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EUROPEAN REGIONAL DEVELOPMENT FUND AT WORK
FOR CORNWALL AND THE ISLES OF SCILLY



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CORNWALL &
ISLES OF SCILLY
GROWTH
PROGRAMME

in association with www.cornwallislesofscillygrowthprogramme.org.uk

Investing in our low-carbon future

IT was in January 2019 that Cornwall Council declared a climate emergency in recognition of the urgent need for action in the face of the climate crisis. A year on, the Growth Programme looks at some of the projects part-funded by the European Regional Development Fund which are making moves in Cornwall and the Isles of Scilly to support the low-carbon agenda.

LOCAL ENERGY MARKET: CENTRICA

THE Local Energy Market is a £17 million pioneering programme spearheaded by Centrica, aimed at testing the use of flexible demand, generation and storage across domestic and business sectors.

Trials cover a number of areas, including an ambitious residential energy storage project. This has seen both battery and solar panels installed into 100 homes across the county and integrated into a virtual marketplace that incentivises businesses and homes to change the way they use and produce energy to help manage the grid.

The batteries from the trial homes are aggregated and connected to the marketplace, making it the UK's most advanced virtual power plant.

Dan Nicholls, programme manager of Cornwall's Local Energy Market, says: "The programme has supported 125 businesses with a combination of grants for energy monitoring equipment, energy surveys, training and, in some cases, much larger energy installations.

"Overall, we are on track to deliver around 5MW of renewable energy and achieve greenhouse gas emission savings of nearly 10,000 tonnes CO₂e per year."

DEEP GEOTHERMAL: UNITED DOWNS AND THE EDEN PROJECT

THANKS to its heat-producing granite, Cornwall has the opportunity to access geothermal energy and the investment into exploring its resources is paying off. Geothermal Engi-



» Bennamann Ltd is leading the way in driving a local clean energy revolution with its project at Chynoweth Farm (above). Below, geothermal drilling at United Downs and solar panels being used to create energy

neering Limited embarked on an £18 million project in November 2018 which saw the drilling of two deep geothermal wells from its site at United Downs. The wells took eight months to drill and the production well at 5.3km deep is the deepest and hottest well ever drilled on land in the UK, with temperatures at the bottom reaching 190C.

The next step in the project is a period of reservoir evaluation and then, assuming the results are positive, the development of a power plant to harness the energy. The plant is hoping to supply up to 3MW of electricity as well as bringing commercial opportunities through the use of the heat generated in the process.

In October 2019, geothermal

energy in Cornwall took another leap forward with funding for deep geothermal at the Eden Project.

The Eden Project raised £16.8 million in private and public funds to start phase one of their plan; drilling one well, a research programme and a heat main to probe the extent of the resource 4.5km down in the granite that lies beneath

the Eden site. This first well will initially supply a district heating system for Eden's Biomes, offices and greenhouses.

A second phase would mean another 4.5km well, an electricity plant and sufficient renewable energy for the Eden Project to become carbon positive during 2023 as well as providing heat and power for the local area.

NEW ENERGY FARM: BENNAMANN

ANOTHER pioneering company on a low-carbon mission is Bennamann Ltd, who are working to improve the sustainability and productivity of farming, one of the highest greenhouse gas emitting industries.

Bennamann's world-leading team have developed a radical solution which allows the commercially-viable local production and distribution of better than net-zero carbon biomethane.

Manure slurry and cut grass are examples of the organic waste materials that the company processes to produce biomethane, which is then delivered as compressed gas and liquid fuel for use in vehicles and by households for heating and cooking.

Bennamann's £1.2 million research and development project is to establish an energy independent farm in Cornwall using their new technologies.

In collaboration with a team on the Penryn Campus of Exeter University and St Allen-based Chynoweth Farm Partners, Bennamann is taking a revolutionary approach to maximise the use of onsite renewable energy resources, in combination with cow manure, to supply all the energy needed for a dairy farm, with surplus production made available for local sale and use.

» Since the start of the Growth Programme, £62 million from the European Regional Development Fund has been used to support initiatives improving environmental protection and resource efficiency.

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