

Renewable Energy Generation Projections

for

Christchurch
East Dorset
North Dorset
Purbeck
West Dorset
Weymouth & Portland
Bournemouth
Poole

BCP (Bournemouth, Christchurch & Poole) Council
Dorset Council
Greater Dorset



Protecting Dorset

Campaign to Protect Rural England

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The Campaign to Protect Rural England exists to promote the beauty, tranquillity and diversity of rural England
by encouraging the sustainable use of land and other natural resources in town and country.

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The purposes of this report are to provide up-to-date information on current and projected renewable energy generation and to report progress towards 2020 renewable energy targets for the constituent authorities of Greater Dorset. It can be used as an evidence-base for informing and updating renewable energy policy and for assisting the determination of planning applications for renewable energy installations.

The renewable energy projections in the summary table below follow Government projection methodology and take into account renewable energy installations that are either operational (16,790), under construction (1) or awaiting construction (10).

The renewable energy target for Greater Dorset is 921.7 GWh (gigawatt hours). This target is 7.5% of estimated 2020 total energy consumption for the Greater Dorset area. The installations that are either operational or under construction are generating or expected to generate an annual 817.8 GWh or 88.7% of the target. The installations awaiting construction are projected to generate 129.6 GWh or 14.1% of the target. The total projected generation is 947.6 GWh or 102.8% of the target.

It should be emphasised that projections provide only a current snap-shot. They will change every time a planning decision is made to either approve a proposal awaiting a decision or abandon an approved proposal awaiting construction (for lack of funding, for example).

Local Authority	CURRENT ANNUAL RENEWABLE ENERGY PROJECTION												
	2020 Energy Consumption		2020 RE Target		Awaiting Construction		Under Construction		Operational		Total		
	GWh	GWh	GWh	GWh	% of Target	GWh	% of Target	GWh	% of Target	GWh	% of Target	GWh	% of Target
East Dorset	1,521.9	114.1	5.0	4.4	0.0	0.0	0.0	109.5	96.0	114.5	100.3		
North Dorset	1,236.0	92.7	5.1	5.4	0.0	0.0	0.0	133.6	144.1	138.6	149.6		
Purbeck	1,098.2	82.4	34.8	42.3	0.0	0.0	0.0	109.5	132.9	144.3	175.2		
West Dorset	2,020.8	151.6	25.6	16.9	0.0	0.0	0.0	157.5	103.9	183.1	120.8		
Weymouth & Portland	829.2	62.2	52.7	84.7	0.0	0.0	0.0	14.7	23.6	67.3	108.3		
DORSET COUNCIL	6,706.2	503.0	123.2	24.5	0.0	0.0	0.0	524.7	104.3	647.9	128.8		
Bournemouth	2,380.4	178.5	0.0	0.0	0.0	0.0	0.0	30.4	17.0	30.4	17.0		
Christchurch	791.0	59.3	6.6	11.1	0.0	0.0	0.0	121.1	204.1	127.7	215.3		
Poole	2,411.7	180.9	0.0	0.0	71.8	39.7	69.8	38.6	141.6	78.3			
BCP COUNCIL	5,583.1	418.7	6.6	1.6	71.8	17.2	221.2	52.8	299.7	71.6			
GREATER DORSET	12,289.3	921.7	129.8	14.1	71.8	7.8	746.0	80.9	947.6	102.8			

The last column of the table shows that 8 of the 11 authorities listed have already exceeded their target, either by a small or large margin. The range is wide, from 100.3% for East Dorset to 215.3% for Christchurch. Of the remaining 3, Poole and the Urban UA at 78.3 and 71.6%, respectively, are doing well but Bournemouth at 17.0% is, exceptionally, failing to make headway.

For Greater Dorset, renewable electricity technologies constitute the majority of the projection, 732 GWh (77%), with renewable heat technologies providing the balance, 216 GWh (23%). Of the electricity technologies, the largest contribution to the projection is from solar PV, 434 GWh (46%), the majority from 50 ground-mounted installations. These contribute 369 GWh (39%). The second largest contribution is from biomass (including a small amount of Micro CHP) which amounts to 146 GWh (15%). A comparison of projections for 2020 and estimated renewable energy resources is presented on page 18 (Tables 24 & 25).

This report provides evidence that, on the whole, Dorset's record of and prospects for renewable energy generation and progress towards targets are impressive. With acknowledgement that targets are not ceilings, the fact that less than a year remains before the final year run-up to the target date of 31 December 2020, suggests that planning authorities, from now on, should ensure that no more than minimal damage is caused by renewable energy installations to Dorset's highly valued landscape, heritage, agricultural and amenity assets.

Chart 1 CURRENT ANNUAL RENEWABLE ENERGY PROJECTION COMPARED WITH THE 2020 RENEWABLE ENERGY TARGET

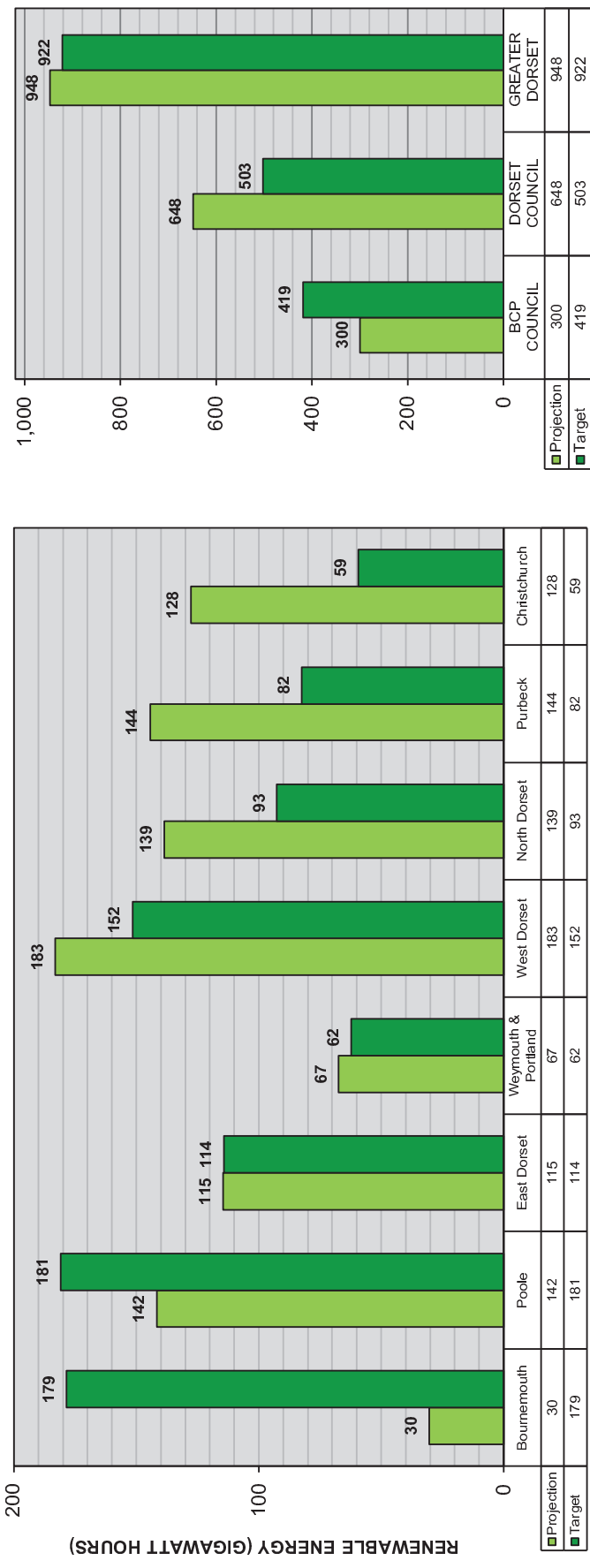


Chart 2 CURRENT ANNUAL RENEWABLE ENERGY PROJECTION AS A PERCENTAGE OF THE 2020 TARGET

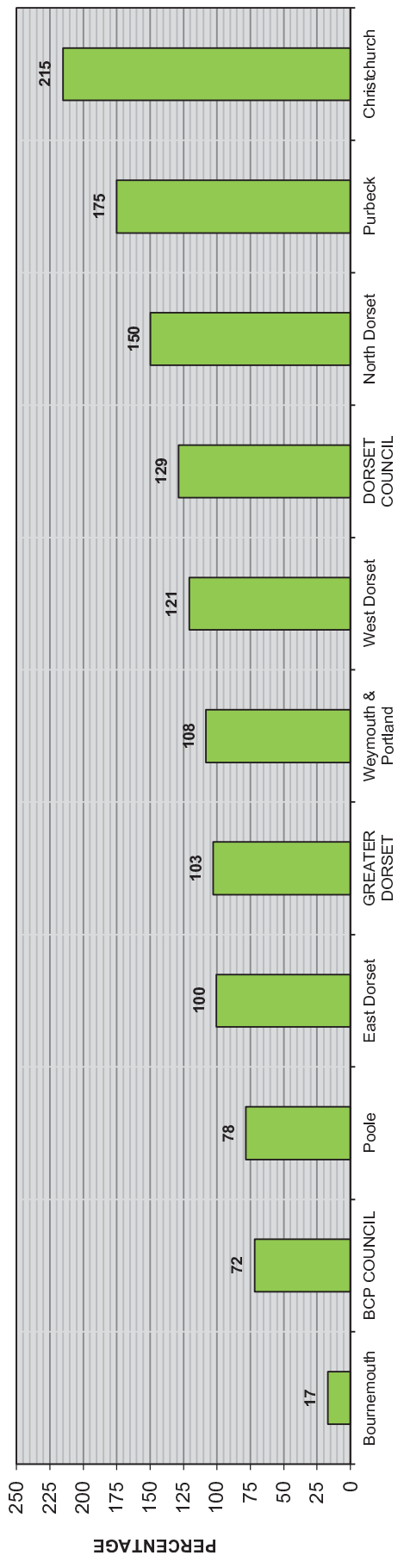


Chart 3 CURRENT ANNUAL RENEWABLE ENERGY PROJECTION
CONTRIBUTION FROM (1): OPERATIONAL INSTALLATIONS & THOSE UNDER CONSTRUCTION AND (2): THOSE AWAITING CONSTRUCTION

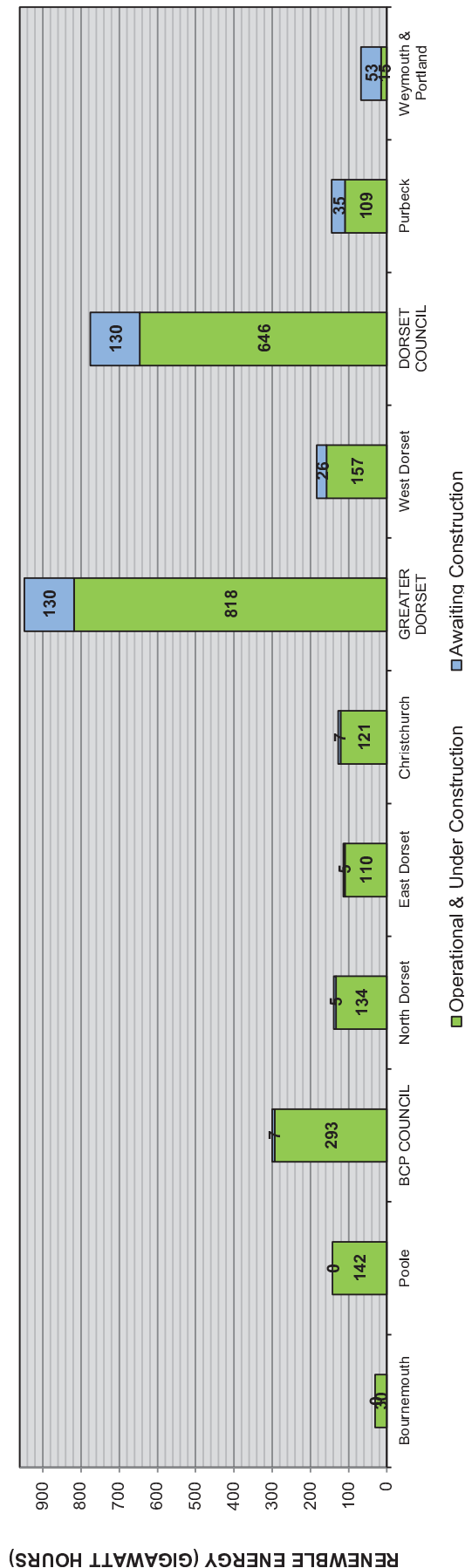
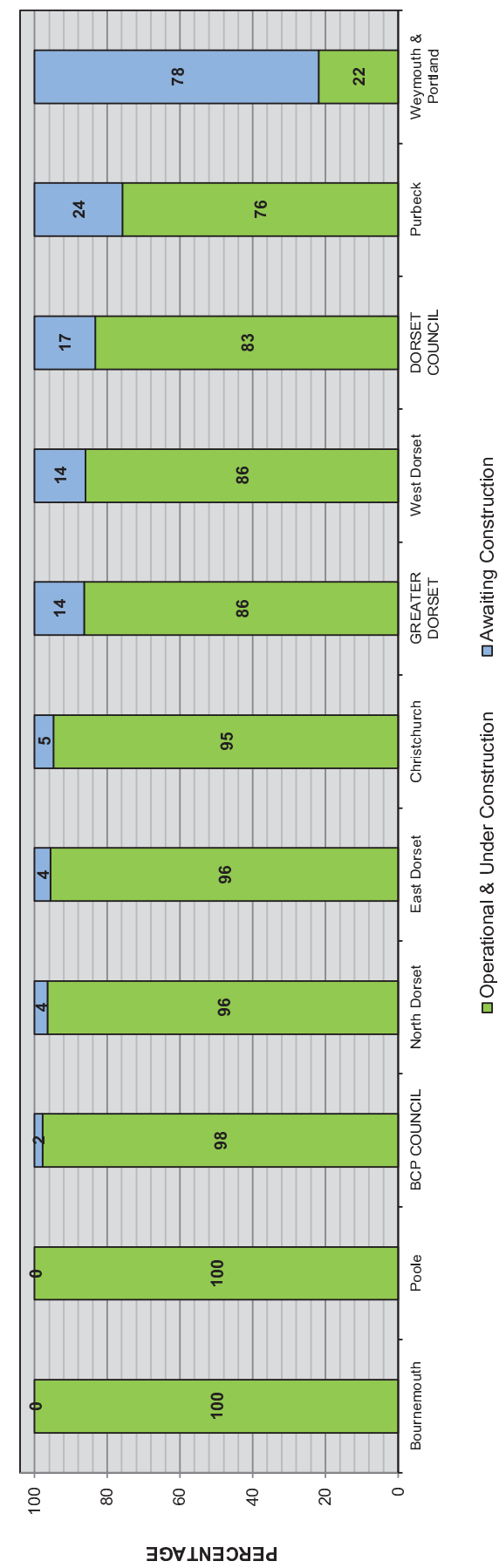


