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Imagining energy futures: societal perspectives on existing and emerging nuclear technologies

G. Meskens¹, C. Turcanu¹, M. Durdovic², R. Sala³, N. Zeleznik⁴, A. Luypaert⁵, C. Mays⁶, F. Abraham⁷, R. Geysmans¹, L. Gonçalves³, M. Martell⁸, P. Mihok⁹, S. Molyneux-Hodgson⁷, M. Poumadère⁶, T. Perko¹, P. Thijssen⁵, M. Constantin¹⁰, D. Diaconu¹⁰

¹SCK CEN, Belgium; ²IS CAS, Czech Republic; ³CIEMAT, Spain; ⁴EIMV, Slovenia; ⁵University Antwerp, Belgium; ⁶Inst. SYMLOG, France; ⁷University Exeter, UK ; ⁸MERIENCE, Spain; ⁹University Matej Bel, Slovakia; ¹⁰RATEN, Romania;

Economic and Social Considerations for the future of Nuclear Energy in Society

Research topics

- public attitudes to nuclear energy and Small Modular Reactors (SMRs)
- experiences and needs for public engagement

Research methods

- desk research in 6 European countries
- focus groups (BE, CZ, ES, SI)
- interviews (SI, SK UK)

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Contact

daniela.diaconu@nuclear.ro

https://ecosens-project.eu/

- engagement with climate and energy protests
- stakeholder views on sustainable energy systems

- public opinion surveys (BE, CZ ES, UK)
- protest surveys
- international stakeholder workshops

Stakeholder engagement in nuclear energy governance

Recommendations

- Early involvement of civil society stakeholders
- Interactive participation, e.g. deliberative processes, open dialogue, cooperation
- Inclusion of diverse stakeholders, incl. local population, NGOs, media
- Appropriate means to support participation
- Activities enhancing public trust in nuclear energy governance
- Transparency about objectives, decisions taken and expected outcomes

perceived barriers

lack of (mutual) trust

poor communication and public information e.g., limited or no accessibility and lack of transparency

lack of meaningful participation opportunities; participation is a box ticking exercise; no public justification for nuclear energy; limited space for dissent in media

poor regulation and institutional capacity; lack of resources and funding; lack of coordination; unclear governance responsibilities; no longterm policy vision; partisan interests

perceived drivers

societal discussions on nuclear scenarios; public dialogue; public referendums; televised public debates

higher level of engagement and impact on decisions; build on existing organizations that promote transparency and public involvement in nuclear safety

Implementation of national and international treaties (e.g., Aarhus Convention); enhanced transparency; trustworthy information processes; openness to diverse information sources



- Continuous monitoring of public concerns and perceptions
- Legal / administrative frameworks providing instruments and resources

"Only I'm still curious about the sustainability aspect of it. I would still like to know so much like to know so much because it's not entirely because it's not entirely technical complexity of nuclear; technocratic decision making

misinformation; nuclear risk perception; lack of public interest; perception of nuclear energy

"The best time to have them was today. But the next best time is tomorrow, right?"

"Isn't this too late? Can we make this in time?"

How would you rate small modular nuclear reactors as an electricity generation technology?



political agreement for mid- and longterm strategies; body overseeing social participation and project evaluation

data driven decisions; investments in radioecological research; enhanced technological education; national programs to improve expertise in nuclear technology; interdisciplinarity

Selected findings on SMRs

- Diverse views on SMRs and differences between countries and (nuclear and non-nuclear) communities
- SMRs seen as a promising technology, if benefits achieved, but attitudes still forming
- Concerns about e.g., unresolved issues of radioactive waste; costs; timeliness w.r.t climate urgency, safety
- Benefits and challenges difficult to assess as technology in development

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- → What is considered benefit for some, might be drawback for others
- → Need for better public communication about SMRs, with detailed information about risks and benefits
- Participation of societal stakeholders (e.g., academia, local representatives, broader publics, NGOs) in decision processes should be improved
 - → Opportunities to weigh in on decisions, particularly regarding siting or balancing sustainability outcomes
 - \rightarrow Processes for long-term participation in energy

policy decisions

• Need for clear and consistent energy policy frameworks

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