

Regional Targets and Scenarios for Renewable Energy (Best Foot Forward, June 2006)

Jun-06 Source: <http://www.emra.gov.uk/files/file724.pdf>

Derbyshire			Lincs		
	Tech	Power rated (kW)		Tech	Power rated (kW)
	Chip	209.8		Chip	209.8
Losehill Hall	Chip	50	Stamford Hospital	CHP (kWe)	64
Market Street Housing Est.	CHP (kWe)	140	Colsterworth	Landfill Gas	2620
Vicotoria Park Leisure Centre	CHP (kWe)	75	Lincoln	Landfill Gas	2050
Queens Park Leisure Centre	CHP (kWe)	70	Leadenham	Landfill Gas	1065
Lowgates Housing Est.	CHP (kWe)	70	Middlemarsh	Landfill Gas	660
Greenbank Leisure Centre	CHP (kWe)	52	Gainsborough	Landfill Gas	330
Belper Mill	Hydro	350	Kirkby on Bain	Landfill Gas	330
Rhodeswood Hydro	Hydro	250	Domestic	Pellet	44
Torside Resvr	Hydro	245	ACIS HA	Pellet	24
Masson Mill	Hydro	240	Lincs Rural Housing Assoc.	Photovoltaic	26
Milford Mill	Hydro	185	Deeping St. Nicholas	Wind Onshore	16000
Borrowwash Mill	Hydro	180	Gedney Marsh	Wind Onshore	12000
Bottoms Resvr	Hydro	160	Mablethorpe II	Wind Onshore	4800
Errwood HES	Hydro	150	Mablethorpe	Wind Onshore	1210
Sutton	Landfill Gas	3018	Spalding	Natural Gas	860000
Staveley	Landfill Gas	2128	Sutton Bridge	Natural Gas	790000
Bretby 2	Landfill Gas	1290			
Glapwell	Landfill Gas	1251			
Bretby	Landfill Gas	982			
Marchington	Landfill Gas	598			
Taddington	Landfill Gas	330			
Crich	Landfill Gas	165			
Queens Park Sport Centre	Photovoltaic	101			
Landau Forte	Photovoltaic	5			
Alfreton	Sewage Gas	390			
Old Whittington	Sewage Gas	354			
Derby Island	Sewage Gas	290			
Derwent	CCGT	214000			
Pye Bridge	Coal Mine Me	9000			

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Derby	Total (kW)	Lincs	Total (kW)	GW/h
<i>Biomass</i>	260	<i>Biomass</i>	278	
<i>CHP</i>	407	<i>CHP</i>	64	
<i>Hydro</i>	1760	<i>Landfill Gas</i>	7055	
<i>Landfill Gas</i>	9762	<i>Photovoltaic</i>	26	
<i>Photovoltaic</i>	106	<i>Wind Onshore</i>	34010	
<i>Biogas</i>	1034	<i>Incineration</i>		
<i>Incineration</i>		<i>Coal</i>		
<i>Coal</i>		<i>Gas</i>	1650000	12285.9
<i>Gas</i>				
Total	13329	Total	1691433	

<http://www.eia.doe.gov/oiaf/1605/9912news.html>

Emissions from Landfill Gas are not included see above ref to IPCC.

<http://www.coalinfo.net.cn/coalbed/meeting/2203/papers/coal-mining/CM030.pdf>

Emissions from abandoned coal mines are not included by IPCC.

