



Australian Energy Market Commission

Rule Determination

**National Electricity Amendment Participant Derogation
(Studland Bay Wind Farm (Frequency Ride Through)) Rule 2006
No.15**

**National Electricity Amendment Participant Derogation
(Studland Bay Wind Farm (Voltage Ride Through)) Rule 2006
No.16**

Rule Proponent
Woolnorth Studland Bay Wind Farm Pty Ltd
19 October 2006

Signed:

.....
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Chairman
For and on behalf of
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About the AEMC

The Council of Australian Governments, through its Ministerial Council on Energy, established the Australian Energy Market Commission (AEMC) in July 2005 to be the Rule maker for the national energy market. The AEMC is currently responsible for Rules and policy advice covering the National Electricity Market. It is a statutory authority. Our key responsibilities are to consider Rule change proposals, conduct energy market reviews and provide policy advice to the Ministerial Council as requested, or on AEMC initiative.

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Contents

1	Woolnorth Studland Bay Wind Farm’s Rule Proposal	5
1.1	Frequency ride through	5
1.2	Voltage ride through	6
2	Background	9
2.1	Frequency ride through	9
2.2	Voltage ride through	10
3	Rule determination	11
3.1	The Commission’s power to make the Rule	11
3.2	Participant derogation	11
3.3	Expediting as a non-controversial Rule	12
3.4	Combining the two participant derogation proposals	13
3.5	Relevant MCE statements of policy principles	13
3.6	Submissions received	13
3.7	Matters arising from consultation and the Commission’s analysis	13
3.8	Expiry dates for the participant derogations	16
3.9	Difference between the proposed Rule and the Final Rule	17
4	Assessing the participant derogations: the Rule making test and the NEM objective	18

Summary

The Australian Energy Market Commission (Commission) makes this Rule determination and accompanying Rules under sections 102 and 103 of the National Electricity Law (NEL). In making this determination the Commission followed the expedited process under section 96 of the NEL.

Woolnorth Studland Bay Wind Farm Pty Ltd (Woolnorth), a subsidiary of Roaring 40s Renewable Energy, proposed participant derogations that would apply to its nearly completed 75 MW Studland Bay wind farm. Fundamentally the derogations allow Woolnorth to capture the benefits it would gain if some of the more flexible technical standards proposed by NEMMCO in its "Technical standards for wind and other Generator Connections" Rule change proposal, currently being assessed by the Commission, were accepted by the Commission. The Commission published its draft determination on NEMMCO's Rule change proposal on 12 October 2006.

Woolnorth submitted its two participant derogation requests to the Commission on 21 August 2006 proposing to:

- allow its wind farm to be treated as a scheduled generator for the purposes of clause S5.2.5.8(a)(2) of the Rules, thus allowing it to be shed during extreme high frequency events without the additional costs of being registered with NEMMCO as a scheduled generator; and
- exempt its wind farm from the voltage disturbance ride through requirements in clause S5.2.5.3(a), that is, the requirement of being capable of continuous uninterrupted operation at voltages in excess of 110 % of nominal voltage.

Woolnorth requested that both the Rule change proposals be expedited as non-controversial under section 96 of the NEL as they are bridging mechanisms, pending the making of the amendment to the Rules as the result of the Commission's final determination on the NEMMCO Rule change proposal, and their benefits cannot be captured unless expedited.

On 7 September 2006 the Commission:

- commenced the Rule change process under section 95 of the NEL; and
- advised that it would expedite the Rule change process under section 96 of the NEL, subject to receiving any written objections under section 96(2).

The Commission also determined to combine the two participant derogations under section 93 of the NEL. The Commission was aware that it would need to revise this decision should it receive objections to expediting the process for either proposal. However, the Commission received no objections.

The Commission received no submissions on Woolnorth's proposal related to frequency ride through and two submissions on the proposal related to voltage ride through.

The Commission is satisfied that both the participant derogations are likely to contribute to the NEM objective, and that therefore they satisfy the Rule Making test.

Attached to this Rule determination are the Rules that the Commission has made:

- the National Electricity Amendment with an expiry date of 1 August 2007 allowing the Studland Bay wind farm to be treated as a scheduled generator for the purposes of clause S5.2.5.8(a)(2) of the Rules; and
- the National Electricity Amendment with an expiry date of 1 October 2007 to exempt the Studland Bay wind farm from the voltage disturbance ride through requirements in clause S5.2.5.3(a) and apply a standard to be equivalent to the minimum access standard proposed as part of by NEMMCO in its Rule change proposal.

