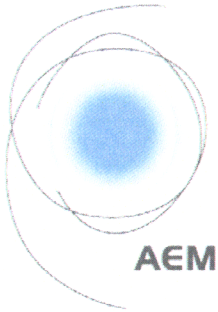

Australian Energy Market Commission

~~Clarification~~ of Schedule for the Administered Price Cap

Final Report

20 May 2008

Signed: .....

Liza Carver
Acting Chairperson
For and on behalf of

Australian Energy Market Commission

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About the AEMC

The Council of Australian Governments, through its Ministerial Council on Energy, established the Australian Energy Market Commission (AEMC) in July 2005 to be the Rule maker for national energy markets. The AEMC is currently responsible for Rules and policy advice covering the National Electricity Market. It is a statutory authority. Our key responsibilities are to consider Rule change proposals, conduct energy market reviews and provide policy advice to the Ministerial Council as requested, or on AEMC initiative.

Contents

Abbreviations

AEMC	Australian Energy Market Commission
APC	Administered Price Cap
APP	Administered Price Period
Code	National Electricity Code
Commission	see AEMC
CPI	Consumer Price Index
CPT	Cumulative Price Threshold
CRR	Comprehensive Reliability Review
ERAA	Energy Retailers Association of Australia
LRMC	long run marginal cost
NECA	National Electricity Code Administrator
NEL	National Electricity Law
NEM	National Electricity Market
NEMMCO	National Electricity Market Management Company
NEO	National Electricity Objective
NGF	National Generators Forum
Rules	National Electricity Rules
SCO	Standing Committee of Officials
SRMC	short run marginal cost
VoLL	Value of Lost Load

Summary

Commission's determination

Following the second round consultation process, the Commission determines the final schedule which specifies the Administered Price Cap (APC).

In this schedule, the Commission determines that the APC is $300/MWh for all regions in the National Electricity Market (NEM), for all time periods.

The Commission anticipates that it will review the APC schedule periodically when it considers necessary, but at least every three years. The Commission considers such revision would appropriately negate the need for any indexation of the APC.

The revised APC schedule will become effective from the *trading interval* ending 4:30 AM Eastern Standard Time on 25 May 2008.

In its draft report, the Commission sought comments from NEMMCO and market participants as to whether an immediate implementation time is appropriate and achievable. The Commission did not receive any comment on this matter.

This APC schedule also replaces the Tasmanian derogation under clause 9.45.2 of the National Electricity Rules (Rules).

The Commission will publish a copy of this schedule on its website. The schedule can also be found in Appendix 1 of this report.

APC determination process

The Commission makes this APC schedule in accordance with the requirements under clause 3.14.1(a) of the Rules:

> "In conjunction with each participating jurisdiction, and after consulting Market Participants in accordance with the Rules consultation procedures, the AEMC must develop, authorise and publish and may vary from time to time a schedule to specify an administered price cap for each region to apply to spot prices and market ancillary service prices and to be used as described in this rule 3.14."

To consult with each participating jurisdiction, the Commission sent letters to all members of the Standing Committee of Officials (SCO). These letters informed the SCO members of the Commission's intention to undertake a consultation on the level of the APC. The letters also sought comments from the SCO members regarding their views on this matter. The Commission did not receive any response from the SCO members.

Clause 8.9 of the Rules sets out the Rules consultation procedures. The Commission followed these procedures to determine the APC schedule.

The Commission undertook the procedures as follows:

- 5 November 2007 - in accordance with clauses 8.9(b), 8.9(c) and 8.9(d) of the Rules, the Commission published a notice on its website as part of the first round consultation process. This notice also invited comments from interested parties.
- 7 January 2008 - the first round consultation ended.
- 22 February 2008 – the Commission published its draft report. As part of the second round consultation process, the Commission invited interested parties to comment on the draft schedule outlined in the draft report.
- 7 April 2008 – the second round consultation ended.
- The Commission publishes this final report following the second round consultation.

Clause 8.9(k) of the Rules requires the *consulting party*, in this case the Commission, to publish the final report setting out:

> "(1) the conclusions and any determinations of the *consulting party* on the matter under consultation [this is discussed in Chapter 3 of this report];
>
> (2) its reasons for those conclusions [this is discussed in Chapter 4 of this report];
>
> (3) the procedure followed by the *consulting party* in considering the matter [this is discussed in Chapter 5 of this report];
>
> (4) summaries required pursuant to rule 8.9(g)(4) [this refers to the summaries of the submissions from the first round consultation process, and the *consulting party*'s response to each issue raised in the submissions. This is discussed in Chapter 6 of this report]; and
>
> (5) summaries of each issue, that the *consulting party* reasonably considers to be material, contained in valid written submissions received from Consulted Persons on the draft report and the consulting party's response to each such submission [this is discussed in Chapter 6 of this report],
>
> and, subject to the provisions of rule 8.6, the *consulting party* must make available to all Consulted Persons, on request, copies of any material submitted to the *consulting party*."

Reasons for the APC determination

The APC level

During the first round consultation process, the Commission sought comments from interested parties on the criteria to be taken into account when determining the level of the APC.

The Commission assessed the submissions from interested parties against the national electricity objective (NEO).

Taking submissions and the NEO into account, the Commission formed the view that the APC level should strike a balance between the following competing objectives:

- mitigating the risk of a systemic financial collapse of the electricity industry during an extreme market event;
- minimising compensation claims by market participants following an application of the APC; and
- minimising the incentives for market participants to not supply electricity during administered price events.

