

Nuclear power has merits, but investing in renewable ensures long-term energy security, renewable energy expert says

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Opposition Leader Peter Dutton has announced that he will go to the next election promising to build seven nuclear power stations. Dutton has

promised the sites can be operational between 2035 and 2037, and will be built on retired or retiring coal stations.

However, Swinburne renewable energy expert Associate Professor Mehdi Seyedmahmoudian says that while the plan could have some merit, our energy system can already be transitioned without relying on nuclear power.

"Peter Dutton's approach could potentially reduce costs and accelerate deployment by utilizing existing infrastructure. However, advancements in [renewable energy sources](#) such as solar, wind, and hydropower, combined with energy storage technologies, offer more sustainable and efficient alternatives," said Associate Professor Seyedmahmoudian.

"Innovations in battery storage, hydrogen fuel cells, and hybrid energy systems are significantly enhancing the reliability and cost-effectiveness of renewable energy."

Nuclear energy typically emits very little carbon dioxide, with Dutton's promise linked to Australia's goal of achieving net zero carbon emissions by 2050. However, Associate Professor Seyedmahmoudian says renewables are a much safer option.

"Smart grid technologies, community microgrids, and demand response management systems optimize energy distribution and consumption, facilitating the seamless integration of intermittent renewable sources. This reduces the need for large-scale, centralized [power plants](#) and addresses environmental and safety concerns associated with nuclear energy, such as radioactive waste management and potential catastrophic failures."

The [price tag](#) for the opposition's nuclear promise is unknown, with Dutton confirming "comprehensive site studies" would be needed before

a cost could be revealed.

Associate Professor Seyedmahmoudian says renewable energy is the answer for a cheaper and more secure energy future.

"By investing in research, innovation, and infrastructure for renewable energy and smart grid technologies, we can achieve a reliable, sustainable, and cost-effective energy transition without relying on nuclear power, ensuring long-term energy security and [environmental sustainability](#)."

Provided by Swinburne University of Technology

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