1 Woolnorth Studland Bay Wind Farm's Rule Proposals

Woolnorth Studland Bay Wind Farm Pty Ltd (Woolnorth), a subsidiary of Roaring 40s Renewable Energy, is the proponent of the 75 MW Studland Bay wind farm that is in the advanced stages of construction in Tasmania.

The Commission received two Rule change proposals from Woolnorth on 21 August 2006. The two proposals are for participant derogations for its wind farm and are intended to amend the current Rules in relation to the frequency ride through and voltage ride through requirements following system disturbances.

Woolnorth is proposing these two participant derogations to the current Rules that would, in effect, allow its wind farm to be designed and initially operated as if two of the technical modifications to the Rules requested by NEMMCO in its Rule change proposal "Technical standards for wind and other Generator Connection" were already in effect. Following the expiry of these participant derogations the Studland Bay wind farm will be required to meet the technical standards that result from the Commission's determination on NEMMCO's Rule change proposal.

Woolnorth requested that both the Rule change proposals be expedited as non-controversial under section 96 of the NEL.

1.1 Frequency ride through

Woolnorth's proposal

Woolnorth is proposing a participant derogation to the current Rules in relation to frequency ride through to allow its Studland Bay wind farm to be treated as a scheduled generator for the purposes of clause S5.2.5.8(a)(2). This would allow its wind farm to participate in the generator shedding scheme coordinated by NEMMCO so that it can be shed in the event of extreme high frequencies, without the cost of meeting other requirements on scheduled generators under the Rules.

Woolnorth considers that it is impossible for a commercially available wind turbine to maintain continuous operation at frequencies within the multiple contingency and island bands of the Tasmanian frequency standard. Therefore, to connect to the Tasmanian power system under the current Rules, Woolnorth would be required to register its wind farm as a scheduled generator. This, however, involves additional costs and ongoing administrative costs that Woolnorth considers would deliver little or no corresponding benefits to either itself or electricity customers.

Woolnorth also considers that precluding wind generators from being shed for high frequencies reduces the robustness of the NEM to high frequency disturbances. This is because not shedding a wind farm means shedding additional hydro and thermal generators, which are better placed to stabilise a post-disturbance system due to their contribution to the system inertia and their governor systems.

Woolnorth notes that S5.2.5.8(a)(2) is currently being assessed by the Commission as part of NEMMCO's Rule change proposal. Consequently, the Commission may make a

Rule such that this clause would apply to large wind farms like Studland Bay¹. However, should the Commission not make the Rule change as proposed by NEMMCO, Woolnorth has proposed a timeframe that gives it sufficient time to register its wind farm as a scheduled generator, thus allowing it to continue to participate in the generator shedding scheme.

How Woolnorth's proposal would contribute to the NEM objective

Woolnorth considers that this proposed derogation would contribute to the NEM objective by promoting efficient investment in electrical services for the long-term interests of consumers without compromising the security of the national electricity system.

More specifically, Woolnorth considers that its proposal allows coordination of the Studland Bay wind farm with other generator over frequency protection, so enhancing system security during frequency disturbance events, without the ongoing administrative overheads associated with scheduled operation. That is, avoiding these overheads reduces the cost of delivering electrical services.

Proposed expiry date

Woolnorth propose an expiry date for its proposed frequency ride through participant derogation of either:

- 180 days after the Commission's final determination on the technical standards for wind and other generator connection; or
- 1 August 2007, if an absolute date is required.

Woolnorth chose the proposed expiry date to allow sufficient time for it to register as a scheduled generator in the event that the Commission does not make the Rule change proposed by NEMMCO.

Reason Woolnorth considers its proposal is non-controversial

Woolnorth considers that its proposal should be expedited as non-controversial in accordance with section 96 of the NEL on the basis that it is an interim measure that is consistent with the market objective and does not materially affect other market participants, including NEMMCO and Transend in meeting their system security and reliability responsibilities.

