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10 April 2008

By e-mail

Mr C Noutso
Manager Regulation (Access)
TRUenergy
Con.Noutso@truenergy.com.au

Dear Con,

FIRM ACCESS

1. On behalf of AGL, Ecogen, International Power Australia, Loy Yang Power and TRUenergy (**Victorian Generators**), you have asked me to consider whether particular provisions in the National Electricity Rules (**Rules**) provide generators with firm access rights.¹ You have also sought my advice on the implications of those provisions for the Victorian Generators' negotiations with VENCORP on the revised use of system (**UoS**) agreement.
2. I advise as follows:
 - 2.1 What the provisions in the Rules you have identified do, together with other Rules, is provide generators with an opportunity to establish or modify a network connection and to have access to the network services provided by the national grid networks.²
 - 2.2 The Rules also set minimum standards of performance that a network service provider (**NSP**) must meet including, importantly, the level and standard of performance of power transfer capability.³

¹ The particular provisions in the Rules you asked me to consider are clauses 5.1.3(a) to (c), 5.2.3(e) and (e1), 5.2.5, 5.3.5(d), 5.3.6 and 5.4A. Details of these are included in appendix 1.

² E.g., see clauses 5.1.3(a), 5.3 and 5.4A. Insofar as connection to the Victorian transmission network is concerned, these provisions of the Rules, and the Rules generally, need to be read in conjunction with the Victorian jurisdictional derogations in Part A of Chapter 9 of the Rules. These derogations accommodate the different roles that VENCORP and SPI PowerNet have. In particular, under clause 9.3.2:

- (a) VENCORP is generally treated as the NSP under clauses relating to the planning, development or augmentation of the transmission network or the provision of common services or network services (other than entry services or exit services).
- (b) SPI PowerNet is generally treated as the NSP under clauses relating to the connection to, or modification of a connection to, the transmission system or the provision of connection services.
- (c) Some provisions of the Rules applicable to NSPs are specifically allocated either to VENCORP or to SPI PowerNet. Among the particular provisions in the Rules you have asked me to consider, the only ones which are specifically allocated, to SPI PowerNet, are clauses 5.2.3(e) and (e1).

³ E.g., see clauses 5.1.3(c) and S5.1.1.

- 2.3 An NSP can meet those minimum standards without it necessarily following that a generator will always be able to transfer power from its generating units into the network.

To illustrate, NSPs have an obligation to arrange for the management, maintenance and operation of their networks such that electricity may be transferred continuously at connection points up to the agreed capability. However, this is an obligation that applies only to the extent that the power system is in the satisfactory operating state.⁴

Likewise, NSPs must ensure that the quantity and quality of the network services they provide are not less than could be provided if the national grid were planned, designed and operated so as to allow the transfer of power from generating units to customers. However, this obligation is one that applies only to the extent that all facilities or equipment associated with the power system are in service.⁵

- 2.4 The Rules further contemplate that the terms on which connection to a network is to be granted, and network services are to be provided, are to be set out in commercial agreements.⁶

The Rules also regulate in part the content of these terms.⁷

Importantly, they contemplate that the terms of a connection agreement may provide for an NSP to compensate a generator in the event that the generator's generating units are constrained off.⁸ An NSP must negotiate this term in good faith with the generator.⁹ It may be that the result of this negotiation would be that compensation would be forthcoming, not every time the generator was constrained off, but perhaps at least on those occasions when it was constrained off due to a failure by the NSP to meet the minimum standards of performance set by the Rules.

- 2.5 It is also open to a generator to require an NSP to meet standards of performance which are higher than the minimum standards. For example, a generator may require an NSP to ensure that it will continue to be able to transfer power into the network even when certain facilities or plant associated with the power system are out of service, whether or not accompanied by the occurrence of credible contingency events.¹⁰ An NSP would be bound by the Rules to use reasonable endeavours to meet the reasonable requirements of the generator, including in particular its requirements in respect of the level and standard of power transfer capability.¹¹

- 2.6 If a generator required standards that were higher than the minimum, then it may well be that, in order for the NSP to meet those standards while at the same time maintaining levels of service and quality of supply to existing network users, the NSP's (or another) network may need to be augmented or extended. The Rules contemplate this.¹² They also contemplate that in this scenario the generator may have to pay UoS charges in relation to any augmentation or extension.¹³

⁴ See clause 5.2.3(e1) (and see also clause S5.1.2.2).

⁵ See clause S5.1.2.1.

⁶ E.g., see clause 5.1.3(b).

⁷ E.g., see clauses 5.3.6(b), (c) and (d) and clauses 5.4A(f)(3) and (h).

