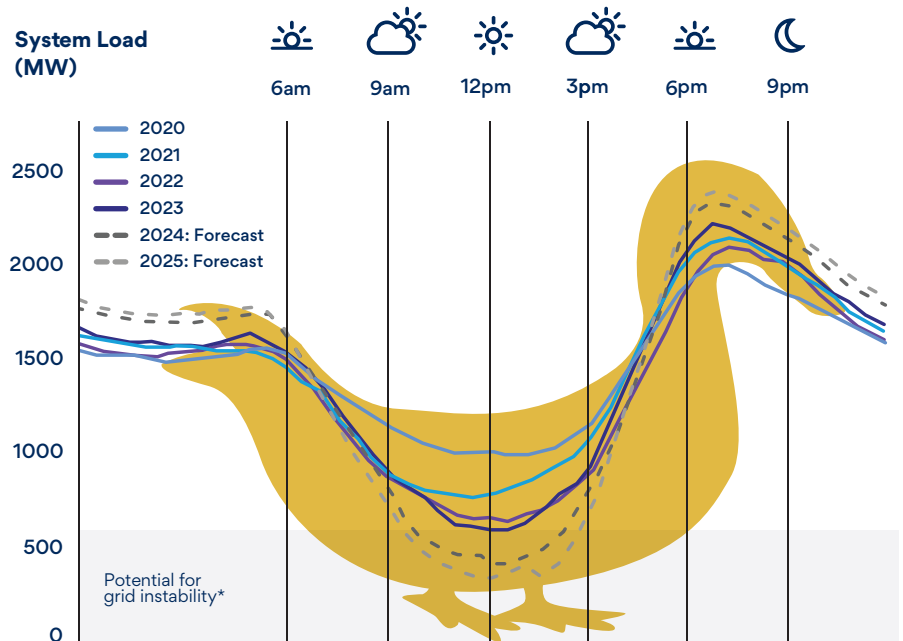


Have you heard of the Duck Curve?

Balancing the electricity grid has become a challenge in WA because of our high levels of solar power generated during the day.

When the sun sets, larger electricity generators, such as gas and coal power plants, can't be turned up quickly in response to a sudden increase in demand for electricity.

This graph shows the Duck Curve based on real data in the South West Interconnected System (the SWIS), the main electricity grid in WA.



A graphical representation of the 'Duck Curve' for the SWIS, created with 2023 data from AEMO.

Here's what it means:

- The coloured lines, which create a duck shape, show the average amount of electricity sent out from the grid to WA homes, schools and businesses across the day.
- Where the large dip in the coloured lines during the middle of the day is – is known as times of 'low load'. This is also the time when the most solar power is being generated – and larger generators might not be needed to meet demand during this time.
- As the sun goes down, demand for electricity goes up as we collectively use more electricity for lighting, cooking dinner, heating and cooling, housework and entertainment in the form of TVs, laptops and gaming consoles. On the graph, you can see when this demand for electricity from the grid increases in the neck and head of the duck from 3pm to 9pm, resulting in 'high load'.



Balancing the grid

At Synergy we're working with the State Government and other industry participants to address the challenges shown by the Duck Curve. This includes investing in new energy generation technologies such as wind power, adding battery capacity to store some of that abundant solar power that is being generated and helping our customers learn how they can help to keep the grid balanced.

Here are some simple changes that could help to reduce the amount of electricity you need to draw from the grid at peak times when there is high load between 3pm and 9pm each day:

- ✓ Ask your parents if you have a smart meter at home, if you do, they can check how your house uses electricity throughout the day in Synergy My Account. Once you know how much your house uses at different times, you and your family could create a plan to shift some of your use or reduce your demand for electricity during peak times.
- ✓ On very hot days, your family could help reduce demand by limiting your use of high energy-consuming appliances such as washing machines and dishwashers in the afternoon and evening. Use only the appliances you really need and switch off others when they're not being used.
- ✓ On nice warm nights, your family could switch out your dinner prep and use a BBQ instead of using the oven or cooktop. This could help you to use less power-hungry appliances and avoid heating up your indoor spaces. Nothing better than a summer bbq!

Your turn

Think about how your household uses electricity when you get home from school and in the evening. What are three ways your household could try to reduce the amount of electricity you use at this time or shift this usage to other times of the day?

1. _____
2. _____
3. _____

