



Renewable Energy in the UK

Can Renewable Energy Power the World?

Titles:

The International Energy Agency in 2013 predicted that within three years renewable electricity generation will grow to be the world's second largest source of electricity ahead of natural gas and nuclear power. So is a renewable powered future for the world achievable?

Dr Ulrike Lehr, GWS Institute of Economic Structures Research:

The share of renewable energy in the future, that's a tough question and also an issue of much debate.

You have scenarios done by, for instance, called the energy revolution scenario, which has been published, commissioned by green peace and the European renewable energy council. And they foresee a rather optimistic future, with renewable energy contributing up to 80% or even 100% by 2050. We have heard rather pessimistic views also, from BP, or scientists who foresee something like 10% to 15% to 20% in the future.

Titles:

BP Projects 10-20% from renewables by 2030.

Dr Ulrike Lehr:

Truth lies somewhere in between maybe we are going to manage 50%, but even that will be an effort. If we manage to bring down energy consumption and energy use, we might as well attain more than 50%, like 60% or 75%.

Dr Jeremy Leggett, Solarcentury & SolarAid:

The frustrating thing for many of us who work on the frontlines of the renewables revolution, we see every day in our vocational lives just what these technologies can do. And in my own case, solar, you know, with the right partners in the construction industry, we can put up a new building, solar powered, zero emissions, with brothers and sisters in the family of technologies doing the heat, we can do all the heat as well. We've done this. We've done it with Scottish and Southern in, in Slough.

Well you don't need any nuclear or any coal or any gas or any oil for these buildings. There's enough electricity left over to charge battery cars, so if you, if you can do it at the level of a building, you can do it at the level of a community, you can do it at the level of the city.

When I look at the modellers who tell us that, you know, you can renewable power -- a modern global economy as soon as 2030 without any loss of quality of life, in fact, improvements in quality of life because of the slip stream benefits of these technologies, then I absolutely think that's true.

Andrew Hiorns, National Grid:

Can renewables power the world? It's a big question. Clearly not next year. But if we move the clock forward, 2030, 2040, do I believe that renewables will power the world? I guess as somebody who operates the system, I'd be looking for a balanced portfolio. Does renewables provide that balanced portfolio? I think the answer is potentially yes. You've got solar; you've got storage in Norway; you've got wind in parts of Scotland, England - so you've got a portfolio there, but you then need the transmission network to facilitate that connection. The question is: How affordable will it be? If the costs keep falling as they do today, do I believe that's achievable? I certainly believe it's achievable.

Professor Michael Jefferson, University of Buckingham:

Well, of course, I think it's absolutely daft to see all these things of 100% renewables, by which I presume people are meaning modern renewables, by 2050. You know, when we come to electricity, globally, we are about 3% of global electricity supply from modern renewables at the present time. How the hell are we going to get to 100% by 2050? It's ridiculous.

Dr Ulrike Lehr:

We have not been looking at those countries who have potential of, for instance, solar, electricity generation. I mean, the Sahara as such, can power Europe, Africa and most of Central Asia! If you put Concentrated Solar Power (CSP) there and just run a couple of high voltage lines there. This is putting it way too easy. But in terms of potential, we have a vast potential in Northern Africa and in the Arab peninsular.

Tobi Kellner, Centre for Alternative technology:

It is possible for renewables to provide all the energy we need by perhaps the middle of the century. It'll involve certain improvements in energy efficiency, reducing our energy demand as well as the dramatic scaling up of how much renewable energy we produce. It's going to be a difficult process but I think if we look at the alternatives, the consequences and the challenges that come from not doing that, then I think realistically, going for a combination of renewables and using a lot less energy is actually the best and the most realistic and the most sane option we have.