⁸ See clause 5.4A(h)(i).

⁹ See clause 5.4A(f)(4).

¹⁰ E.g., see clause S5.1.2.1.

¹¹ See clauses 5.3.6(d) and 5.4A(e).

¹² E.g., see clauses 5.3.5(d) and 5.4A(e)(2).

¹³ See clause 5.4A(f)(3)(i).

- 2.7 In these circumstances it might be expected that the outcome of the negotiation on generator compensation may be more favourable to the generator. Having funded a network augmentation or extension, in order to secure a commitment to higher standards of service from the NSP, the generator may be able to contend that it ought to be compensated by the NSP whenever it was constrained off, except perhaps when the NSP is affected by a force majeure event.¹⁴
- 2.8 An important aspect of the Rules and the access arrangements they provide for is that they place constraints on NSPs in terms of how they negotiate connection agreements and the terms they may require. In particular, the NSPs must negotiate in good faith, the terms of their offers to connect must be fair and reasonable and, as already mentioned, they must use reasonable endeavours to meet generators' reasonable requirements.¹⁵ Furthermore, if a generator cannot reach agreement with an NSP, or a dispute about the proposed connection otherwise arises between them, then the generator is able to invoke dispute resolution procedures under the Rules, under which, ultimately, a solution could be imposed on the NSP by a commercial arbitrator or a dispute resolution panel.¹⁶
- 2.9 I should now circle back to the question I have been asked, namely do the Rules provide generators with firm access. These are my views:
- (a) The term "firm access" is probably not a term of art. It is not defined in the Rules nor would I have thought it has any specific, precise meaning in the current context. In a sense it may not advance matters much to have a debate about whether generators are entitled to firm access under the Rules, as opposed to just focussing on what generators' entitlements actually are under the Rules.
 - (b) If what is meant by firm access is that a generator is entitled to a guarantee from the NSP that the generator will always be able to transfer power from its generating units into the network, or compensation in lieu, then the Rules do not provide for firm access. Instead, they set minimum standards of service for NSPs that specifically contemplate that at times the power transfer available through the power system may be zero.
 - (c) While the Rules do contemplate that NSPs will pay compensation when generators are constrained off, the terms on which that compensation may be payable are negotiable within the boundaries of what is fair and reasonable. It may not be fair and reasonable to expect an NSP to pay compensation for constraints that occurred at times when it was complying with the minimum standards.
 - (d) Generators are entitled to require (and may have to pay for) higher standards of service, but this too is subject to a reasonableness test. It may not be reasonable to require 100% power transfer capability, or compensation in lieu. At the very least it may not be reasonable to hold an NSP to such a standard at times when it is affected by a force majeure event.

¹⁴ This may depend on the levels and standards of service actually required by the generator, and whether they leave any scope for the generator to be constrained off at times when the NSP is meeting the required standards.

¹⁵ E.g., see clauses 5.3.6(c), (d) and (f) and clauses 5.3.7(a) and 5.4A(b).

¹⁶ See clause 6A.30 and Part K of Chapter 6A of the Rules generally and clause 8.2 generally and clause 8.2.1(a) in particular.

- 2.10 Insofar as the Victorian Generators' ongoing negotiations with VENCORP on replacement UoS agreements are concerned, these are my thoughts:
- (a) Victorian Generators could argue that the standard of service required of VENCORP under each replacement UoS agreement should be no less than the standard required under the corresponding existing UoS agreements **and** no less than the minimum standards of service nowadays set by the Rules.
 - (b) Victorian Generators could argue that, consistent with the Rules, VENCORP should compensate a Victorian Generator on those occasions when the Victorian Generator was constrained off due to a failure by VENCORP to meet those standards of performance.
 - (c) Victorian Generators could argue that the amount of the compensation payable by VENCORP should broadly reflect foregone spot market revenue net of avoided costs, calculated having regard to information published by NEMMCO about the impact of constraints on power station output.¹⁷ VENCORP's obligation to pay this compensation should not be reduced by any statutory immunity or other limitation of liability.
 - (d) Victorian Generators should be circumspect about requiring any higher standards of service, especially if the likely implication of such a requirement would be to necessitate network augmentations or extensions.
3. I have included a number of attachments with this letter, as follows:
- 3.1 Attachment 1: Particular provisions of the Rules. In this attachment I set out in detail the clauses in the Rules you asked me to consider.
 - 3.2 Attachment 2: Establishing or modifying a connection. In this attachment I set out in detail the process and procedure under which a generator may establish a connection with a network, or modify an existing connection of alter plant, follow.
 - 3.3 Attachment 3: Levels and standards of service. In this attachment I set out details of obligations NSPs have under the Rules in respect of levels and standards of service.
4. I would be happy to discuss this advice with you further.

