NEMMCO
National Electricity Market Management Company Ltd
ABN 94 072 010 327
Melbourne Office

5 March 2007

By Email: john.tamblyn@aemc.gov.au

Dr John Tamblyn
Chairman
Australian Energy Market Commission
PO Box H166
AUSTRALIA SQUARE NSW 1215

Dear John,

Implementation of a Region Boundary Change

Thank you for the opportunity to discuss the Snowy region boundary change issues last Thursday. As I indicated to you at that meeting, NEMMCO does not believe that it is feasible to implement the proposed changes to the Snowy region by the 4 November 2007. In this letter I have set out the main reasons that lead to this conclusion, as well as an outline of what NEMMCO regards is a feasible project approach.

As this is the first time that a regional boundary change has been carried out in the National Electricity Market, it is important that careful consideration be given to the detailed tasks, issues and risks. It is also essential that a series of trials of the transition process are carried out to ensure that the process runs as expected before introducing into the production systems.

I am mindful that in a letter the AEMC in August 2006, NEMMCO estimated that the earliest implementation time for the proposed changes to the Snowy region was early November 2007. That project estimate was based on high level assessments of tasks, resources and risks. Since that time NEMMCO has appointed a project manager and project team with subject experts from all key areas. That project team has conducted a detailed examination of the project tasks and interdependencies, and has considered specific issues and risks. This project team has identified the following issues that were previously not fully recognised:

- The amount of work involved in converting constraint equations was underestimated. With approximately 2500 equations needing to be modified, this is expected to take 8 months;

- The usual method used to test constraint equations in pre-production will not work in this case as the new constraints being built will have new interconnector terms which will not be modelled in pre production;

Mansfield Office
PO Box 2516
Mansfield QLD 4122
Tel: (07) 3347 3100
Fax: (07) 3347 3200

Melbourne Office
Level 12
15 William Street
Melbourne VIC 3000
Tel: (03) 9648 8777
Fax: (03) 9648 8778

Norwest Office
PO Box 7326
Baulkham Hills BC NSW 2153
Tel: (02) 8884 5000
Fax: (02) 8884 5500

Sydney Office
Level 22, Norwich House
6-10 O'Connell Street
Sydney NSW 2000
Tel: (02) 9239 9199
Fax: (02) 9233 1965

- As we have not previously moved existing regional boundaries, the transition from the current to the new regional structure needs to be trialled before being introduced into the production environment, to ensure that the risk to the market is minimised.

Having prepared a detailed work program, and having considered a range of project risks and issues, NEMMCO recommends that implementation of the regional boundary changes at Snowy be deferred to 1 July 2008.

NEMMCO accepts that this project estimate differs considerably from that provided in August last year, and regrets any inconvenience this has caused to the AEMC. However NEMMCO believes that it is vital to the credibility of the National Electricity Market that this, the first ever regional boundary change, is managed well and with minimal risk to the market.

I have included with this letter, a high level summary of a more detailed project schedule, which highlights the key tasks and interdependencies. The key drivers on the timing of the project are discussed below.

Constraints

There are approximately 2500 constraint equations that will need to be modified as a result of the change to the Snowy region. These include 280 system normal network constraints, 1100 single outage network constraints, 700 FCAS constraints as well as a number of multiple outage constraints. NEMMCO has resource capacity to modify approximately 80 constraints per week in addition to other constraint work as required by the usual market changes (EG introduction of new generators and changes to transmission circuits).

By modifying 80 constraint equations per week for 8 months, NEMMCO will have managed to prepare new constraints in readiness for the new regional boundary.

As constraint equations directly impact on the market and power system outcomes, it is vital that all constraint equations are tested prior to their use. The normal method of testing is to invoke the new constraint equations in the pre production environment, which mirrors the production environment. However, as these particular new constraint equations will be based on a regional structure that is different to what is modelled in the production and pre-production systems, it will not be possible to test the new constraints in pre production as normal. This is an unusual circumstance that NEMMCO has not faced previously.

To overcome this issue, NEMMCO is developing a separate testing environment that accurately represents the production systems, which can be customised to the new regional structure without impacting on the production and pre-production environments. This is a complex task in itself, which commenced in February of this year, and will be complete in June 2007. Once the new testing facilities are in place, NEMMCO will then commence the task of modifying and testing the constraint equations. This will be complete in February 2008.

