



Hydro Tasmania doubles revenue: \$565 million in one quarter as \$60 month average revenue balloons to \$132m

1 It's a brave new world. Hydro Tasmania, now almost one quarter into its new NEM market, sent up 11 cloud seeding missions in July, which must have increased fuel supply, judging by the decision for repeated flights. Despite increased hydro fuel, the rising demand from cold weather, and the advent of NEM trading rules doubled the Hydro Tasmania revenue (*p. 2*) in the quarter, since NEM-start, on 15 May. And the Tasmanian

wholesale price goes on rising. On 3 August price was expected to go to \$10,000/MWh, but reached \$6410.77/MWh (*see page 2 and 3*). Hydro Tasmania has 27 generators. On 3 August, for example, three of those hydros earned over \$10 million each on one day alone:

- Gordon, \$1 million;
- Liapootah, \$13 million; and
- Reece, \$14 million.

Doh! Tas Treasury on flexitime

Tasmania Treasury, the manager of finances for the State of Tasmania, owner of the Tasmania electricity system, told *Electricity Week* it had no idea of the earnings or risk exposures of its corporations since the start of NEM-style trading in mid-May.

Monopoly corps at the wheel? Treasury advised *Electricity Week* to ask the Hydro. The Hydro chose not to comment on NEMMCO data from *Electricity Week's* own data site www.erisk.net. That showed:

- a pool revenue average about \$132 million a month for the Hydro;
- double the last public figures from the Hydro of an average \$60 million a month.

cont. page 6

contents

- 6 Vic-Tas now connected but transformers not yet in place**
- 8 Tasmanian retail competition opens July 2006 for large users**
- 8 Lightning near the Farrell-Sheffield 220kV lines spikes Tas price past \$6000/MWh**
- 9 Wind farm at Collector on hold with renewable energy price too low to make it viable; 50pc Mt Spring sold to Japan**
- 10 Macquarie Energy withdraws from proposed wind farm project south of Canberra**
- 10 Australia's wind energy sector to boom if climate change costs factored into prices**
- 10 AEMC invites submissions to proposed review of NEM electricity transmission revenue and price regulation**
- 11 Vic decides CO₂ waste dumps essential, but observes safety not yet proven**

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week in brief

WIND MARKET COLLAPSES

Price too low to make viable: ActewAGL spokesperson Carsten Larsen said a proposed wind farm at Collector was on hold with the price for renewable energy price too low to make it viable. The MRET value was last week \$28/MWh, and the NSW NGAC, \$11 tonne. (see more in *Green Markets*) The NEM pool price last week was \$19.33-\$145.31/MWh and MRET subsidies had run-out. But subject to development approval and obtaining a retail purchaser, electricity generation from the Tarago project was expected to begin in about 12 months.

Macquarie Energy wind kaput: Macquarie Energy, a NSW Government-owned corporation, has withdrawn from its proposed wind farm in the Anembo area on the Tinderry range south of Canberra, saying that given the state of the market for renewable energy the project would not go ahead, according to *The Canberra Times* (6/8/2005).

National emissions trading 2012: Last week the NSW Cabinet began the process for a national emissions trading market to start 2012 (see *Green markets*).

Wind v fossils: The price of wind energy was expected to overlap with the price of fossil fuels within 10-15 years, and faster if climate change costs were factored into current energy prices.

AS CO₂ DUMPS RISE IN THE WEST

Victorian CO₂ waste dump: In competition with renewables, the Federal and State Governments planned to subsidise CO₂ waste dumps. The *Victorian Government Greenhouse Strategy Action Update* said the State funds the Cooperative Research Centre (CRC) for Greenhouse Gas Technologies at \$700,000 per annum to the

CRC. Outcomes of a recent meeting included acceptance of a CO₂ dump Technical Roadmap; recognition of ten CO₂ dump projects; release of a CO₂ dump international regulatory report; and agreement on a CO₂ dump stakeholder engagement strategy. Reference: *Victorian Government Greenhouse Strategy Action Update*, published by the Victorian Government Department of Sustainability and Environment, Phone: 136 186. <http://www.greenhouse.vic.gov.au>

Boom biddy boom for BHP: BHP Billiton is investing \$25 billion in new projects and acquisitions after a 120pc rise in coking coal.

Rumours NSW assets for sale: New Finance Minister Michael Costa said 4 August that the NSW Government could be forced to sell energy assets to deal with a softening economy. One proposal canvassed involved selling the retail arms of EnergyAustralia, Integral Energy and Country Energy.

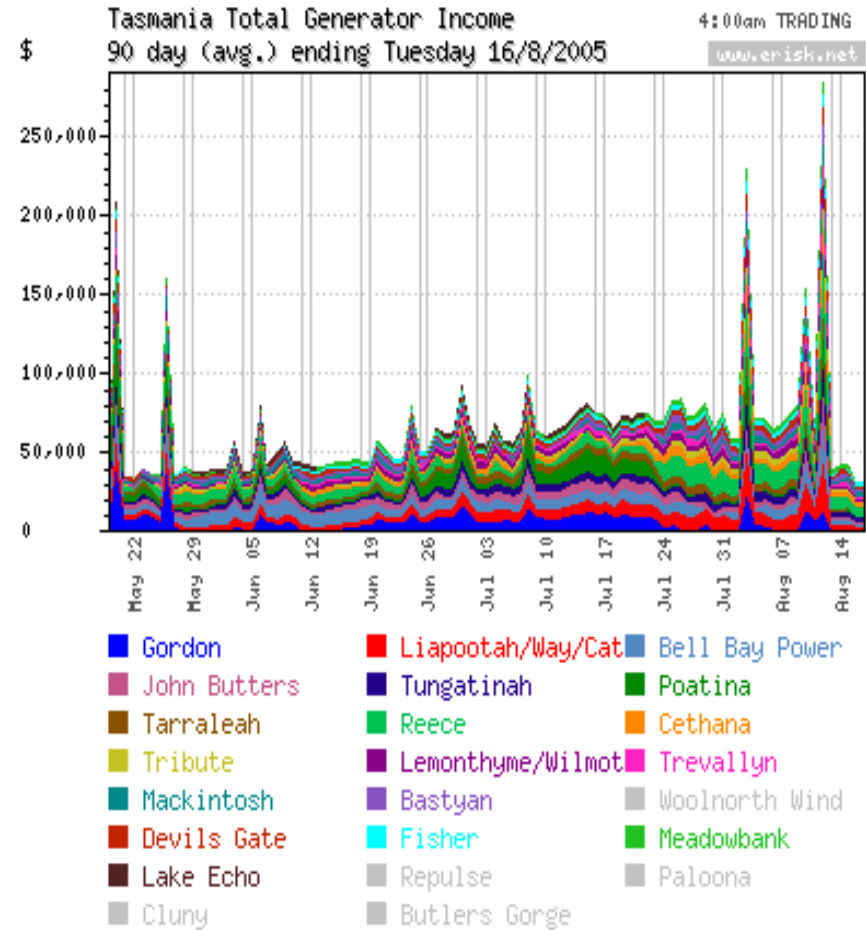
Case for sale of NSW, Qld grids: According to lobbyist Paul Hyslop and Paul Breslin of ACIL Tasman – who did not say who they were acting for – both NSW and Queensland appear to suffer from political interference. Victoria, by contrast, was doing well.