Yours sincerely,



Peter Nelson
Principal

¹⁷ It is interesting to note that, in the papers you provided to me, the Australian Competition and Consumer Commission (ACCC) said that firm access means an intra-regional hedge which insures against the risk of network constraints within a region preventing generators (or customers) from taking advantage of favourable spot prices. In other words, the ACCC said, the hedge works as a proxy for continued access to the regional spot price at traded volumes.

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VICTORIAN GENERATORS FIRM ACCESS ADVICE

ATTACHMENT 1 PARTICULAR PROVISIONS OF THE RULES

1. Details of the particular provisions in the Rules you have asked us to consider follow:
 - 1.1 Rules 5.1.3(a) to (c) provide that Chapter 5 of the Rules, which deals generally with network connection, is based on the following principles relating to connection to the national grid:
 - (a) all *Registered Participants* should have the opportunity to form a *connection* to a *network* and have access to the *network services* provided by the *networks* forming part of the *national grid*;
 - (b) the terms and conditions on which *connection* to a *network* and provision of *network service* is to be granted are to be set out in commercial agreements on reasonable terms entered into between a *Network Service Provider* and other *Registered Participants*;
 - (c) the technical terms and conditions of *connection agreements* regarding standards of performance must be established at levels at or above the *minimum access standards* set out in schedules 5.1, 5.2, 5.3 and 5.3a, with the objective of ensuring that the *power system* operates securely and reliably and in accordance with the *system standards* set out in schedule 5.1a;
 - 1.2 Rule 5.2.3(e) provides that:

A *Network Service Provider* must arrange for operation of that part of the *national grid* over which it has control in accordance with instructions given by *NEMMCO*.
 - 1.3 Rule 5.2.3(e1) provides that:

A *Network Service Provider* must ... arrange for:

 - (1) management, maintenance and operation of its part of the *national grid* such that, in the *satisfactory operating state*, electricity may be transferred continuously at a *connection point* on or with its network up to the *agreed capability*;
 - (2) operation of its *network* such that the fault level at any *connection point* on or with that *network* does not exceed the limits that have been specified in a *connection agreement*;
 - (3) management, maintenance and operation of its *network* to minimise the number of interruptions to *agreed capability* at a *connection point* on or with that *network* by using *good electricity industry practice*; and
 - (4) restoration of the *agreed capability* at a *connection point* on or with that *network* as soon as reasonably practicable following any interruption at that *connection point*.
 - 1.4 Rule 5.2.5 is concerned with obligations generators have under the Rules. In particular, clause 5.2.5(b)(3) requires a generator to provide generation forecast information to the relevant network service provider (NSP), for the NSP then to use in the planning and development of the network.

- 1.5 Rule 5.3.5(d) is concerned with the preparation by an NSP of an offer to connect. This is a key step in the process and procedures provided for in clause 5.3 for establishing or modifying connection. In particular, clause 5.3.5(d) provides that:

So as to maintain levels of service and quality of *supply* to existing *Registered Participants* in accordance with the *Rules*, the *Network Service Provider* in preparing the offer to *connect* must consult with *NEMMCO* and other *Registered Participants* with whom it has *connection agreements*, if the *Network Service Provider* believes in its reasonable opinion, that compliance with the terms and conditions of those *connection agreements* will be affected, in order to assess the *application to connect* and determine:

- (1) the technical requirements for the equipment to be *connected*;
- (2) the extent and cost of augmentations and changes to all affected *networks*;
- (3) any consequent change in *network service* charges; and
- (4) any possible material effect of this new *connection* on the *network power transfer capability* including that of other *networks*.

- 1.6 Rule 5.3.6 requires an NSP to make the offer to connect and regulates the terms and conditions of the offer. In particular:

- (g) An offer to *connect* must define the basis for determining *transmission service* charges in accordance with Chapter 6A, including the prudential requirements set out in that Chapter.
- (i) An offer to *connect* in respect of a *transmission network* must conform with the access arrangements set out in rule 5.4A.¹⁸

- 1.7 Rule 5.4A provides comprehensively for access arrangements relating to transmission networks. In particular:

- (e) The *Transmission Network Service Provider* must use reasonable endeavours to provide the *transmission network user access arrangements* being sought by the *Connection Applicant* subject to those arrangements being consistent with *good electricity industry practice* considering:
 - (1) the *connection assets* to be provided by the *Transmission Network Service Provider* or otherwise at the *connection point*; and
 - (2) the potential *augmentations* or *extensions* required to be undertaken on all affected *transmission networks* or *distribution networks* to provide that level of *power transfer capability* over the period of the *connection agreement* taking into account the amount of *power transfer capability* provided to other *Registered Participants* under *transmission network user access* or *distribution network user access* arrangements in respect of all affected *transmission networks* and *distribution networks*.
- (f) The *Transmission Network Service Provider* and the *Connection Applicant* must negotiate in good faith to reach agreement as appropriate on:

...

