

examining the challenges ahead
for the UK nuclear industry

Speech by Bill Coley, CEO British Energy Group plc

Nuclear Industry Forum, Adam Smith Institute
One Whitehall Place, London, 23 June 2008

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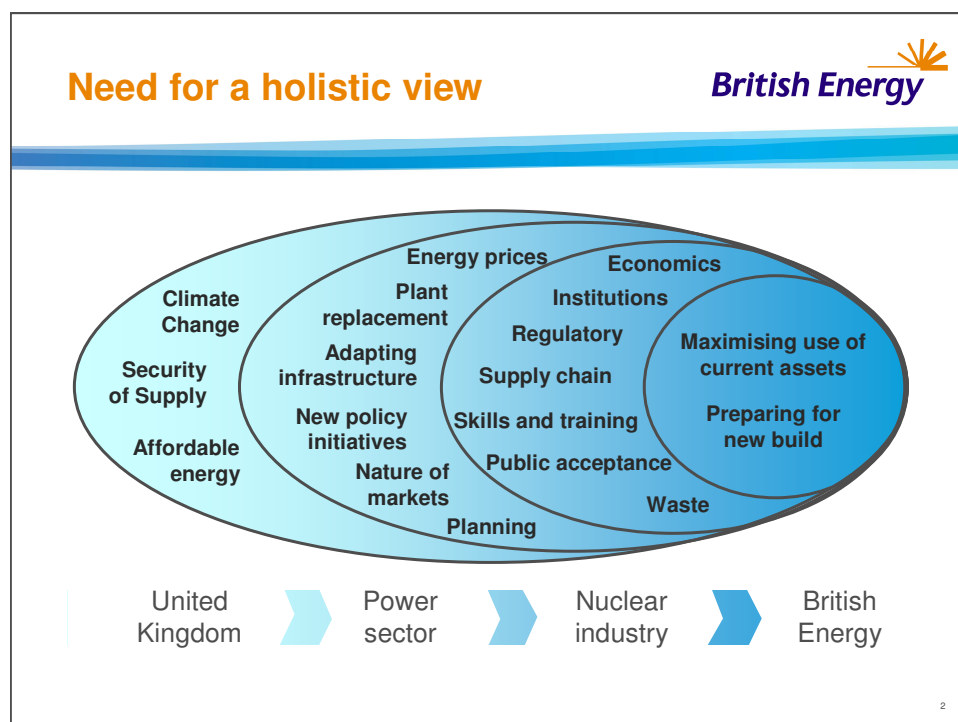
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Ladies and gentlemen I am delighted to be here with you today. The Nuclear Industry Forum is an important event in our calendar, offering us an opportunity to review progress in the nuclear agenda and to look ahead to the challenges that await us as we take our next steps towards a new nuclear build programme.

This is my third Nuclear Industry Forum. Each time I have been struck by the relevance of the topics and the quality of the discussion. And it appears the organisers have positioned us for yet another superb conference this year.

So what has changed over the last three years since my first conference? As I look at developments both in the UK and elsewhere, it seems the energy system which has served us so well over the last few decades is under tremendous stress. Much of this is related to security-of-supply and prices. But there is also considerable uncertainty in the way our energy system will evolve over the next couple of decades and whether it will remain fit for purpose.

In my short presentation I want to touch on the drivers and challenges that await us, for the nuclear industry and for the power sector as a whole. I want to focus on a small number of issues that pose particular challenges for us, and discuss these in a little more detail. And I want to close on a more philosophical note by looking at these challenges from the perspective of future generations.



