

What do we know about public attitudes & public engagement about nuclear?

An un-critiqued list of information sources & examples provided in response to a call out on Twitter

Katherine Mathieson, British Science Association, October 2017
@Kath_Math @BritSciAssoc



European Perceptions of Climate Change (EPCC)

Topline findings of a survey
conducted in four European
countries in 2016

March 2017



EPCC report: UK public is more positive about nuclear power than Norway, France or Germany (2016)

<http://orca.cf.ac.uk/98660/7/EPCC.pdf>



Public Attitudes to Nuclear Power and Climate Change in Britain Two Years after the Fukushima Accident

Synthesis Report

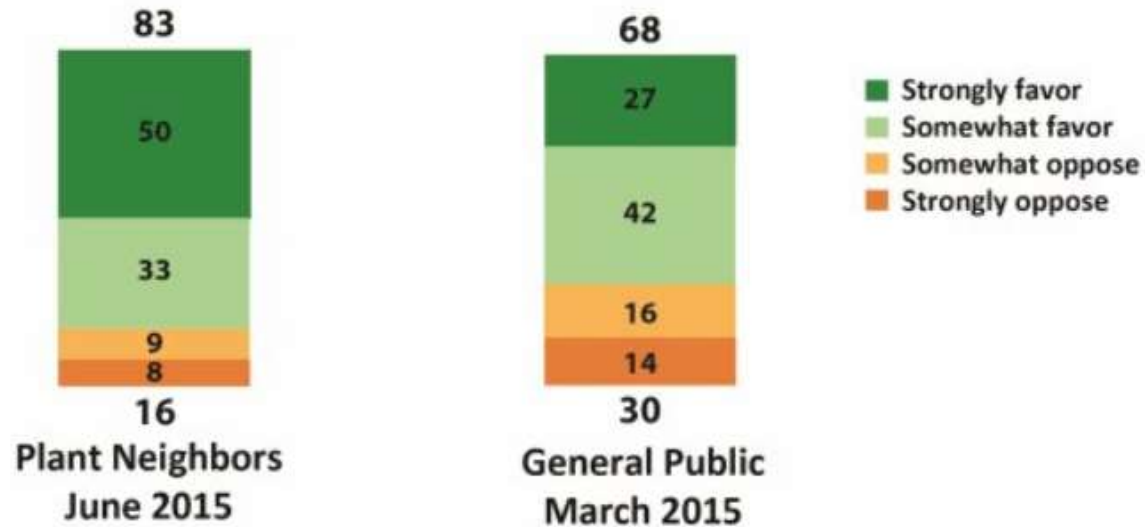
UKERC Report: public
opposition to nuclear power did
not rise in Britain following
Fukushima

<http://www.ukerc.ac.uk/publications/public-attitudes-to-nuclear-power-and-climate-change-in-britain-two-years-after-the-fukushima-accident.html>

[@UKERC](#)

Plant Neighbors More Favorable to Nuclear Energy Than General Public

Overall, do you strongly favor, somewhat favor, somewhat oppose, or strongly oppose the use of nuclear as one of the ways to provide electricity in the United States? (%)



**6th Biennial National Survey of U.S. Nuclear Power Plant Neighbors 2015*

US survey by industry: public who live near a nuclear plant are more positive than general public

<https://www.nei.org/Knowledge-Center/Public-Opinion>

[@NEI](#)

Wave 21 - Nuclear energy

Support and opposition for the use of nuclear energy changes slightly each wave but have remained fairly stable over the course of the tracker. At wave 21 almost four in ten (38%) supported nuclear energy compared with 22% who were opposed. These findings show little change from last year at wave 17, when 38% supported and 23% opposed. Those with an income over £35,000 (48%), male (48%), aged over 55 (48%), and in social grade AB (47%) were the most likely to support the use of nuclear energy. Four in ten (38%) selected the neutral option at this question, to indicate that they neither support nor oppose the use of nuclear energy. Four additional statements on nuclear energy were presented to respondents at wave 21, all of which remained very consistent with the findings at wave 17. These statements focused on whether nuclear energy is seen by the public as reliable, affordable, safe, and good for combatting climate change. Of the four statements, the public were most likely to agree that nuclear energy is a reliable source of energy; 47% agreed with this statement, compared with 14% that disagreed. Respondents were also more likely to agree than disagree with each of the other three statements: whether nuclear energy provides affordable energy for the UK (38% vs. 17%), whether it will help to tackle climate change (36% vs. 20%), and whether it is safe (34% vs. 27%).

