Energy and climate change
Climate Change Bill becomes law

Throughout this booklet we refer to our climate change campaign, The Big Ask.

It took an action-packed 42 months to win, but with the support of hundreds of thousands of people across the UK, Friends of the Earth's Big Ask made the Government listen to sense and pass a strong climate change law.

It's a world first. The groundbreaking new legislation will not only help us play our part in keeping global temperatures below danger levels, it should also move forward international efforts to tackle climate change.

In short the law does everything we campaigned for through The Big Ask:

• it commits the UK to cutting its emissions by 80 per cent by 2050,
• It covers all UK greenhouse gas emissions, including our share from international aviation and shipping.
• It sets up a process to ensure the Government makes steady progress on delivering these long-term targets.

The climate change law is a huge step forward but there is still a lot to be done. Friends the Earth will be working hard to ensure the Government shapes Britain into a thriving low-carbon economy. And we’ll be pushing for a strong and fair international agreement to tackle climate change.

We can only do it with the help of people like you. Please sign up to Climate Online (www.foe.co.uk/climateonline) to get monthly news plus easy ways to put pressure on the right people at the right time.

If you do not have internet access call our Supporter Information Team on 020 7490 1555 and ask for print-outs.
What can we do about climate change?
The biggest challenge facing humanity

The blanket of gases that keeps our planet warm is getting thicker. This is because when we burn fossil fuels and cut down trees we add greenhouse gases to the atmosphere that trap the sun’s heat. More heat means more unpredictable weather and other big changes for life on Earth.

When we burn fossil fuels – oil, coal and natural gas – to make electricity, heat our homes and offices, cook, or power our cars, the main greenhouse gas carbon dioxide (CO₂) is released. Once released CO₂ can stay in the atmosphere for up to 200 years, heating up the planet. The latest science from the Intergovernmental Panel on Climate Change (IPCC) – an independent global climate body – says most of the warming in the past 50 years has been caused by humans. It predicts a temperature rise of up to 6ºC by the end of the century. This means dangerous climate change, which we won’t be able to avoid unless we act soon.

The Kyoto Protocol, which became law in 2005, sets limits on the emissions of greenhouse gases from rich, developed countries like the UK. Many countries have signed up to the Protocol, but not the world’s biggest emitter, the US.

The UK is important in the EU which means it could play an historic role in leading global efforts to tackle climate change. Friends of the Earth wants laws passed that ensure the UK makes at least a 3 per cent cut in CO₂ emissions each year.

This booklet shows why prompt action is vital to avoid dangerous climate change. Find out more by joining Friends of the Earth’s Big Ask (see page 10).

Did you know?

The Prime Minister Tony Blair said in 2004: “I believe that long-term threat to the stability of the planet comes from climate change.”

“The UK has the power to urge people to reduce emissions. But we fear that if London is not drowning the UK will not do anything.” Armely Maeiviana, Indonesia

The world’s 16,000 commercial jet aircraft produce more than 700 million tonnes of CO₂ every year, nearly as much as the whole of Africa.

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Domestic energy
How do you get around?
Better public transport and investment in cleaner fuels could help cut road traffic emissions. We also need to rethink planning rules so that people can travel from home to office to shops without having to make so many car trips.

A three-fold rise in aeroplane passenger numbers is forecast over the next 30 years but if Government taxed aviation fuel (just as they do other fuels) it would cut the surge in short-haul air travel and reduce the amount of goods and food being flown around the world.

Fossil fools or pioneers?
We need to replace fossil fuels with clean alternatives. Making companies pay for the emissions they make is one way of encouraging this transformation.

We could also cut our wasteful use of natural and man-made resources by buying less, re-using more and recycling.

Are you house-proud?
Home improvements (from draft excluders to loft and wall insulation) can help plug leaks. Buying green electricity from renewable sources and cutting our energy use could make a huge difference.

