

NATIONAL E W O K



NATIONAL NETWORK



fox

NT to join NEM? Plan to link Darwin and Mount Isa, in northwest Queensland

Former head of Queensland state-owned Tarong, Alan du Mée - and recently author of a book called Crooks, Hoods and Vagabonds in Business - is one of three directors of Northern Territory Queensland Energy, NTQE. NTQE, a new private, vertically- integrated generation-transmission company, plans a \$1.3 billion line to connect the Northern Territory to the national electricity grid through a 3,000 kilometre line from Queensland to the Top End.

Competition to gas: The group also planned to generate using local gas turbines. The idea was to provide competition to gas in the domestic electricity market. Since his sudden exit from Tarong, du Mée set up a business as a "Change Agent", under the name "Solid Foundation". NTQE was registered as a company with the Australian Securities and Investment Commission the day before the Territory election was called.

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Country Liberal Party (CLP) commits to join NT to the NEM: state election set for 18 June

In an opening move against the Northern Territory Labor Party, Denis Burke of the Northern Territory Country Liberal Party (CLP) committed to join NT to the NEM. The Chief Minister for the Northern Territory has called an election for the Legislative Assembly for 18 June. Former head of Queensland state-owned Tarong, Alan du Mée, appeared before the media with CLP leader Denis Burke when the plan for a powerline was made public last week.

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Find out more at the subscriber section of www.erisk.net

Published by EWN Publishing, PO Box 148, Balmain, NSW 2041. Ph: +612 9818 8877. Fax: +612 9818 8473. Editor: Laurel Fox-Allen.

Electricity in brief

Big brother immunity: Of the more than two dozen cartel investigations currently being run by the Australian Competition and Consumer Commission, half are as a direct result of people taking advantage of the ACCC Leniency Policy. <http://www.accc.gov.au>

27 cartels under investigation: The ACCC was investigating around 27 cartels and a number of the cartels dealt with international conduct. <http://www.accc.gov.au>

ACCC counts the pennies: Litigation has "very stringent controls, as to budgetary expenditure, monitoring expenditure on litigation and controlling the actions themselves." David Smith, Commissioner, Australian Competition and Consumer Commission, 'The Regulator's approach to compliance: Crackdown, Confrontation or Compliance Culture', 26 May 2005.

Cheung Kong float up flagpole: Cheung Kong Infrastructure's Australian assets were thought to be worth more than \$6 billion in enterprise value (including a lot of debt), putting it in the same league as a Singapore Power deal.

S&P/ASX index up 10pc: It's easy to see why some of these ideas are hot. Putting aside the big yields in the sector, the S&P/ASX Utilities Index was up about 10 per cent in the year to date, versus a 3 per cent rise in the broader market.

The lucky country: Unemployment was at a 20-year low, interest rates remained close to the lowest levels in over 30 years, ACCC chair Graeme Samuel said in the Di Yerbury lecture at Sydney's Hotel InterContinental on Tuesday, 30 May.

Business gloom: Sales and profit expectations in the three months starting from 1 July are more pessimistic than at any time since the last recession in 1991, reported *The Courier-Mail* (7/6/2005, p. 27).

Glorious commercial isolation: Graeme Samuel, chair of the (ACCC), said in the Di Yerbury lecture in Sydney that the ethics of profit maximisation did not replace the ethics of honesty and competence, or compliance with the law. <http://www.accc.gov.au>

Silence of the lambs: Samuels said silence of the majority could give opponents of change considerable leverage in mobilising public and political opinion against change. <http://www.accc.gov.au>

Revolution; if you can afford it: To accept the global market as both the engine of wealth and the ultimate arbiter of distribution might not be a sustainable proposition in the long run, concluded Graeme Samuel. <http://www.accc.gov.au>

Punishments for slow adapters: Economies that failed to adapt, and adapt again, and then readapt would get punished, most profoundly, by their own deadweight, said Samuels.

Mainlanders won't pay for Tas FCAS: NEMMCO said mainland participants should not pay for frequency control ancillary services (FCAS) services required locally for Tasmania, and conversely Tasmanian participants should not pay for FCAS services required locally by the mainland.

Plan to fix loop-constraints muddle: A group of seven NEM players, representing most of Victoria and South Australia, told

the ACCC negative settlement residues in the Snowy region would persist as they included a constraint within a loop. The group support for the derogation was conditional on resolving the issue of negative residue management on the Victoria to Snowy link for both southward and northward flows.

How Snowy could cut NSW price: On Tuesday 11th January 2005, when southerly flows through Snowy resulted in binding Option 4 constraints from Tumut to Murray, NEMMCO cut the Snowy-NSW flow to 0MW; this removed 2500MW of potential Snowy and other generation to the south from competing in NSW, and produced artificially high prices in the absence of supply competition. If derogation were in place, all 2500MW would be able to compete in NSW and NSW price would not be able to increase above the level of \$60.

9500MW loss of benefit: The loss of public benefit on NSW customers can be estimated as: loss of benefit = 9500MW (\$1000 - \$60)/12 = \$740,000 for the single 5 minute period. Please note that in this actual market event, there was low demand in NSW in the order of 9500MW.

Lean dry years ahead: Climate scientists have voiced suspicions that eastern Australian may have returned to the drier "El Nino" weather pattern of the first half of last century, after a 50-year cycle of wetter years. El Nino events also brought dry weather to Indonesia, Papua New Guinea, India and to a lesser extent southern Africa. The El Nino event of 1877 resulted in severe famine in China and India, and the death of more than 17 million people. But El Ninos also brought wetter weather to the west coast of South America and the southeast of the US.

