

# IS AUSTRALIA HEADING TOWARDS AN ENERGY CRISIS?

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*Recent blackouts, electricity price hikes and political debates are keeping energy security in the news.*

**T**here is evidence to suggest that Australia may be stumbling into an energy crisis, and the federal and state governments have been unable to agree on any solution.

Earlier this year, South Australia endured a heatwave where the mercury tipped 42 degrees Celsius in Adelaide, and 90,000 residencies were left without power for 45 minutes. At that time, there wasn't enough supply to meet demand, so some of the grid had to be shut off.

This is a process called load shedding, and could become common practice if the industry doesn't start to actively take steps in order to ease the strain on energy consumption. The South Australian Power Networks identifies two main types of load shedding:

- ▶ Automatic load shedding – when equipment in the electricity grid automatically switches off load to protect networks. This is normally associated with a sudden and unexpected disruption on the electricity grid, such as the collapse of the transmission towers, which led to the statewide blackout on 28 September 2016
- ▶ Manual rotational load shedding – when demand increases towards available generation, and the Australian Energy Market Operator (AEMO) has time to direct utilities to shed load in order to restore the generation and demand balance in the national electricity grid.

The authorities need to make sure that the system remains in balance between supply and demand, and if there's no extra supply available, the only choice is to reduce demand by shutting off the power.

If this doesn't happen, the entire system will come under strain, causing another statewide blackout.

The AEMO has responded to the crisis in its recently released report titled 'Gas Statement of Opportunities' (GSOO).

The 2017 GSOO highlights the increasing pressure on gas and electricity for the reliable supply of energy. It confirms what most of us know about the current future of Australian energy: it's extremely important to plan ahead across the entire energy supply chain to deliver energy security and continue a reliable supply to consumers.

According to the information provided in the report, there will be a decline in gas production that may result in a lack of gas-powered electricity generation – this will impact New South Wales, Victoria and South Australia from the summer of 2018–19.

Chief Operating Officer of AEMO Mike Cleary says: 'At a time when liquefied natural gas (LNG) export is dominating demand and supply of gas in eastern states, strategic national planning of gas development has never been more critical for maintaining domestic energy supply adequacy across both gas and electricity sectors'.

The report gives a long-term outlook, and recognises that early investment in exploration and growth plans will be crucial to bring undiscovered resources to the table in time to meet forecast rises in demand for gas.

Prime Minister Malcolm Turnbull responded to the GSOO report almost immediately, calling for urgent crisis talks with Australia's east-coast gas companies in early March. Turnbull met with gas company CEOs, including those from Shell, ExxonMobil, Santos, BHP, Origin and Arrow Energy.

## What are the solutions?

South Australia is in need of additional power sources that can be utilised if necessary.

Authorities are currently investigating an additional interconnector option for New South Wales, Victoria or Queensland.

An additional interconnector could take years and cost consumers billions of dollars.

Other potential ideas have been the storage of renewable energy through batteries, pumped hydro or another technology.

The South Australian Government is potentially looking to stimulate a new market entrant, in all likelihood a gas generator, by offering a long-term contract to supply 75 per cent of its own power needs.

There was also good news coming out of the Federal Budget, with the delivery of a \$265-million energy package. The package will include funding for a Bioregional Assessments Programme to assess any potential impacts on waterways and aquifers from unconventional gas projects that may need to happen in the future.

The government has also committed \$2 million to AEMO to improve publication of real-time assessment of gas flows and market analyses, to make it easier for the market operator, businesses and investors to make informed decisions about gas market operations.

Coming out of the budget, Minister for the Environment and Energy, the Hon. Josh Frydenberg MP, said: 'Improving the transparency, competitiveness and long-term security of Australia's east-coast gas market is a priority for the government, as gas is a crucial energy source as we transition to a low-carbon economy'.

Unfortunately, the package won't give us any quick fixes, but the government seems to be very aware of the issue, and is trying to implement the appropriate steps to research, assess and analyse a stronger and more reliable energy market for the future. 🏗️