Chart 4 CURRENT ANNUAL RENEWABLE ENERGY PROJECTION
CONTRIBUTION FROM (1): OPERATIONAL INSTALLATIONS & THOSE UNDER CONSTRUCTION AND (2): THOSE AWAITING CONSTRUCTION



INTRODUCTION

The Dorset Campaign to Protect Rural England is fully supportive of renewable energy - but not at any price. It objects to planning proposals that would be unacceptably damaging to Dorset's highly valued landscape, heritage, agricultural and amenity assets.

The purposes of this report are to provide up-to-date information on renewable energy generation and to report progress towards a notional 7.5 per cent 2020 renewable energy target for the constituent authorities of the Greater Dorset area. It can be used as an evidence-base for informing and updating renewable energy policies and for assisting the determination of planning applications for renewable energy installations.

Government methodology has been followed in the preparation of this report. Renewable energy installations that are either operational, under construction or awaiting construction have been taken into account. Installations awaiting a planning decision have not.

DATA SOURCES

Two Government sources of data for renewable energy generation from electricity technologies have been accessed for this report: The Renewable Energy Planning Database (REPD) Extract, published monthly by the Department for Business, Energy & Industrial Strategy (BEIS) and the Feed-in Tariff (FIT) Installation Report, published quarterly by the Office of Gas and Electricity Markets (Ofgem).

The Extract provides detailed information on every installation with an installed capacity of 1 megawatt (MW) or more that has entered the planning process. It is important to note that the planning status of every installation is checked regularly and that the date of the most recent check is reported in the Extract. The FIT Report contains only installations that have been commissioned and hence provides information for operational installations only. Accreditation by the FIT Scheme is limited to installations with an installed capacity of no more than 5 MW.

Government does not publish data on renewable heat generation at the planning authority level. Information provided in this report, all for operational schemes, has been taken from the Green Alliance/RegenSW Report, published 10 October 2016. Information for domestic wood stoves, not recorded by the Green Alliance/RegenSW, has been taken from the Dorset Energy Partnership's (DEP's) Annual Review 2015/2016, published 8 July 2016. Local planning authority web sites have also been used as a source of information.

DATA REPORTED

Data are presented in tabular and graphical format. They are accompanied by notes and data sources and are designed to be self-explanatory.

For all technologies other than solar photovoltaic (PV), every renewable electricity generation installation in Greater Dorset is reported individually, in Tables 1 - 8. These total 65. Solar PV installations with an installed capacity (IC) of 0.5 MW and above are also reported individually. All these are ground-mounted and total 49. To this total can be added one other ground-mounted installation (Table 8, entry 30) which has an IC of 0.2484 MW. All other solar PV installations with an IC below 0.5 MW, predominantly roof-mounted, are reported as a total number for each local authority. The total for Greater Dorset is 14,817 (Table 12).

Data for six heat technologies: anaerobic digestion, biomass, heat pumps, sewage gas, solar thermal and domestic wood stoves are presented in Tables 9 & 10. The total number of installations, all operational, is 1,870. For presentation purposes, this number is divided

by technology and subdivided by local authority. It is notable (Table 11) that ground-mounted solar PV technology makes by some margin the largest contribution, 39%, to the current projection for renewable energy generation in Greater Dorset. The contribution from the six heat technologies ranks second with 23% and electricity from biomass third with 15%. Although there has been significant objection to larger installations proposed for inappropriate locations, it has become clear that, on the whole, ground-mounted solar PV installations, particularly those with an IC below 5 MW, can be accommodated successfully within Dorset's countryside.

RENEWABLE ENERGY TARGETS

Although it is only the UK Government that has a legal requirement to meet a 15% 2020 renewable energy target, Dorset's local authorities have a related commitment. Through their membership of the Local Government Association (LGA), the four Districts and two Boroughs of Dorset County, the County itself and the Unitary Authorities of Bournemouth and Poole, endorsed a Memorandum of Understanding (MOU) between the Department for Energy and Climate Change (DECC - now BEIS, created 14 July 2016) and the Local Government Group (LGG) - a partnership the principal member of which is the LGA. The MOU sets out a DECC - LGG partnership approach to help meet climate change mitigation and related objectives, notably including: "The target to supply 15 per cent of the UK's energy consumption from renewable energy by 2020 as set out in the 2009 Renewable Energy Directive (European Commission Directive 2009/28/EU).

The MOU (published 9 March 2011) makes it clear that "This Memorandum is a statement of intent and should not be interpreted as a binding agreement". Subsequently, DECC's UK Renewable Energy Roadmap (published 12 July 2011) suggested that half the UK's 15% target could come from sources of "national significance". These are defined by DECC as installations with an installed capacity of more than 50 MW onshore and 100 MW offshore and are the direct responsibility of the Secretary of State for Energy and Climate Change. This suggestion effectively reduced a local authority's agreement to generate 15% of its 2020 energy consumption from its own renewable energy sources down to a figure of 7.5%.

This commitment to DECC by Dorset's local authorities to a "local" 7.5% target was not universally repeated when they were requested by the DEP to similarly commit to a 7.5% target for the Greater Dorset area. East Dorset, North Dorset and Purbeck decided the commitment was too close to home. They had twin concerns: that Bournemouth and Poole would be unable to meet a 7.5% target with the resources available to them and that to meet the area target they would be put under pressure to deploy a larger number of wind turbines than they would wish - together they were assessed as having a wind resource equivalent to 214 2.5 MW turbines. To add to their concerns, an assurance by the DEP that the resource assessment was not a planning material consideration turned out to be incorrect.

A comparison of the DEP's estimated renewable energy resources and current projections for 2020 deployment is presented in Tables 24 & 25.

CONCLUSIONS

This report provides evidence that, on the whole, Dorset's record of and prospects for renewable energy generation and progress towards targets are impressive. The progress that has already been achieved and the fact that less than a year remains before the final year run-up to the target date of 31 December 2020, suggest that now is an opportune time for local authorities to review and adjust, if necessary, their renewable energy policies. If they do not already do so, and accepting that targets are not ceilings, policies should from now on ensure that no more than minimal damage is caused by renewable energy installations to Dorset's exceptional and highly valued landscape, heritage, agricultural and amenity assets.

Table 1 RENEWABLE ELECTRICITY GENERATION INSTALLATIONS IN CHRISTCHURCH

Old REPD Ref.	New REPD Ref.	Ogern Ref.	PA Ref.	Submitted	Approved	Operational	Status	Last Update by BEIS	Technology Type	REPD IC MW	Developer IC MW	Load Factor	Annual Output GWh
1	B0511	287	DCG PL/1363/12	23/08/2012	25/09/2013	29/08/2014	Awaiting Construction	24/05/2018	Anaerobic Digestion	1.0000	1.0000	0.7543	6.6078
2	B0849	2105	8/13/00332	16/07/2013	26/09/2013	29/08/2014	Operational		Photovoltaic (Ground)	36.0000	37.2600	0.1227	40.0545
3	IF1114	2282	8/12/0512	28/11/2012	28/03/2013	31/03/2014	Operational		Photovoltaic (Ground)	20.0000	24.2000	0.1227	26.0150
4	C3027	2308	8/14/0226	21/05/2014	29/08/2014	27/03/2015	Operational		Photovoltaic (Ground)	18.0000	14.4000	0.1210	15.2640
5		5315	8/15/0284	21/05/2015	24/06/2015	31/03/2016	Operational		Photovoltaic (Ground)	18.0000	3.6000	0.1210	3.8160
6		4727	8/14/0520	28/10/2014	23/09/2015	26/02/2016	Operational		Photovoltaic (Ground)	8.0000	3.5990	0.1227	3.8689
7	C3340	2234	8/14/0412	28/08/2014	30/01/2015	01/09/2015	Operational		Photovoltaic (Ground)	4.0000	3.0360	0.1227	3.2637
8			669 FIT Refs.	various	various		Operational		Photovoltaic (Roof)	2.5617	2.5617	0.1200	2.6929
9	EN00247	139	8/11/0268	26/05/2011	26/07/2011	22/03/2017	Operational		Plant Biomass	3.2000	3.2000	0.7513	21.0618
10			FT00018460	01/04/2010		25/01/2008	Operational		Wind	0.0010	0.0010	0.2683	0.0024
TOTAL										110.7627	92.8577	0.1508	122.6469

Table 2 RENEWABLE ELECTRICITY GENERATION INSTALLATIONS IN EAST DORSET

Old REPD Ref.	New REPD Ref.	Ogern Ref.	PA Ref.	Submitted	Approved	Operational	Status	Last Update by BEIS	Technology Type	REPD IC MW	Developer IC MW	Load Factor	Annual Output GWh
1			No FIT Ref.	17/12/2013		05/12/2014	Operational		Anaerobic Digestion	0.1740	0.1740	0.7543	1.1497
2	IF1311	FT00597205	3/13/0074/FUL	28/01/2013	28/05/2013	06/11/2014	Operational		Anaerobic Digestion	0.1640	0.1640	0.7543	1.0837
3		FT00700851		18/12/2013		25/11/2014	Operational		Anaerobic Digestion	0.1250	0.1250	0.7543	0.8260
4	N00018L	723		28/12/2001	05/07/2002	01/12/2004	Operational		Landfill Gas	3.0000	3.0000	0.4917	12.9225
5			FT00300187	05/12/2011		12/10/2011	Operational		Micro CHP	0.0010	0.0010	0.1329	0.0012
6	B1350	2109	3/14/0457/FUL	15/04/2014	31/07/2014	25/02/2015	Operational		Photovoltaic (Ground)	20.4000	20.3500	0.1176	20.9605
7	C1376	1761	3/13/0470/FUL	28/05/2013	08/10/2013	01/03/2014	Operational		Photovoltaic (Ground)	13.2000	13.2000	0.1176	13.5960
8	C1807	2086	3/13/0689/FUL	22/07/2013	17/01/2014	30/01/2015	Operational		Photovoltaic (Ground)	13.0000	13.0000	0.1176	13.3900
9	B1430	2114	3/14/0790/FUL	14/08/2014	03/11/2014	26/02/2016	Operational		Photovoltaic (Ground)	7.0000	7.0000	0.1210	7.4200
10	C3357	2248	3/14/0774/FUL	19/08/2014	04/11/2014	30/06/2015	Operational		Photovoltaic (Ground)	5.0000	5.0000	0.1142	5.0000
11		5987	3/15/1020/FUL	21/09/2015	17/12/2015		Awaiting Construction	29/01/2019	Photovoltaic (Ground)	5.0000	5.0000	0.1142	5.0000
12	C2169	2139	3/13/0948/FUL	20/09/2013	28/05/2014	31/03/2015	Operational		Photovoltaic (Ground)	3.9200	3.6840	0.1176	3.7945
13		4761	3/14/0956/FUL	24/10/2014	14/10/2015	23/12/2015	Operational		Photovoltaic (Ground)	3.8200	2.7190	0.1227	2.9229
14			1,57 FIT Refs.	various	various	various	Operational		Photovoltaic (Roof)	7.0194	7.0194	0.1200	7.3788
TOTAL										81.6494	80.2624	0.1358	95.4458