The Commission considers the APC level should be sufficiently low to mitigate the risk of a systemic financial collapse and sufficiently high not to distort the incentive for supplying electricity during an extreme market event when the APC is triggered. In addition, the Commission considers the APC level should be sufficiently high so that the expected frequency and magnitude of compensation claims are kept to the minimum.

The Commission considers an APC level of $300/MWh is adequate in achieving a balance between the competing objectives.

This APC level is significantly higher than the short run marginal costs (SRMCs) of most generators in the NEM. The APC level is therefore effective in minimising the distortion of the incentive for supply participation during an extreme market event, when the APC is triggered.

An APC level of $300/MWh is likely to mitigate the frequency and magnitude of compensation because: (a) the APC level is not significantly lower than the highest estimated SRMC in the NEM; and (b) the total generation capacity, with estimated SRMCs above the APC level, is assessed by the Commission to be minor compared to the total generation capacity in the NEM.

The Commission is currently progressing on the work to clarify the administered pricing compensation arrangement under the Rules. This is part of a Rule change proposal submitted by EnergyAustralia.

Being only 3% of the VoLL price of $10,000/MWh, the APC level of $300/MWh is expected to reduce the price risk exposure of market participants significantly following an extreme market event when the APC is triggered. Thus, it is likely that

the APC level would be effective in mitigating the risk of systemic failure of the electricity industry.

This APC level would align with the $300/MWh cap currently traded on the Sydney Futures Exchange (SFE). Thus, the Commission expects prudent market participants to be able to manage their market risks up to this price level. Market intervention under this price level is therefore unlikely to be necessary.

APC level for off-peak periods

The Commission sets the APC level for off-peak periods to be the same as that for peak periods.

During off-peak periods, electricity demand is likely to be low. Therefore it is unlikely that a peaking plant with a high SRMC would be required to generate to meet demand.

However, it is still possible that a peaking plant is required to generate during off-peak periods. This is especially the case during an Administered Price Period (APP). Under this circumstance, the power system is likely to be under stress, possibly due to base load and mid-merit generators experiencing outages. The dispatch of high cost peaking generators may therefore be required to maintain the reliability and security of the power system. These outages may occur at any time. Thus, the dispatch of high cost peaking generators may also be required at any time, during both peak and off-peak periods. The SRMC cost of a peaking generation plant is the same regardless of the time of dispatch.

The APC, being a price cap, should have the ability to encompass any reasonable contingency. The APC should therefore not distort the incentive for the peaking generating plants to be available when they may be needed, peak and off-peak periods alike. This may be achieved by setting the APC level for off-peak periods to be the same as that for peak periods.

APC levels for all regions in the NEM

The Commission considers the APC level should be uniform across all regions in the NEM. This is because the NEM is an interconnected market where interregional trades often take place.

Differences in the levels of price caps between two interconnected regions could potentially lead to counter-price flows. This is likely to occur should a region with a higher APC level be exporting electricity to a region with a lower APC level.

1 Introduction

The purpose of this report is to determine the schedule which specifies the Administered Price Cap (APC).

The Commission has determined this schedule in accordance with clause 3.14.1(a) of the National Electricity Rules (Rules) after undertaking a two stage consultation process in accordance with the requirements under clause 8.9 of the Rules.

Following first round consultation, the Commission produced a draft report on the APC. This draft report is available on the Commission's website.

As part of the second round consultation process, the Commission sought comments from interested parties on the draft report. Following this process, the Commission determined the schedule specifying the APC.

In the schedule, the Commission determines that the APC is $300/MWh for all regions for all time periods. This schedule replaces the Tasmanian derogation pursuant to clause 9.45.2 of the Rules.

Chapter 2 of this report outlines the background information for the determination of the final schedule which specifies the APC.

Chapter 3 outlines the Commission's conclusions of the final determination on the APC.

Chapter 4 outlines the reasons for the final determination.

Chapter 5 sets out the procedures the Commission followed to undertake the consultation process in order to reach the conclusions for the APC determination.

Chapter 6 summarises the issues raised in the submissions received from the first round and second round consultation processes. This chapter also contains the Commission's responses to these issues.

The Commission will publish a copy of this schedule on its website. The schedule can also be found in Appendix 1 of this report.

2 Background

2.1 The Administered Price schedule

In the wholesale electricity market, the Cumulative Price Threshold (CPT) is the cap for the cumulative price over a rolling 7 day, i.e. 336 half-hour trading intervals. The CPT is currently set at $150,000/MWh. In its Comprehensive Reliability Report (CRR), the Reliability Panel advised that it intends to recommend revising the CPT level to $187,500/MWh.

If the cumulative spot price exceeds this threshold, or if a cumulative ancillary services price exceeds six times the CPT, then the APC is applied in accordance with clause 3.14.2(c) of the Rules. Any time period in which the APC is applied is an Administered Price Period (APP).

Once a trading interval becomes an APP, dispatch prices for energy and ancillary service prices cannot exceed the APC. In addition, the energy prices cannot be less than the administered price floor, defined as the negative of the APC.

There are other provisions within clause 3.14.2 specifying the effect of an application of the APC on regions adjacent to an affected region, if there are energy flows on interconnectors between two regions.

