The Trouble with Justification

Getting Straight on the Science and Politics of Nuclear Energy

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ANALYSIS

The trouble with justification – Getting straight on the science and politics of nuclear energy

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ABSTRACT

The way nuclear energy technology 'escapes' a deliberate justification approach as an energy technology on a transnational level is today in sharp contrast with the way fossil fuel energy technologies are subject of global negotiations driven by the doom of climate change. The claim put forward is that this 'denial' is a symptom of a contemporary settled 'comfort of polarisation' around the use of nuclear energy technology that is deeply rooted in the organisational structures of politics, science and informed civil society. The article argues for the need to develop a new rationale that aims to seek societal trust 'by method instead of proof', taking into account that the outcome of such a justification process might as well be an acceptance or a rejection of the technology. It sketches what this 'deliberate-political' approach would be in theory and practice, briefly hits at two contemporary myths that would relativize the need for this approach and concludes with a 'pragmatic' list of elements of an advanced framework for deliberation on nuclear energy technology and on energy in general.

Structure

1 Risk and justification

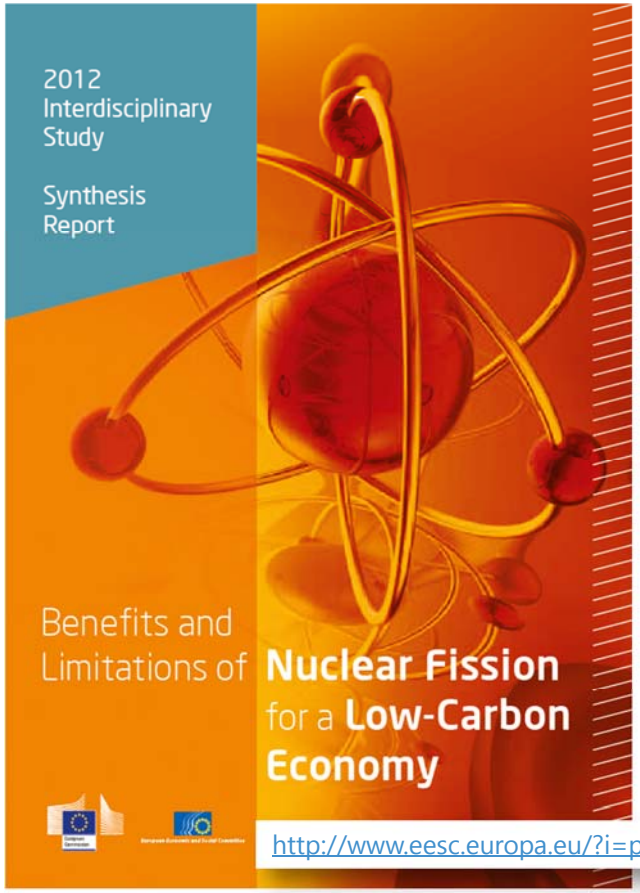
2 The nuclear risk: simple conclusions, complex consequences

3 Critical assessments of contemporary politics of nuclear energy

4 Criteria for fair and effective energy governance

1 Risk and justification

Sharing a recent experience



http://www.eesc.europa.eu/?i=portal.en.events-and-activities-symposium-on-nuclear-fission-papers

