

Qld water crisis sets Qld in low reserves for December 2007, and five months of 2008

Drought has taken a big bite out of the NEM; at *Electricity Week's* count, at least 27 units faces water shortage issues. In the week to Saturday 37 units did not deliver committed capacity; they were 12 in South Australia, 9 in Queensland, 7 in Victoria, 6 in NSW and 3 in Tasmania. However the reasons were perhaps tactical and not fuel or water-related.

Edicts in three regions: In three regions: Snowy, Queensland and Victoria, NEM traders faced current or threatened government-ordered water-reductions, as essential services – towns, power stations, manufacturing and irrigation – compete for 'below intake level' potable water. Reductions appeared in Tarong 3 and Stanwell 3 from 15 March (*see inside*).

Queensland's Mayan crisis: The Beattie Government ordered cut-backs to Queensland generator groups, Tarong and CS Energy as to water shortage set Queensland in the novel territory of low electricity reserves, despite the expected September commissioning of new

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Top price for NEM week 431: Oakey at \$626.88

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TAS			
Generator	Income (\$)	Output (MWh)	Av Price (/MWh)
Liap/Way/Cat	\$464,532	9,646	\$48.16
Bell Bay Power	\$848,460	17,567	\$48.30
John Butters	\$324,515	7,031	\$46.16
Tungatinah	\$175,391	3,680	\$47.66
Poatina	\$837,113	18,133	\$46.16
Tarraleah	\$424,304	8,816	\$48.13
Reece	\$58,385	2,547	\$22.92
Cethana	\$2,253	529	\$4.25
Tribute	-\$6,079	271	-\$22.41
Lemonthyme/Wilmot	\$43,530	1,398	\$31.13
Trevallyn	\$102,421	2,265	\$45.22
Mackintosh	\$143,438	3,200	\$44.83
Bastyan	\$168,685	3,718	\$45.37
Woolnorth Wind	-	-	-
Gordon	\$2,083,197	44,134	\$47.20
Vic->Tas	\$2,818,471	57,047	\$49.41
Devils Gate	\$6,856	235	\$29.12
Fisher	\$33,838	869	\$38.94
Meadowbank	65112.52925	1351.915	\$48.16
Lake Echo	196552.2014	4093.98	\$48.01
Repulse	-	-	-
Paloona	-	-	-
Cluny	-	-	-

coal baseload coal, Kogan Creek, in September. The Queensland premier offered compensation, and, perhaps as part of the deal - also took over the liabilities of the CS Energy "Zerogen" CO2 dump project, which had failed to get federal funding.

Who got the money: \$100 million instead went last week, to a 400MW HRL coal gasification plant in Victoria, an IDGCC Loy Yang HRL coal-drying plant.

Gen cuts show up in Qld: Dispatch cuts appeared this week in Tarong, although Tarong

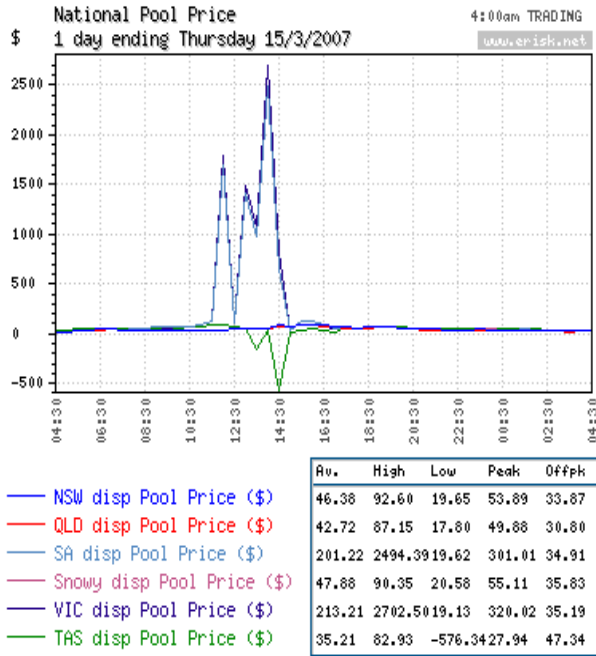
SA			
Generator	Income (\$)	Output (MWh)	Av Price (/MWh)
North'n Power	\$5,296,821	87,716	\$60.39
Ladbroke	\$437,641	3,520	\$124.33
Osborne	\$1,661,303	25,143	\$66.07
Pelican Pt	\$4,394,576	66,928	\$65.66
Torrens Is. B	\$4,739,408	54,817	\$86.46
Vic->SA	\$576,338	11,123	\$51.82
MLink->SA	\$7,851	175	\$44.78
Torrens Is. A	\$394,326	2,984	\$132.15
Mintaro	\$259,541	484	\$535.75
Dry Creek	\$303,362	507	\$598.29
Playford	\$1,111,211	15,612	\$71.18
Snuggery	\$4,018	37	\$107.17
Pt Lincoln	\$3,763	34.17	\$110.14
Quarantine	\$409,369	1,931	\$212.00
Angaston Power	-	-	-
Hallett Power	\$733,282	2,540	-
Lonsdale	-	-	-
Terminal Storage	-	-	-
Lake Bonney Wind	-	-	-

VIC			
Generator	Income (\$)	Output (MWh)	Av Price (/MWh)
Loy Yang A	\$21,390,307	350,706	\$60.99
Loy Yang B	\$10,951,071	175,963	\$62.24
Hazelwood	\$14,282,074	227,221	\$62.86
Yallourn	\$10,906,663	169,936	\$64.18
Anglesea	\$1,575,076	25,193	\$62.52
Energy Brix	\$1,249,655	20,649	\$60.52
Newport	\$772,838	20,359	\$37.96
MLink->Vic	\$580,885	5,533	\$104.99
SA->Vic	\$517,303	10,185	\$50.79
Snowy->Vic	\$2,890,273	26,094	\$110.76
Tas->Vic	\$2,065,460	5,630	\$366.84
Jeeralang	\$157,914	656	\$240.60
West Kiewa	\$147,224	567	\$259.70
Bairnsdale	\$586,532	6,043	\$97.06
Dartmouth	-	-	-
Eildon	\$167,431	597	\$280.56
Hume Vic	-	-	-
McKay Power	\$337,777	572	\$590.56
Clover	-	-	-
Valley Power	\$1,565,024	13,522	\$115.74
Rubicon	-	-	-
Laverton North	2292117.259	23729.155	-
Somerton Power	638135.9843	1819.055	-
Sunshine Energy	-	-	-
Longford	-	-	-

NSW			
Generator	Income (\$)	Output (MWh)	Av Price (/MWh)
Bayswater	\$14,446,591	346,686	\$41.67
Liddell	\$8,014,250	198,287	\$40.42
Mt Piper	\$6,923,650	161,597	\$42.85
Wallerawang	\$3,501,074	83,937	\$41.71
Vales Point	\$3,388,105	88,270	\$38.38
Munmorah	\$1,844,221	50,146	\$36.78
Eraring	\$15,114,320	367,038	\$41.18
Redbank	\$981,456	24,524	\$40.02
Smithfield	\$830,819	20,019	\$41.50
Snowy->NSW	\$3,523,535	70,543	\$49.95
Shoalhaven	\$376,611	11,155	\$33.76
Hunter Valley	-	-	-
Hume Hydro	-	-	-
Blowering	-	-	-
Northern Gas	-	-	-
Burrinjuck	-	-	-
Brown Mountain	-	-	-
Keepit	-	-	-
Broken Hill	-	-	-
Ergon Energy	-	-	-
DL Q->N	\$513,063	12,455	\$41.19
QLD->NSW	\$3,273,046	79,096	\$41.38
Pindari Hydro	-	-	-
West Nowra	-	-	-
Country En (NSW)	-	-	-

QLD			
Generator	Income (\$)	Output (MWh)	Av Price (/MWh)
Tarong	\$14,389,571	242,617	\$59.31
Millmerran	\$7,407,524	127,020	\$58.32
Swanbank	\$3,014,820	45,329	\$66.51
Stanwell	\$11,993,274	193,590	\$61.95
Callide B	\$5,581,092	92,774	\$60.16
Callide Power	\$7,166,205	120,249	\$59.59
Townsville	\$1,914,336	29,472	\$64.96
Gladstone	\$11,681,402	187,041	\$62.45
Collinsville	\$730,046	7,346	\$99.38
Swanbank C_D_E	\$3,025,387	47,085	\$64.25
Barcaldine	\$306,283	3,169	\$96.66
Callide A	-	-	-
Kareeya	\$846,011	14,611	\$57.90
Barron Gorge	\$496,963	7,865	\$63.19
Mt Stuart	\$330,902	3,604	\$91.82
Vivvenhoe	\$234,524	1,988	\$117.95
Braemar Power	\$3,338,371	39,762	\$83.96
Mackay	-	-	-
Roma	\$187,217	834	\$224.62
Oakey	\$84,556	135	\$626.88
DL N->Q	\$4,655	81	\$57.40
NSW->QLD	\$1,074,802	3,485	\$308.42
Rocky Point	-	-	-
Tableland	-	-	-
Stapylton	-	-	-

Peculiar 15 March prices



Energy chief executive, Helen Gluer, said the state-owned power station would “significantly reduce generation from March 30 to conserve water in Boondooma Dam, which is at 15 per cent capacity”. Subsidy payments would be made to generators.

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NSW water crisis, too: A NSW water crisis spiked NEM price on Monday, 15 March. (*see inside*)

Queensland crisis: NEMMCO’s Tuesday, 20 March forecast added December as low reserve period for Queensland in 2007 and added of January and February for Queensland in 2008 as a low reserve condition.

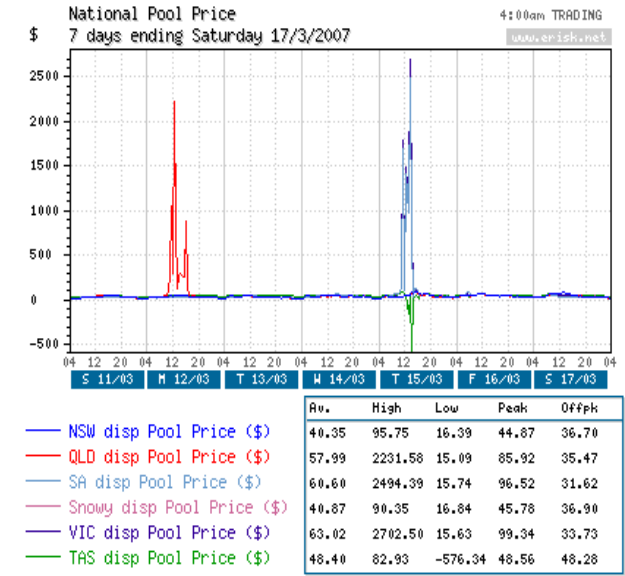
the week in detail

• **NSW:** Average price \$40.35/MWh, up 10 per cent on the spike-affected \$36.62/MWh the previous week, up 77 per cent on the \$22.80/MWh of the comparable week last year; maximum price \$95.75/MWh for the 30-minute trading interval ended 1230EST Saturday. Average demand 8797MW, down 0.6 per cent on the previous week, up 0.2 per cent on a year ago; maximum demand 11,105MW in the 1430EST Friday interval, down 1.1 per cent on the 11,228MW the previous week.