Opinion tracker:
Department for
Business, Energy &
Industrial Strategy
periodic public poll

<https://www.gov.uk/government/collections/public-attitudes-tracking-survey>

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Global Environmental Change

Volume 18, Issue 1, February 2008, Pages 69-85



Climate change or nuclear power—No thanks! A quantitative study of public perceptions and risk framing in Britain

Nick F. Pidgeon ^a , Irene Lorenzoni ^b, Wouter Poortinga ^c

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<https://doi.org/10.1016/j.gloenvcha.2007.09.005>

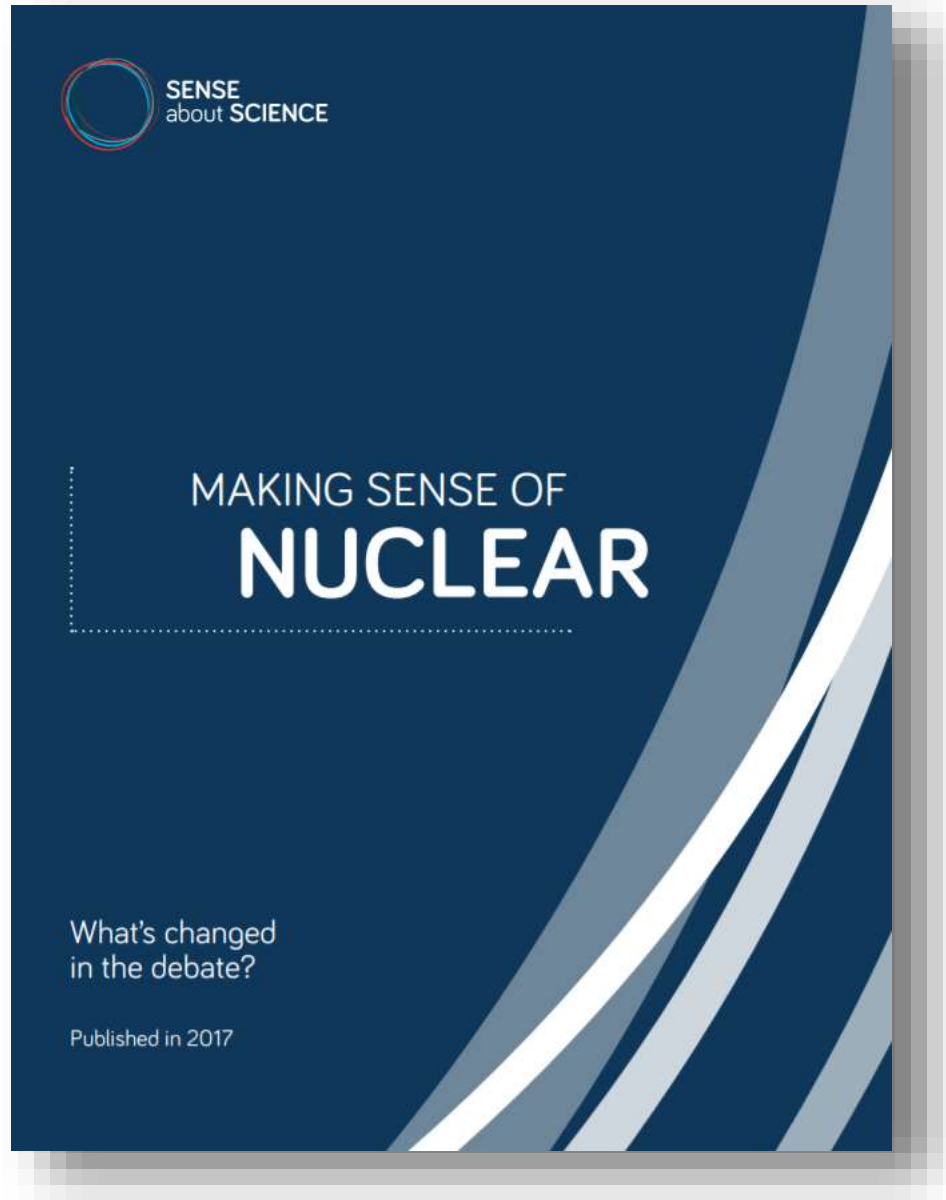
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Abstract

