

## Carellas, Con (ESCOSA)

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**Subject:** FW: ESCOSA Request for submissions: Con Carellas,

**From:** Zhang, Rick [<mailto:rick.zhang@siemens.com>]

**Sent:** Thursday, June 8, 2017 3:50 PM

**To:** ESCOSA:Essential Services Commission of South Australia

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**Subject:** ESCOSA Request for submissions: Con Carellas,

Dear Sir/Madam

I am writing to present Siemens-Gamesa's comments on AEMO's "RECOMMENDED TECHNICAL STANDARDS FOR GENERATOR LICENSING IN SOUTH AUSTRALIA" (Issued: 31 Mar 2017)

Siemens-Gamesa has long history of leading the renewable technology in Australia market and is very keen to support grid stability reliability with our innovative renewable energy technology and engineering.

Most of the recommendations in the report are within current Siemens-Gamesa Fleet's capability, which is recognised as supporting the security of South Australia's grid.

However, the "Over voltage ride through" recommendation (Table 2, Section 3.3.1) is a very onerous requirement from both technical and economic perspectives. Due to the characteristics of semiconductor converters, any over voltage will affect the life cycle of the semiconductors in a converter. Hence, this extraordinary over voltage requirement will necessitate manufacturer's upgrading the semiconductors to a more robust voltage withstand capability, which will cause the cost increase dramatically. Alternatively where the associated size and cost is not a viable solution for future wind farms in South Australia wind farms would need to install extra STATCOMs, which also lead to significant cost increases to projects regardless the forms of the converters or technology types. In conclusion Siemens Gamesa has concern that the balance of economy and technology would be degraded from its current state.

We kindly suggest ESCOSA to consider this recommendation carefully and take the cost impact and further degradation of the network into your deliberations.

We are very keen to participate the rules and regulation deliberations, and if you have any questions regarding our turbine or technology, please do not hesitate to contact us.

Best regards

Rick Zhang

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