



## Renewable Energy in the UK

### *Setting targets*

#### **Titles:**

The EU has set ambitious targets for both renewable energy and carbon reduction but the UK has been reluctant to sign up to new targets beyond 2020.

What are the UK's reservations, and what targets is it considering?

#### **Narrator:**

In 2009, under the Renewable Energy Directive the European Union committed itself to supplying 20% of its delivered energy from renewable sources by 2020. Within this framework, the UK has accepted a binding target to produce 15% of its delivered energy from renewables. Is the UK on course to deliver?

#### **Charles Hendry MP, Former UK Minister of State for Energy:**

We've seen a huge improvement in terms of the output from renewables in the United Kingdom.

We're now well into double figures in terms of renewable electricity and so we're moving very strongly in the right direction. I think if we go back just a few years, people thought the 2020 target when we've got to get 15% of our energy and over 30% of our electricity from renewables, many people thought that was unobtainable. But increasingly, people can see that it can be done. We're changing the funding regime to give much greater certainty to investors, because we know that they need longevity. And we've also put in place a carbon floor price, and so people who are looking to invest understand the framework of the market in which they're investing, that there will be an extra charge on those who are generating electricity from hydrocarbons because of the carbon floor price.

#### **Narrator:**

Currently the European Commission is considering even more ambitious targets of renewable energy beyond 2020. However, while the UK government has been taking steps to meet its current targets, it is hesitant about longer term commitments. Should there be a more specific target for renewables, or just a more general target to cut greenhouse gas emissions by 2030?

#### **Charles Hendry:**

I think there's a case for a low carbon target EU wide, but I think it should then be left to be not sector specific in terms of whether that's renewables or other sources of low carbon. So, could that be nuclear, could it be carbon capture and storage attached to coal or gas. The objective is low carbon; renewables is one other way of getting there, as renewables isn't necessarily an objective separately in its own right. But I think what we do need to see, if we're going to get the industrial gain from this, is greater clarity about what each technology can deliver in the 2020s.

Because if people are going to invest in building wind turbines or the blades or the pylons here, then they need to know that there's a market which was there for a decade, 15, 20 years. If it's only there until 2020 they can't justify the investment. And I think without the jobs coming through on the industrial side, people are going to say: Well hang on a moment, why are we paying more for our electricity sometimes? Why is that money going abroad, because many of these are foreign owned companies, and the jobs are going abroad as well. And so in terms of the public support for this, I think it's incredibly important that we have an industrial strategy which goes with the energy strategy, and that needs greater clarity about what each sector can deliver.

**Narrator:**

The UK used to be self-sufficient in oil and gas, but around the year 2000 output peaked and started to fall. By 2004, Britain had become a net importer and is soon expected to be importing three quarters of its gas. So what are the future prospects for oil and gas supplies? Not only from traditional sources but also from new, unconventional ones.

**Dr Roger Bentley, University of Reading:**

One of the problems nipping at our heels is a supply of conventional hydrocarbons - oil and gas. There are very large amounts of oil in various sorts, or oil in shale rocks; there's perhaps staggeringly amounts, large amounts of gas in things called methane hydrate; which we haven't yet learned how to exploit and so on. So nobody should be worried on the total resource base. But where the difficulty comes is in the sorts of oil and gas that we know how to get out, which are relatively cheap to get out. Those we've known about for a surprisingly long time are relatively small in amount, and you go over what's called a 'peak', you go over a maximum production rate, not when you've used them up, but when you've used up roughly half of what you have available. For something like 30, 40 years we've known that somewhere between the year 2000 and 2010, we were likely to be hitting problems on a supply.

**Narrator:**

What are the problems involved in making a transition from high-density concentrated fossil fuels, to dispersed, low-density renewable sources?

**Roger Bentley:**

One of the problems with renewable energy is some of the sources are relatively weak in terms of the amount of energy per unit area of land. It applies to biomass, it applies to wind in most places, it applies to solar. Some of them are area constraints and some are not. So if you're a country with a high population density and you're only depending on some of those weaker energy systems in terms of the ones where the energy density per square metre is relatively low, then you're going to have to work very hard to make a large percentage of your energy come from renewables.

It can be done. You can do calculations for any region. They've done it for Japan -- relatively high density. They've done it for UK. You can show 100% renewable calculations, enough there, but it's a lot tougher than if you're living in a country with a relatively low population and a large resource just outside your door.

**Dr Jeremy Leggett, Solarcentury & SolarAid:**

With solar energy we, we face cultural problems, there are people who don't like the visual impact of a solar farm in particular or even blue solar modules on roof tops. And my thought for those folk is there are no free lunches with energy, you know, every form of energy has its down sides. We don't need as much land as our detractors say. With solar for example, we have calculated that if we cover all available roof space and the façades of buildings, not that we'd want to do that in the real world, but if we did just to show how potent the technology is, even in cloudy Britain, we could provide more electricity than the country currently consumes.

**Narrator:**

So what does the UK need to do to move forward?

**Tobi Kellner, Centre for Alternative Technology:**

I think an important thing when we talk about how can we convince politicians, how can we convince the public that this is the road we should go down, is to go beyond just looking at the simple numbers of, you know, how much does something cost and actually start talking about what we spend money on. Yes, you know, building 10,000's of large offshore wind turbines will cost, in total, many many billions. But what we say is look, you know, spending many many billions on building all this renewable energy infrastructure would be a tremendous opportunity for creating employment in this country.

The choice that we have about the future isn't one between are we going to have cheap energy or expensive energy. We will have to pay a lot of money for energy in the future, and we think overall, we should be aiming to rather spend money on creating the infrastructure to produce our own energy in this country, rather than saying, you know, let's just spend more

and more money on finite energy sources from other countries. I think that is the debate we need to have. Not just how much does it cost but what are we actually spending the money on.