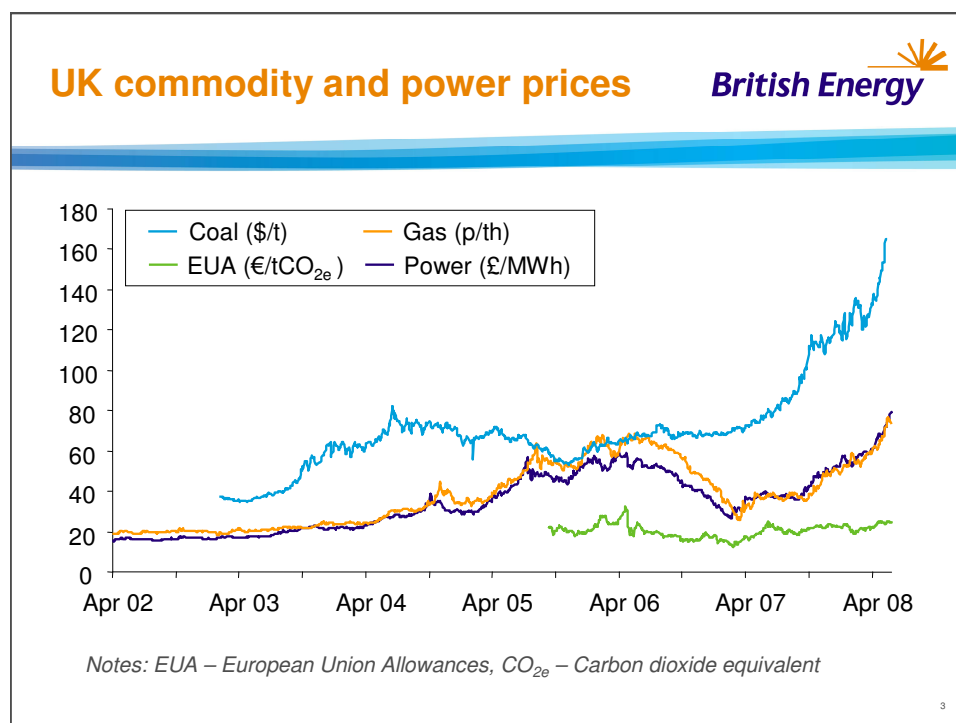
The nuclear industry does not and indeed cannot, develop in isolation. The way in which coal, gas and renewable technologies emerge through the major transition we will shortly undergo, will have significant implications on our new nuclear build programme. We need to take a holistic view of energy, especially the electricity supply system, if we are to be successfully deliver optimal solutions.

Fundamental drivers for the power sector continue to be carbon reductions, security-of-supply, and the need for ample supplies of affordable electricity. Their relative importance tends to shift in response to circumstances - a challenge for Government is to maintain a long-term perspective when short-term pressures come to bear.

Some challenges are common to all technologies - costs, development of supporting infrastructure, the nature of markets, supply chain weaknesses, and of course the planning regime. Others are perhaps more specific to our industry and these include waste management and public acceptance.

I would like to focus on four areas that present particular challenges for our industry – (1) energy prices and the market environment, (2) the planning regime, (3) waste management, and (4) gaining and maintaining public acceptance.

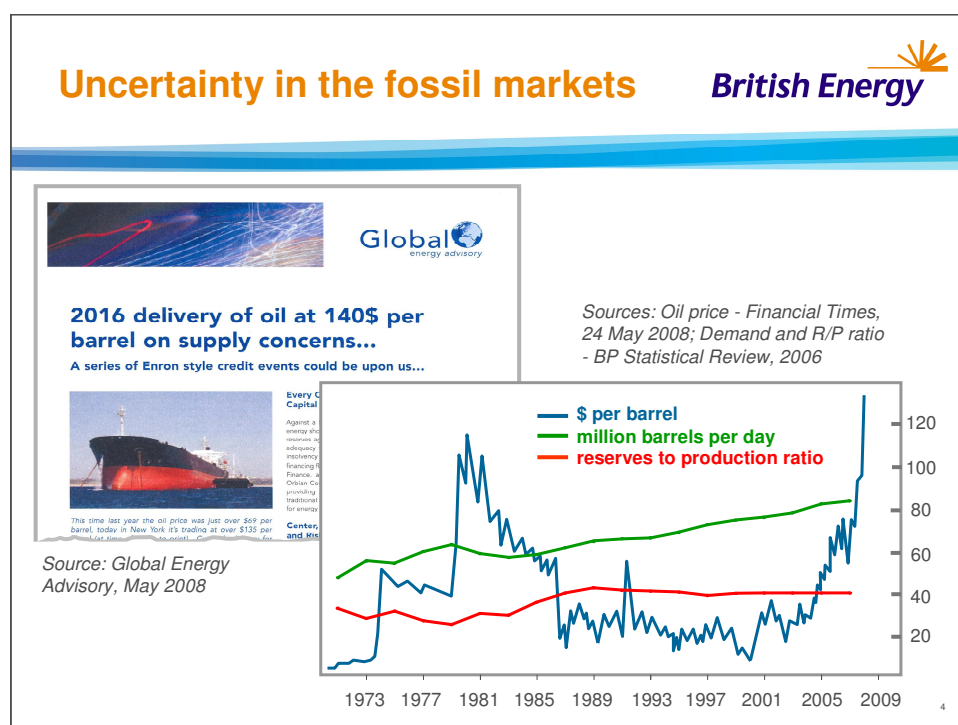
Let me begin with energy prices. There are a number of commodities that can influence power prices. The prices of gas and coal prices are traditional drivers, but we must now also consider the cost of carbon. Power prices rise and fall in sympathy with fossil prices. And, while we know there is impact, the effects of carbon prices on power price are not fully clear.



