0.09	0	51.56	47.53
Totals	**193.67**	**7.66**	**0.47**	**1.12**	**2.75**	**0.75**	**1.20**	**1.07**	**0**	**204.39**	

N.B. Proportion of Prag = the proportion of the estimated pragmatic generation potential stated in Table A9 utilised under the scenario

Table A17: Maximising Non-Wind Basket **What is realistic to generate from other Technologies**

Assessment	Commercial Scale Wind Energy	Small Scale Wind Energy	Energy Crops	Municipal Anaerobic Digestion	Waste Wood	Farm Anaerobic Digestion	Woodfuel	Potential for Solar Energy (PV)	Hydropower		Difference from Target (MW)
Authority	Proportion of Prag	Proportion of Prag	Proportion of Prag	Proportion of Prag	Proportion of Prag	Proportion of Prag	Proportion of Prag	Proportion of Prag	Proportion of Prag	**Totals**	+ve exceeds target, -ve is shortfall
	0	0	1	1	1	1	1	0.8	0.75		
Burnley	0	0	0.08	0.23	0.51	0.05	0.06	1.73	0.05	2.71	-6.50
Calderdale	0	0	0.16	0.60	1.02	0.12	0.33	3.90	0.13	6.27	-22.07
Kirklees	0	0	0.58	0.00	2.13	0.16	0.81	7.49	0.09	11.24	-33.36
Pendle	0	0	0.07	0.24	0.51	0.11	0.11	1.66	0.05	2.76	-12.54
Rossendale	0	0	0.00	0.18	0.34	0.06	0.09	1.47	0.48	2.62	-1.41
Totals	**0**	**0**	**0.88**	**1.25**	**4.51**	**0.50**	**1.40**	**16.26**	**0.80**	**25.59**	

Table A18: No Additional Wind Basket **What can you get from other technologies at a maximum**

Assessment	Commercial Scale Wind Energy	Small Scale Wind Energy	Energy Crops	Municipal Anaerobic Digestion	Waste Wood	Farm Anaerobic Digestion	Woodfuel	Potential for Solar Energy (PV)	Hydropower		Difference from Target (MW)
Authority	No additional wind	Proportion of Prag	Proportion of Prag	Proportion of Prag	Proportion of Prag	Proportion of Prag	Proportion of Prag	Proportion of Prag	Proportion of Prag	**Totals**	+ve exceeds target, -ve is shortfall
		0	1	1	1	1	1	1	1		
Burnley	4.21	0	0.08	0.23	0.51	0.05	0.06	2.16	0.07	7.37	-6.05
Calderdale	6.53	0	0.16	0.60	1.02	0.12	0.33	4.88	0.17	13.82	-21.06
Kirklees	0.00	0	0.58	0.00	2.13	0.16	0.81	9.36	0.11	13.14	-31.46
Pendle	0.00	0	0.07	0.24	0.51	0.11	0.11	2.08	0.07	3.19	-12.11
Rossendale	9.86	0	0.00	0.18	0.34	0.06	0.09	1.84	0.64	13.01	-0.88
Totals	**20.61**	**0**	**0.88**	**1.25**	**4.51**	**0.50**	**1.40**	**20.32**	**1.06**	**50.53**	

Table A19: Existing and Planned Wind Energy and Landscape Capacity

Wind Energy	Existing wind	Additional Capacity potential based on JMA 2010 as 2.5MW turbines	Capacity potential based on JMA 2010 as 2.5MW turbines	In planning but not consented MW capacity	In Planning not consented Generation MW
Burnley	4.21	42.6	17.03	16.40	4.43
Calderdale	6.53	76.0	30.39	10.80	2.92
Kirklees		34.4	13.77		0.00
Pendle		56.7	22.70		0.00
Rossendale	9.86	74.6	29.85	0.00	0.00
Totals		**284.33**	**113.73**	**27.20**	**7.34**

Table A20: All Windfarms in Planning Basket

Assessment	Commercial Scale Wind Energy	Small Scale Wind Energy	Energy Crops	Municipal Anaerobic Digestion	Waste Wood	Farm Anaerobic Digestion	Woodfuel	Potential for Solar Energy (PV)	Hydropower			Generation Difference from Target (MW)	Wind Capacity difference from Target (MW)	
Authority	Existing and consented Windfarms (MW)	Proportion of Prag	Proportion of Prag	Proportion of Prag	Proportion of Prag	Proportion of Prag	Proportion of Prag	Proportion of Prag	Proportion of Prag		**Totals**	+ve exceeds target, -ve is shortfall	+ve exceeds target, -ve is shortfall	No of Additional turbines
		0.05	0.25	0.5	0.5	0.5	0.5	0.01	0.5					
Burnley	8.64	0.03	0.02	0.11	0.26	0.03	0.03	0.02	0.03		9.17	-4.25	-15.74	6.30
Calderdale	9.45	0.11	0.04	0.30	0.51	0.06	0.17	0.05	0.08		10.77	-24.10	-89.27	35.71
Kirklees	0.00	0.13	0.14	0.00	1.06	0.08	0.40	0.09	0.06		1.97	-42.63	-157.89	63.15
Pendle	0.00	0.04	0.02	0.12	0.26	0.06	0.06	0.02	0.04		0.60	-14.70	-54.46	21.78
Rossendale	9.86	0.03	0.00	0.09	0.17	0.03	0.05	0.02	0.32		10.56	-3.33	-12.33	4.93
Totals	**27.95**	**0.38**	**0.47**	**1.12**	**2.75**	**0.75**	**1.20**	**0.21**	**1.03**		**33.07**			