 - (3) the *use of system services* charge to be paid:
 - (i) by the *Connection Applicant* in relation to any *augmentations* or *extensions* required to be undertaken on all affected *transmission networks* and *distribution networks*; and

...
 - (4) the amounts ('*access charges*') referred to in paragraphs (g)-(j).

¹⁸ The focus of this advice is access to the transmission network. If you want I could separately consider access to distribution networks.

- (g) The amount to be paid by the *Connection Applicant* to the *Transmission Network Service Provider* in relation to the costs reasonably incurred by the provider in providing *transmission network user access*.
- (h) Where the *Connection Applicant* is a *Generator*:
 - (1) the compensation to be provided by the *Transmission Network Service Provider* to the *Generator* in the event that the *generating units* or group of *generating units* of the *Generator* are *constrained off* or *constrained on* during a *trading interval*; and
 - (2) the compensation to be provided by the *Generator* to the *Transmission Network Service Provider* in the event that *dispatch* of the *Generator's* *generating units* or group of *generating units* causes another *Generator's* *generating units* or group of *generating units* to be *constrained off* or *constrained on* during a *trading interval*.

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VICTORIAN GENERATORS FIRM ACCESS ADVICE

ATTACHMENT 2 ESTABLISHING OR MODIFYING A CONNECTION

2. Details of the process and procedure under which a generator may establish a connection with a network, or modify an existing connection or alter plant, follow:
 - 2.1 The process is initiated by the making of a connection enquiry by the generator to the network service provider (NSP) [clause 5.3.2].
 - 2.2 The NSP then responds to the connection enquiry [clause 5.3.3]. Among other things, the NSP must ask the generator for details of the generator's reasonable expectations of the level and standard of service of power transfer capability that the network should provide [clause 5.3.3(c)(2)].
 - 2.3 The generator then makes an application to connect [clause 5.3.4] including any proposals for negotiated access standards [clauses 5.3.4(e) and 5.3.4A].
 - 2.4 The NSP then prepares the offer to connect [clause 5.3.5].
 - 2.5 The offer to connect must contain the proposed terms and conditions for connection and must be capable of acceptance by the generator so as to constitute a connection agreement [clause 5.3.6(b)].
 - 2.6 So as to maintain levels of service and quality of supply to existing registered participants, in preparing the offer to connect:
 - (a) the NSP must consult with NEMMCO and other registered participants with whom it has connected agreements, if the NSP believes in its reasonable opinion that compliance with those connection agreements will be affected [clause 5.3.5(d)]; and
 - (b) the NSP must then determine, among other things, the extent of augmentations and changes to all affected networks [clause 5.3.5(d)(2)].
 - 2.7 The offer to connect must be fair and reasonable [clause 5.3.6(c)]. Without limitation, this means the offer to connect must offer connection and network services consistent with the network performance requirements to be provided or co-ordinated by NSPs under schedule 5.1 of the Rules [clause 5.3.6(c)].
 - 2.8 The NSP must use its reasonable endeavours to provide the generator with an offer to connect in accordance with the reasonable requirements of the generator, including the level and standard of power transfer capability that the network will provide [clause 5.3.6(d)].
 - 2.9 The NSP and the generator must conduct negotiations regarding the connection and the transmission network user access arrangements sought by the generator in good faith [clauses 5.3.6(f), 5.3.7(a) and 5.4A(b)].