Following an application of the APC, there is an entitlement for market participants to claim compensation in accordance with clause 3.14.6 of the Rules. The Commission is currently considering a Rule change proposal by EnergyAustralia regarding the compensation arrangement.

2.2 The Commission's role in determining the APC schedule

Prior to the formation of the Commission, the responsibility for setting the APC was with the National Electricity Code Administrator (NECA).

The Commission now has the responsibility for setting the APC. The Commission sets the APC in accordance with clause 3.14.1(a) of the Rules, which states:

> "In conjunction with each participating jurisdiction, and after consulting Market Participants in accordance with the Rules consultation procedures, the AEMC must develop, authorise and publish and may vary from time to time a schedule to specify an administered price cap for each region to apply to spot prices and market ancillary service prices and to be used as described in this rule 3.14."

In the Reliability Panel's second interim report of the CRR, it was recommended that the Commission reviews the level of the APC as a matter of priority.[1]

As a part of the APC determination process, clause 8.9(k) of the Rules requires the *consulting party*, in this case the Commission, to publish this final report setting out:

> "(1) the conclusions and any determinations of the *consulting party* on the matter under consultation [this is discussed in Chapter 3 of this report];
>
> (2) its reasons for those conclusions [this is discussed in Chapter 4 of this report];
>
> (3) the procedure followed by the *consulting party* in considering the matter [this is discussed in Chapter 5 of this report];
>
> (4) summaries required pursuant to rule 8.9(g)(4) [this refers to the summaries of the submissions from the first round consultation process, and the *consulting party*'s response to each issue raised in the submissions. This is discussed in Chapter 6 of this report]; and
>
> (5) summaries of each issue, that the *consulting party* reasonably considers to be material, contained in valid written submissions received from Consulted Persons on the draft report and the consulting party's response to each such submission [this is discussed in Chapter 6 of this report],
>
> and, subject to the provisions of rule 8.6, the *consulting party* must make available to all Consulted Persons, on request, copies of any material submitted to the *consulting party*."

2.3 Current schedule of the APC

NECA set the current schedule of the APC. On its website, NECA published the following:

> "An administered price cap is imposed in the national market if the sum of prices reaches the cumulative price threshold (CPT) of $150,000 in any seven day period. The administered price cap is:
>
> - $100/MWh between 7.00am and 11.00pm on business days; and
> - $50/MWh at other times."[2]

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[1] AEMC Reliability Panel 2007, *Comprehensive Reliability Review, Second Interim Report*, AEMC, Sydney, August 2007. (Available at http://www.aemc.gov.au/electricity.php?r=20051215.142656)

Under clause 8 of schedule 3 of the National Electricity Law (NEL), savings and transitional provisions deem a provision of the National Electricity Code (Code) referred to in a document to be a reference to the Rules. As the Commission has never previously published a schedule for the APC, NECA's schedule is currently applicable to the National Electricity Market (NEM) except for the Tasmanian region, where a derogation applies.

In relation to the Tasmanian derogation, clause 9.45.2 of the Rules provides as follows:

> "Until a different administered price cap is developed, authorised and published in accordance with clause 3.14.1(a) for the Tasmanian region, the administered price cap for the Tasmanian region is:
>
> (1) $100/MWh between 7.00 am and 11.00 pm on a business day; and
>
> (2) $50/MWh at all other times."

Therefore, on the publication of this schedule for the APC, the derogation applying to the Tasmanian region will expire.

2.4 Historical development of the APC

NECA determined the current APC schedule in April 1998. NECA determined the APC schedule to strike a pragmatic balance between two competing objectives:

- mitigating the financial risk exposure of market participants; and
- minimising the frequency and magnitude of compensation claims as a result of an application of the APC.[3]

The APC mechanism was designed to mitigate financial risk exposure. When NECA set the APC in April 1998, a particular concern was the risks to generators which break down and cause high prices in the NEM. When generators break down, they may face negative financial exposures (i.e. financial payout) depending on their hedging contract positions. If the break down also resulted in high prices in the NEM, the financial risk exposures of these generators can be large and would potentially lead to their financial failures. If these generators failed financially, market customers who were counterparties to agreements with these generators would then potentially face full spot prices for unexpectedly large blocks of their loads.

Whilst the APC mitigates financial risk exposure, it would, if triggered, potentially reduce the amount of revenue some participants would otherwise receive. This

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[2] NECA, Administered price arrangement, http://www.neca.com.au/NEM214a.html?CategoryID=50&SubCategoryID=167.

[3] NECA, *Administered Price Arrangements and Force Majeure*, NECA, Adelaide, April 1998, pp 16.

entitles the participants to claim compensation from NEMMCO, currently under clause 3.14.6 of the Rules. The compensation is paid for by market customers in the form of an uplift payment.

NECA noted that minimising the probability of compensation during an administered price period was an important consideration in setting the APC. [4]

To achieve a balance between the two competing objectives, NECA set the APC to its current levels noting that those levels were "relative low" and were "therefore likely to require some levels of compensation to be paid when scheduled units with bid/offer prices in excess of the cap are dispatched."[5]

NECA conducted a public consultation prior to setting the APC levels in April 1998.

In July 1999, the Reliability Panel proposed increasing the APC to $300/MWh for peak periods. The Reliability Panel noted in its report: [6]

> "Too high a level of APC will prolong the potential risk to the market that the overall arrangement is intended to reduce. Subject to consultation input, the Panel considers there is scope to increase the APC to $300/MWh, to move it above the likely operating cost of virtually all generators and bring it into line with upper level proposed for Y2K conditions. This will significantly reduce the potential for compensation and provide greater opportunity for the market to operate freely as it 'recovers' from extreme conditions."