Table A21: Projected Electricity Consumption, RSS Targets and Current RLC Installed Capacity

Council	**Projected 2020 Electricity Consumption MW**	**Indicative National RES Target (30%) MW**	**Indicative local Targets in 2021 MW (RSS Yorkshire and Humber)**	**Lancashire RSS targets MW**		**Target to hit**	**Current Installed Generation MW**	**Difference**	**Non-Wind Installed Generation (MW)**
Burnley	48.7	14.6		27.2		14.6	5.40	9.20	1.18
Calderdale	118.7	35.6	53			35.6	7.26	28.34	0.73
Kirklees	216	64.8	48			64.8	20.20	44.60	20.20
Pendle	51.4	15.4		27.1		15.4	0.10	15.30	0.10
Rossendale	49.4	14.8		19.9		14.8	10.77	4.03	0.91
Totals	484.3	145.3							

Notes.
1. Electricity Projections to 2020 - 2007 (DECC website) electricity values increasing at 1.1% pa.
2. RES - UK renewable energy strategy, 2009.
3. Calderdale and Kirklees have targets from Y&H RSS
4. Lancashire Targets based upon Lancs RSS and proportion of population in target area.
5. Additional targets are presented in appendix ...

Table A9: Total Pragmatic RLC Electricity Generation (MW)

Assessment		Commercial Scale Wind Energy	Small Scale Wind Energy	Energy Crops	Municipal Anaerobic Digestion	Waste Wood	Farm Anaerobic Digestion	Woodfuel	Potential for Solar Energy (PV)	Hydropower	SUM (MW)	SUM Excluding Commercial Wind (MW)
Units/ description		Potential Maximum Installed Generation (MW)	Potential Maximum installed Generation (MW)	Generation (5% of Grade Three Agricultural	Potential Energy Source (MWe)***	Theoretical Maximum Generation (MW) (Electricity	Electricity only (MW)*	Electricity Only (MW)	Total generation (commercial and domestic) MW	Electricity Only (MW)		
Burnley		28.85	0.50	0.08	0.23	0.51	0.05	0.06	2.16	0.07	32.51	3.16
Calderdale		51.48	2.20	0.16	0.60	1.02	0.12	0.33	4.88	0.17	60.96	7.28
Kirklees		23.33	2.67	0.58	0.00	2.13	0.16	0.81	9.36	0.11	39.14	13.14
Pendle		38.45	0.71	0.07	0.24	0.51	0.11	0.11	2.08	0.07	42.36	3.19
Rossendale		50.56	0.57	0.00	0.18	0.34	0.06	0.09	1.84	0.64	54.28	3.15
Total		**192.67**	**6.66**	**0.88**	**1.25**	**4.51**	**0.50**	**1.40**	**20.32**	**1.06**	**229.25**	**29.92**

Table A22: Burnley Electricity Baskets

Assessment		Commercial Scale Wind Energy	Small Scale Wind Energy	Energy Crops	Municipal Anaerobic Digestion	Waste Wood	Farm Anaerobic Digestion	Woodfuel	Potential for Solar Energy (PV)	Hydropower	Totals	Difference from Target (MW)	Additional Wind Capacity Required (MW)	No of Additional turbines
High wind	Proportion of Prag uptake	1	1	0.25	0.5	0.5	0.5	0.5	0.05	0		-ve is shortfall		
	Generation	28.85	0.50	0.02	0.11	0.26	0.03	0.03	0.11	0.00	29.91	20.70	-76.67	-30.67
Enough Wind	Proportion of Prag uptake	0.29	0.29	0.5	0.5	0.5	0.5	0.5	0.2	0.25				
	Generation	8.37	0.15	0.04	0.11	0.26	0.03	0.03	0.43	0.02	9.43	0.22	-0.82	-0.33
Maximise Non-Wind	Proportion of Prag uptake	0	0	1	1	1	1	1	1	1				
	Generation	0.00	0.00	0.08	0.23	0.51	0.05	0.06	2.16	0.07	3.16	-6.05	22.40	8.96

N.B. Proportion of Prag = the proportion of the estimated pragmatic generation potential stated in Table A9 utilised under the scenario

