

## **Dorset Energy Partnership**

### **Annual report 2015 – 16**

#### **The Dorset Energy Partnership**

The Dorset Energy Partnership (DEP) is an active group of organisations set up to develop and deliver the Bournemouth, Dorset and Poole Renewable Energy (2013) and Energy Efficiency Strategies (2009).

The Partnership comprises an Executive and five working groups. The Executive is responsible for the overall direction, delivery and monitoring of both strategies and has a core membership of 20 members including representatives from Dorset County Council, all of the Dorset's district/borough councils, the unitary authorities of Poole and Bournemouth, as well as other stakeholders across the community and business sectors.

The working groups are responsible for delivering the priority action areas in each strategy and as such address sustainable energy in the public, community and domestic sectors as well as planning and bioenergy. Each working group is responsible for developing and delivering annual action plans and again include representatives from Dorset's local authorities and community and business sectors.

The key achievements of each working group in delivering their annual action plans during 201/16 are highlighted in this Annual Review. The action plans, Energy Efficiency and Renewable Energy strategies can be viewed online [www.dorsetforyou.com](http://www.dorsetforyou.com).

A significant piece of work during 2015/16 was the submission of a major proposal in response to the Department for Communities and Local Government issued Call for the Dorset Local Enterprise Partnership European Structural Investment Fund (ESIF) Low Carbon Economy theme. The proposal, which was led by Dorset County Council in conjunction with the DEP aims to stimulate a step change in growth of Dorset's low carbon economy. In particular, the programme aims to de-risk and accelerate deployment of innovation in low carbon technologies. The different elements of what this programme will involve, if successful (which will be known by July 2016) are outlined below.

#### **Community Sustainable Energy Group**

The Community Sustainable Energy Group membership includes local authority sustainable energy, environmental and community development officers, DA 21, Wessex Energy Advice Centre and representatives from local community energy groups and Transition Town groups. Two meetings were held in 2015, in February in Dorchester and in November at the Springhead Trust.

#### **Key achievements**

The Big Lottery funded 'Communities Living Sustainably in Dorset' project (CLS) ended on 31<sup>st</sup> March 2016 with almost all original targets met or exceeded. Activity undertaken in 2015/16 continued to support the delivery of a number of community energy activities including:

- A series of Transition Together meetings in Dorchester in early 2015.
- A successful open ecohomes weekend event in September 2015 covering homes in Bridport, Lyme Regis and the Hillfield Priory near Cerne Abbas. It was co-ordinated by Transition Town Bridport.
- A number of community engagement and awareness raising events including films and presentations were held in October 2015 and a successful end-of-project evening event

in Bridport in March 2016 featuring Rob Hopkins, founder of the Transition movement as the guest speaker.

- An energy awareness training event was held for village hall committee members in January 2016.
- Seed funding support for the not-for-profit community benefit society Dorset Community Energy which enabled £488,000 of local community investment to be raised in 2015 to finance 11 community solar PV installations on schools and 4 PV installations on community buildings. Through the project the participating sites will receive a total of £600,000 of free solar electricity over the 20-year lifetime of the solar panels. Just over half the installations were completed by 31<sup>st</sup> March 2016. The project was a highly commended runner-up in the RegenSW 2015 Green Energy Awards.

A community energy proposal was included as part of the Dorset ESIF Low Carbon Economy programme. If the funding application is successful the project will involve tendering for up to 3 geographically-based communities interested in achieving a 10% monitored energy saving in 50 households per community (total 150 participating households over the 3 year project.) The ESIF funding will provide 50% project support grants. It is hoped the project will also include a local renewable energy direct supply pilot.

Individual member organisations of the Community Sustainable Energy Group have developed a number of additional sustainable energy initiatives including:

- The Energize Stur Valley Industrial and Provident Society has installed a ground mounted solar PV installation at the Springhead Trust near Blandford Forum financed through a community share issue and a 2<sup>nd</sup> share offer for the development costs of a community micro-hydro installation at the same site.
- A climate change working group has been set up as part of the Bridport Neighbourhood Plan development group.

### **Bio-energy Working Group**

The Bio-energy Working Group works jointly with the Dorset AONB Woodlink group. The joint group did not meet in 2015 but a number of key actions in the 2015/16 action plan were taken forward through separate project delivery groups. Members of the joint group include local authority and AONB staff with an interest in sustainable woodland management and local woodfuel supply, the Dorset Wildlife Trust, the Dorset Coppice Group, Natural England, the Forestry Commission and the Dorset Farming and Wildlife Advisory Group.

