

Scottish Renewables written evidence to the Scottish Affairs Committee inquiry into Renewable Energy in Scotland.

About Scottish Renewables

Scottish Renewables is the voice of Scotland's renewable energy industry. The sectors we represent deliver investment, jobs, social benefits and reduce the carbon emissions which cause climate change. Our members work across all renewable energy technologies, in Scotland, the UK, Europe and around the world. In representing them, we aim to lead and inform the debate on how the growth of renewable energy can help sustainably heat and power Scotland's homes and businesses.

Executive Summary

Scottish Renewables welcomes the opportunity to provide written evidence to the House of Commons Scottish Affairs Committee inquiry into Renewable Energy in Scotland.

Renewable energy is already providing the equivalent of 97.4% of Scotland's electricity consumption, supporting our ambitious emissions reduction targets. If we are to reach net-zero by 2045 more progress is needed. Heat, for example, makes up 55% of Scotland's energy use, but only 6.5% of our heating comes from renewable sources. There are many important decisions which government must take to ensure Scotland's transition to a society powered by low-carbon, clean energy is completed.

Scottish Renewables response focuses on the following issues:

- 1) Scotland's renewable energy targets
- 2) Renewable energy sources
- 3) Employment in renewable energy sector

Response to questions

1) Scotland's renewable energy targets

How effective has the setting of targets been in achieving 'net zero' emissions by 2050 (UK Government) and 2045 (Scottish Government)?

1. According to the Climate Change Committee (CCC) in the 2020 Progress Report to Parliament¹, the UK was not making adequate progress to meet the size of the net-zero challenge. Indeed, the CCC stated that the UK failed on 17 out of 21 progress indicators and only 2 of 31 key policy milestones were met between 2019 and 2020. Later in the year the CCC published the Sixth Carbon Budget², which sets out five possible routes to achieving net-zero by 2050, each one with different levels of electricity demand and renewable energy deployment. The CCC states that achieving net-zero is feasible and this will require a nationwide commitment, but it could be achieved at low overall cost and would bring multiple benefits and opportunities to the UK.

During the past year, following the advice from the CCC, the UK made important announcements to align policies with net-zero. Some of the announcements include setting a new target to reduce emissions by at least 78% by 2035; the phase out of petrol and diesel car sales by 2030; and a target of 40GW of offshore wind by 2030 and 1GW of floating offshore

¹ Climate Change Committee, (2020). *Progress Report to Parliament*. Available at:

<https://www.theccc.org.uk/publication/reducing-uk-emissions-2020-progress-report-to-parliament/>

² Climate Change Committee, (2020). *The sixth Carbon Budget*. Available <https://www.theccc.org.uk/publication/sixth-carbon-budget/>

wind. Other important announcement also included driving the growth of low carbon hydrogen, investing in Carbon Capture, Usage and Storage (CCUS) and greener buildings³.

2. In Scotland, the CCC 2020 report to Parliament⁴ stated that Scotland has decreased emissions by more than any other nation in the UK and faster than any G20 economy in the last ten years. However, the main driver of those emissions reductions has been the power sector, which has contributed 65% of all the emissions reduction in the last decade. The CCC pointed out that to achieve net-zero by 2050 the overall rate of emissions reduction must be maintained and go beyond the power sector.

Today Scotland's emissions targets aim to reduce emissions at least 75%, 90% and 100% by 2030, 2040 and 2045 respectively. In the Sixth Carbon Budget, the CCC outlined that the 75% emissions reduction target will be difficult to meet as will the 100% target if greenhouse gas removal technologies are not deployed in time. However, Scotland would likely reach net-negative emissions well before 2050 once greenhouse gas removal technologies are deployed across the UK.

What lessons can or have been learned from setting net zero targets?

3. Setting net-zero targets and establishing a supportive policy framework are crucial to providing industry with clarity on the future of energy use in the UK. This clarity is essential for creating investor confidence, unlocking the private investment by developers and financiers needed to achieve net-zero. These targets and policies are also essential for engaging people with the transition. In the Sixth Carbon Budget, the CCC modelled five different scenarios to achieve net-zero by 2050 and all of them require behavioural changes and investments in new and innovative technologies. The CCC also pointed out that the UK must phase out unabated gas by 2035 at the latest and highlighted that renewables should make up between 75 and 90% of power generation by 2050. They also stated that even though the transition requires a huge national effort, the cost of this will be less than 1% of GDP over the entirety of 2020-2050.