Snuggery directions: The 14 directions issued in April resulted in recommended payments of \$1,303,160, or 59.4 per cent of the total \$2,193,155 for the 33 South Australia directions issued between 17 December 2004 and 19 April 2005. <http://www.roamconsulting.com.au> <http://www.nemmco.com.au>

Friday, 3 June: Tas spike: Tasmania recorded spikes of between \$104.93-\$33254/MWh in six 30-minute trading intervals during the morning of Friday, 3 June.

Monday, 6 June: The 7.03 a.m. predispatch top price of \$1234.10/MWh was expected in the 30-minute trading interval ended 0900EST after surging from \$85.40/MWh in the 0830EST interval. <http://www.erisk.net>

Race to the ACCC's confessional: According to David Smith, Commissioner for the Australian Competition and Consumer Commission, a perception amongst colluders that it may be wise to engage in a race to the ACCC's confessional may not be a bad thing. 'The Regulator's approach to compliance: Crackdown, Confrontation or Compliance Culture', 26 May 2005 <http://www.accc.gov.au>

Loss factors for 2005/06: The transmission loss factors are to apply for the next financial year and are based on a revised set of data developed from the loads and generation levels of the previous financial year. NEMMCO has included in this document the Tasmanian loss factors and regional boundary in preparation for Tasmania joining the NEM in May 2005. Contact: Bandu Gamage, email: bandu_gamage@nemmco.com.au

Forced electricity outages "sickies": "Sick days" might constitute the analogue of forced outages, independent expert Roam Consulting said; the difficulty in either case was telling whether the party had told truthfully it could not function, or whether it had an ulterior motive. www.roamconsulting.com.au <http://www.nemmco.com.au>

Super-normal profit a critical driver: The occasional super-normal profit was a critical driver of the industry, as price spikes were the main means of funding new entry and recouping costs, so it was best to ignore a disinclination to supply as directed in the Code. <http://www.roamconsulting.com.au> <http://www.nemmco.com.au>

Probs inside states distort NEM: To cope with congestion resulting from intra-regional constraints, less efficient generators were directed to operate and for this reason inefficiency resulted, so "notions of efficiency not be allowed to weigh too heavily on the fairness considerations advanced by the Electricity Code". www.roamconsulting.com.au <http://www.nemmco.com.au>

SA Clements Gap wind farm OK: Pacific Hydro Clements Gap Pty Ltd (PHCG) got the OK for 58.7MW and won a 10-kilometre stretch of the Barunga Ranges in the Port Pirie region, connected to ElectraNet's 132kV transmission line that runs from Port Pirie to Hummocks. <http://www.escosa.sa.gov.au>

NEM switch to nodal marginal pricing? Nodal marginal pricing adhered to transmission system realities. It fitted best with economic theory of determining price and averting issues of market failure. This structure was used in Chile, Argentina,

Peru, Bolivia, California, New Zealand, PJM, New York, and New England www.roamconsulting.com.au <http://www.nemmco.com.au>

Mt Stuart peaking plant fits the bill: NEMMCO generation data shows the generator to receive the \$243,232.82 was almost certainly the gas peaking plant, Mt Stuart Power Station, which started up in the relevant times on 8 January and 19 January.

Powerlink's new substations: Powerlink Queensland, the state's transmission network service provider (TNSP), planned to build two new substations near Ipswich for an estimated cost of \$37.9 million in 2004/05 prices. <http://www.nemmco.com.au>

33 SA directions: Two directions at the end of January and one at the beginning of February related to contingency analysis studies that indicated the possibility that the 132kV line from Snuggery to Keith would for a short time exceed its rating of 97MVA. www.roamconsulting.com.au

NT to joint the NEM? The Northern Territory's Country Liberal Party opposition has announced a plan to build a \$1.36 billion, 3000km power line from Queensland if it won the coming election.

Laverton back to work: Justice Raymond Finkelstein yesterday issued an injunction against the Electrical Trades Union and its state secretary, Dean Mighell, stopping industrial action against Corke Instrument Engineering at the Laverton North power station.

Demand peak next February, March: NEMMCO anticipates demand will peak next February and March when Melbourne hosts the Commonwealth Games.

Qld, WA and NT higher growth rate: March quarter growth negative in Victoria, NSW and the ACT.

National accounts show split: Growth was 6 per cent or higher over the year in Queensland, Western Australia and the Northern Territory but just 1.7 per cent in Victoria and 2.5 per cent in NSW and the ACT. In the March quarter growth was negative in Victoria, NSW and the ACT.

Qld growth 4.5 per cent in 2005-06: Queensland's economic growth was expected to continue at about 4.5 per cent in 2005-06, outstripping national growth for the tenth successive year.

Energex staff call 24hr strike: Two hundred white collar Energex staff, fighting to win similar entitlements to their blue collar colleagues, walked off the job on 6 June.

Qld \$686m in coal royalties: Premier Beattie said the Chinese and Indian economies' need for coal would ensure \$686 million in coal royalties for 2004-05.

Queensland says CO2-dump magic: Queensland Premier, Peter Beattie, said "I understand why people want to raise this debate (nuclear), but I mean, for God's sake, we've got 300 years' supply of coal in Queensland."

Tarong wins water: Qld's Boyne River irrigators said they were blindsided by a change in legislation that has left their river pumps slurping at air and a dry riverbed; a cut-off rule diverts water to the Tarong power station when dam levels decrease. The change meant irrigators' supplies cease when the dam reaches 70,000ML, or less, as it has been since April.

Qld constrained by skilled labour: Queensland would spend more on capital works than any other state and was constrained only by the availability of skilled labour.

Rio Tinto blames raw materials: "The reality is prices of some of the commodities have risen, steel being one in particular. I think we are all aware of the hot market environment, so goods and services have increased and that is something we've got to deal with," Rio Tinto chief executive Leigh Clifford said after the company's annual meeting in late April.