1.2 Voltage ride through

Woolnorth's proposal

Woolnorth considers that the current clause S5.2.5.3(a)(2) of the Rules places a uniform requirement on generation plant with regard to being able to maintain continuous uninterrupted operation during periods of high voltage at the connection point. Further it considers that under certain circumstances relaxing these requirements can result in significant costs reductions to the connecting generation plant with no corresponding detriment to system security or reliability, which is not allowed under the current Rules.

¹ Under NEMMCO's Rule change proposal clause S5.2.5.8(a)(2) would be amended so that it applies to generating units with a nameplate rating of 30 MW or more, or generating systems with a combined nameplate rating of 30 MW or more. This would therefore include large wind farms.

Therefore, Woolnorth is proposing a participant derogation to the current Rules in relation to voltage ride through such that:

- until the expiry date, the requirement under clause S5.2.5.3(a) for generating units to be capable of continuous uninterrupted operation at voltages in excess of 110 % of nominal voltage does not apply to generating units registered to Woolnorth Studland Bay Wind Farm Pty Ltd, provided that the total capacity of the generating units registered by Woolnorth Studland Bay Wind Farm does not exceed 80 MW.
- until the expiry date, each generating units registered to Woolnorth Studland Bay Wind Farm must be capable of continuous uninterrupted operation during the occurrence of power system voltages that do not exceed 110 % of nominal voltage at the connection point.

Woolnorth asserts that its proposed participant derogation will substantially reduce the cost to Studland Bay Wind Farm of participating in the NEM, while ensuring that NEMMCO and Transend are not impeded in discharging their system security and reliability responsibilities.

Woolnorth recognises that the provisions of its participant derogation are currently being considered in response to NEMMCO's Rule change proposal. Woolnorth does not propose a parallel review, or to pre-empt the Commission's consideration of NEMMCO's Rule change proposal, rather it is intended as a bridging mechanism pending the Commission determination on this proposal.

How Woolnorth's proposal would contribute to the NEM objective

Woolnorth considers that this proposed derogation would contribute to the NEM objective by promoting efficient investment in electrical services for the long-term interests of consumers without compromising the security of the national electricity system.

Woolnorth asserts that, through discussions with NEMMCO and Transend, it has ascertained that cascading failure of generating plant during system voltage disturbances can be avoided provided its wind farm can maintain continuous uninterrupted operation between 90 % and 110 % voltage, a requirement that Woolnorth can meet as a significantly reduced cost.

Proposed expiry date

Woolnorth propose an expiry date for its proposed voltage ride through participant derogation of either:

- 270 days after the Commission's final determination on the technical standards for wind and other generator connection; or
- 1 October 2007, if an absolute date is required.

Woolnorth chose the proposed expiry date to allow sufficient time for it to construct the additional capital works required to meeting the voltage ride through requirements in the existing Rules in the event that the Commission does not make the Rule change proposed by NEMMCO.

Reason Woolnorth considers its proposal is non-controversial

Woolnorth considers that its proposal should be expedited as non-controversial in accordance with section 96 of the NEL on the basis that it is an interim measure that is consistent with the market objective and does not materially affect other market participants, including NEMMCO and Transend in meeting their system security and reliability responsibilities.

The Tasmanian Department of Infrastructure, Energy and Resources provided the Commission, through the secretariat of the Reliability Panel, with a letter that indicates that the Tasmanian Jurisdiction does not oppose Woolnorth's request in relation to voltage ride through and urged that the proposal be expeditiously progressed.

2 Background

In 2004 the Ministerial Council of Energy (MCE) established the Wind Energy Policy Working Group (WEPWG) to consider a range of issues related to the impact of the increasing number of wind generators in the NEM. WEPWG formed the Wind Energy Technical Advisory Group (WETAG) to report on the relevant issues for the connection of non-scheduled generators. The WETAG discussion paper² identified the need for an urgent review of the technical requirements for wind generator connection. NEMMCO convened an industry based Technical Standards Reference Group (TSRG) to assist with a review of the technical standards and the development of a Rule change proposal.

On 10 February 2006 the Commission received the Rule change proposal from NEMMCO, concerning technical standards for wind generation and existing provisions. NEMMCO's proposal included changes to the current technical standards in schedule 5.2 of the Rules that apply to generator connection. Two of the objectives of NEMMCO's proposal are to:

- where possible, remove the distinctions in the Rules between scheduled and non-scheduled generating units, and between synchronous and non-synchronous generating technologies; and
- increase the scope for negotiation of technical standards in some circumstances where system security is not adversely affected.