Overall lessons include: Climate action represents an opportunity for businesses not a cost but maintaining investor confidence is essential; the transition will require training and new skills, especially to move jobs from the oil and gas sector to renewables; green finance will start to make things easier; businesses will need to adapt to the change; and finally, people need to be engaged with net-zero.

To what extent does the UK Government's latest white paper – Powering our net-zero future – ensure that renewable energy targets will be met in the UK.

4. Scottish Renewables has welcomed the UK Government's latest Energy White Paper: Powering our Net-Zero Future as an opportunity for expanding Scotland's renewable energy industry through the UK Government's intention to fulfil the transition to clean energy sources.

Scotland is already at the forefront of the energy transition with the equivalent of 97.4% of its electricity consumption generated by renewable energy resources. The next priority is to decarbonise heat and transport and the White Paper provides the supporting context needed to ensure Scotland's abundant onshore and offshore wind resource is harnessed to achieve this.

³ UK Government, (2020). *The ten point plan for a green industrial revolution*. Available at:

<https://www.gov.uk/government/publications/the-ten-point-plan-for-a-green-industrial-revolution>

⁴ Climate Change Committee, (2020). *Reducing emissions in Scotland-2020 Progress Report to Parliament*. Available at:

<https://www.theccc.org.uk/publication/reducing-emissions-in-scotland-2020-progress-report-to-parliament/>

Scotland's renewables industry is currently worth £5.5 billion per year, with each additional gigawatt of renewable energy creating 1,500 jobs and adding £133 million GVA to the economy. Our industry will be critical to ambitions to fulfil the North Sea energy transition with Scotland ideally placed to deliver a growing percentage of the clean electricity and green hydrogen we need for the green economic recovery and to create new jobs.

The ambition to grow heat pump installations to 600,000 per year by 2028 plus the commitment to place affordability and fairness at the heart of our reforms will also benefit Scottish homeowners, especially those in remote rural areas where heating costs are disproportionately high.

5. To ensure that renewable energy targets are met, the UK Government must establish a plan for delivering and funding the Energy White Paper. This delivery plan must recognise that Scotland has set the earlier target of meeting net-zero by 2045. The UK Government should establish how it will work with the Scottish Government and Scotland's renewable energy to deliver this plan and what mechanisms will be used to facilitate this.
6. Achieving progress on renewable energy targets will require the UK Government to reform Ofgem and energy market. Ofgem's remit does not oblige it to consider the achievement of net-zero and its current Targeted Charging Review, which will reform electricity transmission and distribution network charging and access, will undermine the further deployment of renewables in Scotland where much of the UK's best wind resource is located.

Transmission Network Use of Service (TNUoS) charges are intended to reflect the actual amount of grid used by generators and so vary by geography and generator type. However, due to the methodology used to calculate TNUoS, this is not the case. For example, TNUoS charges for a wind farm in Scotland will increase £4.50-£5.50 per MWh while an equivalent wind farm in Wales will get paid £2.80 per MWh. This means Scottish generators pay disproportionately high charges that do not relate to the actual amounts spent on grid infrastructure in Scotland, while generators elsewhere in the UK are subsidised to use the grid.

Ofgem's Targeted Charging Review is intended to include the reform of TNUoS but industry is deeply concerned that this will exacerbate the existing issues as Ofgem is not required to include the need to achieve net-zero in its review. Ofgem will also no longer recognise the benefits of localised generation in how they charge generators for using local distribution networks (Distribution Use of Service - DUoS).

The deployment of at least 40GW of offshore wind in Scottish waters plus a substantial increase in the deployment of onshore wind in Scotland will be essential to achieving both the Scottish and UK net-zero targets. If Ofgem does not include the need to achieve net-zero in its reforms of grid charging, then the achievement of net-zero will be put at risk and costs will increase with these costs ultimately being born by consumers.

