20 August 2003

Mr Sebastian Roberts
A/ General Manager Regulatory Affairs - Electricity
Australian Competition and Consumer Commission
GPO Box 520J
MELBOURNE VIC 3001

Dear Sebastian

USE OF SPARES IN CALCULATING THE VALUE OF ALTERNATIVES

After discussions with Mr Louis Tirpcou of your office, the Planning Council puts forward for your consideration the following details with respect to the use of spares in any calculation of alternatives:

In the system normal situation, the number, location and type of spares held by an NSP is a management exercise in logistics, inventory and economic efficiency that is generally dictated by the performance requirements and penalties set by the regulatory scheme and general end customer service and reliability expectations.

Network spares normally represent the list of equipment necessarily kept on hand to restore power in the event of the failure of a critical piece of plant. While each new construction should individually assess the network risk associated with each element, it is unlikely both from a management and economic efficiency point of view, that every critical piece of equipment has a matching spare.

Typically, in managing spares, one would expect an NSP to conform roughly to the following:

1. Standardisation of equipment

   Where possible, NSP's endeavour to use standard equipment across a network. Such an approach provides for significant flexibility with respect to moving network elements around the network as the infrastructure evolves. Additionally, it allows for spares to be shared by multiple, equivalent network elements. While there is occasionally a need for a custom designed piece of equipment, such situations tend to be minimised in good network planning.

2. Sharing of Spares

   As indicated above, it would be economically inefficient to have one spare for each occurrence of a network element. Where there are multiple network elements of a single "type", it is common to have only one (or one per X network elements) spare that is shared. Should a failure occur, the spare is used and a replacement spare purchased. Such a scheme makes sense providing that the network elements don't all fail at around the same time either due to age or a "type" fault. Given the variations in network utilisation, elements tend not to age at exactly the same rate and effective replacement strategies will reduce the risks associated with sharing spares.

3. Cross-NSP Spares

   Where a single line is being built by a third party with no other network assets, a scheme whereby spares are shared between NSPs, although complicated, is likely to be a feasible and economically advantageous alternative to holding spares for every occurrence of a network element. Providing that the third party utilises standard equipment, it would normally be able to contract with an existing NSP to allow access to spares at a price far less than purchasing twice the amount of equipment.

4. Restoring services

   The SA Transmission Code requires, in most circumstances, that the network is constructed to N-1 standards such that the failure of any single element will not cause a loss of supply. For a category 3 area such as the Riverland, the loss of an element bringing the system to an N reliability state does not involve loss of supply and the TNSP has more than 24 hours to replace the element to return the system to its N-1 state.

   In order to restore supply to an adequate (N) level after a rare, double-contingent event, sometimes a temporary solution will be sufficient and will mean that specific spares do not necessarily need to be kept. For example, a spare tower may not be required if the wires can be temporarily supported by poles while a tower is rebuilt. Likewise, and relevant to the Murraylink alternative, the failure of a Phase Shifting Transformer could be temporarily accommodated by using a normal transformer. While flows and control may not be as optimal as those with the PST present, they will, in all likelihood, be sufficient to maintain supply and satisfy reliability requirements until a replacement PST can be sourced.

In an emergency failure situation, the availability of adequate spares to ensure restoration of supply is the key driver for spares management.

In light of the above, the Planning Council would expect to see a small amount allocated to the provision of spares for the alternatives either in recognition of the proportion of the cost of shared network spares to the project or to reflect the cost of a contract with an existing NSP. However, the current level of proposed spares appears to exceed normal and prudent practice.

Yours sincerely

Brad Cowain
CORPORATE SECRETARY
ELECTRICITY SUPPLY INDUSTRY PLANNING COUNCIL