RenewableUK CYMRU

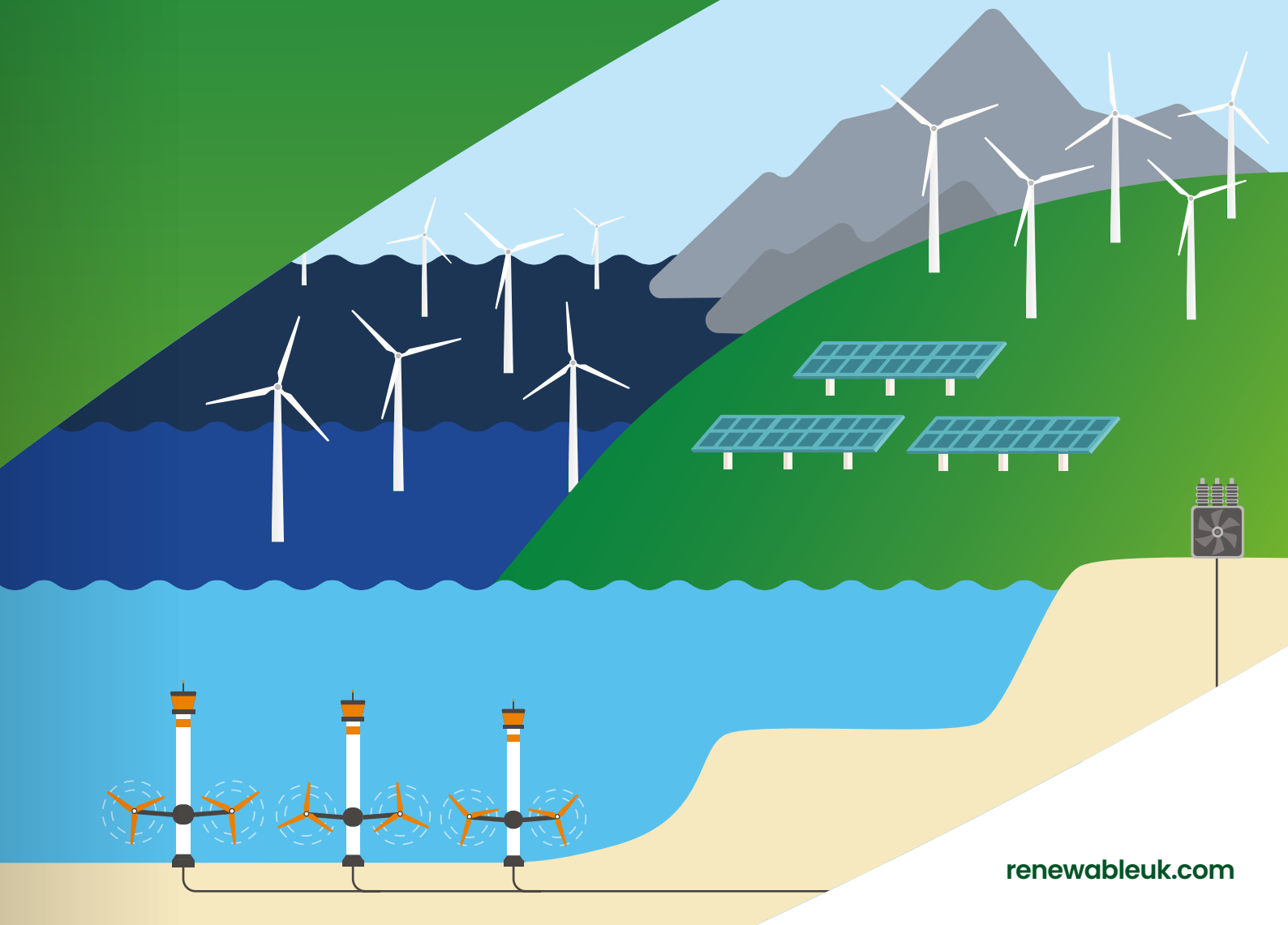
MARINE ENERGY WALES
YNNI MOROL CYMRU

Solar Energy UK

2025–2035

Wind, Solar and Tidal Stream:

Unleashing the Full Value of Welsh Renewables



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Maximising Wales' Renewable Energy potential

Large-scale renewable energy is one of the clearest and most immediate opportunities to deliver lasting, transformative benefits for Wales, from creating high-quality jobs and economic growth to securing direct investment into local communities and boosting energy security.