Table 3 RENEWABLE ELECTRICITY GENERATION INSTALLATIONS IN PURBECK

Old REPD Ref.	New REPD Ref.	Ogern Ref.	PA Ref.	Submitted	Approved	Operational	Status	Last Update by BEIS	Technology Type	REPD IC MW	Developer IC MW	Load Factor	Annual Output GWh
1			FT00051766	22/11/2010		22/11/2010	Operational		Hydro	0.0148	0.0148	0.4054	0.0526
2			Refer to Green Alliance/RegenSW Annual Report October 2016				Operational		Landfill Gas	6.2370	6.2370	0.4917	26.8659
3		5659	6/20150516	19/08/2015	28/10/2015		Awaiting Construction	11/06/2019	Photovoltaic (Ground)	15.0000	12.0000	0.1279	13.4400
4	C1773	1973	6/20130443	02/08/2013	01/11/2013	04/12/2014	Operational		Photovoltaic (Ground)	10.0000	10.0000	0.1244	10.9000
5	IF1442	2058	6/20130134-0574	06/03/2013	28/06/2013	19/03/2014	Operational		Photovoltaic (Ground)	8.2700	8.1000	0.1233	8.7480
6	A4832	1080	6/20120415	05/07/2012	28/11/2012	08/03/2013	Operational		Photovoltaic (Ground)	7.0000	7.0000	0.1279	7.8400
7	IF1364	2016	6/20130132-0572	06/03/2013	28/06/2013	21/03/2014	Operational		Photovoltaic (Ground)	6.1000	6.2000	0.1233	6.6960
8	C3222	2052	6/20140338	30/06/2014	07/11/2014	26/02/2016	Operational		Photovoltaic (Ground)	5.8000	5.8000	0.1279	6.4960
9	C1772	1902	FT00552898	05/08/2013	10/12/2013	17/08/2014	Operational		Photovoltaic (Ground)	5.0000	4.9961	0.1279	5.5956
10	AA751	1589	6/20130246	29/04/2013	19/07/2013	03/01/2014	Operational		Photovoltaic (Ground)	4.9900	4.9900	0.1244	5.4391
11	IF1443	2047	6/20130133-0573	06/03/2013	28/06/2013	19/03/2014	Operational		Photovoltaic (Ground)	2.9900	3.3000	0.1256	3.6300
12	B0869		FT00070326 (x2)	21/06/2011	08/08/2011	31/08/2011	Operational		Photovoltaic (Ground)	0.4984	0.4984	0.1244	0.5433
13			1,127 FIT Refs	various		various	Operational		Photovoltaic (Roof)	4.8934	4.8934	0.1200	5.1440
14	A0395	4333	6/20100082	20/11/2009	06/07/2012		Awaiting Construction	11/06/2019	Wind (large)	9.2000	9.2000	0.2656	21.4081
15			FT00574126	24/03/2014		24/03/2014	Operational		Wind	0.0530	0.0530	0.2683	0.1246
16			FT00377507	18/06/2012		14/11/2012	Operational		Wind	0.5000	0.5000	0.2683	1.1751
17			FT00459583	03/02/2014		19/01/2014	Operational		Wind	0.0150	0.0150	0.2683	0.0353
18			FT00140543	07/12/2011		02/12/2011	Operational		Wind	0.0019	0.0019	0.2683	0.0044
TOTAL										86.5635	83.7996	0.1691	124.1378

Table 4 RENEWABLE ELECTRICITY GENERATION INSTALLATIONS IN NORTH DORSET

Old REPD Ref.	New REPD Ref.	Ogim Ref.	PA Ref.	Submitted	Approved	Operational	Status	Last Update by BEIS	Technology Type	REPD IC MW	Developer IC MW	Load Factor	Annual Output GWh
1	AA045/214	214	2/2009/0103	27/05/2009	28/07/2009	05/01/2011	Operational		Anaerobic Digestion	1.5390	1.5390	0.7543	10.1693
2	EN00085/235	235	2/2006/0363	12/04/2006	06/06/2006	26/06/2006	Operational		Anaerobic Digestion	1.3360	1.3360	0.7543	8.8280
3				26/10/2011		01/01/2011	Operational		Anaerobic Digestion	0.1900	0.1900	0.7543	1.2555
4				22/09/2016		22/09/2016	Operational		Anaerobic Digestion	0.1000	0.1000	0.7543	0.6608
5				10/04/2013		18/03/2013	Operational		Hydro	0.0520	0.0520	0.4054	0.1847
6				24/01/2013		18/12/2012	Operational		Hydro	0.0055	0.0055	0.4054	0.0195
7				25/09/2014		04/08/2016	Operational		Hydro	0.0037	0.0037	0.4054	0.0131
8				20/01/2013		26/10/2012	Operational		Hydro	0.0037	0.0037	0.4054	0.0131
9	C3404	4840	2/2014/1066/FUL	23/09/2014	09/12/2014	23/03/2015	Operational		Photovoltaic (Ground)	12.1400	12.1400	0.1132	12.0429
10	IF1320	1874	2/2013/0770/PLNG	08/07/2013	10/03/2014	03/02/2015	Operational		Photovoltaic (Ground)	8.7000	8.7000	0.1132	8.6304
11	C3339	2233	2/2014/0829/FUL	13/08/2014	12/11/2014	30/03/2015	Operational		Photovoltaic (Ground)	7.0000	7.0000	0.1164	7.1400
12	C1841	1904	2/2013/0791/PLNG	05/08/2013	08/11/2013	09/06/2014	Operational		Photovoltaic (Ground)	5.0000	5.0000	0.1089	4.7700
13		5429	2/2015/0889/FUL	16/06/2015	13/10/2015	31/03/2017	Operational		Photovoltaic (Ground)	5.0000	5.0000	0.1095	4.9500
14		5629	2/2015/1129/PAEA	22/07/2015	31/03/2017		Awaiting Construction	26/10/2018	Photovoltaic (Ground)	5.0000	5.0000	0.1153	5.0500
15	IF1168	1453	2/2011/0304/PLNG			02/03/2013	Operational		Photovoltaic (Ground)	4.0100	4.0100	0.1112	3.9057
16	AA930	1439	2/2012/1042/PLNG			20/03/2013	Operational		Photovoltaic (Ground)	1.8100	1.8100	0.1096	1.7376
17	IF1079	1723	2/2012/0253/PLNG			20/03/2012	Operational		Photovoltaic (Ground)	1.5000	1.5000	0.1097	1.4415
18				various		various	Operational		Photovoltaic (Roof)	9.6203	9.6203	0.1200	10.1128
19				25/07/2011		18/06/2011	Operational		Wind	0.0200	0.0200	0.2683	0.0470
20				22/06/2011		21/06/2011	Operational		Wind	0.0150	0.0150	0.2683	0.0353
21				20/12/2013		19/12/2013	Operational		Wind	0.0150	0.0150	0.2683	0.0353
22				16/08/2012		16/08/2012	Operational		Wind	0.0110	0.0110	0.2683	0.0259
23				01/04/2010		01/07/2007	Operational		Wind	0.0060	0.0060	0.2683	0.0141
24				15/10/2015		18/09/2015	Operational		Wind	0.0060	0.0060	0.2683	0.0141
TOTAL										63.0832	63.0832	0.1465	80.9415

Table 5 RENEWABLE ELECTRICITY GENERATION INSTALLATIONS IN WEYMOUTH & PORTLAND

Old REPD Ref.	New REPD Ref.	Ogim Ref.	PA Ref.	Submitted	Approved	Operational	Status	Last Update by BEIS	Technology Type	REPD IC MW	Developer IC MW	Load Factor	Annual Output GWh
1				01/04/2010		30/03/2008	Operational		Hydro	0.0150	0.0150	0.4054	0.0553
2				12/12/2014		15/11/2016	Operational		Hydro	0.0110	0.0110	0.4054	0.0391
3				23/09/2011		20/09/2011	Operational		Hydro	0.0070	0.0070	0.4054	0.0249
4				22/07/2010		22/07/2010	Operational		Micro CHP	0.0011	0.0011	0.1329	0.0013
5				various		various	Operational		Photovoltaic (Roof)	3.7896	3.7896	0.1200	3.9837
6	AA032	184	09/00648/LBC	23/10/2009	24/01/2010		Awaiting Construction	18/07/2018	Advanced Conversion	8.0000	8.0000	0.7513	52.6545
7	B0661		11/00607/FUL	13/07/2011	07/09/2011	01/11/2012	Operational		Wind	0.0600	0.0600	0.2683	0.1410
8				01/04/2010		06/10/2007	Operational		Wind	0.0015	0.0015	0.2683	0.0035
TOTAL										11.8852	11.8852	0.5465	56.9012

Table 6 RENEWABLE ELECTRICITY GENERATION INSTALLATIONS IN BOURNEMOUTH

Old REPD Ref.	New REPD Ref.	Ogim Ref.	PA Ref.	Submitted	Approved	Operational	Status	Last Update by BEIS	Technology Type	REPD IC MW	Developer IC MW	Load Factor	Annual Output GWh
1				various		various	Operational		Photovoltaic (Roof)	7.6830	7.6830	0.1200	8.0764
TOTAL										7.6830	7.6830	0.1200	8.0764

Table 7 RENEWABLE ELECTRICITY GENERATION INSTALLATIONS IN POOLE

Old REPD Ref.	New REPD Ref.	Ogim Ref.	PA Ref.	Submitted	Approved	Operational	Status	Last Update by BEIS	Technology Type	REPD IC MW	Developer IC MW	Load Factor	Annual Output GWh
1	B1030	956	APP/12/01559/F	21/11/2012	01/07/2013		Under Construction	16/01/2019	Advanced Conversion	10.0000	10.0000	0.8200	71.8320
2	09008L3	588*		28/01/1993	13/05/1993	01/05/1996	Operational		Landfill Gas	6.9160	6.9160	0.4917	29.7907
3				various		various	Operational		Photovoltaic (Roof)	11.5318	11.5318	0.1200	12.1222
TOTAL										28.4478	28.4478	0.4564	113.7449