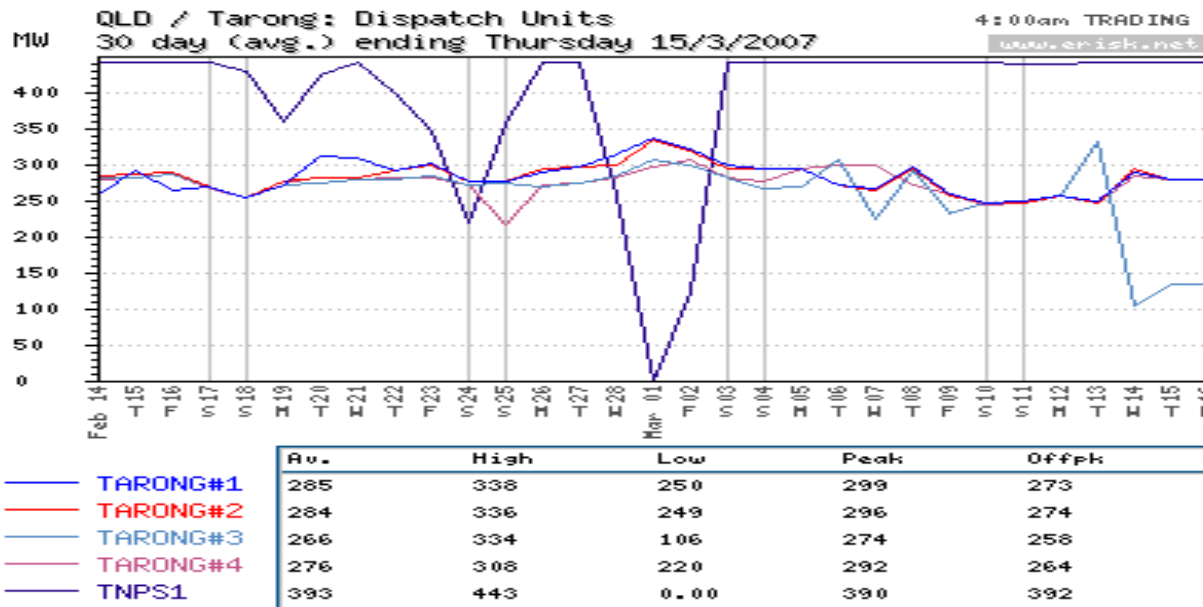
• **Victoria:** Average price \$63.02/MWh, up 79 per cent on the \$35.30/MWh the previous week, up 184 per cent on the \$22.22/MWh of the comparable week last year; maximum price \$2702.50/MWh for the 30-minute trading interval ended 1400EST Thursday. Average demand 5645MW, down 1.8 per cent on the previous week, up 2.0 per cent on a year ago; maximum demand 7976MW in the 1530EST Thursday interval, up 6.6 per cent on the 7483MW the previous week.

• **South Australia:** Average price \$60.60/MWh, up 73 per cent on the \$34.97/MWh the previous week, up 145 per cent on the \$24.76/MWh of the comparable week last year; maximum price \$2494.39/MWh for the 30-minute trading interval ended 1400EST Thursday. Average demand 1532MW, up 1.4 per cent on the previous week, up 8.9 per cent on a year ago; maximum demand 2498MW for the 1530EST Thursday interval, up 23.2 per cent on the 2027MW the previous week.

• **Queensland:** Average price \$57.39/MWh, up 69 per cent on the \$34.03 the previous week, up 195 per cent on the \$19.44/MWh of the comparable week last year; maximum price \$2231.58/MWh for the trading interval ended 1300EST Monday. Average demand 6387MW, down 1.1 per cent on the previous week, up 5.4 per cent on a year ago; maximum demand a record 8589MW for the 1630EST Monday interval, up 5.5 per cent on the 8139MW the previous week.



• **Tasmania:** Average price \$48.40/MWh, down nearly 2 per cent on the \$49.30/MWh the previous week, up 84 per cent on the \$26.35/MWh of the comparable week last year; maximum price \$82.93/MWh for the trading interval ended 1130EST on Thursday. Average demand 1077MW, down 3MW on the previous week, up 4.4 per cent on a year ago; maximum demand 1330MW for the 0700EST Tuesday interval, down 1.3 per cent on the 1347MW the previous week.



from 1300EST to 1630EST with a reserve shortfall of up to 460MW.

Negative settlement residues problems: Victoria also had continuing problems with market outcomes causing the accumulation of negative settlement residues that affected the southerly flow on the Snowy-Vic interconnector.

Negative prices in Tas: Tasmania recorded negative prices of minus \$150.02/MWh and minus \$596.34/MWh in two 30-minute trading intervals on Thursday, 15 March.

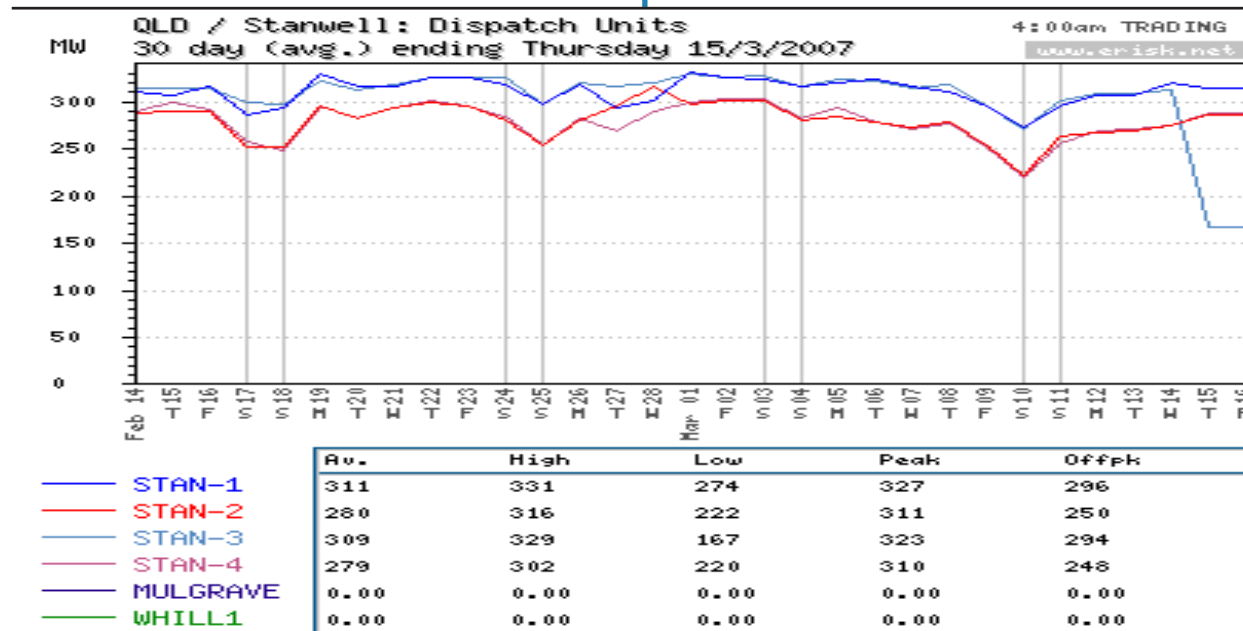
Negative prices in 1330EST and 1430EST : The smaller negative price occurred in the 1330EST interval and the second in the 1430EST interval.

Thursday, 15 March spikes: Multiple spikes with top prices of \$2702.50/MWh in Victoria and \$2494.39/MWh were recorded on Thursday, 15 March.

Nine spike intervals: Both regions had spikes in nine 30-minute trading intervals between 1130EST and 1600EST, with one spike-free interval at 1500EST.

36 degrees in Adelaide, 34 in Melbourne: The spikes occurred as Victoria's maximum demand surged 948MW (13.5 per cent) as Melbourne recorded a top temperature of 34 degrees (up 9) and South Australia's rose 194MW with Adelaide's top temperature of 36 degrees (up 1).

LOR1 declared in Vic: NEMMCO declared a lack of reserve level one (LOR1) in Victoria



Average price down 33 per cent: They resulted in Tasmania's average price falling \$17.20/MWh (33 per cent) to \$35.21/MWh. Tasmania was the only region to post a drop in average price.

Reference: National Price for Tasmania for one day, Thursday 15 March, in Price/Demand section of Erisk Net – Realtime NEM Data. Website: <http://www.erisk.net>

New NEM forecasts with Queensland deficits

In the 20 March forecast NEMMCO said the reliability results forecast LRC for a number of week days in the following months:

2007

- Queensland: December;
- South Australia: December; and
- NSW: April.

2008

- Queensland: January, February, October, November and December;
- NSW: December;
- South Australia: January, February, March and December; and
- Victoria+South Australia: January, February, March and December.

2009

- South Australia: January and February;

- NSW: January and February;
- Victoria + South Australia: January, February and March; and
- Queensland: January, February and March.

Summary of results for next 12 months:

NEMMCO said the results for the next 12 months were summarised at <http://www.nemmco.com.au/data/mtoutlook.htm>. This week's MT PASA run includes revised inputs from some Queensland generators. For more information on this, refer to NEMMCO Communication No. 2417 – MT PASA Results. NEMMCO had also published a guide to the MT PASA reserve forecasts at http://www.nemmco.com.au/dispatch_and_pricing/556.htm#MTPASA.

NSW water crisis spiked NEM price on Monday: \$10,000 for Vic and minus \$1000 for Tas

The threat of a 1000MW cut to NSW generation over a damaged feedwater supply to a large NSW generator was declared to no longer apply on Monday after notices about the threat on the previous Monday, Thursday, Saturday and Sunday.

- However, on Thursday NEMMCO reinstated the threat for Thursday until Friday when it was again declared to no longer exist.
- On Thursday, Victoria had continuing problems with the accumulation of negative

settlement residues from 1455EST to 1520EST and from 1650EST to 1705EST.

- After a review NEMMCO confirmed on Friday the \$10,000 energy price for Victoria in the 1200EST dispatch interval on Thursday; and
- a minus \$1000 energy price in the dispatch interval at 1430EST for both Victoria and South Australia.