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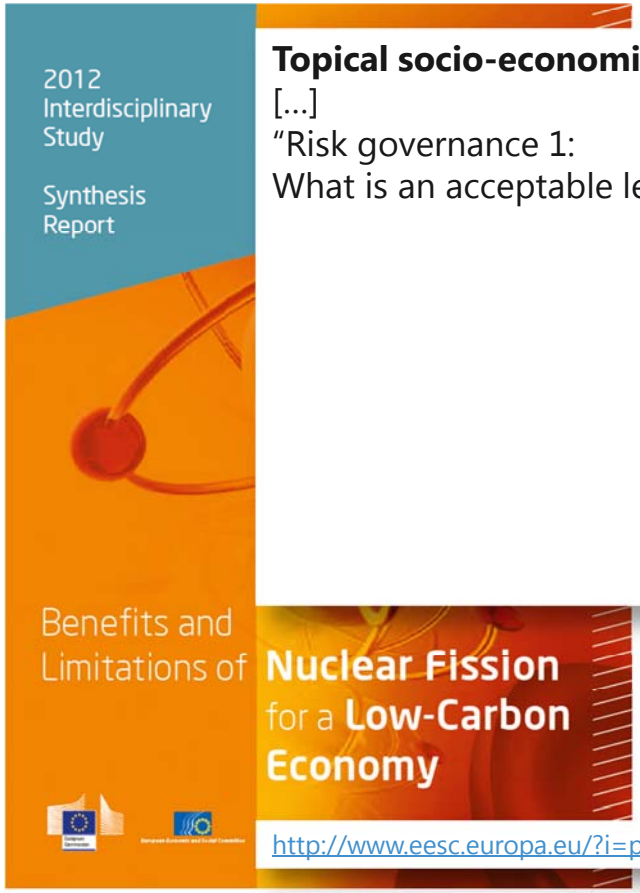

Topical socio-economic reports / expert viewpoints

[…]

"Risk governance 1:
What is an acceptable level of (nuclear) risk for the public at large?"

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1 Risk and justification

Sharing a recent experience

Topical socio-economic reports / expert viewpoints
[…]
"Risk governance 1:
What is an acceptable level of (nuclear) risk for the public at large?"

my answer:

There exists no objective (scientific, economic, social, political or philosophical) rationale for the determination of the acceptable level of nuclear risk for the public at large.

An acceptable nuclear risk is simply a risk that an informed democratic society justifies as acceptable.

http://www.eesc.europa.eu/?i=portal.en.events-and-activities-symposium-on-nuclear-fission-papers

1 Risk and justification

How humans deal with risk: three reflections

1 ● A risk is not a mathematical formula; it is a potential harm that

- you cannot completely know and
- you cannot fully control

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2 ● Justice and risk in society: finding ground between

the right to be protected

the right to co-decide
↑
the right to be responsible
↓
the freedom to hurt yourself

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2 ● Justice and risk in society: finding ground between

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3 ● Acceptable risk?

People will accept a risk they cannot completely know and that they cannot fully control simply when they sense that it is **marked by fairness**.