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Leics			Northants		
	Tech	Power rated (kW)		Tech	Power rated (kW)
Wanlip	AD sewage	1434	Goosey Hill	Biomass	5000
	Chip	209.8		Chip	209.8
Highcliffe Primary School	Chip	200	Northampton General Hospital	CHP (kWe)	610
Conkers Farm Activity Centre	Chip	100	W Pearce and Co Ltd	CHP (kWe)	600
Manor Farm	Chip	93	Midland Meat Packers	CHP (kWe)	500
Jubilee Lodge	Chip	40	Cooper Street Complex	CHP (kWe)	220
Broom Brigg	Chip	40	Northampton Moat House	CHP (kWe)	90
Leicester Royal Infirmary	CHP (kWe)	2130	Cripps Leisure Centre	CHP (kWe)	85
Royal Mail	CHP (kWe)	693	Isebrook Hospital	CHP (kWe)	45
St. Matthews District Heating Sc	CHP (kWe)	600	Daintree Hospital	CHP (kWe)	45
St.Andrews District Heating Sch	CHP (kWe)	220	Weldon	Landfill Gas	4600
St. Peters District Heating Scher	CHP (kWe)	200	Wooton	Landfill Gas	2000
Hermitage Leisure Centre	CHP (kWe)	56	Portley Ford	Landfill Gas	1850
Coalville Hospital	CHP (kWe)	38	Sidegate lane	Landfill Gas	1360
Gorse Hill Hospital	CHP (kWe)	38	Kilsby	Landfill Gas	1000
St.Marys Hospital	CHP (kWe)	38	Brixworth	Landfill Gas	600
De Montford university	CHP (kWe)	38	Great Billing	Sewage Gas	1000
Hinckley and Bosworth Borough	CHP (kWe)	11	Burton Wold	Wind Onshore	20000
Centurion Court Sheltered Accoi	CHP (kWe)	10	Corby	CCGT	350000
Cotesbach	Landfill Gas	3570			
Enderby Warren II	Landfill Gas	3000			
Bradgate	Landfill Gas	2640			
Enderby Warren	Landfill Gas	1978			
Mountsorrel	Landfill Gas	1582			
Narborough	Landfill Gas	1450			
Lount	Landfill Gas	1150			
Manor Farm	Logs	40			
King edward vii school	Pellet	1250			
newbridge high school	Pellet	700			
Orchard Primary School	Pellet	200			
Ashwell Engineering	Pellet	100			
Beaumanor Education Centre	Pellet	15			
FC Visitor centre	Pellet	15			
Rural Training Centre	Pellet	5			

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Environ	Photovoltaic	70
Leicester City Council	Photovoltaic	29.4
Leicester University	Photovoltaic	11
Crest	Photovoltaic	6.4
West Beacon farm	Photovoltaic	6
MKA Healthy Living	Photovoltaic	4.8
Millenium Park	Photovoltaic	4
Beacon Energy	Photovoltaic	3.5
Rushey Mead School	Photovoltaic	1
Melton Mowbray	Sewage Gas	290
Hartshill	Sewage Gas	190
Hinckley	Sewage Gas	190
West Beacon farm	Wind Onshore	65

Leics	Total (kW)
<i>Biogas</i>	2104
<i>Biomass</i>	3008
<i>CHP</i>	4072
<i>Landfill Gas</i>	15370
<i>Photovoltaic</i>	136
<i>Wind Onshore</i>	65
<i>Incineration</i>	
<i>Coal</i>	
<i>Gas</i>	
Total	24755

Northants	Total (kW)
<i>Biofuel</i>	5000
<i>Biomass</i>	210
<i>CHP</i>	2195
<i>Landfill Gas</i>	11410
<i>Sewage Gas</i>	1000
<i>Wind Onshore</i>	20000
<i>Incineration</i>	
<i>Coal</i>	
<i>Gas</i>	350000
Total	389815

Regional Targets and Scenarios for Renewable Energy (Best Foot Forward, June 2006)

Notts		
	Tech	Power rated (kW)
Hexgrave Estate	Chip	300
	Chip	209.8
Allerton Research and Education	Chip	40
Newark Sugar Factory	CHP (kWe)	10000
Queens Medical Centre	CHP (kWe)	4900
Imperial Tobacco	CHP (kWe)	4000
Nottingham City Hospital	CHP (kWe)	370
Central Television	CHP (kWe)	300
Nottingham Royal Moat House	CHP (kWe)	167
Boughton Pumping Station	CHP (kWe)	150
Nottingham Moat House	CHP (kWe)	110
Bramcote Leisure Centre	CHP (kWe)	75
Portland College	CHP (kWe)	70
Royal Centre	CHP (kWe)	54
Ken Martin Swimming Pool	CHP (kWe)	38
Shirebrook	Coal Mine Me	9000
Beeston Weir	Hydro	1676
Dorket Hill	Landfill Gas	2826
Burnstump	Landfill Gas	1920
Daneshill 2	Landfill Gas	1048
Billsthorpe	Landfill Gas	1003
Daneshill	Landfill Gas	937
Carlton Forest	Landfill Gas	330
West Bridgford Comp	Pellet	2200
Chilwell Comp	Pellet	2200
Redhill Comp	Pellet	1760
	Pellet	150
Ranskill School	Pellet	150
Mornington Primary School	Pellet	150
James Peacock School	Pellet	150
Kneesall School	Pellet	150
Butlers Hill School	Pellet	150
Linby School	Pellet	150