Table A23: Calderdale Electricity Baskets

Assessment		Commercial Scale Wind Energy	Small Scale Wind Energy	Energy Crops	Municipal Anaerobic Digestion	Waste Wood	Farm Anaerobic Digestion	Woodfuel	Potential for Solar Energy (PV)	Hydropower	**Totals**	Difference from Target (MW)	Additional Wind Capacity Required (MW)	No of Additional turbines
High wind	Proportion of Prag uptake	1	1	0.25	0.5	0.5	0.5	0.5	0.05	0		-ve is shortfall		
	Generation	51.48	2.20	0.04	0.30	0.51	0.06	0.17	0.24	0.00	55.00	26.66	-98.75	-39.50
Enough Wind	Proportion of Prag uptake	0.48	0.48	0.5	0.5	0.5	0.5	0.5	0.2	0.25				
	Generation	24.71	1.06	0.08	0.30	0.51	0.06	0.17	0.98	0.04	27.90	-0.44	1.62	0.65
Maximise Non-Wind	Proportion of Prag uptake	0	0	1	1	1	1	1	1	1				
	Generation	0.00	0.00	0.16	0.60	1.02	0.12	0.33	4.88	0.17	7.28	-21.06	77.98	31.19

Table A24: Kirklees Electricity Baskets

Assessment		Commercial Scale Wind Energy	Small Scale Wind Energy	Energy Crops	Municipal Anaerobic Digestion	Waste Wood	Farm Anaerobic Digestion	Woodfuel	Potential for Solar Energy (PV)	Hydropower	**Totals**	Difference from Target (MW)	Additional Wind Capacity Required (MW)	No of Additional turbines
High wind	Proportion of Prag uptake	1	1	0.25	0.5	0.5	0.5	0.5	0.05	0		-ve is shortfall		
	Generation	23.33	2.67	0.14	0.00	1.06	0.08	0.40	0.47	0.00	28.157	-16.45	60.92	24.37
Enough Wind	Proportion of Prag uptake	1	1	0.5	0.5	0.5	0.5	0.5	0.2	0.25				
	Generation	23.33	2.67	0.29	0.00	1.06	0.08	0.40	1.87	0.03	29.734	-14.87	55.08	22.03
Maximise Non-Wind	Proportion of Prag uptake	0	0	1	1	1	1	1	1	1				
	Generation	0.00	0.00	0.58	0.00	2.13	0.16	0.81	9.36	0.11	13.144	-31.46	116.52	46.61

Table A25: Pendle Electricity Baskets

Assessment		Commercial Scale Wind Energy	Small Scale Wind Energy	Energy Crops	Municipal Anaerobic Digestion	Waste Wood	Farm Anaerobic Digestion	Woodfuel	Potential for Solar Energy (PV)	Hydropower	**Totals**	Difference from Target (MW)	Wind Capacity Required (MW)	No of Additional turbines
High wind	Proportion of Prag uptake	1	1	0.25	0.5	0.5	0.5	0.5	0.05	0		-ve is shortfall		
	Generation	38.45	0.71	0.02	0.12	0.26	0.06	0.06	0.10	0.00	39.77	24.47	-90.64	-36.26
Enough Wind	Proportion of Prag uptake	0.36	0.35	0.5	0.5	0.5	0.5	0.5	0.2	0.25				
	Generation	13.84	0.25	0.03	0.12	0.26	0.06	0.06	0.42	0.02	15.05	-0.25	0.94	0.37
Maximise Non-Wind	Proportion of Prag uptake	0	0	1	1	1	1	1	1	1				
	Generation	0.00	0.00	0.07	0.24	0.51	0.11	0.11	2.08	0.07	3.19	-12.11	44.84	17.94

Table A26: Rossendale Electricity Baskets

Assessment		Commercial Scale Wind Energy	Small Scale Wind Energy	Energy Crops	Municipal Anaerobic Digestion	Waste Wood	Farm Anaerobic Digestion	Woodfuel	Potential for Solar Energy (PV)	Hydropower	**Totals**	Difference from Target (MW)	Additional Wind Capacity Required (MW)	No of Additional turbines
High wind	Proportion of Prag uptake	1	1	0.25	0.5	0.5	0.5	0.5	0.05	0		-ve is shortfall		
	Generation	50.56	0.57	0.00	0.09	0.17	0.03	0.05	0.09	0.00	51.56	47.53	-176.03	-70.41
Enough Wind	Proportion of Prag uptake	0.06	0.06	0.5	0.5	0.5	0.5	0.5	0.2	0.25				
	Generation	3.03	0.03	0.00	0.09	0.17	0.03	0.05	0.37	0.16	3.9298	-0.10	0.37	0.15
Maximise Non-Wind	Proportion of Prag uptake	0	0	1	1	1	1	1	1	1				
	Generation	0.00	0.00	0.00	0.18	0.34	0.06	0.09	1.84	0.64	3.1477	-0.88	3.27	1.31

Table A10: Total Pragmatic RLC Heating Generation (MW)

	Energy Crops	Waste Wood	Farm Anaerobic Digestion	Woodfuel	Solar Energy	Potential for Domestic and commercial Ground Source Heating	
Authority	5% of Grade Three Agricultural Land					Total Pragmatic Uptake (MW)	SUM (MW)
Burnley	0.24	0.87	0.08	0.21	5.00	16.00	22.40
Calderdale	0.52	1.86	0.18	1.10	11.00	38.50	53.15
Kirklees	1.85	3.76	0.24	2.68	22.25	73.00	103.77
Pendle	0.22	0.86	0.17	0.37	4.75	13.25	19.62
Rossendale	0.00	0.64	0.08	0.31	4.50	16.00	21.52

