

# Social Acceptance “Mini-Workshop”

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# The Social Acceptance Challenge

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- ▶ There is a risk that fusion does not live up to its full potential due to a lack of social acceptance<sup>1</sup>
- ▶ Other technologies<sup>2,3,4</sup> have been limited by a lack of social acceptance, which has increased capital costs, litigation costs and risks and regulatory burdens<sup>5</sup>
- ▶ The way in which fusion is deployed will have profound implications for whether fusion truly makes the world a better place

Risk-reducing technical solutions, regulatory compliance, and better “communication” or “education” are unlikely, on their own, to alleviate a lack of social acceptance<sup>1,6</sup>

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2. Devos Y, Maesele P, Reheul D, et al. “Ethics in the Societal Debate on Genetically Modified Organisms: A (Re)Quest for Sense and Sensibility.” *Agricultural and Environmental Ethics* 21:29–61 (2008). <https://doi.org/10.1007/s10806-007-9057-6>
3. Robbins, R., Tavernise, S., Otterman, S., “Cash, Breakfasts and Firings: An All-Out Push to Vaccinate Wary Medical Workers” *NY Times*, Jan 14, 2021, <https://www.nytimes.com/2021/01/14/business/covid-vaccine-health-hospitals.html>
4. Bickerstaffe, J., Pearce, D., “Can there be a consensus on nuclear power?” *Social Studies of Science* 10:309:344 (1980); Slovic, P., “Perceived Risk, Trust, and the Politics of Nuclear Waste” *Science* 254:1603-1607 (1991).
5. Gunningham N, Kagan RA, Thornton D, “Social license and environmental protection: why businesses go beyond compliance,” *Law & Social Inquiry* 29:307–341 (2004).
6. Otway HJ, Maurer D, Thomas K, “Nuclear power: The question of public acceptance,” *Futures* 10:109–118 (1978). doi: 10.1016/0016-3287(78)90065-4

# The Opportunity

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Fusion has an opportunity to distinguish itself from other energy technologies, not just in how it uses physics, but also in how it approaches society

# Methods of Facilitating Social Acceptance

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- ▶ Social License
- ▶ Bioethical Review
- ▶ Responsible Research and Innovation

Hoedl, Seth A. "A Social License for Nuclear Technologies." *Nuclear Non-Proliferation in International Law-Volume IV*. TMC Asser Press, The Hague, 2019. 19-44.  
<https://arxiv.org/pdf/2009.09844>

Hoedl, Seth A. "Ethical Review for Nuclear Power: Inspiration from Bioethics." *Nuclear Non-Proliferation in International Law-Volume VI*. TMC Asser Press, The Hague, 2021. 331-361.

Hoedl, Seth A. "Social License and Ethical Review of Fusion: Methods to Achieve Social Acceptance." NRC Public Meeting, March 30, 2021. available at  
<https://www.nrc.gov/docs/ML2109/ML21090A288.pdf>

Hoedl, Seth A. "Achieving a Social License for Fusion Energy" APS DPP, November 10, 2021

# Four High-level Insights for Fusion

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- ▶ Fusion is more likely to be socially accepted, worldwide, if the fusion community begins the process of achieving social acceptance **now**
  - regulatory approval will not be sufficient, nor in time
  - waiting for a prototype or pilot plant will be too late
- ▶ Work to build trust through meaningful two-way communication and public engagement
- ▶ Identify future public concerns, especially concerns outside of familiar markets so that fusion can **anticipate** rather than react to these concerns
- ▶ Make technical and business choices that address those concerns

# “Mini-Workshop” Goals

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- ▶ Bring new voices into the social acceptance discussion and launch a process of listening to global perspectives on energy and fusion
- ▶ Brainstorm concrete, actionable ideas for facilitating social acceptance
- ▶ Build momentum to advance these ideas

# “Mini-Workshop” Agenda

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|          |  |
|----------|--|
| 10:20 am | Social acceptance through participatory co-design,<br>Professor Jessica Smith, Colorado School of Mines                      |
| 10:40 am | Achieving widespread public support for a self-limiting mosquito project in the Florida Keys,<br>Ms. Meredith Fensom, Oxitec |
| 11:00 am | Panel discussion on international views on energy and fusion   |
| 12:00 pm | Fusion safeguards,<br>Ms. Laura Rockwood, Open Nuclear Network   |
| 12:20 pm | Lunch  |
| 1:20 pm  | Social acceptance breakout sessions  |
| 2:00 pm  | Separate technical session   |
| 2:35 pm  | Presentation of social acceptance breakout sessions summary and discussion   |

# Breakout Questions

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- ▶ How can we collectively help the fusion community become better communicators to build trust, and how can we engage with the public, today, to further build trust?
- ▶ How can we identify both expert and non-expert concerns, worldwide?
- ▶ How can fusion researchers and technologists engage in “co-design” to make technical and business choices that are sensitive to social acceptance?
- ▶ How can the fusion community effectively share lessons learned regarding social acceptance for mutual benefit?

# Final Thoughts

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- ▶ Although social acceptance is foreign to physicists:
  - There are many successful examples that we can look to for inspiration
  - It's achievable
  - It's critically important for fusion to make a long term, global impact

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