



# Briefing Note

## Climate change solutions

Climate change is the biggest threat the world faces. But there is still time to act to make sure our environment is safe for everyone to enjoy – now and in the future.

Many of the 'solutions' for tackling climate change and cutting emissions already exist. The technologies are already in commercial use, or ripe for it. We can keep the lights on, keep industry buzzing and continue to get around in style.

With the following solutions, we can move towards a low carbon economy and see a 60 per cent reduction in carbon emissions by mid century.

### **SAVE IT**

#### **Bright ideas to tackle climate change**

The compact fluorescent lightbulb (CFL) just keeps going – lasting 10 times longer than a standard bulb and using a third of the electricity. If every UK household fitted three CFLs, we could take a whole nuclear plant out of the equation. The potential is even higher with a programme to replace inefficient lighting on the streets and in the commercial sector.

#### **Off is off**

Across the richest (G8) economies the energy we waste by leaving stuff on like DVDs and computers on standby is equivalent to 20 nuclear or coal fired power stations.

#### **Engineering solutions to climate change**

If industry used clever motors – ones that only used the exact amount of power needed – this would save the equivalent of three nuclear power plants – and that's just in the UK. The BBC recently made an energy saving of 35 per cent by installing a highly efficient motor to drive the system that keeps its archives cool.

#### **Keeping climate change under wraps**

Creaky old UK houses are bad at keeping the heat in – even our new builds hold a lot less heat than a Scandinavian equivalent built before the Second World War. What's more, the cost of keeping our homes warm is often so steep that around 30,000 people die every winter. No fancy footwork needed here – just a drive for more double glazing, loft lagging and draught proofing which could cut emissions from buildings by 60 per cent and make our homes cheaper to run.

#### **Way to go**

We could make big carbon dioxide savings if manufacturers had to design and sell cars that are more efficient and run on renewable fuels. Meanwhile, smarter use of IT for home working, better public transport and safer streets for cycling and walking will also help reduce transport emissions.

## **CLEAN IT**

### **Turning the tide on climate change**

Tidal currents and waves will be harnessed to produce electricity on a commercial scale within the next two years. The Carbon Trust estimates that this type of power has the potential to supply up to 20% of UK electricity

### **Blowing away climate change**

Britain is the windiest country in Europe. And it blows at the times when we need the most energy – during peak daytime periods and in the winter. This means wind turbines could easily be our most dependable energy resources. And it's cheap too. Offshore winds are even stronger and more uniform than on land, meaning the output could be 25 per cent greater. Already hundreds of turbines are being built or planned off our coasts.

### **Getting fired up about climate change**

Burning plant and animal matter (biomass) could save enough electricity to do away with more than four nuclear plants.

### **Homing in on climate change**

So-called microgeneration is getting cheaper and better. Lots of the industrial scale technologies are being quickly adapted to fit the average semi-detached house. As well as your own turbine, solar panels or watermill (if you have a stream), waste heat from the domestic boiler can be recycled (combined heat and power); the heat stored in the Earth can be used to heat new homes, and good old fashioned wood (and other natural stuff) can be burned in modern efficient stoves.

### **World class ideas**

Energy gurus are looking at building massive solar power plants in the Sahara to produce electricity to export to Europe and beyond. Much of this electricity would be used in Southern and central Europe, to reduce losses during transmission, but experts think there could be so much electricity produced of it could be exported to Britain.