Wages up 15 per cent: National mining manager for recruitment company Skilled Group, Chris Chalwell, said that among maintenance and production people there appeared to have been an increase of about 15 per cent in salaries over the past six to 12 months. A tradesperson working on a construction project might earn up to \$50 a hour once all allowances were accounted for, whereas production and maintenance staff at a mine might earn less than \$40 an hour.

Average salary \$150,000: "Where you might employ 50 technical people on one medium-size mine site at an average salary that's gone from \$100,000 to \$150,000, it makes for marginal profits," said Stephen Heather, general manager of specialist recruiter Mining People International.

Cash-settled share swaps game: NSW miner Centennial Coal has applied to the Takeovers Panel to remove Glencore International's right to use cash-settled swaps as a means of securing more than 5 per cent of takeover target Austral Coal's shares. The use of cash-settled swaps to

camouflage stakes in listed companies was an issue in other jurisdictions. The United Kingdom Takeovers Panel was reviewing its regulations on such transactions. In Australia, BHP Billiton used cash-settled swaps to secure 4.3 per cent in WMC Resources.

\$15 a tonne CO2-e black coal wins: If Australia were to introduce a carbon trading regime that priced greenhouse emissions at \$15 a tonne, black coal would probably retain its position as the most cost-efficient fuel for electricity generation in the near future.

Victoria's brown coal 600yrs: According to the University of Sydney & CSIRO's report, 'Balancing Act: A Triple Bottom Line Analysis of The Australian Economy', gaining the technological high ground with highly efficient power generators is the first stage, and then a successful technology for permanent CO2 geo-sequestration to allow long term use of over 100 billion tonnes of inferred resources, giving a 1000 year production horizon.

Black coal very profitable, but: Against the metric of one dollar of final demand, the environmental indicator of greenhouse emissions for black coal was two and one quarter times the average. In constant dollar terms, the turnover of the black coal sector has increased nine fold in the last 30 years. Current turnover is \$13 billion and involves about 100 enterprises.

111pc rise in net profits: The world's 40 largest mining companies reported a 111 per cent rise in aggregate net profits to \$36.9 billion for 2004, up from \$17.5 billion in 2003.

Price increase of 120pc: Most of the new contracts for coal and iron ore took effect on April 1, with price increases of 70 per cent for iron ore and 120 per cent

for the coal used in steel-making. Receipts from coal and iron ore in April rose by a third to \$2.5 billion.

51pc increase in coal earnings: The Australian Bureau of Agricultural and Resource Economics expects Australia's earnings from iron ore to rise 60 per cent this year to \$13 billion, and earnings from coal to rise 51 per cent to \$26 billion.

Uranium spot nears \$US29 a pound: Mark Chalmers, senior vice president of Heathgate Resources, said at a spot price about \$US29 a pound, we should be able to capitalise on the improvement in the market.

But where to put the waste: The Federal Cabinet was certain to choose a mainland site, possibly disused defence land in the Northern Territory.

Electricity emissions up 47 per cent: The 2003 National Greenhouse Gas Inventory, released last month, revealed that Australia's energy sector emissions were up by 31 per cent over 1990 levels, and emissions from electricity generation increased a staggering 47 per cent.

Lobbyists persuade mainstream press: *The Financial Review* supported nuclear power as the only viable baseload energy source with no greenhouse emissions.

Canberra Times supports nuclear: "Nuclear power production could make a greater contribution, here and abroad, to reducing greenhouse gas emissions than almost any other reasonable policy action," the editorial concluded.

China nuclear from to 40,000MW by 2020: China wanted to increase its installed nuclear power capacity from 6700 megawatts (MW) to 40,000MW, CNNC's president, Kang Rixin, told reporters in

Beijing. The country had 9300MW of nuclear capacity under construction' and planned another 24,000MW, he said.

World uranium price increase of 43pc: The Australian Bureau of Agricultural and Resource Economics (ABARE) predicted world prices for uranium mine output will increase by 43 per cent this year and a further 7 per cent next year.

The Age editorial woolly on nuclear: "Nuclear power plants continue to generate lethal radioactive waste. Storing that waste continues to be problematic; no permanent waste disposal facility exists anywhere in the world, and although able to deliver lower greenhouse gas emissions, opponents point to the sobering experiences at Chernobyl and Three Mile Island and say it is folly to assume accidents of this kind will not happen again." *The Age*, 20/4/2005, p. 30

NT no to Territory nuclear dump: Northern Territory Chief Minister, Clare Martin, and the Opposition joined forces to say no to a dump.

Wind compo for neighbours: The Australian Wind Energy Association (AWEA) was about to release an issues paper on landscape values and siting of wind farms prepared in conjunction with the Australian Council of National Trusts, and was developing an accreditation process for wind farm developers.

\$5000 a year for each turbine: Landholders stood to receive about \$5000 a year for each turbine.

DIPNR controls all wind farms: Proposals in NSW's Upper Lachlan for a "Crookwell 2" wind farm and one for 69 towers at Taralga were now being considered by the Department of Infrastructure Planning and Natural

Resources (DIPNR), following a decision late last year by its Minister, Craig Knowles, that all wind farm developments of more than 30 towers would be declared as "State significant".

Towers sprinkled across high ridges: Cooma-Monaro Council has approved several wind monitoring towers before and since Christmas, while Upper Lachlan, Goulburn-Mulwaree, Oberon and Palerang (centred on Queanbeyan) Councils all have the towers sprinkled across high ridges.

Govt and local councils wind fights: The NSW Department of Energy Utilities and Sustainability has a green paper proposal defining regional landscape assessments "no go" areas for wind turbines.

Demo CO2 dump: The Victorian Government last month launched a tender process for a demonstration plant to be built in the Latrobe Valley. If Australia were to introduce a carbon trading regime that priced greenhouse emissions at \$15 a tonne, black coal would probably retain its position.