What is clear is that there is considerable potential for volatility in the energy markets, brought about by a number of factors including rapid economic growth in key markets, resource constraints – such as generating supply margin, and political developments. Over the last five years, coal and gas prices have increased by a factor of four, as have power prices.

A key consideration for new build, nuclear or otherwise, is what fossil prices are likely to be over the next ten to fifteen years.

Oil remains the dominant energy carrier, with gas, and to a much lesser extent coal, following market trends for this commodity. The real question is whether the recent major surge in oil price signals a fundamental shift to a new fossil fuel price regime, or whether prices will fall back again as they have done in the past and, if so, when that will happen.



The indications are that the era of cheap oil, and by association gas and coal, is over. Relatively small changes in the balance between supply and demand will likely lead to greater volatility in the fossil and power markets.

The challenge for us is to make sure that the economic case for new nuclear projects is robust against the vagaries of the market. This means a complete break from what we did in the past. It means for example, the use of established international reactor designs, acceptance of common standards, and construction to time and cost. It also means a commitment to a series of new nuclear units so that the full benefits of economies of scale are realised.

This is a challenge for us, our supply chain, and our regulators. But the prize for all of us, and for the people of the UK, is huge.

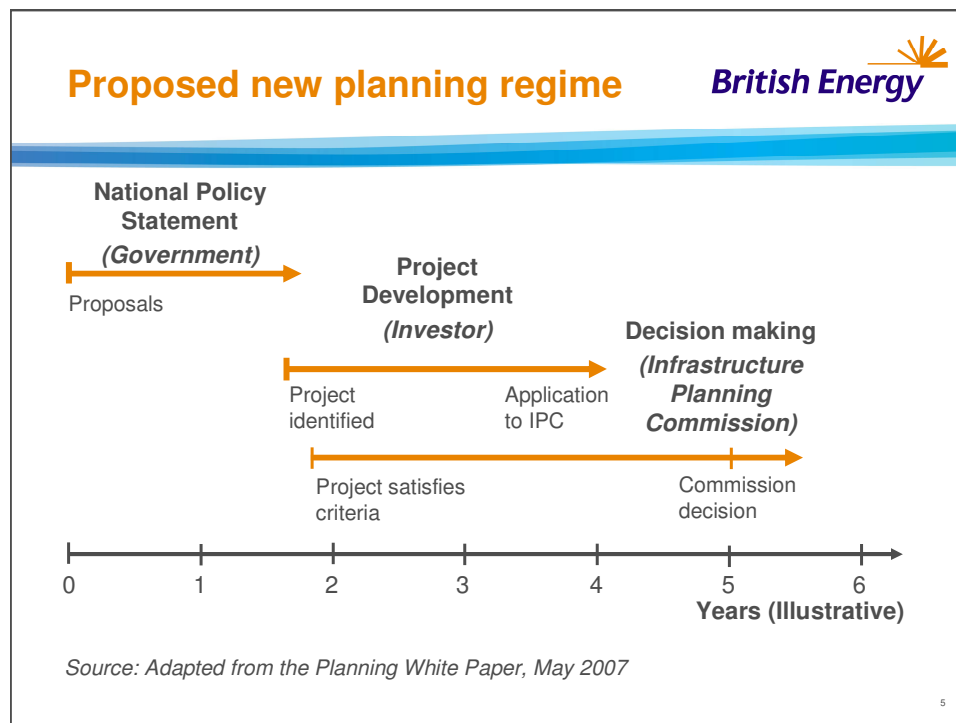
It has been clear for some time that providing the energy infrastructure that meets the needs of our society over the next 50 to 60 years requires a variety of actions – some from government and some from the business community.