The participant derogations proposed by Woolnorth relate to two aspects of the technical standards in clause S5.2. These are the frequency ride through and voltage ride through requirements that are discussed below.

The Commission is currently assessing NEMMCO's Rule change proposal and published its Draft Rule Determination on 12 October 2006. In this Draft Rule Determination the Commission has indicated its intention to accept the relevant aspects of NEMMCO's proposal.

2.1 Frequency ride through

Clause S5.2.5.8(a)(2) requires a scheduled generator to have in place facilities to rapidly and automatically reduce its output if the frequency at its connection exceeds a level nominated by NEMMCO (not less than the upper limit of the operational frequency band). This enables NEMMCO to implement a coordinated generator shedding scheme to manage high frequency disturbances.

A large wind farm, such as Studland Bay, would not be required to be registered with NEMMCO as a scheduled generator because its fuel source is intermittent. However, as a non-scheduled generator it cannot participate in NEMMCO's generator shedding scheme to manage high frequency disturbances and, consequently, would be expected under clause S5.2.5.3 to be capable of continuous uninterrupted operation over the entire range of frequency disturbance conditions allowable under the frequency operating standards.

² WETAG, *Integrating wind farms into the NEM*, discussion paper, March 2005, available at www.mce.gov.au.

Under NEMMCO's Rule change proposal clause S5.2.5.8(a)(2) would be modified to refer to generating units with a nameplate rating of 30 MW or more, or generating systems with a combined nameplate rating of 30 MW or more. Therefore, if the proposal is adopted, a large wind farm like Studland Bay would be able to participate in NEMMCO's high frequency generator shedding scheme, effectively removing the its requirement to be cable of continuous uninterrupted operation for very high frequencies.

In its Draft Rule Determination on NEMMCO's Rule change proposal the Commission has indicated its intention to accept NEMMCO's proposed change to clause S5.2.5.8(a)(2), subject to further consultation.

2.2 Voltage ride through

Generating units connected to the NEM must be capable of meeting the technical standards in relation to the voltage disturbances in clause S5.2.5.3(a)(2). This clause currently imposes a mandatory requirement that generating units must be capable of continuous uninterrupted operation for the range of voltage conditions permitted by the system standards specified in clause S5.1a.4.

The voltage range specified in clause S5.2.5.3(a)(2) may be difficult for some generating technologies to meet and in some circumstances it may be able to be relaxed without adversely affecting system security. Therefore, under NEMMCO's Rule change proposal this mandatory voltage disturbance requirement would become the "automatic access standard" for over voltages and a less arduous "minimum access standard" introduced. The minimum access standard proposed by NEMMCO is that:

each generating unit must be capable of continuous uninterrupted operation for voltages at the connection point in the range 90% to 110% of normal voltage, provided that the ratio of voltage to frequency (as measured at the connection point and expressed as percentage of normal voltage and a percentage of 50 Hz) does not exceed:

- (1) 115% for more than two minutes or
- (2) 110% for more than 10 minutes.

In its Draft Rule Determination on NEMMCO's Rule change proposal the Commission has indicated its intention to accept NEMMCO's proposed change to the voltage ride through requirements in clause S5.2.5.3, subject to further consultation.

3 Rule determination

The Commission has determined in accordance with section 102 of the National Electricity Law (“NEL”) to make the Rule related to frequency ride through and to make with amendments the Rule related to voltage ride through. The Rule to be made (the Rule) is attached to this determination.

This determination sets out the Commission’s reasons for making the Rule. The Commission has taken into account:

1. the Commission’s powers under the NEL to make the Rule;
2. the proponent’s Rule change proposals being participant derogations;
3. expediting the Rule under section 96 of the NEL as non-controversial;
4. combining the two participant derogation proposals under section 93 of the NEL;
5. relevant Ministerial Council of Energy (“MCE”) statements of policy principles;
6. submissions received;
7. the matters arising from consultation and the Commission’s analysis;
8. the Commission’s analysis as to the way(s) in which the Draft Rule will or is likely to contribute to the achievement of the national electricity market objective so that it satisfies the statutory Rule making test; and
9. expiry dates for the participant derogations.