However, NECA did not adopt the Reliability Panel's recommendation. Thus, the proposed APC level was not implemented. The APC has remained unchanged since it was first determined in April 1998.

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[4] NECA, *Administered Price Arrangements and Force Majeure*, NECA, Adelaide, April 1998, pp 16.

[5] Ibid

[6] Reliability Panel (NECA), *Final Report – Review of VoLL in the National Electricity Market*, NECA, Adelaide, July 1999, pp 21.

3 Final determination of the APC

In accordance with clause 3.14.1(a) of the Rules, the Commission determines the schedule specifying the APC. In this schedule, the Commission determines that the APC is $300/MWh. This APC is applicable for all regions in the NEM, for all time periods.

This schedule replaces the derogation applying to the Tasmanian region under clause 9.45.2 of the Rules.

The Commission considers indexation of the APC is not required. This is because the Commission anticipates that it will review the APC schedule periodically as it sees necessary, but at least every three years.

The revised APC level will become effective from the *trading interval* ending 4:30 AM Eastern Standard Time on 25 May 2008.

In its draft report, the Commission sought comments from NEMMCO and market participants as to whether an immediate implementation time is appropriate and achievable. The Commission did not receive any comment on this matter.

4 Reasons for the APC determination

The Commission makes determinations on the following matters:

- the appropriate level of the APC;
- the level of the APC during off-peak periods;
- the level of APC for all regions in the NEM;
- indexation requirements of the APC schedule;
- lead time for the implementation of the APC schedule following its final determination.

In this determination, the Commission has taken the following factors into consideration:

- the national electricity objective (NEO);
- the criteria for the APC level determination; and
- short run marginal costs (SRMCs) of generators.

4.1 The national electricity objective (NEO)

The NEO, pursuant to section 7 of the NEL, is stated as follows:

> "The objective of this Law is to promote efficient investment in, and efficient operation and use of, electricity services for the long term interests of consumers of electricity with respect to—
>
> (a) price, quality, safety, reliability and security of supply of electricity; and
>
> (b) the reliability, safety and security of the national electricity system."

Section 32 of NEL states:

> "In performing or exercising any function or power under this Law, the Regulations or the Rules, the AEMC must have regard to the national electricity objective."

Therefore, the Commission must have regard to the NEO in making its APC determination.

4.2 The criteria for the APC level determination

Taking the NEO and the submissions received into account, the Commission considers the APC should strike a balance between the following competing objectives:

- mitigating the risk of a systemic financial collapse of the electricity industry during an extreme market event;
- minimising compensation claims by market participants following an application of the APC; and
- minimising the incentives for market participants to not supply electricity during administered price events.

The Commission considers the APC level should be sufficiently low to mitigate the risk of a systemic financial collapse but sufficiently high not to distort the incentive for supply participation during an extreme market event when the APC is triggered. The APC level should also be sufficiently high so that the expected frequency and magnitude of compensation claims, under clause 3.14.6 of the Rules, are kept to the minimum.

The Commission considers that the criteria, for the APC level determined, meet the NEO.

The criteria endeavour to ensure that the electricity industry does not experience a systemic financial collapse following an extreme market event. This requires that market participants remain financially viable following an extreme market event, where the management of such risk is beyond the ability reasonably expected of a prudent market participant.

The financial viability of a prudent market participant enables it to continue to invest in the NEM. A market where prudent participants are financially viable also provides the environment in which new entrant participants are confident to invest. An adequate environment for investment is likely to enhance the quality, reliability and security of electricity supply in the NEM.

The criteria also endeavour to ascertain that the incentive for supply participation, during an extreme market event, is not distorted. This enhances the efficient operation, and the reliability and security, of the NEM which is expected to promote the long term interests of consumers in terms of price and reliability of electricity supply.

The criteria also endeavour to minimise the compensation potentially payable under clause 3.14.6 of the Rules, in terms of both the magnitude and frequency. The compensation payment is expected to result in financial risk exposure that is difficult to hedge by market customers. The Commission therefore considers that minimising compensation claims would mitigate uncertainty in the NEM that can not be readily managed by a prudent participant. Minimising uncertainty is expected to enhance the NEM's operational efficiency and deliver an efficient market outcome. An

efficient market outcome is expected to promote the long term interest of consumers of electricity with respect to price, quality, reliability and security of power supply.

4.3 Short run marginal costs of generators

In determining the appropriate APC level, the Commission considered the SRMCs of generators in the NEM because the operating cost of generators was raised in submissions. The SRMCs of generators in the NEM were estimated by economic consultanting firm ACIL Tasman, in its report entitled *Fuel Resource, New Entry and Generation Costs in the NEM, Report 2 – Data and Documentation, 6 June 2007*.

In this report, SRMC is defined as "the additional cost associated with a small increment (1 MWh) in output when the power station is operating in the region of its typical output and includes:

- the cost of the additional fuel required; plus
- any non-fuel variable operating and maintenance cost (O&M) such was water, chemicals, ash disposal, bringing forward of maintenance etc." [7]

Unlike long run marginal cost, SRMC does not include capital and periodic maintenance costs.