*Refer to Green Alliance/RegensSW Annual Report October 2016

Table 8 RENEWABLE ELECTRICITY GENERATION INSTALLATIONS IN WEST DORSET

Old REPD Ref.	New REPD Ref.	Ogden Ref.	PA Ref.	Submitted	Approved	Operational	Status	Last Update by BEIS	Technology Type	REPDIC MW	Developer IC MW	Load Factor	Annual Output GWh
1	B1521	FT000365833	PL069808	21/05/2008	08/06/2010	25/09/2012	Operational		Anaerobic Digestion	1.1000	1.1000	0.7543	7.2685
2	C2632		WD/D/14/000011	15/01/2014	20/05/2014		Awaiting Construction	19/09/2016 (CPRE update)	Anaerobic Digestion	0.5000	0.5000	0.7543	3.3039
3	A4779	FT00017703	1/D/08/000549	18/04/2008	19/09/2008	01/07/2010	Operational		Anaerobic Digestion	0.5000	0.5000	0.7543	3.3039
4	IF1208	FT00497169	1/D/12/001514	31/10/2012	26/04/2013	17/11/2013	Operational		Anaerobic Digestion	0.4990	0.4990	0.7543	3.2973
5	B0488	FT00365833	1/D/20/0080989	21/05/2008	08/06/2010	21/09/2012	Operational		Anaerobic Digestion	0.4980	0.4980	0.7543	3.2907
6	AA946	FT00327038	1/D/10/001372	16/08/2010	21/04/2011	21/11/2012	Operational		Anaerobic Digestion	0.4000	0.4000	0.7543	2.6431
7		FT00497169		17/11/2013		26/11/2015	Operational		Anaerobic Digestion	0.2500	0.2500	0.7543	1.6519
8		FT00537806		27/11/2013		25/08/2014	Operational		Anaerobic Digestion	0.2490	0.2490	0.7543	1.6453
9		FT00011931		01/04/2010		01/03/2007	Operational		Hydro	0.0070	0.0070	0.4054	0.0249
10		not recorded		27/02/2017		03/04/2014	Operational		Hydro	0.0030	0.0030	0.4054	0.0107
11							Operational		Landfill Gas	0.4500	0.4500	0.4917	1.9384
12		FT00050154		31/05/2011		21/04/2011	Operational		Micro CHP	0.0010	0.0010	0.1329	0.0012
13		FT00019094		31/12/2010		01/11/2010	Operational		Micro CHP	0.0010	0.000990	0.1329	0.0012
14		FT00048865		14/06/2011		14/06/2011	Operational		Micro CHP	0.0010	0.000990	0.1329	0.0012
15	4897		WD/D/14/002974	19/11/2014	22/12/2016		Awaiting Construction	03/05/2017	Photovoltaic (Ground)	12.3000	12.3100	0.1153	12.4331
16	C1103		1/D/13/000242	08/03/2013	13/12/2013	23/03/2016	Operational		Photovoltaic (Ground)	6.7000	6.7000	0.1090	6.3985
17	C1942		1/D/13/001116	09/08/2013	30/10/2013	19/03/2015	Operational		Photovoltaic (Ground)	4.9900	5.0000	0.1233	5.4000
18	5632		WD/D/15/001856	29/07/2015	18/12/2015	31/03/2017	Operational		Photovoltaic (Ground)	5.0000	5.0000	0.1279	5.6000
19	5891		WD/D/15/001862	08/09/2015	08/01/2016		Awaiting Construction	23/06/2017	Photovoltaic (Ground)	5.0000	5.0000	0.1164	5.1000
20	5662		WD/D/15/001841	07/09/2015	18/01/2016		Awaiting Construction	23/01/2019	Photovoltaic (Ground)	5.0000	5.0000	0.1096	4.8000
21	5650		WD/D/15/001858	29/07/2015	06/09/2016	31/03/2017	Operational		Photovoltaic (Ground)	5.0000	5.0000	0.1279	5.6000
22	5512		WD/D/15/001708	14/07/2015	07/09/2016	31/03/2017	Operational		Photovoltaic (Ground)	5.0000	5.0000	0.1279	5.6000
23	A4315	FT00377467(?)	1/D/11/000168	24/02/2011	23/08/2011	31/07/2012	Operational		Photovoltaic (Ground)	5.0000	4.9970	0.1279	5.5966
24	5096		WD/D/14/003367	24/12/2014	08/09/2015	06/01/2017	Operational		Photovoltaic (Ground)	9.0000	4.9900	0.1164	5.0898
25	4897		WD/D/14/002974	19/11/2014	22/12/2016	01/03/2017	Operational		Photovoltaic (Ground)	5.0000	4.9900	0.1153	5.0399
26	C0230	FT00395161(?)	1/D/12/000858	31/05/2012	20/09/2012	12/03/2013	Operational		Photovoltaic (Ground)	5.0000	4.8384	0.1301	5.5158
27	C3463	4703	WD/D/14/002675	13/10/2014	17/12/2014	14/04/2016	Operational		Photovoltaic (Ground)	4.9900	4.4000	0.1301	5.0160
28	A4360	FT00096497(x2)	1/D/11/000453	13/04/2011	13/07/2011	01/04/2012	Operational		Photovoltaic (Ground)	2.9000	3.9261	0.1187	4.0831
29	C1785	FT00576454	1/D/13/001044	01/08/2013	14/10/2013	07/11/2014	Operational	Field B8 Bourne Park	Photovoltaic (Ground)	2.4000	2.3997	0.1233	2.5917
30	A4653	FT00276991	1/D/11/002085	14/12/2011	07/02/2012	01/03/2012	Operational		Photovoltaic (Ground)	0.2484	0.2484	0.1233	0.2683
31	none	FT00029999(x3)		18/03/2011		22/09/2011	Operational		Photovoltaic (Ground)	1.5853	1.5853	0.1200	1.6664
32		2,853 FIT Relis.		various		various	Operational		Photovoltaic (Roof)	14.6900	14.6900	0.1200	15.4421
33		FT00279895		26/03/2012		26/03/2012	Operational		Wind	0.0800	0.0800	0.2683	0.1880
34		FT00007667		01/04/2010		09/05/2009	Operational		Wind	0.0150	0.0150	0.2683	0.0353
35		FT00036791		05/05/2011		14/03/2011	Operational		Wind	0.0150	0.0150	0.2683	0.0353
36		FT00360906		16/11/2012		15/11/2012	Operational		Wind	0.0150	0.0150	0.2683	0.0353
37		FT00331092		01/10/2012		16/07/2012	Operational		Wind	0.0100	0.0100	0.2683	0.0235
38		FT00010350		01/04/2010		01/04/2006	Operational		Wind	0.0060	0.0060	0.2683	0.0141
39		FT00011986		01/04/2010		24/03/2009	Operational		Wind	0.0060	0.0060	0.2683	0.0141
40		FT00010335		01/04/2010		26/08/2009	Operational		Wind	0.0060	0.0060	0.2683	0.0141
41		FT00275317		27/03/2012		22/03/2012	Operational		Wind	0.0060	0.0060	0.2683	0.0141
42		FT00286247		01/04/2010		20/12/2008	Operational		Wind	0.0060	0.0060	0.2683	0.0141
43		FT00009850		01/04/2010		09/05/2007	Operational		Wind	0.0050	0.0050	0.2683	0.0118
44		FT00013459		01/04/2010		01/07/2007	Operational		Wind	0.0050	0.0050	0.2683	0.0118
45		FT00015625		01/04/2010		26/06/2008	Operational		Wind	0.0025	0.0025	0.2683	0.0059
TOTAL										104.4401	100.7113	0.1474	130.0404

NOTE

DATA SOURCES

1. BEIS's Monthly Renewable Energy Planning Database Extract for October 2014, for installations with an installed capacity below 0.5 MW, all roof-mounted except for West Dorset entry 30.
2. BEIS's Monthly Renewable Energy Planning Database Extract for June 2019, for installations with an installed capacity (IC) of 1 MW or greater, published 15 July 2019.
3. Ogden's Feed-in Tariff Quarterly Installation Report for 1 April 2010 to 30 June 2019, published 5 July 2019. All installations recorded in this document are operational.
4. Local Planning Authority web sites.
5. See Table 15, page 11 of this report for Load Factor sources.

Indicates a ground-mounted solar PV installation with an installed capacity of 0.5 MW or above.

Indicates solar PV installations with an installed capacity below 0.5 MW, all roof-mounted except for West Dorset entry 30.

Indicates a ground-mounted solar PV installation with an installed capacity below 0.5 MW, all roof-mounted except for West Dorset entry 30.

Indicates solar PV installations with an installed capacity below 0.5 MW, all roof-mounted except for West Dorset entry 30.

Indicates solar PV installations with an installed capacity below 0.5 MW, all roof-mounted except for West Dorset entry 30.

Table 9 RENEWABLE HEAT GENERATION BY TECHNOLOGY AND LOCAL AUTHORITY

Local Authority	RENEWABLE HEAT TECHNOLOGY															
	ANAEROBIC DIGESTION					BIOMASS					HEAT PUMPS					
	Number of Installations	Thermal Capacity MW	Load Factor	Annual Heat Generation GWh	Number of Installations	Thermal Capacity MW	Load Factor	Annual Heat Generation GWh	Number of Installations	Thermal Capacity MW	Load Factor	Annual Heat Generation GWh	Number of Installations	Thermal Capacity MW	Load Factor	Annual Heat Generation GWh
East Dorset					28	2,036	0.35	6,243	121	1,495	0.23	2,990				
North Dorset	3	2,210	0.70	13,552	96	9,740	0.35	29,863	284	3,147	0.23	6,293				
Purbeck					17	1,747	0.35	5,356	84	0,937	0.23	1,873				
West Dorset	5	2,560	0.70	15,698	133	8,375	0.35	25,677	301	3,057	0.23	6,114				
Weymouth & Portland					8	0,835	0.35	2,560	44	0,424	0.23	0,848				
Dorset Council	8	4,770	0.70	29,250	282	22,733	0.35	69,698	834	9,060	0.23	18,118				
Christchurch																
Bournemouth					3	0,350	0.35	1,074	26	0,233	0.23	0,466				
Poole					3	0,680	0.35	2,085	91	0,832	0.23	1,665				
BCP Council					6	1,030	0.35	3,159	117	1,066	0.23	2,131				
Greater Dorset	8	4,770	0.70	29,250	288	23,763	0.35	72,857	951	10,126	0.23	20,249				

Table 9 (continued)

Local Authority	RENEWABLE HEAT TECHNOLOGY															
	SEWAGE GAS					SOLAR THERMAL					DOMESTIC WOOD STOVES					
	Number of Installations	Thermal Capacity MW	Load Factor	Annual Heat Generation GWh	Number of Installations	Thermal Capacity MW	Load Factor	Annual Heat Generation GWh	Number of Installations	Thermal Capacity MW	Load Factor	Annual Heat Generation GWh	Number of Installations	Thermal Capacity MW	Load Factor	Annual Heat Generation GWh
East Dorset					101	0,302	0.07	0,185	11,027	0,10	9,659					
North Dorset					81	0,242	0.07	0,149	8,956	0,10	7,845					
Purbeck					61	0,195	0.07	0,120	14,642	0,10	12,826					
West Dorset					169	0,537	0.07	0,329	6,008	0,10	5,263					
Weymouth & Portland					26	0,074	0.07	0,045	7,957	0,10	6,970					
Dorset Council	1	0,900	0.70	5,519	438	1,350	0.07	0,828	48,589	0,10	42,564					
Bournemouth					67	0,213	0.07	0,130	17,247	0,10	15,108					
Christchurch					22	0,063	0.07	0,038	5,731	0,10	5,021					
Poole	1	1,400	0.70	8,585	94	0,339	0.07	0,208	17,474	0,10	15,307					
BCP Council	2	2,300	0.70	14,104	183	0,615	0.07	0,377	40,452	0,10	35,436					
Greater Dorset	2	2,300	0.70	14,104	621	1,965	0.07	1,205	89,041	0,10	78,000					

Table 10 SUMMARY OF RENEWABLE HEAT GENERATION BY LOCAL AUTHORITY

Local Authority	ALL RENEWABLE HEAT TECHNOLOGIES			
	Number of Installations	Thermal Capacity MW	Load Factor	Annual Heat Generation GWh
East Dorset	250	14,860	0.15	19,077
North Dorset	464	24,295	0.27	57,701
Purbeck	162	17,521	0.13	20,176
West Dorset	608	20,537	0.30	53,081
Weymouth & Portland	78	9,290	0.13	10,423
Dorset Council	1,562	86,501	0.21	160,458
Bournemouth	97	18,943	0.13	22,298
Christchurch	22	5,794	0.10	5,059
Poole	189	20,726	0.15	27,850
BCP Council	308	45,463	0.14	55,207
Greater Dorset	1,870	131,964	0.19	215,664

NOTE

All the information in Table 9, apart from that for domestic wood stoves, has been made available by Green Alliance/RegenSW¹. The information on stoves has been provided by the Dorset Energy Partnership², which has estimated that as at 31 March 2016 domestic wood stoves were generating an annual 78 GWh of renewable heat energy in the area covered by Dorset County Council and the Bournemouth and Poole Unitary Authorities. Stove locations are not specified and for the purpose of this report the 78 GWh have been distributed amongst the authorities according to estimates of 2020 energy consumption (Table 19, p.15). All installations recorded are operational.

DATA SOURCES

- 1 Renewable Heat Installations Operational on 31 March 2016, Green Alliance/RegenSW Report, published 10 October 2016. <http://renewableconnector.green-alliance.org.uk/about/>
- 2 Dorset Energy Partnership's Annual Review 2015/2016, p.6, published 8 July 2016.