Solar water heating is a cost-effective renewable technology, as are south-facing windows and conservatories.

*UK carbon dioxide emissions by end user 1970-2003
(note figures do not add up to 100 per cent, remaining category is “other”)
Defra, www.defra.gov.uk
Climate change cannot be written off as just another day of weird weather. It is the most serious threat facing people and the environment on which we all depend. Global warming, rising sea levels, widespread flooding, droughts and the spread of tropical diseases are already having a devastating impact. The poorer you are, the more likely you are to suffer from the effects of climate change.

Yet it is the poorest people, living in the countries that are least responsible for emissions of greenhouse gases, who are set to suffer most. Future generations may well puzzle why we knew about the problem but still didn’t take steps to tackle it.

Even extracting fossil fuels can have devastating impacts on communities. A new oil pipeline built from Baku in Azerbaijan to Ceyhan in Turkey runs through sensitive environments and has displaced communities in its path. In Nigeria women are fed up with gas flaring from the oil fields which they fear is damaging their own, and their children’s health. In the oil-rich Middle East the past decade has seen several bloody conflicts as customers and leaders jostle for control.

**Climate justice** recognise this. It is about taking into account each country’s historical contribution to climate change, their capacity to act and their stated commitment to sustainable development.

**Rich countries, like the UK and other G8 nations, are responsible for the majority of CO₂ emissions released over the past 200 years, so they must take a lead in cutting emissions.**
Climate change respects no boundaries: sea level rise threatens coastal cities and changes in weather patterns will affect farming and natural habitats. Already 4 million homes are at risk from flooding in England and Wales. For people, like the Vietnamese families above who can’t get insurance, or have nowhere else to go, climate change is a disaster.
There are two ways we can get a grip on CO₂ emissions. The best approach is to make a steady, achievable cut every year. The alternative is to wait until we have no choice but to do something, and then make drastic cuts – which may turn out to be too little, too late. It’s like choosing a gentle path down a slope or going over a precipice.

1 Rich countries like the UK need to take control of their CO₂ emissions so they can guarantee year-on-year cuts from now on. Friends of the Earth wants this to be a legal obligation (see The Big Ask on page 10). Nuclear power may have virtually no CO₂ emissions but is far more expensive than cleaner alternatives, has unresolved waste problems and poses a security threat.

2 Managing our carbon emissions annually – in the same way we manage our economy – makes good sense for the environment and for business. In 2006 research carried out on behalf of The Co-operative Bank in partnership with Friends of the Earth looked at how the UK could stay within a carbon budget to ensure we’re playing our part in tackling emissions. The research showed we can cut our CO₂ emissions year-on-year with a mix of energy-saving measures, clean and safe energy sources and improvements in industry. Daily life doesn’t need to be radically different. What will change is how energy efficient our lives are, and where we get our power from.

If rich countries like the UK start to use carbon budgets and make other changes, such as improved energy efficiency, it will send a strong signal that we are serious about climate change and determined to work together with the rest of the world to find solutions.
Thinking differently: this is a solar PV roof which generates enough electricity for the owner to sell it back to the National Grid. At least 250,000 new jobs could be created if the Government invested in energy efficiency, renewable energy and clean technologies.
Friends of the Earth’s research shows that the Government needs to reduce the UK’s emissions of carbon dioxide (CO₂) by at least 3 per cent a year. Signing up to the Kyoto Protocol shows that the Government recognises the UK’s historic role in producing much of the CO₂ in the atmosphere. Over the next few years, some countries will need to reduce their emissions, while some poorer countries may need to increase their emissions as they modernise.

Individuals can make energy-efficient changes at home (see page 11) but it is the Government that has real muscle. The problem is that there are political obstacles to action. Many politicians are reluctant to take long-term decisions if it might jeopardise their election chances. They aren’t used to solving global problems, and they can be swayed by those with vested interests in polluting businesses. But if we don’t act now and our planet does heat up by up to 6°C, the impact on wildlife and people will be immense. This means that the Government must ensure CO₂ emission cuts are made across the whole economy. Key principles include:

1 **Our environment has limits.** If we keep on using the planet as we are now, then we’ll need eight.

