

AEMO CONSULTATION PAPER ISSUES AND INPUTS FOR 2017 COMMENT

1 STAKEHOLDER CONSULTATION NTNDP 2016

The 2016 document is considered to be significantly better than previous editions. It is considered that some definitions/explanations could have been relegated to the appendix to assist in continuity within the document.

2 STATEMENT OF MATERIAL ISSUES

2.1 Time horizon

It is considered that a detailed scenario for 20 years is adequate but should be supplemented by a less detailed scenario to 2050.

2.2 Coal generation retirement

It is considered that a fifty-year life should be planned with provision for extending this if necessary to stabilize a region of the system with some planned extension by official request. Insufficient dispatchable generation to limit the necessary reserve margin to an economic level might be such a reason.

With respect to new coal fired units the only possibly viable installation would be to complete the last two 660 MW units at Mt Piper as a considerable proportion of infrastructure is already there. There are very few sites having 2-300mt of virgin good quality coal adjacent to a water supply and a transmission network to repeat the many previous mine-mouth power stations.

2.3 Distributed energy resources

It is not considered necessary to model distributed energy resources at this stage. If they are offered they represent an additional safety margin on the operation of the NEM. As investors develop this form of supply on a proven reliable base it can be included in following NTNDP's.

2.4 Energy transformation

The prime transformation in the network lies in the change from a north/south configuration based on coal reserves and cities/smelter loads to an east/west configuration providing maximum solar access together with broadest weather variety for wind generation. For instance, the ideal extension from NSW to South Australia would be Mt Piper to Broken Hill to Olympic Dam, the only real load centre for South Australia, but this is extremely unlikely.

The other transformation is in the multitude of connections from aggregates of small solar/wind generators as the proportion of such generators increases. At the same time the existing network will face a lesser duty but will be required for connectivity.

2.5 Regulatory uncertainties

The coming Finkel report may provide some useful guide.

3.1 Scenario development

There is serious concern that the process of smooth scenario development cannot identify potential dislocations, problems and inconsistencies. This is of increasing concern as political action shortens the time available to manage smooth transitions.

The political imperatives/international agreements focus on an eventual 100% renewable generation system. There are a number of necessary initiatives arising from this perceived requirement as set out below.

It is timely that AEMO repeated the 100% Renewable Report it completed some years ago using new data and basing it on the existing transmission network. A number of academic studies, such as Lenzen et al, have attempted this but used a hypothetical network. It is unlikely that the present network will be abandoned.

It is also desirable for AEMO to focus on the eventual system at ~2050/100% renewable and begin to describe in general terms what it might look like and how it might operate for the guidance of investors.

The present smooth scenario transition is of serious concern as political will truncates this time line more rapidly. Is it possible to take the scenarios and shorten the time scale or carry out back casting to test the robustness of the scenarios under time pressures to identify and minimize the possibility of dislocations, problems or inconsistencies.

These matters may be outside the remit of AEMO and, if so, consideration should be given to approaching ARENA or other funding body concerned with the transition towards 100% renewable generation for appropriate assistance with funding. It may also be possible to link with other organizations to achieve necessary certainty for the network and guidance for potential investors.

The 2017 NTNDP should be able to acknowledge these matters and state what is in hand to ensure future stability as far as can be foreseen.

4 METHODOLOGY CONSIDERATIONS

No useful comment.

5 PROPOSED 2017 NTNDP INPUTS

There have been a number of occasions where a lack of resources has resulted in system problems. While gas is given a complete document describing this resource in some detail other resources are not effectively considered.

It is considered that a small general resource section should cover the other resources at least in general terms, identifying potential shortcomings in a crisp manner.

The question of availability of coal is of interest. The closure of Northern Power Station was triggered to a certain extent by lack of coal. With concern over how long specific coal fired stations might last the local coal reserves are of interest as the original mine-mouth concept was exhausted long ago and coal must be sourced from progressively longer distances by train. Stockpile tonnage might be a useful measure.

The conversion of the system to one driven by weather also requires attention listing weather linked matters such as El Nino and sunspot activity together with potential electromagnetic radiation effects.

6 OTHER MATTERS

Document utilization

Three groups utilize the NTNDP and every group needs consideration. The first group is a small number of major organizations considering investing ~AUD 1b in major plant additions. These have a small army of experts covering all aspects of their interest and use the document as a guide.

The second group of about 300,000 installs local PV/battery facilities, does not know the NTNDP document exists but should be catered for by a small section in the AEMO web page acknowledging their contribution and referring them to their local retailer.

The third group is possibly 10,000 investors and others using the document as a reliable guide to the likely future of electricity/gas supply for a multitude of projects.

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