### **Key achievements**

- A grant of £25,000 has been provided by Dorset County Council for a detailed technical study for biomass heating at County Hall including self-supply of woodchips from Dorset County Council's Countryside Service. The study will be undertaken in 2016-17.
- The European funded ROKWOOD energy crops research and demonstration project, which includes Dorset County Council, the Centre for Sustainable Energy and Crops for Energy Ltd as UK partners held 2 international meetings during 2014-15, in Poland in May and a final project meeting in October in Brussels. A well-attended energy crops training workshop took place early May 2015 at Kingston Maurward College. The project ended on 30<sup>th</sup> November 2015. More about the project and its outputs can be seen at <http://www.rokwood.eu/>
- The CLS project to set up a community woodland group has developed very successfully. Project Coordinators the Dorset AONB continued to support 9 local community woodland groups in the Bridport - Dorchester area. Over the course of the two year project, over 180 woodland sessions were held, totaling over 3,300 volunteer hours contributed to woodland management.

- A biomass & timber market development proposal to provide approximately £450,000 of grant support to biomass & timber business supply chains and businesses considering installing biomass boilers has been submitted as part of to the Dorset ESIF Low Carbon Economy funding bid. The Dorset AONB will be the project delivery partner if the bid is successful.
- Dorset AONB are part of a consortium of partners delivering a British Gas Energy Savings Trust project. Dorset AONB and Magna Housing Association will be working together on a pilot to install wood burners and supply with sustainable fuel to tenants.

### **Sustainable Energy Planning Group**

The Sustainable Energy Planning Group supports the delivery of the planning actions in the Bournemouth, Dorset and Poole Renewable Energy and Energy Efficiency Strategies. Membership mainly consists of local authority Planning Policy Officers but is also open to Development Management and Building Control Officers.

The group did not meet during 2015-16 as Planning Policy Officers were very busy in preparing Local Plans and the public consultations on Local Plans. In addition, the planning departments in the original 5 Dorset district councils are currently being merged into 3 new planning services. A number of actions in the 2015-16 Action Plan were taken forward by members of the group where resources were available.

National policy changes since May 2015, including removal of financial support mechanisms for on-shore wind energy and solar farms and a requirement for complete local community support for on-shore wind developments, have presented major barriers to further larger scale renewable energy development in Dorset. Three wind farm planning applications, with a total of approximately 30MW of installed capacity, were either refused planning consent or withdrawn by the developers. The proposed 900 MW Navitus Bay offshore windfarm development was not approved by the Secretary of State.

The Housing and Planning Bill also emerged from Government during this year, and is expected to be enacted later in 2016. It is expected to set out further changes around the delivery of low carbon homes either in the Bill or a commitment through a review of Building Regulations.

### **Key achievements**

- Local plans are at various stages of development and consultation, with both Poole and Purbeck Councils commencing reviews of their Local Plans. The West Dorset and Weymouth and North Dorset Local Plans have now been adopted. The North Dorset Local plan contains sections on climate change and renewable energy and West Dorset Local Plan contains a paragraph supporting community energy.
- A number of Neighbourhood Plans are currently in development which include sections on climate change and sustainable energy, including the Bridport Neighbourhood Plan.
- An information sharing meeting of 11 Town and Parish Councils who have successfully negotiated solar farm community benefit funds (together worth a total of £2m over 20 years) was organized in Dorchester in September 2015. It is encouraging to note that local community benefit funds are now routinely offered by renewable energy developers in Dorset and have led to positive engagement with the host communities.

## **Domestic Sustainable Energy Working Group**

The domestic sector working group comprises Local Authority Officers with Home Energy Conservation Act (HECA) responsibilities; Registered Provider representatives; Wessex Energy Advice Centre; Home Improvement Agency representative; a Public Health representative, and a sustainable energy industry representative.

### **Key achievements**

- The Home Energy Conservation Act Progress report was made available on [www.dorsetforyou.com](http://www.dorsetforyou.com) and its ambitions are reflected in the annual DEP Domestic Sector Action Plan
- The Public Health Dorset Healthy Homes Dorset phase 1 project was developed and delivered, trialling the use of MOSAIC geodemographic data to target people vulnerable to the health impacts of living in cold homes. A poster presentation of initial findings was shown at the Public Health England Annual Conference. Project development for phase 2, based on referrals from a wide range of organisations in contact with vulnerable people, progressed significantly.
- The Bournemouth Warm Homes project was completed. Follow-up surveys showed high levels of satisfaction with both the service received and the benefits of insulating homes.
- Continued work with the Department of Energy and Climate Change and Public Health England on closer collaboration in making homes healthy, and the growing importance of evaluation.
- Continued exploration of the opportunities for offering energy supply to residents of Bournemouth, Dorset, and Poole.
- Park Home Insulation project completed in the Purbeck area. 15 installations completed.