7. Ofgem has not yet indicated how it will address TNUoS charging or mitigate its impact on consumers and decarbonisation. We would recommend that the UK Government introduces a review of TNUoS charging and its impact on Scotland. The recent OFTO Review can act as an exemplar in how to deliver this.
8. The recent recommendation from Ofgem for an independent body to help lead the path to net-zero at the lowest cost to consumers, is a welcome development. This, however, must be delivered at an appropriate pace and with an effective strategy to ensure our regulation is fit for net-zero, and mitigate the impact of TNUoS. Without action, renewable deployment in Scotland

will continue to be at a disadvantage, and will undermine the ambitions of the Energy White Paper.

2) Renewable energy sources

What variables have contributed toward wind energy providing more energy to the grid than any other renewable source?

9. Onshore wind turbines and solar panels were some of the first modern renewable energy technologies to become widely available. Due to Scotland's wind patterns being well suited to the production of renewable energy using onshore turbines, this was the first renewable technology deployed in Scotland at commercial scale since the hydro power boom of the 1950s.
10. The deployment of onshore wind in Scotland attracted Government support, especially from demand pull policies⁵ such as the Renewable Obligation scheme (RO, 2002-2017)⁶, Feed in Tariff scheme (FiT, 2010-2019)⁷ and Contract for Difference (CfD, 2015-)⁸. These financial schemes supported an increase in installed onshore wind capacity from 2,486MW in 2010 to 8,478MW in 2020⁹ and it is the main reason why the technology currently provides more renewable energy to the grid than any other technologies.

The RO and FiT schemes were designed to support large and small-scale developments respectively. CfDs, which replaced the RO, were designed to incentivise investment in large scale renewable energy projects by providing developers direct protection from volatile wholesale prices, which at the same time protects consumers from paying increased costs when electricity prices are high¹⁰. These mechanisms have largely benefited onshore wind in the past 10 years, as the technology fell under all the categories to receive support from each one of them.

The RO and FiT closed in 2017 and 2019 respectively, and the CfD is only available for projects over 5MW. As a result, there is now no clear route to market for most small-scale renewable generators, which has had a significant impact on deployment and the benefits small-scale renewables bring to communities.

11. Offshore wind is another example that shows how Government policy and financial support can drive the growth of a sector. Offshore wind deployment has increased approximately five-fold in the past 10 years and the cost of the technology has decreased by around a third¹¹ from a decade ago¹². This success has been possible due to the implementation of 'demand pull' policies and 'technology push'¹³ policies. In 2011, the UK Government established a task force¹⁴

⁵ Demand pull policies are normally used when the technology achieve a mature stage of development. An example of this is the CfD scheme.

⁶ The RO closed for new generating capacity for large-scale and small-scale solar PV in March 2015 & 2016 respectively. It was then closed for onshore wind in May 2016 and for all other technologies in March 2017.

⁷ FiT closed for new generators in April 2019.

⁸ CfD continues to support both new offshore and onshore projects however not all technologies (those which are more established: Solar PV and Onshore wind) were not able to enter the auctions between 2015 and 2019.

⁹ BEIS, (2021). *Energy Trends*. Available at: <https://www.gov.uk/government/statistics/energy-trends-section-6-renewables>

¹⁰ UK Government, (2020). *Contract for Difference*. Available at: <https://www.gov.uk/government/publications/contracts-for-difference/contract-for-difference>

¹¹ Carbon Trust, (2020). *Policy, Innovation and cost reduction in UK offshore wind*. Available at: <https://prod-drupal-files.storage.googleapis.com/documents/resource/public/Policy-innovation-offshore-wind-report-2020.pdf>

¹² CATAPULT, (2017). *The Economic Value of Offshore Wind*. Available at: <https://ore.catapult.org.uk/app/uploads/2017/12/SP-0012-The-Economic-Value-of-Offshore-Wind-1.pdf>

¹³ Technology pull policies are used when the technology is in early stage of development and are focused on funding basic and applied R&D.

¹⁴ UK Government, (2012). *Offshore Wind Cost Reduction Task Force*. Available at: <https://www.gov.uk/government/groups/offshore-wind-cost-reduction-task-force>

to reduce the cost of offshore wind to £100/MWh by 2020¹⁵. The program provided targeted financial support to develop innovative offshore wind technologies between the years 2011-2016, which resulted in cost reductions from £142/MWh in 2010 to £97/MWh in 2016. A recent report from Carbon Trust¹⁶ has shown that 80.5% of offshore cost reduction in recent years has been driven by demand pull policies such as the Renewable Obligation (RO) and CfDs, while 12.5% and 7% has been driven by technology push policies and other factors.

