

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

Answers to questions on notice
Environment and Energy portfolio

Question No: 159
Hearing: Additional Estimates
Outcome: Outcome 5
Program: Energy Division (ED)
Topic: Maintaining grid stability
Hansard Page: -
Question Date: 14 March 2017
Question Type: Written

Senator Back asked:

Is additional expenditure on transmission the most cost effective way of increasing grid stability? Please indicate why this is the case and if it is not the case please indicate the most cost effective way of maintaining grid stability.

Answer:

The most cost effective way of increasing grid stability will differ across the grid.

Options to maintain grid stability include:

- Transmission network services, including interconnectors
- geographic diversity of large scale conventional and renewable generators
- distributed generation
- demand side response by customers
- electricity storage like batteries and pumped hydro
- synchronous condensers to provide inertia
- advanced wind farm controls to provide fast frequency response.

These options are not mutually exclusive and may complement each other.