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## Green growth: the transition to a sustainable economy

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Thanks very much.

Three years ago, the credit crunch hit home.

Three years ago, the economy suffered its most profound shock since the 1930s.

Three years ago, customers queued around the block in the first run on a British bank for a century and a half.

From Iceland to Greece, the financial crisis changed the fortunes of countries, their people, and their governments. It framed political debate then as it does now.

The UK was hit hard.

Our overdependence on the financial sector left us critically exposed.

Our banks trembled. Our credit rating faltered.

And our gross domestic product fell by 5% in a single year – the sharpest drop since 1921.

### UK Response

Coming after a decade of government overspending, the result was a budget deficit unmatched in peacetime.

A fiscal stimulus package without precedent.

And a ballooning credibility gap, as it became clear there was no real plan to lift us out of a deep recession.

Tackling our chronic structural deficit – and rebuilding confidence in our economy – demanded difficult decisions.

The coalition's response was decisive.

The Emergency Budget steered us away from a sovereign debt crisis. And the Spending Review set out a clear and credible path back to national prosperity.

The latest indications are good: GDP is growing faster than expected. Our national credit rating is back where it belongs. Investors feel confident that the UK's course is true.

We have weathered the storm.

But now we are in the open ocean, and a question still remains:

Where is the growth coming from?

## **Future Prosperity**

It is no longer enough to decry the excesses of the last Government. Yes, the cupboard is bare. Now it is up to us fill it.

Over the past week, you have heard our plan to bring back growth.

A tougher competition regime. Funding for scientific research. The national infrastructure programme. The local growth strategy.

Together, they will help restore prosperity and promote growth.

But there is something else.

Something that can deliver a boost of macroeconomic significance.

It is essential to the recovery.

It is vital for our future competitiveness.

And as the Prime Minister made clear last week, it is a critical part of the Government's strategy for growth.

To change our national economic story from one of financial speculation to one of future growth, we need a third industrial revolution: a green revolution.

It will transform our economy as surely as the shift from iron to steel, from steam to oil.

It will lead us toward a low-carbon future, with cleaner energy and greener growth. With an economy that is built to last – on more sustainable, more stable foundations.

It is an enticing prospect.

But what does green growth mean?

It means jobs. It means investment pouring into the UK, and exports pouring out.

Technologies that can be licensed and spun off to lock-in profits.

A more skilled workforce. Able to compete in the global marketplace, furthering our reputation for innovation, boosting British enterprise.

And at home, a more sustainable economy. One less prone to the fits and starts of a fragile energy market, and more resilient in the face of global uncertainty.

These are the long-term rewards that await us if we have the courage to build our economy anew.

We cannot risk falling behind. Other countries are not waiting for international agreements before engaging with the next global growth sector.

Instead, they are nurturing new industries focused on the defining challenges of our age: the development of clean energy.

Today, I will set out the case for green growth.

The industries it will nurture. The investment it will spark. The jobs it will create.

And the security it will bring, as we gain greater energy independence and build a more sustainable economy.

## **A Global Market**

We are at the brink of a new industrial era.

From electric vehicles to energy management, the global low-carbon and environmental goods and services sector is a £3.2 trillion market. It is forecast to reach £4 trillion before this Parliament dissolves.

Last year, our share of that market was worth £112 billion. 900,000 people are employed in the low-carbon sector and its supply chain; by 2015, there will be at least a million. That's a workforce – and a budget – to rival the NHS.

As global efforts to cut carbon gather pace, the market will grow. Those countries which take the lead will be uniquely positioned.

Think of Germany's expertise in wind turbine manufacturing, or China's growing share of solar photovoltaic production.

We must secure a bigger slice of the pie. In offshore wind, in carbon capture and storage, Britain can establish itself as a market leader.

Our job is to ensure British firms can take full advantage of the opportunities. Converting our technical successes into commercial opportunities.

That means removing barriers to innovation and investment at home.

Exporting the best of British overseas. And securing international buy-in for the low-carbon transition.

The best way to achieve that consensus is to lead from the front. On energy supply and energy demand, we can set an example which boosts growth at home and competitiveness abroad.

## **New Generation**

As with previous industrial revolutions, our primary energy source will define our economy.

Victorian fortunes were built on coal and steam. 20th century dynasties were founded on oil and gas.