Why does marine energy account for such a small proportion of the total energy output of renewables in Scotland?

12. Marine energy is more technically complex to develop than wind and solar technology and so is at an earlier stage of development compared to more mature technologies such as wind. Despite this, the current pipeline has the capacity to deliver 1GW of electricity to the grid with around a half of that located in Scotland¹⁷.
13. Learning from the example of offshore wind, with the correct support from Government, the marine renewables sector could rapidly increase. Today the UK boasts 22 tidal stream developers and 23 wave developers¹⁸, with Scotland delivering the world's first tidal arrays, and being home to leading test centres. Several developers are already supplying electricity to the grid and are ready to bring the technology to the next stage of development. Industry examples include the companies SIMEC Atlantis, Nova Innovation and Orbital Marine Power.
14. Targeted support from the UK Government can now unlock the next stage of commercialisation, moving to the deployment of multi-turbine arrays around our coast, using high levels of Scottish content to generate clean and predictable power. The marine energy sector has benefited from £200 million in EU Research & Development funding over the last four years. As we leave the European Union, the UK Government will need to fill this gap and ensure that this funding continues at a rate of £50 million per annum. Additionally, the industry is asking for financial mechanisms that support the sector with an immediate route to market, this includes a reform of the CfDs and the creation of an Innovation Power Purchase Agreement (IPPA). These mechanisms could unlock deployment and allow the technology to account for a greater proportion of energy output.

What is being done to develop and research other forms of renewable energy in Scotland such as wave/tidal energy and carbon capture usage and storage (CCUS) energy or others?

15. For tidal energy, the latest research, funded primarily by the EU and Scottish Government, has allowed the existing technologies to increase their technology readiness level (TRL). Last year, important milestones were achieved. Examples include:

SIMEC Atlantis' four-turbine 6MW MeyGen project had produced 35GWh of generation¹⁹, with maintainability also demonstrated through recovery and reinstallation operations. An innovative subsea hub is being installed to simplify inter-array cabling with grant support from the Scottish

¹⁵ UK Government, (2011). *UK renewable energy roadmap*. Available at: <https://www.gov.uk/government/collections/uk-renewable-energy-roadmap>

¹⁶ Carbon Trust, (2020). *Policy, Innovation and cost reduction in UK offshore wind*. Available at: <https://prod-drupal-files.storage.googleapis.com/documents/resource/public/Policy-innovation-offshore-wind-report-2020.pdf>

¹⁷ BEIS, (2021). *Renewable Energy Planning Database quarterly extract*. Available at: <https://www.gov.uk/government/publications/renewable-energy-planning-database-monthly-extract>

¹⁸ ORE Catapult, (2018). *Tidal Stream and Wave Energy Cost Reduction and Industrial Benefit Report*. Available at: <https://ore.catapult.org.uk/wp-content/uploads/2018/11/Tidal-Stream-and-Wave-Energy-Cost-Reduction-and-Industrial-Benefit.pdf>

¹⁹ SIMEC ATLANTIS ENERGY. Available at: <https://simecatlantis.com/projects/meygen/>

Government. SIMEC Atlantis has also exported the first tidal turbine to Japan, a turbine that was designed and built in Scotland²⁰.

Nova Innovation has an operational tidal array in Scotland's Shetland Islands funded by EU Horizon 2020, accumulating more than 20,000 hours generating power to the grid²¹. Additionally, thanks to funding from Crown Estate Scotland and Transport Scotland, the company is now in the process of powering a local whisky distillery and has already created the first electric vehicle (EV) charge point powered by tidal energy sources²².

Orbital Marine Power is another relevant example of technology innovation, they have the largest single tidal generating platform to date. The turbine has generated over 3,250MWh of electricity at the European Marine Energy Centre (EMEC) in Orkney and the company is in the process of starting the operation of their 2MW O2 turbine, which includes key innovations and lessons learned from the previous turbine²³.