The current planning system is a major barrier to new build and the need for Government action to streamline the planning system is clear. But that's not only the case for new nuclear - planning is the major hurdle to any major infrastructure project in the UK. Critical projects needed to deliver wider strategic, environmental and economic goals, have been viewed in isolation, stuck in a congested planning pipeline, and delayed for years.

Looking ahead, reform of the planning system to deliver a clear and stable framework for future investment is important for us in industry, and the country. Government to their credit have set out proposals to reform the planning process.

In terms of detail, it is right that national infrastructure needs should be debated, considered, and agreed by Parliament and Government. But it is also right that the decision on projects of national significance should be driven by the needs of the people of the UK - not by political considerations.

The aims of the Planning Bill as it is currently composed are, in my judgement, sound, balancing the needs of the country and the rights of local communities.



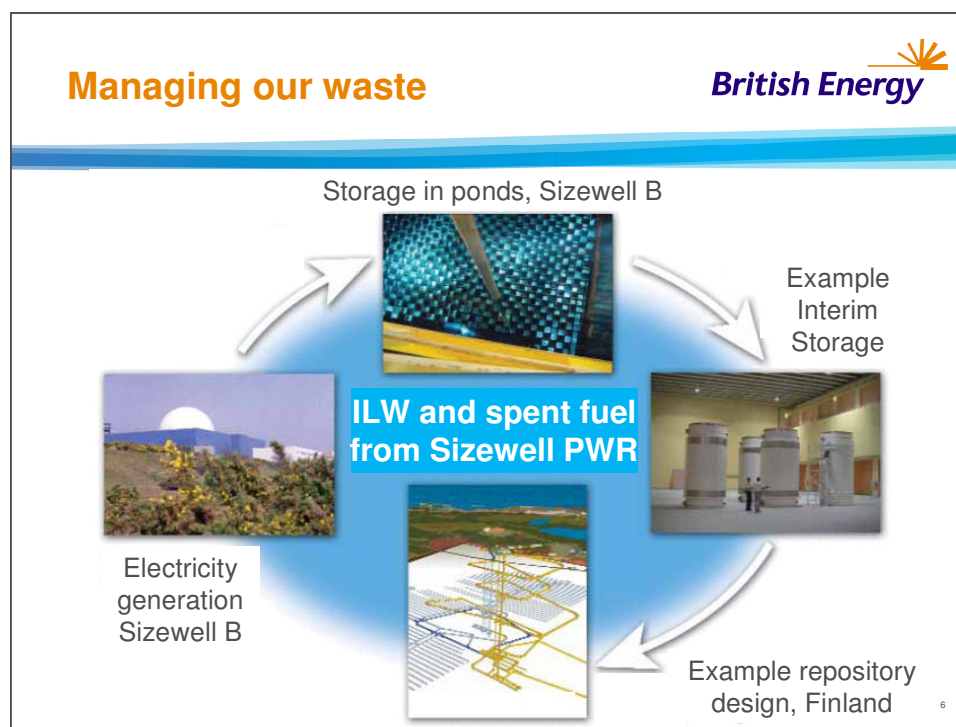
But it is fair to say that the Bill has had a difficult time as it goes through the Parliamentary process – it has been delayed, debates have been postponed, and the timetable is slipping. In part this is due to the heavy legislative programme with a number of important Bills going through due process at the same time. And it appears that there are major disagreements over elements of the Bill at the political level, including the potential role of a new Infrastructure Planning Commission.