The next generation's prosperity will come from clean energy. It must be affordable. It must be secure. And it must be low-carbon.

Many of the technologies that will power our future are still emerging. Wave and tidal stream tech are improving quickly. Solar photovoltaic is becoming ever more affordable. And in Britain, onshore wind is expected to be cost competitive with nuclear power.

This rapid expansion in new technology coincides with an explosion in demand for new generation.

Demand for electricity could double as we plug in to the national grid to power our cars and heat our homes.

Yet the UK's power plants are ageing fast. 20 Gigawatts of capacity will be lost by 2023 as old power stations close.

Ofgem estimates that we need £200 billion of investment by 2020 to upgrade our outdated energy assets.

The replacement cycle means energy investment will ramp up significantly – between 0.5 and 1% of GDP.

Have no doubt: this is a step change. And the opportunities are breathtaking.

As the next generation of power plants come online, so new industries will spring up around them – from manufacturing to maintenance. Each new plant must be designed, built, operated and connected to the grid.

To take full advantage of the shift to low-carbon generation, we must allow these developing industries to flourish within our borders.

Our policy is built on four pillars: energy saving, carbon capture and storage, renewables and – as the coalition agreement made clear – new nuclear without public subsidy.

When saving for your retirement, it would be irresponsible to put all your eggs in one basket. It would also be irresponsible to tie the nation's energy security to just one technology. We cannot be certain of future costs or liabilities.

To keep the lights on and the public finances in the black, we need a solution delivered by the market. So we are determined to make it easier to invest across the energy portfolio.

We want to remove the planning obstacles that have held up new nuclear. Investors looking at the next generation of nuclear power need clarity and certainty, and this Government will provide it.

Later this year, we will consult on a new market framework for electricity; one that encourages low-carbon investment and gives consumers a fair deal.

Our work on electricity market reform will look at how we can deliver a secure, affordable, low-carbon electricity mix. It is a fundamental change in the market structure that underpins our national supply.

By the second half of the decade, annual investment in the UK energy system is expected to reach £25 billion.

Key engineering companies are already planning for opportunities in power generation at a national scale.

The world's biggest offshore windfarm, at Thanet, is an impressive feat of engineering. Yet most of the value went to companies outside the UK. This has to change.

The funds for ports infrastructure announced last week is a statement of intent. We want to make sure turbine manufacturers can build what they need on our shores, instead of importing expensive finished products that could be made here.

The sector could create 70,000 jobs, cementing our position as leaders of the offshore wind pack.

We also need to clean up our existing fossil fuel plants.

The Spending Review underlined the Government's commitment to carbon capture and storage; a project worth up to a billion pounds, to tackle our fossil fuel legacy and prepare us for a future of clean coal.

This will build the first ever commercial scale CCS plant, delivering on a technology that the IEA says will be essential for the future.

Globally, it estimates 3,400 CCS plants will be needed by 2050 if we are to meet our critical 2 degree target.

And the demonstration project puts the UK at the forefront of this emerging market.

## **Saving Energy**

Greening the supply of energy in the UK will be critical. But action on new generation alone will not be enough. We must also do something about demand.

A snapshot of the UK's domestic power consumption reveals chronic inefficiency.

A quarter of UK carbon emissions come from housing. We use more energy heating our homes than Sweden.

Our homes may be our castles. But they shouldn't cost a king's ransom to run.

In houses across the country, boilers are firing up earlier than they need to. Burning more gas than they have to. Producing more emissions than they should do.

And all because our outdated housing stock leaks heat and wastes carbon.

Our response is the Green Deal, a radical programme to bring our houses out of the dark ages.

Over the next two years we expect to insulate 3.5 million homes, with a renewed focus on those in fuel poverty - and those who need it most.

Then, from 2012 onwards, energy saving packages worth thousands will be installed in millions of homes, with the capital and interest costs covered by savings on energy bills.

And we will look at how we can apply the Green Deal model to businesses, too – enabling them to cut carbon, and cut costs.

The potential benefits are vast.

From assessment to installation, from manufacturing to supply, the Green Deal means opportunities for skilled and unskilled labour alike.

Opportunities that will last for decades – and span the length and breadth of Britain.

Nothing on this scale has ever been attempted before. It is one of the single biggest interventions in British domestic history: a nationwide, once-in-generation refit to future-proof our homes.

Over the last two years steady progress has been made, with two million loft and cavity wall insulations installed.