The UK is witnessing a new line in political debate around new nuclear energy generation as one potential feature of future energy policy, specifically for contributing to climate change mitigation alongside energy security. Little is known about how ordinary citizens might be responding to this reframing. This paper reports the results from a major British survey ($n=1491$) undertaken in the autumn of 2005. The consistent message is that while higher proportions of the British public are prepared to accept nuclear power if they believe it contributes to climate change mitigation, this is a highly conditional view, with very few actively preferring this over renewable sources given the choice. People see both climate change and nuclear power as problematic in terms of risks and express only a 'reluctant acceptance' of nuclear power as a 'solution' to climate change. The combined data from this survey can also be interpreted as an indication of the complexity surrounding beliefs about energy futures and the difficulty of undertaking simplistic risk–risk tradeoffs within any single framing of the issues; such as nuclear energy versus climate change. The results also indicate that it would be unwise, in the UK or elsewhere, to simplistically assume that there

2005 data: limited & highly conditional support for nuclear among British public

<http://www.sciencedirect.com/science/article/pii/S0959378007000623>



Report: what has prompted a recent rise in positive attitudes to nuclear? By Sense about Science, funded by nuclear energy organisations, 2017

<http://senseaboutscience.org/wp-content/uploads/2017/06/making-sense-of-nuclear.pdf>

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1824

The University of Manchester
Dalton Nuclear Institute

Public Perception and SMRs

UK in SMR; SMR in UK

Manchester Conference Centre • 25 September 2014



Professor Andrew Sherry FREng
Director of the Dalton Nuclear Institute

Presentation on how to do effective public engagement on nuclear energy – Prof. Andrew Sherry, National Nuclear Laboratory & Manchester University (2014)

http://www.nuclearinst.com/write/MediaUploads/17.20_Andrew_Sherry.pdf

ENYGF
MANCHESTER
2017 

Nuclear and a Low Carbon Energy Market: The need for Social and Economic Innovation

Dr Ben Britton / @bmatb / b.britton@imperial.ac.uk

Deputy Director, Centre for Nuclear Engineering
Director MSc in Advanced Nuclear Engineering
Materials Lecturer & RAEng Research Fellow

Imperial College
London

Centre for Nuclear
Engineering 

Presentation by Dr Ben
Britton at Centre for Nuclear
Engineering – “stop talking
about safety”

<https://drive.google.com/file/d/0BzcVPW0PZrl9eWdkVEdfX3ZhNDQ/view>

[@BMatB](#)

Energy Source	Mortality Rate (deaths/trillionkWhr)	
Coal – global average	100,000	(41% global electricity)
Coal – China	170,000	(75% China's electricity)
Coal – U.S.	10,000	(32% U.S. electricity)
Oil electricity)	36,000	(33% of energy, 8% of electricity)
Natural Gas	4,000	(22% global electricity)
Biofuel/Biomass	24,000	(21% global energy)
Solar (rooftop)	440	(< 1% global electricity)
Wind	150	(2% global electricity)
Hydro – global average	1,400	(16% global electricity)
Hydro – U.S.	5	(6% U.S. electricity)
Nuclear – global average w/Chern&Fukush)	90	(11% global electricity)

Comparing mortality – from Forbes

<https://www.forbes.com/sites/jamesconca/2012/06/10/energys-deathprint-a-price-always-paid/#4c87443e709b>

Secure | <https://www.cnec.group.cam.ac.uk/news/Student-Report>

Science Festival News


Cambridge Nuclear Energy Centre

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last modified Jul 12, 2017 11:46 AM


On March 18th students from the Imperial, Cambridge, and Open (ICO) centre for Doctoral Training in Nuclear Energy cohort had the opportunity to exhibit at Cambridge Science Festival. The theme for this year's festival was 'Getting Personal'.