16. Wave energy is in an earlier stage of development compared to tidal energy and most research funding also comes from the EU and Scottish Government. Wave Energy Scotland (WES) is a Scottish programme formed in 2014 at the request of the Scottish Government and is a subsidiary of Highlands and Islands Enterprise. The aim of WES is to ensure that Scotland maintains a leading role in the development of wave energy. Examples of research and progress in the development of the technology include:

Mocean Energy, a wave energy developer, is gearing up to deploy its scale prototype, Blue X wave energy converter at EMEC in Orkney, Scotland. The Blue X has been manufactured at Fife fabricators AJS Production and has been funded by WES. It is a floating hinged raft with a unique geometry that improves performance and increases survivability by diving through the largest waves.

Tension Technology International's (TTI) NetBuoy, which was developed as part of WES's Structural Materials and Manufacturing Programme aims to reduce the cost in wave energy converters through the use of innovative materials that promise long-term exposure to sea water, environmental loading, biofouling and UV and ozone.

17. Despite the progress that wave and tidal technologies have had in the last few years, further support from the UK Government is essential. Last year, the sector responded to a series of consultations outlining the lack of support and the need for reforming the CfDs and adopting new financial mechanisms such as the introduction of an IPPA. The sector is awaiting the response to these consultations, hopefully in the middle of this year.
18. The current lack of support leaves the sector with the uncertainty of losing the supply chain, which is currently 80% UK based. Latest figures already show a rapid increase in tidal developments installed in China, with around 3.9MW installed in 2019 against 6.3MW in the UK in the same year²⁴. This means that if the UK Government does not act now, years of investment and the potential economic benefits that the industry can bring could be lost.

²⁰ SIMEC ATLANTIS ENERGY. Available at: <https://simecatlantis.com/2020/12/22/4705/>

²¹ EnFAIT. Available at: <https://www.enfait.eu/>

²² NOVA INOVATION. Available at: https://www.novainnovation.com/news/news_/i/tidal-powered-cars-driving-scotland-to-net-zero/

²³ ORBITAL MARINE POWER: Available at: <https://orbitalmarine.com/news/press-releases/170-orbital-marine-power-takes-final-lessons-from-sr2000-tidal-turbine>

²⁴ BloombergNEF, 2021. *Tidal stream capacity installed as of summer 2020, by country*. Scottish Renewables Annual Conference.

3) Employment in renewable energy sector

Scottish Renewables will answer these three questions collectively:

What policy decisions do the UK and Scottish Governments need to make to increase the number of jobs in the renewable energy sector?

What UK and Scottish Government support would facilitate the growth of jobs in this sector?

What do the UK and Scottish Governments need to do to achieve a 'just transition' for workers in the oil and gas industry to successfully redeploy to the renewable sector or other sectors?

19. To support an increase in jobs and the development of the supply chain it is essential that there is a continuous pipeline of projects coming forward. This gives individuals and companies the confidence to invest in the skills development and infrastructure needed to benefit from the economic opportunities these projects offer. Since the closure of the RO and FiT schemes in 2017 and 2019 respectively and onshore wind only being able to participate in CfD Auction Round 1, the Government's financial mechanisms for supporting renewable energy developments have been sporadic. This has led to a 'stop/start' pattern in renewable energy development. In recent years, the only major projects being four offshore wind developments²⁵ while onshore wind and small-scale renewables developments have all but ceased. There has also been a lack of clarity and clear policy on support for low carbon heat. Combined these have created a lack of opportunity and confidence, hindering an increase in jobs and the development of the supply chain.

20. We have actively campaigned for the Scottish Government to introduce both a Renewables Transition Training Fund to support oil and gas professionals, supply chain businesses, tradespeople and public servants acquire the skills to join the renewable energy industry. We have also campaigned for the establishment a Renewable Energy Skills Centre of Excellence which will work with further education establishments and industry to ensure the development of Scotland's renewable energy skill base and that training and professional development remains relevant to new innovation and emerging technologies.

Scottish Renewables commissioned Survation to conduct polling of Scottish oil and gas professionals and found significant support for a Renewable Transition Training Fund. We found that 80% of respondents had considered how their careers could be impacted by actions to tackle climate change, with 50% saying they had already considered joining the renewable energy industry. A total of 77% of respondents were positive about the opportunity to join the renewable energy industry, with 86% of those surveyed stating they would consider retraining to join renewable energy if training was funded by The Scottish Government.

21. We welcomed The Scottish Government's commitment in the Programme for Government of £125million to fund training for a Green Job Fund and National Transition Training programme and the announcement in the Scottish Budget of a Green Jobs Academy. These announcements are significant steps forward to ensure Scotland can continue to grow renewable energy jobs and build the low-carbon skills of the future. They will also ensure support for individuals impacted by the energy transition to retrain and enter industries which are compatible with our net-zero future.