3.1 The Commission’s power to make the Rule

The Commission is satisfied that the two Rules proposed by Woolnorth fall within the subject matters for which the Commission may make Rules, as set out in section 34 and in Schedule 1 to the NEL.

The Rule satisfies the criteria of section 34 of the NEL as it relates to:

- the operation of the national electricity system for the purposes of security; and
- the activities of persons participating in the national electricity market or the national electricity system.

In addition, the Rule relates specifically to matters which the Commission may make Rules provided for in clauses 11, 13 and 36 of Schedule 1 of the NEL where:

- clause 11 relates to the operation of generating systems, transmission systems, distribution systems or other facilities;
- clause 13 relates to the access to electricity services provided by means of transmission systems and distribution systems; and
- clause 36 relates to any other matter or thing that is the subject of, or is of a kind dealt with by, a provision of the National Electricity Code as in operation and effect immediately before the commencement of section 12 of the NEL.

3.2 Participant derogation

The Woolnorth Rule change proposals are participant derogations.

3.2.1 Woolnorth's eligibility to propose a participant derogation

Woolnorth intends to become a registered participant and has, therefore, certain obligations under the Rules. Therefore the Commission considers that Woolnorth has the right to propose a participant derogation under section 91(5)(a) of the NEL, which states:

“A person conferred a right, or on whom an obligation is imposed, under the Rules (including a Registered participant) may request the AEMC to make a participant derogation that relates to ... that person”

3.2.2 Expiry dates

Under section 92(2) of the NEL a request for the making of a participant derogation must specify a date on which the participant derogation, if made, will expire.

Woolnorth propose an expiry date for its proposed frequency ride through participant derogation of either:

- 180 days after the Commission's final determination on Technical standards for wind generators; or
- 1 August 2007, if an absolute date is required.

Similarly, Woolnorth propose an expiry date for its proposed voltage ride through participant derogation of either:

- 270 days after the Commission's final determination on Technical standards for wind generators; or
- 1 October 2007, if an absolute date is required.

3.3 Expediting as a non-controversial Rule

Woolnorth requested that the Commission treat both its applications as non-controversial in accordance with section 96 of the NEL on the basis that they are interim measures that are consistent with the market objective and do not materially affect other market participants, including NEMMCO and Transend in meeting their system security and reliability responsibilities.

The Tasmanian Department of Infrastructure, Energy and Resources provided the Commission, through the secretariat of the Reliability Panel, with a letter that indicates that the Tasmanian Jurisdiction does not oppose Woolnorth request In relation to voltage ride through and urged that the proposal is expeditiously progressed.

The Commission noted that, as these participant derogations are bridging mechanisms pending the final determination on the NEMMCO Rule change proposal, their benefits cannot be captured unless expedited under section 96 of the NEL.

The Commission considered that, in accordance with section 87 of the NEL, the two Rule change proposals are unlikely to have a significant effect on the NEM and therefore the Commission expedited the Rule changes as non-controversial in accordance with section 96 of the NEL.

The Commission did not receive any written objections under section 96(2) for either of the Woolnorth participant derogation proposals. Therefore the Commission proceeded directly to this final determination in respect to both the proposals under section 96 of the NEL.

3.4 Combining the two participant derogation proposals

Under section 93 of the NEL if the AEMC receives more than one request for the making of a Rule in respect of the same subject matter or subject matters that are related subject matters, the AEMC may treat those requests as one request.

The Commission has determined to exercise its power under section 93 and has combined the two participant derogations proposals from Woolnorth into a single proposal for the purposes of this determination. The Commission considers that the requests are related subject matters as both participant derogation proposals:

- relate to the same participant and wind farm project;
- relate to similar aspects of the generator technical standards contained in Schedule 5.2 of the Rules and that the standards may be modified as a result of NEMMCO's Rule change proposal "Technical Standards for Wind Generation", which is currently being assessed by the Commission; and
- are interim mechanisms until the NEMMCO Rule change proposal is made.

3.5 Relevant MCE statements of policy principles

The NEL requires the Commission to have regard to any MCE statements of policy principles in applying the Rule Making test. The Commission notes that currently, there are no specific MCE statements of policy principles that directly relate to the two Woolnorth proposals.