We were tasked to relate our PhD research and the broader topic of nuclear energy to an exhibit in which the public could relate to the idea of how their electricity is generated and why our research is important for the continuation and improvement of nuclear power production. Planning began in the previous October and took place over the months ahead of the festival, with our many ideas being discussed, and eventually we chose to have a range of sections within the exhibit in order to appeal to the expected broad range of visitors including a couple which were interactive. Our exhibit included a timeline of nuclear energy development in the UK from initial research in the 1950's to the current situation and future plans, a cloud chamber to show radiation that occurs naturally within our environment, a table of everyday household objects including a smoke detector and bananas along with a Geiger counter to measure radiation from these objects, a real-time energy map showing current energy sources and emissions from across Europe, a model spacecraft engine which employs a source of plutonium to produce energy and show an alternative application for fission, and a waste corner with information about nuclear waste and how it is dealt with.



Public festivals: Report from a PhD student at Cambridge Nuclear Energy Centre research team who planned and ran an exhibit at Cambridge Science Festival

<https://www.cnec.group.cam.ac.uk/news/Student-Report>










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New nuclear power stations – reviewing how to engage with members of the public in reactor design assessments (known as the Generic Design Assessment or GDA)
 Sciencewise co-funded project 2014

Introduction

The purpose of this project is to help the Environment Agency, Office for Nuclear Regulation and Natural Resources Wales better understand the needs of members of the public in relation to engagement in the GDA of new nuclear reactor designs, by engaging in a dialogue with members of the public.

[Read more](#)

Project Status

Case study published - March 2016

Evaluation report published - November 2015

Final evaluation of dialogue activities - October 2015

Final evaluation of dialogue activities

Findings on how to engage with members of the public on the design of nuclear reactors

<http://www.sciencewise-erc.org.uk/cms/new-nuclear-power-stations-reviewing-how-to-engage-with-members-of-the-public-in-reactor-design-assessments-known-as-the-generic-design-assessment-or-gda>



Hutson, C., Martin, P., Payne, L., Oughton, N., Wyness, K. E., Smith, D., ... Scott, T. (2017). The Importance and Impact of Public Engagement for the Nuclear Industry. In Waste Management Symposia 2017: Proceedings of a meeting held 5-9 March 2017, Phoenix, Arizona, USA [17602] (WMS Journal; Vol. 2, No. 3). Waste Management Symposia, Inc.

Peer reviewed version

[Link to publication record in Explore Bristol Research](#)
PDF-document

A public engagement programme in south west England

https://research-information.bristol.ac.uk/files/106325353/Final_paper_The_Importance_and_Impact_of_Public_Engagement_for_the_Nuclear_Industry.pdf



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An interview with Nuclear Energy Specialist Professor Robin Grimes

↑ Issue date: 13 August 2013

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📄 Related themes: Energy Engineering LWEC Manufacturing the future Physical Sciences

Professor Robin Grimes is Chief Scientific Advisor to the Foreign and Commonwealth Office and Professor of Materials Physics at Imperial College London. He leads a network of UK academic researchers, supported by the [RCUK Energy Programme](#) (led by [EPSRC](#)), to ensure effective engagement with industry, and national and international nuclear energy groups.

In this audio interview he talks about nuclear fission research, the long term role of nuclear power in the UK's energy future, and perspectives on



Visible specialists:
public interview with
Prof. Robin Grimes,
nuclear energy
specialist

<https://www.epsrc.ac.uk/newsevents/news/robingrimesinterview/.pdf>



Funding criteria: the National Nuclear Laboratory's Corporate Social Responsibility 2015 report lists criteria for selecting public engagement activities for funding

<http://www.nnl.co.uk/media/2024/csr-report-2015.pdf>



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Hinkley Point: Overwhelming majority of British public oppose Theresa May's decision to approve nuclear plant

Findings come amid claims Government has agreed to pay private firm double the wholesale price for electricity

May Bulman | @maybulman | Thursday 15 September 2016 12:49 BST | 8 comments



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Media coverage:
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Third Generation Environmentalism Limited [GB] | <https://www.e3g.org/news/media-room/hinkley-green-light-is-a-massive->



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PRESS RELEASE — 14 September 2016

Hinkley green light is a massive strategic mistake, says climate change think tank



Following reports today that the Government is about to give the green light to the Hinkley Point C nuclear power station, E3G, a leading climate change think tank said it would be a hugely expensive strategic mistake, using expensive 20th century technology that would soon be obsolete.