²⁵ Naithe ne Goithe, Kincardine (floating), Moray Firth East and SeaGreen 1 (about to start construction).

Developing renewable skills is essential if we are to meet net-zero and will be of transferable benefit to all parts of the UK. The UK Government should now ensure similar provision to that offered by The Scottish Government is provided to support green jobs.

22. Low-carbon technologies like heat pumps and solar thermal panels provided just 6.5% of Scotland's non-electrical heat demand in 2018, the latest figures available. Heat makes up 55% of Scotland's energy use and decarbonising heating is essential if we are to meet our targets for 2030. The technologies we need to replace gas in our homes largely exist now and would allow us to use domestically produced renewable electricity. The manufacture, installation and maintenance of the technologies which can replace gas has the potential to kick-start a green jobs revolution for Scotland's army of gas, electrical and heating engineers.

Heat pumps – which use small amounts of electricity to compress naturally-occurring heat in water, soil and air – will provide the heating solution for many homes. Heat pumps are already being manufactured in Livingston and Glasgow – and there is the opportunity for more of that work to come to Scotland if government and industry work together on the transition to renewable heat.

Today around 100,000 gas boilers are replaced every year in Scotland. The jobs which that carbon-intensive process maintains will change to renewable heat systems. Heat pumps for example, like the gas boilers they'll replace, need an annual check-up, where anti-freeze levels are tested, flow rates analysed, and controller settings optimised. Lessons from continental Europe, which is far ahead of us in decarbonising heat, show homes which switch away from gas will also need increased insulation. This offers more opportunity to grow jobs, and if the right support is offered, today's heating engineers can become all-round energy advisors, working with homeowners to optimise their lives, installing smart equipment and controls and remotely monitoring their performance to make the most of the energy being used.

23. Transitioning Scottish communities to renewable heat will offer enormous opportunities. Across Scotland's seven cities Scottish Renewables has identified 46 potential heat networks which can help cut Scotland's carbon emissions by 10% whilst creating extensive socio-economic benefits in construction and civil engineering work. Having passed the Heat Networks (Scotland) Act 2021, The Scottish Government can work to roll out heat networks and accelerate the vital transition to clean heat, tapping the enormous economic opportunity offered by renewable technologies, using the public estate as a primer to create supply chains and local manufacturing and developing the skills we'll need in the future, now.
24. There is also enormous opportunity for the Scottish Government to support our rural and island communities' transition to renewable heat. These communities are still reliant on the use of dirty coal, oil and LPG boilers, the Scottish Government can place net-zero at the centre of regulation and set a target that fossil fuel heating systems in these communities will be phased out by 2030 and replaced by low-carbon heat pumps. With many of our rural and island communities often isolated from support systems, extra help will be required to ensure Scotland's tradespeople can enable and maintain the transition to green heat. The introduction of a Rural Heat Decarbonisation Fund by the Scottish Government will help these communities to switch away from high carbon heating, whilst creating new green jobs for Scotland's island, remote and rural communities.
25. Whilst certain powers on heat are devolved to The Scottish Government, UK Government policy plays a vital role in providing funding and strategic direction. The majority of the 7,600 low-carbon heat projects in Scotland to date have been supported by the Renewable Heat Incentive (RHI). The scheme has funded installations in off-gas grid buildings, new builds and heat networks, as well as in biomethane production.

Although the RHI has been extended to 2022, the UK Government needs to replace it with new policies to phase out high-carbon heating in existing off-gas-grid buildings and fund low-carbon heat generation where this is feeding district heat networks, for example large-scale heat pumps and biomass. The UK Government should also ensure that fossil fuel heating systems bear the costs of their carbon pollution. This will incentivise more communities across Scotland to decarbonise their heating systems, offering opportunities to create more jobs.