Currently, the Welsh Government aims to meet 100% of electricity consumption from renewables by 2035 and reach net zero by 2050. With electricity demand set to rise sharply in the coming years, Wales must urgently scale up all forms of renewable energy generation to meet future needs. Doing so could unlock billions in investment, thousands of well-paid jobs, and long-term prosperity for Welsh communities and businesses alike. But to realise this, we need to pick up the pace. In 2023, renewables supplied just 27% of projected 2035 demand, with growth lagging behind other UK nations. Wales only added 109 MW of new capacity last year, almost all from small-scale solar, and, for the first time since the 1990s, no new wind farms were commissioned.

While the Welsh Government's renewable energy targets mark an important step forward, current ambitions may not go far enough to fully meet future electricity demand, or unlock the full scale of benefits available to Wales. Without greater ambition, we risk missing out on the chance to become a net exporter of renewable energy. Expanding large-scale renewable energy deployment will be essential, not only to meet climate and energy security goals, but to revitalise Welsh industry, support community energy initiatives, and grow a resilient, well-being focused economy. To realise these benefits, Welsh and UK policies must urgently support and accelerate the development of renewable energy infrastructure, onshore, offshore, and at both large and community scales.

BiGGAR Economics, Everoze and Lumen Energy & Environment indicate that Wales faces three distinct scenarios for renewable energy deployment:

- ***Current Targets*, follows the Welsh Government goal to meet 100% of electricity demand from renewables by 2035. However, our analysis indicates that these targets lack the level of ambition needed to capture the full benefits of the energy transition;**
- ***Increased Ambition*, surpasses current targets but still under-delivers; and**
- ***Maximising Renewables*, envisions up to 17.7GW of renewable energy by 2035, fully realising the renewable energy opportunity of Wales, in Wales, for Wales.**

The Maximising Renewables pathway not only drives the greatest local prosperity, but also increases security of energy supply, boosts innovation, enhances Wales' global role in reducing carbon emissions and its international footing as a frontrunner in renewable energy investment.

Photo credit: Bute Energy

Scaling up renewables is not just about hitting climate targets, it is a major economic opportunity for Wales.

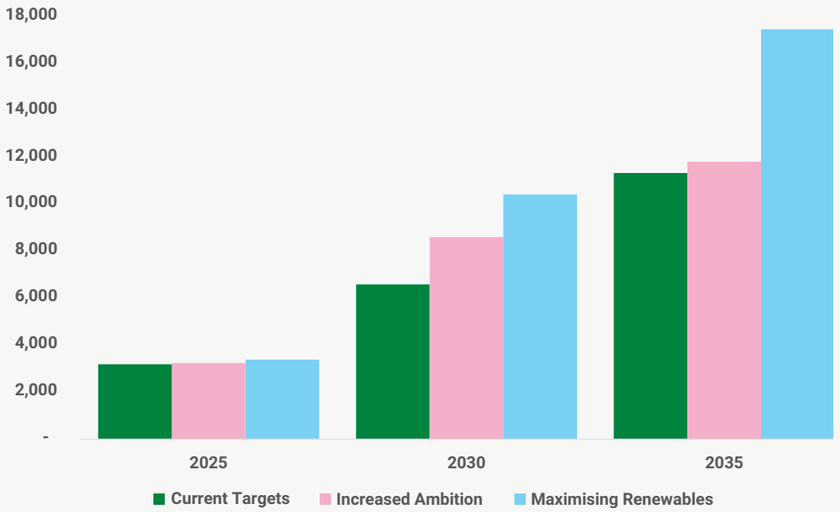
We have the natural resources, industrial capability, and talent to become a world leader in renewable energy, but to seize that opportunity, we must be bold. Unlocking our full renewable energy potential means powering a new era of green growth, skilled jobs, and shared prosperity in every part of Wales. This report makes clear the scale of the prize. With the right policies, investment, and political will, Wales can lead, and we intend to.