2 **Everyone needs to do something.** Especially the energy, housing and transport sectors.

3 **Social impacts must not be forgotten.** If domestic fuel prices rise, Government needs to prevent this hurting the poorest and most vulnerable people.

With the right investment we could get more than half our energy from clean, renewable sources by 2050. Making these changes will bring new jobs too.

**The key to solving climate change will be policies that respect the natural world’s limits and are fair.**
Make some noise: 25,000 people, including Friends of the Earth supporters, gathered in Trafalgar Square on 4 November 2006 to shout for a law to bring emissions down. Now turn over the page to find out how you can add your voice.
Join The Big Ask

What you can do to combat climate change

Friends of the Earth’s Big Ask campaign helps people who are worried about climate change to ask questions and take action. The Big Ask wants decisive action from the UK Government that will make us world leaders in tackling climate change and inspire other countries to act. That’s why we’re calling for a law with annual targets to reduce the UK’s CO₂ emissions.

The Big Ask is working. Responding to overwhelming pressure, the Government announced plans for a climate change law in November 2006.

Now we need to make sure this law will be strong enough to make a real difference. It should:

1 Deliver emissions cuts of at least 3 per cent a year so that the UK does its fair share to prevent dangerous climate change.

2 Introduce an annual carbon budget and report on progress.

3 Make sure Government Ministers take action if emissions go off track.

If you’re keen to help out, join Climate Online. We’ll give you the news, views, stories and stats on The Big Ask every month. We’ll also make it easy for you to put pressure on the right people at the right time. Sign up now at www.foe.co.uk/climateonline

Did you know?

In just over a year, business leaders, celebrities and more than 130,000 members of the public backed The Big Ask, and over 400 MPs supported our Climate Change Bill.

“It’s good to get involved with something that’s constructive, rather than falling into the trap of thinking there’s nothing you can do about climate change.” Thom Yorke, Radiohead frontman

“Cutting CO₂ emissions will help to solve many social problems. Think of better access to public transport, regeneration of urban centres, limited night flights and an end to fuel poverty for vulnerable households.” Tony Juniper, Friends of the Earth’s Executive Director

If you do not have internet access call our Supporter Information Team on 020 7490 1555 and ask for print-outs from www.thebigask.com
Save cash & save the planet
Make The Big Ask, then sort out your home

When it comes to controlling climate change, the Government can make the most significant changes – but most of us can reduce our own CO₂ emissions too. Often this is more about changing habits than spending more cash.

Start at home Go to www.est.org.uk/myhome to do a simple home energy audit to help you focus on energy efficiency. Many people can slash their energy bills by a third by improving insulation and switching to A-rated Energy Efficiency Recommended labelled electrical goods.

Shop locally to cut down on food miles for your own car journeys and produce (eg out of season fruit and veg flown into the UK). Local Friends of the Earth groups will be able to help you find nearby markets, farmers’ markets, farm shops and organic veg box schemes. To find your nearest group see http://community.foe.co.uk.

If you have to drive look at www.est.org.uk/mycar to compare fuel efficiency so you can choose the greenest model. Vary your route to work with the bus, train or even car sharing with colleagues, see www.liftshare.org. Before you buy a second car see if your nearest car club would meet your needs at www.carplus.org.uk.

Better school runs Find out if your school has a School Travel Plan so pupils, staff and parents/carers can find ways to get more children walking/cycling safely to and from school. This may result in a change to start/end times so children can use more buses, or start a walking school bus or cycle train to escort kids on foot.

