

AREAS FOR ACTION

As a result of this evidence gathering eight key themes were identified and internal Task and Finish groups established to bring together technical experts and wider stakeholders.

Renewable Energy
Natural Assets
Economy
Food & Drink
Buildings
Water
Waste
Transport

The theme-based Task and Finish groups were able to explore in more detail the national approach, scientific guidance, the relevance to Dorset Council and the Dorset area, and guide the creation of background technical papers to set out the information gathered and identify and contextualise areas for action.

Each technical paper briefly sets out not only the context but also the key issues and opportunities for action in each of the eight areas. Identifying objectives and areas where Dorset Council will seek to take action or work with wider partners.

Summary versions of these papers are detailed in the following sections, each with a link to the background technical paper. In addition to setting the background, they identify a number of actions which Dorset Council intends to progress and will form the basis for development of more detailed actions plans (see **Next Steps** section later in the document)...



RENEWABLE ENERGY

Scale of the challenge...

To address the climate emergency **all** energy currently provided by fossil fuels for heating, transport and electricity will need to come from a low-carbon source. This will need to be through electricity or hydrogen generated from renewable energy (solar, wind, hydro, biomass) or nuclear.

This will mean switching **all** heating to low-carbon alternatives such as biomass, heat pumps or hydrogen, and switching **all** transport to electric batteries or hydrogen. It will then require an enormous increase in renewable electricity generation and low-carbon hydrogen generation to meet the demand.





It will also be essential that we can store energy locally and manage our energy in a smarter way in order to meet peak energy demand and make the most of the renewable energy we produce.

Given the uncertainty about heating and hydrogen in national policy; it is difficult to estimate how much renewable energy will be needed to meet the challenge in Dorset. Under the greenest scenario energy demand in the Dorset Council area will be around **4 billion kWh/yr**. So, for Dorset to play its fair share and generate 100% of its own energy demand we will need around 4GW of solar (around 19,000 acres) or 2GW of wind (around 700 big turbines), or a combination of the two. Bournemouth, Christchurch and Poole Council will need as much again, if not more, and is unlikely to be able to fit it within its own boundaries.

For Dorset Council alone it is estimated that we will need 60MW of

solar PV (or 30MW of wind) to cover our own energy demand once efficiency measures have been taken. To ensure this demand is kept to a minimum improving the efficiency of our buildings will be critical.

Dorset's progress so far...

-  Significant increase in installed renewable energy capacity in Dorset between 2010 to 2016 to 480 MW (around 10% of all Dorset Council area's energy demand)
-  1MW of renewable energy capacity installed on Dorset Council's estate and schools
-  The Dorset-Council-run ERDF-funded Low Carbon Dorset programme is currently encouraging (through advice and grants) the installation of 4 MW of renewable energy capacity across the Dorset Council and BCP areas
-  Bridport is currently hosting a volunteer-run pilot project, the first in England, to allow local trading of renewable energy



Hear more about the challenge we are facing in Dorset from [Low Carbon Dorset's Renewable Energy Technical Officer...](#)



Key Issues...

- Nationally**
- **Uncertainty at national level** around key strategic decision & direction
 - **Electricity grid limited** in its ability to support deployment of renewable energy at scale needed
 - **Technology is still developing in some areas** (like EV infrastructure) to enable mass deployment
 - **Current policy framework** does not support the journey to a low carbon future
 - **Existing planning system** does not actively encourage renewable energy installations
- In Dorset**
- **Delivery at scale is required**, every opportunity to utilise renewable energy to meet current demand needs to be taken & large-scale deployment projects need to be developed
 - **Dorset Council's renewable energy capacity needs to increase** by a factor of 60 to meet demands
 - **Dorset county's renewable energy capacity needs to increase** by a factor of at least 8 to meet its own demands
 - **Decision makers within many organisations are not always aware** of renewable energy opportunities
 - **Deployment of onshore renewable energy stagnated** since 2016 due to planning restrictions imposed & removal of all subsidies
 - **Lack of financial incentives** in place to encourage investment in renewable energy
 - **Cases where small-scale renewable energy can offer good returns** need to be identified & promoted to local businesses

Key Opportunities...





