

AUGUST 2011

**NUCLEAR
POWER**

TONY GILLAND



DEBATING MATTERS
TOPIC
GUIDES

www.debatingmatters.com

MOTION:

**“AFTER FUKUSHIMA,
WE SHOULD
ABANDON NUCLEAR
POWER”**

CONTENTS

Introduction

Key terms

The nuclear power debate in context

Essential reading

Backgrounders

FILMCLUB recommends

Organisations

In the news

KEY TERMS

Greenhouse gas

Richter magnitude scale

INTRODUCTION

1 of 6

NOTES

1
1
2
4
5
5
5
6

On 11 March 2011, Japan was hit by a huge earthquake, measured at 9.0 on the Richter magnitude scale [Ref: [USGS](#)]. The earthquake triggered massive tsunami waves of up to 40.5 metres, one of which crashed into the Fukushima Daiichi nuclear power plant on Japan's eastern coast. These devastating waves caused serious damage to the nuclear plant, including fires and explosions in the reactors, sending panic across the world and reigniting an age-old debate about the relative merits, or otherwise, of nuclear power. In the wake of the disaster, countries including Germany [Ref: [Telegraph](#)] and Italy [Ref: [Wall Street Journal](#)] have announced decisions to discontinue their nuclear-power programmes. Meanwhile, in the UK, the go-ahead has been given to start work on pre-construction of Britain's first new nuclear-power station for 20 years [Ref: [Guardian](#)], leaving Europe divided over where best to source its energy from [Ref: [Guardian](#)]. So, should the disaster at Fukushima, and others like it over the years, force us to take a step back and consider whether such a potentially dangerous energy source is worth the risk for the clean energy it provides [Ref: [BBC News](#)]? Might other sources of energy, such as renewables or shale gas, be a better investment long term? Or would abandoning nuclear at this stage be an over-reaction to what is still a relatively minor accident? If we were to abandon nuclear, how would we meet demand for our ever-increasing energy needs?



Is nuclear worth the risk?

Many have long been concerned about the safety of nuclear power, and feel that the recent disaster in Japan once again highlights the dangers associated with this method of producing energy. As a consequence, there has been a backlash against nuclear power with many claiming that enough is enough, and that now is the time to end our relationship with nuclear power for good [Ref: [New Statesman](#)]. They argue that there are far less risky ways to produce energy given that we now have an increasing choice of new renewable energies at our fingertips, which supporters argue could produce plentiful clean and safe energy if the correct investments were made. Additionally, new advances in technologies such as shale gas could potentially produce a new source of abundant energy, so why continue to pursue nuclear when there are clearly other safer or more 'progressive' options [Ref: [spiked](#)]? But others are not convinced that it is possible to power the country on renewables alone and that nuclear, together with fossil fuels, has to be a part of the mix. In response to the calls for an end to nuclear power, some commentators argue that the reaction to the Fukushima disaster has been seriously overblown [Ref: [New York Times](#)], with cover-ups rampant, doom-ridden predictions rife and figures distorted to fuel anti-nuclear sentiments [Ref: [The Times](#)]. Comparatively speaking, nuclear still remains one of the safest forms of energy, with Three Mile Island, Chernobyl and Fukushima the only three major accidents to have occurred in over 14,500 cumulative reactor-years of commercial operation in 32 countries [Ref: [World Nuclear Association](#)]. Why abandon nuclear when it creates abundant, low-carbon energy with minimal risks simply because of the fear attached to this form of energy?

The response of Germany and Japan

The reaction to the Fukushima disaster has taken different forms around the world, and indeed highlighted how much the debate about the use of nuclear energy has changed in recent years. Where once, it was seen as 'green' to be anti-nuclear and 'anti-green' to be pro-nuclear, the debate about the use of nuclear energy can no longer simply be along these lines, reflecting the complexity of the need to balance world energy demands with the search for new forms of energy production for the future [Ref: [Guardian](#)]. Of particular surprise to many commentators was the reaction both of the Japanese government in the immediate aftermath, but also of one of Europe's biggest producers of nuclear energy, Germany. Whilst Japan was still dealing with the disaster, amid increasing accusations of safety cover-ups and incompetence in its aftermath, its prime minister Naoto Kan announced that he wanted to pursue a programme of phasing out the nation's nuclear-power stations and ending reliance on nuclear energy. Given the crisis Japan was dealing with this is perhaps less surprising than the swift reaction of the German government, which also announced plans to phase out the use of nuclear energy, an apparent reversal of its previously stated position [Ref: [Telegraph](#)]. Apparently fearful of a public backlash against nuclear energy and the sense that it's fundamentally unsafe, both the German and Japanese governments appeared to lack the will to make the case for nuclear, and in turn led commentators to suggest both countries will be left with huge problems in the future regarding their energy production and consumption, and whilst new technologies are developed an increase in the use of coal-fired power stations would be the only way to meet current, never



mind future levels, of energy use in those countries.

