

**JANUARY 2014**

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**COAL &  
CLIMATE  
CHANGE**

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**ROB LYONS**



DEBATING MATTERS  
**TOPIC  
GUIDES**

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**MOTION:**

**“WESTERN COUNTRIES  
SHOULD NOT  
ENCOURAGE COAL-FIRED  
POWER STATIONS IN THE  
DEVELOPING WORLD”**

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# CONTENTS

**Introduction**

**Key terms**

**The coal and climate change debate in context**

**Essential reading**

**Backgrounders**

**Organisations**

**In the news**

# INTRODUCTION

1 of 6

# NOTES

1  
1  
2  
4  
5  
5  
6

In 2013, the World Bank - along with two of its leading members, the US and the UK - stated it will no longer, except in 'rare circumstances', provide funding for coal-fired power stations. [Ref: [Reuters](#)]. The Bank argues that the problem of climate change is now so serious that funding coal-fired stations should only be a last resort. Keeping greenhouse-gas emissions low enough to prevent a serious rise in global temperatures over the next century is already a major challenge. [Ref: [Carbon Brief](#)]. Coal is the most polluting form of fossil fuel [Ref: [US Energy Information Administration](#)], so if more coal-burning plants are built, meeting climate targets will become even harder [Ref: [AFP](#)]. However, electricity produced from coal is cheap and reliable, and developing countries have consequently employed coal widely. In 2012, the World Resources Institute found that over 1,000 coal-powered plants were being planned, the majority in China and India [Ref: [World Resources Institute](#)]. Even in Europe, often at the forefront of calls for action on climate change, coal-fired power stations are making a comeback where "The amount of electricity generated from coal is rising at annualised rates of as much as 50% in some European countries" [Ref: [Economist](#)]. So which goal should take priority: tackling climate change or providing cheap electricity to allow economic development? One possible solution would be a technology called 'carbon capture and storage', which would take the carbon dioxide emitted from fossil-fuel burning power stations and bury it out of harm's way [Ref: [British Geological Survey](#)]. But the technology is a long way from being ready to use in practice [Ref: [Scientific American](#)]. Can developing countries afford to wait? Or are the problems created by climate change so serious that they must be confronted, even at the cost of slowing down economic development?

## KEY TERMS

- [CCS](#)
- [Coal](#)
- [Greenhouse gas emissions](#)



## The Climate change

Since the late 1980s, the issue of global warming has been high on the political agenda. In 1988, Dr James Hansen of NASA gave dramatic testimony to a US Senate committee, stating that the world was warmer than at any time since records began, the cause was the greenhouse effect and that the result would be more extreme weather events [Ref: [Guardian](#)]. In the same year, the Intergovernmental Panel on Climate Change (IPCC) was created to advise governments on the possible scale and consequences of global warming. In 1989, the then UK prime minister, Margaret Thatcher, told the Conservative Party conference that Britain would take a global lead in tackling climate change. [Ref: [YouTube](#)]. In 1992, a United Nations conference in Rio de Janeiro agreed the Framework Convention on Climate Change, which led to the Kyoto Protocol in 1997, where industrialised countries agreed to binding limits on greenhouse gas emissions [Ref: [UNFCCC](#)]. The IPCC has produced five assessment reports. The latest was launched publicly in September 2013. The Summary for Policymakers states: “Warming of the climate system is unequivocal, and since the 1950s, many of the observed changes are unprecedented over decades to millennia. The atmosphere and ocean have warmed, the amounts of snow and ice have diminished, sea level has risen, and the concentrations of greenhouse gases have increased.” [Ref: [IPCC](#)]. The Stern Review, published in 2006 by the UK government, states: “Climate change will affect the basic elements of life for people around the world – access to water, food production, health, and the environment. Hundreds of millions of people could suffer hunger, water shortages and coastal flooding as the world warms”. The authors note

that ‘the benefits of strong and early action far outweigh the economic costs of not acting.’ [Ref: [Stern Review](#)]. But a global deal has proved hard to agree because many developing countries are using more and more fossil fuels to power their growing economies. Now that the Kyoto Protocol has expired, attempts to agree a new international agreement – most recently in climate talks in Warsaw, Poland in November 2013 – have faltered, primarily on the issue of how much developing countries should be allowed to continue to expand their carbon emissions [Ref: [Economist](#)].

## Economic development

A number of countries in the developing world have seen dramatic rates of economic growth in the past 20 years. For example, China has seen its economic output grow by about 10 per cent per year over this period [Ref: [World Bank](#)]. While India’s economy has grown more slowly, it is now one of the largest in the world, and growing much faster than Western economies [Ref: [CNN](#)]. Yet even these fast-developing countries remain poor. According to figures from the International Monetary Fund, China is just 93rd in a list of economies by output per head; India is 133rd [Ref: [Wikipedia](#)]. By contrast, the UK’s output per head is four times higher than China’s, and nine times higher than India’s. These fast-developing countries therefore still have a long way to go in order to achieve the standard of living of people in the West. In order to do that, they need to produce vast quantities of electricity as cheaply and reliably as possible. Electricity from coal costs just one-third as much from renewables like solar and wind. As a result, China and India plan to build over 200 new coal-fired plants by 2016 [Ref:



New York Times].

