Spot Market Insurance Fund

18 December 2008

Table of Contents

1 Introduction

1.1 Rule Change Request

Snowy Hydro Limited requests the AEMC to make a Rule under Part 7 of the National Electricity Law (NEL).

The proposed Rule is a competing alternative Rule change proposal to the NGF's Physical Market Cap Trigger Rule change proposal.

The proposed Rule would establish a Spot Market Insurance Fund whereby participating Market Participants would be eligible to claim compensation for Spot market contingency events(s) which have a low probability of occurring but when it occurs result in high financial impact. These system contingency events must satisfy pre-determined conditions in order for affected Market Participants who are members of the Spot market insurance fund to claim compensation.

The major difference and advantage of the Snowy Hydro proposal compared to the competing NGF proposal is that the Spot market is not suspended during the spot market contingency event(s). The assessment of compensation is proposed to be determined by the AER after the contingency event(s) when all relevant parties have the time, resources, and all necessary data to determine whether compensation is warranted.

1.2 Purpose of the proposed Rule

Snowy Hydro has serious concerns with the NGF's proposal. These concerns can be largely summarised as:

- Distorting spot market outcomes; and
- Placing undue and unpractical pressure on NEMMCO to trigger the Contingency Administered Price Cap (CAPP) in real time when NEMMCO System Operators are likely to be under stress.

Snowy Hydro's competing and alternative proposal does not distort spot market outcomes or place NEMMCO in a position where they must trigger the CAPP in real time.

Snowy Hydro's proposal allows the Spot market to continue to operate under non credible contingency event(s) but allows participating Market Participants to make a claim to the AER for compensation AFTER the non credible contingency event when NEMMCO and all Market Participants have sufficient data and time to assess whether the relevant non credible contingency event qualifies as a trigger event for compensation purposes. If the event meets all specified trigger criteria then Spot market compensation may be warranted.

2 Statement of Issue

The primary purpose of Snowy Hydro's Rule change proposal is to mitigate the financial risk on Market Participants of very low probability but high financial impact system contingency event(s) outside a Market Participants's direct control. When these severe power system disruption events occur Snowy Hydro's proposal uses an established Spot market insurance fund to compensate individual Market Participants which have elected to be members of the insurance fund.

Participation in the Spot market insurance fund is not limited to scheduled generators as the relevant system incident may impact the Spot price which in turn will impact all Market Participants.

In contrast the NGF proposal relies on NEMMCO having to determine in real time when these severe power system disruption event occurs whether to suspend the Spot market and introduce administered prices.

While the purpose of Snowy Hydro's Rule change and the competing NGF Rule proposal are similar the way by which the financial risk is managed are very different with very different impacts on market efficiency.

Snowy Hydro believes the NGF proposal is inefficient and does not meet the NEM objective on a number of fronts. These concerns are outlined in the following sections.

2.1 Distorting Spot Market Outcomes

The NGF proposal uses the Spot market rules to limit financial exposure. This risks distorting Spot market outcomes and incentives:

- Because of a Spot market contingency event(s) the Spot market is at risk of administered prices or in effect suspended. Just the risk of suspension alone will change generator incentives and demand side response which in the absence of the CAPP would have efficiently brought the underlying supply and demand situation into balance;

- When the CAPP is imposed, the correct incentives for market response are removed. That is the capping of spot prices will dis-incentivise available generation and demand side response to respond to the Spot market signal in the most responsive manner;

- As a result price signals are blunted and this distorts the optimal mix of generation plant and demand side response in the long run. In particular, Snowy Hydro is concerned that blunting the spot price would significantly reduce incentives on peak plant entry which typically rely on a short duration of high spot prices to become economically viable.

The NGF proposal tries to make a distinction between efficient and non-efficient Spot prices for the purposes of new generation pricing signals. Snowy Hydro believes this attempt at classifying the price is wrong.

The very purpose of a Spot market is to allow Market Participants to respond to the Spot price both for dispatch, consumption, and in the long run for investment decisions. In particular, for new generation investment what matters is the price irrespective of whether it was brought about from a non credible contingency or as a result of tight supply and demand.

The CAPP would be an arbitrary mechanism that would affect the Spot price by distorting the both the price and the distribution of prices. Snowy Hydro believes that it is the distortion on the distribution of Spot prices which would have the most significant impact on the mix of optimal plant increasing the risk that the wrong type of generation investment is committed into the market. In the long run this is not in the interest of consumers.