More renewables says Age editorial: Greater support of renewable energy at an individual and government level is also required. We need greater engagement with "the most pressing issue of our times." *The Age*, 20/4/2005, p. 30

CO2-e cuts to change face of NEM: Black coal IGCC with CCS would potentially capture 38 per cent of electricity generation, while brown coal IGCC with CCS could reach around 16 per cent.

Queensland CO2 waste dumps: The first step for coal-fired power generation to cut its emissions was for its carbon dioxide

emission to be in a form that can be captured and stored, reported *The Queensland Government Mining Journal* (March 2005).

Qld Govt blah blah "coal coal coal": "Many believed that in the next 5 to 10 years there will be a growing imperative for the energy supply industry to address major step reductions in their greenhouse gas emissions, thus creating an opportunity for unique power generation solutions, said the *Queensland Government Mining Journal* (March 2005).

Elephant in the room: How do we tackle climate change caused by greenhouse gas emissions from fossil energy use while supplying ever-increasing community and industry demands for energy at a reasonable price?

Coal lobby to blitz renewables: "When significant emission cuts were required, carbon capture and storage (CCS) was critical, but if these cuts were too deep and the capture rate cannot be increased to close to 100 per cent, vast quantities of renewables will be required," argued a report by the Cooperative Research Centre for Coal in Sustainable Development. Phone: (07) 3871 4400. <http://www.ccsd.biz>

IGCC CO2 dumps to \$35/MWh: Technologies that included carbon capture and storage (CCS) typically cost \$20/MWh more. Reference: Report released by the Cooperative Research Centre for Coal in Sustainable Development. Phone: (07) 3871 4400. <http://www.ccsd.biz>

IGCC not proven viable yet: Right now, there are only two real IGCC plants in operation in the United States (US), but

neither is operating fully on coal. Of 106 proposed new coal plants for the US, nine are IGCC.

Coal lobby roars on: CSIRO/Qld Govt Centre for Low Emission Technology was negotiating for more partners including "Australian Coal Association Research Limited, Stanwell Corporation, Tarong Energy, CS Energy and The University of Queensland".

Retrofit old plants for CO2 dumps: Ultra-supercritical processes for coal combustion, in terms of generation costs, would be the lowest cost for carbon capture and storage of greater than 75 per cent, but this difference decreases in the future as rapid developments emerge with Integrated Gasification Combined Cycle (IGCC) experience.

IGCC coal to CO2 dumps: The *Queensland Government Mining Journal* (March 2005) said there were several IGCC plants around the world, either completed or under construction and at least four of these were coal fired. However, none of these plants are located in Australia.

Costs of IGCC to drop by 2030? To install an IGCC plant today (without carbon capture and storage) was estimated to cost \$1584/kilowatt (kW) of installed capacity; by 2030 this was expected to drop to \$884/kW. Conventional power plants operating in Australia cost around \$900/kW without flue gas cleaning.

POOL PRICE

Week to Saturday, 4 June: Spikes end in SA, Tas averages \$65.39/MWh in first week in NEM as averages rise 1pc in SA, and drop 3-24pc in NSW, Vic, Qld, and Tas to \$21.57-\$65.39/MWh range on stronger demand.

Sunday, 5 June: Average prices down 2-7pc on mainland, up 5pc in Tas to \$18.13-\$63.19/MWh range on firmer demand.

Friday, 3 June: Spikes push Tas average price up 35pc as NSW, Vic, SA and Qld fall 4-24pc to \$16.54-\$82.85/MWh range on demand collapse.

Transformer outage affects NSW-Qld: Transfer limits between NSW and Queensland might be restricted because of a short notice outage of a transformer at Armidale in NSW, NEMMCO said in a market notice at 1450EST on Friday, 3 June.

Thursday, 2 June: SA average price drops 12pc on spike-free day, with NSW, Vic, Qld and Tas down 1-3pc to overall \$21.77-\$61.48/MWh range on steady demand.

Sunday, 5 June: Average prices fell 2-7 per cent on the mainland and rose 5 per cent in Tasmania to an overall \$1.13-\$63.19/MWh range on system-wide maximum demand from 303MW (1.2 per cent) to 26,431MW. Top price of the day was the \$92.25/MWh in Tasmania for the 30-minute trading interval ended 1800EST.

Tuesday, 7 June: Average prices were steady in NSW, edged down 2 per cent in the other mainland regions, but dropped 39 per cent in spike-free Tasmania to an overall \$16.61-\$66.72/MWh range on system-wide maximum demand down 495MW (1.7 per cent) to 28442MW, with all regions but NSW registered falls. Top price of the day was the \$87.78/MWh in Tasmania for the 30-minute trading interval ended 1800EST.

Monday, 6 June: Spikes to \$1152.67/MWh pushed average price up 31pc as the cold gripped Tas: Qld up 2pc, NSW, Vic and SA down 14-16pc to overall

\$16.89-\$108.67/MWh range on stronger demand. A cold snap in Tasmania with Hobart having a temperature range of 2-7 degrees saw average price surge 31 per cent on the back of spikes in eight trading intervals to a top of \$1152.67/MWh. Elsewhere, average prices rose 2 per cent in Queensland and dropped 14-16 per cent in NSW, Victoria and South Australia to an overall \$16.89-\$108.67/MWh range on system-wide maximum demand of 28,937, up 647MW (2.3 per cent) on Friday, the previous week day.

Gen revealed for Feb 2007: February was removed from the low reserve conditions (LRC) for Queensland, NSW, South Australia and Victoria in 2007.

NT election could topple Labor: The election would be won or lost in the northern suburbs of Darwin. For insurance, Labor would need to take Araluen, MacDonnell, Nelson, Katherine, Braiting and Port Darwin.