Eluned Morgan
First Minister for Wales

17.7GW
Maximising Renewables **envisions up to 17.7GW of renewable energy by 2035.**

11.8GW
Increased Ambition **envisions up to 11.8GW of renewable energy by 2035.**

Future Energy Scenarios for Wales



Key Benefits from Investment in Renewables

Photo credit: RWE

Maximising Renewables

17.7GW
installed

Requiring total investment of **£46.7B** and generating across Wales:

£6.9B GVA
over next 10 years

£1.9B
tax revenue

Jobs
8,000 FTEs

Resulting in better outcomes for the climate and Welsh communities:

£183M
community benefits

13.4M
tonnes CO^2 saved

Photo credit: RWE

Increased Ambition

11.8GW
installed

Requiring total investment of **£34.6B** and generating across Wales:

£4.8B GVA
over next 10 years

£1.4B
tax revenue

Jobs
5,600 FTEs

Resulting in better outcomes for the climate and Welsh communities:

£136M
community benefits

7.2M
tonnes CO^2 saved

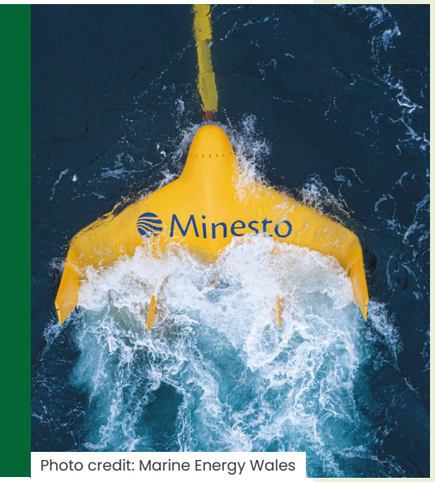


Photo credit: Marine Energy Wales

Current Targets

11.3GW
installed

Requiring total investment of **£25.4B** and generating across Wales:

£3.5B GVA
over next 10 years

£1.1B
tax revenue

Jobs
4,100 FTEs

Resulting in better outcomes for the climate and Welsh communities:

£113M
community benefits

7.1M
tonnes CO^2 saved

Case studies

Jones Bros Civil Engineering UK

Jones Bros is a major UK civil engineering contractor based in Wales, using their onshore wind experience to transition into the offshore renewables sector.

Jones Bros was the principal civils contractor for the renowned Pen y Cymoedd Wind Farm, which can generate 228 MW of power. The scope of work included:

- **construction of 76 concrete turbine foundations (including 50,000m3 of concrete produced by own on-site batching plant and 6,000 tonnes of locally sourced steel reinforcements);**
- **120km of cable trenching and supply and installation of 450km of cable; and**
- **electrical design and installation.**

As part of Jones Bros' ongoing commitment to local economic development, more than 70% of workers on site were employed within a 35-mile radius, prioritising employment from local Welsh communities.

The scheme claimed a Considerate Constructors Scheme national site gold in 2017, as well as Civils Project of the Year at the 2018 Constructing Excellence National Awards.

Despite a strong presence in renewables, 90% of Jones Bros' work is currently in Scotland and England, with only 10% in Wales due to a lack of local projects, highlighting the economic and employment potential of expanding the sector in Wales.

To date, Jones Bros portfolio totals over 1,800MW of renewable energy projects, either completed or currently under construction. Jones Bros continues to deliver civil works in the onshore wind sector across the UK, with over 700 turbine foundations constructed to date. As part of the company's diversification, Jones Bros has recently completed activity on the world's largest offshore wind farm, Dogger Bank, and tidal energy project, Morlais. This won Infrastructure Project of the Year and Climate Action awards at the 2024 Constructing Excellence in Wales Awards, as well as a community engagement honour at the 2024 ICE Wales Cymru Awards.

Jones Bros owns one of the largest plant fleets in the UK and employs more than 500 people. The company runs an award-winning apprenticeship scheme, which has produced nearly 40% of its current workforce. As a Welsh company, they uphold the Well-being of Future Generations (Wales) Act 2015 and support local communities.

RWE Coleg Llandrillo

For the renewables industry to grow at pace, the right number of people with the right skills is essential. Partnerships between industry and training institutions lead the way in developing this vital skills base, such as the one between RWE and Coleg Llandrillo Menai.

Industry support for skills development in the renewables sector is crucial in order to expand at the rate required to meet targets and climate change ambitions.

RWE has a strong record for developing skills and collaborating with local education institutions globally.

The company's award winning, UK-wide turbine apprenticeship hub is based in North Wales and has so far trained over 100 apprentices (from all over the UK, including Wales) to support the future of the wind industry.