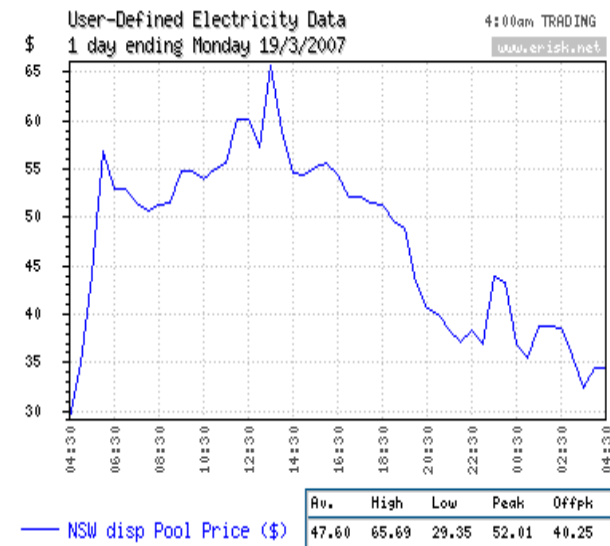
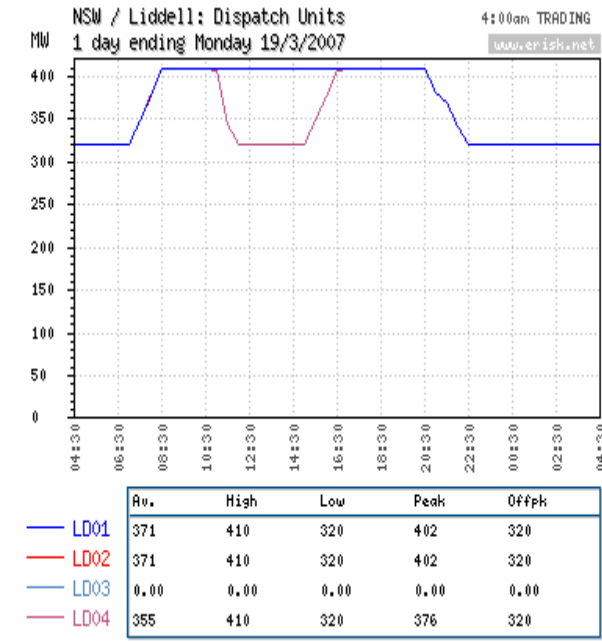
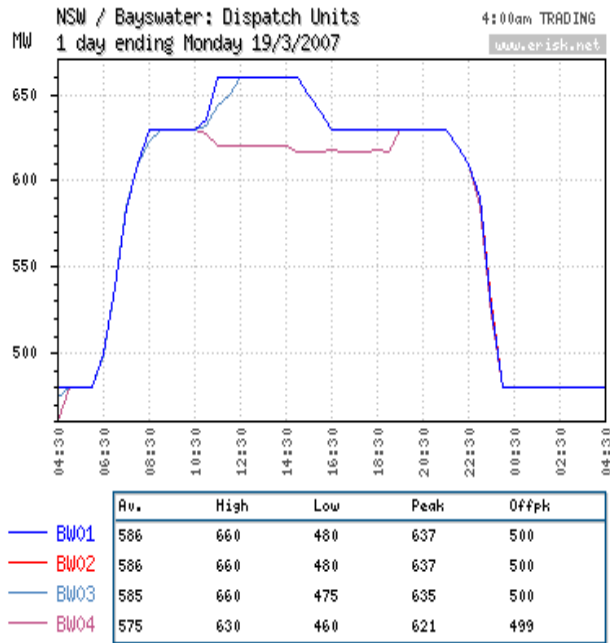
37 generators non-conforming last week:

They were 12 in South Australia, 9 in Queensland, 7 in Victoria, 6 in NSW and 3 in Tasmania.

The land of the NEM; billions rest on rules which no longer work as intended: many want to keep it that way

A constraint-based residue approach the was the do-able solution to the mis-pricing and hedging problems in the NEM, said the latest mathematical pot-shot at NEM calculations.

Idiots guide to the NEM: Its all getting a bit confusing – all was not right in the NEM and no-one can agree on what to do about it. Regulators put submissions to each other, and Ministers interfere through MCE edicts, aided by Charles Rivers Associates (CRA). NEMMCO and ERIG are all part of a whirlygig, kept foggy by energy-investors' legal teams.



But, now the game was to take pot shots at each others' calculations.

Mathematical warfare: Only about five people understand all of this. One of them was Darryl Biggar. The latest round was the public release, by the AEMC of his mathematics of the NEM and his explanation of:

- why it was no longer working right;
- how smart investors had found the loopholes, and want the distortions to stay;
- and how solution may exists, but were;
- no politically acceptable.

For example: A NEMMCO report on Impact of intra-regional constraints on Pricing reviewed

the previous work by Darryl Biggar on mis-pricing. Then On 22 March 2007, the Commission published a paper labelled *Pricing and Hedging Problems in the NEM Using Constraints Based Residue* prepared by Dr. Biggar.

Darryl Biggar's maths: The case for constraint-based residue approach to deal with mis-pricing and hedging problems in the NEM was made by Darryl Biggar, 25 October 2006 in a paper, published by the AEMC on 22 March 2007, said there were two proposals for solving the mis-pricing and hedging problems in the NEM:

- the CSP/CSC mechanism proposed by Charles River Associates for the Ministerial Council on Energy, and the
- constraint-based residues approach set out by Biggar.

Things will get worse: Biggar argued said in the long run mis-pricing will affect generator and load location decisions generators and loads will have too strong an incentive to locate or expand in regions which exacerbate transmission congestion and loads will have too little incentive to locate or expand in regions which alleviate congestion.

Smaller nodes needed: So, solving the mis-pricing problem requires a move towards finer geographic differentiation of prices (at least for generators) in the NEM. This could be achieved through the dividing up of existing regions into smaller regions. If these regions are made small enough this would eliminate

the mis-pricing problem. However, it would not solve the hedging problem.

Get rid of loops: As long as there remain loops between regions (and the smaller the regions the more likely it is that there will be numerous loops) the inter-regional settlement residues will remain non-firm.

The solution: Constraint-based residues approach can solve the problems of mis-pricing and hedging of both intra-regional and inter-regional price risk, in the presence of both outages and loop-flow. The constraint-based residues approach is also:

- a natural evolution or extension;
- rather than a radical overhaul of the current market design; and
- involves no risk of accumulation of surpluses or deficits by the system operator.

Need for action: He said: “The current problems in the NEM the mis-pricing and the hedging problems should be addressed.”

What’s politically possible: A move to full nodal pricing and Financial Transmission Rights is possible but is unlikely. That leaves two approaches for resolving these problems:

- the CSP/CSC mechanism proposed by CRA; and
- the constraint-based residues approach set out in this paper.

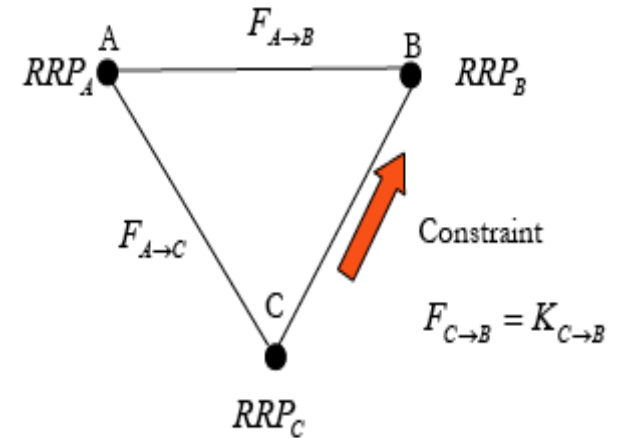
Why MCE-CRA model won’t work: The CSP/CSC mechanism solves the mis-pricing

problem as long as all the potentially binding constraints are included within this mechanism.

- However, it is not always possible to design a CSP/CSC mechanism which achieves firm inter-regional hedging without leaving some surplus or deficit on the system operator.
- CRA do not address the problem of achieving intraregional hedging under the CSP/CSC mechanism. ... this is possible, but only if participants can actively trade disaggregated CSC payments between themselves.
- This seems unlikely. In contrast the constraint-based residues approach solves both the mis-pricing problem (again, as long as all the potentially binding constraints are included within this mechanism) and allows for fully firm inter-regional and intra-regional hedging.
- The mechanism is revenue neutral by design that is, there is no surplus or deficit left with the system operator.

Natural evolution: The constraint based residues approach is also a natural evolution of the existing market arrangements. The benefits of the constraint-based residues approach depend on whether or not it is feasible to define separate residue funds for all relevant binding constraints. It is not yet clear precisely how many separate residue funds will be required. In my view, the constraint-based residue approach offers the greatest

NEM Incantation



Solving The Pricing And Hedging Problems In The NEM Using Constraint-based Residues
 Darryl Biggar 25 October 2006. Published 22 March at www.aemc.gov.au

promise as a medium or long-term solution to the mis-pricing and hedging problems in the NEM”.

Reference: Solving The Pricing And Hedging Problems In The NEM Using Constraint-based Residues Darryl Biggar 25 October 2006. Website: www.aemc.gov.au

AEMC and AER row on NEM AEMC and AER row over market rules

A number of market participants have referred to the AER indicators as evidence that congestion is not material in the NEM, except in the Snowy Region, according to the AEMC *Congestion Management Review Direction Paper* (12/03/2007, p.31-32). The AER responded. The AER said the AEMC contended that:

- compared to annual wholesale market sales of \$6 billion in the NEM; and
- costs of congestion in the order of \$36 to \$66 million per annum are immaterial.

The Commission acknowledges these views and notes that the AER indicators do not provide a comprehensive measure of the cost or materiality of congestion.

AER indicators misleading says AEMC:

- First, the AER measures relate to the effect of binding constraints on the costs of dispatch as calculated by the NEM Dispatch Engine (NEMDE).
- These costs of dispatch may diverge from the economic resource cost of dispatch where the industry offer curve (i.e. generator offers) is different to the industry cost curve (i.e. generator resource costs).
- This may occur due to generators exercising transient market power (bidding

above resource costs) or distorting their bids in response to mis-pricing (as discussed in Chapter 2).

- While it is strictly ambiguous whether these factors, in combination, would lead to the AER measures over-stating or under-stating the economic dispatch costs of congestion, the Commission is concerned that the former result may be more likely.

Commission to investigate events: As part of its work program on the materiality of congestion, the Commission intends to investigate specific events where the recorded Total Cost of Constraints (TCC) figures are relatively large to get a better understanding of the impact of congestion on economic resource costs.

- For example, on 2 February 2006, the AER calculated a TCC of \$12.7 million, which was a significant proportion of the TCC for the 2005/6 year of \$66 million.
- The AER put forward that the high TCC on 2 February arose at times of high demand and very high (but sub-VoLL (i.e. sub \$10,000/MWh)) prices in NSW and Queensland.
- Whether the figure of \$12.7 million was principally due to the exercise of transient market power in tight market conditions or whether it was due to the dispatch of extremely high (resource)-cost plant (or demand-side response) is the type of question the Commission will seek to address in its work program.

- Second, the AER indicators are based on observed generation bids and assume that bids would be unchanged if constraints were removed. However, as explained above, both actual and potential congestion can affect generators' bidding incentives and lead them to bid at a price different from their costs.

AER measures strategic bidding effects:

- Although the AER tries to remove any distortions to bidding behaviour by replacing the bids of constrained on generators with a \$300/MWh bid, bidding behaviour could nevertheless change if constraints were removed.
- Furthermore AEMC says the AER measures ignore the effects of strategic bidding to prevent or stop constraints binding. If generators bid strategically to stop a constraint from binding, the impact of that potential congestion on efficiency would not be measured.
- On the other hand, if generators bid strategically to cause a constraint to bind, that constraint would appear more significant than otherwise in the TCC measure.

Reference: Australian Energy Market Commission, *Congestion Management Review, Direction Paper, 12 March 2007, p.31-32. The Australian Energy Market Commission, PO Box H166, Australia Square NSW 1215. Email: aemc@aemc.gov.au. Phone: (02) 8296 7800. Fax: (02) 8296 7899. This document is available at: <http://www.aemc.gov.au/pdfs/reviews/Congestion%20Management%20Review/directionspaper.pdf>*

AEMC abandons nodal pricing for NEM after States' opposition; proposes generator nodal pricing

The jurisdictions have made clear through the Ministerial Council on Energy (MCE) that they do not believe that the benefits of full nodal pricing would outweigh the costs. The National Electricity Market (NEM) represents a limited form of nodal pricing, because only certain nodes are given an individual price that reflects local demand and supply conditions and the impact of network congestion, according to the Australian Energy Market Commission's (AEMC) *Congestion Management Review Direction Paper* (12 March 2007, p.66-67 & 81).

Increase some nodes?: One way of managing congestion is to increase the number of nodes at which the price is set equal to the local marginal cost of supply. As more nodes are given an individual price, congestion is more likely to be reflected in spot price differentials. An increase in the number of nodes that are priced translates into an increase in the number of NEM regions.