GWh

4.0938108

7.6345152

67.108608

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Harworth	Pellet	150		
St Matthews	Pellet	150		
St Wilfrids	Pellet	150		
Ruddinton Park	Pellet	12	57.125712	
Trent Park Developments	Photovoltaic	49.7		
Corncroft	Photovoltaic	34		
University of Nottingham	Photovoltaic	17.8		
Tesco	Photovoltaic	15.8		
Nottinghamshire Community Ho	Photovoltaic	15.6		
Nottinghamshire Wildlife Trust	Photovoltaic	10.9		
Notts County Council - Business	Photovoltaic	10.5		
University of Nottingham	Photovoltaic	9		
Hockerton Housing	Photovoltaic	7.9		
Autonomous House, Southwell	Photovoltaic	2.2		
Eco Energy House	Photovoltaic	1.6		
The Marmont Centre	Photovoltaic	1	0.2004288	
Stoke Bardolph	Sewage Gas	2114		
Newthorpe	Sewage Gas	390		
Mansfield	Sewage Gas	290		
Toton	Sewage Gas	290		
Retford	Sewage Gas	190		
Garibaldi School	SRC Chip	800	5.9568	
Eastcroft	Waste Inciner:	7000		142.1198748
Ratcliffe on Soar	Coal	2360000		
Cottam	Coal	2000000		
West Burton	Coal	2000000		
		924		

Notts	Total (kW)
Biomass	9022
CHP	20234
Coal Mine Methane	9000
Hydro	1676
Landfill Gas	8064
Photovoltaic	176
Sewage Gas	3274

	2006	CO2
Derbs		302,754
Leics		-
Lincs		2,334,321
Nhants		465,159
Notts		19,343,586
		22,445,820

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<i>Waste Incineration</i>	7000
<i>Coal</i>	6360000
<i>Gas</i>	
	<u>924</u>
Total	6419370

<http://www.defra.gov.uk/environment/tusdac/reports/ecep/05.htm>

A New Economics Foundation (NEF) guide cites a CHP unit in Nottingham to exemplify the job creation from a community heating system. Around 125 jobs were created, of which 100 were involved in laying new pipe-work, 17 in installing meters and heating controls, and 8 in operation and maintenance (NEF, 1998).

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None

	117
	150
	22
	90
	300
drayton	270
Manor House Business Park	100
	1049
	209.8

Consumption

		GWh	Total	2010 Target	% of Total	Generated
Amber Valley	Derbyshire	699				
Bolsover	Derbyshire	326				
Chesterfield	Derbyshire	564				
Derby	Derbyshire	1,242				
Derbyshire Dales	Derbyshire	503				
Erewash	Derbyshire	526				
High Peak	Derbyshire	812				
North East Derbyshire	Derbyshire	492				
South Derbyshire	Derbyshire	518	5,682	224.00	0.04	
Blaby	Leicestershire	390				
Charnwood	Leicestershire	817				
Harborough	Leicestershire	413				
Hinckley and Bosworth	Leicestershire	537				
Leicester	Leicestershire	1,677				
Melton	Leicestershire	302				
North West Leicestershire	Leicestershire	616				
Oadby and Wigston	Leicestershire	226				
Rutland	Leicestershire	462	5,440	320.00	0.06	0.4427681
Boston	Lincolnshire	367				
East Lindsey	Lincolnshire	774				
Lincoln	Lincolnshire	495				
North Kesteven	Lincolnshire	529				
South Holland	Lincolnshire	517				
South Kesteven	Lincolnshire	725				
West Lindsey	Lincolnshire	401	3,808	346.00	0.09	
Corby	Northampton	544				
Daventry	Northampton	464				
East Northamptonshire	Northampton	360				
Kettering	Northampton	424				
Northampton	Northampton	1,170				
South Northamptonshire	Northampton	439				
Wellingborough	Northampton	401	3,802	366.00	0.10	2800.3 0.736452
Ashfield	Nottinghamshire	588				
Bassetlaw	Nottinghamshire	700				
Broxtowe	Nottinghamshire	400				