Partnering with Coleg Llandrillo Menai, a Welsh, further education institution, RWE has established both engineering courses and an apprenticeship programme.

The Coleg recently opened a new, £14 million Engineering Centre in Rhyl, in which RWE's purpose-built training workshop is located. This investment underlines RWE's continued commitment to developing a local skilled workforce, with many of the technicians and engineers passing through the programme and joining RWE to further their careers.

Photo credit: RWE

Setting the impact of a Maximum Renewable Energy scenario in a Welsh context

based on 17.7GW of renewables installed by 2035

Scale of Private Investment

This scenario would unlock up to £46.7 billion in private investment by 2035, with Welsh businesses in line to secure nearly £10 billion of that. That is money flowing directly into local supply chains, jobs, and communities across the country, building not just energy infrastructure, but long-term prosperity.

Contributing to Economic Growth

Over the past decade, the Welsh economy has grown by an average of £842 million per year. By comparison, expanding Wales' renewable energy sector could generate **£574 million in annual GVA** by 2035, equivalent to 62% of that historic growth.

Productivity & Pay

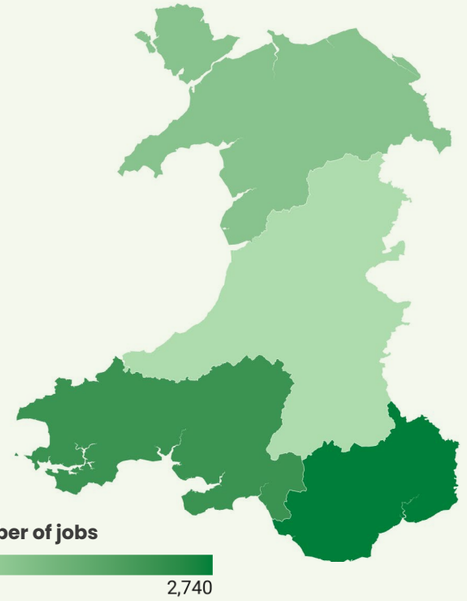
Jobs in the renewable energy sector are both productive and well-paid. GVA per job is **£70,500**, significantly higher than the Welsh average and more than double that of tourism. Average salaries in the sector are £49,000, more than a quarter higher than the national and public sector averages. Creating these high-value, skilled jobs is vital for Wales' economic growth.

Tax Revenue

The renewable energy sector would generate an average of **£159 million in tax revenue each year,** which would be more than enough to cover the Welsh Government's annual economic development spending (£117 million).

Distribution of average annual jobs supported by region

The renewables industry will unequivocally deliver 'green jobs and growth' at an unprecedented scale in line with current Welsh Government priorities. Jobs in this sector do not just contribute to the economy, they outperform it. The average GVA per job in renewable energy is 19% higher than the Welsh economy-wide average, while salaries exceed the national average by 26%, offering high-value employment for communities across Wales. Thanks to a diverse mix of technologies and the geographical spread of activity, crucially, the sector's economic impact is felt in every corner of the country from rural communities to industrial hubs.



Community Benefits

By contributing on average £15 million through community benefits, renewable energy projects would support local economic development initiatives and enable local causes to secure additional funding. Community benefit funding of £183 million to 2035 could generate up to £937 million in well-being benefits and £765 million in local economic value to Welsh communities[1].

Decarbonisation

The emissions saved from 17.7GW of renewables, over 13 million tonnes of CO2, are equivalent to taking almost 10 million cars off the road, resulting in cleaner air and health benefits.

Land Restoration & Management

Renewable energy projects also support land management and restoration. With a requirement of up to £500 million to restore peatland across Wales, projects such as the Pen y Cymoedd Wind Farm (contributing £3 million to peatland restoration), bring much needed private investment into re-wetting peat.

[1] Based on 'Impact Assessment of SSE Renewables Achany and RWE Rosehall Wind Farms Community Benefit Funds', BiGGAR Economics, February 2025.

Photo credit: Trydan Gwyrdd Cymru

Renewables significantly contribute to the

well-being of future generations

Renewable energy is a cornerstone of Wales' well-being economy, delivering significant economic value, while playing a vital role in achieving the goals in the Well-Being of Future Generations Framework.