I know my place. It is certainly not for me to second guess politicians, or to suggest compromises. But my message to politicians is that those of us who want to invest in energy infrastructure in the UK are watching to see what is happening with the Planning Bill. Our hope and expectation is that a viable, robust and efficient planning regime emerges from the Parliamentary process - one that will provide us with the timely decisions and certainty we are seeking.

Management of nuclear wastes remains crucial to the argument over hearts and minds. It is still the public's number one concern when considering new nuclear build.

To be honest, it is disappointing that both the industry and Government have failed to make genuine progress with this issue in the past. I know it is not for want of trying, and that many good people have tried. And I don't just blame politicians - those of us in the industry could have done a much better job of explaining the realities, and delivering solutions.

But we now appear to have a way forward. We appear to have a clear plan of engagement and a widely accepted end-point – a national repository to store high level waste from the civil nuclear energy and weapons programmes.



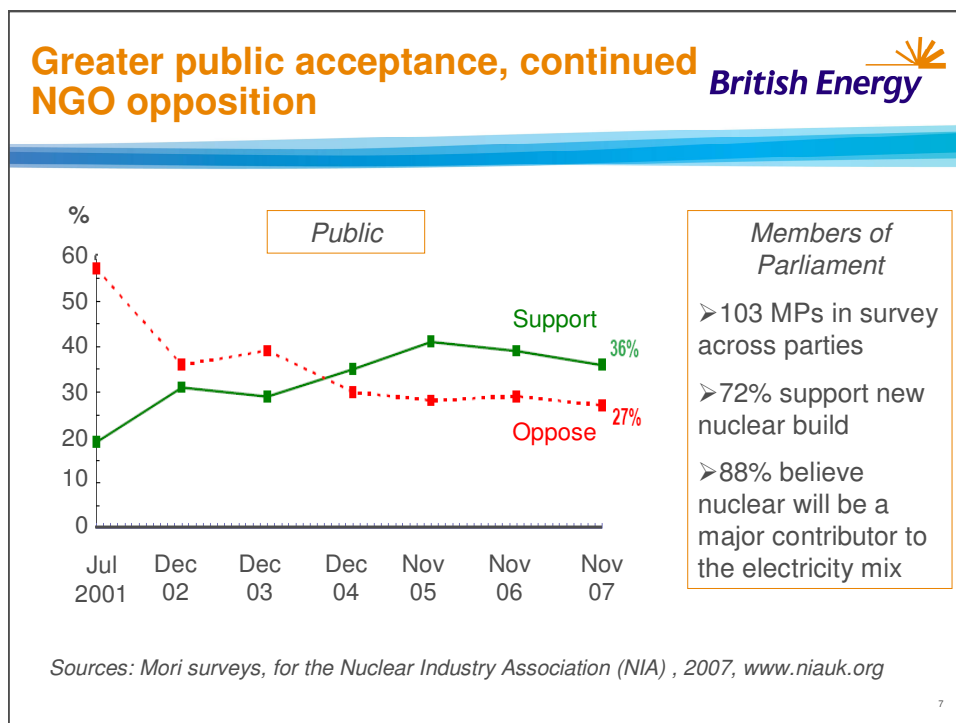
So there is a plan – it will take time and much consultation to deliver but with every milestone reached comes increasing certainty which is important for all stakeholders. But plans need clear objectives. What would be greatly encouraging is to have a target date at which the country intends to have the national repository operational.

In the meantime, our challenge is to help move the process to a successful outcome and to reassure the public that we continue to manage our wastes safely.

The spent fuel from our Sizewell B PWR station is stored safely on site. We will shortly apply for permission to develop additional capacity to allow us to continue to store all of the spent fuel that will be generated over the lifetime of our station. Such Interim storage will be based on technology already used successfully in other parts of the world for some years.