Consumption

Gedling	Nottinghamshire	392			
Mansfield	Nottinghamshire	467			
Newark and Sherwood	Nottinghamshire	648			
Nottingham	Nottinghamshire	1,583			
Rushcliffe	Nottinghamshire	423	5,200	183.00	0.04
			23,932	1,439	0.060

45384854 45384.85 0.114575

Ref:Regional and local electricity consumption statistics, 2005 (experimental) <http://www.dti.gov.uk/files/file36068.xls>

Renewables Capacity - Derbyshire

*The 2010 Derbyshire renewables target is 224 GWh per year or 4% of the electricity consumption of Derbyshire.
The CO2 emissions from power generation in Derbyshire are 302,754 tonnes. Derbyshire is a net importer of electricity*

DERBYSHIRE	Installed capacity		Target 2010	% of Total County Consumption
	kW	MWh	kW	
Wind Onshore (2 MW)	0	0	36,000	1.8
Wind Offshore (3 MW)	0	0	0	0.0
Hydro (330 kW)	1,760	8,017	2,800	0.2
Biomass (263kW)	260	1,936	0	0.0
Biogas (263kW)	1,034	8,152	5,800	0.9
Coal Mine Methane (1300kW)	9,000	67,014	0	0.0
Landfill Gas (1578kW)	9,762	81,239	8,500	1.4
CHP (1.6MW)	407	3,031	0	0.0
Micro Wind (1kW)	0	0	0	0.0
PV (2kW)	106	121	500	0.0
Waste Incineration (7,000kW)	0	0	0	0.0
Coal (2000MW)	0	0	2,000	0.3
Natural Gas (700MW)	214,000	1,593,444	0	0.0
TOTAL	236,329	1,762,954	0	4.6

Renewables Capacity - Leicestershire Rutland

The 2010 Leicestershire renewables target is 320 GWh or 6% of the electricity consumption of Leicestershire. Leicestershire does not have any CO2 emitting power generation facilities and is a net importer of electricity.

LEICESTERSHIRE and Rutland	Installed capacity		Power Generation	% of Total County Consumption
	kW	MWh	kW	
Wind Onshore (2 MW)	65	171	22,000	1.1
Wind Offshore (3 MW)	0	0	0	0.0
Hydro (330 kW)	0	0	0	0.0
Biomass (263kW)	3,008	22,398	10,000	1.4
Biogas (263kW)	2,104	16,588	4,600	0.7
Coal Mine Methane (1300kW)	0	0	0	0.0
Landfill Gas (1578kW)	15,370	127,909	18,000	2.9
CHP (1.6MW)	4,073	30,328	0	0.0
Micro Wind (1kW)	0	0	4,000	0.2
PV (2kW)	136	155	400	0.0
Waste Incineration (7,000kW)	0	0	0	0.0
Coal (2000MW)	0	0	2,000	0.3
Natural Gas (700MW)	0	0	700	0.1
TOTAL	24,756	197,548	61,700	6.7

Renewables Capacity - Lincolnshire


The 2010 Lincolnshire renewables target is 346 GWh or 9% of the electricity consumption of Lincolnshire
The CO2 emissions from power generation in Lincolnshire are 2.3 million tonnes. 44% of this electricity is consumed in Lincolnshire.