Renewables directly support 86% of the national well-being indicators, making a meaningful contribution to all seven of the national goals, with particularly strong impacts on:

- **a prosperous Wales;**
- **a resilient Wales;**
- **a healthier Wales; and**
- **a globally responsible Wales.**

By driving inclusive growth, supporting climate resilience, and reinvesting in local communities, Wales' renewable energy sector is

laying foundations for a more sustainable, fair, and prosperous future.

The sector's contribution stems not only from its operations but also from the broader impacts of community benefit support. This is clearly illustrated by the range of initiatives funded by the community benefit funds from Rhyl Flats and Gwynt y Mor wind farms. These empower local communities, create employment opportunities, support skills development, foster a sense of place, promote healthier lifestyles, and encourage cultural development.

Photo credit: Bute Energy

86%

of the national well-being indicators are supported by renewables.

Photo credit: Bute Energy

"The community funds from Rhyl Flats and Gwynt y Mor wind farms have allowed us to enhance our facilities and expand our reach, proving that with the right support, community projects can thrive and adapt to ever-changing local needs."

Abergele Community Action

Case study

Abergele Community Action

Community Benefit Funding is key for groups like Abergele Community Action, enabling activities that address social challenges and support community cohesion.

The RWE-operated Rhyl Flats and Gwynt Y Mor wind farm Community Benefit Funds have provided long-term support for the activities of Abergele Community Action, a community hub that supports digital skills and employability, as well as a food bank, money advice, and fuel poverty service; all of which help reduce social isolation and combat poverty.

The activities at the hub, which draw on the work of nine members of staff and 30 volunteers, support both the well-being of users and volunteers. Each week, Abergele Community Action welcomes around 175 users, supports 225 young people, and sees 90 regular visitors to the community shop. Additionally, 180 people use money advice services. Overall, activities at Abergele Community Action generate well-being impacts of at least £0.8 million per year, from a total 2024/25 funding of £256,239, including around £20,000 from wind farms.

For further information on the scale and commitment of funding to Abergele Community Action, please scan the QR code.

Crucial government interventions needed to

maximise Welsh renewables

Only the most ambitious deployment scenario will unlock the full value of Wales' renewable energy potential. It is this pathway that delivers the highest returns in GVA, skilled jobs, tax revenue, community benefit support, local supply chain growth, security of supply and carbon savings.

Crucially, it is also the only route capable of attracting the scale of investment needed to transform ports, infrastructure, skills, and planning into the backbone of a thriving Welsh economy. Anything less risks falling short of Wales' economic, environmental, and social ambitions.

If Wales is to lead in the clean energy transition, now is the moment to act boldly.

Realising this opportunity will take more than meeting targets. It demands a whole-government commitment to fast-tracking large-scale deployment, scaling local capacity, and unlocking investment.

The reward is a resilient, inclusive well-being economy delivering prosperity today and safeguarding the interests of future generations. To enable this, the Welsh renewables industry asks that the Welsh Government:

1. **Set minimum technology targets to provide industry and business certainty and support the delivery of the Maximising Renewables pathway;**
2. **Create a policy and regulatory framework that recognises and supports the strategic value of large-scale renewable energy in delivering shared prosperity for communities and a net benefit for biodiversity and ecosystem resilience; and**
3. **Accelerate progress through a Sector Deal underpinned by a dedicated Task & Finish group to drive delivery of targets and maximise socio-economic benefits.**

To maximise socio-economic benefits, a series of specific actions will be required, which will be the starting point for a Sector Deal.

- **Grid infrastructure**
  Develop a robust, supportive position on the need for transmission and distribution infrastructure.
- **Planning**
  Develop Infrastructure Policy Statements to provide policy alignment and clarity for decision-makers.
- **Stakeholder resourcing**
  Establish a central pool of resources to be used across regulatory and policy bodies.
- **Port investment**
  Put pressure on UK government and The Crown Estate to provide clarity and certainty on future offshore wind leasing as soon as Leasing Round 5 winners are announced.
- **Supply chain**
  Using the Industrial Growth Plan as the basis, focus investment in supply chain areas where current capabilities can be leveraged to maximise local content through both onshore and offshore development.
- **Skills**
  Create and fund a central net zero skills body to align all the activity across Wales.