Full nodal pricing option not on: At the extreme, there is full nodal pricing. The Commission also believes that full nodal pricing is beyond the scope of the Congestion Management Review (CMR). As noted earlier, the Terms of Reference (ToR) requests the

Commission to consider the implementation of congestion management mechanisms to apply to specific instances of material congestion, prior to consideration of regional boundary change. This suggests that only interim congestion management mechanisms that apply on a particular set of binding constraints or cutset are within the scope of the Review.

Full nodal pricing too radical: A move to full nodal pricing would be beyond the scope of the ToR by:

- applying to all congestion even when it is not material; and
- effectively pre-empting and obviating the consideration of regional boundary change as an ultimate solution to material and persistent congestion.

Generator nodal pricing instead: For these reasons, the Commission has no plans to investigate full nodal pricing any further.

- A less radical alternative to full nodal pricing but more fundamental than incremental changes to regional boundaries is the adoption of generator nodal pricing.
- This is an arrangement where individual prices apply to each generator node but not to bulk supply (i.e. load) nodes.
- The Commission considers that this option would not be precluded by the MCE's position on full nodal pricing.
- However, as with full nodal pricing, the Commission believes this is beyond the

scope of the Review, which is intended to address trading risks associated with the emergence of specific instances of material congestion.

- Consequently the Commission intends to consider only localised forms of generator nodal pricing, where one or a "small" number of material constraints are involved.

However, clearly the literature and experience on both full nodal pricing and generator nodal pricing would usefully inform this evaluation.

How it would work: Under a localised form of generator nodal pricing, consumers would either pay:

- the RRP, which would generate a settlement surplus if it was higher than the average nodal price at generators' connection points; or
- a volume-weighted averaged regional price such that no settlement surplus (beyond losses) was produced.

Risk management instruments: The key concern with even limited generator nodal pricing would again be the need for basis risk management instruments. Constraint Support Contracts (CSCs) or Financial Transmission Rights (FTRs) (see below under basis risk management) could be considered for this purpose.

More study of generator nodal pricing: The Commission intends to further investigate the implications of limited generator nodal pricing

for interim application in limited areas where congestion is material. The Commission has clearly highlighted areas where it intends to maintain or commence work programmes to examine various options. In particular:

- more refined pricing approaches such as limited generator nodal pricing, Constraint Support Payments (CSPs), and constrained-on payments that do not involve funding using an uplift charge on energy transactions;
- improved basis risk management instruments, such as enhancements to the Inter-regional Settlement Residue (IRSR) framework of varying degrees, FTRs, CSCs, and Constraint Based Residues (CBRs);
- the provision of additional information, particularly on the current level and implications of congestion; and
- a review of clamping and any intervention alternatives for the management of counter-price flows.

Feedback sought: The Commission seeks stakeholder feedback as to whether these are the appropriate areas of attention for the CMR and if not, why this is the case.

Reference: Australian Energy Market Commission, *Congestion Management Review, Direction Paper, 12 March 2007, p.76-77 & p.91.* The Australian Energy Market Commission, PO Box H166, Australia Square NSW 1215. Email: aemc@aemc.gov.au. Phone: (02) 8296 7800. Fax: (02) 8296 7899. This document is available at: <http://www.aemc.gov.au/pdfs/reviews/Congestion%20Management%20Review/directionspaper.pdf>

AEMC: change the rules to stop investors building generators in wrong areas

According to the Australian Energy Market Commission's *Congestion Management Review Direction Paper* (12/03/2007, it was time to the change the rules to stop investors building generators in the wrong areas. p.23).

NEM rules give wrong signals: "Dispatch risk may ... encourage new generators to locate in inappropriate areas. For example:

- a generator may have incentives to locate in an area that experiences congestion because of its ability to manage the risks of being constrained-off by offering its plant at $-\$1,000/\text{MWh}$. This behaviour may not completely eliminate dispatch risk, but it could overcome some of the risk;
- Similarly a new generator may be deterred from locating in an area where it could relieve congestion because it risks being dispatched even where its resource costs and offer price is greater than the prevailing price at the Regional Reference Node (RRN) (i.e. it is constrained-on).

Does not fit NEM objective: These dynamic inefficiencies could also harm the promotion of the NEM Objective.

Prices will rise: Higher spot prices may, in turn, flow through to higher end-user prices. This may lead to a reduction in the

consumption of electricity compared to what would otherwise be the case.

Bad news for economic welfare: Economic welfare is the sum of consumer and producer surplus, so an increase in prices caused by less efficient dispatch could reduce economic welfare. As noted by the Commission in its final decision on the Southern Generators' proposal and its draft decision on the Snowy Hydro Abolition of Snowy Region proposal, there may be lags and rigidities in lower spot prices being reflected in lower retail prices actually paid by consumers.

How market does not work: The issue was the "disconnect between bidding, dispatch and settlement that can arise in a regional market design. If generators were both dispatched and settled on the basis of the same price, their dispatch risk would be reduced and their incentives to distort their bids in this way would diminish".

Small, very small regions the answer: Therefore, one way to analyse dispatch risk is by characterising it as a result of the mispricing that occurs in a regional market design.

Winners and losers in the game: At the same time, addressing mis-pricing by increasing the granularity of pricing for settlement may have detrimental effects on both:

- participants' financial trading risks; and
- generators' incentives to exercise transient market power.

Reference: Australian Energy Market Commission, Congestion Management Review, Direction Paper, 12 March 2007, p.23. The Australian Energy Market Commission, PO Box H166, Australia Square NSW 1215. Email: aemc@aemc.gov.au. Phone: (02) 8296 7800. Fax: (02) 8296 7899. This document is available at: <http://www.aemc.gov.au/pdfs/reviews/Congestion%20Management%20Review/directionspaper.pdf>

Withdrawal strategies by Snowy, cause more expensive generators in Victoria to run

According to Danny Price, of Frontier Economics, recorded in an AEMC transcript of a 22 Feb meeting on a code change proposed to abolish the Snowy Region – “In our base case, what’s happening in these high demand periods and high Vic-SA periods is that Snowy Hydro is engaging in strategic behaviour that involves Murray Generation withdrawing quite large amounts of capacity to ensure that they’re not uncoupled from the high Victorian price”. He said the models showed why Snowy Hydro preferred its option (abortion of Snowy region) and why the Vic and New South Wales generators lobby prefer the split region options. He said modelling showed:

- withdrawal strategies by Snowy caused more expensive generators in Victoria to operate more frequently; but
- a proposed Snowy Hydro rule-change and a competitive split region option changed

the incentive, in both cases because Snowy now doesn’t have to as frequently engage in withdrawal strategies to keep itself as a Victorian region, because it’s in the Victorian region;

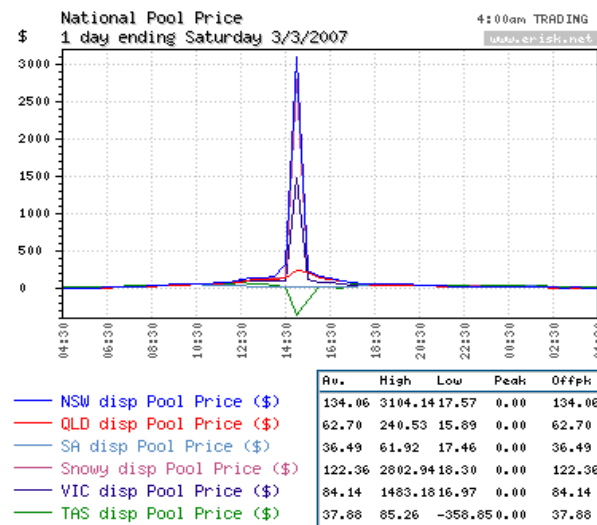
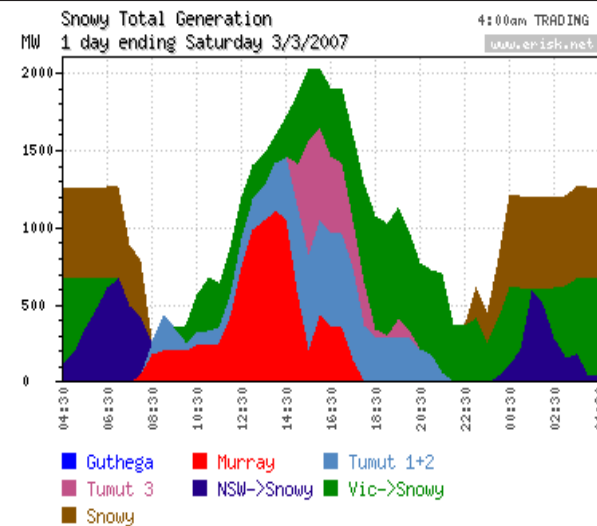
- so (Snowy) tends to produce more at those times. When it produces more, those high-cost generation facilities that were running before are no longer running.

Caveats on modelling: “But remember our modelling approach assumes that Snowy Hydro uses all of its energy budget, so if it’s running more in summer times, it’s running less in winter times. It just so happens that the times that it’s running less, the plant that’s running more in that place is in fact the cheaper plant,” said Price.

Electricity prices fall from 2008: “Part of the reason why prices are falling in 2009-10 anyway is because of the combination of the new plant that goes in, things like Tallawarra and I think Munmorah GT and a few other plants around, and also the effect of the potential roll-off, or the roll-off, of ETEF, which will change contracting behaviour. So there’s a few things going on there which are constant for all cases”.

How rule-changes were tested: “... in the case of say a New South Wales generator or participant hedging into Victoria, we’ve said that they have a 100-megawatt position in Victoria and they can optimise that position either by relying purely on spot or inter-regional settlement residues (IRSRs)”.

3 March: Huge NEM-wide price spikes on Snowy Murray cut-back



Reference: Australian Energy Market Commission, Consultation Forum - Transcript of Proceedings, Rule Change - Abolition of Snowy Region, at Melbourne on 22 February 2007, at 9.30 AM, p.17-20. This document is available at <http://www.aemc.gov.au/pdfs/reviews>

Snowy Hydro rebidding error in trading interval on Saturday, 3 March when NSW spiked to \$3104.14/MWh

Snowy Hydro was involved in a rebidding error during the 30-minute trading interval ended 1500EST on Saturday, 3 March when there was a spike to \$3104.34/MWh, the Australian Energy Regulator (AER) said in its market analysis for the week from Sunday 25 February to Saturday 3 March.

Steps taken to prevent it happening again: The AER said it understood Snowy Hydro had taken steps to avert such a rebidding error in future. The spike to \$3104.34/MWh in the 1500EST was the largest of three on the Saturday that the NSW spot price was greater than three times the NSW weekly average of \$59/MWh.

Details of large spike: The table showed the following details for the 1500EST interval:

Price, demand and capacity	Actual	4-hour forecast	12-hour forecast
Price	\$3104.14/MWh	\$92.64/MWh	\$87.55/MWh
Demand	11258MW	10,244MW	10,242MW
Available capacity	9214MW	9447MW	9494MW

“To manage dam levels: reallocate gen”:

The analysis said that at 1433EST, effective at 1440EST, Snowy Hydro rebid 1100MW of capacity at Murray from prices below \$150/MWh to \$450/MWh and \$10,000/MWh. The rebid reason given was “Manage dam levels: reallocate gen”.

Dispatch price reaches \$8000/MWh: At 1440EST, the five-minute dispatch price in NSW increased to \$8000/MWh. The AER said it understood the intention of Snowy Hydro’s rebid at 1433EST was to reduce generation at Murray and Upper Tumut, by increasing the availability and shifting capacity into lower prices at Tumut 3.