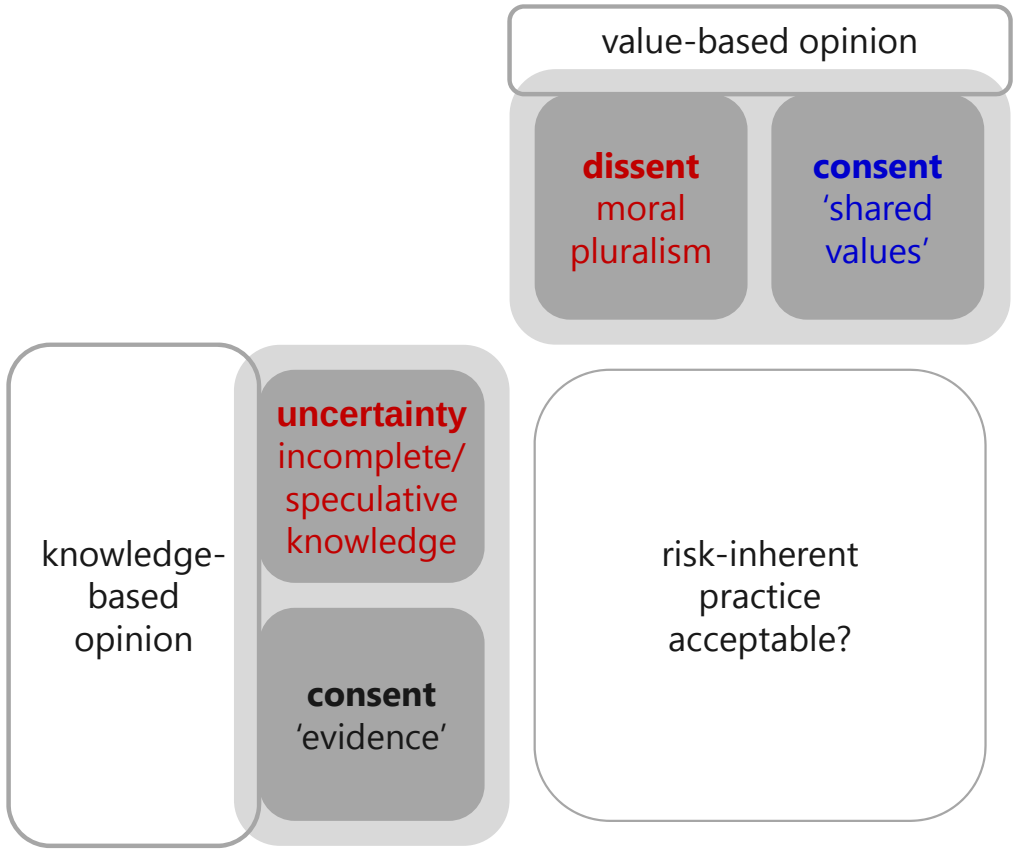
1 Risk and justification

Justifying risk: mapping the 'playing field'

risk-inherent practice acceptable?

1 Risk and justification

Justifying risk: mapping the 'playing field'



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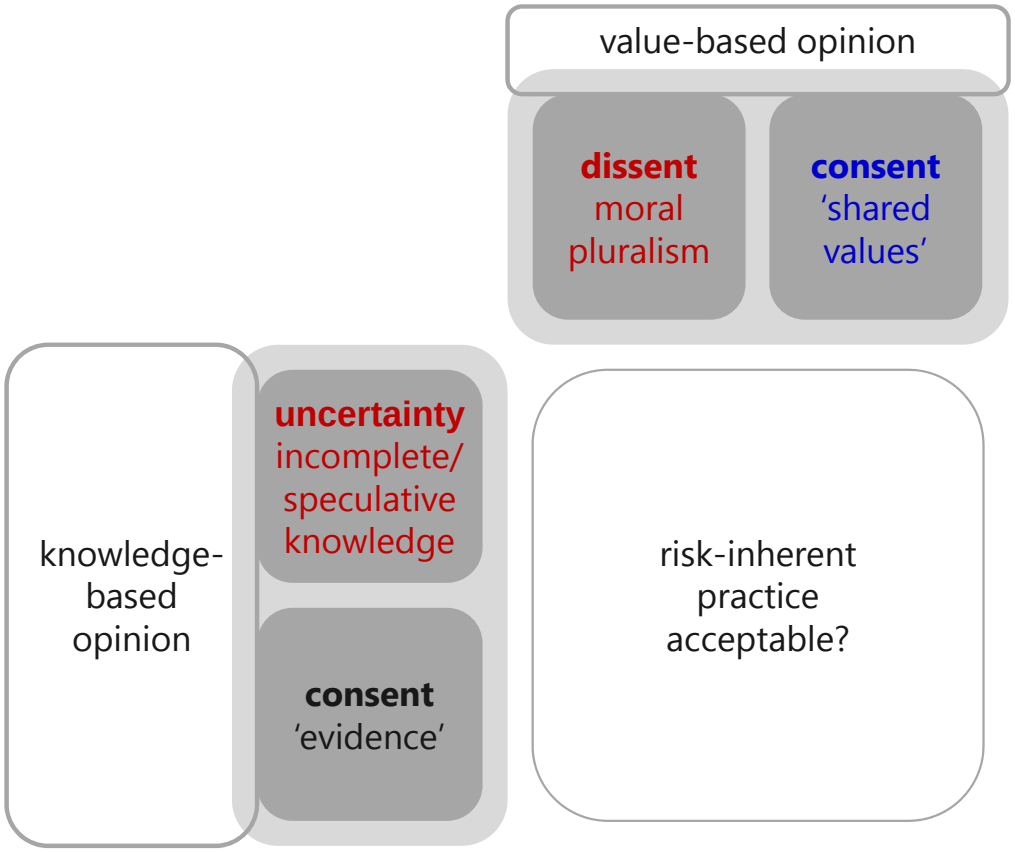