LINCOLNSHIRE	Installed capacity		Target 2010	% of Total County Consumption
	kW	MWh	kW	
Wind Onshore (2 MW)	34,010	89,378	42,000	2.1
Wind Offshore (3 MW)	0	0	0	0.0
Hydro (330 kW)	0	0	0	0.0
Biomass (263kW)	278	2,070	20,000	2.9
Biogas (263kW)	0	0	3,500	0.5
Coal Mine Methane (1300kW)	0	0	0	0.0
Landfill Gas (1578kW)	7,055	58,712	7,000	1.1
CHP (1.6MW)	0	0	0	0.0
Micro Wind (1kW)	0	0	0	0.0
PV (2kW)	26	30	300	0.0
Waste Incineration (7,000kW)	0	0	0	0.0
Coal (2000MW)	0	0	0	0.0
Natural Gas (700MW)	1,650,000	12,285,900	0	0.0
TOTAL	1,691,369	12,436,090	0	6.6


Renewables Capacity - Northamptonshire

**The 2010 Northamptonshire renewables target is 366 GWh or 10% of the electricity consumption of Northamptonshire
The CO2 emissions from power generation in Northamptonshire are 466,159 tonnes. 74% of this electricity is consumed in Northamptonshire.**


NORTHAMPTONSHIRE	Installed capacity		Target 2010	% of Total County Consumption
	kW	MWh	kW	
Wind Onshore (2 MW)	20,000	52,560	12,000	0.6
Wind Offshore (3 MW)	0	0	0	0.0
Hydro (330 kW)	0	0	0	0.0
Biomass (263kW)	5,210	38,792	25,000	3.6
Biogas (263kW)	1,000	7,884	4,200	0.6
Coal Mine Methane (1300kW)	0	0	0	0.0
Landfill Gas (1578kW)	11,410	94,954	14,000	2.2
CHP (1.6MW)	0	0	0	0.0
Micro Wind (1kW)	0	0	0	0.0
PV (2kW)	0	0	300	0.0
Waste Incineration (7,000kW)	0	0	0	0.0
Coal (2000MW)	0	0	0	0.0
Natural Gas (700MW)	350,000	2,606,100	0	0.0
TOTAL	387,620	2,800,290	55500	7.1




START



START




START




START


INSTALLATIONS	NEW JOBS	COST (£million)	CO2 EMISSIONS
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Optimum





100% Renewables Scenario



The 2010 Nottinghamshire renewables target is 183 GWh or 4% of the electricity consumption of Nottinghamshire
The CO2 emissions from power generation in Nottinghamshire are 19.3 million tonnes. only 11% of this electricity is consumed in Nottinghamshire.

NOTTINGHAMSHIRE	Installed capacity 2006		Target 2010	% of Total County Consumption
	kW	MWh	kW	
Wind Onshore (2 MW)	0	0	10,000	0.5
Wind Offshore (3 MW)	0	0	0	0.0
Hydro (330 kW)	1,676	7,635	7,800	0.7
Biomass (263kW)	9,022	67,178	6,000	0.9
Biogas (263kW)	3,274	25,812	5,400	0.8
Coal Mine Methane (1300kW)	9,000	67,014	0	0.0
Landfill Gas (1578kW)	8,064	67,109	5,000	0.8
CHP (1.6MW)	20,234	150,662	0	0.0
Micro Wind (1kW)	0	0	0	0.0
PV (2kW)	176	200	500	0.0
Waste Incineration (7,000kW)	7,000	55,188	0	0.0
Coal (2000MW)	0	0	0	0.0
Natural Gas (700MW)	0	0	0	0.0
TOTAL	58,446	440,798	34,700	3.7

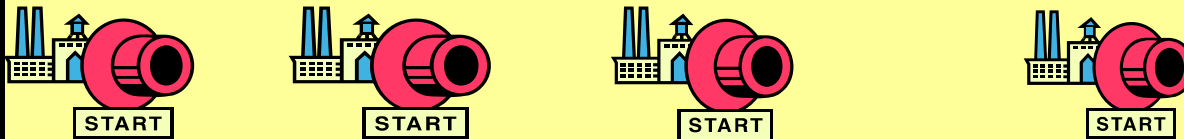
Optimum

JOBS

COST

100% Renewables Scenario

100%



INSTALLATIONS	NEW JOBS	COST (£million)	CO2 EMISSIONS
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