NSW subsidy-go round: An opinion-piece in *The Australian Financial Review* (8/8/2005, p. 54), said "In NSW, the Electricity Tariff Equalisation Fund has distorted prices in the NEM and supported the profits of NSW generators, which flow through to the State Treasury.

WHOLESALE PRICE

Week to Saturday, 6 August: Spikes pushed average prices up 8-32pc to \$19.33-\$145.31/MWh on stronger demand.

Tasmania blackouts: Four \$10,000/MWh prices in overconstrained dispatch intervals were confirmed. Spikes occurred on all seven days in Tasmania, on four days in NSW and



Spot revenue of about \$132 million a month. The last public figures from the Hydro showed an average \$60 million a month.

South Australia and on 3 days in Victoria. The \$6410/MWh in Tasmania for the 30-minute trading interval ended 1730EST on Wednesday was top price of the week. Another \$10,000/MWh in the overconstrained 2000EST dispatch interval on Wednesday was also confirmed.

Tuesday, 9 August: Average prices rose 4-7 per cent in Queensland and Tasmania, fell 6 per cent in NSW, and varied 12 cents in both Victoria and South Australia to a \$20.73-\$122.53/MWh overall range on system-wide maximum demand down a marginal 49MW (0.2 per cent) to 29,405MW. Top price of the

day was \$154.85/MWh in Tasmania for the 30-minute trading interval ended 2000EST.

Monday, 8 August: Average prices fell 31-32 per cent in NSW, Victoria and South Australia on the spike-affected averages of Friday, the previous week day, and rose 4-10 per cent in Queensland and Tasmania to a \$19.88-\$114.47/MWh range on system-wide maximum demand up 648MW to 29,454MW.

Sunday, 7 August: Average prices fell 14-21 per cent in NSW, Victoria and South Australia and rose 3-6 per cent in Queensland and Tasmania to a \$17.74-\$112.09/MWh range.

Saturday, 6 August: NSW recorded spikes of between \$101.82-\$102.63/MWh in two 30-minute trading intervals with Tasmania registering spikes from \$100.35-\$112.75/MWh in all 48 trading intervals on Saturday, 6 August.

Friday, 5 August: Average prices fell 3-15 per cent to a 18.07-\$110.41/MWh range as spikes continued in all regions except Queensland on a colder day in all NEM capitals except Brisbane.

Three interconnectors cut back: The unplanned outage of a South East static var compensator (SVC) resulted in a reduction in the transfer capabilities of the Victoria-Snowy, and the Victoria-South Australia Heywood and Murraylink interconnectors from 0410EST on Sunday, 7 August.

Thursday, 4 August: Top spikes of between \$273.64-\$293.08/MWh in NSW, Victoria and South Australia pushed their average prices up 84-87 per cent while Queensland rose a more sedate 9 per cent, and Tasmania, with much smaller spikes, dropped 68 per cent for an overall \$21.21-\$114.32/MWh range. System-wide maximum demand was up 1316MW (4.7 per cent) to 29,225MW. Top price of the day was the \$293.08/MWh in South Australia.

Wednesday, 3 August: \$6410.77/MWh spike in eventful Tas day as average prices were up 7-278pc to \$19.46-\$362.59/MWh range on easing demand.

Ergon's new 33/11kV substation: Queensland distribution network service provider (DNSP), Ergon Energy, proposes to establish a 33/11kV substation and develop and connect the 11kV network to provide new feeders to the Mackay city area.

Review of NEM transmission: The Australian Energy Market Commission has been established as part of the energy reform process undertaken by the Ministerial Council on Energy (MCE). <http://www.aemc.gov.au> Closing: 19 August 2005.

COAL

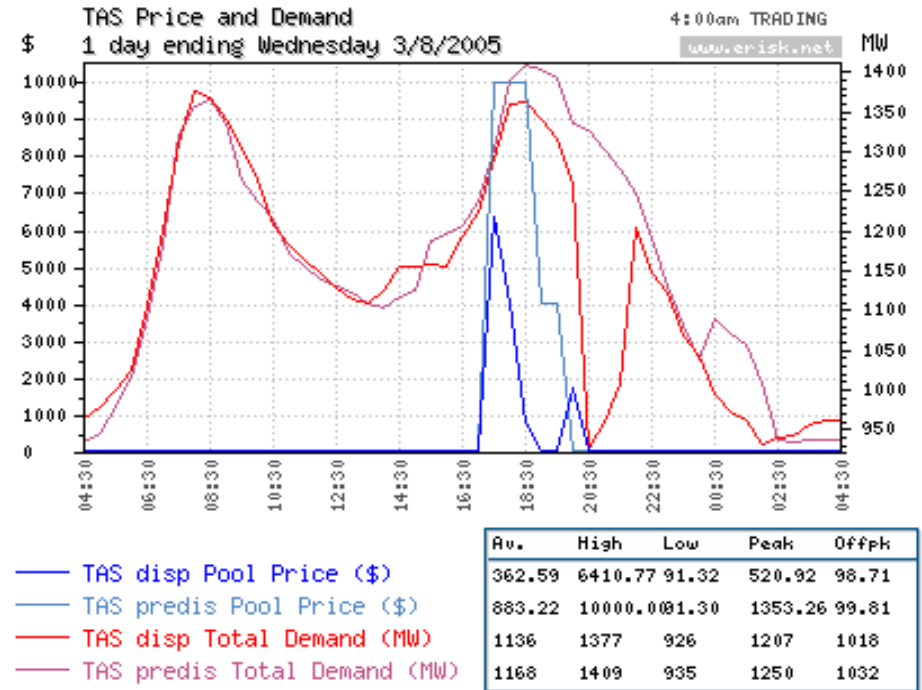
WA thermal \$53 a tonne: The price of WA thermal coal, used by power stations, also rose by nearly 18 per cent to about \$53 a tonne.

Tarong may build own coal mine: In a first for a government-owned corporation, Tarong Energy is considering developing its own coal mine in Queensland's Surat Basin at a cost of about \$500 million.

Mining lease in Glen Wilga: As part of a future diversification strategy. Tarong several years ago acquired a mining lease over the Glen Wilga coal deposit in the Surat Basin.

Coal for gas turbines: Sydney company UCC Energy has signed an arrangement with Datang International Power to use its coal and technology for a coal briquette gas power station which is hoped to be operating before the Olympics. CSIRO, which has patented the process, receives an undisclosed royalty on commercial sales of the process.

Wesfarmers revs Curragh North: Wesfarmers has accelerated development of the Curragh North coalmine in Queensland to take advantage of record prices.



3 August: \$10,000/MWh for at least half an hour as Tas sheds loads

TASMANIA

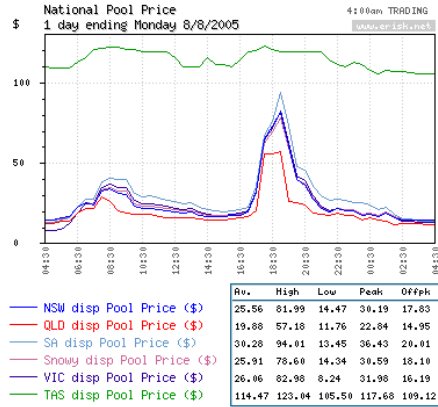
Tasmania price to \$6410.77/MWh: Spot prices peaked at \$6,411/MWh in Tasmania on Wednesday evening, 3 August. This followed the reclassification of the Farrell-Sheffield 220kV lines due to lightning.

