

**Senate Standing Committee on Environment and Communications
Legislation Committee**

Answers to questions on notice
Environment and Energy portfolio

Question No: 258
Hearing: Supplementary Budget Estimates
Outcome: Outcome 5
Program: Energy Division (ED)
Topic: South Australia - Electricity Blackout
Hansard Page: N/A
Question Date: 24 October 2016
Question Type: Written

Senator Chisholm, Anthony asked:

The Prime Minister, Energy Minister and Deputy Prime Minister all made comments linking the blackout to South Australia's use of renewable energy, in particular the intermittancy of some renewable generation. Is there any evidence to support their claims?

Answer:

The Australian Energy Market Operator (AEMO) released an updated report on the causes of the blackout in South Australia on 19 October 2016. The report finds that five transmission line faults, which resulted in voltage disturbances on the network, led to the SA region black system.

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.

Approximately 20MW of wind power also disconnected due to excessive wind speed during the storm.

The AEMO report indicates that all five gas-fired generating units operating at the time remained connected during the voltage disturbances.

AEMO is consulting with wind farm operators and wind turbine manufacturers to better understand the impact on the power system of their control settings which determine how the generator responds to voltage fluctuations. An improved understanding of and consistency in wind turbine control settings may avert tripping of wind farms in the presence of voltage disturbances of a similar scale in the future.