26. Across Scotland there are renewable infrastructure projects which, if given the green light for development, offer significant opportunity to stimulate the economy. Renewable infrastructure projects across Scotland include:
- Drax is planning a two-fold expansion of the 440MW Cruachan Pumped Storage Hydro power station near Oban which will include an investment of around £400 million and support 800 jobs.
 - SSE Renewables has proposed a Pumped Storage Hydro scheme at Coire Glas near Loch Lochy which would expand the consented 600MW up to 1500MW with a proposed investment of up to £1.5 billion, 70% of which it is estimated could be spent directly in the Scottish Highlands.
 - The Moray West offshore wind farm is currently seeking a Contract for Difference (CfD) from the UK Government which, if awarded, would see up to 85 turbines deployed in the Moray Firth and a potential investment of £90 million in the north-east of Scotland.
 - SSE Renewables has secured a CfD for the first phase of the Seagreen offshore wind farm which will generate 454MW of power in the Firth of Forth, contributing over £1 billion to the Scottish economy.
 - The Inch Cape offshore wind farm off the coast of Angus is seeking a CfD award. When granted, this project will have a capacity of 700MW from 72 turbines, providing an investment of £558 million and creating around 858 jobs.
 - As the windiest country in Europe, Scotland has a massive opportunity to boost its economic growth with onshore wind. At present 110 projects with planning permission await construction, and 64 have planning applications or appeals submitted.

Unlocking the benefits of these projects will require The Scottish Government to work with the UK Government to ensure that these projects and others like them have the financial stabilisation mechanisms needed to enable them to go ahead. The Scottish Government should also use its own powers to remove any barriers which stand in the way of deployment for example ensuring that the planning system has special regard for the climate emergency, allowing deployment to move forward at speed. The UK Government must ensure that the CfD mechanism delivers for Scottish projects and ensure that it takes account of UK and Scottish climate targets in any future national or regional infrastructure investment packages and review its plans accordingly.

27. There is significant opportunity to grow renewable jobs through harnessing trade, export and investment powers to boost Scotland's green exports. Already, countries with more than £2.9 trillion in combined GDP have placed a green recovery at the heart of their post-pandemic response. They include France, Germany, Austria, Denmark, Finland, Italy, Latvia, Luxembourg, South Korea, the Netherlands, Portugal, Spain, and Sweden. Scotland's renewable energy expertise is already being put to work in 72 countries and is employing staff on six of the planet's seven continents. More than half (57%) of the companies which took part in a Scottish Renewables survey on Scotland's green energy export impact say they are currently moving into new markets, with almost a third (29%) considering doing so.

The Scottish Government can continue to internationalise our industry, and can use its trade, export and investment powers to highlight that Scotland's skills can help other countries decarbonise their economies while maintaining economic growth with the aim of boosting our skills exports to nations seeking to undertake green recoveries. The UK Government can

support this by utilising its international trade powers to boost skills exports to nations seeking to undertake green recoveries.

28. Scottish Renewables had actively campaigned for the UK Government to re-open the Contracts for Difference (CfD) Pot 1 for onshore wind and solar, and we welcomed the UK Government's announcement to this effect.

The UK Government must now ensure that there is a commitment to the provision of ringfencing for early-stage technologies within the CfD system for innovative revenue support mechanisms for our world-leading wave, tidal and floating wind sectors.

Scotland leads the world in wave and tidal energy development. Despite a series of challenges facing the sector our members continue to break records, progress development and deliver economic and employment benefits to rural communities. The UK has 25% of Europe's tidal energy resource, but the absence of revenue support from the UK Government means that countries like China, Canada and France are catching up.

Getting the development pathway for these technologies right means being able to increase the benefits the sector delivers, help balance our energy system and export more of our knowledge abroad, as well as cutting the costs of these innovative energy solutions.

29. Scotland boasts a strong small-scale renewables sector. These solar, wind and hydro projects providing energy security and economic support to communities across Scotland, allowing communities to engage with and take control of their own energy systems.

This success has been built on the Feed-in Tariff (FiT), a scheme which provided revenue stability for the installation of small energy generation projects. Since its introduction in 2010 the equivalent of 60,000 solar panels have been installed every year across Scotland. These constitute 22,500 standard household solar power systems, worth £150 million.

30. The closure of the FiT in 2019 has made it very difficult for communities and companies across Scotland to secure finance for small-scale renewable energy projects. This means less renewable energy production in Scotland, less energy resiliency for Scotland's communities and fewer green-collar jobs. The UK Government now needs to act swiftly to secure a future for the small-scale renewable energy sector, recognising the unique benefits it offers, and the jobs it can support.

May 2021