

**Submission
No 16**

THE ELECTRICITY OUTAGES AFFECTING FAR WEST NSW IN OCTOBER 2024

Organisation: Broken Hill City Council

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7 February 2025

The Hon Clayton Barr MP
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Dear Minister and Committee Chairperson,

BROKEN HILL CITY COUNCIL SUBMISSION

INQUIRY INTO THE MAJOR ELECTRICITY OUTAGES AND DISRUPTIONS IN FAR WEST NEW SOUTH WALES IN OCTOBER 2024

Thank you for the opportunity to provide a submission to the Legislative Assembly Committee regarding the Inquiry into the major electricity outages and disruptions that the Far West New South Wales region endured during October 2024.

Council offers the following comments in relation to the Terms of Reference of the Inquiry as published:

BACKGROUND

In October 2024, the Far West region experienced widespread electricity outages due to severe storms and infrastructure failures as a result of a storm that destroyed 7 power line towers of the main feed between Buronga and Broken Hill. This resulted in multiple extended and rolling blackouts that lasted several days in some areas, until the main line could be restored. The region's reliance on long-distance power transmission further exacerbated the problem, as repairs required extensive coordination and resources, along with inadequate backup solutions at the ready.

The effects of the outages were severe, including:

- **Public Safety Risks:** The prolonged loss of power disrupted emergency services and telecommunications, affecting the ability to respond to critical situations.

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- **Economic Impact:** Many businesses, including essential public services suffered financial losses due to the inability to operate or the additional costs to provide diesel generators. Furthermore, many employees were stood down without pay due to businesses not being able to operate. In particular, both mines (Perilya & CBH – Rasp) ceased operating, forcing unpaid leave or entitlements to be used by employees.
- **Health and Well-being:** Vulnerable populations, including the elderly and individuals dependent on medical equipment, faced serious risks without access to electricity.
- **Community Disruptions:** Schools, businesses and essential services were forced to close, while households struggled with the loss of refrigeration, cooling, as well as the risk of water supply in some areas.

KEY ISSUES

Inadequate Backup Supply

- There was only one gas turbine backup generator in service, which was inadequate to supply Broken Hill and the surrounding areas.
- The one remaining turbine in place, had not been maintained to an appropriate service level, as it was only able to operate at 60-80% of full capacity, further reducing power supply.
- There was no alternative or backup supplied to cater for the second generator being out of service for extended repairs.

Inadequate and Poor Communication

- Transgrid did not inform the Local Emergency Management Committee (LEMC) or the Regional Emergency Management Committee (REMC), that the second generator had been taken offline for extended repairs as per the requirements under their contract with the State Government.
- There was also a lack of consistent messaging surrounding how long the second generator had already been out of service or was likely to be out of service. Transgrid confirmed that the generator was taken out of service in September 2024, however there was various reports from contractors and workers involved, that it had been more than six months.
- Poor and inconsistent messaging was provided from Transgrid to the LEMC/REMC, local media and Broken Hill City Council inclusive of the following:
 - The reason for the main generator to fail causing a widespread blackout on Tuesday 22 and Wednesday 23 October 2024 in extreme heat.
 - The likelihood of power restoration and timing.
 - The capacity of generators that would be 'turned on' to ensure rolling backouts were not ongoing.
 - The timing of the additional generators being supplied and the additional supply they would add to the network.

- Communication was lost in parts of Broken Hill as a result of the telecommunication towers' batteries running out before power could be restored. This affected communication throughout the City, but most importantly interrupted communication for essential services such as Ambulance NSW.
- Telstra did activate generators for the towers on 22 October 2024, however once power was restored to the diesel generators Telstra disconnected and removed the generators (initially), causing further telecommunication outages in the coming days due to the rolling blackouts.

Inadequate reaction/mitigation strategies to the Power Outage

- Transgrid and Essential Energy began to implement diesel generators for large consumers and in various locations to reduce the pressure on the sole gas turbine during peak demand, as a result of and only after the extended black out on the 22-23 October 2024. This should have been readily available due to Transgrid knowing one generator was out of service in September 2024, but at the very least, as soon as the main transmission line was damaged during the storm event of 17 October 2024.
- Delayed reaction to ensuring residents with lifesaving medical equipment were supported.
- The Broken Hill Solar Battery Storage Plant, was not active or available when required due to ongoing commercial negotiations between AGL & Transgrid. If this had of been operational at the beginning of the disaster, this would have assisted during the peak demand times and reduced the pressure on the sole remaining turbine. It also would have been able to be charged from excess solar generation as opposed to Perilya having to operate machinery, on demand, to stabilise the grid.
- Poor maintenance and asset conditions of the main transmission lines between Buronga and Broken Hill.

OTHER ISSUES

- Far West Local Health District, due to privacy, could not pass the details of their clients that required lifesaving equipment through to the REMC for Essential Energy to be able to assist in a timely manner.
- The standalone generator at the Far West Local Health District is inadequate and has not been updated to meet the current demands of the service, placing patients' health at risk, delaying medical procedures and being unable to use appropriate imaging machines to make timely diagnosis in emergency health situations. This resulted in one patient having unnecessary surgery in Adelaide as a result.
- Loss of local pharmacy pharmaceutical supplies due to long-term refrigeration outages, causing a delay in some medications being able to be administered.
- The Broken Hill City Airport requires an upgrade to the main runway to support key infrastructure and supplies being delivered to both Broken Hill and the Far West region during times of disaster and emergencies. This impediment to timely supply and infrastructure delivery was experienced during COVID as well.

RECOMMENDATIONS MOVING FORWARD

- Investment in battery storage and microgrid projects for localised energy resilience. In particular, Hydrostor's Silver City Advanced Compressed Air Energy Storage (A-CAES) project is a key part of that permanent solution. It will provide crucial long duration storage capacity and energy stability to the Broken Hill region, with a total capability of 200 MW and 1,600 MWh (for 8 hours of storage duration at full output), which is much larger than existing infrastructure at Broken Hill.

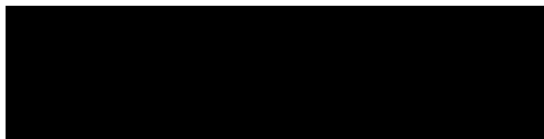
Based on the average power requirements for a household the facility is capable of supplying in excess of 80,000 homes for a day when it is fully charged. When the transmission line is operational, some of this supply will feed Broken Hill locally, and some will feed the national electricity grid.

The facility can also run much longer at a lower generation output (and this would be a common occurrence given the fact that the demand in Broken Hill very rarely exceeds 50MW). So, this allows for long periods of supply to be provided to Broken Hill from the Silver City Advanced Compressed Air Energy Storage when transmission is interrupted. Furthermore, the facility has the capability of charging and discharging simultaneously, unlike batteries, to ensure maximum usage of renewable energy in the region during times of transmission outage.

- Ensuring Transgrid are audited and held accountable to their contract with NSW by ensuring maintenance is upheld on the main transmission lines, they meet their backup and reporting requirements along with ensuring accurate information is reported to key agencies and the public.

Thank you for your consideration of the matters raised in Council's submission.

Yours faithfully



JAY NANKIVELL
GENERAL MANAGER