Rethink plane trips Taking the plane for short flights that could be done by train is a false economy as aviation is a growing contributor to climate change.
For a clean, green future people’s electricity and heat need to come from renewable sources and their homes need to be more energy efficient. People will need to travel more by better public transport, and when they use their car it will be more fuel efficient – and powered by more renewable fuels. We need to make a start now. Here’s how:

1 Time for business to clean up
The energy industry needs to become smarter, and old coal-fired power stations need to be replaced by more efficient power plants. Energy companies need to be focused on making money by helping businesses and individuals reduce their energy use, rather than convincing customers to buy more energy.

For the 60,000 residents of Gotland, Sweden’s largest island, energy efficiency is becoming second nature. To generate power there are 130 wind turbines, hotels use solar panels and the library uses pumps to extract heat from sea water. Gotland’s goal is to become a zero emissions municipality 100 per cent powered by renewable energy by 2025.

2 Power forever, for you
Renewable energy has a long tradition in the UK – from wood burners to water mills. You may already have made your home more energy efficient (with double glazing, insulation and energy efficient goods), but you could go a step further and turn your home into a mini power station – exporting excess energy back to the grid – by installing a micro-CHP (combined heat and power) unit.

Did you know?
We can tap the power of the tides to generate electricity. Turbines harnessing the energy of waves and tidal currents could provide almost 4 per cent of UK electricity by 2020. Successful trials mean they could be up and running in two years.

1 Do you have to use your car for every journey? Walking and cycling are ideal for short journeys.
Since Woking began its energy-efficient, zero-waste strategy in 2002 it has become the country’s most energy-efficient local authority. Easy-to-copy ideas include the country’s first sheltered housing heated and lit by a mix of CHP and solar panels. Even the town’s pay-and-display parking meters are run from solar PV cells that charge up in sunlight, so there are no energy bills.

3 Big ideas
Renewable energy is not just about wind turbines. We can reduce our reliance on fossil fuels by using a mix of energy efficiency; on- and offshore turbines; tidal farms (eg to harness the power of the sea from tidal currents, wave power or tidal lagoons); growing crops on set-aside land for biomass fuels; or carbon capture and storage (CCS) – a process which enables carbon to be locked underground.

Since 1998 Dyfi Valley in Wales has used a combination of hydro, wind, solar thermal, solar electric, wood heat and ground source pump to create 100 per cent renewable electricity supply for the area’s 12,500 people. While the National Botanical Garden of Wales in Llanarthne uses biomass to heat the greenhouse.

Renewable energy offers clean alternatives to dirty fossil fuels and nuclear power.
Friends of the Earth’s climate campaign

Here’s how we are working towards truly sustainable future

Friends of the Earth has a vision for a new era of energy efficiency and investment in green energy:

**UK could be a leader**
With the Kyoto Protocol we have an international climate agreement to limit our emissions of greenhouse gases. We need the UK to show leadership by convincing the global community it needs to take action on climate change, and showing them how. We also need to get a head start in low carbon and energy efficient processes.

**Make Britain keep its promise**
We are holding the UK Government to its promise to cut CO₂ emissions by 20 per cent by 2010 – and 60 per cent by 2050. To do this Government needs to pass a law that will make emissions cuts of at least 3 per cent each year a legal obligation. For more information on how to help go to www.thebigask.com.

**Meeting renewable energy targets**
Government needs to support inventive low carbon solutions such as renewable heat and transport fuels – and not go down the nuclear route. We will work with regional and local groups to promote renewable energy and energy demand reduction to help meet these targets. We want public subsidy of fossil fuels to be phased out.

**Fair tax for aviation and better transport choices**
The aviation industry should cover the real cost of the damage they cause to the environment by paying fair taxes. Expanding airports will mean a greater contribution to climate change. We also want to see high quality, sustainable transport choices that work for people, communities and the environment.

**Climate justice**
We will work with directly affected communities overseas and in the UK.

Contact Friends of the Earth for more information about our work on climate change and The Big Ask campaign, as well as for information about how to join us.