In the current Legislative Assembly:

- Territory Labor holds 13 of the 25 seats - a bare majority;
- the Country Liberal Party holds 10, and there are two independents.

The NT Country Liberal Party said it was “totally independent of control or direction from any other political party, though it is associated with the Liberal Party and National Party of Australia.”

The rules: Under the *Northern Territory (Self Government) Act 1978*, an election must be held within four years of the first meeting of a Legislative Assembly. Hence, the last possible date for an election is 15 October 2005. The *NT Electoral Act 2004* provides for a short campaign period: an election must be held 18 days after the writ has been issued.

25 single member electorates: The NT Legislative Assembly has 25 single member electorates, and members are selected using preferential voting. The electorates are quite small, with around 4500 voters each. The election will be managed by the newly created NT Electoral Commission.

Not possible to pick: The AEC said: “There has been a redistribution since the 2001 territory election, so it is not possible to provide an accurate pendulum for the 2005 election.”

Top price for NEM week 5-11 June 2005: Quarantine at \$35.10/MWh

SA			
Generator	Income (\$)	Output (MWh)	Av Price (/MWh)
North'n Power	\$2,045,410	87,752	\$23.31
Ladbroke	\$95,549	3,979	\$24.02
Osborne	\$543,907	23,155	\$23.49
Pelican Pt	\$548,648	22,393	\$24.50
Torrens Is. B	\$811,266	31,768	\$25.54
Vic->SA	\$1,148,130	48,403	\$23.72
MLink->SA	\$106,769	4,358	\$24.50
Torrens Is. A	\$50,727	2,147	\$23.63
Mintaro	-	-	-
Dry Creek	-	-	-
Playford	\$237,183	9,781	\$24.25
Snuggery	-	-	-
Pt Lincoln	-	-	-
Quarantine	\$710	20	\$35.10
Angaston Power	\$532	23	\$23.05
Hallett Power	-	-	-

VIC			
Generator	Income (\$)	Output (MWh)	Av Price (/MWh)
Loy Yang A	\$7,108,071	354,851	\$20.03
Loy Yang B	\$3,407,523	170,975	\$19.93
Hazelwood	\$4,323,719	213,605	\$20.24
Yallourn	\$4,747,912	238,357	\$19.92
Anglesea	\$535,074	26,880	\$19.91
Energy Brix	\$472,329	23,793	\$19.85
Newport	\$27,627	912	\$30.30
MLink->Vic	\$6,551	597	\$10.98
SA->Vic	-	-	-
Snowy->Vic	\$854,837	35,062	\$24.38
Jeeralang	-	-	-
West Kiewa	\$21,081	899	\$23.46
Bairnsdale	\$5,643	283	\$19.93
Dartmouth	\$16,768	649	\$25.85
Eildon	-	-	-
Hume Vic	-	-	-
McKay Power	-	-	-
Clover	-	-	-
Valley Power	-	-	-
Rubicon	-	-	-
Somerton Power	\$3,019	133	\$22.76
Sunshine Energy	-	-	-
Longford	-	-	-
Tramway Road	-	-	-
Toora Wind Farm	-	-	-

NSW			
Generator	Income (\$)	Output (MWh)	Av Price (/MWh)
Bayswater	\$8,071,579	402,944	\$20.03
Liddell	\$4,011,667	200,722	\$19.99
Mt Piper	\$3,853,915	188,862	\$20.41
Wallerawang	\$2,401,735	118,010	\$20.35
Vales Point	\$2,411,940	118,310	\$20.39
Munmorah	\$501,174	24,759	\$20.24
Eraring	\$4,669,414	226,660	\$20.60
Redbank	\$482,143	24,349	\$19.80
Smithfield	\$418,447	20,492	\$20.42
Snowy->NSW	\$1,251,696	61,467	\$20.36
Shoalhaven	\$5,614	343	\$16.35
Hunter Valley	-	-	-
Hume Hydro	-	-	-
Blowering	-	-	-
Northern Gas	-	-	-
Burrinjuck	-	-	-
Brown Mountain	-	-	-
Keepit	-	-	-
Broken Hill	-	-	-
Ergon Energy	-	-	-
Pindari Hydro	-	-	-
DL Q->N	\$203,262	9,631	\$21.10
QLD->NSW	\$1,879,545	96,274	\$19.52
West Nowra	-	-	-

QLD			
Generator	Income (\$)	Output (MWh)	Av Price (/MWh)
Tarong	\$4,197,313	249,852	\$16.80
Millmerran	\$2,390,054	142,303	\$16.80
Swanbank	\$698,451	40,174	\$17.39
Stanwell	\$3,268,256	191,360	\$17.08
Callide B	\$1,760,565	103,785	\$16.96
Callide Power	\$2,043,407	120,579	\$16.95
Gladstone	\$2,280,526	129,755	\$17.58
Collinsville	\$24,477	1,454	\$16.84
Swanbank C_D_E	\$563,966	33,031	\$17.07
Barcardine	-	-	-
Callide A	-	-	-
Kareeya	\$76,723	4,308	\$17.81
Barron Gorge	\$71,374	3,877	\$18.41
Mt Stuart	\$9,158	446	\$20.53
Wivenhoe	\$276,249	18,504	\$14.93
Townsville	\$533,341	32,000	\$16.67
Mackay	-	-	-
Roma	-	-	-
Oakey	-	-	-
DL N->Q	\$199	13	\$15.64
NSW->QLD	\$7,656	563	\$13.59
Rocky Point	-	-	-
Tableland	-	-	-

NT Labor Party opposes NTQE plan to link NT to NEM via Queensland; cites South Australia retail price-rise

The Labor Party has rejected outright the company's plan to run a 2,500 kilometre electricity line to the Queensland power grid. Business Minister, Paul Henderson, called on the Country Liberal Party (CLP) to scrap its involvement in the idea.