Existing generators in the NEM with estimated SRMCs above $300/MWh (in 2008/09) are illustrated in Figure 1.

Figure 1: Generators with estimated SRMCs above $300/MWh[8]

Generator	Region	Estimated SRMC 2007/08[9]	Estimated SRMC 2008/09	Size (MW)[10]
Hunter Valley Gas Turbine	NSW	$299.88/MWh	$307.37/MWh	51 MW
McKay Gas Turbine	QLD	$320.14/MWh	$328.15/MWh	34 MW
Port Lincoln Gas Turbine	SA	$326.88/MWh	$335.05/MWh	50 MW
Snuggery Power Station	SA	$344.65/MWh	$353.26/MWh	42 MW[11]

[7] ACIL Tasman, *Fuel Resource, New Entry and Generation Costs in the NEM, Report 2 – Data and Documentation*, ACIL Tasman, 6 June 2007, pp 12.

[8] Nominal $/MWh generated before adjustment for Greenhouse abatement schemes. The adjustment slightly elevates the SRMCs in 2007/08 and 2008/09.

[9] ACIL Tasman, *Fuel Resource, New Entry and Generation Costs in the NEM, Report 2 – Data and Documentation*, ACIL Tasman , 6 June 2007, pp 96 (NSW & QLD) and 98 (SA).

[10] Winter rating. NEMMCO, *Statement of Opportunities*, NEMMCO, October 2007, pp 4-10 (NSW), 4-7 (QLD) and 4-17 (SA).

[11] Reduce to 21 MW in year 2009. NEMMCO, *Statement of Opportunities*, NEMMCO, October 2007, pp 4-17.

Generators in the NEM with estimated SRMCs between $100/MWh and $300/MWh (in 2008/09) are illustrated in Figure 2.

Figure 2: Generators with estimated SRMCs between $100/MWh and $300/MWh

Generator	Region	Estimated SRMC 2007/08[12]	Estimated SRMC 2008/09	Size (MW)[13]
Mt Stuart Gas Turbine	QLD	$265.12/MWh	$271.75/MWh	288 MW
Angaston	SA	$251.95/MWh	$258.25/MWh	49 MW

As seen in Figure 1, only a small number of existing generators are estimated to have SRMCs above $300/MWh. In addition, these generators are typically small in size and the total capacity is 177 MW in 2008/09.[14]

As illustrated in Figure 2, in 2008/09, two existing generators are estimated to have SRMCs between $100/MWh and $300/MWh. The total generation capacity with SRMCs between these price levels is 337 MW.

ACIL Tasman also estimates that all new entrant plants have SRMCs well below the $100/MWh level up to year 2010/11.[15]

4.4 Determination of the APC level

The Commission determines that the APC level is $300/MWh for all regions in the NEM, for all periods.

To assess an appropriate level of the APC, the Commission considered the following three cases:

- High Case: the APC to be set to $500/MWh;
- Low Case: the APC to be set to $100/MWh; and
- Medium Case: the APC to be set to $300/MWh.

The Commission considered these cases against the criterion to strike a balance on the competing objectives discussed in section 4.2 of this report.

[12] ACIL Tasman, *Fuel Resource, New Entry and Generation Costs in the NEM, Report 2 – Data and Documentation*, ACIL Tasman, 6 June 2007, pp 96 (QLD) and 98 (SA).

[13] Winter ratings. NEMMCO, *Statement of Opportunities*, October 2007, NEMMCO, pp 4-7 (QLD) and 4-17 (SA).

[14] Does not include the recently registered Eraring Black Start GT, which has an SRMC of $291.91/MWh in 2007/08. The size of the GT is 41.5 MW.

[15] ACIL Tasman, *Fuel Resource, New Entry and Generation Costs in the NEM, Report 2 – Data and Documentation*, ACIL Tasman, 6 June 2007, pp 100-105.

4.4.1 APC level – High Case ($500/MWh)

The Commission considers that an APC level of $500/MWh would be effective in encouraging participants to make offers into the NEM during an administered price event.

The Commission considers this APC level to be sufficiently high to encourage supply participation because the level is above the SRMCs of all market generators in the NEM as estimated by ACIL Tasman in June 2007. Therefore, the probability of a market participant having grounds for compensation following an application of the APC is expected to be minimal, even after allowing for a potential upwards shift in the cost of liquid fuel due to the increase in world oil prices since the publication of the SRMCs by ACIL Tasman in June 2007.

Nevertheless, this APC level is well above the SRMCs of all scheduled generators in the NEM. The APC should balance mitigating financial risk to market customers with minimising the frequency and magnitude of compensation payments arising from the use of the APC. The Commission believes that the risk to market customers is better managed with a lower APC.

4.4.2 APC level – Low Case ($100/MWh)

In the low case, where the APC would be set to $100/MWh, the Commission considers the APC would be effective in protecting the electricity industry from a systemic financial collapse, but may discourage adequate incentive for supply participation during an extreme market event when the APC is applied. This is because the APC level of $100/MWh is significantly below the SRMCs of some of the peaking generation capacities in the NEM.

Under this scenario, following an extreme market event and hence application of the APC, it is possible that some peaking generators, whose SRMCs are above the APC level, would have little financial incentive to supply electricity to NEM. If they generated electricity during an administered price event, it is anticipated that they would incur financial losses and hence would have reasonable grounds for compensation from NEMMCO under clause 3.14.6 of the Rules.

