

**Name of collection**

Renewable Energy: the Scottish Story - Setting ambitious targets

Graphic:

Scotland has set very different renewable energy and carbon emission targets to those of the rest of the UK. They're considered the most ambitious in Europe.

Voice Over:

Scotland is blessed with an abundance of renewable energy sources, allowing the Scottish Government to set very ambitious renewable energy targets. Its mountains have long been home to the UK's largest hydro-electric schemes, and the country's high wind speeds make it a perfect place to site wind turbines. Over 100 land based wind farms have been built in the last twenty years, and more are in development. In recent years the enormous energy potential of the nation's even higher off-shore wind speeds has begun to be harnessed, using wind turbines located out at sea. Then there's the large but still-to-be-developed potential of the waves and tidal currents that can be harnessed around Scotland's coastline. There are also considerable bioenergy resources available to be harvested. And although Scotland isn't the world's sunniest country, there's still a lot of potential for generating heat and electricity from the sun. Since devolution, the parties in the Scottish Parliament have gradually begun to develop an independent line from their Westminster counterparts. In particular, they've adopted very high targets for renewable energy production and carbon emission reduction.

Marco Biagi, SNP MSP for Edinburgh Central:

The 100% renewable electricity target really is a, a big headline, but that's based on the overall consumption in a year and there will be peaks and troughs, at some times we'll be exporting south of the border, other times we will be importing or we'll be relying on fossil fuels. That, that's reasonable. Within that the aim is that 30% of all the energy will be from renewable sources, all energy and there are also targets for renewable heat as well, which are noticeably less ambitious at the moment. We set in 2009, a target in Scotland with cross party support of reducing our carbon emissions by 42% from where they were in 1990. The progress has been generally in the right direction, there are some years where you go a little bit slower, some years where you go a little bit faster, but there's an action plan now, and that has us on course for a 40% reduction in carbon emissions by 2020. Those are incredibly ambitious targets - even just achieving that 40% reduction, would make us the world leader for carbon reduction from the 1990 base line.

Voice Over:

Scotland's targets for 2020 are ambitious. In 2011 the Government proposed that 100% of electricity, 11% of heat, 10% of transport fuels and 30% of overall energy supplies should come from renewable energy sources by 2020. Scotland's 30% overall renewables target is more ambitious than the Westminster Government's for the UK as a whole, which is to have 15% of all energy from renewables by 2020. This is lower than the European Union's target of 20% EU energy from renewables by 2020. Progress has been encouraging, and by 2012 Scotland was already sourcing 39% of electricity from renewables. Conventional energy sources including existing nuclear power stations will still be used as back up. So are Scotland's higher targets realistic?

Niall Stuart, Scottish Renewables:

What we have to be very careful about is understanding exactly what the Scottish government's target is. So the Scottish government's target is for renewable energy sector to generate the equivalent of 100% of demand of electricity in 2020. So that doesn't mean there will only be renewable electricity in Scotland. What that means is that we will have a strong renewable energy sector which exports power at times of high output, at times of low output from the renewable sector. We will depend on back-up and a technology such as pump storage. What it doesn't mean is that we will only have renewable electricity. I mean I liken it to lots of other industries we have. For example, we produce more oil and gas than we need, and export that to the rest of the UK and other parts of Europe. So we will export massive amounts of renewable electricity, but we'll also still have a conventional and nuclear power industry here in Scotland. I'd imagine our two nuclear power stations will still be in operation and potentially we'll have gas fired generation with carbon capture and storage, all ready for carbon capture and storage in the future.

Dr Nicola McEwen, Academy of Government, University of Edinburgh:

So the 2020 target is for 30% of all energy demand to be from renewables. Electricity is the bulk of that, but that also includes significant targets for heat and transport and also for demand reduction, and they appear to be on track to meeting that, so I'm not suggesting that it wouldn't be difficult, but they are at least on track.

Voice Over:

Maintaining supply is one side of the energy equation, but managing demand is just as important. Efficient use of energy and demand reduction are key concepts behind the UK Government's Green Deal, which aims to encourage users to improve energy efficiency in their homes without having to pay upfront for the costs of improvements. So how important is it to have a target for energy demand as well as production?

Niall Stuart, Scottish Renewables:

Scotland has very strong ambitions to change the way we produce, distribute energy, but we also have strong ambitions around energy efficiency, with a target for a 12% reduction in overall energies by 2020. And everyone's got a role to play in that. So if I think about business, for example, I know that in the whiskey industry there is a big, big focus on renewable forms of heat and renewable forms of power, and that's... so the whiskey industry is the second biggest investor in renewable energy in Scotland after the utilities and energy sector. And there's long been talk about energy efficiency, the Green Deal has been one of the flagship policies of this government. But successive governments have found it very, very difficult to achieve a significant reduction in overall energies, because the quality of life we have depends on it and our economy depends on it. That doesn't mean that we don't need to, you know, redouble our efforts and focus more and more. But I think it also means that people are naïve to say we don't need renewable energy because we can just make all these drastic cuts in energies. Because the evidence is that that's incredibly difficult to achieve and actually economically it would be very harmful. It's very, very difficult to look too far forward in terms of energy because changes have come in the past that nobody foresaw. The International Energy Agency published a report which said 'renewables will be the world's second biggest source of electricity by 2016', overtaking nuclear and overtaking gas power. And I think people in Britain and in Scotland often think that we're going further and faster and doing something different. But this is a change that's happening all over the world. Economies all over the world, whether it's developed economies, developing economies, are increasingly looking to renewables to power their homes and businesses in the future.