

## POWERLINK QUEENSLAND

RESPONSE TO: AEMC PROPOSED RULE No. 2005/2

System Restart Ancillary Services and Pricing Under Market Suspension

14 October 2005

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Powerlink welcomes the opportunity to comment on the AEMC's proposed Rules and offers the following observations and suggestions in relation to these two proposals.

### **System Restart Ancillary Services**

#### Clause 3.11.5A

The new clause 3.11.5A places new obligations on Network Service Providers whereby they would be expected to assist prospective restart service providers in the development of expressions of interest and required restart service testing programs. Proposed clause 3.11.5A states that:

*“(b) Prior to responding to any call for SRAS expressions of interest for the provision of restart services, prospective respondents should engage in discussions with relevant Network Service Providers and other relevant parties to identify and resolve, where possible, issues that would prevent the delivery of effective restart services by that prospective respondent.*

*(c) Network Service Providers must negotiate in good faith with prospective respondents to resolve, and must resolve where it is reasonable and practicable to do so, any issues raised by the prospective respondents.*

*(d) Network Service Providers must negotiate in good faith with prospective respondents to resolve, where it is reasonable and practicable to do so, any issues associated with the conduct of testing required by NEMMCO pursuant to clause 3.11.4A(c)(1)(ii). Network Service Providers must agree to participate in, or facilitate, testing of a restart service where it is reasonable and practicable to do so.”*

Such obligations could lead to significant additional work for a Network Service Provider, such as detailed system analysis or operational measures to facilitate testing, and have significant costs. The proposed Rules make no specific reference to recovery of such costs by the Network Service Provider or the basis of contractual relationships between the prospective restart service provider and the relevant Network Service Provider.

Powerlink proposes that the services provided under this clause be clearly identified as *excluded services*, either in the glossary or within this clause, and as such be covered by the framework included in clause 6.5.9 of the Rules.

It is also important to ensure that the costs of facilitating the restart service of any prospective respondent are fully recovered from that prospective respondent, for instance where additional network augmentation is required over and above that which

would meet the requirements of the regulatory test, i.e. such arrangements must not be cross-subsidised by regulated services. The fundamental principle that must be followed is that no other customer should be exposed to additional costs or supply risks as a result of any proponent providing a commercial service for system restart.

There is no reference in the proposed Rules to the impact of the proposed restart services upon system reliability and security. For instance, a generator equipped with the facility to trip to house load could exacerbate a serious system incident if it were to mal-operate, i.e. trip to house load too early during a system frequency or voltage disturbance. Also, there must be appropriate safeguards taken by NEMMCO and by the proponents to ensure system reliability during the test of such facilities.

Powerlink proposes the inclusion of additional clauses of the form:

*For the avoidance of doubt, nothing in the above obligations will require a Network Service Provider to compromise the reliability and security of its network or the supply to its customers or to consider, negotiate or adopt any arrangement unless it is fully consistent with the Network Service Provider's legal obligations. All incremental risks associated with all aspects of the restart services, including the design, testing, operation, maintenance and mal-operation must be borne by the proponent unless otherwise agreed to by the Network Service Provider. The Network Service Provider is under no obligation to accept any of these additional risks.*

*NEMMCO shall ensure that any contracted restart service does not compromise power system reliability or security at any time, including during its testing or during any reasonably foreseeable scenarios for the mal-operation of any contracted restart service, including any associated protection or control systems.*

#### Clause 4.8.12A

Clause 4.8.12 has been deleted and a new clause 4.8.12A inserted. We believe that for the purposes of clarity and simplicity, this new clause should simply replace the existing clause 4.8.12.

In part, the clause states that:

*“(a) NEMMCO must prepare, and may from time to time amend, a system restart plan for the purpose of managing and coordinating system restoration activities during any major supply disruption.”*

A major supply disruption is later defined in the glossary as:

*“The unplanned absence of voltage on a part of the transmission system, affecting one or more power stations.”*

This leads to a wide range of instances where NEMMCO may invoke system restart plans. Powerlink suggests adding clarification in the Rules by adding wording similar to “that leads to a black system to an entire electrical sub-network or a region” to the end of clause 4.8.12A(a).

In this way, the instances where calling upon SRAS are justified are more clearly defined.



Clause 4.8.13

With the deletion of clause 4.8.13, and the removal of the testing requirements from the Rules, each contract may have unique test requirements. It is essential therefore that the testing guidelines prepared by NEMMCO, whilst providing minimum acceptable physical testing requirements, are cognisant of specific electricity network restrictions on configuring networks securely to accommodate physical testing.

Clause 4.8.14

This clause is titled "Power system restoration". Powerlink believes that it is more accurate to title this clause "system restart", which would be consistent with the proposed definition.

Definitions – black start capability

The draft Rule change defines black start capability as:

*"A capability whereby, following disconnection of a generating unit from the power system, the generating unit is subsequently able to deliver electricity to either:*

- a) its connection point; or*
- b) a suitable point in the network from which supply can be made available to other generating units,*

*without having taken supply from any part of the power system since disconnection."*

Powerlink believes that this definition, rather than simplifying the Rules, further confuses the understanding of what constitutes black start capability and system restart.

Black start capability is independent of whether a generating unit has actually been disconnected from the power system, i.e. a generating unit previously off-line could also have black start capability, and is also independent of whether the unit can provide a restart service.

The important aspect of black start capability is that the generating unit must have the capability to start up without taking supply from the power system. This is a specific capability and is distinct from generating units that have the facility to trip to house load. Such units may also offer a restart service, but they do not have black start capability.

An alternative definition would be of the form:

*The capability of a generator to start from standstill, without taking supply from any part of the power system, to a state where it is capable of supplying load (in isolation) at rated frequency and voltage.*

Definitions – black system

Powerlink believes that the proposed definition for black system is not sufficiently specific, and that the definition should make reference to electrical sub-networks. The definition in the proposed rule change is:

*"The absence of voltage on all or a significant part of the transmission system or within a region during a major supply disruption affecting a significant number of customers."*



This definition relies on a subjective measure of determining what a “significant part” or a “significant number of customers” is, which allows substantial discretion in NEMMCO’s judgement and use of restart services. An example of an objective definition would be:

*The absence of voltage on an entire electrical sub-network or region during a major supply disruption.*

### Definitions – restart service

In the proposed Rules change, restart service is defined as:

*“A service provided by facilities with black start capability whereby:*

- a) energy is supplied; and*
- b) a connection is established;*

*sufficient to restart large generating units following a major supply disruption.”*

Powerlink contends that the facilities do not need black start capability per se. Such a definition excludes interconnectors, generators with the facility to trip to house load and islanding schemes, whereby a portion of an electrical network is intentionally disconnected from the wider electricity network to retain supply capacity in the event of under-frequency schemes failing to stabilise the system following a major supply disruption.

Powerlink proposes an alternative definition of “restart service” as follows:

*A service provided by facilities whereby:*

- a) energy is supplied; and*
- b) a connection is established;*

*sufficient to restart large generating units in a black system. A restart service may be provided by, but not limited to, any of the following:*

- *generators with black start capability;*
- *generators with trip to house load capability;*
- *islanded systems containing generators supplying load via a limited electrical network; and*
- *transmission system interconnectors with the necessary generation capacity.*

### Definitions – system restart

Powerlink proposes the retention of a definition for “system restart”, which was alluded to in our comments to clause 4.8.14, similar to:

*The process of energising a black system using restart services to restart generating units and restore supply to consumers following a major supply disruption.*

### **Pricing Under Market Suspension**

Powerlink is supportive of the general concepts proposed by NEMMCO and has no specific comments to make on this issue.