Table A27: High Level Heating Uptake Scenario

Authority	Energy Crops	Waste Wood	Farm Anaerobic Digestion	Woodfuel	Solar Energy	Potential for Domestic and commercial Ground Source Heating (low figure)	Sum (MW)	Proportion of 2020 Total Heating Demand
	Proportion of Prag	Proportion of Prag	Proportion of Prag	Proportion of Prag	Proportion of Prag	Proportion of Prag		
	1	1	1	1	1	1		
Burnley	0.24	0.87	0.08	0.21	5.00	16.00	22.40	22.72%
Calderdale	0.52	1.86	0.18	1.10	11.00	38.50	53.15	22.88%
Kirklees	1.85	3.76	0.24	2.68	22.25	73.00	103.77	22.74%
Pendle	0.22	0.86	0.17	0.37	4.75	13.25	19.62	20.04%
Rossendale	0.00	0.64	0.08	0.31	4.50	16.00	21.52	27.94%

N.B. Proportion of Prag = the proportion of the estimated pragmatic generation potential stated in Table A10 utilised under the scenario

Table A28: Medium Level Heating Uptake Scenario

Authority	Energy Crops	Waste Wood	Farm Anaerobic Digestion	Woodfuel	Solar Energy	Potential for Domestic and commercial Ground Source Heating (low figure)	Sum (MW)	Proportion of 2020 Total Heating Demand
	Proportion of Prag	Proportion of Prag	Proportion of Prag	Proportion of Prag	Proportion of Prag	Proportion of Prag		
	0.75	0.75	0.75	0.75	0.75	0.75		
Burnley	0.18	0.65	0.06	0.16	3.75	12.00	16.80	17.04%
Calderdale	0.39	1.40	0.13	0.82	8.25	28.88	39.86	17.16%
Kirklees	1.39	2.82	0.18	2.01	16.69	54.75	77.83	17.06%
Pendle	0.16	0.65	0.13	0.28	3.56	9.94	14.72	15.03%
Rossendale	0.00	0.48	0.06	0.23	3.38	12.00	16.14	20.95%

Table A29: Low Level Heating Uptake Scenario (commercial and off grid domestic uptake of ground source heating)

Authority	Energy Crops	Waste Wood	Farm Anaerobic Digestion	Woodfuel	Solar Energy	Potential for Domestic and commercial Ground Source Heating (low figure)	Sum (MW)	Proportion of 2020 Total Heating Demand
	Proportion of Prag	Proportion of Prag	Proportion of Prag	Proportion of Prag	Proportion of Prag	(see Table 4-38 x capacity factor)		
	0.5	0.5	0.5	0.5	0.5			
Burnley	0.12	0.43	0.04	0.11	2.50	1.81	5.01	5.08%
Calderdale	0.26	0.93	0.09	0.55	5.50	6.47	13.79	5.94%
Kirklees	0.92	1.88	0.12	1.34	11.13	13.70	29.09	6.37%
Pendle	0.11	0.43	0.08	0.19	2.38	2.28	5.47	5.59%
Rossendale	0.00	0.32	0.04	0.15	2.25	1.84	4.60	5.97%

Tables A30: Estimated Domestic and Commercial Heat Demand for 2010 and 2020

Authority	Households in Authority Area in 2010*	2010 Domestic Heat consumption (MW)**	2010 Industry and Services Consumption (MW)***	2010 Total Heat Demand (MW)	12% of Total 2010 Heat Demand (MW)
Burnley	40,629	65.4	30.1	95.5	11.46
Calderdale	92,119	148.2	68.3	216.6	25.99
Kirklees	177,087	285.0	131.3	416.3	49.96
Pendle	39,762	64.0	29.5	93.5	11.22
Rossendale	30,550	49.2	22.7	71.8	8.62
*Based on wastedataflow.org					
**Based on a household consuming 0.00161 MW per year on spacing heating from national figures at http://www.statistics.gov.uk/STATBASE/ssdataset.asp?vlnk=7287					
***Based on national ratio of domestic to industrial and service energy used for space heating i.e. 2.17 times more energy was used in the domestic sector compared to the industrial and services sectors (DECC Website)					

Authority	Households in Authority Area in 2020****	2020 Domestic Heat consumption (MW)*	2020 Industry and Services Consumption (MW)**	2020 Total Heat Demand (MW)	12% of Total 2020 Heat Demand (MW)
Burnley	41,929	67.5	31.1	98.6	11.83
Calderdale	98,819	159.0	73.3	232.3	27.88
Kirklees	194,087	312.3	143.9	456.3	54.75
Pendle	41,662	67.0	30.9	97.9	11.75
Rossendale	32,770	52.7	24.3	77.0	9.24
**** based on 2010 household numbers plus the households required to be built under the RSSs					

Table A31: Additional Housing required by 2020

Authority	Additional Houses Required Under RSS by 2020
Burnley	1,300
Calderdale	6,700
Kirklees	17,000
Pendle	1,900
Rossendale	2,220

Table A8: Total Theoretical RLC Heating Maximum Generation (MW)

