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**SIR DAVID KING**

PARIS AGREEMENT ON CLIMATE  
CHANGE: WHAT'S NEXT?



# > SIR DAVID KING CLIMATE CHANGE: WHAT'S NEXT?

Sir David King, the UK's Special Representative for Climate Change, gave the second annual lecture for the Energy and Natural Resources Law Institute (ENLRI) at Queen Mary University of London. The event was sponsored by Clifford Chance and in this extract Sir David talks about the Paris Agreement on Climate Change and why he is optimistic about the future of renewable energy.

I believe that future historians will say that 12 December 2015 – the date that the Paris Agreement on Climate Change was adopted – was a great turning point for humanity. 195 nations worked together to reach a deal on the greatest challenge we face this century. I'm going to explore to what extent the Paris Agreement is the solution, how far it goes and what is the way forward.

## What's in the Paris Agreement?

### ■ Managing the global temperature

It has taken many years to get to this Agreement but it is relatively simple. It's essentially a shift from the fossil fuel based economies which have existed since the industrial revolution, to fossil fuel free economies in a matter of decades. The Agreement is about managing the global temperature and, after much discussion, it was decided that well below two degrees centigrade is the target figure that we should aim for in order to manage the major risks associated with climate change. The Agreement also commits to pursuing efforts to limit the rise in temperature to 1.5 degrees centigrade. This was driven through by small island states which are at grave risk of disappearing due to rising sea levels.

### ■ Finance

The second part of the Agreement deals with finance. It was decided that from 2020 developed countries must provide US\$100 billion a year to poor nations to help them cut emissions and adapt to the impact of climate change. Analysis by the OECD reveals that in 2014 US\$63 billion was

mobilised towards this aim so we are already moving in the right direction. The finance agreement will have to be updated in 2025.

### ■ Differentiation

Developed countries must continue to "take the lead" in the reduction of greenhouse gases and developing nations are encouraged to "enhance their efforts" in light of their different national circumstances.

### ■ Green house gas emissions

The objective of the Agreement is for green house gas emissions to peak as soon as possible and then rapidly reduce to achieve a balance in the second half of this century between emissions from human activity and the amount that can be captured by carbon sinks. Thus, crucially, moving towards net zero carbon dioxide emissions.

### ■ Sharing the burden

Developing countries are invited to share the burden of providing financial resources to help other developing countries where they are able to do so. China, Chile and Brazil, for example, are already beginning to contribute in this way.



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## ■ Review mechanism

My personal 'red line' during the negotiations was that it was critical that we have a review mechanism within the Agreement. It was agreed that we would have a review every five years but I want to stress that reviewing is an ongoing process and begins now. We will review global progress in 2018 but the review starts by looking at the pathway we are on and what the challenges are. Each review will inform countries in updating and enhancing their pledges.

## ■ Loss and damage

This was the subject of much debate at the Paris conference. Essentially the wording indicates that vulnerable countries have gained recognition for the need for averting, minimising and addressing losses suffered due to climate change.

## Other agreements outside the Paris process

### New York Forest Declaration

There have been a number of important agreements outside the direct Paris negotiating process and I have been heavily involved in three of them. The New York Forest Declaration deals with new carbon sinks. It says that by 2030 not only would there be no further deforestation in natural forests but also that we would have already reforested an area the size of India. The UK is putting a significant sum of money behind this, together with Norway and Germany. We now have 37 of the world's most heavily forested tropical nations signed up.

### Carbon pricing activities

Another agreement focuses on the expansion of carbon pricing activities around the world. The Kyoto Protocol was essentially about carbon pricing but it was a top down process and we decided that was never going to work. So now we have a "bottom up" carbon pricing process. It started in the UK and Europe followed. Next year, the whole of China will be in a carbon dioxide trade process and the British government has assisted the Chinese government enormously through that detailed process to achieve a better pricing system than we managed to achieve in Europe in the early phases. It

is also happening in California and many other parts of the US and Canada.

### Providing energy for Africa

The UK and the US have signed an agreement on providing governments in Africa with a means to achieving energy for all by 2030. Across Africa 620 million people are currently without access to electricity in their homes and we aim to reach all of them – I believe this is a realistic plan. The reason that the UK is a key player in this initiative is simply the magnitude of our aid budget – 0.7% of GDP or US\$18 billion this year. A major advantage of this agreement is that there will be an immediate shift to renewable energy sources in Africa. This is going to be very heavily based on photo-voltaics and solar energy with micro grids and energy storage facilities. There is a big new market there. The Foreign & Commonwealth Office (FCO) estimates that it is worth around US\$4 trillion a year worldwide. The upshot of the Paris Agreement is that as all these nations are committed to moving into a clean energy world, demand will increase significantly. As the market grows, new players will enter the market and prices will fall.

### Reasons for optimism?

I think that we will see the commitments of the Paris Agreement roll forward and be exceeded. I am feeling significantly more optimistic after the Paris Conference than I was before. However, our challenge is to massively reduce carbon emission in the next 15 years. Time is not on our side. The Paris Agreement was reached later in the day than we'd have liked it to be. We need to accelerate this process by every means possible.