2.2 Problems in Triggering and ceasing the CAPP in real time

The procedure to trigger the NGF's CAPP and determine when the CAPP should cease is very complex. This is demonstrated by a series of complex flow diagrams.

NEMMCO is required to trigger the CAPP in real time under these procedures. There is an element of subjective interpretation (eg. guessing) required by NEMMCO to make real time decisions based on incomplete system data relating to the system contingency event and interpretation of very complex procedures.

This means NEMMCO has to have all necessary information and perfect foresight to ascertain whether a CAPP should be applied. Snowy Hydro believes this is both unreasonable and unpractical to impose on NEMMCO as the Spot market operator particularly in a time where NEMMCO system operators are likely to be under high stress.

The Reliability Panel's annual NEM Performance Review summates the number of Non Credible Contingency Events and multiple contingencies occurring each year. The NGF states that, "According to these reports, there were a total of 47 such incidents in the four years to 2007: about one per month[1]".

According to these statistics it is possible under that NGF proposal that the Spot market could be suspended once per month. This is potentially a very high level of market intervention and compromises the very reason for a Spot market, that is, to provide a transparent price signal for Participants to respond to the underlying supply and demand balance.

Some of these Non Credible Contingency Events may not have a material impact on dispatch and therefore not result in the CAPP being applied. However, this is irrelevant as the risk of administered prices (ie. market suspension) is sufficient to change Market Participants behaviour and incentives and hence the NGF proposal could result in a greater level of market distortion than envisaged by the number of time the CAPP is actually triggered.

Snowy Hydro believes that under the NGF proposal there is a possible risk that NEMMCO may incorrectly trigger the CAPP when analysis of the facts after the contingency event conclude that the trigger was unwarranted. In this situation we believe that there are strong grounds for Market Participants to claim compensation. This raises the issue of who pays for this sort of compensation?

[1] NGF Physical Cap Trigger Rule Change Proposal, page 24.

2.3 Increases the risk of further NEMMCO market interventions

Capping the Spot market at times of system stress financially prevents appropriate supply and demand side response. This complicates system stress management for NEMMCO, and as a result increases the risk that further market interventions are required to bring the Spot market back to balance. This may mean that NEMMCO is required to direct Market Participants.

Directions under these circumstances would be an artificial requirement brought about by the intervention of the CAPP in the first instance. If these directions were to occur then further resources and time is required to determine subsequent compensation. Snowy Hydro believes such outcomes would be inefficient and not in the long term increase of consumers.

2.4 Smearing of Financial Risk

The NGF rule proposal smears the financial exposure to all Market Participants. As a result this may reduce the incentive to address the root cause to the problem which triggered the CAPP in the first instance since the pain is not incurred by one or a Group of Participants who in the absence of the CAPP would have a greater incentive to ensure that the problem never occurs again.

In a sense the NGF rule proposal creates moral hazard whereby generators rely on the market to provide “free” insurance instead of ensuring their risks are managed prudently.

The smearing of risk under the NGF proposal would adversely impact the secondary market and its regular Participants such as brokers and financial intermediaries. This class of market Participants rely on market volatility and their services are tied to managing the risk of market volatility and providing liquidity.

If the overall level of market volatility is distorted under the NGF proposal then the risk is this important class of Market Participants would become unviable. In the medium to long term this becomes an undesirable outcome as these entities provide an important function to an efficient secondary market for financial contracts.

Finally, the NGF proposal results in arbitrary financial transfers which are dependent on the Market Operator triggering the CAPP in real time. Depending on the individual Market Participants contract position it could be a winner or a loser.

2.5 Technology Biased

The NGF Rule change proposal is technology biased. That is, peaking generators don’t have start up problems similar to coal generators. Thereby, in the absence of market suspension the response from peaking generators may ameliorate the risks associated with the system contingency event.

2.6 Bias towards a number of generators in close proximity and gaming concerns

The NGF Rule change proposal is designed to favour generators in a highly concentrated location at the expense of generation that is not concentrated (eg. Favours the Latrobe Valley generators). This is because the probability of a contingency affecting multiple stations is much higher. Snowy Hydro's proposal does not have this bias as the triggers for compensation would be dependent on consultation undertaken by AER with Market Participants and NEMMCO.

Further to this there is the possibility of gaming where a scheduled generator with multiple generators in different locations "co-ordinate" multiple generator failures as a means to cap the spot price in situations where the un-administered spot prices are unfavourable to them.

3 Description of the proposed solution

This section describes Snowy Hydro's proposed alternative rule change.