incomplete/speculative knowledge

The science of hypotheses, probabilities and foresight

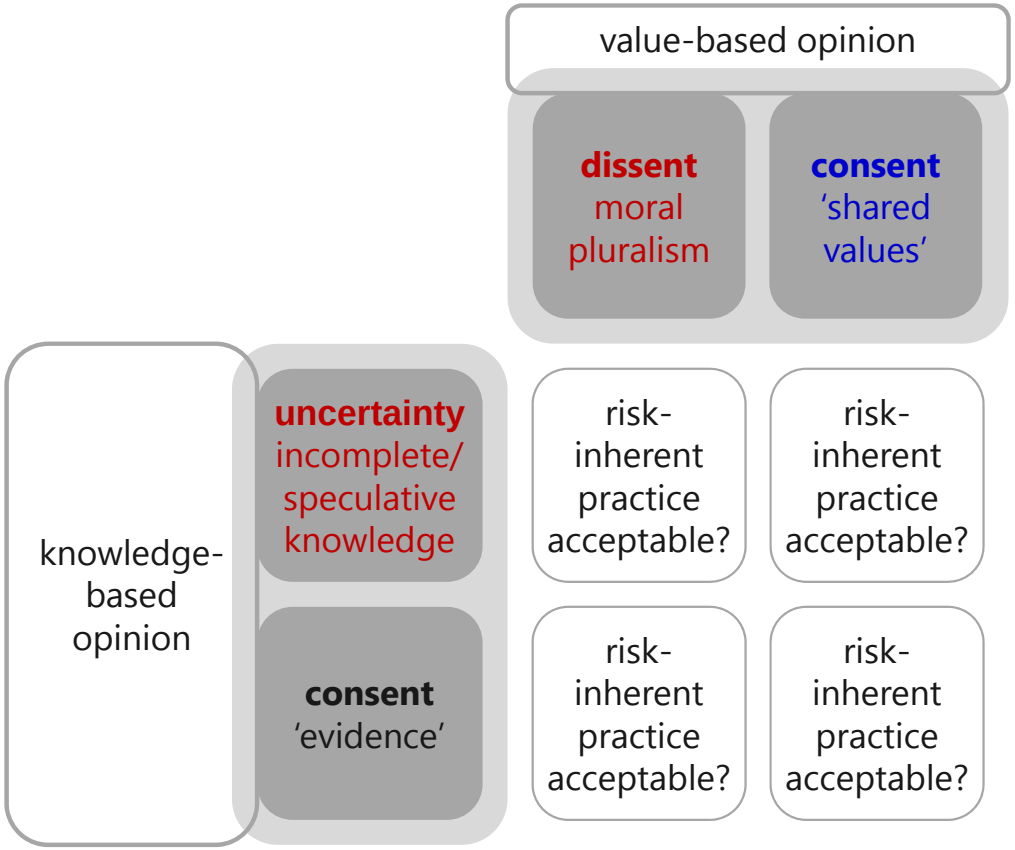
moral pluralism

Even if we would all agree on the scientific knowledge base for the assessment of the risk, opinions would still differ on its acceptability.

Science may thus inform us about the technical and societal aspects of options, it cannot instruct or clarify the choice to make.