But Labour failed to improve the private rented sector, which benefited from less than 2 per cent of these installations.

Privately rented homes have far too many leaky lofts and icy drafts. Over half a million have the lowest energy rating.

The Green Deal will change this. We should no longer condemn those who rent privately.

Landlords will face no upfront cost, and will benefit from an improved property. By 2015 every tenant should be able to be as warm as toast in their home.

This is a win, win, win situation – for the landlord, the tenant, and the climate.

I hope and expect that landlords will respond positively to the Green Deal. But this Government will not put up with tenants needlessly living in chilly conditions.

If a review into energy efficiency in the sector finds that landlords aren't taking up this once-in-a-generation opportunity, we will respond.

If necessary, we will look to take powers to ensure that from 2015, any tenant who asks for energy efficiency improvements cannot be refused.

And we will give local authorities the power to insist that landlords improve the worst performing homes.

We estimate that every household could benefit from energy improvements under the Green Deal, with implications for manufacturing and supply chains across the country.

The number of people employed in insulation alone could soar from 27,000 to 100,000 by 2015. That could eventually rise to a peak of 250,000.

This is no idle ambition. In September, British Gas announced its plan to 'go early' on the Green Deal, investing £30 million and creating 3,700 jobs.

Earlier today, I visited their Energy Academy, where they've just recruited their thousandth green-collar worker. From school leavers to highly-qualified engineers, this is real green growth.

Within our borders. With a long timeframe. And with no regional bias, because our homes are everywhere.

The Green Deal will also reduce our reliance on imported fossil fuels.

The most inefficient households could save £550 a year on their fuel bills; if every household took up the Green Deal, spending on gas would fall by £2.5 billion per year.

With over a third of our gas currently imported and UK gas production on a downward trend, the net result is a saving on a national level.

That bigger picture is important.

The link between the micro and the macro illustrates a curious truth: double-glazing your windows really can improve the UK's energy security.

## **Security and Stability**

And energy security matters.

Not just security of supply, but security of price.

For it is becoming increasingly clear that the age of cheap energy is over.

Dwindling fossil fuel resources and soaring demand suggest we are headed towards an energy crunch.

The Gulf of Mexico merely underlined the point: extracting fossil fuels is becoming more risky and more costly.

Yet one of the clearest lessons of the financial crisis is that growth is nothing without stability.

Greater energy independence – with more renewable and nuclear power – is the best way to protect our consumers and our country from the uncertainty of the energy markets.

Our policies are not free. There will be a significant price impact, and there will be costs to the consumer.

But not only are they offset by energy efficiency savings; they are also an insurance policy against rising prices.

Consider oil. At \$80 a barrel, energy bills will only rise by 1% in 2020.

Yet the IAE predict a \$90 barrel by 2020. And the US administration forecasts \$108 per barrel.

If the US administration is right, our consumers will be saving money as a result of our policies.

Then take the macroeconomics. I asked DECC economists to look at the impact of a late 1970s-style oil price shock on our economy.

They found that if the oil price doubled, it could lead to a cumulative loss of GDP of around £45 billion over 2 years. That's the equivalent of the entire Ministry of Defence budget in 2008/09.

That's bad for business, profits and jobs.

Even a more moderate rise in oil and gas prices would leave us critically exposed.

Thanks to a decade of missed opportunities on renewables, our energy import dependence could double by 2020.

As demand grows and the global recovery picks up, it is increasingly clear that an economy dependent on fossil fuels is neither sustainable nor stable.

The solution is to get ourselves off the oil hook – and on to clean green growth.

We estimate the low-carbon transition will safeguard growth by cutting UK demand for oil, and boosting our defences against oil price shocks.

If we do not create the conditions for sustainable growth, we will be more exposed to rising energy costs. More dependent on finite fossil fuels.

And more vulnerable to resource risk.

### **A New Kind of Economy**

Instead, we have a chance to build a new kind of economy. A more balanced, more sustainable economy. Where climate stabilisation and financial recovery are not mutually exclusive but mutually beneficial.

Delivering jobs, creating exports, and securing investment.

Tackling the deficit without sacrificing the environment.

Protecting us from the economic and environmental risks of runaway climate change.

And all while maintaining energy security in an increasingly volatile global market.

This is the promise of the green revolution.

And this is the government that will lead the way.

Thank you very much.