

## Canberra load shifting

Reconfiguring Australia's residential off-peak hot water systems to consume electricity when renewable generation is at its peak could help minimise the more than 4,000 MWh of large-scale solar and wind generation that is being curtailed in the National Electricity Market annually.

New analysis from research organisation the Australia Institute shows that 3,959 GWh of renewable energy was curtailed in the National Electricity Market (NEM) in the 12 months to 31 May 2024. This represents about 9.3% of Australia's total annual utility scale solar and wind generation for that period.

In a discussion paper prepared in collaboration with data analytics and engineering organisation Buildings Alive, the Australia Institute says that off-peak hot water systems have historically been set to operate at night but they could be reconfigured to consume electricity during the middle of the day, when there is an abundant supply of renewable electricity.

The Canberra-based think tank has calculated that shifting off-peak hot water systems to heat in the middle of the day could provide about 4,000 GWh of flexible demand per annum, helping offset the curtailment of renewables.

"If off-peak hours were moved away from the time of day dominated by coal-fired electricity and towards the time of day when the sun is shining brightest, curtailment of solar power supply could be reduced significantly," the organisation said.

"This is the low hanging fruit of the energy transition," he said. "There are significant gains to be made from this one relatively simple and cost-effective intervention in our energy market."

Australia Institute Executive Director Dr Richard Denniss has acknowledged that such a shift would not be without some difficulties but called on the federal government to make the necessary regulatory changes.

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Around three million Australians are now enjoying lower electricity bills thanks to rooftop solar systems. But



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did you know that you could be getting more value out of your panels and even lower bills?

Load shifting is a technique that allows you to maximise the efficiency of your roof and lower your bill even more. In this guide we explain load shifting and how it allows you to maximise the efficiency of your rooftop PV system and save more money than ever before.

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