1 Risk and justification

Justifying risk: mapping the 'playing field'



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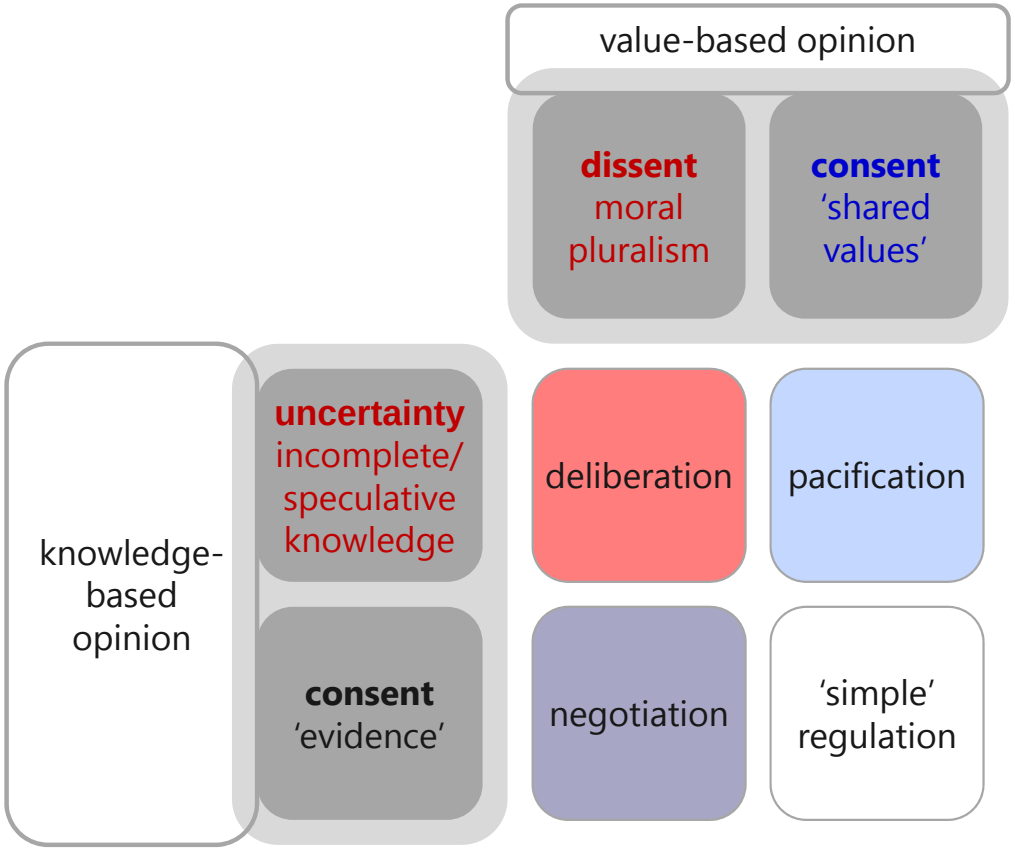

1 Risk and justification

Justifying risk: mapping the 'playing field'

value-based opinion

dissent moral pluralism

consent 'shared values'

knowledge-based opinion

uncertainty incomplete/ speculative knowledge

consent 'evidence'

'simple' regulation

need for **fairness**:

key concepts: precaution & fair play

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need for **fairness** in dealing with incomplete & speculative knowledge

key concepts:
precaution
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value-based opinion

dissent moral pluralism

consent 'shared values'

knowledge-based opinion

uncertainty incomplete/ speculative knowledge

consent 'evidence'

deliberation

need for **fairness** in dealing with incomplete & speculative knowledge and moral pluralism

key concepts:
precaution
intellectual confrontation

2 The nuclear risk: simple conclusions, complex consequences

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↘ "public acceptance is a key criterion for nuclear energy" (industry voices)

↗ People will accept a risk they cannot completely know and that they cannot fully control simply when they sense that it is **marked by fairness**.

→ If the nuclear industry and its supportive politics are serious about public acceptance, then they should acknowledge that

- scientific explanation
- clear and transparent information;
- a responsible nuclear safety and radiological protection culture

are essential but can never generate societal trust in themselves.

→ Societal trust around nuclear will only emerge **if the method of its justification and governance is sensed as fair** by society.

