

3. Power Up



Defining a Vision for 2030

Our use of energy manifests itself in the notion of ‘somewhere else’ cause and effects, with both the production of energy and the subsequent damage it causes taking place out of sight, and often out of mind. This chapter, as well as looking at the technical challenge and statistics, seeks to define a vision where we can actually see the source of our energy production here in Dorset, and in doing so, asks us to reconnect with how we power our lives for the first time since the birth of the industrial age.

In 2030...

All Dorset’s energy needs are provided by renewable sources, all of them situated within the county’s boundaries or offshore. The transition has been just, equitable and produced wider benefits to residents, including the creation of local jobs and lower bills.

Most energy production is owned by the community through various mechanisms: Council-controlled installations that return profits to residents through reduced local taxes, mutual organisations who return profits to members, direct community ownership, and homeowners themselves.

The link between energy requirements (for example how many wind turbines we need) and our energy usage is clearly understood, supporting the on-going efforts of businesses, the public sector, communities, and individuals to reduce their energy demand.

No biofuels or any other ‘renewable’ technologies are employed that require imported materials or are in some other way damaging to eco-systems.

Assessment Framework

How are we performing currently?

The framework below sets out the criteria against which the current status can be assessed. Aspirational objectives are then set to encourage progress towards the vision.

Category	Assessment Criteria
1	Less than 25% of energy needs are provided by local* renewable sources and, where plans exist, they are insufficient to address the issue (*local = within Dorset's boundary or immediately offshore).
2	More than 25% of energy needs are provided by local renewable sources and, while plans exist, they are not at the scale required.
3	More than 50% of energy needs are provided by local renewable sources and clear plans exist to extend this.
4	More than 75% of energy needs are provided by local renewable sources with plans to address the remaining requirements and with community schemes increasing.
5	All of Dorset's energy needs are provided by local renewable sources, most of which are community owned.

2021 Assessment

1	While the latest data is pending it is highly unlikely that more than 25% of energy needs are provided by local* renewable sources and, where plans exist, they are insufficient to address the issue, as such this area is rated "1". (* local = within Dorset's boundary or immediately offshore)
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2022 Assessment

1	More renewable energy schemes were commissioned during the year, but the latest data shows renewables still generated less than 5% of energy use.
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2022 Observations

Most of the analysis in our original report remains valid at the end of 2022. However, we have noted the following developments during the year.

Renewable energy deployment

Renewable energy generation in Dorset is still woefully low. In 2020, just 3.4% of energy consumed in Dorset came from renewable sources. On the plus side, the number of sites generating renewable energy, principally from solar PV, increased by 675 to 17,895 between 2020 and 2021ⁱ. In 2021, these sites generated 454 GWh of electricity. PVs are the dominant form of renewables; there is no off-shore wind and a tiny amount of on-shore wind. In 2021, PVs account for 90% of electricity generation and 94% of generation capacity. But much more capacity must be installed as rapidly as possible to meet demand. There is anecdotal evidence that the steep rise in energy prices has kick started Dorset home owners to install solar PV arrays on their roofs.

Power Up Dorset

In June 2022, ZCD hosted a Power Up webinar where Pete West delivered an inspiring talk on the opportunities

for Community Energy schemes followed by a discussion on the priorities for making progress to meeting all of Dorset's energy demand from renewable energy.

Community energy.

In 2021, the first Energy Local Club in England started in Dorset to enable trading of renewable energy between generators and consumers at a local level. The Bridport Clubⁱ initially allowed householders in the Bridport area to purchase the electricity generated by the 50kW wind turbine at Salway Ash. There are plans now to extend the Club by adding PV generation into the mix.

Dorset Council investment.

A new PV array has been installed at Avon Heath Country Parkⁱⁱⁱ. The array is expected to produce around 20,000 kilowatt hours of electricity a year which will help power the visitor centre, café and classroom at Dorset's largest country park – saving around five tonnes of carbon emissions each year.

Business investment.

Suttle Stone Quarries has cut its carbon footprint by almost 400 tonnes of carbon dioxide equivalent (tCO₂e) since 2018^{iv}, with its most recent measures saving nearly 100 tCO₂e in 2021. In 2022, it topped up grant funding from Low Carbon Dorset to install 120 solar panels at its Worth Matravers quarry, generating the power for its quarry workshop, security and fixed electrical systems. Solar also helps power the quarry's 160kW stone crusher motor, which was recently upgraded from diesel to electric.

Hydrogen economy.

Green hydrogen production facility, Dorset Green H₂^v, is a flagship project in the region and a catalyst for the hydrogen economy in the South West. A £6.5 million fund has enabled Poole-based Canford Renewable Energy Ltd to generate hydrogen fuel from on-site, renewable sources. It is expected to produce enough hydrogen each year to fuel the equivalent of 900,000 miles travelled by lorries.

Need for investment in infrastructure.

The 2021 Regen analysis for Dorset LEP^{vi} found that much of the electrical infrastructure in the area is constrained, this means that new connections, generation or demand can incur high costs. It concluded local government and local networks need to identify the strategic sites for the green economy and processes required to develop the right energy infrastructure to support net zero in Dorset.

What do we need to focus on in 2023?

- Boost renewable energy generation from homes and businesses. Remove barriers to development, apply new planning rules for new build and look to diversify supply.
- Invest in the grid infrastructure to support the green economy.
- Support Community energy clubs to provide cheaper energy to local people and so also help tackle fuel poverty.

ⁱ <https://www.gov.uk/government/statistics/regional-renewable-statistics>

ⁱⁱ <https://www.dorsetcommunityenergy.org.uk/projects/energy-local-bridport/>

ⁱⁱⁱ https://news.dorsetcouncil.gov.uk/2022/06/15/dorsets-largest-country-park-goes-green/?utm_source=Dorset+Council

^{iv} <https://www.suttles.co.uk/news/suttle-stone-quarries-makes-crucial-progress-in-its-drive-to-become-carbon-neutral/>

^v <https://www.dorsetlep.co.uk/dorset-green-h2>

^{vi} <https://www.dorsetlep.co.uk/dorset-net-zero>