PUBLIC AWARENESS OF SMR: CHALLENGES AND OPPORTUNITIES FOR NUCLEAR POWER IN THE ENERGY TRANSITION

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Developing and constructing small modular reactors (SMR) is a promising pathway for many countries. With their potential to meet flexible, inherently safe power generation environmental needs for a broader range of users, these reactors offer a hopeful future for nuclear power. Global interest in SMRs is growing, with the United States, EU, Canada, China, and others activating public support and private equity attraction. However, the public response to SMR is mixed and relies on information and education: some express concern about the risks and threats, while others see SMR as an accepted technology. SMR's strengths include its eco-stable technology for combating climate change, lower fuel and refueling needs, flexibility, passive safety features & appropriate level of physical protection, ability to ensure the stability of the electrical network, ability to be combined with other energy sources and to collocate with industrial and suburban areas, and economic competitiveness. Weaknesses include public fear of nuclear accidents and catastrophes, the duration and cost of licensing and legislation, the risk of overspending on project time and costs, increasing the number of nuclear facilities, weak public recognition, supply chain issues caused by the geopolitical situation, producing more radioactive waste than conventional reactors, proliferation risk, etc. Public recognition and acceptance of nuclear power can influence decision-making and demand. Disproportionate coverage of pro-nuclear sources limits representative public debate, particularly in local communities. We emphasize that public and community involvement is not just important, but integral to solving problems and ensuring the adoption of SMRs at both regional and global levels. In its Declaration on EU SMRs of 4 April 2023, the Industrial Alliance on SMRs confirms the EU's intention to continue research and training on the safety of European SMRs. Thus, the community of SMR developers must insure their technological solution against climate change is actively involving interested parties in public hearings as speakers, conferences or webinars to express their opinions and receive information. We believe that public participation is a crucial element of the regulation and support mechanism for the development of SMR. Training and engaging with local communities throughout the development and deployment can build trust and solve problems.

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