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STUDY OF KNOWLEDGE AND PUBLIC AWARENESS OF SMALL MODULAR REACTORS IN MALAYSIA

The application of nuclear energy is becoming more prevalent, especially to produce clean electricity. While conventional nuclear reactors offer large-scale power generation, their construction is time-consuming and expensive. Small modular reactors (SMRs), with capacities up to 300 megawatts (MW), present an alternative for providing energy in remote areas and aligning with the National Energy Policy's goals of efficient, economical, and low-carbon energy use. However, public acceptance is crucial for their feasibility in Malaysia. This study aimed to assess Malaysians' current perception of nuclear energy, measure their knowledge and awareness of SMRs, and explore the relationship between their perception of nuclear energy and their support for SMRs. A quantitative online survey was distributed nationwide, with 200 respondents participating. The results revealed a diverse demographic, with females constituting 56%, ages ranging from 14 to 74, and a majority holding bachelor's degrees. The findings indicated a mixed public perception. Despite concerns about safety and environmental impact, a general view exists of nuclear energy as a reliable source and a potential tool in the fight against climate change. However, knowledge of SMRs was relatively low, with nearly 58% of respondents demonstrating low levels according to the questionnaire. Nevertheless, overall awareness was moderate, with 54% expressing a good understanding of SMRs' potential for low-carbon energy production. While respondents exhibited positive support for SMR use in Malaysia despite security concerns, these concerns did not significantly affect their overall support for their development. These results highlight the importance of strengthening public education through educational institutions and social media to enhance awareness and foster a more positive perception of SMRs in the context of Malaysia.

Country OR International Organization

Malaysia

Email address

idzat@ukm.edu.my

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Author: BIN IDRIS, Mohd Idzat (Department of Applied Physics, Faculty Science and Technology, Universiti Kebangsaan Malaysia)

Co-author: Mr AZIZ, Muhammad Hannan (Department of Applied Physics, Faculty Science and Technology, Universiti Kebangsaan Malaysia)

Presenter: BIN IDRIS, Mohd Idzat (Department of Applied Physics, Faculty Science and Technology, Universiti Kebangsaan Malaysia)

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