

8 August 2008

Addendum No.1 to Request for EOI - Reactive Power Ancillary Service in Synchronous Condenser Mode in NSW and QLD

TAKE NOTICE that NEMMCO issues this Addendum to the Request for EOI, which is to be read subject to the clarifications detailed in this Addendum.

Further information relating to the Request for Expressions of Interest is available from NEMMCO's website at <http://www.nemmco.com.au/powersystemops/160-0378.html>.

The following questions have been raised by Interested Parties, and we set out a response to each question, which should be read in conjunction with the Request for EOI:

Question 1: Could you please explain what technical characteristics of reactive power supply NEMMCO is seeking from reactive power ancillary service (RPAS) in synchronous condenser mode as opposed to generating unit import/export capability?

Answer: NEMMCO issued a request for expression of interest to acquire RPAS in synchronous condenser mode:

- (1) to achieve the power system security and reliability standards; and
- (2) where practicable to enhance network transfer capability whilst still maintaining a secure operating state when, in NEMMCO's reasonable opinion, the resultant expected increase in network control ancillary service costs will not exceed the resultant expected increase in benefits of trade from the spot market.

NEMMCO determined the indicative reactive power absorption requirement for reactive power absorption capability to achieve the power system security and reliability standards.

Reactive power absorption capability in synchronous condenser mode in order to achieve the power system security and reliability standards is required to be enabled by NEMMCO for several reasons including voltage control during periods when insufficient reactive power absorption is available from dispatched generating units in the area where RPAS is required (the effectiveness of a generating unit to deliver RPAS will depend on its proximity to the area where RPAS is required). The need for NEMMCO to enable synchronous condensers to absorb RPAS in these circumstances typically occurs when the power system demand is low and flows on the transmission network are reduced. During such periods generating units, that would normally be available to provide reactive power absorption capability in generating mode, may be off line and unavailable and as such NEMMCO uses synchronous condensers to provide the required capability.

RPAS in synchronous condenser mode in order to enhance network transfer capability conversely is typically utilised when power system demand is high. NEMMCO published a list of constraint equations with most binding instances during the previous financial year including constraint equations where RPAS in synchronous condenser mode could have a significant effect as an indication of where RPAS could be used to enhance transmission network transfer. The effect of enabling and disabling reactive power services in generating mode is not captured in the constraint equations. Therefore, such services cannot be beneficial for enhancing network transfer.

Question 2: Consider a scenario where NEMMCO has instructed an NCAS provider to enable a synchronous condenser. If the generating unit is operating in synchronous condenser mode, is there a mechanism under which the NCAS provider could elect to revert the generating unit back to generating mode in order to generate active power [MW] in the energy market, for example during periods of high spot prices? In this scenario, the generating unit may be able to provide some reactive power capability in generating mode.

Answer: A generating unit instructed by NEMMCO to provide RPAS in synchronous condenser mode must operate in that mode until NEMMCO issues a further instruction. NEMMCO's decision as to whether the synchronous condenser mode may be disabled or not is an operational matter and would depend on the prevailing power system conditions at the time. Another matter to be considered in the decision may include the reactive power capability of the generating unit in generating mode when dispatched in the energy market compared to the reactive power capability of the same generating unit in synchronous condenser mode.

Question 3: If the NCAS Equipment was tested previously, what is the allowed timeframe for the test to be accepted by NEMMCO for the purpose of EOI evaluation?

Answer: Schedule 3 of the EOI states:

“If the Recipient has conducted a test within 12 months of the date of the EOI, it must provide:

- the test results and any additional supporting information to demonstrate the capabilities of the Services as measured at the connection point to the transmission network;”

Applying this provision, the Recipient may lodge test results for tests conducted in the 12 months prior to the date on which the EOI was issued. Please note however that the test results and other supporting information should meet the EOI requirements including demonstrating the capabilities of the proposed service that is to be offered under the EOI.

DATED this day of 8 August 2008

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