Table 11 PROJECTED ANNUAL RENEWABLE ENERGY GENERATION BY TECHNOLOGY AND LOCAL AUTHORITY

Local Authority	PROJECTED RENEWABLE ENERGY GENERATION											A 7.5% 2020 TARGET GWh	PROGRESS TOWARDS TARGET %
	RENEWABLE ELECTRICITY GWh												
	Hydro	Landfill Gas	Anaerobic Digestion	Wind	Biomass & Micro CHP	Photovoltaic		TOTAL ELECTRICITY	RENEWABLE HEAT GWh	HEAT & ELECTRICITY GWh			
East Dorset		12.92	3.06		0.0012	72.08	7.38	95.45	19.08	114.52	114.14	100.3	
North Dorset	0.23		20.91	0.17		49.51	10.11	80.94	57.70	138.64	92.70	149.6	
Purbeck	0.05	26.87		22.75		69.33	5.14	124.14	20.18	144.31	82.37	175.2	
West Dorset	0.04	1.94	26.40	0.42	0.0035	85.80	15.44	130.04	53.08	183.12	151.56	120.8	
Weymouth & Portland	0.12			0.14	52.66	0.00	3.98	56.90	10.42	67.32	62.19	108.3	
Dorset Council	0.44	41.73	50.38	23.48	52.66	276.72	42.06	487.47	160.46	647.92	502.96	128.8	
Bournemouth							8.08	8.08	22.30	30.37	178.53	17.0	
Christchurch			6.61	0.0024	21.06	92.28	2.69	122.65	5.06	127.71	59.33	215.3	
Poole		29.79			71.83		12.12	113.74	27.85	141.59	180.88	78.3	
BCP Council	0.00	29.79	6.61	0.00	92.89	92.28	22.89	244.47	55.21	299.67	418.73	71.6	
Greater Dorset	0.44	71.52	56.99	23.48	145.55	369.01	64.95	731.93	215.66	947.593307	921.70	102.8	
% Contribution to Total	0.05	7.55	6.01	2.48	15.36	38.94	145.55	77.24	22.76	100			
					% of all PV	85.0	15.0						

Table 12 NUMBERS OF RENEWABLE ENERGY INSTALLATIONS BY TECHNOLOGY AND LOCAL AUTHORITY

Local Authority	NUMBERS OF RENEWABLE ENERGY INSTALLATIONS											RENEWABLE HEAT	HEAT & ELECTRICITY
	ELECTRICITY												
	Hydro	Landfill Gas	Anaerobic Digestion	Wind	Biomass & Micro CHP	Photovoltaic		TOTAL ELECTRICITY					
East Dorset		1	3		1	8	1,757	1,770	250	2,020	250	2,020	
North Dorset	4		4	6		9	1,660	1,683	464	2,147	464	2,147	
Purbeck	1	1	1	5		10	1,127	1,144	162	1,306	162	1,306	
West Dorset	2	1	8	13	3	17	2,853	2,897	608	3,505	608	3,505	
Weymouth & Portland	3			2	2	0	1,045	1,052	78	1,130	78	1,130	
Dorset Council	10	3	15	26	6	44	8,442	8,546	1,562	10,108	1,562	10,108	
Bournemouth				1	1	6	2,189	2,189	97	2,286	97	2,286	
Christchurch		1		1	1	6	669	678	22	700	22	700	
Poole					1	1	3,517	3,519	189	3,708	189	3,708	
BCP Council	0	1	1	1	2	6	6,375	6,386	308	6,694	308	6,694	
Greater Dorset	10	4	16	27	8	50	14,817	14,932	1,870	16,802	1,870	16,802	
% Contribution to Total	0.06	0.02	0.10	0.16	0.05	0.30	88.19	88.87	11.13	100.00			
					% of all PV	0.3	99.7						

Table 13 SUMMARY OF ANNUAL RENEWABLE ENERGY GENERATION BY PLANNING STATUS

Development Status	GENERATION		INSTALLATIONS	
	GWh	% of Target	Number	%
Operational - Electricity	530.31	56.0	14,921	88.80
Operational - Heat	215.7	22.8	1,870	11.13
Operational	746.0	78.7	16,791	99.93
Under Construction	71.8	7.6	1	0.01
Awaiting Construction	129.8	13.7	10	0.06
TOTAL	947.6	100.0	16,802	100.00

Table 14 SUMMARY OF ANNUAL RENEWABLE ENERGY GENERATION BY LOCAL AUTHORITY

Local Authority	RENEWABLE ENERGY						INSTALLATIONS			
	Operational and Under Construction		Awaiting Construction		TOTAL	7.5% Target	% of 2020 Target	Operational and Under Construction	Awaiting Construction	TOTAL
	GWh	% of Total	GWh	% of Total	GWh	GWh		Number	Number	Number
East Dorset	109.52	95.63	5.00	4.37	114.52	114.14	100.34	2,019	1	2,020
North Dorset	133.59	96.36	5.05	3.64	138.64	92.70	149.55	2,146	1	2,147
Purbeck	109.47	75.85	34.85	24.15	144.31	82.37	175.21	1,304	2	1,306
West Dorset	157.48	86.00	25.64	14.0000	183.12	151.56	120.82	3,501	4	3,505
Weymouth & Portland	14.67	21.79	52.65	78.21	67.32	62.19	108.26	1,129	1	1,130
Dorset Council	524.73	80.99	123.19	19.01	647.92	502.96	128.82	10,099	9	10,108
Bournemouth	30.37	100.00	0.00	0.00	30.37	178.53	17.01	2,286	0	2,286
Christchurch	121.10	94.83	6.61	5.17	127.71	59.33	215.26	699	1	700
Poole	141.59	100.00	0.00	0.00	141.59	180.88	78.28	3,708	0	3,708
BCP Council	293.07	97.80	6.61	2.20	299.67	418.73	71.57	6,693	1	6,694
Greater Dorset	817.80	86.30	129.80	13.70	947.599306	921.70	102.81	818	10	16,802

Table 15 ESTIMATED LOAD FACTORS

Renewable Electricity Technology	Load Factor	Source
Onshore wind (large)	0.2656	
Landfill gas	0.4917	Average for the 5 years 2014 - 2018 for schemes operating on an unchanged configuration basis :
Sewage Gas	0.4638	DUKES, Table 6.5, BEIS, 26 July 2019.
Anaerobic Digestion	0.7543	
Plant Biomass	0.7513	
FIT Anaerobic Digestion	0.7543	Average for the 4 years 2014/2015 - 2017/2018 : Feed-in tariff annual and quarterly load factors. BEIS, 20 December 2018.
FIT Hydro	0.4054	Average for the 5 years 2013/2014 - 2017/2018 : Feed-in tariff annual and quarterly load factors. BEIS, 20 December 2018.
FIT Micro CHP	0.1329	Average for the 5 years 2013/2014 - 2017/2018 : Feed-in tariff annual and quarterly load factors. BEIS, 20 December 2018.
FIT Onshore wind	0.2683	Average for the 5 years 2013/2014 - 2017/2018 : Feed-in tariff annual and quarterly load factors. BEIS, 20 December 2018.
Advanced conversion	0.8200	Mark Harradine, Technical Director. Syngas Products: Poole PA APP/12/01559/F. installation forecast to be fully operational by January 2019.
Solar Photovoltaic	0.1200	0.1200 (12%) is suggested as an appropriate average load factor for Dorset. This conclusion is based on an analysis of recorded outputs for several ground-mounted (G-M) installations in Dorset County and estimated outputs from the EU Joint Research Centre PV Estimation Facility. For this report a load factor has been calculated for each G-M installation but 12% has been assumed for all roof-mounted installations. More details of the methodology used to arrive at this conclusion are provided in Table 24 (p.18).

Table 16 APPROVED DORSET COUNTY GROUND-MOUNTED PV INSTALLATIONS listed by Planning Authority and Decreasing Magnitude of Installed Capacity

Planning Authority	Planning Application Reference	Registration Date	Decision Date	Ordnance Survey Grid Reference	Site			Approx. % Covered by Panels	Number of Panels	Panel Rating W	Annual Energy Generation MWh	Load Factor	Power Rating (Installed Capacity) MW
					Hectares	Acres	Soccer Pitches						
1	Christchurch BC	8/13/0332	16/07/2013	410222/099598	76.70	189.53	119.8	27	149,040	250	40,055	0.1227	37.2600
2	Christchurch BC	8/12/0512	28/11/2012	410016/099547	48.50	119.85	75.8	28	96,800	250	26,015	0.1227	24.2000
3	Christchurch BC	8/14/0226	21/05/2014	417714/095129	35.50	87.72	55.5	22	57,600	250	15,264	0.1210	14.4000
4	Christchurch BC	8/15/0284	21/05/2015	41783/095661	9.50	23.47	14.8	21	14,400	250	3,816	0.1210	3.6000
5	Christchurch BC	8/14/0520	28/10/2014	409499/097070	18.07	44.65	28.2	11	14,396	250	3,869	0.1227	3.5990
6	Christchurch BC	8/14/0412	28/08/2014	409506/100357	7.20	17.79	11.3	23	12,144	250	3,264	0.1227	3.0360
7	East Dorset DC	3/14/0457/FUL	15/04/2014	408332/107310	45.73	113.00	71.5	25	81,400	250	20,961	0.1176	20.3500
8	East Dorset DC	3/13/0470/FUL	28/05/2013	409618/105289	28.10	69.44	43.9	26	52,800	250	13,596	0.1176	13.2000
9	East Dorset DC	3/13/0669/FUL	19/07/2013	407075/106873	27.83	68.77	43.5	26	52,000	250	13,390	0.1176	13.0000
10	East Dorset DC	3/14/0790/FUL	14/08/2014	406125/101700	12.50	30.89	19.5	31	28,000	250	7,420	0.1210	7.0000
11	East Dorset DC	3/14/0774/FUL	19/08/2014	411300/111800	12.72	31.43	19.9	27	20,000	250	5,000	0.1142	5.0000
12	East Dorset DC	3/15/1020/FUL	21/09/2015	411500/111020	10.12	25.01	15.8	27	20,000	250	5,000	0.1142	5.0000
13	East Dorset DC	3/13/0948/FUL	20/09/2013	396675/097198	12.90	31.88	20.2	16	14,736	250	3,795	0.1176	3.6840
14	East Dorset DC	3/14/0956/FUL	07/10/2014	409137/097513	7.46	18.43	11.7	20	10,876	250	2,923	0.1227	2.7190
15	North Dorset DC	2/2014/1066/FUL	23/09/2014	388332/105051	21.40	52.88	33.4	31	48,560	250	12,043	0.1132	12.1400
16	North Dorset DC	2/2013/0770/PLNG	08/07/2013	385425/105000	15.30	37.81	23.9	32	34,800	250	8,630	0.1132	8.7000
17	North Dorset DC	2/2014/0825/FUL	13/08/2014	378136/102088	14.50	35.83	22.7	27	28,000	250	7,140	0.1164	7.0000
18	North Dorset DC	2/2013/0791/PLNG	05/08/2013	377815/128359	16.00	39.54	25.0	17	20,000	250	4,770	0.1089	5.0000
19	North Dorset DC	2/2015/0898/FUL	03/07/2015	371997/118399	11.92	29.45	18.6	22	19,231	260	4,795	0.1095	5.0000
20	North Dorset DC	2/2015/1129/PAEIA	22/07/2015	385926/104812	8.64	21.35	13.5	32	20,000	250	5,050	0.1153	5.0000
21	North Dorset DC	2/2011/0304/PLNG	22/03/2011	385726/113717	9.70	23.97	15.2	23	16,040	250	3,906	0.1112	4.0100
22	North Dorset DC	2/2012/1042/PLNG	31/08/2012	378233/127441	4.36	10.77	6.8	23	7,240	250	1,738	0.1096	1.8100
23	North Dorset DC	2/2012/0253/PLNG	20/03/2012	378118/112656	2.80	6.92	4.4	30	6,000	250	1,442	0.1097	1.5000
24	Purbeck DC	6/2015/0516	19/08/2015	387124/087619	48.00	118.61	75.0	14	48,000	250	13,440	0.1279	12.0000
25	Purbeck DC	6/2013/0443	02/08/2013	388420/090356	15.70	38.80	24.5	35	40,000	250	10,900	0.1244	10.0000
26	Purbeck DC	6/2013/0134-0574	18/10/2013	395767/094301	16.70	41.27	26.1	27	32,400	250	8,748	0.1233	8.1000
27	Purbeck DC	6/2012/0415	05/07/2012	387802/090076	18.00	44.48	28.1	22	28,000	250	7,840	0.1279	7.0000
28	Purbeck DC	6/2013/0132-0572	18/10/2013	395767/094301	14.50	35.83	22.7	24	24,800	250	6,696	0.1233	6.2000
29	Purbeck DC	6/2014/0338	30/06/2014	389957/089555	20.00	49.42	31.3	16	23,200	250	6,496	0.1279	5.8000
30	Purbeck DC	6/2013/0446	05/08/2013	384311/087689	10.60	26.19	16.6	26	19,984	250	5,596	0.1279	4.9961
31	Purbeck DC	6/2013/0246	29/04/2013	392824/094634	7.00	17.30	10.9	40	19,960	250	5,439	0.1244	4.9900
32	Purbeck DC	6/2013/0133-0573	18/10/2013	393388/093923	13.70	33.85	21.4	13	13,200	250	3,630	0.1256	3.3000
33	Purbeck DC	6/2011/0086-0385	21/06/2011	392223/093019	2.83	7.00	4.4	9	1,780	280	543	0.1244	0.4984
34	West Dorset DC	W/D/14/002974	19/11/2014	355019/101303	37.84	93.50	59.1	25	69,200	250	17,473	0.1153	17.3000
35	West Dorset DC	1/D/13/000242	08/03/2013	368160/109979	19.18	47.39	30.0	19	26,800	250	6,399	0.1090	6.7000
36	West Dorset DC	1/D/13/001116	09/08/2013	372299/097660	9.30	22.98	14.5	30	20,000	250	5,400	0.1233	5.0000
37	West Dorset DC	W/D/15/001856	29/07/2015	376969/086897	9.26	22.88	14.5	30	20,000	250	5,600	0.1279	5.0000
38	West Dorset DC	W/D/15/001862	08/09/2015	360954/102552	5.45	13.47	8.5	51	20,000	250	5,100	0.1164	5.0000
39	West Dorset DC	W/D/15/001841	07/09/2015	360912/110027	6.35	15.69	9.9	44	20,000	250	4,800	0.1096	5.0000
40	West Dorset DC	W/D/15/001858	29/07/2015	377318/086227	15.33	37.88	24.0	18	20,000	250	5,600	0.1279	5.0000
41	West Dorset DC	W/D/15/001708	14/07/2015	378479/085698	9.90	24.46	15.5	28	20,000	250	5,600	0.1279	5.0000
42	West Dorset DC	1/D/11/000168	24/02/2011	377872/088264	14.92	36.87	23.3	20	21,726	230	5,597	0.1279	4.9970
43	West Dorset DC	W/D/14/003367	24/12/2014	361325/102775	6.60	16.31	10.3	40	19,192	260	5,090	0.1164	4.9900
44	West Dorset DC	1/D/12/000858	31/05/2012	364747/082848	16.90	41.76	26.4	17	20,160	240	5,516	0.1301	4.8384
45	West Dorset DC	W/D/14/002675	13/10/2014	364490/081305	7.38	18.24	11.5	33	17,600	250	5,016	0.1301	4.4000
46	West Dorset DC	1/D/11/000453	13/04/2011	333898/097856	8.56	21.15	13.4	25	15,704	250	4,083	0.1187	3.9261
47	West Dorset DC	1/D/13/001044	01/08/2013	372985/097311	4.88	12.07	7.6	27	9,599	250	2,592	0.1233	2.3997
48	West Dorset DC	1/D/11/002085	14/12/2011	372302/097662	1.02	2.52	1.6	14	994	250	268	0.1233	0.2484
TOTAL					797.4	1,970	1,246	24	1,396,362	250	367,340	0.1202	348.8921
AVERAGE					16.6	41.0	26.0	24	29,091	250	7,653	0.1202	7.3