	Energy Crops	Waste Wood	Farm Anaerobic Digestion	Woodfuel	Solar Energy	Potential for Domestic and commercial Ground Source Heating	
Authority	100% of Grade Three Agricultural Land					Total Maximum Uptake (MW)	SUM
Burnley	5.11	1.73	0.50	0.21	8.75	17.21	33.52
Calderdale	10.36	3.72	1.17	1.10	19.25	44.39	79.99
Kirklees	37.26	7.52	1.57	2.68	39.00	83.33	171.36
Pendle	4.35	1.73	1.13	0.37	8.50	15.50	31.58
Rossendale	0.00	1.27	0.55	0.31	7.75	17.25	27.13
Total	**57.09**	**15.97**	**4.92**	**4.67**	**83.25**	**177.68**	**343.58**

Table A10: Total Pragmatic RLC Heating Generation (MW)

	Energy Crops	Waste Wood	Farm Anaerobic Digestion	Woodfuel	Solar Energy	Potential for Domestic and commercial Ground Source Heating	
Authority	5% of Grade Three Agricultural Land					Total Pragmatic Uptake (MW)	
Burnley	0.24	0.87	0.08	0.21	5.00	16.00	22.40
Calderdale	0.52	1.86	0.18	1.10	11.00	38.50	53.15
Kirklees	1.85	3.76	0.24	2.68	22.25	73.00	103.77
Pendle	0.22	0.86	0.17	0.37	4.75	13.25	19.62
Rossendale	0.00	0.64	0.08	0.31	4.50	16.00	21.52
Total	**2.83**	**7.99**	**0.74**	**4.67**	**47.50**	**156.75**	**220.47**

Table A32: Heat Scenario - Moderate solar heat uptake - High GSH

Authority	Energy Crops 5% of Grade Three Agricultural Land	Waste Wood	Farm Anaerobic	Woodfuel	Solar Energy	Potential for GSH Total Pragmatic Uptake (MW)	Totals	Percentage of 2020 Demand
Prop of prag	1	1	1	1	0.2	1		
Burnley	0.24	0.87	0.08	0.21	1.00	16.00	18.40	18.67%
Calderdale	0.52	1.86	0.18	1.10	2.20	38.50	44.35	19.09%
Kirklees	1.85	3.76	0.24	2.68	4.45	73.00	85.97	18.84%
Pendle	0.22	0.86	0.17	0.37	0.95	13.25	15.82	16.16%
Rossendale	0.00	0.64	0.08	0.31	0.90	16.00	17.92	23.27%
Total	**2.83**	**7.99**	**0.74**	**4.67**	**9.50**	**156.75**	**182.47**	

N.B. Proportion of Prag = the proportion of the estimated pragmatic generation potential stated in Table A10 utilised under the scenario

Table A33: Heat Scenario - Moderate solar heat uptake - low GSH

Authority	Energy Crops 5% of Grade Three Agricultural Land	Waste Wood	Farm Anaerobic	Woodfuel	Solar Energy	Potential for GSH Off grid uptake (see Table A 29)	Totals	Percentage of 2020 Demand
Prop of prag	1	1	1	1	0.2			
Burnley	0.24	0.87	0.08	0.21	1.00	1.81	4.21	4.27%
Calderdale	0.52	1.86	0.18	1.10	2.20	6.47	12.32	5.30%
Kirklees	1.85	3.76	0.24	2.68	4.45	13.70	26.67	5.85%
Pendle	0.22	0.86	0.17	0.37	0.95	2.28	4.86	4.96%
Rossendale	0.00	0.64	0.08	0.31	0.90	1.84	3.76	4.88%
Total	**2.83**	**7.99**	**0.74**	**4.67**	**9.50**	**26.1**	**51.82**	

Table A34: Existing Small Scale Wind Turbines for Burnley Council

Planning application no.	Site address	Power	x coordinate	y coordinate	Turbine No.	Blade Diameter (m)	Mast Height (m)	Planning Stage
APP/2006/1044	Shay Lane Farm Shay Lane ,BURNLEY, BB10 3PH	6kW	388,438	434,273	2	5.5m?	9m?	Operational
APP/2009/0332	The Kestrels Manchester Road ,BURNLEY, BB11 5NT	11kW	382,892	428,735	1	13	18	Full permission granted
APP/2008/0415	Far Pasture Farm The Long Causeway ,CLIVIGER, BB10 4RR	6kW	382,892	428,735	1	5.5	9.7	Full permission granted
APP/2008/0416	Middle Pasture Farm Foxstones Lane ,CLIVIGER, BB10 4RS	6kW	388,659	430,346	1	5.5	9.7	Full permission granted
APP/2007/0277	Thorny Bank Farm Hameldon Road ,HAPTON, BB11 5QP	5kW	379,712	429,701	1	5.4	12	Full permission granted
APP/2006/1091	28 Kings Drive ,HAPTON, BB12 7DF	1kW	379,988	432,934	1	1.75	n.a.	Full permission granted

Table A35: Sites with Planning Permission for Small Scale Wind Turbine Sites in Calderdale