Snowy Hydro believes that the institution best placed to administer the Spot market insurance fund is the AER. The AER are best placed to take an independent perspective on Spot market outcomes and are in the best place to determine whether a Spot market contingency event would qualify as a trigger event for compensation purposes.

3.1 Overview

It is proposed that the AER in consultation with Market Participants and NEMMCO will determine what structure and form the Spot market insurance fund will ultimately take.

Snowy Hydro envisages that the Spot market insurance fund will be similar to the Participant Compensation Fund in clause 3.16 of the National Electricity Rules.

Appendix 1 outlines a Draft Rule change of what the Spot market insurance fund may be like based on clause 3.16 Participant compensation fund.

3.2 Administration of the Spot Market Insurance Fund

It is proposed that the AER in consultation with Market Participants and NEMMCO is to develop guidelines and procedures to determine the administration of the Spot market insurance fund.

The following is an examination of a number of issues that would need to be agreed amongst Market Participants and NEMMCO as to how the Spot market insurance fund is be administered.

3.2.1 Funding of the Spot Market Insurance Fund

It is proposed that the AER in consultation with Market Participants and NEMMCO would determine how the Spot market insurance fund is to be funded by its members. It is envisaged that Market Participants can elect to contribute to the fund on a voluntary basis. This payment would be facilitated through the NEMMCO Participant fees. Once this payment is made the Market Participant is insured for the relevant financial year.

It is envisaged that there would be no cap on the fund. This is because the fund is to insure against low probability but high financial impact contingency events. Hence, the fund should err on the side of being bigger rather than smaller.

To stop gaming of the participation in the fund, Market Participants who elect to participate by making a financial payment into the fund after the fund establishes are subjected to a one year waiting period after their payment whereby they can not make a claim.

3.2.2 Defining a Trigger Event for Compensation purposes

Members in the fund can make a claim for compensation when the relevant system contingency event meets trigger specifications. Snowy Hydro believes the trigger outlined by the NGF proposal is a reasonable starting point for discussion.

We believe the NGF's proposed material impact on dispatch triggers are too small and don't recognise idle capacity that may be available to respond to the contingency event.

However, Snowy Hydro believes that the relevant trigger and material impact on dispatch thresholds are key issues that should be determined by the AER in consultation with Market Participants and NEMMCO.

3.2.3 Compensation methodology

If a trigger event meets all relevant threshold criteria then compensation to the affected Market Participant is applicable.

In general we believe the compensation is to be limited to the amount available in the Spot market insurance fund. The compensation is to insure against spot market losses and will not include compensation arising from loss on financial contracts. Compensation arising from the possession of settlement residue units may be relevant for the purposes of determining compensation.

Snowy Hydro recommends that the compensation methodology is an important issue that the AER would develop in consultation with Market Participants and NEMMCO.

4 How the proposed rule would address the Issues and meet the market objective

Snowy Hydro's proposed Rule would mitigate the risk for Market Participants of low probability but high financial impact system contingency events. The key difference and advantage of the Snowy Hydro rule change is that the determination of whether a system event meets the specified criteria for compensation is done after the market event and not in real time. The following is a brief description of how the proposed Rule would address the issues.

4.1 Does Not Distort Spot Market Outcomes

The Snowy Hydro proposal does not disrupt the Spot market. Market Participants would have confidence that the Spot market would continue to operate without the risk of administered prices due to a system contingency event. This then ensures that there exist strong incentives to ensure that the supply and demand balance is achieved in the most efficient manner.

4.2 No Problems Associated with Triggering and Ceasing the CAPP in real time

NEMMCO is not required to trigger the CAPP in real time under system contingency conditions. This means NEMMCO has all the necessary information and sufficient time to ascertain whether the system incident event meets all the required triggers for compensation to be applicable.

NEMMCO as the spot market operator are not placed under undue stress to manage the complex NGF CAPP procedure at a time where they are likely to be under high stress. NEMMCO can then concentrate resources and time to managing the power system in a secure and reliable manner.

4.3 Reduces the risk of NEMMCO market interventions

Under the Snowy Hydro proposal the Spot market is allowed to operate uninterrupted by a system incident(s). This means Market Participants would manage their positions with confidence knowing that there would be no administered prices. Under these circumstances the risk of NEMMCO intervention is reduced since all Participants have the correct incentives to match the supply and demand balance in the most efficient manner.

4.4 No Arbitrary Smearing of Financial Risk

In the Snowy Hydro proposal there is no arbitrary smearing of financial risk amongst all generators by suspending the Spot market and capping the market price.