3.6 Submissions received

The Commission received no submissions on Woolnorth's proposal relating to frequency ride through and received two submissions on Woolnorth's proposal relating to voltage ride through from Transend and Roaring 40s.

Transend's submission is generally supportive of Woolnorth's voltage ride through proposal but suggests minor alterations to the proposed Rule. Roaring 40s supports Transend's suggested alterations.

3.7 Matters arising from consultation and the Commission's analysis

In this Section, the Commission addresses the suggestions that have been raised in the Transend submission or that have emerged from the Commission's analysis in relation to various aspects of Woolnorth's proposals.

3.7.1 Frequency ride through

Woolnorth's proposal

Woolnorth is proposing a participant derogation to the current Rules to allow its Studland Bay wind farm to be treated as a scheduled generator for the purposes of clause S5.2.5.8(a)(2). This would allow its wind farm to participate in the generator shedding scheme coordinated by NEMMCO so that it can be shed in the event of

extreme high frequencies, without the cost of meeting other requirements on scheduled generators under the Rules.

Woolnorth considers that precluding wind generators from being shed for high frequencies reduces the robustness of the NEM to high frequency disturbances in that not shedding a wind farm means shedding additional hydro and thermal generators, which are better placed to stabilise a post-disturbance system due to their contribution to the system inertia and their governor system.

As discussed in section 2.1 above, clause S5.2.5.8(a)(2) would be modified under NEMMCO's Rule change proposal and would apply to large wind farms irrespective of whether they were classified as scheduled or non-scheduled. Therefore, if the relevant aspects of this NEMMCO Rule change proposal are made into a Rule, this would allow the wind farm to participate in the generator shedding scheme as it is seeking to do by this derogation proposal. However, should the Commission not make the Rule change as proposed by NEMMCO, Woolnorth has proposed a timeframe that gives it sufficient time to register its wind farm as a scheduled generator, thus allowing it to continue to participate in the generator shedding scheme.

Submissions

The Commission received no submissions on the Woolnorth participant derogation related to frequency ride through.

The Commission's consideration and reasoning

The Commission notes that the Studland Bay wind farm is unable to operate continuously for the extremely high frequencies that can arise in Tasmania for multiple contingency and islanding events. Therefore, to operate, the wind farm will need to participate in NEMMCO's high frequency generator shedding scheme to ensure it is automatically shed during these high frequency events.

The Commission accepts Woolnorth view that allowing its wind farm to be shed during extremely high frequency events enhances system security as wind generators do not contribute to the inertia of the power system and cannot be readily controlled because of the intermittent nature of their fuel source.

The Commission also accepts that little would be gained by requiring Woolnorth to register its wind farm as a scheduled generator as this imposes additional costs and otherwise irrelevant requirements.

For these reasons, the Commission can only identify positive benefits arising from the proposed participant derogation and has received no submissions to the contrary.

The Commission also considers that the changes to clause S5.2.5.8(a)(2) proposed by Woolnorth are sufficient to achieve its objective of participating in NEMMCO's high frequency generator shedding scheme. NEMMCO has the power to nominate settings for this generator shedding scheme under clause 4.4.2(e). This clause provides a general power and is not specific to scheduled generators.

The Commission notes that in its Draft Determination on NEMMCO's Rule change proposal it has indicated its intention to accept NEMMCO's proposed change to clause

S5.2.5.8(a)(2), subject to further consultation. Accordingly, the clause is substantially the same in the Draft Determination as it was in NEMMCO's proposal which was the basis for Woolnorth's proposal.

3.7.2 Voltage ride through

Woolnorth's proposal

Woolnorth is proposing a participant derogation that would change the current voltage ride through requirements in schedule 5.2.5.3(a)(2) so that the requirement to be capable of continuous uninterrupted operation at voltages in excess of 110 % of nominal voltages does not apply to its Studland Bay wind farm. This is a standard that is equivalent to the minimum access standard in NEMMCO's Rule change proposal, except to the extent that this participant derogation refers to nominal voltage whereas the clause in the current Rules and the relevant clause in NEMMCO's proposal refer to normal voltage³.

Woolnorth indicated that its grid integration studies have indicated that the cost of the reactive plant required to meet the current requirements of clause S5.2.5.3(a)(2) would be significantly higher than it would be to meet the less arduous requirements in NEMMCO's proposal.