Tumut 3 not available due to maintenance: However, the bid did not increase the availability of Tumut 3 power station, which had been unavailable because of maintenance. At 1441EST, effective 1450EST, a total of 260MW of capacity at Upper Tumut was rebid into prices of less than \$150/MWh.

Availability later increased to 1160MW: At 1447EST, effective 145EST, the availability of Tumut 3 was increased from zero to 1160MW, with 800MW of this capacity priced at zero. The rebid reasons given for both rebids was “Prices higher than forecast: bandshift down”.

Actual demand about 1000MW higher than forecast: NEMMCO also noted that demand in the 1500EST interval was about 1000MW higher than forecast four hours and 12 hours ahead.

Liddell 4 return to service postponed: It said the previous night Macquarie Generation postponed the return to service of Liddell 4 reducing available capacity by 515 MW. As a consequence 480MW of capacity across Bayswater was rebid from prices above \$9000/MWh to below \$30/MWh.

Eraring 1 availability reduced: Rebidding the previous night by Eraring Energy reduced the availability of Eraring 1 by 460MW, with the rebid reason being given as “primary air heater problem”. Following this, 180MW of capacity was rebid into prices below \$20/MWh across the other three Eraring units.

Reference: Australian Energy Regulator (AER) market analysis for week Sunday, 25 February to Saturday, 3 March. 16 March, 2007. Address: Level 11, The Tower, 360 Elizabeth Street, Melbourne Central, Melbourne, Vic 3000; GPO Box 520, Melbourne, Vic 3001. Phone: (03) 9290 1444. Fax: (03) 9290 1457. Website: <http://www.aer.gov.au>

Energy Australia wants to abolish the Snowy region

According to Tim O’Grady from Energy Australia, recorded in an AER transcript of a 22 February on a code change proposed to abolish the Snowy Regions, O’Grady said Energy Australia supported the commission’s draft determination to abolish the Snowy region.

Energy Australia wants firmer hedges: He said: “My self-interest is to hedge my large customer exposure in New South Wales. From

that point of view, I'm quite certain that abolishing the Snowy region would allow Snowy to write a greater volume of firmer hedges off the New South Wales node, and I'm quite certain that would lead to:

- less market power from other generators in New South Wales; and
- more efficient and lower pricing outcomes in New South Wales.

Supports the abolition of the Snowy region:

"In terms of the split region proposal, I'm uncertain and concerned about what the outcomes of that will be. I think a lot of the perverse drivers that we've created in having a region with 3800 megawatts and no load have been difficult to predict, and I'm concerned that if we put in two regions there, it's going to be more difficult in terms of inter-regional trading and we're going to get more perverse drivers and more inefficient outcomes. They're the reasons why we support the abolition of the Snowy region.

Reference: Australian Energy Market Commission, Consultation Forum - Transcript of Proceedings, Rule Change - Abolition of Snowy Region, at Melbourne on 22 February 2007, at 9.30 AM, p.46. This document is available at [http://www.aemc.gov.au/pdfs/reviews/Abolition%20of%20Snowy%20Region%20and%20Article%20Snowy%20Region%20Bundaberg%20aemcdocs/027Consultation%20Forum%20-%20Transcript%20of%20Proceedings%20\(22%20February%202007\).pdf](http://www.aemc.gov.au/pdfs/reviews/Abolition%20of%20Snowy%20Region%20and%20Article%20Snowy%20Region%20Bundaberg%20aemcdocs/027Consultation%20Forum%20-%20Transcript%20of%20Proceedings%20(22%20February%202007).pdf)

NEM mis-pricing gets worse

The Australian Energy Market Commission (AEMC) asked National Electricity Market Management

Company (NEMMCO) to review the results in the Biggar paper, according to the *AEMC's Congestion Management Review Direction Paper* (12/03/2007, p.33-34).

NEMMCO joins study: NEMMCO agreed to extend the analysis to cover a larger study period (from 2001/02 to 2005/06) and perform some analysis to identify the causes behind any trends in mis-pricing. NEMMCO's preliminary report will be released onto the Commission website with this Direction Paper.

NEMMCO study confirms findings:

NEMMCO's preliminary study confirmed Biggar's findings that there is an increasing trend in mis-pricing towards 2003/04 onwards for the NSW, QLD and SA regions and the Victorian region showed decreasing trend. However the study also showed:

- over the analysis period from 2001/02 to 2005/06, the number of connection points being mis-priced was fairly steady.
- across all regions, the NEM-wide number of mis-priced connection points remained within a band of 120-140.
- regarding the average annual duration of mis-pricing at each of those connection points, there was a big fall from about 160 in 2001/02 to 40 in 2002/03.
- this was followed by a gradual increase to just over 60 in 2004/05 to about 110 in 2005/06.

Highest in NSW and Qld: The average duration of mis-pricing was highest in NSW

and Queensland and lowest in Victoria and Tasmania.

Reasons for mis-pricing trends: NEMMCO's study lists range of possible reasons behind the mis-pricing trends and notes that most of the reasons are specific to the region and the situation at the time. NEMMCO also commented that the progressive conversion of option 8 constraints to a fully optimised formulation would have also contributed to the increase in incidence of mis-pricing.

Mis-pricing driven by outage events? The work undertaken by NEMMCO raises the issue of whether the incidence of mis-pricing observed by Biggar is substantially driven by outage events. This may be significant as the Commission believes the appropriate policy response to congestion during system normal conditions and those during periods of outage events may well be different. The Commission also notes that the NEMMCO analysis to date has only focussed on historical events and considered the number of connection points mis-priced and average duration. As with the Biggar analysis, it is a backward-looking study. Further, as again is the case with the Biggar analysis, the NEMMCO analysis does not calculate the economic dispatch cost of mis-pricing.

Reference: Australian Energy Market Commission, Congestion Management Review, Direction Paper, 12 March 2007, p.33-34. The Australian Energy Market Commission, PO Box H166, Australia Square NSW 1215. Email: aemc@aemc.gov.au. Phone: (02) 8296 7800. Fax: (02) 8296 7899. This document is available at: <http://www.aemc.gov.au/pdfs/reviews/>

Congestion%20Management%20Review/
directionspaper.pdf

Qld Water Grid Market Rules binding on buyers and sellers

A set of Queensland Water Grid Market Rules will govern the contractual arrangements between the Grid Manager and the owners of Grid Assets and Grid Customers. It is intended that the Water Grid Market Rules will be subordinate legislation made by the State Government and be binding on all relevant parties. Under the Market Rules, the Grid Manager will have exclusive (or near exclusive) rights to:

- purchase the services of Grid Assets; and
- sell the water produced by or, delivered through Grid Assets to Grid Customers (retailers and power stations).

The Market Rules will specify:

- that owners of Grid Assets will be entitled to recover their fixed costs, a rate of return on investment and variable operating costs; and
- the pricing arrangements for the sale of water to Grid Customers.

Recommendations:

- That a Water Grid Manager be established with the primary role of ensuring that grid operations and contractual arrangements comply with operational and market parameters.

- That Water Grid Market Rules governing the contractual arrangements between the Water Grid Manager and infrastructure owners and Grid Customers be established as subordinate legislation.

Contact: Chief Executive Officer, Queensland Water Commission, PO Box 15087, City East QLD Australia 4002. Phone: (07) 3227 8207. Fax: (07) 3033 0887. Email: qwcenquiries@qwc.qld.gov.au. Closing date for submissions: Thursday 5 April 2007. Website: <http://www.qwc.qld.gov.au>

Tasmania Hydro debt-transfer likely to go to Transend

Energy Minister, David Llewellyn, told the Tasmania Legislative Council, Government Business Scrutiny Committee, on Friday 9 March 2007 that it was wrong to look at public-owned bodies like Aurora Energy and compare them to privately owned bodies in terms of debt equity. His comments showed Aurora was not likely to get any Tasmania Hydro debt transferred to it. Transend was more likely to carry the load.

Demands for electricity infrastructure:

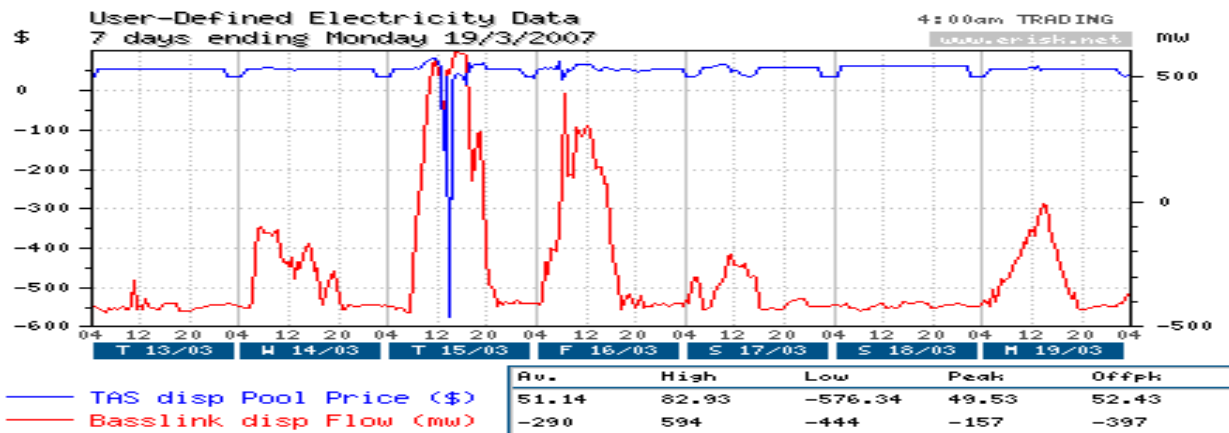
“Clearly, we need to have the capacity to invest to continue to deliver on our purpose, which is to see the Tasmanian community prosper from our efforts. Our view is that our debt to equity ratio is about correct and in fact we are, as I mentioned earlier, increasing our debt a little bit in response to the demands from the Tasmanian community for electricity infrastructure”.

Aurora capacity to take on more debt? A committee member asked the Minister if there was any capacity for Aurora to take on any more debt from other energy instrumentalities as was mooted at the Transend hearings earlier this week.

“Wrong” to compare public and private-owned bodies: Llewellyn responded: “Debt to equity ratios and comparisons with businesses such as Aurora or Transend or even the Hydro are issues that I mentioned a bit earlier on in the week, things that are monitored on an ongoing basis. There are comparisons that one can make with bodies, other electricity entities around Australia. I think it is probably wrong to look at public-owned bodies and compare them exactly to privately owned bodies”.

Debt to equity issue no problem: “There was a lot of discussion about that particular issue when Transend, in the other place, was at our hearings earlier in the week. However, I think the debt to equity issue within Hydro is about right and I would not see much would change in relation to that”.

