WWF SCOTLAND MEDIA BRIEFING
Scotland's Renewables Revolution

Background:
Scotland is now into its second decade with climate legislation, shaping government policy to reduce emissions ahead of other parts of the UK, and faster than any G20 economy since 2008. [1] As emissions have been drastically reduced, prosperity has followed, with the Scottish economy growing throughout this period. The most significant transformation in Scotland's economy has been in electricity generation- Scotland's renewables revolution.

In 2010, almost half of Scotland's electricity demand was met by fossil fuel power stations, with 29% of this supplied by burning coal. [2] The intervening decade saw major shifts in government policy- and new investment from public and private sources. By 2020, renewable power generated equivalent to 95.9% of Scotland's electricity demand; with 4,369MW in 2010 growing by more than double to 11,993MW in 2021. [3]

In 2019 there were 6440 FTE jobs in the renewable sector. But the real value of this industry to Scotland's economy goes beyond turnover and jobs - over 22,000 further jobs are supported by the renewable energy sector and these jobs are spread across a variety of industries, from engineering and construction to retail, and across the length and breadth of Scotland. [4]

How did we get here?

Government Ambition
In 2009 the Scottish Parliament passed its first Climate Change Act, setting targets to reduce emissions by at least 80% by 2050 on 1990 levels.[5] The law established annual targets and a duty on government to report annually on its progress towards these, creating a strong accountability mechanism to show whether the Scottish Government was living up to these promises. [6] Ambitious emissions reductions targets created the government support to transform Scotland's energy system, for example through streamlined planning procedures for wind turbine sites. The Scottish Government also provided leadership in not supporting new fossil-fuel industries, such as preventing the development of 'fracking' sites in Scotland, which reinforced the clear trajectory towards completely renewable sources of power.[7]

In an attempt to attract new investment for renewable sources of energy generation, the UK Government established a series of subsidy regimes, to incentivise energy companies to roll out new technologies on larger scales. Today, schemes such as the 'Contracts for Difference' programme, offer companies a minimum price per unit of energy, which provided the investor security to finance large developments.[8] This has resulted in some of the world's largest offshore windfarms being sited in UK waters, allowing costs to fall such that today, renewables are the most cost-effective form of generation.[9]

Winds of Change
Scotland's last coal-fired power station, Longannet in Fife, closed in March 2016, bringing an end to one of our largest sources of emissions from electricity production and over a century of burning coal.

This generation has been replaced by renewables, primarily wind power on land and at sea. Scotland has a very limited amount of gas-powered generation and two ageing nuclear power stations, but these are set to close this decade. The Scottish Government has a policy to end nuclear generation in

Scotland, and these plants will be replaced with more renewables. System security will be maintained by interconnection, storage, and smarter systems.

Breaking records
2020 was another record year for renewable power in Scotland. Scotland produced the equivalent of 90.1% of its gross electricity consumption from renewable sources in 2019 and grew to 95.9% in 2020.[10] With Scotland on the brink of meeting 100% of electricity needs through renewables (and often exporting supply to the rest of the UK) the next task is supplying all of our *energy* through renewable sources, with a target of 50% by 2030. This will require producing more renewable electricity and using it in the transport and heating sectors.

What needs to happen at COP?

In September, the UN synthesis report on National Determined Contributions (NDC) to emissions reduction found that the current commitments would result in a 16% increase in Global Greenhouse gases by 2030 and set a course for a 2.7 degree rise in temperatures. [11] This illustrates the urgent need for industrialised nations to rapidly transform their energy systems.

Scotland and the UK have been at the vanguard of the renewables revolution, showing that it is possible to replace fossil fuels with clean wind, solar, tidal and hydro generation. However, many countries around the world are still planning to build new coal power stations. COP26 must ensure that all countries are supported to shift investment to clean, green sources of power.

The Scottish story illustrates how targets such as these have provided the necessary policy structure and support to make major transformations within years. The UK Government has also now established targets for electricity generation, including an end to coal generation by 2024. [12] A new target has been set to make all the UK's electricity generation completely fossil fuel free by 2035, to remove remaining reliance on gas power generation. [13]

It is important that other major industrialised nations establish similar legal targets, alongside supporting the development and deployment of renewable technologies in lower income nations around the world.

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- Lang Banks, director, WWF Scotland. Lang is also a former member of the Just Transition Commission
- Fabrice Leveque, climate & energy policy manager, WWF Scotland
- Stephen Cornelius and Martin Sommerkorn, WWF International climate scientists

CASE STUDY: Scottish Power Renewables- Whitelee Windfarm

NOTES:

[1] https://www.theccc.org.uk/publication/reducing-emissions-in-scotland-2020-progress-report-to-parliament/ p.11

[2] https://www.theccc.org.uk/publication/reducing-emissions-in-scotland-2020-progress-report-to-parliament/ p.26

[3] These figures indicate Scotland's electricity use during times of high renewable energy supply. At times of low wind, Scotland's supply is supported through other sources, including a gas-fired power station in Peterhead. https://scotland.shinyapps.io/sg-scottish-energy-statistics/?Section=RenLowCarbon&Subsection=RenElec&Chart=RenElecTarget and https://www.scottishrenewables.com/our-industry/statistics