Basslink crosses the waters: Five Mile Bluff, Tasmania, near Low Head in the north, is now connected to Victoria's South Gippsland coast by 290 kilometres of cable. Basslink will be fully operational by April 2006.

Tasmania July 2006: Competition for Tasmania contracts with the Boyer paper mill, Temco, Comalco and Zinifex - formerly known as Pasmenco Ez - are up for re-negotiation over the next decade.

New data on Tas retail entry: There is no application form for licences, as the Regulator prefers to deal with applications on a case by case basis. <http://www.energyregulator.tas.gov.au> Andrew Reeves Tasmanian Energy Regulator Tel: 6233 6323 Mob: 0419 397 956.

spikes



Wednesday, 10 August: Cold weather tipped to kick spikes to \$246.23-\$291.98/MWh range in NSW, Vic, SA and Snowy, with \$151.90/MWh top in Tas in 28 trading intervals. The NEMMCO predispach at 6.29 a.m. on Wednesday, 10 August was predicting top spikes of between \$246.23-\$291.98/MWh in NSW, Victoria, South Australia and Snowy.

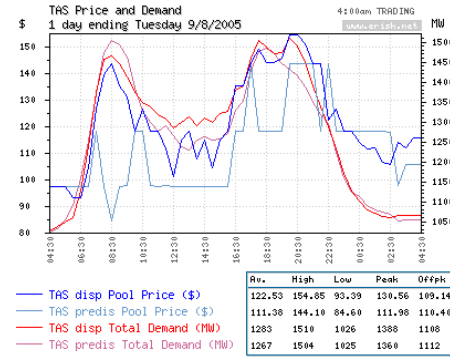
28 spike intervals in Tasmania: Spikes of between \$123.71-\$151.90/MWh are forecast for 28 of the 48 30-minute trading intervals in Tasmania, with the top price occurring in the 1130EST trading interval.

Colder in three capitals: The spikes are predicted on a day when colder weather is forecast for Melbourne, Adelaide and Hobart, but with Sydney being slightly warmer.

Spike details for NSW, Vic, SA, Snowy: Four spike intervals are predicted for Victoria and South Australia and two for NSW and Snowy. The following table shows the expected spike intervals:

Region	1800EST	1830EST	1900EST	1930EST
NSW	n/a	\$252.01/MWh	\$252.43/MWh	n/a
Victoria	\$104.39/MWh	\$276.00/MWh	\$276.00/MWh	\$102.61/MWh
South Australia	\$110.13/MWh	\$283.45/MWh	\$291.98/MWh	\$117.37/MWh
Snowy	n/a	\$246.21/MWh	246.23/MWh	n/a

Reference: Pool price for NSW, Victoria, South Australia, Snowy and Tasmania shown in 6.29 a.m. predispach for one day, Wednesday 10 August, in User Defined section of Erisk Net - Realtime NEM Data.



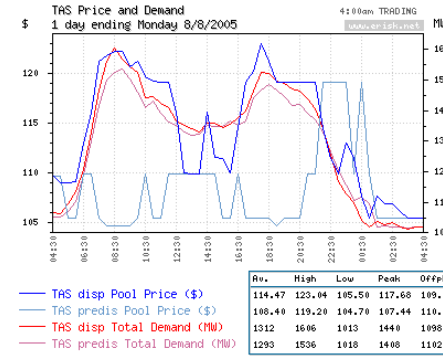
Tuesday, 9 August: Tasmania registered spikes between \$101.27-\$154.85/MWh in 43 of the 48 30-minute trading intervals on Tuesday, 8 August.

Three above \$150.00/MWh: The top spike occurred in the 2000EST interval, one of three that exceeded \$150.00/MWh. The other two in this range were \$154.81/MWh and \$151.27/MWh.

37 days of multiple spikes: This was the 37th successive day of multiple spikes in Tasmania. The last time a top price under \$100/MWh was recorded was Sunday, 3 July.

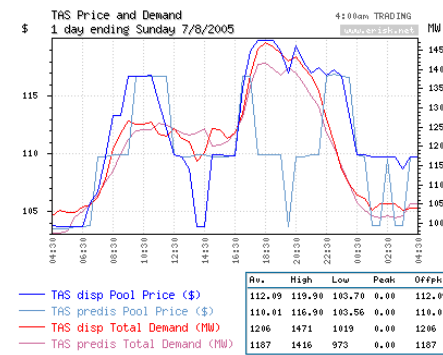
Reference: National Price for Tasmania for one day, Tuesday 9 August, in Price/Demand section of Erisk Net - Realtime NEM Data. http://www.erisk.net

Monday, 8 August: The NEMMCO predispach at 7.12 a.m. on Monday, 8 August was predicting that Tasmania would begin its sixth week of multiple spikes with prices of between \$104.70-\$119.20/MWh in all 48 30-minute trading intervals.



Top price in late evening: Tasmania has not had a maximum price under \$100.00/MWh since Sunday, 3 July. The predispach forecasts the maximum price of \$119.20/MWh will occur in three late evening intervals from 2230-2330EST inclusive.

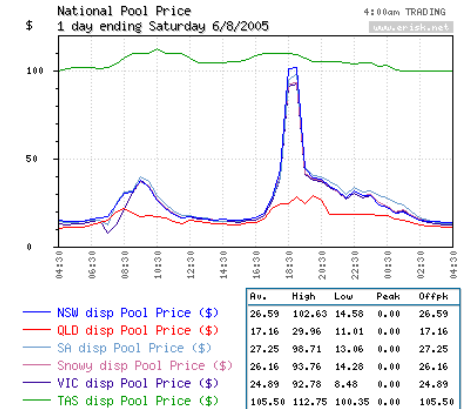
Reference: Pool price in 7.12 a.m. predispach for Tasmania for one day, Monday 8 August, in User Defined section of Erisk Net - Realtime NEM Data. http://www.erisk.net



Sunday, 7 August: Tasmania's multiple spikes continued for the 35th successive day with spikes between \$103.70-\$119.90/MWh in all 48 30-minute trading intervals on Sunday, 7 August.

Top prices in evening: The top spikes occurred in the three evening trading intervals from 1800-1900EST inclusive. The day of spikes came on a day when Hobart's minimum temperature was 6 degrees.

Reference: National Price for Tasmania for one day, Sunday 7 August, in Price/Demand section of Erisk Net - Realtime NEM Data. http://www.erisk.net

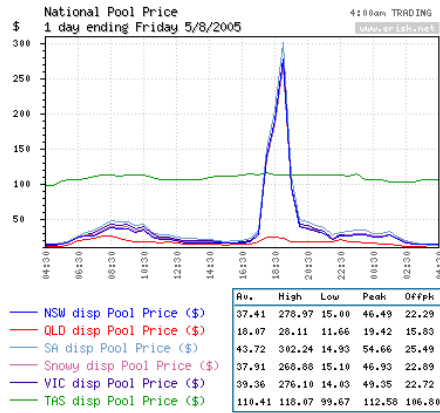


Saturday, 6 August: NSW recorded spikes of between \$101.82-\$102.63/MWh in two 30-minute trading intervals with Tasmania registering spikes from \$100.35-\$112.75/MWh in all 48 trading intervals on Saturday, 6 August.