A compensation claim is an administrative burden to the NEM and would result in financial risk exposure that is difficult to hedge by market customers.

A low APC would also be expected to result in reduced incentive for participation by demand side response.

4.4.3 APC level – Medium Case ($300/MWh)

The Commission considers that an APC level of $300/MWh is adequate in achieving a balance between the competing objectives.

This APC level is significantly higher than the estimated SRMCs of most generators in the NEM. The APC level is therefore effective in minimising the distortion of the

incentive for supply participation during an extreme market event, when the APC is applied.

This APC level is below the estimated SRMCs of a small number of small-size peaking generators (see Figure 1). Nevertheless, it is unlikely that this would diminish the supply participation incentive of the peaking generators (hence unlikely to threaten system security and reliability). This is because $300/MWh is not significantly lower then the SRMCs. In addition, the administered price compensation arrangement under clause 3.14.6 of the Rules is intended to provide adequate financial incentive for the peaking generators to make their plants available for electricity supply during an extreme market event when the APC is applied.

Moreover, in the event that the system reliability and security are under threat (for example, if a market participant were to declare plant unavailable in response to the level of the APC lower than the fuel cost), NEMMCO has powers of direction which it could use to guarantee the reliability and security of the NEM. In this circumstance, the market participant would be entitled to compensation under other compensation arrangements within the Rules, different from those in clause 3.14.6 which specifically relate to the APC.

An APC level of $300/MWh is likely to mitigate the frequency and magnitude of compensation because: (a) the APC level is not significantly lower than the highest estimated SRMC in the NEM; and (b) the total generation capacity, with estimated SRMCs above the APC level, is assessed by the Commission to be minor compared to the total generation capacity in the NEM.

For example, in 2008/09, only 177 MW of the existing generation capacity have SRMCs above the APC level of $300/MWh. This is in contrast with the case for the APC level of $100/MWh, where 514 MW of generation capacity are above this APC level.

The Commission is currently progressing on the work to clarify the administered pricing compensation arrangement under the Rules. This is part of a Rule change proposal submitted by EnergyAustralia.

Being only 3% of the VoLL price of $10,000/MWh, the APC level of $300/MWh is expected to reduce the price risk exposure of market participants significantly following an extreme market event when the APC is triggered. Thus, it is likely that the APC level would be effective in mitigating the risk of systemic failure of the electricity industry.

This APC level would also align with the $300/MWh cap currently traded on the SFE.[16] Thus, the Commission expects prudent market participants to be able to manage their market risks up to this price level. Market intervention under this price level is therefore unlikely to be necessary.

[16] A $300/MWh cap contract is a financial derivative where the seller of the cap agrees to pay to the buyer the difference between the spot price and $300 in those half-hours where the spot price is higher than $300.

In its draft report, in response to an issue raised by EnergyAustralia during first round consultation, the Commission invited cap sellers to provide comments on the appropriateness of an APC level of $300/MWh. The Commission did not receive any comment on this matter.

4.5 APC level for off –peak periods

The Commission sets the APC level for off-peak periods to be the same as that for peak periods.

During off-peak periods, electricity demand is likely to be low. Therefore, it is unlikely that a peaking plant with a high SRMC would be required to generate to meet the demand.

However, it is still possible that a peaking plant would be required to generate during off-peak periods. This is especially the case during an APP. Under this circumstance, the power system is likely to be under stress, possibly due to base load and mid-merit generators experiencing outages. The dispatch of high cost peaking generators may therefore be required to maintain the reliability and security of the power system. These outages may occur at any time. Thus, the dispatch of high cost peaking generators may also therefore be required at any time, during both peak and off-peak periods. The SRMC cost of a peaking generation plant is the same regardless of the time of dispatch.

The APC, being a price cap, should have the ability to encompass any reasonable contingency. The APC should therefore not distort the incentive for the peaking generating plants to be available when they may be needed, peak and off-peak periods alike. This may be achieved by setting the APC level for off-peak periods to be the same as that for peak.

4.6 APC levels for all regions in the NEM

The Commission considers the APC level should be uniform across all regions in the NEM. This is because the NEM is an interconnected market where interregional trades often take place.

Differences in the levels of price caps between two interconnected regions could potentially lead to counter-price flows. This is likely to occur should a region with a higher APC level be exporting electricity to a region with a lower APC level.

4.7 Indexation of the APC schedule

The Commission does not consider a general inflation indicator, for example the CPI, to be entirely relevant to determining the appropriate level of the APC. Rather, the Commission considers other factors may have greater impacts on the appropriate level of the APC. These include, inter alia, the cost of fuel and the operation & maintenance costs of power generation units in the NEM.

To ensure that the APC reflects the requirement of the NEM on a timely basis, the Commission anticipates that it would review the APC schedule periodically, when the Commission considers such review is necessary, but at least every three years. The Commission considers this appropriately negates the requirement for inflation indexation of the APC schedule.

5 Consultation procedure

In accordance with the requirements under clause 3.14.1(a) of the Rules, to consult with each participating jurisdiction the Commission sent letters to all members of the Standing Committee of Officials (SCO). These letters informed the SCO members of the Commission's intention to undertake a consultation on the level of the APC. The letters also sought comments from the SCO members regarding their views on this matter. The Commission did not receive any response from the SCO members.

Clause 8.9 of the Rules sets out the Rules consultation procedures. The Commission followed these procedures to determine the APC schedule.