Debt to equity ratio around 60:40: Aurora Energy chairman Davis said: “I think it is important to understand that Aurora has a role to play. As the minister has indicated, we have had advice that looked at our debt to equity ratio; our current gearing level is a debt to equity ratio around 60:40. That 60 per cent has emerged as the most sensible and appropriate for a business of our type. We need to think about what Aurora is. It is a retail business that

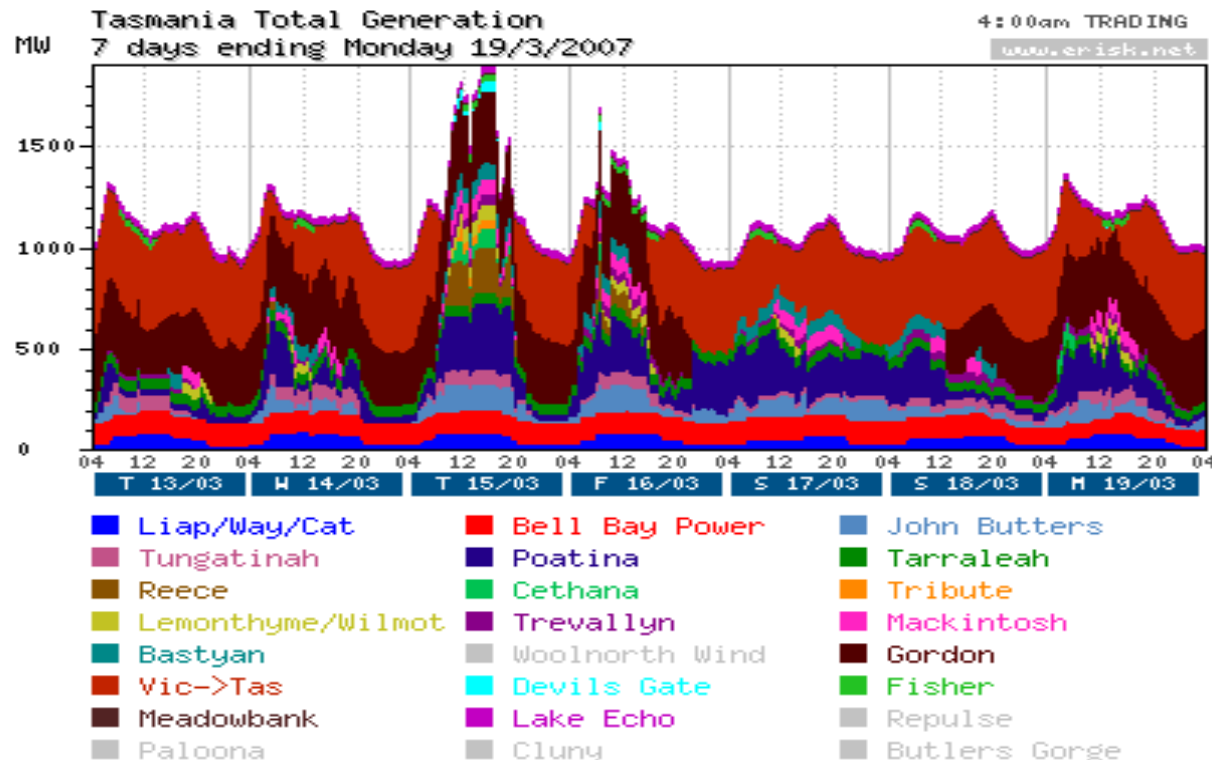


Treasurer to Regulator: Tasmanian Government will set the retail energy price

The Legislative Council, Government Business Scrutiny Committee B, met on Friday 9 March 2007. Mrs. Smith, Chair, asked David Llewellyn, Minister for Energy: "Minister, you are telling us to date it is the Energy Regulator on the submissions of Aurora who actually sets the maximum

is facing competition and it is a regulated monopoly distribution business. So the debt to equity ratio we have, based on expert advice, is appropriate and it is important that we maintain it at around that level because Aurora needs to be able to respond to customers who want infrastructure built in this State".

Reference: Government of Tasmania, Legislative Council, Government Business Scrutiny Committee, Friday 9 March 2007, Members: Mr Dean, Mr Finch, Mr Hall, Mrs Jamieson, Ms Ritchie, Mrs Smith (Chair) In Attendance: Hon. David Llewellyn, Minister for Energy Ministerial Office; Nick Wright, Adviser; Graham Wilson, Adviser; Aurora Energy Pty Ltd; Dr Peter Davis, Chief Executive Officer; Mr John Hasker, Chairman; Mr Paul Bloomfield, General Manager, Retail; Mr John Devereaux, General Manager, Network; Mr Stuart Hatton, General Manager, Commercial Services (and Chief Financial Officer); Mr Adrian Wild, Group Manager, Corporate Affairs; Mr Martin Wallace, General Manager Strategy and Corporate Affairs.



pricings on where the electricity charges for the people of Tasmania will go. Is that correct? And that it will move into the national arena under the national electricity marketing. Can you equate that with the web site of the office of the Tasmanian Regulator that states that the Treasurer has advised the Regulator that the Tasmanian Government will set the energy price for the period 1 January 2008 to 30 June 2010 through amendments to the electricity regulators?"

Government trying to take back control:

"That sounds to me as if the Government is taking back control from the Regulator, be it State or Federal. I am looking for an explanation of where the Government sits in this concept of independent pricing and regulation".

A long drawn process: David Llewellyn, Minister for Energy replied: "What I said was that the process is established through independent assessment, and the Regulator is part of that particular process. I gave an overview of what is expected as far as the draft report is concerned that he will be initiating in July this year, and then the final report."

Minister explains:

- HydroTasmania and Aurora Energy agree on non-contestable load parameters for the process, including both the total load and specific blocks that may be contracted, depending on the needs of Aurora Energy;

- HydroTasmania prepares a binding submission to the Treasurer on what it considers to be the market base price or the non-contestable load for consideration by the Government and gives an undertaking that it will abide by the final decision of the Government;
- A review of Hydro Tasmania's submission in relation to its market-based energy price or the non-contestable load will be completed for the Department of Treasury and Finance by an independent expert. The review will include consultation with Aurora Energy;
- The Tasmanian Energy Regulator will report to the Treasurer on the methodology and processes followed by the consultant;
- The Treasurer determines an energy price, taking into account the outcome of the review by the independent expert; and
- The price control regulations are amended to incorporate the Government's decision on energy prices as part of the building-block approach, and Hydro Tasmania and Aurora Energy negotiate financial contracts for the blocks nominated by Aurora Energy in the context of the energy price established to meet price control regulations.

A fair and exhaustive process: Llewellyn said: "The Regulator is also required to report to Treasury on the methodology of the process and will contribute to discussions during the preparation of the independent expert's report;

provide feedback on drafts of this report, focusing on process and methodology, particularly to ensure that the methodology is robust and appropriate; assess the impact of recommendations on consumer prices; and ensure appropriate probity."

Regulator reports to Treasury: Llewellyn said: "The Regulator is required to report to Treasury initially in respect of this by 31 March 2007. The discussion relates only to the energy component, that is the energy component of the non-contestable tariff. The tariff, of course, is built up and comprises other components from the distribution point of view.

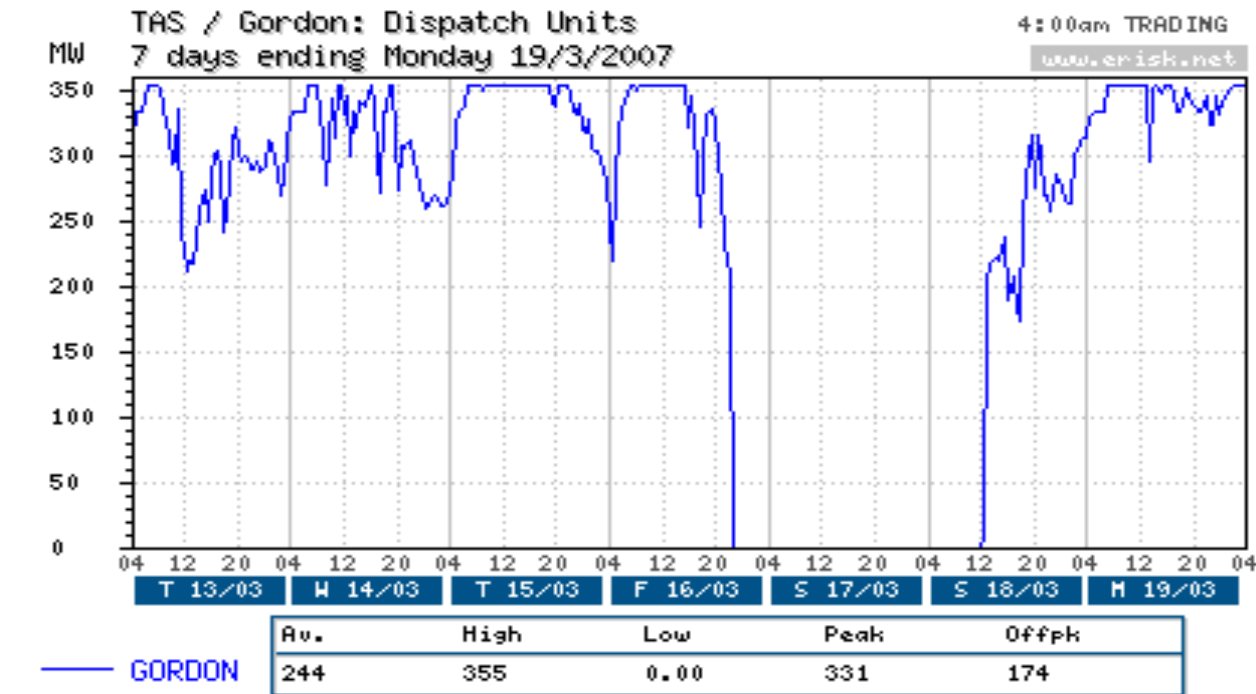
The regulator's role: "The process of determining the regulated tariffs for non-contestable customers for the period January 2008 to 30 June 2010 uses the building-block approach. It requires separate inputs on the prices of energy supplied by Hydro Tasmania and from sources such as transmission and distribution charges, retail costs and margins. That is what the Regulator is involved in doing," Llewellyn added.

Reference: Government of Tasmania, Legislative Council, Government Business Scrutiny Committee B Friday 9 March 2007. The report is available at <http://www.parliament.tas.gov.au/hansard>

Take the generators out of Gordon ... energy market across Basslink, could be manipulated

Hon. David Llewellyn, Minister for Energy speaking to the Parliament of Tasmania, House of Assembly, Government Businesses Scrutiny Committee meeting, Tuesday 6 March 2007 explained Hydro Tasmania's competitive thinking: "We effectively have green energy that we can sell to the mainland given the circumstances with Basslink and so on. Of course as time goes on and emission trading systems become a reality, as they will have to with regard to global warming and these issues then our assets will be much more valuable given those circumstances. However, we do operate now in the National Energy Market and it is a very sensitive market. In other words, if they knew in advance that somehow or other Hydro Tasmania were going to take the generators out of Gordon for some regular maintenance or whatever for a period of time, they would try to capitalise on that in regard to how they could manipulate the energy market across Basslink in order to get an advantage on it".