2 The nuclear risk: simple conclusions, complex consequences

Fairness in the method of justification and governance relates to …

→ the way we make decisions about nuclear

→ the way we generate knowledge about nuclear

↘ the working of the 'science – policy interface'

↘ the **organisation of intellectual confrontation** in knowledge generation and decision making

[research: **transdisciplinarity** and **participation** of civil society]
[politics **transparancy** and **participation** of civil society → **deliberation**]

→ Our current systems of research and politics related to nuclear are not designed to enable and enforce intellectual confrontation.

3 Critical assessments of contemporary politics of nuclear energy

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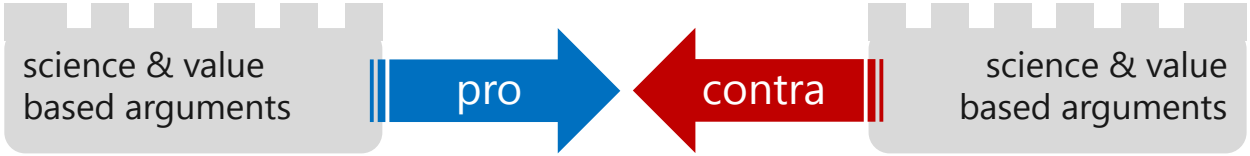
The comfort of polarisation

- Reasoning on the acceptability of nuclear is 'complex', but since the beginning,
  - opinion makers have been divided into two camps
  - opinion makers have been using the same arguments pro and contra



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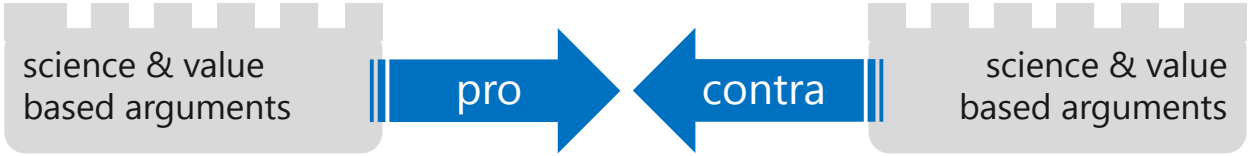
Today the debate is no longer a ratio↔emo debate, but a ratio↔ratio debate



- These camps are now turned into non-overlapping comfort zones, maintained by strategic and often populist simplifications of arguments pro/contra

- As in a joint conspiracy, both make no effort to convince each other, but focus on 'the general public'

  the pro-camp tries to convince it ↔ the contra camp claims to represent it

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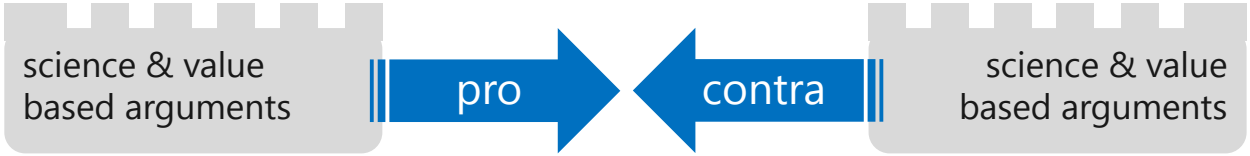

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The result — is a polarisation maintained by **a lack of methodological intellectual confrontation** in the structures of politics, science and civil society

3 example

Critical assessments of contemporary politics of nuclear energy
Fukushima: diverging conclusions, case closed?

- After Fukusima, rationalisations on the justification of nuclear seem to move in various and often opposing directions:

EU politics media

German energy policy ►◄ UK energy policy
"Fukushima: the end of a nuclear era" ►◄ "Fukushima proves nuclear safety"

- FORATOM 2050 Roadmap update (http://www.foratom.org/)

  '…Fukushima is likely to have some effect on costs and new build timescales in the shorter-term but **will not to be a decisive factor** affecting the longer term contribution of nuclear energy…'

- World Nuclear Association position (Energy & Environment, Volume 22 – Number 7 – 2011 – page 945)

  'The **future of nuclear energy** in most countries **is likely to be much the same** after the ramifications of the Fukushima accident are fully considered **as it was before the accident**, though there will be some safety benefits from lessons learned…'