Planning application no.	Site address	Power (kW)	x coordinate	y coordinate	Turbine No.	Mast Height (m)
06/02435	Cinderhill Farm	5	395213	424705	1	4
06/02506/HSE	8 Belcross Drive Claremount HALIFAX West Yorkshire HX6 3AN	1	409754	426019	1	12
06/02471/FUL	Land Adjacent To Ivy House Farm Whitley Lane Southowram Halifax West Yorkshire	5	411518	424334	1	12
06/02323/FUL	Cherry Hall Farm	10	415725	425265	1	15
06/02241/FUL	Field Near 2 Prospect View Blackley Elland West Yorkshire	6	410041	419938	1	
06/01923/FUL	Land South Of Akroyd Farm Akroyd Lane Pecket Well Hebden Bridge West Yorkshire	6	399615	428978	1	9.6
06/01801/FUL	Land Adjacent To Wells Bottom Farm Blue Ball Road Ripponden Sowerby Bridge West Yorkshire	6	402291	419841	1	15
06/02465	Land Adjacent To New Fold Farm Taylor Lane Bradshaw Halifax West Yorkshire	5	408227	430918	1	12
07/00517	Field Adjacent To Higher Mount Farm Kebs Road Shore Todmorden	5	391490	427529	1	12
07/00633	Commons Farm Kebs Road Shore Todmorden OL14 8SD	20	391230	427233	1	18
07/01210	Land Adjacent To Old Town Reservoir Off Parrock Lane Old Town Hebden Bridge West Yorkshire	15	400146	428656	1	15
07/00313	Land At Woolrow Farm Woolrow Lane Brighouse West Yorkshire HD6 4JN	6	415104	424449	1	15
07/00559	Land Adjacent To Haven Farm Long Causeway Luddendenfoot Halifax West Yorkshire	5	402381	424679	1	12
07/01802	Field Adjacent To Moorhall Farm Cottage Moorcock Road Blackshawhead Hebden Bridge West Yorkshire	20	394554	428239	1	15

Planning application no.	Site address	Power (kW)	x coordinate	y coordinate	Turbine No.	Mast Height (m)
07/01865	Site Of B & Q Shroggs Road Halifax West Yorkshire HX3 5HL	6	408415	425840	3	15
07/02172	Sunny View Kebs Road Shore Todmorden OL14 8SB	5	392524	427254	1	15
07/01958	Field Adjacent To Far Moorside Farm Stacks Lane Cragg Vale Hebden Bridge West Yorkshire	6	401691	424100	1	15
07/02604	Field Adjacent To Higher Hawstones Barn Kebs Road Shore Todmorden	5	392355	427327	1	12
08/00086	Field Adjacent To The Old Farmhouse 4 Little Hollin Hey Hebden Bridge West Yorkshire	15	401281	425145	1	15.5
08/00219	Field Adjacent To Lower Moor Farm Cote Road Ripponden Sowerby Bridge West Yorkshire	6	403192	420011	1	9
08/00246	Land North Of Kirk Lane Quarries Kirk Lane Hipperholme Halifax West Yorkshire	10	412080	425743		12
08/00497	Field Opposite Land Bottom Farm Long Causeway Blackshawhead Hebden Bridge West Yorkshire	10	395001	427456	1	12
08/00562	Field Rear Of Moor End Farm Steep Lane Sowerby Sowerby Bridge West Yorkshire	6	402178	423478	1	9
08/01418	Field Adjacent To Round Hill Farm New Road Cragg Vale Hebden Bridge West Yorkshire	6	400813	421882	1	9
08/01797	Lower Giles Hill Farm South Lane Shelf Halifax West Yorkshire HX3 7TW	20	411729	429543	2	18
08/01861	Tesco Stores Haugh Shaw Road Halifax West Yorkshire HX1 3TU	6	408208	424282		10.6
08/01911/FUL	Land At Upper Flat Head Ripponden Sowerby Bridge West Yorkshire	6	403122	419802	1	15

Planning application no.	Site address	Power (kW)	x coordinate	y coordinate	Turbine No.	Mast Height (m)
08/01436/FUL	Land Adjacent Warcock Hill Barn Long Causeway Blackshawhead Hebden Bridge West Yorkshire	10	394934	427602	2	12
08/02023/FUL	Old Hold Farm Latham Lane Wadsworth Hebden Bridge West Yorkshire HX7 8TG	5	400608	428876	1	12
08/01841/FUL	Field Near Hole Bottom Farm Thornhills Beck Lane Brighouse West Yorkshire	5	414958	424109	1	12
08/01695	Fields Farm Green Lane Heptonstall Hebden Bridge West Yorkshire HX7 7PD	6	397989	428454	1	9
08/01600	Field Rear Of Harefield Farm 907 Halifax Road Hartshead Moor Cleckheaton West Yorkshire	10	416281	424891	1	11
08/01325	Field Adjacent To New Springs Farm Thacker Gate Road Sowerby Sowerby Bridge West Yorkshire	5	402502	423839	1	15
08/01295	Land West Of Blackshaw Clough Farm Blackshaw Clough Road Soyland Sowerby Bridge West Yorkshire	6	402294	420493	1	15
09/00068/FUL	Wood Mill Halifax Road Todmorden OL14 6EE	1	396699	425863	1	4
A-10/00089	Land At Thornton Park Farm	11	402,019	421350	1	18
09/01318	Badgerfields Farm Badger Lane Blackshaw Head Hebden Bridge HX7 7JX	10	396816	427591	1	15
09/01285	Row Farm Row Lane Sowerby Sowerby Bridge West Yorkshire HX6 1JP	6.9	403910	423446	1	15
09/00929	Higher Earnshaw Water Farm Long Causeway Blackshaw Head HEBDEN BRIDGE HX7 7JB	10	396816	427591	1	18