(12.31+4.99)

Table 16 (continued)

Planning Authority	Planning Application Reference	Site Type	Site Location	Developer
1 Christchurch BC	8/13/00332	Green Belt	Parley Solar Farm 2, Chapel Lane, Parley, CHRISTCHURCH BH23 6BG	Eco Sustainable Solutions Limited
2 Christchurch BC	8/12/0512	Green Belt	Parley Solar Farm 1, Chapel Lane, Parley, CHRISTCHURCH BH23 6BG	British Solar/Renewables Limited
3 Christchurch BC	8/14/0226	Green Belt	Waterditch Farm, Lower Waterditch, CHRISTCHURCH BH23 7AA	Canada Solar
4 Christchurch BC	8/15/00284	Green Belt	Pratt's Field, Waterditch Farm, Lower Waterditch, CHRISTCHURCH BH23 7AA	New Future Energy
5 Christchurch BC	8/14/00250	Green Belt	Hale Farm, Chapel Lane, Parley, CHRISTCHURCH BH23 6BG	Alliance Planning
6 Christchurch BC	8/14/0412	Green Belt	Parley Solar Farm 3, Chapel Lane, Parley, CHRISTCHURCH BH23 6BG	Eco Sustainable Solutions Limited
7 East Dorset DC	3/14/0457/FUL	Greenfield	Manor Farm, St Michaels Road, VERWOOD BH31 6JA	Solstice Renewables Limited
8 East Dorset DC	3/13/0470/FUL	Greenfield	HomeLand Farm, Ringwood Road, Three Legged Cross, WIMBORNE BH21 6CZ	Good Energy Generation Limited
9 East Dorset DC	3/13/0669/FUL	Green Belt Grade 5	Wedgell Farm, Woodlands, WIMBORNE BH21 8LX	Orar Solar
10 East Dorset DC	3/14/0790/FUL	Green Belt	Bedborough Farm, Uddens Drive, WIMBORNE BH21 7BQ	Solstice Renewables Limited
11 East Dorset DC	3/14/0774/FUL	Greenfield	Cross Roads Plantation, Ringwood Road, Alderholt, FORDINGBRIDGE SP6 3AD	Good Energy Generation Limited
12 East Dorset DC	3/2015/1020/FUL	Greenfield	Warren Park Farm, Ringwood Road, Alderholt, FORDINGBRIDGE SP6 3DE	Good Energy Generation Limited
13 East Dorset DC	3/13/0948/FUL	Green Belt Grades 3 & 4	Henbury Quarry, Henbury Plantation, Old Market Road, Corfe Mullen, WIMBORNE BH21 3CZ	Lightsource Renewable Energy Limited
14 East Dorset DC	3/14/0956/FUL	Green Belt	Woodton Farm, 390 Christchurch Road, West Parley, FERNDOWN BH22 8SW	Alliance Planning
15 North Dorset DC	2/2014/1066/FUL	Greenfield Grade 3b	Litteton Farm Limited, Litteton Lodge, Blendford St Mary, BLANDFORD FORUM DT11 9NB	Lightsource Renewable Energy Limited
16 North Dorset DC	2/2013/0770/PLNG	AONB	Canada Farm, Winterborne Stickland, BLANDFORD FORUM DT11 9AD	British Solar/Renewables Limited
17 North Dorset DC	2/2014/0825/PLNG	Greenfield	North Farm, Spetsbury, BLANDFORD FORUM DT11 9DH3	Northam Pine Solar Park Limited
18 North Dorset DC	2/2013/0791/PLNG	Greenfield	Manor Church Road, Sillon, GILLINGHAM SP8 5PR	INRG Solar Limited
19 North Dorset DC	2/2015/0898/FUL	Greenfield	Stalbridge Park Estate, Landshill Lane, STURMINSTER NEWTON DT10 2S9	British Solar/Renewables Limited
20 North Dorset DC	2/2015/1129/PAEIA	AONB	Down House, Down House Estate, Blendford St. Mary, BLANDFORD FORUM, DT11 9AD	British Solar/Renewables Limited
21 North Dorset DC	2/2011/0304/PLNG	Greenfield	Park Farm, Iwerne Minster, BLANDFORD FORUM DT11 8TP	Low Carbon Solar Limited
22 North Dorset DC	2/2012/1042/PLNG	Greenfield	Slaughtergate Farm, Waverling Lane West, GILLINGHAM SP8 4NR	Lightsource Renewable Energy Limited
23 North Dorset DC	2/2012/0253/PLNG	Greenfield	Rudge Hill Farm, Rivers Corner, STURMINSTER NEWTON DT10 2AB	Lightsource Renewable Energy Limited
24 Purbeck DC	6/2015/0516	Greenfield	Stokeford Farm, East Stoke, WAREHAM BH20 6AN	JumpStar Sustainability Limited
25 Purbeck DC	6/2013/0443	Greenfield Grade 4	Land at Bottom Plain, Bere Road, Trigon, WAREHAM BH20 7PA	Inazin Power Limited
26 Purbeck DC	6/2013/00134-0574	Green Belt Grade 3a	Newton Farm, Dorchester Road, Lytchett Minster, POOLE BH16 6HS	Cambome Energy Investments Limited
27 Purbeck DC	6/2012/0415	Green Belt	Trigon House, WAREHAM BH20 7PD	Inazin Power Limited
28 Purbeck DC	6/2013/0132-0572	Green Belt Grade 3a	Race Farm, Huntick Road, Lytchett Matravers, POOLE BH16 6BB	Cambome Energy Investments Limited
29 Purbeck DC	6/2014/0338	Greenfield Grade 5	Oaklands Plantation, Bere Road, Coldharbour, WAREHAM BH20 7PA	Good Energy Generation Limited
30 Purbeck DC	6/2013/0446	Greenfield	Tout Hill, Woolbridge, WAREHAM BH20 6HH	Good Energy Generation Limited
31 Purbeck DC	6/2013/0246	Green Belt Grade 3b	Redbridge Farm, Doinants Hill, Lytchett Matravers, POOLE BH16 6HP (Variation)	Emotion Energy Limited
32 Purbeck DC	6/2013/0133-0573	Green Belt	Newton Farm, Dorchester Road, Lytchett Minster, POOLE BH16 6HS	Cambome Energy Investments Limited
33 Purbeck DC	6/2011/0385	Greenfield Grade 3b	Slope Farm, Dorchester Road, Lytchett Minster, POOLE BH16 6HS	Farm Power Generation Limited
34 West Dorset DC	WD/D/14/002974	AONB	Rampisham Down, Rampisham, DORCHESTER DT2 0HS (South of A356)	British Solar/Renewables Limited
35 West Dorset DC	1/D/13/000242	Greenfield	Field B11, Bourne Farm, Piddlehinton, DORCHESTER DT2 7TU	Juwi Renewable Energies Limited
36 West Dorset DC	1/D/13/001116	Greenfield	Caswell Farm, Common Lane, Ryme Inrinesea, SHERBORNE DT9 6JP	Sovereign Energy Partners LLP
37 West Dorset DC	WD/D/15/001856	Greenfield	Holly Farm, Moreton Road, Owemoligne, DORCHESTER DT2 8HZ	British Solar/Renewables Limited
38 West Dorset DC	WD/D/15/001862	AONB	Southern Counties Shooting Ground, Wardon Hill, DORCHESTER DT2 9PW	British Solar/Renewables Limited
39 West Dorset DC	WD/D/15/001841	Greenfield	Mallows Farm, Alton Mead Lane, Yeimminster, SHERBORNE DT9 6BN	Aardvark EM Limited
40 West Dorset DC	WD/D/15/001858	Greenfield	Eaton Farm, Moreton Road, Owemoligne, DORCHESTER DT2 8XP	British Solar/Renewables Limited
41 West Dorset DC	WD/D/15/001708	Greenfield	Gallon Manor Farm, Owemoligne, DORCHESTER DT2 8HY	British Solar/Renewables Limited
42 West Dorset DC	1/D/11/000168	Greenfield	Crossways Pit, Heath Farm, Redbridge Road, Crossways, DORCHESTER DT2 8DX	Vogel Solar
43 West Dorset DC	WD/D/14/003367	AONB	Field NE of Southern Counties Shooting Ground, Wardon Hill, DORCHESTER DT2 9PW	British Solar/Renewables Limited
44 West Dorset DC	1/D/12/000858	Greenfield	North Farm, Nottingham Lane, Buckland Ripers, WEYMOUTH DT3 4BU	PS Renewables
45 West Dorset DC	WD/D/14/002974	Greenfield Grade 3b	Newlands Farm, Coldharbour, Chickwell, WEYMOUTH DT3 4BG	British Solar/Renewables Limited
46 West Dorset DC	1/D/11/000453	AONB	Wyld Meadow Farm, Pound Lane, Monkton Wyld, BRIDPORT DT6 8DD (site at EX13 5UL)	Low Carbon Solar Limited
47 West Dorset DC	1/D/13/001044	Greenfield	Field B8, Bourne Farm, Piddlehinton, DORCHESTER DT2 7TU	Farm Power Apollo
48 West Dorset DC	1/D/11/002085	Greenfield	Field B8, Bourne Farm, Piddlehinton, DORCHESTER DT2 7TU	Farm Power Apollo

NOTE

- 1 hectare = 10,000 square metres = 2.47105 acres
- 1 acre = 4,047 square metres or a square of side 63.61 metres
- The size of a standard FA football pitch is 100 metres x 64 metre or 1.581 acres.
- All installations shown have an installed capacity of 0.5 MW or more (except for No.48) and are assumed to be ground-mounted.
- The 1.5853 MW FIT registered installation #00209999 recorded for West Dorset in Table 8 (entry 30) does not have a known planning application reference and is not listed above.

RECORDED 2005 AND PROJECTED 2020 TOTAL ENERGY CONSUMPTION

The UK's commitment to a 15% renewable energy target for 2020 is based on total energy consumption in 2020, as defined by European Commission Directive 2009/28/EU. The UK Government only publishes estimates of 2020 total energy consumption for the UK as a whole. However, it does publish actual annual total energy consumption at the local authority level as data become available. The most recent year for which data are available is 2013¹. For the purpose of calculating acceptable estimates of 2020 total energy consumption for Dorset's local authorities, this report has adopted a RegensW working hypothesis for the South West Region which assumes a 1% year-on-year reduction in energy consumption, for all sectors, for the years 2014 to 2020². Below, Table 17 records energy consumption in 2013 and Table 18 records estimated energy consumption in 2020 based on the RegensW hypothesis.