The Commission undertook the procedures as follows:

- 5 November 2007 - in accordance with clauses 8.9(b), 8.9(c) and 8.9(d) of the Rules, the Commission published a notice on its website as part of the first round consultation process. This notice also invited comments from interested parties.
- 7 January 2008 - the first round consultation ended.
- 22 February 2008 – the Commission published the draft determination. As part of the second round consultation process, the Commission invited interested parties to comment on the draft determination outlined in the draft report.
- 7 April 2008 – the second round consultation ended.
- The Commission publishes this final report following the second round consultation.

6 Submissions received

6.1 Submissions received during the first round consultation process

The Commission received six submissions during the first round consultation process. These submissions were received from the following organisations:

- National Generators Forum (NGF);
- Macquarie Generation;
- TRUenergy and AGL (joint submission);
- International Power, Loy Yang and Intergen (joint submission);
- EnergyAustralia; and
- Energy Retailers Association of Australia (ERAA).

Copies of all submissions are available on the Commission's website.

A range of views have been expressed by the submissions. Most of the submissions proposed that the APC should mitigate the risk of significant adverse financial consequence following an extreme market event. Some market participants also submitted that the APC should be designed to minimise compensation claims following an application of the APC. Some submissions also proposed that the APC should not lead to perverse market behaviour.

Most submissions, either explicitly or implicitly, requested the Commission to strike a balance between these competing objectives.

Macquarie Generation and TRUenergy and AGL supported increasing the APC to higher levels. International Power, Loy Yang and Intergen proposed that the current APC schedule should be maintained. EnergyAustralia proposed a small increase in the APC level for peak periods, and setting the off-peak APC to the same level as the peak. The NGF and the ERAA did not express a view on the appropriate level of the APC.

6.1.1 NGF

The NGF expressed the view that the primary objective of the CPT-APC mechanism is to avert a systematic financial collapse of the electricity industry following an extreme market event.

The NGF submitted that APC levels should be low to limit risk exposure. However, it recognised the operational problems associated with a low APC level. These include the complexity associated with the compensation mechanism and perverse behaviour. The NGF suggested that the APC level should strike a balance between these competing objectives.

The NGF also proposed that the APC schedule should be indexed so that it is not eroded by the effect of inflation.

The Commission considers it is more appropriate to review the APC schedule periodically rather than indexing it. This is discussed in section 4.7 of this report.

NGF did not submit a concluded view on the appropriate level of the APC.

6.1.2 Macquarie Generation

Macquarie Generation considered the APC as part of the safety valve that contains the financial impact on participants following a breach of the CPT.

Macquarie Generation also recognised the complexity associated with the compensation mechanism following an application of the APC.

Macquarie Generation submitted that the current level of the APC does not adequately reflect the likely costs incurred by marginal peaking plant operating during periods of sustained high demand and/or limited supply. Macquarie Generation proposed to increase the APC to $500/MWh for peak periods and $100/MWh for off peak periods.

The proposed value for the peaking periods was based on the avoidable costs of running gas turbines using liquid fuels. The off-peak value was based on the avoidable costs of running an open cycle gas plant.

The Commission's consideration of the proposed APC level of $500/MWh is discussed in section 4.4.1 of this report.

The Commission considers the APC level for the off-peak periods should be the same as that for the peak periods. This is discussed in section 4.5 of this report.

6.1.3 TRUenergy and AGL

TRUenergy and AGL submitted that the APC should only be a fraction of VoLL such that potential losses, during an extreme market event, are reduced to only a fraction of what they otherwise would be. At the same time, however, the APC must not inadvertently reduce system reliability, particularly since the APC is likely to be applied during a period of stress.

TRUenergy and AGL submitted that power system reliability is diminished by the distortion of market signals due to a very low APC. The submission also discussed the issues associated with the compensation mechanism.

TRUenergy and AGL proposed to increase the APC level to $500/MWh for both peak and off peak periods. They considered it unlikely that the proposed level would significantly increase the risk of financial collapse of market participants. They argue that "$500/MWh should allow direct cost recovery for all scheduled liquid fuel plant in the NEM." They also believed that that level should attract the participation of non- scheduled generation and existing demand side response.

The Commission's consideration of the proposed APC level of $500/MWh is discussed in section 4.4.1 of this report.

TRUenergy and AGL further submitted that there is no justification to have a lower APC level for off-peak periods. This Commission's view on this matter is discussed in section 4.5 of this report.

TRUenergy and AGL also proposed that the APC scheduled should be indexed so that it is not eroded by the effect of inflation.

The Commission's consideration on this matter is discussed in section 4.7 of this report.

6.1.4 International Power, Loy Yang & Intergen

International Power, Loy Yang and Intergen submitted that the APC is intended to reduce the quantum of financial damage and random wealth transfer for unusual plant failure events that are uncertain both in nature and timing.

International Power, Loy Yang and Intergen submitted that the establishment of the APC level should take into account that participants have varying degrees of ability to absorb the risks associated with an unusual plant failure. They argue that:

> "At one end of the spectrum, vertically integrated business with a diversified plant portfolio in a range of geographic locations would have a greater capability to manage the risk and a preference for a higher APC than would a stand alone generator of one type in a single geographic location."

They also argued that the APC should be set with recognition of the more vulnerable participants.