## **Public sector energy managers working group**

The public sector group includes local authority representatives with an energy and/ or carbon management responsibility. The group did not meet in 2015/16 and its role and structure will be reviewed in light of the ESIF bid, if successful.

### **Key achievements:**

- A public sector energy proposal was included as part of the Dorset ESIF Low Carbon Economy programme to provide an 'ideas to implementation' locus for business and public sector to develop and implement at least four projects utilising new technologies in the public sector / social housing market, and six low carbon projects in the private sector, taking all projects from inception to delivery.

## **Business sector actions**

- Dorset County Council and Borough of Poole completed work on the LoToNo project to support innovation in the low carbon business sector. As part of the EU 2013 'Clusters and Entrepreneurship in Support of Emerging Industries' programme. 25 business innovation voucher applications were approved and case studies can be viewed at <http://www.lotono.co.uk/news-events/>
- The ESIF Dorset Low Carbon Economy Programme, aims to stimulate a step change in growth of Dorset's low carbon economy. In relation to the business sector the Programme will establish a Low Carbon Economy Fund to provide grant aid to assist the shift towards a Low Carbon Economy, targeting particularly SMEs. It is also proposed that a Clean Technology Cluster will be developed (to provide advice on technological innovation, promote applications to the Low Carbon Economy Fund, and establish collaborative links between business and research institutions to develop new low carbon products).

**Total renewable energy installed capacity in Bournemouth, Dorset and Poole- March 2016<sup>1</sup>**

Renewable heat <sup>2</sup>	Installations total March 2015 <sup>3</sup> (MW)	Additional installations 2015/16 <sup>4</sup> (MW)	Total installations March 2016 (MW)	Capacity factor	Hours per year	Energy per year (GWh)
Biogas (anaerobic digestion)- heat	4.2	0	4.2	0.9	8760	33.1
Sewage gas	1.1	0	1.1	0.9	8760	8.7
Biomass boilers (woodfuel)	19.5	1.5	21	0.1	8760	18.4
Heat pumps	9.42	0.2	9.62	0.1	8760	8.4
Solar thermal	2.06	0.1	2.16	0.1	8760	1.9
Biogas injection to grid (Poundbury)	20GWh					20
Domestic woodstoves <sup>5</sup>	61GWh	17GWh				78
<b>SUB TOTAL</b>	<b>36.28</b>	<b>1.8</b>	<b>38.08</b>			<b>168.5</b>
<b>Renewable electricity<sup>6</sup></b>						
Biogas (anaerobic digestion)	4.26	0	4.26	0.9	8760	33.6
Hydro	0.18	0	0.18	0.5	8760	0.8
Landfill gas <sup>7</sup>	12.6	0	12.6	0.5	8760	55.2
Onshore wind	0.92	0.006	0.926	0.25	8760	2.0
Sewage gas	1.6	0	1.6	0.9	8760	12.6
Solar PV roof mounted	40.4	7.8	48.2	0.1	8760	42.2
Solar PV ground mounted (solar farms)	255	91.9	345.2	0.12	8760	362.9
<b>SUB TOTAL</b>	<b>314.96</b>	<b>99.7</b>	<b>413.0</b>			<b>511.1</b>
<b>TOTAL ENERGY HEAT + ELECTRICITY</b>	<b>351.24</b>	<b>101.5</b>	<b>451.0</b>			<b>679.6</b>

The aspirational target in the Bournemouth, Dorset and Poole Renewable Energy Strategy to 2020 is 7.5% of total energy consumption, equivalent to 1,200GWh of local on-shore renewable energy generation by 2020. The target was based on 2005 DECC energy consumption data, with an estimated 4% energy reduction by 2020. However, recent DECC data<sup>8</sup> indicates energy consumption in Bournemouth, Dorset and Poole has reduced by approximately 17% between 2005 and 2013 and energy savings are anticipated by Regen SW to continue at approximately 1% per year.

Therefore the 2016 revised 7.5% target for 2020 is equivalent to 922 GWh of local renewable energy per year. The generation of 680 GWh of renewable energy by March 2016 is equivalent to 5.5% of total energy consumption, representing a significant increase from 0.95 % in January 2011.