Planning application no.	Site address	Power (kW)	x coordinate	y coordinate	Turbine No.	Mast Height (m)
08/01264	Blackshaw Royd Barn Marsh Lane Blackshawhead Hebden Bridge West Yorkshire HX7 7JU	5	396555	426956	1	15

Table A36: Existing Small Scale Wind Turbines for Kirklees Council

Planning application no.	Site address	Power	x coordinate	y coordinate	Turbine No.	Blade Diameter (m)	Mast Height (m)
1989/01040	Longley Farm/Off, Dunford Road, Holmfirth		414790	406180	2	n/a	n/a
2002/93224	FAR VIEW, 1/3 HALIFAX ROAD, SCAPEGOAT HILL, HUDDERSFIELD, HD7 4NS	6kW	408532	416211	1	n/a	n/a
2003/91859	SCHOOL OF CARING, HUDDERSFIELD TECHNICAL COLLEGE, BLUE BELL HILL, TAYLOR HILL, HUDDERSFIELD, HD4 6LE		413780	414780	1	n/a	n/a
2004/95066	DEIGHTON CENTRE, DEIGHTON ROAD, DEIGHTON, HUDDERSFIELD.		416050	419560	1	n/a	15
2004/95076	CIVIC CENTRE I, MARKET STREET, HUDDERSFIELD.	6kW	414320	416410	3	n/a	n/a
2004/95106	SPEN VALLEY SPORTS COLLEGE, ROBERTTOWN LANE, LIVERSEDGE, WF15 7LX.		419980	423150	1	n/a	n/a
2005/91870	GOAT HILL FARM,BRIESTFIELD ROAD,BRIESTFIELD,DEWSBURY,WF12 0NU		422550	416500	1	5.6	9
2005/93370	DEIGHTON CENTRE,DEIGHTON ROAD,DEIGHTON,HUDDERSFIELD		416050	419560	2		n/a
2006/91257	GOAT HILL END FARM,BURNT PLATTS LANE,SLAITHWAITE,HUDDERSFIELD,HD7 5UZ		405865	414793	1	1.75	9
2007/90384	THE HAYBARN,OLDFIELD,HONLEY,HOLMFIRTH,HD9 6RL		413480	410330	1	5.5	up to 3.75 above roof
2007/91418	HAWTHORNE COTTAGE,21 HEALEY HOUSE,NETHERTON,HUDDERSFIELD,HD4 7DG		411780	412260	1	5.5	up to 3.75 above roof
2007/91606	ADJACENT TO,THE BARN,OFF MOORSIDE LANE,WEST TOP,SLAITHWAITE,HD7 5UU		406952	415191	1	5.5	9
2007/92383	SPARTH TOP COTTAGE,CLIFF ROAD,AUSTONLEY,HOLMFIRTH,HD9 3RJ		411500	407729	1	5.5	9
2007/93435	SLACK FARM,COP HILL SIDE,SLAITHWAITE,HD7 5XA		405821	413589	1	5.5	9

Planning application no.	Site address	Power	x coordinate	y coordinate	Turbine No.	Blade Diameter (m)	Mast Height (m)
2007/93448	HEYSIDE FARM,WINDMILL LANE,UPPER CUMBERWORTH,HUDDERSFIELD,HD8 8YD		418160	407081	1	5.5	15
2008/92128	RYDAL BANK,LIPHILL BANK ROAD,HOLMFIRTH,HD9 2LQ		412910	407803	1	1.5	5
2008/92462	ADJACENT TO,LANDS FARM,CLIFFE LANE,GOMERSAL,CLECKHEATON,BD19 4EU		419450	426460	1	11?	12
2008/92753	NEW HALL FARM,WAKEFIELD ROAD,GRANGE MOOR,HUDDERSFIELD,WF4 4BG		422550	415390	1	5.5	9
2008/92948	WEST ROYD FARM,MARSH LANE,SHEPLEY,HUDDERSFIELD,HD8 8AY		418300	409077	1	n/a	9
2008/93198	Land Adjacent, 43, Deanhouse, Holmfirth, HD3 3TD		413895	410137	1	5.4	12
2008/94227	Land adjacent to, Hill House, Hill, Holmfirth, HD9 3BN		413818	408462	1	5.5	15
2008/94241	Chidswell Farm, Chidswell Lane, Shaw Cross, Dewsbury, WF12 7SW		426745	422945	2	10	18
2009/90365	New Hall Farm, Wakefield Road, Grange Moor, Huddersfield, WF4 4BG		422611	415282	1	5.5	15
2009/91059	The Tetleys Stadium, Owl Lane, Shaw Cross, Dewsbury, WF12 7RH		426316	422708	1	4.3	11
2009/91256	Oldfield Road Farm, Oldfield Road, Honley, Holmfirth, HD9 6RL		413759	410699	1	5.5	12
2009/91576	Land rear of, 11, Halifax Road, Scapegoat Hill, Huddersfield, HD7 4NS		408282	416314	2	13.4	18.3