International Power, Loy Yang and Intergen were therefore of the view that the current levels of the APC are effective and appropriate and considers that system reliability is supported by a workable compensation mechanism.

The Commission considers the current APC levels are effective in protecting market participants from a systemic financial failure following an extreme market event.

Nevertheless, the Commission also recognises the need to strike a balance between the competing objectives (see section 4.2) and considers these objectives are better met with an APC level of $300/MWh (see section 4.4.3). The Commission also considers the APC level for off-peak periods should be the same as that for peak periods (see section 4.5).

The Commission's consideration of the current APC level of $100/MWh is discussed in section 4.4.2 of this report.

6.1.5 EnergyAustralia

EnergyAustralia submitted that the policy objective of the APC should be to balance the overall financial risk to market participants in times of extreme market conditions, while maintaining appropriate incentives on individuals for prudent risk management and for minimising distortion of incentive for efficient investment.

EnergyAustralia proposed a small increase of the APC, to the maximum of $120/MWh, for both peak and off-peak periods.

EnergyAustralia submitted that a substantial increase in the APC level may not only have negative impacts on retailers and customers, but also on generators. In particular, EnergyAustralia argued that a high APC level would seriously impinge the financial viability of cap sellers.

In the draft report, the Commission sought comments from cap sellers on whether a high APC level would seriously impinge their financial viabilities. The Commission did not receive any submission on this matter.

EnergyAustralia submitted that its proposed APC level would ensure that there is sufficient incentive for gas fired generator to operate, while at the same time "not exposing cap sellers and future system security." In addition, the compensation mechanism is in place if the APC level fails to provide the appropriate incentive.

EnergyAustralia submitted that the APC should not be seen as a mechanism for generators to obtain opportunistic return on their capital investments and that any APC level higher than $120/MWh is likely to over-compensate most generators in vast majority of cases.

The Commission's consideration of EnergyAustralia's proposal, of a low APC level, is discussed in section 4.4.2 of this report.

EnergyAustralia noted in its submission that it has proposed a Rule change to the current compensation provision. The Commission is currently considering this Rule change proposal.

In addition, EnergyAustralia expressed the view that the current CPT level is not effective in protecting the NEM from an extreme system stress event.

The Commission notes that the Reliability Panel recently addressed the level of the CPT as part of the CRR. A Rule change from the Reliability Panel is expected and will go through the normal consultative Rule change process.

6.1.6 ERAA

The ERAA submitted the setting of the CPT and the APC are important components of the NEM safety net, which operates when triggered to limit market participants' exposure to the wholesale spot market during periods of prolonged high prices.

The ERAA also submitted that the APC should not be seen or used as a mechanism for allowing generators to obtain opportunistic return on their capital investments.

Rather, the policy objective of the APC should be to limit the financial stress on the NEM during extreme conditions (or market failure).

While the objective of the APC is to limit overall financial stress in the NEM, the ERAA submitted that the APC needs to "balance against the need to ensure the APC is sufficient to encourage available generator or demand side resources to continue to participate in the market."

The ERAA supports EnergyAustralia's Rule change proposal regarding the compensation agreement under clause 3.14.6 of the Rules. However, the ERAA recognises that "change in itself is not sufficient to ensure that unhedgeable compensation payments do not arise for retailers."

The ERAA did not submit a concluded view on the appropriate level of the APC.

6.2 Submission received during the second round consultation process

The Commission received a submission from the second round consultation process. The submission was jointly submitted by AGL, Macquarie Generation and TRUenergy.

AGL, Macquarie Generation and TRUenergy are satisfied that, in reaching its draft determination, the Commission appropriately and thoroughly considered the relevant issues. Whilst AGL, Macquarie Generation and TRUenergy favoured increases of APC levels up to $500/MWh, they nevertheless support the proposed increase to $300/MWh. They see this as a considerable improvement and reduction in risk over the current arrangements.

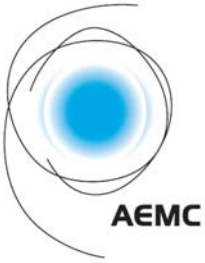
AGL, Macquarie Generation and TRUenergy commented on the Commission's decision not to inflation-index the APC schedule, but to review the schedule regularly.

AGL, Macquarie Generation and TRUenergy consider this decision is acceptable. However, they "note from experience that intentions to review discrete market settings can be overlooked whilst other reviews are underway, with the unintended result that the value erodes over time."

AGL, Macquarie Generation and TRUenergy therefore suggested that the intention for regular review be mandated, with an objective that each review must at least adjust the value to reflect changes in underlying cost structure from the previous review.

The Commission notes this as a valid concern. However, the Commission also notes that such a mandatory review process would need to be prescribed within the Rules. This would require a Rule change proposal which is outside the scope of this review.

Appendix 1: Notice of Administered Price Cap (APC) determination



Administered Price Cap Schedule

On 20 May 2008, in accordance with clause 3.14.1(a) of the Rules, the Australian Energy Market Commission determined the following schedule that specifies an Administered Price Cap (APC) for each region of the National Electricity Market to apply to spot prices and market ancillary services prices:

Region	**APC**
All regions	$300/MWh

The above schedule applies at all times.

Notes:

This schedule replaces the Tasmanian derogation under clause 9.45.2 of the National Electricity Rules (Rules).

This schedule will become effective from the *trading interval* ending 4:30 AM Eastern Standard Time on 25 May 2008.