What's the future for nuclear?

As the global population grows and developing countries become wealthier, our need for energy is increasing daily. Many argue that at present the only really viable option for meeting this demand is to exploit every energy source available to us, including nuclear [Ref: [Guardian](#)]. They see no reason why we can't continue to explore renewable energy whilst at the same time pursuing nuclear to provide for our current energy needs. Some go further still, stating that nuclear power is essential for the UK's future [Ref: [Nuclear Industry Association](#)] and argue that renewable energy is expensive, intermittent and unreliable [Ref: [Telegraph](#)]. However, some are sceptical as to whether nuclear power really does create abundant energy, and point to the fact that the UK currently only relies on nuclear for 20% of its energy, which could be replaced by renewable technologies like wind, solar, wave and geothermal power or slightly lower-carbon fuels like gas. Others feel that supporting nuclear goes against contemporary environmental concerns, and go as far as arguing that we should be cutting back our energy consumption altogether, rather than making compromises about how we produce it. If the reaction to Fukushima shows that we are still fearful of nuclear technology, should we accept public fear or make the case for nuclear as a relatively safe, abundant and clean fuel that can meet the world's needs? Or should we accept that the risk of a serious nuclear disaster, like Chernobyl or worse, is too great for us to contemplate as a society?



ESSENTIAL READING

Unsure about nuclear power? Here's the five questions you must answer to decide

Damian Carrington *Guardian* 21 April 2011

Britain's nuclear confidence goes into meltdown

Charles Clover *The Sunday Times* 20 March 2011

Uncertainty surrounds Japan's nuclear picture

Richard Black *BBC News* 12 March 2011

FOR

Why the UK must choose renewables over nuclear: an answer to Monbiot

Jonathon Porritt *Guardian* 26 July 2011

Germany is right to opt out of nuclear

Ulrich Beck *Guardian* 20 June 2011

Germany can no longer pretend nuclear power is safe

Roland Nelles *Guardian* 14 March 2011

A few good reasons why we should abandon nuclear energy for good

Dr. Éric Notebaert *David Suzuki Foundation* 24 January 2011

Japan nuclear crisis: Seven reasons why we should abandon nuclear power

Paul Josephson *Christian Science Monitor*

4 of 6

NOTES

AGAINST

Geo-engineering, nuclear power and climate change: playing God is good for the planet

Mark Lynas *Telegraph* 12 July 2011

Should Europe abandon nuclear energy after Fukushima?

Péter Zentai *BBJ* 6 May 2011

Yes, Nukes: The tragedy in Japan shouldn't cause us to abandon nuclear power

Bjorn Lomborg *Slate* 13 April 2011

Those nuclear scaremongers are a toxic lot

David Aaranovitch *The Times* 31 March 2011

Why Fukushima made me stop worrying and love nuclear power

George Monbiot *Guardian* 21 March 2011

IN DEPTH

The Government's energy policy leaves everyone in the dark

Jeremy Warner *Telegraph* 6 July 2011

Nuclear vs climate change: the clash of the alarmists

Frank Furedi *spiked* 2 June 2011

Why must UK have to choose between nuclear and renewable energy?

George Monbiot *Guardian* 27 May 2011

Chernobyl 25 years on: learning the lessons of nuclear disaster

Roger Highfield *Telegraph* 26 April 2011



BACKGROUNDERS

Nuclear Power in a post-Fukushima world

The World Nuclear Industry Status Report 2011

Nuclear power is in last place in the race against climate change

Justin McKeating *Greenpeace* 22 July 2011

Germany's trouble with abandoning nuclear power

Isabelle de Pommereau *Christian Science Monitor* 15 July 2011

Energy prices: without reform, we'll all be in the dark

Chris Huhne *Telegraph* 11 July 2011

Shale gas: a welcome energy shock

Rob Lyons *spiked* 5 May 2011

Costs of low-carbon generation technologies

Committee on Climate Change May 2011

Timeline: Nuclear plant accidents

BBC News 12 April 2011

The dangers of nuclear power in light of Fukushima

Mark Lynas and Chris Goodall *Mark Lynas blog* 30 March 2011

Nuclear power plant accidents: listed and ranked since 1952

Simon Rogers *Guardian* 18 March 2011

What we know, and don't know, about Japan's reactors

David L Chandler *Massachusetts Institute of Technology* 16

March 2011

Is Nuclear Power Safe?