NSW top in evening, Tasmania in morning: The two NSW spikes were in the evening at 1830EST and 1900EST with the top price being in the 1900EST interval. Tasmania's top spike was in the 1030EST interval.

Cold in both capitals: Sydney recorded its lowest minimum temperature of the week with 6 degrees on Saturday. Hobart's minimum of 5 degrees was the second lowest of the week.

Reference: National Price for NSW and Tasmania for one day, Saturday 6 August, in Price/Demand section of Erisk Net - Realtime NEM Data. http://www.erisk.net



Friday 5 August: Top spikes of between \$268.88-\$302.24/MWh were recorded in NSW, Victoria, South Australia and Snowy in evening intervals on Friday, August as Tasmania recorded a top spike of \$118.07/MWh in 46 of the 48 30-minute trading intervals.

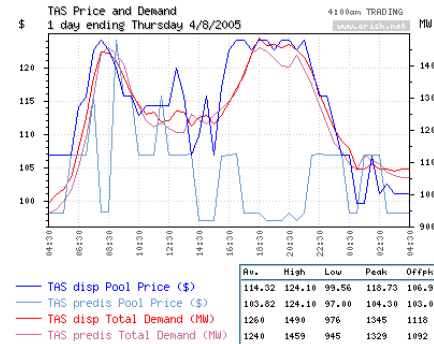
Colder in the capitals: The spikes came on a day when minimum temperatures in the NEM capitals of Sydney, Melbourne, Adelaide and Hobart were down between 2-6 degrees on Thursday.

33 successive spike days in Tas: Tasmania recorded spikes of between \$104.00-\$118.07/MWh with the top price being in the 1800EST interval. This was the 33rd successive day that Tasmania recorded top prices of above \$100/MWh, with the last price below that mark on Sunday, 3 July.

Three spike intervals in NSW, Vic and Snowy, four in SA: NSW, Victoria and Snowy all had spikes in the three intervals of 1800EST, 1830EST and 1900EST while South Australia added 1930EST to these three. The following table shows the range of spikes in these four regions:

Region	1800EST	1830EST	1900EST	1930EST
NSW	\$140.15/MWh	\$192.68/MWh	\$278.97/MWh	no spike
Victoria	\$129.38/MWh	\$190.05/MWh	\$276.10/MWh	no spike
SA	\$150.08/MWh	\$206.37/MWh	\$302.24/MWh	\$111.91/MWh
Snowy	\$135.81/MWh	\$185.37/MWh	\$268.88/MWh	no spike

Reference: National Price for NSW, Victoria, South Australia, Snowy and Tasmania for one day, Friday 5 August, in Price/Demand section of Erisk Net - Realtime NEM Data. <http://www.erisk.net>



Thursday, 4 August: The NEMMCO predisp at 7.10 a.m. on Thursday, 4 August was predicting maximum \$10,000/MWh spikes in the three 30-minute trading intervals between 1730-1830EST inclusive.

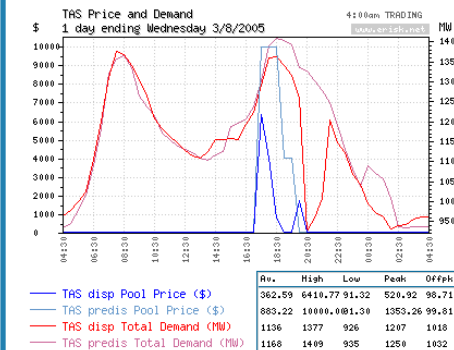
19 intervals of spikes: The predisp was forecasting a total of 19 intervals of spikes ranging from a low of \$100.47/MWh to \$10,000/MWh. Two spikes to \$4056.20/MWh were predicted for the 1900-1930EST intervals.

Cold snap in Hobart: Hobart expected a cold snap with showers and mountain snow, and a forecast minimum temperature of 5 degrees, down 7 degrees on Wednesday. However, there was no significant rise in maximum demand expected with the forecast 1409MW being 32MW (2.3 per cent) above the week's low so far of 1377MW.

Three \$10,000.00/MWh intervals: The spikes were expected to start in the 1630EST interval at \$104.20 and continue at this level in the 1700EST interval before soaring to \$10,000.00/MWh in the three intervals between 1730-1830EST inclusive and to \$4056.20/MWh in the 1900EST and 1930EST intervals.

12 intervals \$100.47-\$112.50/MWh: Prices were expected to drop back between \$104.20-\$112.50 in the six trading intervals from 2000-2230EST. After a short dip below \$100.00/MWh, prices are tipped to vary from \$100.47-\$109.40/MWh in the six intervals between 2330-0200EST Friday.

Reference: Pool price in 7.10 a.m. predisp for Tasmania for one day, Thursday 4 August, in User Defined section of Erisk Net - Realtime NEM Data. <http://www.erisk.net>



Wednesday, 3 August: Spikes to \$6410.77/MWh in Tas as lightning affects transmission network, over-constrained dispatch in four dispatch intervals and raise and lower regulation upped to control frequency

Spikes of between \$100.49-\$6410.97/MWh in 14 of the 48 trading intervals occurred in an eventful day in Tasmania on Wednesday, 3 August. There was one interval with a spike above \$4000/MWh, one above \$1700/MWh, and one above \$850/MWh. The other 10 were under \$110/MWh

Day of problems: Lightning near a transmission network line resulted in a credible contingency being declared for two hours 45 minutes from 1640-1925EST, over-constrained dispatch occurred in three

successive dispatch intervals at 1705EST, 1710EST and 1715EST and later at 2000EST, and the raise and lower regulation was lifted from 50MW to 100MW to control frequency in the period from 2010EST to 2145EST.

Highest price in problem periods: The lightning-induced credible contingency and the three over-constrained dispatch intervals occurred in the 30-minute interval ended 1730EST which saw the top price of the day at \$6410.77/MWh.

How prices moved: The following table shows how prices moved:

30-minute trading interval	Price (MWh)
1630EST	\$101.98
1700EST	\$103.00
1730EST	\$6410.97
1800EST	\$4056.20
1830EST	\$851.92
1900EST	\$108.65
1930EST	\$106.83
2000EST	\$1753.50
2200-0000EST Thursday (5 intervals)	\$100.49 to \$105.50
0130EST	\$100.53

Reference: National Price for Tasmania for one day, Wednesday, 3 August, in Price/Demand section of Erisk Net - Realtime NEM Data. <http://www.erisk.net>

Aurora's phantom California crash. If this was real market, the Tasmanian retailer Aurora would have gone into a Californian crash. The reason for the lack of interest from the Tasmania Treasury is the "load-following" contract, where the State owned generator invoices the State-owned retailer and then pays it back again. The same model exists in NSW and Queensland.

Tas prices get higher and higher: Last week, Tasmanian spot prices peaked at \$6,411/MWh on Wednesday evening, 3 August. This followed the reclassification of the Farrell-Sheffield 220kV lines due to lightning. (*details page 6*). There was one occasion in Tasmania where the spot price was greater than \$5,000/MWh. This occurred at 5.30pm on Wednesday. Lightning threats to transmission lines, over-constrained dispatch in four dispatch intervals and the need to up the raise and lower regulation to control frequency were a feature of an eventful day in Tasmania.