Photo credit: Marine Energy Wales

RenewableUK Cymru · Marine Energy Wales – Ynni Morol Cymru · Solar Energy UK

Statkraft · Trydan Gwyrdd Cymru · Vattenfall

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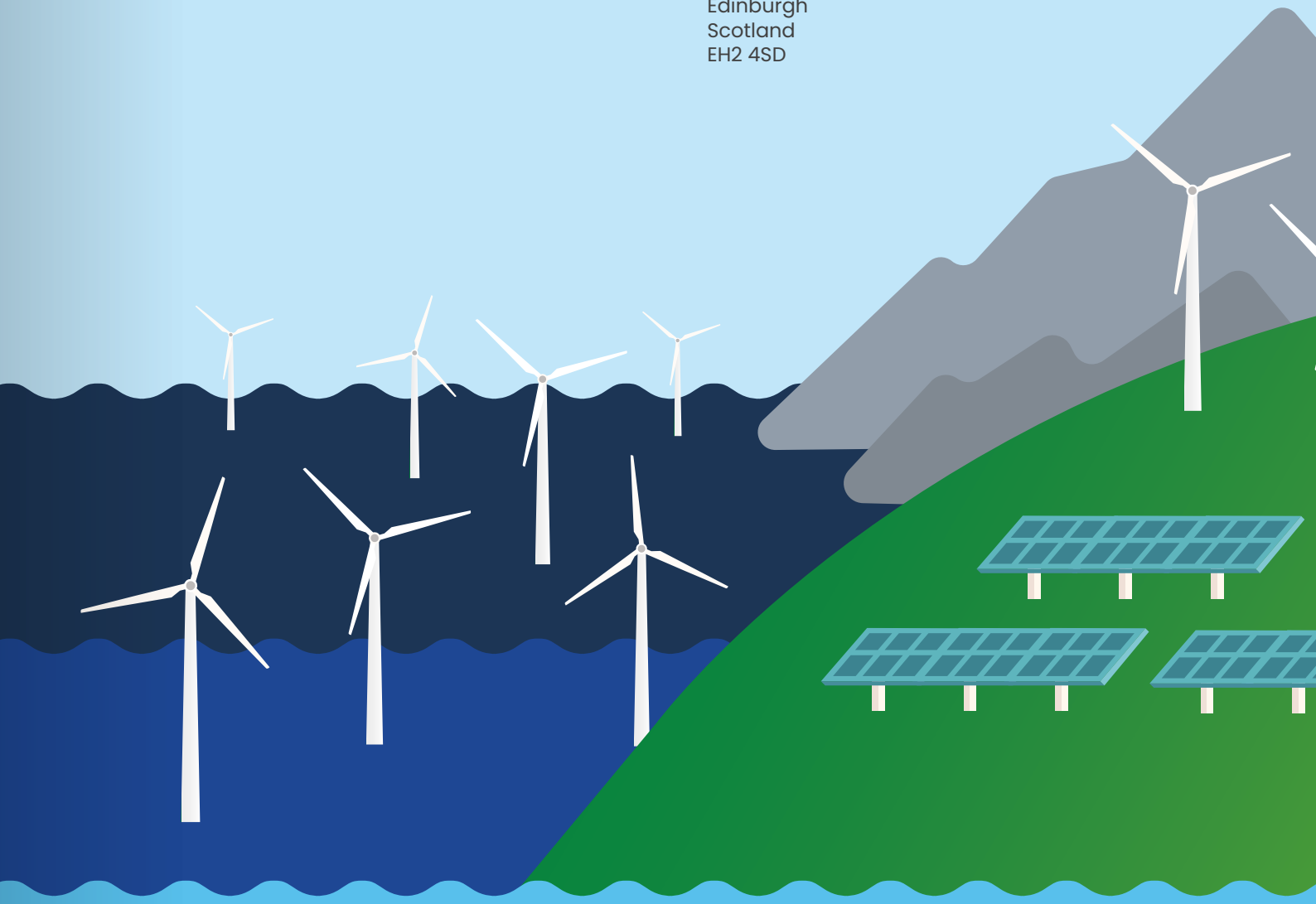
Contact

For further information on BiGGAR Economics please contact our team at:

info@biggareconomics.co.uk

BiGGAR Economics
67 Shandwick Place
Edinburgh
Scotland
EH2 4SD



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For further information on RenewableUK please contact our team at:

info@renewableuk.com

The Conduit
6 Langley Street
London
WC2H 9JA