Interim storage is an important step in the process because it means we are able to manage our waste safely until such time as it can be moved to a national repository.

Ladies and gentlemen, there is no doubt where the British public stood on the question of nuclear eight or nine years ago. They were polarised between a majority who opposed nuclear energy, and a minority who supported it. There was little room for ambiguity.



But times have changed. Energy is a vital, scarce and expensive global commodity - and security of supply is a major concern. And people are much more attuned to the implications of energy policy on climate change objectives.

The nuclear industry has also traveled some way down the path of change in the interim period. We have engaged readily with decisions makers and the public and we have tried to answer their concerns forthrightly with facts and with accurate, timely information. So changing circumstances and some hard work by the industry has led to a sea change in opinion amongst the public and the politicians.

But we have to do more. We need to show why – in today's world – nuclear energy has a part to play in contributing towards solutions. Nuclear technology, just as any generating technology, has advantages and disadvantages. We need to acknowledge both. And we need to explain what they are, and to set them honestly against the context of wider options.

So we who advocate nuclear generation as part of the UK's balanced energy mix need to change and improve our communications with the public. But so do those who oppose nuclear. In this complex world and major challenges for society it is no longer good enough for NGOs to approach the issue of sustainable energy provision from the standpoint of simply saying 'no'. And the tired old tactics of 'publicity stunts' and engaging in 'scare mongering' need to be tossed aside in favour of serious debate and discussion for future of the country and it's people.

Looking at the polling, it seems to me that the NGOs could be more responsive and responsible to a public which increasingly understands the difficult choices we face.

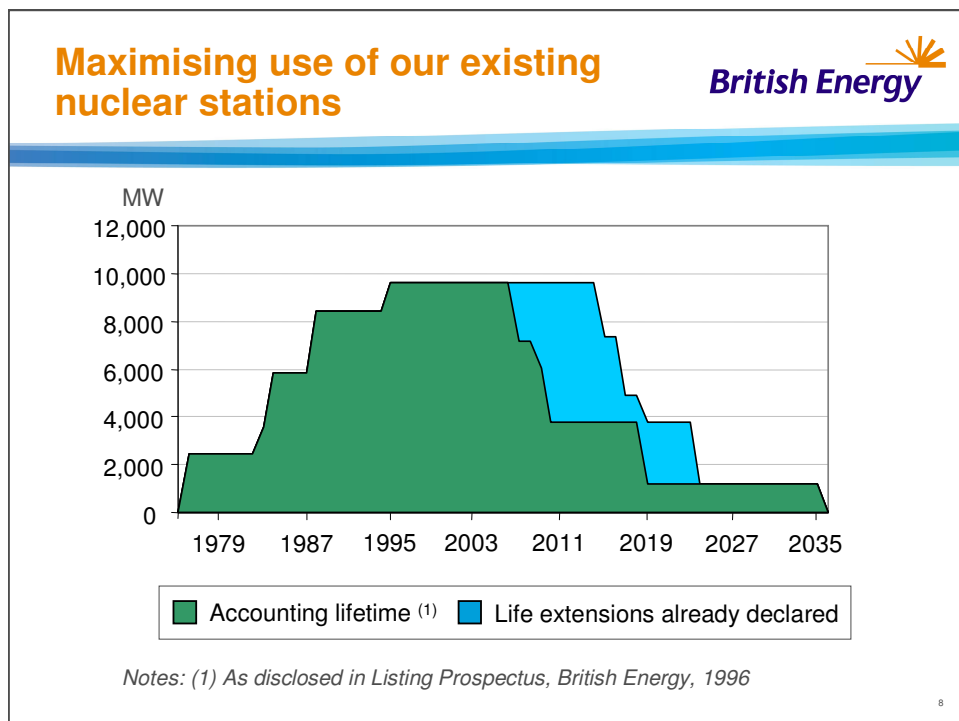
They need to explain exactly how they would provide energy for a global economy that needs to grow. They need to admit the impact that their solutions would have upon communities, and they need to tell the public how they would be paid for, how much they would cost, and who would pay.

