

Renewable energy and environmental technology

In some places, the green economy is seen as the future. In Cornwall, it's already happening. The region is establishing itself as a leader in renewable energy – and is at the forefront of the development of environmental technologies that are transforming approaches to sustainability across the world.

Cornwall's climate makes it an ideal location for all types of renewable energy – one of the prime reasons it has become home to global leaders in wind, marine, solar and geothermal power.

But Cornwall's green economy goes beyond energy. We are also home to an established cluster of pioneering companies in areas such as waste processing and environmental consultancy.

These draw on the environmental research excellence of the Combined Universities of Cornwall, incorporating the internationally renowned Camborne School of Mines. The iconic Eden Project, situated at the heart of the county, is also a global leader in climate research – a key attraction for sustainable businesses – while its Green Talent programme helps develop the workforce of the future.

Businesses here benefit too from a regional commitment to protecting Cornwall's natural environment. The South West is the UK's first Low Carbon Economic Area, and Cornwall Council has adopted a bold sustainability strategy, which encourages greener homes and living. The council plans to invest £11m in renewable energy and green transport over the next five years.

These strategies will come together in the development of the Eco-town – one of just four such projects in the UK which will provide a blueprint for low carbon living and working, and see the construction of 5000 new homes meeting the highest environmental standards. The large-scale project is set to create significant opportunities over the next few years for companies working in green construction, sustainable transport, renewable energy and other emerging technologies.

Cornwall's renewable leadership

Marine

With its extensive Atlantic coastline and powerful tides, Cornwall is a world centre for the development of wave and tidal energy. That's why it was the obvious location for the Wave Hub – the world's largest dedicated facility for long-term testing of wave energy devices. The area is also home to the Peninsular Research Institute for Marine Renewable Energy (PRIMaRE), which brings together a unique team of international researchers and offers world-class facilities for R&D. Expertise includes wave and tidal resource assessment, hydrodynamics and reliability testing and modelling.

Solar

Cornwall is officially the sunniest part of the UK – so when it comes to solar power, we've got a natural advantage. The local authority has set out a clear plan to build the UK's first solar park as part of its Green Cornwall programme: a 5MW PV park outside Newquay. That's in addition to a growing domestic market where the county boasts some of the UK's leading accredited installers.

Geothermal

Thanks to the right geology for deep geothermal power – granite close to the surface – Cornwall is set to become home to two commercial geothermal plants. A £40m development near Redruth will supply 10MW of base load electricity to the National Grid

and up to 55MW of renewable heat for local use. Plans are also underway for a second plant to power the Eden Project and the nearby Eco-town. These projects build on the experience of those involved in the original hot rocks research project in the 1980s – whose continued presence means the county is home to heat pump specialists and geothermal experts.

Wind

In 1991, the UK's first commercial on-shore wind farm opened in Cornwall. This is now one of seven commercial wind farms here which together produce enough power for 25,000 homes. The county is close to two of the UK's most promising off-shore wind farm sites. Cornwall's extensive off-shore marine expertise makes it ideal to support these developments.

Talent pool

The creation of CUC, the unique partnership of six higher education institutions, has meant Cornwall is well placed to meet the future demands of the renewable energy sector. The County has produced the UK's first renewable energy undergraduates as well as provides foundation level courses.

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