

Educating public about nuclear energy part of institute's efforts

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Public outreach and education will be a part of a new nuclear safety and research institute, which will have facilities for exhibitions and tours for the public.

Such programmes will help teach people about radiation and nuclear technologies, and dispel common misconceptions.

Launched on July 11, the Singapore Nuclear Research and Safety Institute (SNRSI) at NUS will have its ground floor dedicated to outreach events, posters and exhibits related to radiation, nuclear energy and their safety.

The facility will also host educational activities to dispel common misconceptions about nuclear energy, which tends to incite fear due to a few high-profile meltdowns, and help the public understand radiation better.

Associate Professor Chung Keng Yeow, director of the SNRSI, added that the institute will organise regular fortnightly workshops, which include a tour of the laboratories, and students can even check out nuclear reactor simulators.

The SNRSI's predecessor was the Singapore Nuclear Research and Safety Initiative. It did not have its own building, and was housed in the Campus for Research Excellence and Technological Enterprise tower in NUS.

The institute's plans for more activities for the public add to its existing engagement efforts. Researchers have, for example, conducted talks and workshops on radiation and nuclear technologies for students and members of the public.

Experts said engagement with the public on the risks and benefits of nuclear energy is critical, as public perception could influence policy decisions.

Professor Leonard Lee, director at Lloyd's Register Foundation Institute for the Public Understanding of Risk at NUS, said that successful long-term adoption of nuclear power in Singapore and the wider region hinges vitally on public acceptance.

Dr Olivia Jensen, deputy director and lead scientist for environment and climate from the same institution, said case studies elsewhere have demonstrated how public concern over nuclear facilities influenced decisions to shut down or restart plants.

In Italy and Germany, concern over potential health and environmental implications of nuclear power resulted in the decommissioning of operational nuclear facilities, even in the absence of direct accidents.

"Conversely, some countries, including Japan, have reversed nuclear bans and resumed the development of such facilities, amid growing public support," she added.

Dr Jensen said the public may not be fully aware of the benefits nuclear energy can bring compared with other clean energy sources when it comes to achieving net-zero emissions.

It is also important to address concerns over the risks involved, such as on the safety of the technology or nuclear waste.

"Providing relevant information about the issues that people are concerned about, promoting transparency and establishing a process and forum for open engagement with the public will all be very valuable," Dr Jensen said.

Public opposition expressed after a technology has been introduced raises the risks of stranded assets and abandoned projects, and can be a barrier to achieving decarbonisation targets, she added.

Dr Alvin Chew, senior fellow at the S. Rajaratnam School of International Studies at NTU, said that the use of nuclear energy is a multifaceted issue that goes beyond just the scientific and technological issues.

Hence, public engagement efforts should not be limited to just the SNRSI, he said.

He added that the institute should also work with those in the private sector and think-tanks to address potential concerns of the public.

For example, the public may be concerned about the impacts of living close to a nuclear power plant or how their electricity prices will be affected by this new energy source.

On outreach to students, experts said such engagement is important regardless of whether Singapore decides to deploy nuclear power.

"The main purpose is to get our students interested in nuclear science so that Singapore will have a local talent pool to tap in the future, because nuclear application is not limited to just energy production, but also fronting advancements in medical science and space exploration," said Dr Chew.

"Nuclear energy will be a future source of clean and sustainable energy globally and thus, our future generation cannot be isolated, without a good understanding of nuclear issues."

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