### What has the UK been doing?

I believe that it's fair to say that since 1997 the British Government has made a bigger effort managing this

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problem both nationally and internationally than any other country in the world. Here are some of the things we have done:

- The introduction of feed-in tariffs in 2003.
- The creation of a new Department of Energy and Climate Change in 2007.
- At the Glen Eagles G8 talks in 2005 when we held the Presidency, climate change was the topic on the agenda.
- We agreed at those talks that the G8 nations should provide 0.7% of GDP for overseas development. We are the only nation that has actually delivered.
- The 2008 Climate Change Act was a commitment to an 80% reduction in emissions by 2050 regardless of what other countries were doing. It has been a very powerful position and has enabled us to develop enormous trust with almost every nation in the world.
- We developed our own International Climate Fund with £4 billion and we have reached millions of people.
- We put a proposal to the G7 that we reach carbon dioxide neutrality during the course of this century.

#### **What are the outcomes?**

The UK has already reduced its emissions by 29% compared with 1990 and we will have reduced our emissions by 52% by 2028. This has enabled us to put pressure on the EU to be more ambitious – getting the EU to agree to at least a 40% reduction by 2030 was very much our agenda. The FCO has also appointed around 100 climate attachés to our embassies around the world – no other country has anything like this. This means we have a good negotiating team with outreach into every country. At the Pacific Islands Forum in Papua New Guinea last September we said to these island nations – which will disappear if sea levels continue to rise – if you push for 1.5 degrees then Britain will back you. This was, at the time, out of line with the EU

position but we persuaded the EU it was the right thing to do and got it through the Paris conference.

#### **The risks of climate change**

I've also been involved in a major risk assessment programme associated with climate change. This did not look at what is the most likely scenario of greenhouse gases rising but instead asked what is the worst that climate change can throw at us and what is the probability that that will happen? Anything approaching 1% probability in any given year is extraordinarily dangerous. We talked to reinsurance and insurance experts, statisticians, political advisors, politicians and diplomats – in all about 110 people drawn from the UK, the US, India and China. It was absolutely key at the Paris negotiations that these nations were agreed on the dangers that were threatening us. The risk assessment gets across the message that getting to a world beyond 2070 on anything like a business-as-usual basis would be totally destructive to the global economy.

#### **Opportunities for the renewable energy sector**

On a positive note, in 2014 more renewable energy was installed worldwide than fossil fuel energy sources. That's a significant step forward. In the UK renewable energy is the fastest growing sector of the economy. 11,500 companies employing 460,000 people are involved in the new low carbon economy which had an annual turnover of £100 billion in 2014. The renewable market was driven in the UK and in other parts of Europe through feed-in tariffs (subsidies for low carbon energy sources) and through regulatory processes.

Falling costs for clean energy technologies such as wind, solar and LEDs, means that they are becoming very competitive. A number of banks including Barclays and Goldman Sachs issued reports following

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the Paris conference which say that the opportunities for these technologies are huge. The market is currently worth £4 trillion and is expected to rise to between £7 trillion and £10 trillion a year by 2030.

How do we build on this? Can radical technological innovation reduce the cost of supply? Yes it can, but we need to target support and we need to have a framework under which that is done. I was involved in the formation of a programme called Mission Innovation which was launched at the Paris conference. It is a plan to deal with climate change through publicly funded research, development and demonstration. Our aim is make the cost of renewable energy cheaper than fossil fuels. It is supported by President Obama, President Holland, Prime Minister Modi and Prime Minister Cameron amongst others. We now have 20 nations joining the initiative with an annual spend of approximately US\$20 billion. In addition Bill Gates said that he would put down US\$1 billion, not as philanthropic money to back up

the public sector funding but as an investment. He is expecting a return. He brought in a group of other investors who each put in US\$1 billion. We now have the finance in place for the next ten years to take clean energy solutions to the market. There are other good things happening around the world. Prime Minister Modi announced that he would commit India to developing 100 gigawatts of solar energy by 2022. South Africa has also committed to solar energy. Germany is looking at innovative solutions for energy storage and in Brazil they are using the waste from sugar cane fields to produce liquid fuel for cars. Renewable energy is the biggest opportunity of our age, both for the scientific community but also for the industrial community, the private sector. It's actually the biggest and most exciting opportunity we've had since the industrial revolution.



**Sir David King**

Sir David King was appointed as The UK's permanent Special Representative for Climate Change in September 2013. He was previously the Government's Chief Scientific Advisor from 2000 – 2007, during which time he raised awareness of the need for governments to act on climate change and was instrumental in creating the Energy Technologies Institute. He also served as the Founding Director of the Smith School of Enterprise and Environment at Oxford; was Head of the Department of Chemistry at Cambridge University 1993-2000 and Master of Downing College at Cambridge 1995 -2000. Sir David has published over 500 papers on science and policy, for which he has received numerous awards, and holds 22 Honorary Degrees from universities around the world.



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The Energy and Natural Resources Law Institute is a London-based Institute providing focus for the development of energy and natural resources law. The Institute provides practical and academic training of energy lawyers through its specialist Energy and Natural Resources Law LLM, practitioner training and events. Within the Centre for Commercial Law Studies at Queen Mary University of London, the Institute's aim is to be an international centre of academic excellence.

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