Vic-Tas now connected but transformers not yet in place

6

Five Mile Bluff, Tasmania, near Low Head in the north, was now connected to Victoria's South Gippsland coast by 290 kilometres of cable. Basslink will be fully operational by April 2006. It will provide Victorians with 600MW of energy during the summer months, and provide Tasmania with 300MW during winter. The 400kV HVDC

Top price for NEM week 31 July - 6 August 2005: Angaston Power at \$153.12

SA			
Generator	Income (\$)	Output (MWh)	Av Price (/MWh)
North'n Power	\$3,061,635	87,044	\$35.17
Ladbroke	\$251,292	7,211	\$34.85
Osborne	\$862,109	22,641	\$38.08
Pelican Pt	\$1,258,134	33,874	\$37.14
Torrens Is. B	\$2,004,837	47,005	\$42.65
Vic->SA	\$1,135,621	36,322	\$31.27
MLink->SA	\$56,464	1,931	\$29.25
Torrens Is. A	\$92,852	1,407	\$66.01
Mintaro	-	-	-
Dry Creek	\$2,392	8	\$302.24
Playford	\$468,503	12,496	\$37.49
Snuggery	-	-	-
Pt Lincoln	-	-	-
Quarantine	\$145,952	1,796	\$81.28
Angaston Power	\$8,620	56	\$153.12
Hallett Power	\$51,428	414	

VIC			
Generator	Income (\$)	Output (MWh)	Av Price (/MWh)
Loy Yang A	\$8,331,235	272,727	\$30.55
Loy Yang B	\$5,223,814	170,026	\$30.72
Hazelwood	\$7,684,273	248,039	\$30.98
Yallourn	\$6,636,384	215,314	\$30.82
Anglesea	\$808,024	26,433	\$30.57
Energy Brix	\$693,021	22,845	\$30.34
Newport	\$407,533	5,572	\$73.14
MLink->Vic	\$40,923	1,665	\$24.57
SA->Vic	\$46,660	642	\$72.70
Snowy->Vic	\$2,677,793	75,008	\$35.70
Jeeralang	-	-	-
West Kiewa	\$233,233	6,501	\$35.88
Bairnsdale	\$135,366	1,630	\$83.03
Dartmouth	\$174,621	1,775	\$98.37
Eildon	\$96,841	799	\$121.22
Hume Vic	\$35,815	1,094	\$32.75
McKay Power	\$206,920	2,336	\$88.57
Clover	-	-	-
Valley Power	\$245,502	2,077	\$118.21
Rubicon	-	-	-
Somerton Power	-	-	-
Sunshine Energy	-	-	-
Longford	-	-	-
Tramway Road	-	-	-
Toora Wind Farm	-	-	-

NSW			
Generator	Income (\$)	Output (MWh)	Av Price (/MWh)
Bayswater	\$11,275,165	387,754	\$29.08
Liddell	\$5,909,212	198,209	\$29.81
Mt Piper	\$6,034,523	193,905	\$31.12
Wallerawang	\$4,229,740	134,583	\$31.43
Vales Point	\$2,529,579	83,859	\$30.16
Munmorah	\$1,111,123	34,261	\$32.43
Eraring	\$9,437,845	285,988	\$33.00
Redbank	\$730,044	24,846	\$29.38
Smithfield	\$675,857	20,543	\$32.90
Snowy->NSW	\$2,132,036	37,961	\$56.16
Shoalhaven	\$435,322	15,788	\$27.57
Hunter Valley	-	-	-
Hume Hydro	\$7,701	396	\$19.45
Blowering	-	-	-
Northern Gas	-	-	-
Burrinjuck	-	-	-
Brown Mountain	-	-	-
Keepit	-	-	-
Broken Hill	-	-	-
Ergon Energy	-	-	-
Pindari Hydro	-	-	-
DL Q->N	\$515,636	16,489	\$31.27
QLD->NSW	\$4,509,531	144,897	\$31.12
West Nowra	-	-	-

QLD			
Generator	Income (\$)	Output (MWh)	Av Price (/MWh)
Tarong	\$5,919,004	306,225	\$19.33
Millmerran	\$2,536,982	130,761	\$19.40
Swanbank	\$927,305	44,491	\$20.84
Stanwell	\$3,852,169	193,603	\$19.90
Callide B	\$2,089,194	105,822	\$19.74
Callide Power	\$2,479,245	126,341	\$19.62
Gladstone	\$3,015,358	144,094	\$20.93
Collinsville	\$60,645	2,892	\$20.97
Swanbank C_D_E	\$264,474	13,453	\$19.66
Barcardine	\$46,207	1,816	\$25.45
Callide A	-	-	-
Kareeya	\$34,905	1,965	\$17.76
Barron Gorge	\$70,117	3,284	\$21.35
Mt Stuart	\$3,264	98	\$33.48
Wivenhoe	\$63,794	2,707	\$23.57
Townsville	\$648,247	32,233	\$20.11
Mackay	\$319	15	\$21.41
Roma	\$19,839	486	\$40.85
Oakey	-	-	-
DL N->Q	-	-	-
NSW->QLD	-	-	-
Rocky Point	-	-	-
Tableland	-	-	-

interconnector was manufactured in Italy by Pirelli and installed in three sections by the company's cable laying vessel the Giulio Verne over a 14 month period. Three campaigns were necessary because of the weight of the cable and capacity of the Giulio Verne, with each 98 kilometre section weighing more than 6000 tonne.

In Gippsland, two towers a day: Construction of the 57-kilometre Basslink overhead line and trenching of the 6 kilometre underground cable is moving ahead in Gippsland. Basslink project director, Mike Carter, said crews were erecting up to two towers per day, with the 600MW interconnector on track to provide Victorians with Tasmanian hydro power from summer 2005. "All up there'll be 133 towers from the transition station to the converter station." Near the coast, work has begun on the transition station. This is where the link changes from an overhead line to an underground cable.

Then underground: Basslink is underground for 6.4 kilometres to just behind the dunes at McGaurans Beach. There it connects with the submarine cable and heads under the dunes and across Bass Strait.

Towers near complete in Tasmania: Work is also well advanced on the two \$100 million converter stations, and NEMMCO takeover: Tasmania became a participating jurisdiction in the NEM on 29 May 2005.

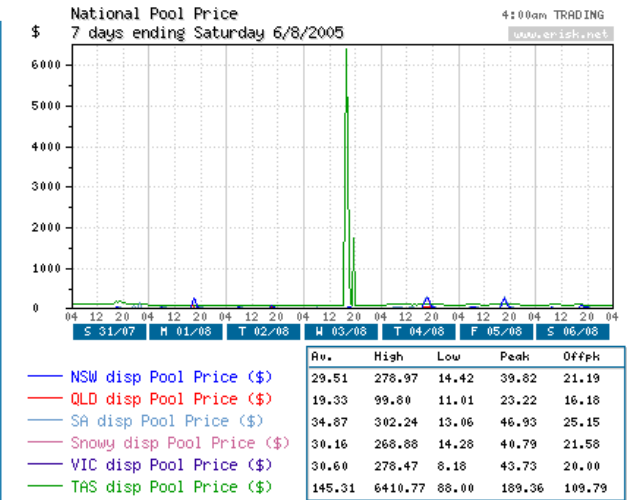
Tasmania to corner the "green" market: The Government of Tasmania through its corporations will offer "green power" through wind and hydros.