3 example

Critical assessments of contemporary politics of nuclear energy
Nuclear as a non-issue in global energy governance

↘ In United Nations negotiations on energy and climate change, countries make no effort to bring nuclear on the global political agenda

- United Nations Framework Convention on Climate Change

  *Since Kyoto (1997), **nuclear has never been officially debated** as a potential base load 'avoidance' energy technology.*

- United Nations Commission on Sustainable Development

  - ***UNCSD9 (2001)**: '**agreement to disagree**' on nuclear';*
  - ***UNCSD15 Energy (2007)**: nuclear is mentioned in a paragraph that states that **every country has the right to choose for nuclear** under the condition it does so 'responsibly';*
  - ***UN Rio+20 (2012)**: the final text reaffirms support for 'national policies' using an 'appropriate energy mix' and explicitely refers to 'renewable energy sources and cleaner fossil fuel technologies'; **the word nuclear does not appear** in the whole of the text.*

3
example

Critical assessments of contemporary politics of nuclear energy
Nuclear as a non-issue in global energy governance

↗ But, on the other hand …

the UN does not hesitate to declare official support for nuclear energy in non-proliferation context

Opening the NPT Review conference 2010, Ban Ki-moon declared that

"Advancing the peaceful uses of nuclear energy cannot be held hostage to either disarmament or non-proliferation…"

http://www.un.org/apps/news/infocus/sgspeeches/statments_full.asp?statID=802

3 Critical assessments of contemporary politics of nuclear energy
Contemporary myths related to fair justification of nuclear

myth 1 "Fair and effective public participation is today ensured by the law"

↘ In reality, legally based public participation is **restricted to participation in 'public inquiries'** in environmental impact assessment procedures.

- authorities have the freedom to 'interpret' the outcome of such an inquiry
- inquiries are organised when projects are already in an advanced stage of development, not during concept phase

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myth 2 "The energy market can serve as a way to fairly justify nuclear energy"

↘ The **market rationale for the nuclear option fails** because
(a) it remains uncertain how (and how much) externalities should be internalised;
(b) investing in nuclear is impossible without structural subsidies.

↘ The market rationale fails for energy governance as a whole as (a) also counts for fossil fuels and (b) counts for all energy technologies.

An energy market with fossil fuels and nuclear **can never be 'free'**

4 Criteria for fair and effective energy governance
'Finding trust by method instead of proof'

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'Finding trust by method instead of proof'

	basics for energy governance
first focus	fair and effective policies for energy savings
then	fair and effective policies on renewable energy
then	confrontation 'between' fossil fuels and nuclear
recall ↘	the **organisation of intellectual confrontation** in knowledge generation and decision making
[research: [politics	**transdisciplinarity** and **participation** of civil society] **transparancy** and **participation** of civil society → **deliberation**]
<u>but</u>	Nuclear will only have a fair chance in this deliberation if its supporters (including nuclear research and industry) engage in **active pacifism** with regard to the use of its own technology.

4 Criteria for fair and effective energy governance
'Finding trust by method instead of proof'

1 See technological risk simply as an 'artefact of civilisation', not (only) as a historical product of ill-considered technocratic politics;

2 Approach energy governance as a theme among the other themes of sustainable development (water, food, transport, …) and organise the energy governance process in parallel to these other themes;

3 Organise transdisciplinary and inclusive research and inclusive, transparent and process-oriented political deliberation within the 'neutral frame' of energy governance and in the spirit of reflexivity and intellectual solidarity, in particular along the following lines:

3a Treat energy saving and renewable energy not as trade-offs but on the basis of their own merits in the context of sustainable development;

3b Confront nuclear energy technology as an option with the other 'problematic' energy technology (fossil fuels) in a resigned but responsible energy politics 'anticipating full alternatives' (whether they come or not);

3c Organise accountability and compensation towards (potential) victims of collateral harm and towards future generations (towards the last also by providing them with a resigned explanation of why we thought this was the best thing we could do).