Miserable failure: "It is a move that failed miserably in Adelaide," Henderson said. "We have two power bills from the same family between 2003 and 2004 that show within a six month period even though that family used less power, they actually paid \$77 more on their power bill, so this plan is definitely going to increase power costs for Territorians," he said.

NTQE defends plan: But NTQE's Alan Du Mee told the ABC, "My view of the Labor Party's comments would be if this really could deliver more economical or more reliable energy for the Territory then would any responsible political party turn around and say that they wouldn't support it?", Du Mee insists he never intended for the project to become party political. "The company itself is merely a vehicle, the work that was done to support the project took about 18 months," he said.

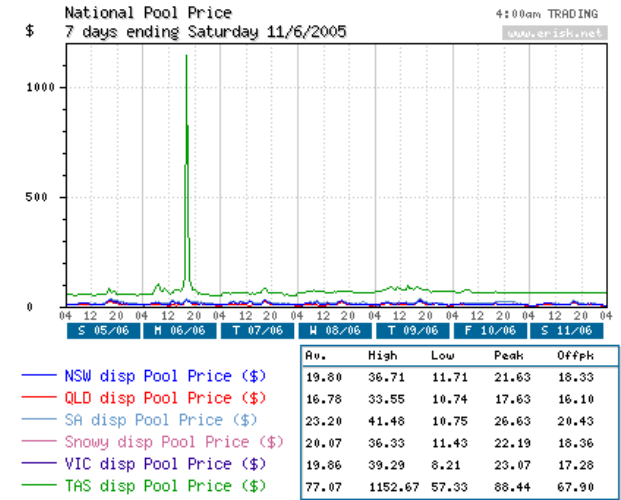
Speech by NT Country Liberal Party leader, Denis Burke 2005, NT election Country Liberal Party

the week in detail

• **NSW:** Average price \$19.80/MWh, down 25 per cent on the \$26.46/MWh of the previous week, down 32 per cent on the spike-affected \$28.99/MWh of the comparable week last year; maximum price \$36.71/MWh for the 30-minute trading interval ended 1800EST on Monday. Average demand 8902MW, down 3.2 per cent on the previous week, down 0.8 per cent on a year ago; maximum demand 11,197MW in the 1800EST interval on Tuesday, down 3.4 per cent on the 11,592MW of the previous week. Snowy-NSW exports averaged 771MW, down 12.7 per cent on average exports of 425MW the previous week;

• **Victoria:** Average price \$19.86/MWh, down 25 per cent on the \$26.41/MWh of the previous week, down 27 per cent on the \$27.36/MWh of the comparable week last year; maximum price \$39.29/MWh for the 30-minute trading interval ended 1800EST on Monday. Average demand 5808MW, down 3.7 per cent on the previous week, down 2.1 per cent on a year ago; maximum demand 7232MW for the 1800EST interval on Monday, down 2.6 per cent on the 7427MW of the previous week. Victorian exports to Snowy averaged 4.74MW, compared to average imports of 120MW the previous week;

• **South Australia:** Average price \$23.20/MWh, down 49 per cent on the spike-affected \$45.49/MWh the previous week, down 25 per cent on the \$30.99/MWh of the comparable week last year; maximum price \$41.48/MWh for the 30-minute trading interval ended 1830EST on Sunday. Average demand 1383MW, down 12.2 per cent on the previous week, down 5.6 per cent on a year ago; maximum demand 1850MW for the 1900EST interval on Monday, down 11.0 per cent on the 2078MW of the previous week. Vic-SA flow averaged 286MW, up 24.9 per cent on the average 229MW the previous week; Murraylink net flow averaged 21.15MW west, down from 42.96MW west the previous week;



• **Queensland:** Average price \$16.78/MWh, down 22 per cent on the \$21.57/MWh the previous week, down 38 per cent on the \$27.28/MWh of the comparable week last year; maximum price \$33.55/MWh for the trading interval ended 1800EST on Monday. Average demand 5536MW, down 0.7 per cent on the previous week, up 3.5 per cent on a year ago; maximum demand 6962MW for the 1800EST interval on Monday, up 0.6 per cent on the 6922MW the previous week. QNI flow averaged 568MW south, down 11.7 per cent on the 643MW south the previous week. Directlink averaged 54.85MW south, down from 73.58MW south the previous week; and

• **Tasmania:** Average price \$77.07/MWh, up 18 per cent on the \$65.39/MWh of the previous week; maximum price \$1152.67/MWh for the trading interval ended 1800EST on Monday. Average demand 1276MW up 2.7 per cent on the 1242MW the previous week; maximum demand 1647MW in the 1800EST interval Monday, up 6.5 per cent on the 1547MW of the previous week.

launch. PO Box 40945 Casuarina NT 0811 Contact: Diana Scott, Office Manager. Location: Suite 7, 266 Trower Road Casuarina NT 0810, Phone: 08 8927 8233 Facsimile: 08 8927 8766 Email: ntclp@bigpond.com



NT Electrical Trades Union says it's a silly idea for NT to join the NEM: too much outback lightning a problem

The Electrical Trades Union said the Country Liberal Party's (CLP) planned powerline from Darwin to Mount Isa is a hare-brained scheme that would increase the risk of blackouts.

The union's Territory branch organiser, Alan Paton, told the ABC the line would be at constant risk of breakdown in remote and inaccessible areas of the Barkly region.

Threat to Darwin: "You're going across some very rough country, not only tidal and flood areas, but also lightning areas where we have massive wet season storms throughout that region as well," he said. "If that line got struck it'd shut down Darwin straight away. That happened this year with the Katherine line getting hit and Darwin was out of power for six hours with only a small line running 300kms."