### South Africa controversy and a change of policy

The debate about whether Western institutions should help finance coal-fired power stations reached global attention with the proposal for the massive Medupi plant, which will be three times larger than the UK's largest coal-fired station and emit 25million tonnes of carbon dioxide per year [Ref: Guardian]. The World Bank agreed to provide a loan of \$3.75 billion for the project. After much controversy, the US, UK, Netherlands, Italy and Norway all abstained when the vote was taken, but the loan was approved [Ref: Guardian]. In June 2013, the US president, Barack Obama, announced restrictions on support for coal-fired plants [Ref: Washington Post]. The following month, the World Bank announced followed suit. At the Warsaw talks in November, the UK energy secretary, Ed Davey, announced UK government would not support coal-fired power stations [Ref: Guardian]. What is at stake in this debate is how much poorer countries should be allowed to develop using the cheapest and most convenient fuels. Using renewable sources of power is more expensive and the supply of electricity is less reliable. Should people remain poor for longer because climate change is an even bigger problem than poverty? Or is poverty such a crisis right now that development must push ahead, even if it creates problems in the future?



## ESSENTIAL READING

4 of 6

NOTES

Thinking through when the World Bank should fund coal projects  
Scott Morris and Billy Pizer *Center for Global Development*  
July 2013

### FOR

New Eskom power plant defies carbon cut pledge  
*Mail & Guardian (South Africa)* 27 September 2013

The heat is on for change: coal  
David Shearman *Australian* 10 July 2010

The great global coal rush puts us on the fast track to irreversible disaster  
John Harris *Guardian* 30 August 2007

Coal  
*Greenpeace International*

### AGAINST

We must accept trade-offs in order to improve the lives of the poor  
Bjorn Lomborg *Daily Star (Lebanon)* 21 December 2013

Mission Possible: An Environmentalist Looks at Coal and Climate  
Armond Cohen *Cornerstone* 21 May 2013

Why coal is the best way to power South Africa's growth  
Pravin Gordhan *Washington Post* 22 March 2010

Like it or not, coal is vital to Asia's growth  
James Woudhuysen *spiked* 12 September 2007

## ORGANISATIONS

- British Geological Survey
- Greenpeace International
- IPCC
- The World Bank
- U.S Energy Information Administration
- World Coal Association



## BACKGROUNDERS

5 of 6

## NOTES

UN's war on coal threatens environmental progress in world's desperate regions

Donna Laframboise *Financial Post* 3 December 2013

Another shabby Warsaw Pact

*Economist* 28 November 2013

2013 emissions edge the world closer to 2 degrees

Freya Roberts *Carbon Brief* 19 November 2013

The U.S. will stop financing coal plants abroad. That's a huge shift

Brad Plumer *Washington Post* 27 June 2013

The unwelcome renaissance

*Economist* 5 January 2013

World Energy Outlook 2013

*International Energy Agency* 2013

Climate Change 2013: The Physical Science Basis

*IPCC* 2013

New Global Assessment Reveals Nearly 1,200 Proposed Coal-Fired Power Plants

Ailun Yang *World Resources Institute* 20 November 2012

With China and India Ravenous for Energy, Coal's Future Seems

Assured

*New York Times* 12 November 2012

Critical Carbon-Capture Technology Stalled

David Biello *Scientific American* 16 October 2012

Europe's return to coal

*Wall Street Journal* 18 May 2012

Money for India's 'Ultra Mega' Coal Plants Approved

Andrew C. Revkin *New York Times* 9 April 2008

The Greenhouse Effect: Impacts on Current Global Temperature and Heatwaves

Statement of James E. Hansen to US Senate Committee on Energy and Natural Resources *Guardian* 23 June 1988

List of countries by GDP (PPP) per capita

*Wikipedia*

World's largest economies

*CNN*

China Overview

*The World Bank*

Stern Review: The Economics of Climate Change

*HM Government*

Background on the UNFCCC: The international response to

climate change

*UNFCCC*

Margaret Thatcher on Global Warming

*YouTube*

Introduction to carbon capture and storage (CCS)

*British Geological Survey*

FAQ's: How much carbon dioxide (CO<sub>2</sub>) is produced when

different fuels are burned?

*U.S Energy Information Administration*



## IN THE NEWS

6 of 6

NOTES

UK: no new funding for coal-fired power stations abroad  
*Guardian* 20 January 2014

China says coal addiction makes climate change fight hard  
*AFP* 29 October 2008

Green dream on ice as 'coal frenzy' grips Europe and renewables lose their attraction  
*Australian* 11 January 2014

Coal industry accuses UN climate chief of ignoring reality  
*Guardian* 2 December 2013

UK to end funding of coal-fired power stations  
*Guardian* 20 November 2013

U.S. Says It Won't Back New International Coal-Fired Power Plants  
*New York Times* 29 October 2013

IPCC climate report: humans 'dominant cause' of warming  
*BBC News* 27 September 2013

World Bank to stop funding coal-fired power stations in developing countries  
*ABC* 17 July 2013

World Bank to limit financing of coal-fired plants  
*Reuters* 16 July 2013

More than 1,000 new coal plants planned worldwide, figures show  
*Guardian* 20 November 2012

World Bank's \$3.75bn coal plant loan defies environment criticism  
*Guardian* 9 April 2010

Britain has key vote on World Bank loan to Medupi power station  
*Guardian* 1 April 2010





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