I am pleased that today we have more people in favour of nuclear than against. But the most significant group is the undecided. Our challenge is to continue to set out the options, and the consequences and costs, so that they can form their own judgments about what nuclear energy has to offer.

An important part of gaining and maintaining public trust is to keep operating our plants safely – and this is, and has always been, our number one priority. Our challenge is also to keep our stations generating a valuable commodity for as long as possible.

We at British Energy have worked very hard, and invested large amounts of money in our people and in our plant over the last three years or so – 1000 new employees and about one billion pounds. We are investing to increase output and reliability, and to extend the operating lives of all our stations.

These life extensions will span a decade in which many of the UK's coal plant will be retired, putting considerable pressure on the country's electricity supplies. The fact that our nuclear stations will be available over this period will ease the pressure on the rest of the sector. It will also maintain the significant environmental and cost benefits to the UK and the market respectively.



Life extensions also mean we will be able to bridge the gap between the existing nuclear stations and new build. A smooth transition of this kind is crucial to the well-being of the entire nuclear industry. I am determined that we do all in our power to make the most of these important stations.

It is fair to say that our biggest challenge is to make new nuclear build a reality.

It will come as no surprise that I believe that the sites on which British Energy currently operates are prime locations for new development. These sites have the proven geology, the required land, established transmission links, and communities familiar with, and supportive of, nuclear generation. Indeed, people forget that some time ago, two of our new build sites obtained initial planning consent for new build.

We are preparing for new build. We have commissioned a range of geological, environmental, marine, transmission system, and other studies for our sites. Most recently, we announced that we have entered into transmission connection agreements with National Grid from 2016 onward to support maximum new build at each of our key sites in the South of England – Sizewell, Hinkley, Dungeness and Bradwell.

We are also meeting with the local Planning Authorities and local communities to tell them of our plans and hear any concerns they have in relation to potential new nuclear build in their area – concerns such as waste management, transport infrastructure, coastal erosion, and so on.

Making new nuclear build a reality



- > Site assessment
 - > Climate change
 - > Geology and hydrology
 - > Environmental surveys
 - > Marine studies
- > Local community consultations
- > Grid connection agreements
- > Design assessment
- > People and skills
 - > 1000 new employees
 - > Nuclear Power Academy
 - > Working with national institutions on skills agenda



These have been very valuable consultations, important for developing any licensing applications. And, as part of a comprehensive programme, are just the first of many meetings and discussions we will have with local communities to understand their needs and concerns as we progress new build.

We have a clear programme of activities going forward that involves all of our key stakeholders. All of this is predicated on the belief that the power market, in which carbon is a key element going forward, will support our existing nuclear generation and new build.

Let me finish this brief presentation on a more philosophical but important note. There are those in our society then, who say it is not ethical for us to build new nuclear stations when the waste issue has still to be resolved. Others suggest that climate change poses a significantly greater challenge.

We should recognise that all energy sources have environmental impacts: Nuclear has a comparatively small volume of managed radioactive waste; coal and gas plants, even today, vent significant quantities of carbon dioxide emissions to the sky; biomass causes soil degradation; the noise, location and sheer scale of wind farms has led to public concern; tidal power affects marine ecology: and making solar photovoltaic devices produces toxic wastes that must be managed.

When we consider energy from an ethical standpoint, we must acknowledge that there will always be a trade-off, a balance struck recognising the full spectrum of benefits and impacts for each source. Sometimes choices are difficult.

Nuclear a responsible option



Future generations would not look kindly on us if the window of opportunity to build new nuclear stations was open to us, and we – government and industry - did not rise to the challenge

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The question of future generations is often raised in ethical discussions and, in particular, what they might say about decisions we take today. I believe they would not look kindly on us if the window of opportunity to build new nuclear stations was open to us, and we, government and industry, did not rise to the challenge and leave them with an energy infrastructure that supported a quality of life and standard of living as good as – and hopefully better than – that we enjoy today.