the week in detail

• **NSW:** Average price \$29.51/MWh, up 32 per cent on the \$22.42/MWh of the previous week, up 8 per cent on the \$27.28/MWh of the comparable week last year; maximum price \$278.97/MWh for the 30-minute trading interval ended 1900EST on Sunday. Average demand 9082MW, up 0.6 per cent on the previous week, down 2.1 per cent on a year ago; maximum demand 11,532MW in the 1830EST interval on Friday, up 3.0 per cent on the 11,197MW the previous week. Snowy-NSW exports averaged 139MW, compared to average imports of 102MW the previous week;

• **Victoria:** Average price \$30.60/MWh, up 21 per cent on the \$25.24/MWh of the previous week, up 18 per cent on the \$25.95/MWh of the comparable week last year; maximum price \$278.47/MWh for the 30-minute trading interval ended 1830EST on Thursday. Average demand 5950MW, up 0.9 per cent on the previous week, down 2.6 per cent on a year ago; maximum demand 7424MW in the 1830EST interval on Thursday, up 3.3 per cent on the 7189MW the previous week. Victorian imports from Snowy averaged 356MW, down 38.8 cent on average imports of 582MW the previous week;

• **South Australia:** Average price \$34.87/MWh, up 27 per cent on the \$27.35/MWh the previous week, down 25 per cent on the spike-affected \$46.68/MWh of the comparable week last year; maximum price \$302.24/MWh for the 30-minute trading interval ended 1900EST on Friday. Average demand 1476MW, up 2.2 per cent on the previous week, down 5.9 per cent on a year ago; maximum demand 2005MW for the 1930EST interval on Thursday, up 3.5 per cent on the 1937MW of the previous week. Vic-SA flow averaged 209MW up 28.2 per cent on the average 163MW the previous week; Murraylink net flow averaged 1.21MW west, down from 2.93MW west the previous week;



• **Queensland:** Average price \$19.33/MWh, up 8 per cent on the \$17.88/MWh the previous week, down 46 per cent on the spike-affected \$35.67/MWh of the comparable week last year; maximum price \$99.80/MWh for the trading interval ended 1800EST on Monday. Average demand 5613MW, up 0.9 per cent on the previous week, up 4.6 per cent on a year ago; maximum demand 6873MW for the 1830EST interval on Tuesday, down 0.6 per cent on the 6912MW the previous week. QNI flow averaged 866MW south, down 4.7 per cent on the 909MW south the previous week. Directlink averaged 96.88MW south, down 22.5 per cent on the 125MW south the previous week; and

• **Tasmania:** Average price \$145.31/MWh, up 15 per cent on the spike-affected \$125.87/MWh of the previous week; maximum price \$6410.77/MWh for the trading interval ended 1730EST on Wednesday. Average demand 1211MW, up 1.1 per cent on the previous week; maximum demand 1514MW in the interval ended 0830EST on Friday, up 0.7 per cent on the 1504MW the previous week.

Tas retail competition opens July 2006 for large users

Competition will form for the industrial consumers, as smaller consumer tariffs are controlled. Competition for Tasmania contracts with the Boyer paper mill, Temco, Comalco and Zinifex - formerly known as Pasminco Ez - are up for re-negotiation over the next decade. For retail customers, entry to the NEM will allow other retailers to enter the Tasmanian market and compete with State-owned Aurora Energy. Starting on 1 July 2006, retail contestability will be phased in by progressively allowing tranches of customers, starting with the biggest power users, to choose their preferred retailer.

Small user price fixed: A public benefit test will be undertaken prior to 2010 to determine if retail contestability should extend to domestic customers.

New data on retail entry: Licence Applicants Electricity Industry Guideline No.1 - Version 4 - was updated 1 August 2005 about how to apply for a licence to operate in the Tasmanian electricity supply industry. The Guideline outlines statutory requirements for licence applications and provides a list of preliminary additional information required by the Regulator. There is no application form for licences, as the Regulator prefers to deal with applications on a case by case basis.

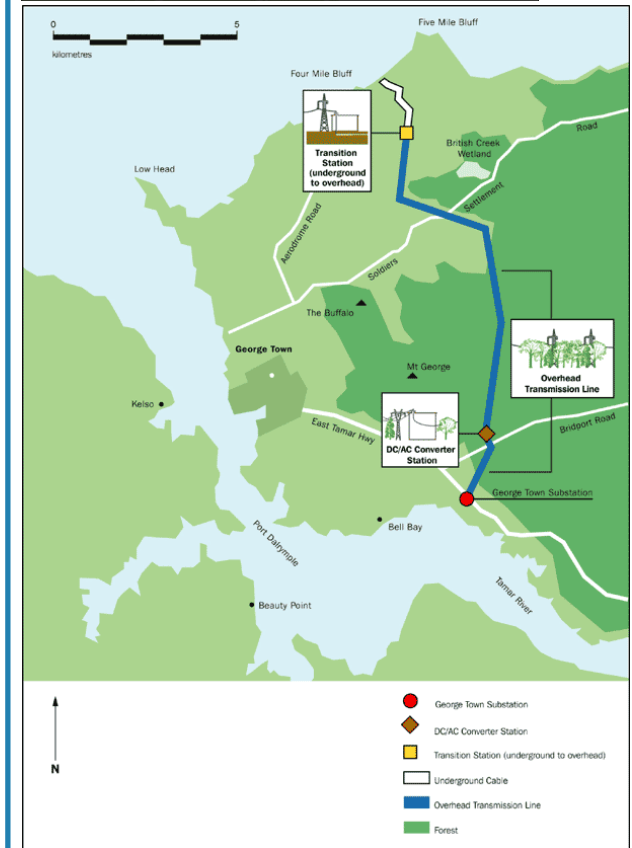
Aurora regulation: Aurora tariffs were not allowed to increase on average by more than

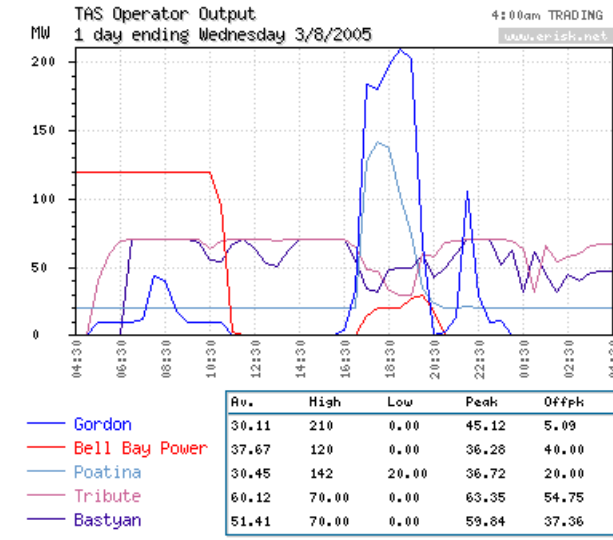
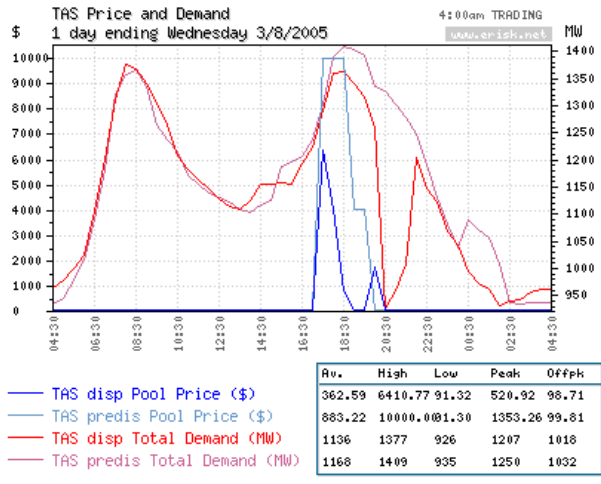
1.11 per cent from 1 January 2005. Aurora failed to meet reliability of supply targets for 2004 and was required to pay a penalty of \$1.68 million in 2005, through reducing customer charges. In addition, there was significant load growth in 2004, approximately 7 per cent compared to a forecast load growth of only 1.4 per cent. Aurora reported increased sales in the residential sector of over 6 per cent and the business/industrial sector of over 10 per cent in the 2003-04 financial year. A large part of Aurora's costs are fixed – that is, they are not dependent on volumes sold. As a result, higher sales volumes generated stronger profits in 2003-04. Some of these gains will be returned to customers through tariffs in 2005.