Instead under the Snowy Hydro proposal Market Participants that contribute to the Insurance Fund can seek compensation through the Spot market insurance fund.

The Snowy Hydro proposal more transparently exposes the root cause to the system incident as the market price is uncapped. As a result after the system event there would be greater transparency and incentives to address the root cause to the problem which triggered the system event in first instance. That is, the focus would remain on transmission performance if this has lead to the non credible contingency. In comparison the NGF proposal smears financial exposure to all Market Participants thereby potentially ameliorating the drive to address the root cause of the non credible contingency event.

4.5 No Technology Biased

Under the Snowy Hydro proposal there is competitive neutrality amongst different generator types and demand side response. Base, intermediate, and peaking generators would respond accordingly to the underlying supply and demand balance and the resultant Spot market price.

4.6 Neutrality for generators in all locations and no gaming concerns

The Snowy Hydro proposal is neutral for all generators in all locations. The claim for compensation from generators in made after the system incident event and is dependent on the triggers that Market Participants and NEMMCO can agree on in consultation with the AER.

Because the trigger is not executed in real time this eliminates the risk of gaming to cap the Spot market price.

5 How the proposed Rule contributes to the National Electricity Objective

Snowy Hydro believes the Rule change proposal would contribute to the National Electricity Objective. The efficiency improvements are likely to occur in the following areas:

- The spot market: Participants would continue to have confidence in making operational and investment decisions based on a minimal interventionalist spot market.

- The contracts market: Market risk would be a function of the underlying supply and demand balance without having to factor in the risk of more market intervention that would may have the effect of reducing the overall market volatility.

- Long term generation and demand side response investment: The Snowy Hydro rule change proposal is competitively neutral on different types of generation plant and demand side response. As such the market is free to come up with the optimal mix of plant and demand side response to meet future supply and demand balance.

These net efficiency improvements are discussed in the following sections.

5.1 The Spot Market

Participants would continue to have confidence in making operational and investment decisions based on a minimal interventionalist spot market. The risk of market intervention suspending the market is eliminated thereby ensuring that Market Participants have strong incentives to restore the supply and demand balance as quickly as possible.

NEMMCO can focus on maintaining the system in a secure and reliable manner when there is a serious system contingency event.

5.2 The Contracts Market

Market risk would be a function of the underlying supply and demand balance without having to factor in the risk of more market intervention that would have the effect of distorting the overall market volatility.

Financial intermediaries would have the right incentives to provide their services of risk management and the provision of liquidity.

5.3 Long Term Generation and Demand Side Response Investment

The Snowy Hydro rule change proposal is competitively neutral on different types of generation plant and demand side response. As such the market should come up with the optimal mix of plant and demand side response to meet future supply and demand balance.

In contrast the NGF proposal seriously risks artificially reducing the overall market volatility thereby reducing the likelihood of peak generation plant entry to a sub-optimal level to meet the overall system demand profile. In the long run consumers of electricity would pay a higher price for electricity since the optimal merit order of plant has been artificially modified.

6 Expected Costs and Benefits of the Rule Change

The costs and benefits of the Rule change can be divided into the following groups or entity:

- Generators
- Retailers
- Customers
- NEMMCO and the AER

The expected costs and benefits to each group or entity is analysed in the following sections.

6.1 Generators

The expected benefit to generators would be greater assurance that compensation is claimable for system contingency events which cause a large financial impact. Generators may then be in a better position to increase their overall exposure to the electricity market and therefore increase their volume of contracts offered to the market.

The expected cost would be the insurance premium payable into the Spot market insurance fund as determined by the AER in consultation with Market Participants and NEMMCO. However, this cost in effect reduces the risk exposure of the generator to a system contingency event which causes large financial impact on the generator.

6.2 Retailers

Retailers can elect to participate in the Spot market insurance fund and thereby have some level of insurance for severe system contingency events that meet the triggers for a claim for compensation.

Retailers are also expected to benefit from the overall increase in the volume of contracts offered by generators participating in the Spot market insurance fund.

6.3 Customers

Customers would be the ultimate beneficiaries from more contract availability in the market.

The Snowy Hydro proposal also minimises the risk of market interventions. Less market intervention ensures less price distortion and over the long term this is likely to benefit customers.

The Snowy Hydro proposal does not distort the mix of new generation plant in the market. Hence, customers in the long run would benefit from a more optimal mix of generation plant to meet future supply and demand balance.

