

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

Answers to questions on notice
Environment and Energy portfolio

Question No: 257
Hearing: Supplementary Budget Estimates
Outcome: Outcome 5
Program: Energy Division (ED)
Topic: Multiple Power Lines Loss
Hansard Page: N/A
Question Date: 24 October 2016
Question Type: Written

Senator Chisholm, Anthony asked:

If the loss of multiple power lines causes a blackout, does the type of energy generation have any impact?

Answer:

Generation type will not make a difference between a part of the network that has been cut off, but could make a difference to the stability of the rest of the network, which was not directly affected by the loss of power lines.

If a customer is physically cut off from the network, due to a power line being down, they will not receive electricity regardless of the generation mix at that point in time.

However, the generation mix does affect the ability to manage technical parameters like frequency and voltage, which in turn affects the ability of the network to cope with a disruption, due to either the loss of power line or generator.

An electricity system with high levels of inertia and multiple providers of frequency control ancillary services is better able to cope with a disruption. Synchronous generators, such as hydro, gas and coal, supply these services.