

It would be desirable to solve this problem via previously tried and proven methods.

It has arisen from the subsidized and largely unplanned injection of DERs into what was a very effective suburban electricity supply system.

Australia used to have some of the cheapest distributed electricity in the developed world...and some manufacturing industry to boost employment. Now we have some of the dearest electricity and declining manufacturing activity. Better use of rooftop solar has the potential to relieve some of this burden. Clearly, restriction of solar output should be avoided if cost-effectively possible.

Tried and proven methods of load management include energy storage via water heating strategies. What is the daily energy usage for water heating? How does this compare with the component of solar generated energy that is causing the "traffic jam"? The technology to control water heating is in place and apparently acceptable to consumers so it should be part of the solution.

Air conditioning is also a possibility to soak up excess summer solar generation...perhaps the subsidies can be redirected to solar driven air conditioners?

Pumping of water into suburban reservoirs can be timed to alleviate the traffic jam?

EV charging stations in the rooftop solar suburbs... Could be adjacent to power/streetlight poles and provide daytime recharges for people working in the area.

The underlying problem, currently, with renewables, due to their "unreliability", is a need for cost-effective, eco-friendly energy storage devices. Currently water is about the only candidate. Battery disposal for current technology is not eco-friendly? Battery costs currently are too high.

For a consumer, having installed the solar panels, often with the objective of reducing household energy costs and potentially earning from sales to grid, and then being advised that grid sales are going to be restricted, looks like government interference.

In the bigger picture, promoting rooftop solar panel energy generating infrastructure and then declining to use the output suggests absence of effective planning?

Certainly the traffic jam issue needs to be addressed by appropriate rules. However where practical, cost-effective operational measures can largely relieve the impact without imposition of rules, the operational approach is preferred.

Some brief numbers for the controlled water heater suggestion:

3500 kWh per year per house (ABS) used for water heating....9.6 kWh/day

About 50% of Aust houses use electric water heater.

About 21% of houses have solar panels. A 4kW system produces about 17kWh per day

So 50% of houses use 9.6 /day for water heating by electric water heaters and 21% of houses produce 17 / day

Conclusion:

This suggests that all of residential rooftop solar output could be absorbed by controlling residential electric water heaters ...not just the surplus that is fed back into the grid currently potentially causing the traffic jam