Injunction set against ETU, to allow Corke to work on Snowy's new summer-critical 310MW Laverton plant

Justice Raymond Finkelstein last week issued an injunction against the Electrical Trades Union and its state secretary, Dean Mighell, stopping industrial action against Corke Instrument Engineering at the Laverton North power station, reported *The Australian Financial Review* (7/6/2005, p. 9).

Unlawful action: The injunction - effective immediately - held the union was unlawfully taking action to prevent Corke working for Siemens, which is building the 310 megawatt power station for Snowy Hydro.

Industrial action restricted? The court would resume for hearings that could have implications for ETU campaigns at other construction sites. Lawyers claimed it was a benchmark decision that would restrict industrial action by the union, a claim denied by the union.

Major users happy: The ruling would be welcomed by major electricity users, which earlier this year successfully lobbied the Australian Competition and Consumer Commission to increase safeguards because of concerns the state could face one of the demand-supply equations for several years.

NEMMCO predicts demand peak next February, March, when Melbourne hosts Commonwealth Games

The National Electricity Market Management Company (NEMMCO), which monitors the market to ensure supply meets demand, anticipates demand will peak next February and March when Melbourne hosts the Commonwealth Games, reported *The Australian Financial Review* (7/6/2005, p. 9).

Lights will stay on: "This does not mean the lights will go out. We have based our projections upon very conservative numbers for contingency planning purposes," a spokesperson said.

Demand met for cool summer: This summer, Victoria had a reserve deficit, but the unusually cool weather meant the electricity system easily met demand. Another planned increase in supply has been disrupted until at least April next year because of delays in the Basslink powerline between Gippsland and Tasmania.

Safety-net provision: In April, the ACCC approved an application by users to extend for another 12 months, to July 2006, a safety-net provision allowing NEMMCO to enter into short-term contracts to boost supply. Typically, big users such as factories or office blocks with an alternative source of power generation would be offered incentives to switch off during peak periods.

February shortages removed for Queensland, NSW, South Australia and Victoria in 2007

The four changes to the latest medium term projected assessment of system adequacy (MT PASA) report by NEMMCO at 1329EST on Tuesday, 7 June all relate to the removal of February from the low reserve conditions (LRC) for Queensland, NSW, South Australia and Victoria in 2007 to what was shown in the MT PASA on Tuesday, 31 May.

Flagged LRC conditions: In the 7 June MT PASA, NEMMCO flagged the following LRC for a number of week days in the following months:

2005

- Queensland: November.

2006

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

2007

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

Algorithm improved: NEMMCO said that as part of the mid-year MMS release the MT PASA algorithm was improved to enhance the way LRC reserve shortfalls were distributed across regions. Where a LRC reserve shortfall existed this would now be shown in each of the affected regions.

Modelling of DSP: NEMMCO said demand side participation (DSP) was modelled as an injection of supply in each region as follows:

- NSW: 14MW.
- Queensland: 157MW.
- South Australia: 74MW.
- Victoria: 129MW.

Market response sought: NEMMCO said it was seeking a market response to the reserve shortfalls.

At \$15 a tonne CO₂-e cost, Sinclair Knight Merz analyst claims Vic soon a black coal power importer from Qld, NSW

Sinclair Knight Merz engineering analyst, Rohan Zauner, has argued that the new baseload power generation required by

Victoria was most likely to come from Queensland or NSW black coal due to the economics of the energy industry, and that the importing of this power would result in energy losses and require the boosting of transmission lines, reported *The Age* (2/6/2005, p. 3) Rohan Zauner, of engineers Sinclair Knight Merz, said that, as a result, Victoria would become a net importer of energy.

Carbon trading system: A spokesperson for Energy Minister, Theo Theophanous, said the government was trying to make progress with advanced brown-coal technology as quickly as possible. Zauner said that if Australia were to introduce a carbon trading regime that priced greenhouse emissions at \$15 a tonne, black coal would probably retain its position as the most cost-efficient fuel for electricity generation in the near future. The states recently committed themselves to introducing a carbon trading system, but no details of any potential scheme have been released.

Anglo American development: Several new technologies have been proposed for exploiting Victoria's brown coal fields. South African mining giant Anglo American last year paid \$52 million for rights to develop a process that converted brown coal into diesel and generates electricity. No time frame for the development has been announced.

Forecast: by 2050 black coal USC with CO₂ dumps will deliver 55pc; brown coal gasification 19pc with dumps

If Australian power generation continued in a "business as usual" scenario, the nature of current electricity market drivers will favour replacing subcritical pulverised fuel (PF) with black coal ultrasupercritical (USC) and brown coal gasification plants, a study by the coal lobby group, the Cooperative Research Centre for Coal in Sustainable Development, found, reported *The Queensland Government Mining Journal* (March 2005).

Coal to deliver 74pc of gen: In this scenario, predictions suggested that by 2050 black coal USC will deliver 55 per cent of electricity (0 per cent at present), and brown coal gasification 19 per cent (0 per cent at present). Interestingly, regardless of which emission scenario was modelled, black coal subcritical PF still contributed between 8 to 12 per cent by 2050.

Brown coal phased out: Similarly, brown coal subcritical PF were gradually phased out across the range of scenarios. In other words, for the black coal industry, USC or Integrated Gasification Combined Cycle (IGCC) emerged as the most favoured options for electricity generation.

Reference: Report by the Cooperative Research Centre for Coal in Sustainable Development. Phone: (07) 3871 4400. <http://www.ccsd.biz>

14 SA directions in April result in recommended compo payments of \$1,303,160

The 14 directions issued in April resulted in recommended payments of \$1,303,160, or 59.4 per cent of the total \$2,193,155 for the 33 South Australia directions issued between 17 December 2004 and 19 April 2005.