- 2.10 The generator may seek access arrangements at any level of power transfer capability between zero and the maximum power input of the generator's generating units [clause 5.4A(d)].
- 2.11 The NSP must use reasonable endeavours to provide the access arrangements being sought by the generator, subject to those access arrangements being consistent with good electricity industry practice considering the connection assets to be provided and the potential augmentations or extensions required to be undertaken on all affected networks to provide the level of power transfer capability sought taking into account the amount of power transfer capability provided to other registered participants [clause 5.4A(e)].
- 2.12 The NSP and the generator must negotiate in good faith to reach agreement on:
- (a) the use of system charge to be paid by the generator in relation to any augmentations or extensions to affected networks [clause 5.4A(f)(3)];
 - (b) the compensation to be provided by the NSP to the generator in the event that generator's generating units are constrained off or constrained on [clause 5.4A(h)(1)]; and
 - (c) the compensation to be provided by the generator to the NSP in the event that the dispatch of the generator's generating units causes another generator's generating units to be constrained off or constrained on [clause 5.4A(h)(2)].
- 2.13 The generator and the NSP then finalise their connection agreement [clause 5.3.7].
- 2.14 If the generator and the NSP fail to reach agreement on any matter concerning the proposed access arrangements or the connection agreement, or a dispute otherwise arises between them, then the dispute resolution procedures under either Part K of Chapter 6A or Chapter 8 of the Rules may be invoked [clause 8.2.1(a)]. Ultimately this may lead to the matter in dispute being determined by a commercial arbitrator or by a dispute resolution panel.

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VICTORIAN GENERATORS FIRM ACCESS ADVICE

ATTACHMENT 3 LEVELS AND STANDARDS OF SERVICE

3. Details of obligations network service providers (NSPs) have under the National Electricity Rules (**Rules**) in respect of levels and standards of service follow:
 - 3.1 The technical terms and conditions of connection agreements regarding standards of performance must be established at levels at or above the minimum access standards for NSPs for network performance under schedule 5.1 of the Rules [clause 5.1.3(c)].
 - 3.2 As a registered participant, an NSP must maintain and operate all equipment that forms part of its facilities in accordance with relevant laws, the requirements of the Rules, good electricity industry practice and the applicable Australian Standards [clause 5.2.1(a)].
 - 3.3 An NSP must comply with the power system performance and quality of supply standards:
 - (a) described in schedule 5.1 of the Rules;
 - (b) in accordance with any connection agreement with a registered participant, with the former prevailing where there is any inconsistency if compliance with the connection agreement would adversely affect the quality or security of network service to other network users, and the latter prevailing otherwise [clause 5.2.3(b)].
 - 3.4 An NSP must arrange for:
 - (a) management, maintenance and operation of its part of the national grid such that, in the satisfactory operating state, electricity may be transferred continuously at a connection point on or with its network up to the agreed capability;
 - (b) operation of its network such that the fault level at any connection point on or with that network does not exceed the limits that have been specified in a connection agreement;
 - (c) management, maintenance and operation of its network to minimise the number of interruptions to agreed capability at a connection point on or with that network by using good electricity industry practice; and
 - (d) restoration of the agreed capability at a connection point on or with that network as soon as reasonably practicable following any interruption at that connection point [clause 5.2.3(e1)].
 - 3.5 An NSP must comply with all applicable regulatory instruments [clause 5.2.3(f)].

- 3.6 An NSP must:
- (a) fully describe the quantity and quality of network services which it agrees to provide to a person under a connection agreement in terms that apply to the connection point as well as to the transmission or distribution system as a whole;
 - (b) ensure that the quantity and quality of those network services are not less than could be provided to the relevant person if the national grid were planned, designed and operated in accordance with the criteria set out in schedule 5.1 and recognising that levels of service will vary depending on location of the connection point in the network; and
 - (c) observe and apply the relevant provisions of the system standards in accordance with schedule 5.1 [clause S5.1.1].
- 3.7 A key criteria under schedule 5.1 is that an NSP must plan, design, maintain and operate its network to allow the transfer of power from generating units to customers when all facilities or equipment associated with the power system are in service [clause S5.1.2.1].
- 3.8 However, more may be required of an NSP by a registered participant. In particular, an NSP may be required by a registered participant under a connection agreement to continue to allow the transfer of power with certain facilities or plant associated with the power system out of service, whether or not accompanied by the occurrence of certain faults (called 'credible contingency events') [clause S5.1.2.1].
- 3.9 An NSP is required to include in the relevant connection agreement the standard of service to be provided at each connection point, and that standard of service must include a power transfer capability such as that, in the satisfactory operating state, the power system must be capable of providing the highest reasonably expected requirement for power transfer (with appropriate recognition of diversity between individual peak requirements and the necessity to withstand credible contingency events) at any time [clause S5.1.2.2].
- 3.10 In contrast, during the most critical single element outage, the power transfer available through the power system may be zero (single element supply).
- 3.11 Again, however, more may be required of an NSP by a registered participant. In those circumstances the standard of service included in the connection agreement may instead be:
- (a) the defined capacity of a backup supply;
 - (b) a nominated proportion of the normal power transfer capability (e.g., 70%);
or
 - (c) the normal power transfer capability of the power system.