[4] 2021_FAI_Economic_Impact_of_Scotland_s_Renewable_Energy_Sector_original.pdf (scottishrenewables.com)) and Supply Chain Map – RenewableUK)

[5]https://www.gov.scot/publications/climate-change-legislation/

[6] https://www.gov.scot/policies/climate-change/reducing-emissions/

[7] For more information see- https://www.bbc.co.uk/news/uk-scotland-scotland-politics-49924749

[8] Hornsea One is now the largest offshore wind farm in the world with an operational capacity of over 1.2GW Our Offshore Wind Farms in the United Kingdom | Ørsted (orsted.co.uk)

[9] https://www.imperial.ac.uk/news/200353/offshore-wind-power-cheap-could-money/

[10] https://www.gov.scot/binaries/content/documents/govscot/publications/statistics/2018/10/quarterly-energy-statistics-bulletins/documents/energy-statistics-summary---march-2021/energy-statistics-summary---march-2021/govscot:document/Scotland+Energy+Statistics+Q4+2020.pdf

[11] Full NDC Synthesis Report: Some Progress, but Still a Big Concern | UNFCCC

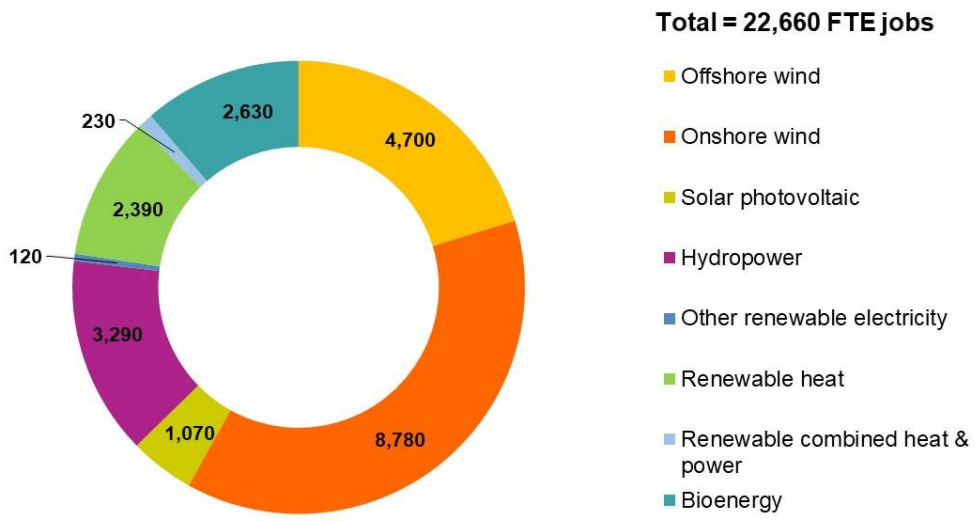
[12] End of coal power to be brought forward in drive towards net zero - GOV.UK (www.gov.uk)

[13] Plans unveiled to decarbonise UK power system by 2035 - GOV.UK (www.gov.uk)

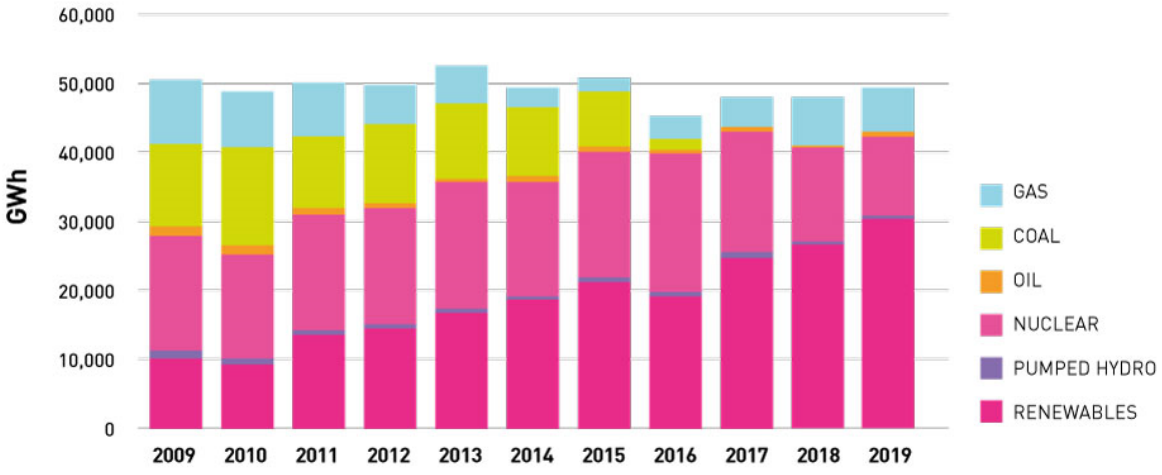
Appendix 1: Renewables statistics from Scottish Renewables Renewable Energy Facts & Statistics | Scottish Renewables

Renewables employment in Scotland, 2019; electricity generation in Scotland by fuel 2019; total installed capacity of renewable electricity in Scotland 2009-2019

RENEWABLE EMPLOYMENT IN SCOTLAND



ELECTRICITY GENERATION IN SCOTLAND BY FUEL (GWh)



TOTAL INSTALLED CAPACITY OF RENEWABLE ELECTRICITY IN SCOTLAND 2009-2020