More at Information for Licence Applicants Electricity Industry Guideline no. 1 Revised August 2005 Version: Issue No. 4 <http://www.energyregulator.tas.gov.au> Andrew Reeves
Tasmanian Energy Regulator Tel: 6233 6323 Mob: 0419 397 956. Treasury Contact: Richard Sulikowski on 03 6233 2600 or email richard.sulikowski@treasury.tas.gov.au

Lightning near the Farrell-Sheffield 220kV lines spikes Tas price past \$6000/MWh

Tasmania's spike to \$6410.77/MWh in the 30-minute trading interval ended 1730EST came after Transend, Tasmania's transmission network service provider (TNSP), advised on Wednesday, 3





August that lightning near the Farrell-Sheffield 220kV lines made the trip of both lines a credible contingency. In a market notice at 1712EST on Wednesday, NEMMCO said it declared the double circuit trip of the Farrell-Sheffield 220kV lines a single credible contingency event from 1640EST on Wednesday until further advice. It invoked constraint sets F-T-FASH_N-2 & T-FASH_N-2 from 1700EST until further notice. In an update at 1930EST, NEMMCO said Transend advised the lightning was no longer a threat to the 220kV lines and it cancelled the credible contingency after two hours 45 minutes from 1925EST and also revoked the constraint sets from the same time.

Over-constrained dispatch in 4: Over-constrained dispatch occurred in Tasmania for the dispatch intervals (DIs) 1705EST, 1710EST and 1715EST on Wednesday, 3 August, NEMMCO advised in a market notice at 1812EST on Wednesday. NEMMCO said

dispatch prices for these intervals were subject to manual pricing review, which would be advised in a market notice. In a market notice at 2118EST, NEMMCO said another over-constrained dispatch occurred for the 2000EST dispatch interval. The price for this dispatch interval was also subject to manual review, which would be advised in a market notice.

Raise and lower regulation upped in Tas: NEMMCO advised in a market notice at 2152EST on Wednesday, 3 August that to assist control of frequency to agreed standards it had increased Tasmania's raise and lower regulation frequency control ancillary services (FCAS) requirement from 50MW to 100MW. NEMMCO said it invoked constraint F-TAS_ISLE_RREG_0100 from 2010-2145EST on Wednesday and constraint F-TAS_ISLE_LREG_0100 from 2010-2115EST on Wednesday.

The generation picture: In Tasmania, Bell Bay 2, Woolnorth, Lake Echo, Repulse, Palooana, Cluny and Butler's Gorge were offline all day. Bell Bay 1 went offline in the intervals between 1200-1700EST before going off again in the 2100EST interval. Gordon, and Poatina 220 operated at various times during the day. Tribute came back online in the 0530EST interval and Bastyan returned in the 0700EST interval.

Temperature ranges: The temperature ranges were: Sydney 10-25 degrees, Melbourne 10-19, Adelaide 14-21, Brisbane 11-23, and Hobart 12-20.

Wind farm at Collector on hold with renewable energy price too low to make it viable; 50pc Mt Spring sold to Japan

ActewAGL is a 25 per cent investor in a \$100-million proposed wind farm on the Woodlawn property near Tarago with joint-venture partners Collex Pty Ltd and EHN. Last year, construction of that wind farm was expected to have begun by now. But it is still waiting on NSW Government approval, according to *The Canberra Times* (6/8/2005).

Renewable energy prices too low: ActewAGL spokesperson Carsten Larsen said a proposed wind farm at Collector was on hold with the price for renewable energy too low to make it viable. But subject to development

approval and obtaining a retail purchaser, electricity generation from the Tarago project was expected to begin in about 12 months.

Test site at Mt Spring: ActewAGL also has a test site at Mt Spring, in NSW near the ACT village of Hall. Larsen said community consultation on that project would begin shortly. Construction was not expected to begin until 2007 at the earliest.

50 per cent share sold: ActewAGL chief executive John Mackay said a 50 per cent share in the Mt Spring project had been sold last week to a Japanese energy company. The intention had always been to sell that share.

Macquarie Energy withdraws from proposed wind farm project south of Canberra

Macquarie Energy, a NSW Government-owned corporation, has withdrawn from its proposed wind farm in the Anembo area on the Tinderry range south of Canberra, saying that, given the state of the market for renewable energy, the project would not go ahead, according to *The Canberra Times* (6/8/2005).

Wind farms off agenda: A spokesperson said the market meant it was difficult for anyone to say they would now build wind farms. He would not say if Macquarie Energy had retained an option in the Anembo area, but said: "We are not planning to build a wind farm there."

Australia's wind energy sector to boom if climate change costs factored into prices

The Australian Wind Energy Association (AusWEA) has called on the Federal Government to reconsider the role of proven clean energy technologies following the release of a new climate change report.

The wind energy sector: Australia has over \$10 billion of wind energy projects on the cards, with the potential for approximately \$2 billion to proceed by 2007 under the existing Mandatory Renewable Energy Target (MRET). Beyond this date, the future of the Australian renewable energy industry remains unknown.

The costs involved and its future: Wind energy is already one of the most cost-competitive sources of clean renewable energy, and this cost is declining at a rapid rate. The price of wind energy is expected to overlap with the price of fossil fuels within 10-15 years time, provided that Australia keeps up with international growth. This scenario could take place even sooner if climate change costs are factored into current energy prices.

Reference: Australian Wind Energy Association, 27 July 2005. **Media contact:** Yolande Strengers, Phone: (03) 8605 4832, Mobile: 0408 408 572. **Media interviews:** Dominique La Fontaine, Mobile: 0428

AEMC invites submissions to proposed review of NEM electricity transmission revenue and price regulation

The Australian Energy Market Commission has been established as part of the energy reform process undertaken by the Ministerial Council on Energy (MCE). Its responsibilities include carrying out reviews of the Rules as part of its market development role in the National Electricity Market (NEM).

Public comment: The National Electricity Law (NEL) requires the AEMC to review and, as required, rewrite the Rules for electricity transmission revenue and price regulation. The Commission has prepared a Scoping Paper to invite comments from market participants and other stakeholders on the scope of this Review and the key issues relevant to it, in light of the statutory requirements of the NEL. To provide a basis for those comments, the Commission has identified in this paper a preliminary indication of the areas and issues that it considers to be either directly or indirectly relevant to this Review.