Total investment in renewable energy in Bournemouth, Dorset and Poole has been approximately £489m since 2010 and local economic benefits including income from Feed-in Tariffs, saved income from avoided purchase of grid electricity and local supply of woodfuel are estimated at £66m per year.

<sup>1</sup> The Dorset Energy Partnership's annual renewable energy progress report includes installations already in operation or in construction. Projects in planning or with planning approval and awaiting construction are excluded, as technical and policy impacts can make future predictions unreliable.

<sup>2</sup> Data from the Regen SW Renewable Energy Progress Report, published annually in June and the Green Alliance <http://renewablelocator.green-alliance.org.uk/>

<sup>3</sup> Both Regen SW and the Dorset Energy Partnership publish combined renewable energy data for Bournemouth, Dorset and Poole. The term 'Dorset' is used purely for brevity.

<sup>4</sup> 2015-16 Renewable heat installations provisional - to be updated on publication of the Regen SW Renewable Energy Annual Survey in June 2016.

<sup>5</sup> Data on domestic woodstoves is not recorded by Regen SW. The Dorset Energy Partnership estimates woodfuel use from recent national and SW regional research, pro-rata for Bournemouth, Dorset and Poole (March 2016) [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/517572/Summary\\_results\\_of\\_the\\_domestic\\_wood\\_use\\_survey\\_.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/517572/Summary_results_of_the_domestic_wood_use_survey_.pdf)

<sup>6</sup> Renewable electricity installation data from the DECC Renewable Energy Planning Database accessed on 20th April 2016 and from the Ofgem Feed-in Tariffs Statistical Report accessed on 20th April 2016

<sup>7</sup> The landfill gas capacity factor has been reduced to reflect declining gas production.

<sup>8</sup> <https://www.gov.uk/government/statistical-data-sets/total-final-energy-consumption-at-regional-and-local-authority-level-2005-to-2010>

### **Economic benefit from renewable energy in Bournemouth, Dorset and Poole since 2010.**

<b>Technology</b>	<b>Capital investment since 2010 (cumulative)</b>	<b>Capital investment 2015-16</b>	<b>Annual value of local renewable energy generation</b>
Solar PV (roof mounted)	£103m	£10m	£18m (FIT income + savings)
Solar PV farms (ground mounted)	£337m	£92m	£35m (ROCS income etc)
Anaerobic digestion (biogas)	£18m	£0	£1.8m (FITS + RHI income)
Biomass (woodstoves)	£15m	£3m	£10m (local log supply)
Biomass (boilers)m	£12.5m	£1.5m	£0.9m (wood chip and wood pellet supply)
Wind energy	£0.9m	£0m	£0.15m (FIT income)
Other microgeneration	£2.75m	£0.2m	£0.2m (RHI income + avoided fuel purchase)
<b>TOTALS</b>	<b>£489m</b>	<b>£106.7m</b>	<b>£66m</b>

## Energy Company Obligation (ECO) measures installed in Dorset homes January - December 2015

There were a total of 14,916 ECO measures installed in 2015, compared with 6,841 in 2014.

	Carbon Saving Target (CSO)	Carbon Savings Community (CSCO)	Affordable Warmth (HHCRO)	Total number of ECO measures delivered
<b>Dorset</b>	3,647	1,290	1,913	<b>6,850</b>
Christchurch	568	50	280	898
East Dorset	784	130	346	1,260
North Dorset	408	176	192	776
Purbeck	349	41	178	568
West Dorset	751	381	338	1,470
Weymouth and Portland	787	512	579	1,878
<b>Bournemouth</b>	2,503	1,185	1,020	<b>4,708</b>
<b>Poole</b>	2,312	272	774	<b>3,358</b>

### Fuel poverty figures for 2013 (latest data published by DECC, May 2015)

From 2012, a new national indicator of fuel poverty has been in use, the Low Income/High cost (LIHC) model, replacing the previous 10% income fuel poverty definition. The new definition is based on those households on low incomes with above average fuel needs.

Local Authority Name	Estimated number of households	Estimated number of Fuel Poor Households	Proportion of households fuel poor (%)
Christchurch	22586	1984	8.8
East Dorset	39552	3197	8.1
North Dorset	30192	3070	10.2
Purbeck	20629	2081	10.1
West Dorset	46723	4878	10.4
Weymouth and Portland	30040	3657	12.2
<b>Dorset total</b>	<b>189722</b>	<b>18867</b>	<b>9.7</b>
<b>Bournemouth</b>	86332	9933	11.5
<b>Poole</b>	66732	6062	9.1

In comparison to the data published in 2012 fuel poverty has increased across Dorset County and Bournemouth by 1.6%, and across by Poole 1.8%.