Table 17 RECORDED 2013 TOTAL ENERGY CONSUMPTION (Ref.1)

Local Authority	Heat		Electricity		Transport		TOTAL GWh
	GWh	%	GWh	%	GWh	%	
Christchurch	371.57	43.8	192.65	22.7	284.45	33.5	848.67
East Dorset	689.30	42.2	316.09	19.4	627.39	38.4	1,632.78
North Dorset	585.79	44.2	286.14	21.6	454.21	34.3	1,326.14
Purbeck	435.33	36.9	346.15	29.4	396.79	33.7	1,178.27
West Dorset	775.83	35.8	463.90	21.4	928.38	42.8	2,168.12
Weymouth and Portland	414.67	46.6	214.40	24.1	260.56	29.3	889.64
Dorset County	3,272.49	40.7	1,819.34	22.6	2,951.79	36.7	8,043.61
Bournemouth	1,220.33	47.8	718.07	28.1	615.47	24.1	2,553.86
Poole	1,259.10	48.7	690.48	26.7	637.95	24.7	2,587.53
Greater Dorset	5,751.91	43.6	3,227.88	24.5	4,205.21	31.9	13,185.00

Table 18 ESTIMATED 2020 TOTAL ENERGY CONSUMPTION (Ref.2)

Local Authority	Heat		Electricity		Transport		TOTAL GWh
	GWh	%	GWh	%	GWh	%	
Christchurch	346.33	43.8	179.57	22.7	265.12	33.5	791.02
East Dorset	642.47	42.2	294.62	19.4	584.77	38.4	1,521.86
North Dorset	545.99	44.2	266.70	21.6	423.36	34.3	1,236.05
Purbeck	405.75	36.9	322.63	29.4	369.84	33.7	1,098.22
West Dorset	723.13	35.8	432.39	21.4	865.31	42.8	2,020.83
Weymouth and Portland	386.50	46.6	199.84	24.1	242.86	29.3	829.20
Dorset County	3,050.17	40.7	1,695.74	22.6	2,751.26	36.7	7,497.17
Bournemouth	1,137.42	47.8	669.28	28.1	573.66	24.1	2,380.37
Poole	1,173.56	48.7	643.57	26.7	594.61	24.7	2,411.74
Greater Dorset	5,361.16	43.6	3,008.59	24.5	3,919.53	31.9	12,289.28

A NOTE ON 2020 RENEWABLE ENERGY TARGETS

Only the UK Government has a legal requirement to meet the 15% 2020 target. However, through their membership of the Local Government Association (LGA), the four Districts and two Boroughs of Dorset County, the County itself and the Unitary Authorities of Bournemouth and Poole, endorsed a Memorandum of Understanding (MOU) between the Department of Energy and Climate Change (DECC) and the Local Government Group (LGG) - a partnership the principal member of which is the LGA. The MOU sets out a DECC - LGG partnership approach to help meet climate change mitigation and related objectives, notably including: "The target to supply 15% of the UK's energy consumption from renewable energy by 2020 as set out in the 2009 Renewable Energy Directive" The MOU³ makes it clear that "This Memorandum is a statement of intent and should not be interpreted as a binding agreement". Subsequently, DECC's UK Renewable Energy Roadmap⁴, suggested that half the UK's 15% target, could come from sources of "national significance". These are defined by DECC as installations with a generating capacity of more than 50 MW onshore and 100 MW offshore and are the direct responsibility of the Secretary of State for Energy and Climate Change⁵. This suggestion effectively reduced a local authority's agreement to generate 15% of its 2020 energy consumption from its own resources down to a figure of 7.5%.

REFERENCES

- 1 Sub-national Total Final Energy Consumption in the UK 2005-2013, Publication URN: 15/D/450, DECC, November 2015. Also, see Tables 19 - 22 of this report (p.15).
- 2 Private communication, Joel Venn, Onshore Analyst and Technical Lead, RegensW.
- 3 Memorandum of Understanding Between the Local Government Group and the Department of Energy and Climate Change, para.3.4.3, p.4, 9 March 2011.
- 4 UK Renewable Energy Roadmap, p.14, DECC, 12 July 2011.
- 5 Guidance: Consents and planning applications for national energy infrastructure projects, DECC, 24 July 2014.

A 7.5% 2020 Target GWh
59.33
114.14
92.70
82.37
151.56
62.19
562.29
178.53
180.88
921.70

THE APPLICATION TO DORSET'S LOCAL AUTHORITIES OF RegensW's METHODOLOGIES FOR CALCULATING 2020 ENERGY CONSUMPTION FOR THE SOUTH WEST REGION RECORDED CONSUMPTION DATA FOR 2005 AND 2013

Table 19

Local Authority	DECC's Published Energy Consumption Data for 2005 (Base Year) ¹						RegensW 2020 Forecast ²		
	Heat Sector		Electricity Sector		Transport Sector		TOTAL GWh	7.5% Target GWh	
	GWh	% of Total	GWh	% of Total	GWh	% of Total			
Christchurch	495.4	47.6	225.0	21.6	319.6	30.7	1,040.1	995.5	74.7
East Dorset	1,001.4	49.2	352.7	17.3	683.0	33.5	2,037.1	1,962.9	147.2
North Dorset	668.3	45.4	308.1	20.9	496.9	33.7	1,473.4	1,419.3	106.4
Purbeck	598.1	41.7	363.5	25.3	473.7	33.0	1,435.3	1,379.3	103.4
West Dorset	991.0	38.9	519.5	20.4	1,040.2	40.8	2,550.7	2,493.3	187.0
Weymouth & Portland	571.2	51.1	251.1	22.5	295.2	26.4	1,117.6	1,059.8	79.5
Dorset County	4,325.5	44.8	2,020.0	20.9	3,308.7	34.3	9,654.2	9,310.1	698.3
Bournemouth	1,652.7	52.2	805.8	25.5	706.7	22.3	3,165.2	2,973.9	223.0
Poole	1,672.4	52.7	766.5	24.2	733.8	23.1	3,172.6	2,986.7	224.0
Greater Dorset	7,650.6	47.8	3,592.3	22.5	4,749.1	29.7	15,992.0	15,270.7	1,145.3

Table 20

Local Authority	DECC's Published Energy Consumption Data for 2013 ³						RegensW 2020 Forecast ³		
	Heat Sector		Electricity Sector		Transport Sector		TOTAL GWh	7.5% Target GWh	
	GWh	% of Total	GWh	% of Total	GWh	% of Total			
Christchurch	371.6	43.8	192.7	22.7	284.4	33.5	848.7	791.0	59.3
East Dorset	689.3	42.2	316.1	19.4	627.4	38.4	1,632.8	1,521.9	114.1
North Dorset	585.8	44.2	286.1	21.6	454.2	34.3	1,326.0	1,236.0	92.7
Purbeck	435.3	36.9	346.1	29.4	396.8	33.7	1,178.3	1,088.2	82.4
West Dorset	775.8	35.8	463.9	21.4	928.4	42.8	2,168.1	2,020.8	151.6
Weymouth & Portland	414.7	46.6	214.4	24.1	260.6	29.3	899.6	829.2	62.2
Dorset County	3,272.5	40.7	1,819.3	22.6	2,951.8	36.7	8,043.6	7,497.2	562.3
Bournemouth	1,220.3	47.8	718.1	28.1	615.5	24.1	2,553.9	2,380.4	178.5
Poole	1,259.1	48.7	690.5	26.7	638.0	24.7	2,587.5	2,411.7	180.9
Greater Dorset	5,751.9	43.6	3,227.9	24.5	4,205.2	31.9	13,165.0	12,289.3	921.7

Table 21

Local Authority	RegensW's Forecast for 2020 Energy Consumption ⁴						% Reduction on 2013 RE Target		
	Heat Sector		Electricity Sector		Transport Sector		2020 7.5% RE Target GWh	Consumption GWh	
	GWh	% of Total	GWh	% of Total	GWh	% of Total			
Christchurch	346.3	43.8	179.6	22.7	265.1	33.5	791.0	6.8	59.3
East Dorset	642.5	42.2	294.6	19.4	584.8	38.4	1,521.9	6.8	114.1
North Dorset	546.0	44.2	266.7	21.6	423.4	34.3	1,236.0	6.8	92.7
Purbeck	405.8	36.9	322.6	29.4	369.8	33.7	1,098.2	6.8	82.4
West Dorset	723.1	35.8	432.4	21.4	865.3	42.8	2,020.8	6.8	151.6
Weymouth & Portland	386.5	46.6	199.8	24.1	242.9	29.3	829.2	6.8	62.2
Dorset County	3,050.2	40.7	1,695.7	22.6	2,751.3	36.7	7,497.2	6.8	562.3
Bournemouth	1,137.4	47.8	669.3	28.1	573.7	24.1	2,380.4	6.8	178.5
Poole	1,173.6	48.7	643.6	26.7	594.6	24.7	2,411.7	6.8	180.9
Greater Dorset	5,361.2	43.6	3,008.6	24.5	3,919.5	31.9	12,289.3	6.8	921.7

Table 22

Local Authority	% Change in Consumption Between 2005 and 2013						RegensW 2020 Consumption Forecasts				2020 7.5% Renewable Energy Targets			
	Heat Sector	Electricity Sector	Transport Sector	All Sectors	Published/2012 (GWh)	Adopted/2016 (GWh)	Difference (%)	Published/2012 (GWh)	Adopted/2016 (GWh)	Difference (%)	Published/2012 (GWh)	Adopted/2016 (GWh)	Difference (%)	Targets (%)
Christchurch	-25.0	-14.4	-11.0	-18.4	995.5	791.0	-20.5	74.7	59.3	-20.5	74.7	59.3	-20.5	-20.5
East Dorset	-31.2	-10.4	-8.1	-19.8	1,962.9	1,521.9	-22.5	147.2	114.1	-22.5	147.2	114.1	-22.5	-22.5
North Dorset	-12.4	-7.1	-8.6	-10.0	1,419.3	1,236.0	-12.9	106.4	82.4	-20.4	103.4	82.4	-20.4	-20.4
Purbeck	-27.2	-4.8	-16.2	-17.9	1,379.3	1,098.2	-20.4	187.0	151.6	-18.9	187.0	151.6	-18.9	-18.9
West Dorset	-21.7	-10.7	-10.7	-15.0	2,493.3	2,020.8	-18.9	187.0	151.6	-18.9	187.0	151.6	-18.9	-18.9
Weymouth & Portland	-27.4	-14.6	-11.7	-20.4	1,059.8	829.2	-21.8	79.5	62.2	-21.8	79.5	62.2	-21.8	-21.8
Dorset County	-24.3	-9.9	-10.8	-16.7	9,310.1	7,497.2	-19.5	698.3	562.3	-19.5	698.3	562.3	-19.5	-19.5
Bournemouth	-26.2	-10.9	-12.9	-19.3	2,973.9	2,380.4	-20.0	223.0	178.5	-20.0	223.0	178.5	-20.0	-20.0
Poole	-24.7	-9.9	-13.1	-18.4	2,986.7	2,411.7	-19.3	224.0	180.9	-19.3	224.0	180.9	-19.3	-19.3
Greater Dorset	-24.8	-10.1	-11.5	-17.6	15,270.7	12,289.3	-19.5	1,145.3	921.7	-19.5	1,145.3	921.7	-19.5	-19.5

NOTES AND REFERENCES

1. Sub-national Total Final Energy Consumption in the UK 2005-2013, Publication URN: 15/D/450, DECC, November 2015. For Greater Dorset, the 17.6% reduction in total final consumption from 2005 to 2013 is equivalent to a year-on-year reduction of 2.4%.
2. RegensW's 2020 energy consumption forecasts published in 2012 were calculated by applying percentage changes of -10, -12 and +10 to DECC's published 2005 energy consumption data for heat, electricity and transport, respectively. (Reference: "Renewable Energy Resource Assessment for Bournemouth, Dorset & Poole", p.44, RegensW, Amended March 2012).
3. RegensW's current 2020 energy consumption forecasts are calculated by applying a 1% year-on-year reduction to DECC's published 2013 energy consumption data, for all sectors, for each of the years 2014 to 2020. The 2020 consumption arrived at by this method is equivalent to applying a 6.8% reduction to the 2013 data. (Reference: Private communication, Joel Venn, RegensW Onshore Analyst and Technical Lead, April 2016).