Reference: AEMC, 29 July 2005. **Contact:** Australian Energy Market Commission, PO Box H166, AUSTRALIA SQUARE NSW 1215, Fax (02) 8296 7899, email: submissions@aemc.gov.au website: <http://www.aemc.gov.au> Closing: 19 August 2005.

Constraint Library Changes Report for the week 1-7 August 2005

01/08/2005: New Constraint Set(s) and Constraint Equation(s)
Constraint Set: F-I_NIL, F-T_NIL
Constraint Equation: F_I+LREG_0130, F_I+MLOAD_L5_0370, F_I+MLOAD_L6_0370, F_I+MLOAD_L60_0370, F_I+NIL_MG_R5, F_I+NIL_MG_R6, F_I+NIL_MG_R60, F_I+RREG_0130, F_T_NIL+MG_R5, F_T_NIL+MG_R6, F_T_NIL+MG_R60, F_T+TL_L5_0200, F_T+TL_L6_0200, F_T+TL_L60_0200, F_TAS_ISLE+L5_0100, F_TAS_ISLE+L6_0100, F_TAS_ISLE+L60_0100, F_TAS_ISLE+LREG_0050, F_TAS_ISLE+RREG_0050
Reason: Combine FCAS sets for Mainland and Tasmania
03/08/2005: New Constraint Set(s) and Constraint Equation(s)
Constraint Set: I-CNLT_07
Constraint Equation: H>>N_CNLT_B_15M, N>>N_CNLT_2_15M (2 added); H>N-07_B_15M (1 deleted); N:H_CNLT(1 modified);
Reason: Conversion to Fully Co-Optimised and required for planned outage
04/08/2005: New Constraint Set(s) and Constraint Equation(s)
Constraint Set: T_JB_RC1_MC_50, 100, 145, 155, 165, 175, 185, 200, 225;
Constraint Equation: T_T_JB_RC1_MC_50, 100, 145, 155, 165, 175, 185, 200, 225 (one to each respective set)
Reason: Required for System Operation
04/08/2005: Modified Constraint Equation(s)
Constraint Equation: VH>V3NIL, VH>V4NIL
Reason: Increase pre-dispatch constraint to allow for the new 500/220kV Cranbourne transformer
04/08/2005: Modified Constraint Equation(s)
Constraint Equation: T:T_NIL_1
Reason: Updated based on advice from TNSP
Please note that the Effective Date indicates the new/updated Constraint is available from that date, it may not necessarily be invoked until a later time. Refer to the System Operating Procedure SO_OP3709 (http://www.nemmco.com.au/powersystemops/3709.htm) for more information on Generic Constraints. Refer also to the Constraint Naming Guidelines: http://www.nemmco.com.au/dispatchandpricing/200-0062.htm and the Network and FCAS constraint formulation policy: http://www.nemmco.com.au/dispatchandpricing/170-0030.htm Should you have any queries regarding the above please contact Ben Blake on 02 8838 5359

Victoria decides CO2 waste dumps essential, but observes safety not yet proven

The Victorian Government Greenhouse Strategy Action Update states, "Ultimately, geosequestration will be required". The paper said: "Geosequestration involves the combined processes of CO2 capture from large point sources of emissions (e.g. power stations), and transportation and geological storage of captured gas. However, based on current technologies, the capture and storage of emissions from electricity generation would result in substantially higher electricity prices than generation from gas and renewables".

CO2 dumps mean expanded brown coal: The relative merits of brown coal power may change substantially in coming decades if promising new technologies are further developed and commercialised. There are still many issues to be resolved before geosequestration can be commercially deployed as a greenhouse abatement strategy.

Not yet proven safe: "Further research is required to investigate:

- feasibility of geosequestration technologies;
- whether they are safe, secure and permanent;
- capable of dealing with the large volumes of gas from a power station; and
- able to reduce greenhouse gas emissions at a reasonable economic cost.

ewn publishing

Key player on national stage: “To this end, Victoria is participating in national processes - through a working group under the Ministerial Council for Minerals and Petroleum Resources – aimed at progressing the development of geosequestration. In July 2004, all jurisdictions indicated support for the development of nationally consistent regulatory principles for geosequestration.”

Seven key issues: The working group has identified seven key issues that will form the basis for broader community consultation. These issues include:

- access and property rights;
- long-term responsibilities;
- environmental issues;
- authorisation and compliance;
- monitoring and verification;
- transportation; and
- financial issues.

Reference: Victorian Government Greenhouse Strategy Action Update, published by the Victorian Government Department of Sustainability and Environment, Phone: 136 186. <http://www.greenhouse.vic.gov.au>

D-cypha Weekly Report

Trading summary for week ending 08/08/05

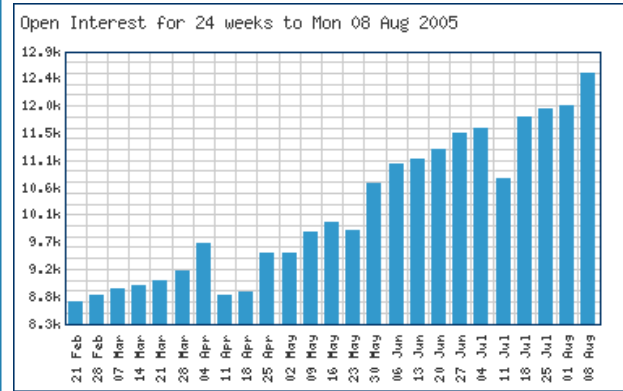
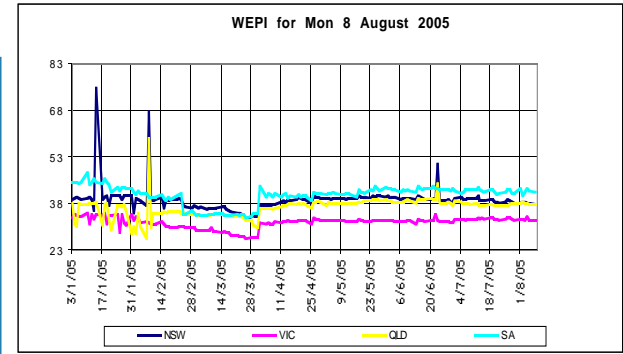
- New Record for Open Interest = 12,661 contracts.

Weekly Volume

- Futures contracts traded this week = 697
 - Base = 267
 - Peak = 325
 - Caps = 105
- Options contracts traded this week = 0
- Volume of EFP trades this week = 5
- Volume of BTF trades this week = 660
- Total MWh traded this week = 1,122,246
- Futures & Options contracts traded to date = 35,915
- Open Interest (including Caps & Options) as at COB Monday 08/08/05 = 12,661 lots

Monthly Volume

- Average daily volume FY05-06 = 97
- August 2005 volume to date = 697 lots / average daily volume = 116
- July 2005 volume to date = 1,930 lots / average daily volume = 92



- June 2005 total volume = 1,206 / average daily volume = 57
- May 2005 total volume = 2,835 lots / average daily volume = 129

Activity

- Volume on the bid/offer as at 4.15pm 08/08/05 = 1050 lots.
- Brokers with active orders this week include: Credit Suisse, Deutsche Bank, FIMAT, ICAP, JP Morgan and Man Financial.

Source: d-Cypha.