- **Largely untapped resource** of solar, onshore wind, offshore wind and tidal in Dorset
- **Increased energy security** possible through local low-carbon generation
- **Income stream** from generating our own renewable energy
- **Potential to attract investment** into Dorset's sustainable infrastructure
- **Potential reduction in energy costs** for local businesses & communities
- **Dorset Council's county farms could be exemplar test sites** for renewable energy generation
- **Biomass identified as a significant opportunity for Dorset** in Bournemouth Dorset & Poole Renewable Energy Strategy 2012
- **Financial benefits to transitioning** Dorset Council's entire estate and operations to zero carbon
- **Opportunity for DC to show leadership** and set an example






Areas for Action...

Dorset Council cannot itself deploy the GigaWatts of renewable energy required at a Dorset-area level, and does not have control of national planning policy or the economics of renewable energy. But there are many things that the Council can do to facilitate the transition from the current state to a situation where Dorset supplies its own energy demands with renewable energy.







Direct

-  Maximise renewable energy opportunities of all DC buildings; convert all off-grid buildings to heat pumps or biomass, convert heating of all on-grid buildings to hydrogen-ready hybrid heat pumps, install max capacity solar arrays on every building
-  Construct large renewable energy installation (around 60 MW of solar PV or 30 MW of wind turbines) on Council owned land to meet Council's demand
-  Commission study to identify opportunities for renewable energy in County Farms and Council carparks
-  Work with renewable energy developers in Dorset to secure new renewable energy generation to meet (and exceed) needs of the Council

Indirect (through services)

-  As Local Planning Authority – actively encourage renewable energy deployment
-  Undertake detailed resource mapping to confirm Dorset has the technical resources to be self-sufficient. Potential sites to be identified in the Local Plan
-  Establish a positive planning policy framework and toolkit for maximising the use of renewable energy within new developments

Influence & Partnership

-  Lobby central government over the major hurdles to renewable energy deployment, the Navitus Bay decision, investment needed on grid infrastructure, and future of heat
-  Work in partnership with BCP to plan a zero-carbon energy system for Dorset
-  Dedicated resources to promote renewable heat in cases where it is financially viable
-  Deliver extended Low Carbon Dorset programme
-  Dedicated resources to assist with the expansion and awareness building of the Energy Local project in Dorset
-  A review of whether Council run fuel-poverty schemes could install low-carbon heating systems over gas boilers

Case Study: Stewarts Garden Centre

Stewarts is a family run business in Dorset with three garden centres, a nursery and a landscaping division.



With support from Dorset Council's Low Carbon Dorset programme, in 2019-20 Stewarts spent over £800k on low-carbon initiatives to drastically reduce their carbon footprint. Part of this project to become more environmentally

and financially sustainable included installing 179kWp of solar PV on the rooftops of their two Dorset garden centres. And investing in a ground-source heat pump in their new 8,000 sq m glasshouse.

These installations, combined with energy efficiency measures, reduced their footprint by 449 tonnes of CO₂ (40%) and will save around £50k in electricity costs each year. These savings will be re-invested in to the business and will help support clean growth.

Case Study: Dorset Community Energy

Dorset Community Energy (DCE) is a not-for-profit Community Benefit Society which facilitates community ownership of renewable energy production.



It was established in 2013 with support from the BIG Lottery. Its 152 members have invested £490,000 in the last 7 years, this has paid for the installation of solar PV panels on 12 schools and four community buildings in Dorset - resulting in 420kW of installed capacity.

Electricity is provided to the community buildings at little or no cost, and any electricity not used on site is exported to the national electricity grid. Revenue is generated from the sale of electricity and from the government's feed-in-tariff. The income covers the operational cost of the Society and provides a return on investment to member shareholders.

In 2019 DCE launched its third share offer and as of May 2020, 245kW has been installed at three sites at a total capacity of 665kW.

[Read more about DCE here.](#)