6.4 NEMMCO and the AER

NEMMCO would benefit from the Snowy Hydro proposal by not requiring to administer the complex NGF CAPP procedure at a time when the system is under stress. NEMMCO can then concentrate on their core responsibility of managing the system in a secure and reliable state. There would be small on-going costs to NEMMCO in administrating the fund. This includes the collection of the insurance premium on yearly basis.

It is proposed that the AER would be required to consult with Market Participants and NEMMCO on the operation and administration of the Spot market insurance fund, the triggers, and the compensation methodology. This is likely to be a one off cost to the AER. There may be some on-going costs to the AER for the determination of compensation for any claims.

Whilst these are costs to NEMMCO and the AER, the overall benefit in having the Spot market insurance fund is expected to far outweigh these costs.

7 Summary

The NGF Physical Cap Trigger Rule proposal has the following major problems:

- Distorts spot market outcomes
- Requires NEMMCO intervention in real time
- The NGF proposal may require more flow-on market interventions to balance the underlying supply and demand balance.

The NGF proposal tries to classify efficient and non efficient Spot prices for the purpose of signalling new generation investment. For new generation investment and demand side response what matters is the price irrespective of whether it was brought about from a non credible contingency or as a result of tight supply demand.

The NGF proposal by trying to eliminate price volatility created from non credible contingencies is distorting the price duration curve thereby increasing the risk that the wrong type of generation investment is introduced into the market and it may reduce the level of demand side response. In the long run this is not in the interest of consumers.

Snowy Hydro has proposed a Spot Market Insurance Fund as an alternative solution. The Spot Market Insurance Fund addresses all of the problems outlined in the NGF proposal without the major problems associated with the NGF proposal.

The Spot Market Insurance Fund will require further consultation from the AER in consultation with Market Participants and NEMMCO on:

- Trigger conditions for compensation purposes;
- The form of the Spot market compensation fund; and
- Membership of the Spot market insurance fund and membership costs.

Snowy Hydro believes the Spot Market Insurance Fund will address the issue of unmanageable material financial losses following a low probability but high financial impact power system disruption.

Draft Rule

3.21 Spot market insurance fund

3.21.1 Establishment of Spot market insurance fund

(a) *NEMMCO* must continue to maintain, in the books of the corporation, a fund called the *Spot market insurance fund* for the purpose of paying compensation to *Market Participants* as determined by the *AER* for a *system contingency trigger event*.

(b) The *AER* in consultation with *Market Participants* and *NEMMCO* is to develop and publish guidelines and procedures for the operation of the *Spot market insurance fund*. These guidelines and procedures will include at a minimum the following provisions:

(1) the definition of *system contingency trigger event*; and

(2) the compensation methodology of the *Spot market insurance fund*.

(c) Any claims for compensation by any participant of the *Spot market insurance fund* must be determined by the *AER*.

(d) Participation in the *Spot market insurance fund* must be:

(1) open to any Market Participant; and

(2) voluntary.

(e) Any *Market Participant* that does not elect to participate in the *Spot market insurance fund*:

(1) will have no entitlement to compensation from the *Spot market insurance fund;* and

(2) will have no liability for any fees or charges associated with the *Spot market insurance fund*.

(f) *NEMMCO* must pay to the *Spot market insurance fund* that component of Participant fees under rule 2.11 attributable to the *Spot market insurance fund*.

(g) The *Spot market insurance fund* is to be maintained by *NEMMCO* and is the property of *NEMMCO*.

(h) Any interest paid on money held in the *Spot market insurance fund* will accrue to and form part of the *Spot market insurance fund*.

(i) *NEMMCO* must pay from the *Spot market insurance fund* all income tax on interest earned by the *Spot market insurance fund* and must pay from the *Spot* *market insurance fund* all bank account debit tax, financial institutions duty and bank fees in relation to the *Spot market insurance fund*.

(j) Upon ceasing to be a *Market Participant*, a *Market Participant* is not entitled to a refund of any contributions made to the *Spot market insurance fund*.

(k) *NEMMCO* must:

(1) operate the *Spot market insurance fund* in accordance with the guidelines and procedures referred to in clause 3.21.1(b); and

(2) make payments from the *Spot market insurance fund* only under the express authorisation of the *AER*.

Terms to be added to the Glossary (Chapter 10 of the Rules)

Defined Term	**Meaning**
Spot market insurance fund	The fund described in rule 3.21.1
System contingency trigger event	A system contingency trigger event determined by the AER under rule 3.21.1