Woolnorth further asserts its proposed participant derogation would not impede Transend and NEMMCO when discharging their responsibilities with regard to system security and reliability.

Submissions

The Commission received submissions from Transend and Roaring 40s on the Woolnorth participant derogation related to voltage ride through.

In its submission Transend suggests:

- referring to "normal voltage" at the connection point, rather than "nominal voltage" as proposed in Woolnorth's proposal; and
- requiring that the capability of the generating units be negotiated and agreed with the relevant Network Service Provider.

The submission from Roaring 40s, Woolnorth's parent company, supported the suggestions in the Transend submission.

The Commission's consideration and reasoning

The Commission notes the significant cost savings that are available to Woolnorth should the voltage ride through requirements proposed in NEMMCO's Rule change proposal and in Woolnorth's participant derogation. The participant derogation allows Studland Bay wind farm to be designed to the less arduous technical standard. However, if NEMMCO's Rule change proposal is not adopted then Woolnorth would be given sufficient time to upgrade its plant to meet the voltage ride through requirements in the Rules. The Commission notes that in its Draft Determination on NEMMCO's Rule

³ In the current Rules "normal voltage" means, in relation to a connection point, its nominal voltage or such other voltage up to 10 percent higher or lower than the nominal voltage, as approved by NEMMCO, for that connection point at the request of the Network Service Provider who provides connection to the power system.

change proposal it has indicated its intention to accept NEMMCO's proposed change to the voltage ride through requirements in clause S5.2.5.3, subject to further consultation.

The Commission accepts Woolnorth's assertion that adopting the proposed voltage ride through requirements would not have a significant impact on system security as:

- the requirements are equivalent to those put forward by NEMMCO in its Rule change proposal; and
- there is support for the proposal from Transend, the relevant Network Service Provider, and the Tasmanian Jurisdiction.

The Commission agrees with Transend's suggestion that the drafting should refer to "normal voltage", rather than "nominal voltage". The Commission considers that this makes the terminology in the derogation consistent with both the current Rules and the Commission's Draft Rule for NEMMCO's Rule change proposal.

The Commission also agrees with Transend's suggestion that would require negotiation and agreement with the relevant Network Service Provider. The Commission considers that this would give further assurance that Transend and NEMMCO can meet their system security and reliability responsibilities.

However, the Commission further considers that, should Woolnorth and the relevant Network Service Provider fail to agree, then the Studland Bay wind farm should be required to meet the existing requirements in clause S5.2.5.3(a)(2). This requirement ensures that the resulting performance standard will be sufficient to ensure adequate system security.

In summary, the Commission considers that, by allowing the Studland Bay wind farm to be designed at a lower capital cost to meet less arduous technical requirements, the proposed participant derogation promotes efficient investment in electricity services without compromising the security of the national electricity system.

3.8 Expiry dates for the participant derogations

3.8.1 Frequency ride through

The Commission has accepted Woolnorth's proposed date of 21 August 2006 as all derogations must have a definite date as to when the derogation will expire. In relation to the other date which is dependent on the making of the National Electricity Amendment (Technical Standards for Wind and other Generator Connections) Rule 2006, the Commission considers that the appropriate trigger date should be the making of that Rule. The basis for this decision is the Commission is unable to identify the date that the "Technical standards for wind and other Generator Connections" Rule will be made and as such the 180 days after that date being proposed by Woolnorth as the expiry date appears indefinite at this point in time.

Should Woolnorth need additional time to address the transitional issues to deal with the Technical Standards for Wind and other Generator Connections Rule, the Commission considers that the appropriate place to deal with those issues are in the savings and transitional issues in that Rule. The Commission invites Woolnorth to make

comments on any savings and transitional arrangements it may need during the consultation period on the Draft Rule Determination on NEMMCO's proposal.

3.8.2 Voltage ride through

Similarly to the discussion above relating to frequency ride through, the Commission accepts the proposed date of 21 August 2006 but does not consider the other date proposed by Woolnorth appropriate as it is dependent on the yet to be determined date of the Technical Standards for Wind and other Generators Connections Rule being made. The Commission invites Woolnorth to advise the Commission by way of a submission on the Draft Rule Determination of NEMMCO's proposal as the savings and transitional arrangements it requires on the making of the NEMMCO Rule.