Our competitive advantage is storage: Vince Hawkesworth, chief executive officer of Hydro Tasmania, said: "You talk about our competitive advantages, we are a hydro system with wind and we can store and then at times of peak pricing on the mainland we can

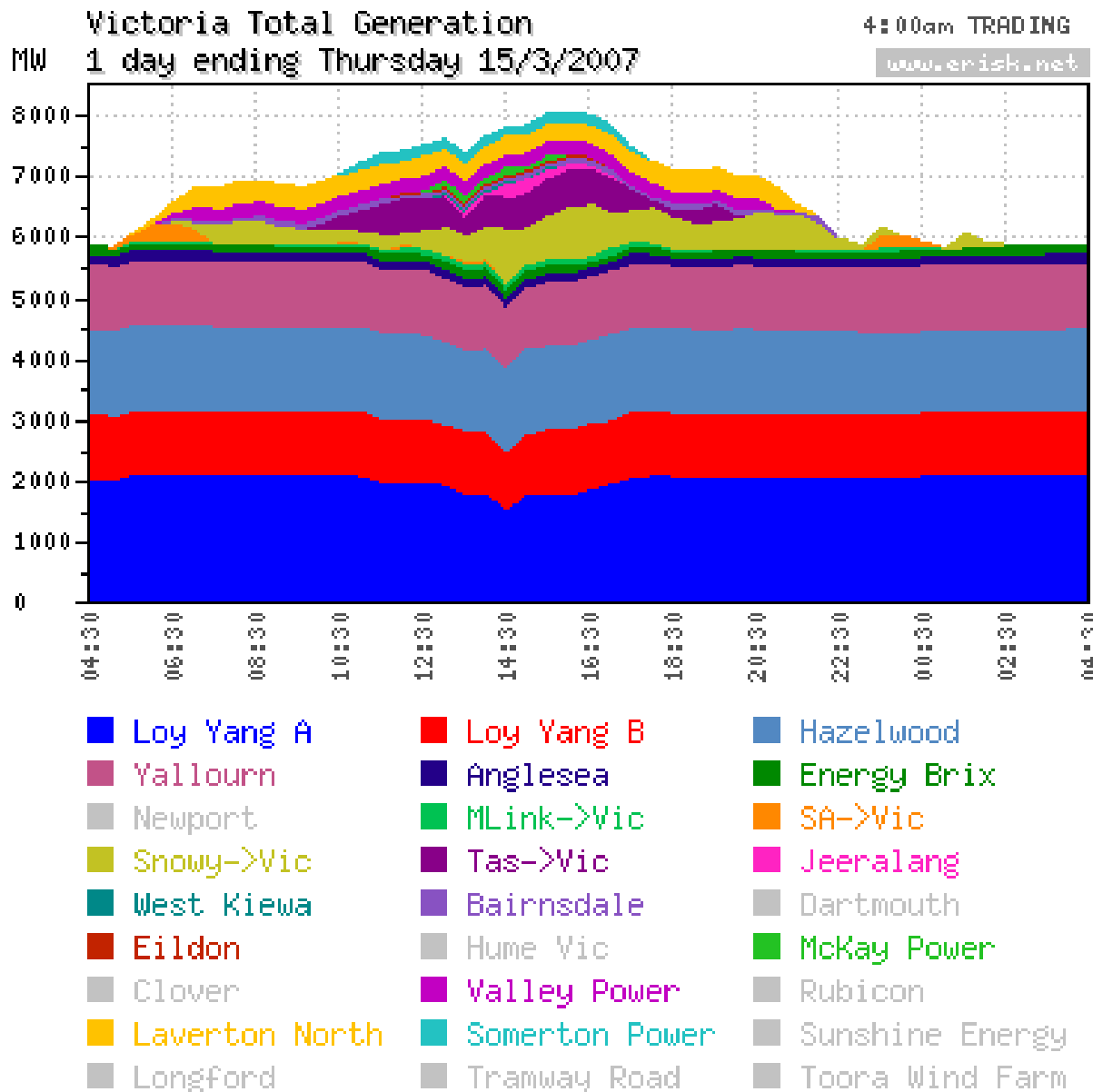


sell that across Basslink. Of course the optimum position for us in relation to Basslink is that it is raining a lot".

Optimum is to have plenty of storages: Dr David Crean, chair of Hydro Tasmania, said: "So the optimum is that we have plenty of water storage so that we can export to maximise all the peak prices and we only have to import at times of very low prices. That was not the situation this year because of the drought but that is the ideal situation and I am sure that there will be many years in the 25 years where that situation occurs, so that is our competitive advantage".

Sin-free hydro: Vince Hawkesworth, chief executive officer of Hydro Tasmania said: "I totally agree with that position and, if one thinks about where the global climate change debate is now going, I am certainly happier being a chief executive of a hydro-based system than I think I would be of a coal-fired generator".

Reference: Parliament of Tasmania, House of Assembly, Government Businesses Scrutiny Committee meeting, Tuesday 6 March 2007. This document is available at <http://www.parliament.tas.gov.au/hansard>



Beach signs a 225PJ, 15-year agreement with Alinta to supply gas to Tasmanian power station

Beach Petroleum had signed a 15-year agreement with Alinta to supply gas to a Tasmanian power station, and a 500 million upgrade to one of its oil and gas projects. Beach said the agreement to supply 225 petajoules of gas over 15 years, starting in 2009, would help fund a \$500 million expansion of its part-owned Basker Manta and Gummy fields project (BMG) in Bass Strait. The project mostly produces oil, and *The Australian* (19/3/2007, p.32).

Pipeline plan: Beach said new drills there in 2006 led to much greater expectations for the project's potential, with oil reserves estimated at 40 million barrels. In light of the Alinta deal, three new oil wells are now scheduled for construction there late this year, and three new gas wells are planned for 2008. The gas development will include a gas processing facility and a pipeline to shore. "The ability to export gas to onshore markets will also enhance oil production by allowing wells to achieve optimum performance," Beach managing director, Reg Nelson, said.

Tasmania wood-fired power station proposed for pulp mill

Transend Networks CEO, Richard Bevan, told the Parliament of Tasmania Government Businesses Scrutiny Committee on 6 March 2007 that a proposed pulp mill in the Tamar would need to pay for a new transmission line and substation.

Upgrades needed for line into Newwood?

Committee member Morris asked: "Can you provide me with information regarding the line into Newwood. Firstly, what is the current line's capacity? Who paid for it? Is there any capacity built into it for an upgrade or has it already been constructed on the basis that there may be power generated on site and carted out?"

Wood-fired power station: Richard Bevan, CEO of Transend Networks Pty Ltd, responded: "The transmission line goes from our Kermandie substation; it's off an existing transmission line. It is being funded by Newwood. In terms of your question about the capacity it was being built to, the transformer at the end of the line at Newwood is sized for what is there currently – the Ta Ann veneer mill. In the event that a wood-fired power station were to proceed then we would need to change that transformer to a larger unit, but the transmission line itself has sufficient capacity".

30-40MW capacity: "Again, it comes back to my comment that a transmission line tends to

get build in chunks of capacity. A few numbers have been talked about regarding the capacity of a power station – 30 or 40 megawatts – which the existing transmission line of 120kV would be well capable of handling, but we would need to change the transformer".

Substation upgrade needed? Morris asked: "Minister, with the proposed pulp mill in the Tamar, would there be a need for an upgrade of the substation up there, or the building of a new substation? What is the capacity of that line and who will pay for that work?"

Energy minister not sure: David Llewellyn, Minister for Energy, said: "I understand that the proposed pulp mill itself will be generating electricity but I don't know how that relates to the grid. I will ask Mr Bevan to make some comment, bearing in mind that it is still subject to Resource Planning and Development Commission assessment at the moment".

New transmission line, substation sought: Bevan said: "We are currently in discussion with the pulp mill proponents about their requirements. The intention would be for a 220kV connection with our existing George Town substation, which would require a new section of transmission line running from the substation to the pulp mill site, and a substation on that site".

Pulp mill should fund lines, station: "That line, because it is dedicated for the purpose of the pulp mill, would need to be funded by the pulp mill, as would their substation. Whether they would want us to have a role in building,

owning, operating it or whatever is a second-order question. The important issue is that the proponent is required to fund the investment".

Reference: Parliament of Tasmania, House of Assembly, Government Businesses Scrutiny Committee, Tuesday 6 March 2007. Members: Mr Best (Chair); Mrs Butler, Mr Gutwein, Mr Hidding, Mr McKim and Mr Sturges (Deputy Chair); Substitute Members: Mr Booth, Mr Morris, Mr Will Hodgman and Mr Whiteley. In attendance: Hon. David Llewellyn, Minister for Energy and Ministerial Office Nick Wright, Adviser. Document is available at: <http://www.hansard.parliament.tas.gov.au/isysquery/irl565b/1/doc>

Hydro debt situation: ABN Amro appointed to weigh all the options

The House of Assembly, Government Businesses Scrutiny Committee met on 6 March 2007. Hon. David Llewellyn, Minister for Energy said they were discussing Hydro and it was on review about its debt situation.

Preferred option for hydro to charge more: Mr Gutwein, Liberal member asked Llewellyn: "What options are you currently considering? Obviously a cash injection is one, some form of debt transfer might be another. You have already announced that your preferred option is to charge Tasmanians more to which Llewellyn said that he hadn't said that. Gutwein, then asked Llewellyn about the other options apart from those was Hydro currently considering?"

ABN Amro appointed to weigh all the options: Dr David Crean, chair of Hydro Tasmania, said: “That is exactly right. What is a matter of public record is that National Grid have made that decision, it is their decision. We are looking at protecting our interests under the contract, and we have appointed ABN Amro to look at all the options we have in relation to this issue, and that is where we are at the moment – considering those options. As David said, they are certainly sensitive.

Waiting for ABN Amro submission: “We are at the point of considering the ABN Amro submission on the options and making a decision on how we proceed. We are in that situation at the moment”.

A valid reason for Basslink takeover: Booth, Substitute member, said: “So given the reality that the owner of Basslink is able to apply to make it into a regulated link rather than the entrepreneurial link that it is at the moment, that would then enable effectively a facility fee to be turned into a transmission fee that could be related to energy prices. Would that be one of the drivers, Minister, why you would be wanting to perhaps take control of Basslink to turn it into a regulator link and allow the pricing of that to be passed on to the consumer?” Llewellyn said that decision had not been made.

Fee will be passed on to consumers: Booth, Substitute member then asked Llewellyn that “if that wasn’t the case ... given that the Basslink arrangements are locked down for the 25-year life of the project in that sense that you have a

facility fee that is amortised over those 25 years, no matter who owns the grid that facility fee will still be payable. Obviously if you could purchase the thing for a fire sale price, for example, there could be a point where it would be worthwhile the Hydro buying it. I am not saying that it is not a worthy project to look at but I am interested in the effect turning it into a regulated link would have on the ability of Hydro to price-shift across to the consumer that facility fee that at the moment does not form part of your submission to the regulator”.

Hydro has a range of options: Llewellyn said: “For distribution of electricity at the transmission level. They are all issues that relate to the sale that is going on at the moment. The Hydro has indicated that ABN Amro have given some advice to them and they are considering that advice. There are quite a lot of different options that may be on the table but I do not believe it is appropriate for us to talk about those sorts of things in a very competitive open market situation”.

Purchase, one of the options: Mr Gutwein, member, asked: “But definitely one of the options is that the Government is considering the purchase?” Llewellyn said: “All the options are being canvassed through that and there has been no decision made about those sorts of issues”.

Reference: Parliament of Tasmania, House of Assembly, Government Businesses Scrutiny Committee meeting, Tuesday 6 March 2007. This document is available at <http://www.parliament.tas.gov.au/hansard>

Tasmania Hydro business case for the Lake Margaret Power Station to increase sales of RECs

The Tasmania House of assembly Committee for the Government Businesses Scrutiny met on 06 March 2007. Mr Morris, Substitute member, asked Hon. David Llewellyn, Minister for Energy: “Minister, in relation to the one storage that is full – Lake Margaret – if it was not for the three-year waiting period for the renewable energy certificates to become available for the refurbishment of that station, would you undertake the refurbishment sooner?”

Business case for Lake Margaret: Hon. David Llewellyn, Minister for Energy, replied: “The Heritage Council has been involved and it has been listed on the heritage register. I think the current situation is that Hydro needs to do a further business case for the Lake Margaret Power Station, but I think things are on track.