**Per capita local CO2 emission estimates: industry, domestic and transport sectors 2005 - 2013 ( source Department of Energy and Climate Change)**

Local Authority	Year	Industry and Commercial	Domestic	Transport	Total
Christchurch	2005	2.0	2.6	2.2	6.7
	2006	2.0	2.5	2.2	6.7
	2007	1.9	2.4	2.2	6.5
	2008	2.0	2.4	2.1	6.4
	2009	1.7	2.1	2.0	5.8
	2010	1.8	2.3	2.0	5.9
	2011	1.6	2.0	1.9	5.4
	2012	1.6	2.1	1.8	5.5
	2013	1.5	2.1	1.8	5.3
East Dorset	2005	1.9	2.7	2.2	6.7
	2006	1.7	2.7	2.2	6.6
	2007	1.6	2.6	2.3	6.4
	2008	1.6	2.6	2.2	6.3
	2009	1.4	2.4	2.1	5.8
	2010	1.5	2.5	2.1	6.0
	2011	1.4	2.2	2.0	5.5
	2012	1.4	2.4	2.0	5.7
	2013	1.3	2.3	2.0	5.5
North Dorset	2005	2.4	2.6	2.1	7.2
	2006	2.4	2.6	2.1	7.2
	2007	2.2	2.4	2.1	6.9
	2008	2.2	2.5	2.0	6.8
	2009	2.1	2.3	2.0	6.5
	2010	2.2	2.4	1.9	6.6
	2011	2.0	2.1	1.9	6.0
	2012	2.2	2.2	1.8	6.3
	2013	2.1	2.1	1.8	6.1
Purbeck	2005	4.8	2.6	3.0	10.6
	2006	4.7	2.6	3.0	10.4
	2007	4.6	2.4	2.9	10.1
	2008	4.7	2.5	2.8	10.1
	2009	4.2	2.3	2.7	9.3
	2010	4.2	2.4	2.7	9.4
	2011	3.7	2.1	2.6	8.6
	2012	4.1	2.3	2.5	9.0
	2013	4.0	2.2	2.4	8.6



Local Authority	Year	Industry and Commercial	Domestic	Transport	Total
West Dorset	2005	2.7	2.8	3.0	8.9
	2006	2.7	2.8	3.0	8.9
	2007	2.6	2.6	3.0	8.6
	2008	2.5	2.6	2.9	8.3
	2009	2.3	2.4	2.8	7.8
	2010	2.4	2.6	2.7	8.1
	2011	2.2	2.2	2.6	7.4
	2012	2.3	2.4	2.6	7.5
	2013	2.1	2.3	2.6	7.2
Weymouth and Portland	2005	1.5	2.2	1.3	5.1
	2006	1.5	2.2	1.3	5.0
	2007	1.4	2.1	1.3	4.8
	2008	1.4	2.1	1.3	4.8
	2009	1.3	1.9	1.2	4.5
	2010	1.4	2.0	1.2	4.6
	2011	1.2	1.7	1.1	4.1
	2012	1.3	1.9	1.1	4.3
	2013	1.2	1.8	1.1	4.1
Dorset Total	2005	2.4	2.6	2.3	7.5
	2006	2.4	2.6	2.3	7.4
	2007	2.3	2.4	2.3	7.2
	2008	2.3	2.5	2.2	7.1
	2009	2.1	2.2	2.2	6.6
	2010	2.1	2.4	2.1	6.7
	2011	1.9	2.1	2.1	6.1
	2012	2.0	2.2	2.0	6.3
	2013	1.9	2.1	2.0	6.1

Bournemouth	2005	1.9	2.5	1.2	5.6
	2006	2.0	2.5	1.2	5.6
	2007	1.9	2.3	1.2	5.3
	2008	1.8	2.3	1.1	5.3
	2009	1.6	2.1	1.1	4.7
	2010	1.6	2.1	1.0	4.7
	2011	1.4	1.8	0.9	4.1
	2012	1.5	1.9	0.9	4.4
	2013	1.4	1.9	0.9	4.1
Poole	2005	2.7	2.5	1.5	6.7
	2006	2.7	2.5	1.4	6.6
	2007	2.7	2.3	1.4	6.4
	2008	2.6	2.4	1.4	6.3
	2009	2.3	2.1	1.3	5.6
	2010	2.4	2.2	1.3	5.8
	2011	2.1	1.9	1.3	5.2
	2012	2.2	2.1	1.2	5.5
	2013	2.1	2.0	1.2	5.3

Units = t CO2 per person