Full campaign information, briefings and reports are at www.foe.co.uk/campaigns/climate. Also see www.thebigask.com.
Energy and climate change directory

Do a home energy audit at www.est.org.uk/myhome to find out ways to keep your home warm and cut your use of dirty fossil fuels.

Measure your CO₂ emissions with a handy calculator at www.nef.org.uk/energyadvice/co2calculator.htm

**British Wind Energy Association**
Renewable Energy House
1 Aztec Row, Berners Road
London, N1 0PW
Tel: 020 7689 1960
www.bwea.com

**British Hydropower Association**
Unit 12 Riverside Park, Station Road, Wimborne, Dorset, BH21 1QU
Tel: 01202 880333
www.british-hydro.org

**Centre for Alternative Technology**
Machynlleth, Powys SY20 9AZ
Tel: 01654 705950
www.cat.org.uk

**Centre for Sustainable Energy**
The CREATE Centre
Smeaton Road
Bristol BS1 6XN
Tel: 0117 929 9950
www.cse.org.uk

**Climate Ark**
Climate change, renewable energy and conservation network
www.climateark.org

**COIN**
Climate outreach and information network
16B Cherwell Street
Oxford, OX4 1BG
Tel: 01865 727911
www.coinet.org.uk

**Energy Saving Trust (EST) England**
21 Dartmouth Street
London SW1H 9BP
Tel: 020 7222 0101
Tel: 0800 512 012
(energy efficiency advice for homeowners)
www.est.org.uk

**EST Scotland**
112/2 Commercial Street
Leith, Edinburgh EH6 6NF
Tel: 0131 555 7900

**EST Wales**
Albion House,
Oxford Street, Nantgarw,
Cardiff CF15 7TR
Tel: 01443 845930

**EST Northern Ireland**
Enterprise House,
55/59 Adelaide Street, Belfast
BT2 8FE
Tel: 028 9072 6006

**Friends of the Earth England, Wales & Northern Ireland**
Tel: 020 7490 1555
www.foe.co.uk

**Friends of the Earth Scotland**
Lamb’s House, Burgess Street
Edinburgh, EH6 6RD
Tel: 0131 554 9977
www.foe-scotland.org.uk

**Intergovernmental Panel on Climate Change (IPCC)**
IPCC Secretariat, c/o World Meteorological Organization
7 bis Avenue de la Paix, CP 2300
CH-1211 Geneva 2, Switzerland
Tel: +41-22-730-8208
www.ipcc.ch

**Local Energy Advice Centres**
For local advice about energy efficiency in your home
Tel: 0800 512012

**LILI Environmental Systems**
Useful courses for self-build solar installations
Redfield Community,
Buckingham Road
Winslow, Bucks, MK18 3LZ
Tel: 01296 714184
www.lowimpact.org

**National Energy Foundation**
Renewable energy for home and schools
Davy Avenue, Knowlhill
Milton Keynes, MK5 8NG
Tel: 01908 665555
www.natenergy.org.uk
and home to these trade groups:
Solar Trade Association: www.solartradeassociation.org.uk
British Photovoltaic Association: www.pv-uk.org.uk
Ground Source Heat Pump Club: www.gshp.org.uk
British Pellet Club: www.british-pellet-club.org.uk

**OneWorld.net**
News, campaigns and jobs covering human rights and sustainable development
www.oneworld.net

**Renewable Energy Association**
17 Waterloo Place
London, SW1Y 4AR
www.r-p-a.org
Friends of the Earth makes life better for people by inspiring solutions to environmental problems

Friends of the Earth is:

- the UK’s most influential national environmental campaigning organisation
- the most extensive environmental network in the world, with around 1 million supporters across five continents and more than 70 national organisations worldwide
- a unique network of campaigning local groups, working in more than 200 communities throughout England, Wales and Northern Ireland
- dependent on individuals for over 90 per cent of its income.