Heritage aspects the issue: “I think people would realise that in order to progress the matter, providing the business plan stacks up and so on, a new wood-stave pipeline is probably required. Obviously we have to take into account the heritage aspects of the power station but they were always part of the idea and the feasibility and so on.

Will improve bottom line: “It would help with additional and renewable energy certificates.

Victoria and New South Wales, given an appropriate result in the election, may enable some renewable energy certificates to be generated, and if so then that improves the bottom line as far as the business case is concerned”.

Waiving three year waiting period: Mr Morris, Substitute member, asked the Minister whether a request had been made to the Federal Government from Hydro for waiving the three-year waiting period, formally or informally, to which the Minister replied: “Not that I am aware of, no”.

Reference: Parliament of Tasmania, House of Assembly, Government Businesses Scrutiny Committee meeting, Tuesday 6 March 2007. This document is available at <http://www.parliament.tas.gov.au/hansard>

Qld Level water 5 restrictions: Premier says subsidy payments to be made to generators

Hon. PD Beattie, Premier and Minister for Trade told the House: “Unfortunately, we have to move to level 5 water restrictions ... What we are doing is minimising the consumption of water by these power stations. We have made it clear and the minister for energy has made it clear that it is not going to affect generation and it is not going to affect prices. This is about ensuring that we preserve water for people

and we make certain that we have drinking water. It is likely that we will need to make CSO (Community Service Obligation) payments this year to power generators. That is because of the changes we are pursuing here. They are not dividends”.

Our aim is to provide water: “If those opposite understood how the CSO arrangements work then they would know that is exactly one of the likely consequences. The important thing for us is that we are determined to provide water. If we can save it in terms of generation and if we can save it by people reducing their consumption in their homes then of course we are going to do it.

A whole gamut of activities: “What we have announced today is a responsible way to provide water to people in the southeast corner of the state in the worst drought on record. That is not all we are doing. We are building a water grid. We are producing recycled water for drinking and energy generation.

Australians can cope up with crisis: “What we are seeing with level 5 restrictions is government responding through the Water Commission. Of course no-one likes to see these restrictions happen. But one of the great things about Australians is that they pull together when they are confronted with a crisis”.

Reference: Queensland Parliament, Record of proceedings, First Session of the Fifty-second Parliament, Thursday, 8 March 2007, p.796. The document is available at <http://www.parliament.qld.gov.au/hansard>

Qld Water Grid plan: centrally coordinated management of bulk water supply, transport and treatment assets, councils, power stations, to pay costs

The Queensland Water Commission said water is a regional resource and existing water supplies are not owned by individual local governments; and therefore proposed a Queensland Water Grid would provide a mandated mechanism for the centrally coordinated management of bulk water supply, transport and treatment assets, and providing services to identified Grid Customers.

How it would work:

- The Grid Manager would provide contracted amounts of water to nominated demand nodes;
- retailers would retain responsibility for the supply and standards of service to their own customers (for example households and commercial and industrial users; and
- Grid Customers (retailers and power stations) be deemed to be beneficiaries of the Water Grid (and therefore required to contribute to its costs.

Who has to pay: The following retailers and power stations were to be declared as Grid

Customers and, as beneficiaries, be subject to cost recovery arrangements commencing as of 1 July 2008.

Councils: Beaudesert Shire Council; Boonah Shire Council; Brisbane City Council; Caboolture Shire Council; Council of the Shire of Esk; Gatton Shire Council; Gold Coast City Council; Ipswich City Council; Kilcoy Shire Council; Laidley Shire Council; Logan City Council; Pine Rivers Shire Council; and Redcliffe City Council.

Power stations: CS Energy (Swanbank Power Station) and Tarong Energy (Tarong Power Station and Tarong North Power Station).

Users must pay: The plan was the following entities be declared as Grid Customers and, as beneficiaries, be subject to cost recovery arrangements commencing as of 1 July 2009: Redland Shire Council, Noosa Shire Council, Maroochy Shire Council and Caloundra City Council.

Toowoomba a possible: Assessment as to whether Toowoomba is a beneficiary of the Water Grid will be dependent on whether a pipeline interconnection to Wivenhoe Dam is to be established. The fundamental scope of the Water Grid will be defined in terms of both:

- the Grid Assets required to be managed in a coordinated manner by the Grid Manager; and
- the Grid Customers, being those communities to which the Water Grid

provides services at specified off-take points or 'demand nodes'.

The beneficiaries of the Water Grid are those customers within the South East Queensland (SEQ) Region that benefit from security of supply. These beneficiaries will be declared as Grid Customers and will be required, in aggregate, to pay for the supply of those services. The Water Grid provides security of supply through a commitment to supply water in accordance with defined Level of Service Objectives which address hydrologic risk. The Water Grid may also improve Grid Customers' ability to mitigate risks such as localised asset failure (for example treatment plant failure) and source risks (for example a contamination event in a dam); and the economic and social well-being of SEQ's individual communities are inherently interdependent and an improvement to water supply security in one community provides benefits to the entire SEQ Region.

Reference: Queensland Water Commission, Institutional Arrangements for Urban Water Supply Arrangements in South East Queensland, Draft Report for Consultation, February 2007, website: <http://www.qwc.qld.gov.au>. Contact: Chief Executive Officer, Queensland Water Commission, PO Box 15087, City East QLD Australia 4002. Phone: (07) 3227 8207. Fax: (07) 3033 0887. Email: qwcenquiries@qwc.qld.gov.au. Closing date for submissions: Thursday 5 April 2007.

Verve Energy lists its WA Muja Power Station A & B sites for sale; generation to end 30 April 2007

Verve Energy owns and Operates the Muja power station, near Collie in Western Australia. The Muja power station has four stages – A, B, C and D. Stages A and B are comprised of 4 x 60MW coal fired generating units which were commissioned in the 1960s. Verve Energy will cease generating at Muja Stages A & B on Monday, 30 April 2007. Stages C and D will continue to operate. Verve Energy is seeking Expressions Of interest from interested parties in respect of future uses of the plant and/or the site of Muja Stages A & B which is offered as leasehold. Following evaluation of the initial expressions of interest, formal proposals may be invited from some proponents. Expressions of interest must be received by 5pm Perth time on Monday, 30 April 2007.

Reference: Verve Energy, email: muja.abrftp@verveenergy.com.au. Phone: (08) 9424 1828 (Attn: General Manager – fuel and Business Development).

Western Power proposal to construct 300km-long, 220,000 volt transmission line from Collie to Wellstead angers farmers in line's path

A proposal by Western Power to construct a 300km 220,000 volt transmission line from Collie to Wellstead has angered farmers in the line's path, reported *Farm Weekly* (8/3/2007, p.3-4).

Magnetite mine needs power: The transmission line is required to power Southdown, the Grange Resources magnetite mine at Wellstead. Broomehill farmers are unhappy the line will run through their property low land potentially lower land values through visual pollution.

Western Power stubbornness: They say despite a common sense alternative that could benefit the wider community, Western Power appeared determined to pursue a course only of benefit to Grange Resources.

Combine power upgrades: Broomehill group spokesperson, Tint Altus, said new lines were to be added to the Kojonup to Albany power line in 2011-2012 to satisfy increasing power needs in Albany. Altus said that the planned upgrade should be brought forward to incorporate the Collie to Wellstead line and effectively to kill two birds with one stone. "Albany is in desperate need of more power

and it would make more sense to run the proposed transmission line to a substation at Kojonup and then direct it through the existing Kojonup to Albany line," he said. "It could then be directed to Wellstead from Albany and cause less disruption to landowners."

Cheaper to combine lines: Llewellyn said it appeared to be cheaper to combine the two lines, from a cost point of view. "It is going to cost \$300 million to develop the Muja to Wellstead line and \$200m for the Kojonup to Albany line so surely there would be cost savings if the two were incorporated," he said.

Western Power unsure about Muja to Wellstead line: Western Power major projects coordinator, Ian Buchanan, said there was no guarantee construction of the Muja to Wellstead line would even go ahead. "It all depends on Grange Resources and their plans for the mine," Buchanan said. He confirmed that if Grange Resources went ahead with the mine in the anticipated timeframe, the transmission line would follow the proposed route despite the upgrading of the Kojonup to Albany line in 2011-2012. "We have done a large amount of work on various route options and decided on the Muja to Wellstead one as the most effective at this stage," Buchanan said. "As you can imagine there is a lot involved in undertaking a project like this and if we were now to stop and look at the Kojonup to Albany line as an alternative it would put us back a further two years because that is how far advanced we are with the current proposal."

Potential if Grange Resources revises timeframe: Buchanan said if Grange Resources revised their timeframe, for opening the mine and it corresponded with work on the Kojonup to Albany line then that option could be looked at.

Jackgreen (International) seeks ACT electricity and gas supply licences

The ACT Independent Competition and Regulatory Commission has received applications from Jackgreen (International) Pty Ltd for a licence to supply electricity and a licence to supply gas in the ACT. It invites submissions from interested parties, as advertised in *The Canberra Times* (10/3/07, p.B9).

Comments: Jackgreen's applications may be viewed at the Commission's office, Level 2, 12 Moore Street, Civic ACT. Comments should be submitted to GPO Box 296, Canberra City, ACT 2601 by Tuesday 10 April 2007. Further information can be obtained on (02) 6205 0779.

Federal govt announces \$100m subsidy for new 400MW IDGCC Loy Yang 'clean coal' generator: coal-drying aims to reduce generator emissions

The Howard Government has announced plans to inject a further \$100 million into clean coal technology to reduce greenhouse gas emissions. Industry Minister, Ian Macfarlane, and Environment Minister, Malcolm Turnbull, last week announced Victorian-based HRL Limited will receive a \$100 million grant for a \$750 million clean coal technology project.

Emissions reduction potential: The project, funded under the Australian Government's Low Emissions Technology Demonstration Fund (LETDF), has the potential to slash greenhouse gas emissions generated by coal-fired power stations.

New 400MW IDGCC Loy Yang generator: Macfarlane said the demonstration project involves building a 400 megawatt integrated drying gasification combined-cycle (IDGCC) power generation plant at the Loy Yang coal mine in Victoria's Latrobe valley.

Coal drying boost efficiency: Drying brown coal significantly increases burning efficiency, leading to reduced levels of greenhouse emissions. Further conversion of the coal into

clean-burning gases, such as methane, also improves efficiency and enables relatively pure carbon dioxide to be captured instead of released into the atmosphere.

No silver bullet: "While there is no single silver bullet to deal with climate change, Australia's progress towards cleaner coal is one of the most important ways we can make a global contribution. The coal industry is vital for Australia and vital for the world," said Macfarlane.

87mt emissions reduction forecast: "By 2010 Australia will be emitting 87 million less tonnes of carbon than we otherwise would – equivalent to the emissions of the entire transport sector," Turnbull said.

Work begins end 2009: Work on HRL's IDGCC power generation plant is expected to start mid-2007, and be completed by the end of 2009, creating around 300 new jobs during construction and 36 new jobs for the plant's operation.

\$410 spent on emissions reduction: The Howard Government has now committed \$410 million from its \$500 million LETDF program, announced in its 2004 Energy White Paper and designed to leverage at least a further \$1 billion from industry. This \$410 million in funding supports projects worth more than \$3 billion.

Clean coal plus one solar generator: Four of the six LETDF projects funded to date involve clean coal. The world's largest carbon dioxide capture and storage project, and a large scale

solar concentrator have also been supported through the scheme.

Reference: For more information about the Low Emission Technology Demonstration Fund, please see the attached table or visit: <http://www.ausindustry.gov.au>