How it Works 15 March 2011

Japan's crisis and the anti-nuclear backlash

George Eaton *New Statesman* 15 March 2011

Why greens must learn to love nuclear power

Mark Lynas *New Statesman* 18 September 2008

5 of 6

NOTES

Public Risk Perceptions, Climate Change and Reframing of UK

Energy Policy

ESRC 2006

Nuclear power - the problems

Greenpeace

FILMCLUB

RECOMMENDS:

• 'The China Syndrome' (PG), 1979

• 'Into Eternity' (12), 2010

• Find out more about our partnership with the education charity

• FILMCLUB, how you can bring the power of films into your school

• debates, and this autumn's recommendations from the FILMCLUB

• team for Debating Matters!

ORGANISATIONS

• Greenpeace International

• No2Nuclear Power

• UKERC

• World Nuclear Association



IN THE NEWS

UK Windpower targets are 'unfeasible'

Telegraph 13 August 2011

Hinkley C nuclear power station gets green light for preparatory work

Guardian 29 July 2011

Japan crisis will not end nuclear age

BBC News 26 July 2011

British Government officials 'sought to play down Fukushima', emails suggest

Telegraph 1 July 2011

Italians Vote to Abandon Nuclear Energy

Wall Street Journal 14 June 2011

Germany to shut all nuclear reactors by 2022

Telegraph 30 May 2011

Germany Nuclear Power Plants To Be Entirely Shut Down By 2022

Huffington Post 30 May 2011

Nuclear power loses its appeal after Japan crisis

Guardian 29 May 2011

Europe divided over nuclear power after Fukushima disaster

Guardian 25 May 2011

Japan will not abandon nuclear power despite crisis

Telegraph 8 May 2011

Drumbeat of Nuclear Fallout Fear Doesn't Resound With Experts

New York Times 2 May 2011

Can Nuclear Power Be Safe?

Wall Street Journal 23 March 2011

Japan: Nuclear panic is 'over-reaction' say scientists

Channel 4 News 17 March 2011

6 of 6

NOTES



ABOUT DEBATING MATTERS

Debating Matters because ideas matter. This is the premise of the Institute of Ideas & Pfizer Debating Matters Competition for sixth form students which emphasises substance, not just style, and the importance of taking ideas seriously. Debating Matters presents schools with an innovative and engaging approach to debating, where the real-world debates and a challenging format, including panel judges who engage with the students, appeal to students from a wide range of backgrounds, including schools with a long tradition of debating and those with none.

DEBATING MATTERS
**TOPIC
GUIDES**

www.debatingmatters.com

FIND OUT MORE

Debating Matters engages a wide range of individuals, from the students who take part in the debates, the diverse group of professionals who judge for us, the teachers who train and support their debaters, and the young people who go on to become Debating Matters Alumni after school and help us to continue to expand and develop the competition. If you enjoyed using this Topic Guide, and are interested in finding out more about Debating Matters and how you can be involved, please complete this form and return it to us at the address below.

Debating Matters Competition
Academy of Ideas Ltd
Signet House
49-51 Farringdon Road
London
EC1M 3JP

- Yes, I'd like to know more. Please send me further information about the Debating Matters Competition:
- I am a teacher and would like further details about events in my area and how to enter a team
- I am a sixth form student and would like further details about events in my area
- I am interested in becoming a Debating Matters judge
- I am interested in sponsoring/supporting Debating Matters
- Other (please specify)

First name

Surname

School/company/
organisation

Professional role
(if applicable)

Address

Postcode

Email address

School/work phone

Mobile phone

**“TEENAGE CITIZENS
THINKING DEEPLY
ABOUT...SOCIAL
ISSUES”**

IAN GRANT, CEO, BRITANNICA

**DEBATING MATTERS
TOPIC
GUIDES**

www.debatingmatters.com