Campaigning:
Environmental think tank
press release opposes
nuclear power station
decision

<https://www.e3g.org/news/media-room/hinkley-green-light-is-a-massive-strategic-mistake-says-e3g>

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Lady Barbara Judge, CBE
Chair of the Institute of Directors

0:10 / 10:37

Why are people nervous about nuclear? | Barbara Judge

British Science Association

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Dame Barbara Judge, Chair Emeritus of the UK Atomic Energy Authority, talking at the Huxley Summit 2016 about the public engagement work done in the vicinity of Hinckley Point

<https://youtu.be/uIZlvNQEwtk>



HOUSE OF LORDS

Science and Technology Select Committee

3rd Report of Session 2016–17

Nuclear research and technology: Breaking the cycle of indecision

Ordered to be printed 25 April 2017 and published 2 May 2017

Published by the Authority of the House of Lords

Government report: Select committee calls on government to be more decisive

SUMMARY

The undoubted potential of civil nuclear has been blighted by the indecision of successive Governments. Now, within the context of the industrial strategy and amid the challenges of Brexit, it is critical for the Government to set out a decisive future for this industry.

Urgent Government action required

<https://www.parliament.uk/business/committees/committees-a-z/lords-select/science-and-technology-committee/news-parliament-2015/nuclear-research-technology-report-published/>



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Energy Policy

Volume 73, October 2014, Pages 368-390



Risk perception, trust and public engagement in nuclear decision-making in Hong Kong

Daphne Ngar-yin Mah ^{a, b} , Peter Hills ^b, Julia Tao ^c

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<https://doi.org/10.1016/j.enpol.2014.05.019>

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Highlights

- Risk perception, trust and public engagement matter to nuclear decision-making.
- Our logistic regression analysis found that demographics, trust and perception of public engagement are the factors that explain risk perception and nuclear choice in Hong Kong.
- Our conceptual model specifies aspects of trust that are influential.

Energy Policy paper: in HK, government needs to work to build public trust, not leave it to business

<http://www.sciencedirect.com/science/article/pii/S0301421514003000>

Nuclear Energy and Society

A Concordat for Public Engagement



December 2015

Concordat: nuclear industry's
commitment to public engagement
(2015)

<http://www.world-nuclear-news.org/uploadedFiles/wnn/Links/Reports/Nuclear%20Energy%20and%20Society%20-%20A%20Concordat%20for%20Public%20Engagement.pdf>



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For more than 60 years the UK's nuclear industry has worked to keep the lights on. Over that time a number of myths and erroneous claims have been made about the safety, security and suitability of nuclear.

Industry association's
online myth-busting

<https://www.niauk.org/media-centre/myth-busting/>

With thanks to everyone who everyone who made suggestions, including:

Louis Stuppel-Harris ([@LouisSH](#)) & Clio Heslop, British Science Association

Dr Ben Britton, Deputy Director at Centre for Nuclear Engineering,
Director MSc in Advanced Nuclear Engineering, Imperial College London, RAEng Research Fellow, [@BMatB](#)

Sir Roland Jackson, Chair Sciencewise and Visiting Fellow at the Royal Institution of Great Britain, [@Roland_Jackson](#)

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Prof Wouter Poortinga, Professor of Environmental Psychology, Cardiff University [@WouterPoortinga](#)

Alan Mercer, ex-Sciencewise, [@AlanCMercer](#)

SW Nuclear Hub, a collaboration of the Universities of Bristol & Oxford and the Nuclear Research Centre, [@SWNuclearHub](#)

Jeremy Gordon, World Nuclear Association, [@jrmygrdn](#)

Christina MacPherson, Australian anti-nuclear campaigner, [@ChristinaMac1](#)