Table A37: Existing Small Scale Wind Turbines for Pendle Council

Planning application no.	Site address	Year installed	Power / Size	x coordinate	y coordinate
13/06/0278P	Pendle Vale College, Oxford Rd	2008/09	6kW, 10m	387293	438485
13/06/0736P	The Coach House, Warley Wise Lane	2007/08	5kW, 12m	393276	443404
13/07/0045P	Herders Inn, Lancashire Moor Road	2007/08	6kW, 10m	395034	438865
13/07/0802P	Far New Field Edge Farm, Edge Lane	2008/09	5kW, 12m	386077	445445

Table A38: Existing Small Scale Wind Turbines for Rossendale Borough Council

Planning application no.	Site address	Power	x coordinate	y coordinate	Turbine No.	Blade Diameter (m)	Mast Height (m)
2008/0465	Lower Faribanks Farm, Goodshaw Fold Road, Loveclough BB4 8UF	6kW	380,370	426,115	1	6	9
2009/0175	Sunnyside (Hen Head Farm) Kings Highway Accrington BB5 2DL	Iskra AT5-1 5kW	378,958	426,809	1	5.4	15
2009/0215	Brow Edge Farm Cribden Side Haslingden Rossendale BB4 5UB	Iskra AT5-1 5kW	379,353	424,792	1	5.4	15
2009/0478	Higher Bridge Clough Farm Coal Pit Lane Waterfoot Rossendale Lancashire BB4 9SB	Proven WT6000 6KW	384,681	423,549	1		15
2010/0027	Under Brow Farm Cribden Side Haslingden Rossendale BB4 5UD	11kW	379,475	424,529	1		>25
2010/0230	Trickling Water Barn Great House Avenue Helmshore Rossendale BB4 4AL	6kW	377,064	420,372	1		9
2010/0049	Hoyle Dean Farm Coal Pit Lane Rossendale BB4 9SA	Evance Iskra R9000/ 5kW	384,564	424,527	1	5.4	15
2010/0086	End Cottage Tippett Farm Cowpe BB4 7AE	5kW	383,327	420,979	1		15
2010/0096	Higher Trough Farm Eagley Bank Shawforth Rochdale Lancs OL12 8XE	5kW	389,204	420,553	1		15
2010/0172	3 Swinshaw Cottages, Loveclough BB4 8RA	6kW	381,497	426,800	1		10
2009/0620	Dean Head House, Bacup OL13 8RF	2kW	386,544	426,063	1		9

Table A37: Existing Small Scale Wind Turbines for Pendle Council

Planning application no.	Site address	Year installed	Power / Size	x coordinate	y coordinate
13/06/0278P	Pendle Vale College, Oxford Rd	2008/09	6kW, 10m	387293	438485
13/06/0736P	The Coach House, Warley Wise Lane	2007/08	5kW, 12m	393276	443404
13/07/0045P	Herders Inn, Lancashire Moor Road	2007/08	6kW, 10m	395034	438865
13/07/0802P	Far New Field Edge Farm, Edge Lane	2008/09	5kW, 12m	386077	445445

Table A38: Existing Small Scale Wind Turbines for Rossendale Borough Council

Planning application no.	Site address	Power	x coordinate	y coordinate	Turbine No.	Blade Diameter (m)	Mast Height (m)
2008/0465	Lower Faribanks Farm, Goodshaw Fold Road, Loveclough BB4 8UF	6kW	380,370	426,115	1	6	9
2009/0175	Sunnyside (Hen Head Farm) Kings Highway Accrington BB5 2DL	Iskra AT5-1 5kW	378,958	426,809	1	5.4	15
2009/0215	Brow Edge Farm Cribden Side Haslingden Rossendale BB4 5UB	Iskra AT5-1 5kW	379,353	424,792	1	5.4	15
2009/0478	Higher Bridge Clough Farm Coal Pit Lane Waterfoot Rossendale Lancashire BB4 9SB	Proven WT6000 6KW	384,681	423,549	1		15
2010/0027	Under Brow Farm Cribden Side Haslingden Rossendale BB4 5UD	11kW	379,475	424,529	1		>25
2010/0230	Trickling Water Barn Great House Avenue Helmshore Rossendale BB4 4AL	6kW	377,064	420,372	1		9
2010/0049	Hoyle Dean Farm Coal Pit Lane Rossendale BB4 9SA	Evance Iskra R9000/ 5kW	384,564	424,527	1	5.4	15
2010/0086	End Cottage Tippett Farm Cowpe BB4 7AE	5kW	383,327	420,979	1		15
2010/0096	Higher Trough Farm Eagley Bank Shawforth Rochdale Lancs OL12 8XE	5kW	389,204	420,553	1		15
2010/0172	3 Swinshaw Cottages, Loveclough BB4 8RA	6kW	381,497	426,800	1		10
2009/0620	Dean Head House, Bacup OL13 8RF	2kW	386,544	426,063	1		9