Table 23 ASSESSMENT OF ANNUAL OUTPUT OF APPROVED SURVEY CENTRE PV INSTALLATIONS USING THE EU JOINT RESEARCH CENTRE SOLAR PV ESTIMATION PROGRAMME

Planning Authority	Planning Application Reference	Installed Capacity MW	Ordnance Survey Grid Reference		INPUT to EU Joint Research Centre PV Estimation Programme		OUTPUT from EU Joint Research Centre PV Estimation Programme				Annual Electricity Generation GWh						
			Easting	Northing	Latitude Degrees	Longitude Degrees	PV Panel Slope	PV Panel Azimuth	Inverter and cable losses etc. (%)	Optimum Slope Degrees		Optimum Azimuth Degrees	% Losses Due to Temperature and Low Irradiance	Angular Reflectance	Combined System Losses (%)	Elevation metres a.s.l.	Annual Yield Factor (kWh/kWp)
1	North Dorset DC	5.0000	377815	128359	51.05414	-2.31790	Optimum	16.0	37	-1	7.5	3.0	14.6	120	954	0.1089	4.770
2	North Dorset DC	1.8100	378233	127441	51.04590	-2.31188	Optimum	16.0	37	-1	7.4	3.0	24.6	108	960	0.1096	1.738
3	North Dorset DC	5.0000	371997	118399	50.96433	-2.40013	Optimum	16.0	37	0	7.5	3.0	24.6	126	959	0.1095	4.795
4	North Dorset DC	4.0100	385726	113717	50.92273	-2.20445	Optimum	16.0	37	-1	7.5	3.0	24.6	65	974	0.1112	3.906
5	North Dorset DC	1.5000	378118	112656	50.91295	-2.31262	Optimum	16.0	38	0	7.5	2.9	24.6	76	961	0.1097	1.442
6	East Dorset DC	5.0000	411300	111800	50.90556	-1.84066	Optimum	16.0	38	0	7.5	2.9	24.6	51	1,000	0.1142	5.000
7	East Dorset DC	5.0000	411500	111020	50.89855	-1.83784	Optimum	16.0	38	-1	7.5	2.9	24.6	45	1,000	0.1142	5.000
8	West Dorset DC	5.0000	360912	110027	50.88940	-2.55707	Optimum	16.0	38	0	7.5	3.0	24.6	62	960	0.1096	4.800
9	West Dorset DC	6.7000	358160	109979	50.88777	-2.59819	Optimum	16.0	37	0	7.5	3.0	24.6	76	955	0.1090	6.399
10	East Dorset DC	20.3500	408332	107310	50.86524	-1.88297	Optimum	16.0	38	-1	7.3	2.9	24.4	48	1,030	0.1176	20.961
11	East Dorset DC	13.0000	407075	106873	50.86132	-1.90084	Optimum	16.0	38	-1	7.3	2.9	24.4	49	1,030	0.1176	13.390
12	East Dorset DC	13.2000	409618	105289	50.84704	-1.86475	Optimum	16.0	38	-1	7.2	2.9	24.3	19	1,030	0.1176	13.596
13	North Dorset DC	12.1400	388332	105051	50.84486	-2.16709	Optimum	16.0	38	-1	7.4	3.0	24.5	76	992	0.1132	12.043
14	North Dorset DC	8.7000	385425	105000	50.84434	-2.20838	Optimum	16.0	38	-1	7.5	2.9	24.6	117	992	0.1132	8.630
15	North Dorset DC	5.0000	385928	104812	50.84286	-2.01259	Optimum	16.0	38	-1	7.4	2.9	24.5	27	1,010	0.1153	5.050
16	West Dorset DC	4.9900	361325	102775	50.82322	-2.55034	Optimum	16.0	38	-1	7.0	2.9	24.2	240	1,020	0.1164	5.090
17	West Dorset DC	5.0000	360954	102552	50.82119	-2.55668	Optimum	16.0	38	-1	7.0	2.9	24.2	241	1,020	0.1164	5.100
18	North Dorset DC	7.0000	388136	102088	50.81921	-2.16978	Optimum	16.0	38	-1	7.5	2.9	24.5	71	1,020	0.1164	7.140
19	East Dorset DC	7.0000	406125	101700	50.81482	-1.91443	Optimum	16.0	39	-1	7.3	2.9	24.4	18	1,060	0.1210	7.420
20	West Dorset DC	17.3000	355019	101303	50.80952	-2.639774	Optimum	16.0	38	-1	7.0	2.9	24.1	216	1,010	0.1153	17.473
21	Christchurch BC	3.0360	409506	100357	50.80270	-1.86647	Optimum	16.0	39	-1	7.3	2.9	24.3	22	1,075	0.1227	3.264
22	Christchurch BC	37.2600	410222	99598	50.79586	-1.85633	Optimum	16.0	39	-1	7.3	2.8	23.9	10	1,075	0.1227	40.055
23	Christchurch BC	24.2000	410016	99547	50.79540	-1.85926	Optimum	16.0	39	-1	7.3	2.8	23.9	12	1,075	0.1227	26.015
24	West Dorset DC	0.2484	372302	97662	50.77787	-2.39421	Optimum	16.0	39	-1	7.4	2.8	24.5	105	1,080	0.1233	0.268
25	West Dorset DC	5.0000	372299	97660	50.77785	-2.39425	Optimum	16.0	39	-1	7.4	2.8	24.5	105	1,080	0.1233	5.400
26	East Dorset DC	2.7190	409137	97513	50.77713	-1.87178	Optimum	16.0	39	-1	7.3	2.8	24.3	10	1,075	0.1227	2.923
27	West Dorset DC	3.9261	333898	97856	50.77650	-2.93888	Optimum	16.0	38	-3	7.1	2.9	24.2	183	1,040	0.1187	4.083
28	West Dorset DC	2.3997	372985	97311	50.77475	-2.38450	Optimum	16.0	39	-1	7.4	2.8	24.5	84	1,080	0.1233	2.592
29	East Dorset DC	3.6840	396675	97198	50.77435	-2.04852	Optimum	16.0	39	-1	7.5	2.9	24.5	45	1,030	0.1176	3.795
30	Christchurch BC	3.5990	409499	97070	50.77314	-1.86665	Optimum	16.0	39	-1	7.3	2.8	24.3	9	1,075	0.1227	3.869
31	Christchurch BC	3.6000	417813	95611	50.75982	-1.74882	Optimum	16.0	38	-1	7.3	2.9	24.4	8	1,060	0.1210	3.816
32	Christchurch BC	14.4000	417714	95129	50.75549	-1.75024	Optimum	16.0	38	0	7.3	2.9	24.4	8	1,060	0.1210	15.264
33	Purbeck DC	4.9900	392824	94634	50.75126	-2.10309	Optimum	16.0	39	-1	7.5	2.8	24.5	62	1,090	0.1244	5.439
34	Purbeck DC	8.1000	395767	94301	50.74830	-2.06136	Optimum	16.0	38	0	7.0	2.9	24.2	38	1,080	0.1233	8.748
35	Purbeck DC	6.2000	395767	94301	50.74830	-2.06136	Optimum	16.0	38	0	7.0	2.9	24.2	38	1,080	0.1233	6.696
36	Purbeck DC	3.3000	393388	93923	50.74487	-2.09508	Optimum	16.0	39	0	7.0	2.8	24.1	23	1,100	0.1256	3.630
37	Purbeck DC	0.4984	392223	93019	50.73673	-2.11157	Optimum	16.0	39	0	7.0	2.8	24.1	9	1,090	0.1244	0.543
38	Purbeck DC	10.0000	388420	90356	50.71272	-2.16538	Optimum	16.0	39	0	6.9	2.8	24.1	20	1,090	0.1244	10.900
39	Purbeck DC	7.0000	387802	90076	50.71019	-2.17412	Optimum	16.0	39	0	6.9	2.8	24.0	17	1,120	0.1279	7.840
40	Purbeck DC	5.8000	369957	89555	50.70554	-2.14359	Optimum	16.0	39	0	6.9	2.8	24.0	30	1,120	0.1279	6.496
41	West Dorset DC	4.9970	377872	88264	50.69360	-2.31465	Optimum	16.0	39	0	7.0	2.8	24.1	55	1,120	0.1279	5.597
42	Purbeck DC	4.9961	384311	87689	50.68864	-2.22346	Optimum	16.0	39	0	6.9	2.8	24.0	19	1,120	0.1279	5.596
43	Purbeck DC	12.0000	387124	87619	50.68808	-2.18364	Optimum	16.0	39	0	6.9	2.8	24.0	21	1,120	0.1279	13.440
44	West Dorset DC	5.0000	376969	86687	50.68127	-2.32734	Optimum	16.0	39	0	7.0	2.8	24.1	30	1,120	0.1279	5.600
45	West Dorset DC	5.0000	377318	86227	50.67526	-2.32236	Optimum	16.0	39	0	7.0	2.8	24.1	34	1,120	0.1279	5.600
46	West Dorset DC	5.0000	378479	85698	50.67055	-2.30590	Optimum	16.0	39	0	7.0	2.8	24.1	37	1,120	0.1279	5.600
47	West Dorset DC	4.8384	364747	82848	50.64425	-2.49994	Optimum	16.0	39	0	7.1	2.8	24.2	30	1,140	0.1301	5.516
48	West Dorset DC	4.4000	364490	81305	50.63035	-2.50343	Optimum	16.0	38	0	7.1	2.8	24.2	34	1,140	0.1301	5.016

NOTE 1 Installations are listed in order of decreasing latitude of the development site.
 2 Yield Factor estimates highlighted in yellow are based on on-site recordings.
 For these, an input value of 15.5 or 16% for inverter and cable losses, etc., has been selected to provide a similar outcome. 16% has been used for all other installations.

TOTAL	348.8921
AVERAGE	7.269

AVERAGE	1.053
TOTAL	367.340

GREATER DORSET²: RENEWABLE ENERGY RESOURCES AND PROJECTED RENEWABLE ENERGY DEPLOYMENT

Table 24 RESOURCE TECHNOLOGY MIX COMPARED WITH PROJECTED TECHNOLOGY MIX

Renewable Energy Source	INSTALLED CAPACITY			ANNUAL ENERGY GENERATION			CAPACITY FACTORS USED	
	MW		%	GWh		%	for	for
	Resource Estimate ³	2020 Projection ⁴	Resource Estimate	2020 Projection ⁴	Resource Estimate	2020 Projection	Estimated Resource	2020 Projection
Heat & Electricity Bioenergy	215.49	166.31	12.74	27.72	564.86	472.03	16.24	49.66
Large Wind	900.00	9.20	53.20	1.53	2,096.83	21.43	60.29	2.26
Small Wind ⁵	0.00	0.88	0.00	0.15	0.00	1.98	0.00	0.21
Solar PV Roof-Mounted	162.60	57.85	9.61	9.64	170.93	60.82	4.91	6.40
Solar PV Ground-Mounted ⁵	0.00	353.48	0.00	58.92	0.00	372.31	0.00	39.17
Hydro	3.32	0.12	0.20	0.02	12.20	0.45	0.35	0.05
Solar Thermal	135.48	1.96	8.01	0.33	83.08	1.20	2.39	0.13
Heat Pumps	274.98	10.13	16.25	1.69	549.91	20.25	15.81	2.13
TOTAL	1,691.87	599.93	100.00	100.00	3,477.80	950.47	100.00	100.00

Table 25 PERCENTAGES OF ESTIMATED RESOURCES PROJECTED TO BE DEPLOYED

Renewable Energy Source	INSTALLED CAPACITY			ANNUAL ENERGY GENERATION		
	2020 Projection ⁴		% of Resource Estimate	2020 Projection ⁴		% of Resource Estimate
	Resource Estimate ³	MW	Resource Estimate	Resource Estimate ³	GWh	Resource Estimate
Heat & Electricity Bioenergy	215.5	166.3	77.2	564.9	472.0	83.6
Large Wind	900.0	9.2	1.0	2,096.8	21.4	1.0
Small Wind ⁵	0.0	0.9	∞	0.0	2.0	∞
Solar PV Roof-Mounted	162.6	57.9	35.6	170.9	60.8	35.6
Solar PV Ground-Mounted ⁵	0.0	353.5	∞	0.0	372.3	∞
Hydro	3.3	0.1	3.7	12.2	0.5	3.7
Solar Thermal	135.5	2.0	1.5	83.1	1.2	1.5
Heat Pumps	275.0	10.1	3.7	549.9	20.2	3.7
TOTAL	1,691.9	599.9	35.5	3,477.8	950.5	27.3

NOTE

- 2 Greater Dorset refers to the area covered by Dorset County Council and Bournemouth and Poole Unitary Authorities.
- 3 Resources are taken from "Renewable Energy Resource Assessment for Bournemouth, Dorset and Poole", published by RegenSW, March 2012.
- 4 Projections are based on installed capacity, capacity factor and annual energy output reported in the 31 December 2017 edition of this report, in Tables 1 - 9 & 15. These data differ only slightly from current data. For example, total projected renewable energy generation is shown as 950.5 GWh above and is currently 947.6 GWh.
- 5 It can be noted that no resource estimates were published for Small Wind and Ground-Mounted Solar PV.

NOTE 1
The estimated resource for bioenergy is made up from a different set of technologies than that for the estimated 2020 projection. This should be borne in mind when comparing the two sets of data. However, the load factors used by RegenSW for calculating resource bioenergy generation lead to an effective overall factor of 0.2992, which is only 8% less than 0.3240, the corresponding figure for 2020 projected bioenergy generation.