3.9 Difference between the proposed Rule and the Final Rule

The Commission has accepted the proposed Rules put forward by Woolnorth with its proposal. The Commission has made a number of drafting enhancements to ease understanding of the Rules to be made and to ensure consistency with the other participant derogations in the Rules in terms of form. The only modifications that the Commission has made to the Rules relate to the negotiation process for the voltage ride through Rule and the expiry date for both Rules.

The Commission is of the view that the negotiation process for the voltage ride through Rule that was suggested by Transend, and agreed by Roaring 40s and the Commission, should include a mechanism to ensure that the access standard is sufficient ensure adequate system security

The Commission is also of the view that instead of an expiry date of a certain number of days after the National Electricity Amendment (Technical Standards for Wind and Other Generator Connections) Rule 2006 is made, the Commission has determined that the expiry date should be the earlier date of the specified date for the respective date (1 October 2007 or 1 August 2007) and the time that the National Electricity Amendment (Technical Standards for Wind and Other Generator Connections) Rule 2006 is made.

4 Assessing the participant derogations: the Rule making test and the NEM objective

The Rule making test requires the Commission to be satisfied that a Rule that it makes will, or is likely to, contribute to the NEM objective. The NEM objective is defined in section 7 of the NEL.

The test requires the Commission to consider the implications of the two proposed participant derogations to the Rules, for the efficient investment in, and efficient use of, electricity services for the long term interests of consumers of electricity with respect to price, quality, reliability and security of supply of electricity and the reliability, safety and security of the national electricity system.

The Commission has applied the Rule Making Test to Woolnorth's proposed participant derogations and has taken into consideration alterations made by the Commission from the outcomes of its analysis and discussions in section 3.7. These modifications have been compared to the provisions currently contained in the Rules.

Based on the Commission's assessment below, the Commission is of the view that the participant derogations each satisfy the Rule Making Test as they are likely to contribute to the achievement of the NEM objective.

4.1.1 Frequency ride through

The Commission notes that the Studland Bay wind farm is unable to operate continuously for the extremely high frequencies that can arise in Tasmania for multiple contingency and islanding events. Therefore, to connect the Studland Bay wind farm it will need to participate in NEMMCO's high frequency generator shedding scheme. In the absence of its proposed frequency ride through participant derogation, Woolnorth would be required to either:

- delay connection of its wind farm until the Commission publishes its final determination on the NEMMCO Rule change proposal, possibly allowing it to participate in the generator shedding scheme; or
- incur additional compliance costs for it to meet all the obligations of a scheduled generator under the Rules, most of which are not relevant to its wind farm, with the possibility that the requirements would be removed a few months later.

The Commission recognises that both of these alternatives would be likely to be inefficient and, therefore, that the proposed derogation would contribute to the NEM objective by promoting efficient investment in electrical services for the long-term interests of consumers without compromising the security of the national electricity system.

The Commission is of the view that this derogation to the Rules represents a material improvement in the efficiency of the operational arrangements that apply to the Studland Bay wind farm and, therefore, that the proposed participant derogation meets the NEM objective.

4.1.2 Voltage ride through

The Commission recognises that to meet the current voltage ride through requirements in the Rules would require a significantly high capital cost than would be required under the less arduous requirements proposed in this derogation and in NEMMCO's Rule change proposal. Therefore, in the absence of the proposed derogation Woolnorth would need to either:

- delay connection of its wind farm until the Commission publishes its final determination on the NEMMCO Rule change proposal; or
- incur additional capital costs to meet the existing and more arduous technical requirements in the Rules with the possibility that the relevant technical standards would be relaxed a few months later.

The Commission recognises that both of these alternatives would be likely to be inefficient and, therefore, that the proposed derogation would contribute to the NEM objective by promoting efficient investment in electrical services for the long-term interests of consumers without compromising the security of the national electricity system.

Therefore, the Commission is of the view that the participant derogation meets the NEM objective as it has the potential to reduce the cost of the Studland Bay wind farm (depending on the outcome of Commissions determination on the NEMMCO Rule change proposal), while not having a material impact on the operation of the power system, particularly system security and power quality impacts on other network users.

Attachment 1: Rules to be made