Market Systems

NEMMCO is already well advanced in preparing it's market systems to accommodate changes to regional boundaries. This work has been divided into two stages, with stage 1 being modifications to the dispatch and pre-dispatch systems, and stage 2 being modifications to the PASAs. Stage 1 is now well advanced and on track for completion in May 2007. Stage 2 will then commence, with completion expected in November 2007.

With stages 1 and 2 expected to be complete by November 2007, the Market Systems will at that point, be able to accommodate changes to regional boundaries. However, before any changes to regions are introduced into the National Electricity Market systems, it is important to carry out a number of trials of the transition from the old, to the new regional structure.

Pre Production Trials

NEMMCO has not previously implemented a change to existing regional boundaries, and this transition needs to be carefully managed to ensure that market outcomes are not impacted. The experience gained with the introduction of the Tasmania region to the National Electricity Market is that carrying out a number of trials of the transition process in the pre production systems enables both NEMMCO and participants to ensure that their systems are able to pass through the transition without any unexpected outcomes.

Although the market systems will be ready from November 2006, it will not be possible to commence the pre production trials until all other changes have been finalised, including the constraints equations, metering and settlements, EMS changes, reserve margins and ST and MT PASA. These preparations will be finalised in February 2008, and the pre production trials can then commence.

Each pre production trial requires approximately two weeks to prepare, and then two weeks to conduct. NEMMCO experience from the Tasmania project is that the first pre production trial will be enable NEMMCO to ensure that the market systems are able to pass through the transition successfully. Two further trials are planned to enable participants and NEMMCO to gain experience with the transition process, and to be adequately prepared for when the transition is carried out to the production systems by 1 July 2008.

Loss Factors

Although not a key consideration in selecting the 1 July date, introduction of the new regional structure on the first day of the financial year will make the transition from the current loss factors to the 2007 / 08 loss factors a clean process. This means that it will not be necessary to carry out a supplementary calculation of loss factors to apply for a part of the financial year.

SRA & Settlements

As the 1 July is the transition from Q2 to Q3, the transition will be easier to manage for the SRA process, and will overcome the need to have SRA units applying for a part of a quarter. Although the 1 July 2008 falls on a Tuesday, the NEMMCO settlements process runs on a daily basis, and so transition of the new regional structure need not be introduced on a Sunday.

I am confident that the project estimates provided in this letter are achievable, and involve a manageable level of risk. Any proposal to implement regional boundary changes earlier that 1 July 2008 will inevitably require some of the steps in this project to be omitted, which will result in the project risk increasing.

I hope that this information is of assistance to the AEMC in it's deliberations on the proposed changes to the Snowy regional boundary. NEMMCO will be provided a more complete submission to the AEMC in it's submission on the 9 March.

NEMMCO

Please do not hesitate to contact either myself or Chris Deague should you wish to discuss this matter.

Yours faithfully,

Charlie Macaulay
General Manager Operations and Planning
on behalf of
Brian Spalding
Chief Operating Officer

NEMMCO

National Electricity Market Management Company Ltd

ID	Task Name
1	**Loss Factors**
2	Gather data
3	Calculate loss factors
4	Loss factors published for 2008 / 09
5	Review loss factors
6	Enter into MMS
7	**SRA**
8	Confirm what Auction Rule changes neede
9	Establish new Auction Rules
10	Establish new systems or workaround
11	Test new systems
12	Withdraw old units
13	Add new units
14	Update procedures
15	Auction new units
16	**Metering, Settlements & Prudential**
17	Interconnector Revenue Metering
18	Metering & Settlement Analysis Tools
19	Prudentials
20	Testing & Verification
21	**Constraints**
22	Additional testing facilities
23	Constraint equation modifications
24	**Establish reserve margins for VIC & NSW**
25	Calculate reserves
26	Enter into NEMCO systems
27	**MMS changes to enable region boundary changes:**
28	MMS stage 1 changes (Dispatch and Pre Dispatch)
29	MMS stage 2 changes (PASA)
30	**EMS changes:**
31	Prepare new displays and calculations
32	Changes ready for pre production
33	**ST & MT PASA**
34	Update standing data & forecasts
35	Prepare for pre production test
36	**Pre Production Trial**
37	Trial 1 (NEMMCO only)
38	Trial 2 (with Participants)
39	Trial 3 (with Participants)
40	**Transition to production**
41	**Changes implemented in production**