

**Senate Standing Committee on Environment and Communications**  
**Legislation Committee**  
Answers to questions on notice  
**Environment and Energy portfolio**

**Question No:** 264  
**Hearing:** Supplementary Budget Estimates  
**Outcome:** Outcome 5.1  
**Program:** Energy Security Office (ESO)  
**Topic:** South Australia - Electricity Blackout  
**Hansard Page:** n/a  
**Question Date:** 24 October 2016  
**Question Type:** Written

**Senator Chisholm, Anthony asked:**

The day after the severe storm that hit South Australia on 28 September and lead to a state wide blackout, AEMO released a statement that said 'the root cause of the event is likely to be the multiple loss of 275 kilovolt (kV) power lines'. Has this view changed over the last couple of weeks?

**Answer:**

The Australian Energy Market Operator (AEMO) released its *Preliminary Report – Black Systems Event in South Australia on 28 September 2016* on 5 October and updated the report on 19 October. The latter report provides more information on the sequence of events resulting from extreme weather damage to transmission lines. The updated report finds that five transmission line faults, which resulted in voltage disturbances on the network, led to the South Australian blackout.

The voltage disturbances caused an unexpected reduction of 445MW of wind generation due to an automatic response from the wind farms' control systems. This is a design setting of the affected wind farms. The AEMO report indicates that nine of the 13 wind farms in operation at the time automatically suspended operation due to the size of the voltage dips.

The Heywood Interconnector between South Australia and Victoria then increased its flows to meet the demand. As a result, the Heywood Interconnector overloaded and the automatic protective mechanisms closed the Interconnector to prevent damage. All remaining South Australian generators and the Murray Link Interconnector then tripped, leaving South Australia blacked out.

The updated report can be found on the AEMO web site: <http://www.aemo.com.au/>

AEMO intends to release a further report in December 2016 which will outline preliminary recommendations.