Independent expert reports: This is shown in the draft report to the National Electricity Market Management Company (NEMMCO) by the appointed independent expert, Roam Consulting, on the 33 directions issued in South Australia and four directions issued in Queensland in January 2005.

19 directions in other four months: The report also shows that the 19 directions issued in the four months between December and April attract compensation payments of \$890,049. There were two directions in each of December, January and February and 13 in March.

Monthly breakdown of directions: A breakdown of the report's recommended compensation payments shows the following:

- \$102,374.27 for two directions in December 2004;
- \$69,731.15 for two directions in January 2005;
- \$58,11,40 for two directions in February 2005;

- \$659,832.39 for 13 directions in March 2005; and
- \$1,303,106 for 14 directions in April 2005.

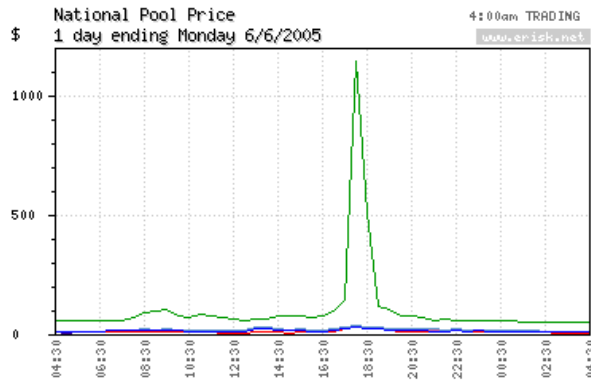
Reference: Draft report by Roam Consulting Pty Ltd to National Electricity market Management Company (NEMMCO) on compensation for 33 directions in South Australia between 17 December 2004 and 19 April 2005 and four directions in Queensland between 8-19 January 2005. 1 June 2005. Address: Suite 3, Level 4, 49 Sherwood Road, Toowong. Qld. 4066. Phone (07) 3371 2644. Fax (07) 3371 0880. NEMMCO address: Level 12, 15 William Street, Melbourne. Vic. 3000. Phone: (03) 9648 8777. Fax: (03) 9648 8778. <http://www.roamconsulting.com.au> <http://www.nemmco.com.au>

Monday 6 June: spikes in 8 intervals reach \$1152.67/MWh top as Tasmania shivers

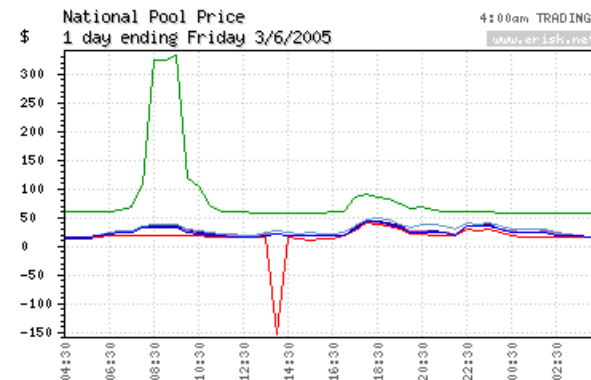
Spikes occurred in eight 30-minute trading intervals in Tasmania on Monday, 6 June, reaching a top of \$1152.67/MWh in the early evening as the minimum temperature dropped to 2 degrees in Hobart.

Two spikes in morning: Two spikes occurred in morning trading intervals. The price rose to \$104.40/MWh in the 0900EST interval after reaching \$98.07/MWh in the 0830EST interval. The price rose to \$109.83/MWh in the 0930EST interval before falling back to \$85.40/MWh in the 1000EST interval.

Six spikes in late afternoon and evening: Six spikes occurred between 1700-1930EST



	Avg.	High	Low	Peak	Offpk
NSW disp Pool Price (\$)	20.97	36.71	13.55	23.10	17.43
QLD disp Pool Price (\$)	16.89	33.55	11.60	17.83	15.32
SA disp Pool Price (\$)	24.59	40.77	12.69	28.05	18.82
Snowy disp Pool Price (\$)	21.47	36.33	13.28	23.86	17.48
VIC disp Pool Price (\$)	21.89	39.29	12.19	25.03	16.66
TAS disp Pool Price (\$)	108.67	1152.6758	0.00	136.73	61.89



	Avg.	High	Low	Peak	Offpk
NSW disp Pool Price (\$)	24.87	43.52	16.44	25.27	24.22
QLD disp Pool Price (\$)	16.54	41.49	-153.10	14.64	19.70
SA disp Pool Price (\$)	29.22	48.72	16.24	30.95	26.34
Snowy disp Pool Price (\$)	25.20	41.34	17.00	25.69	24.36
VIC disp Pool Price (\$)	25.57	44.24	13.94	26.84	23.43
TAS disp Pool Price (\$)	82.85	332.54	57.33	96.82	59.57

1000EST interval, \$104.93/MWh in the 1030EST interval and \$72.70/MWh in the 1100EST interval.

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

New ACCC cartel leniency applies to person first to expose the cartel, or first to come forward in investigations

While the ACCC had increased publicity for its cartel investigations, David Smith, Commissioner for the Australian Competition and Consumer Commission (ACCC), explained that the success of these investigations owed a lot to its "Leniency Policy" (26/5/2005).

How the policy works: "The Leniency Policy contains an automatic offer of immunity for eligible companies and individuals but is available for cartel conduct only," Smith said. "The decision to go down this route was an explicit acknowledgment that the secretive nature of cartels meant that they would often only be exposed by cartel participants persuaded to break the code of silence."

50pc of investigations due to policy: "And to date, this approach shows some rewards. Of the more than two dozen cartel investigations currently being run by the Australian

inclusive. The price rose from \$82.13/MWh in the 1630EST interval to \$104.40/MWh in the 1700EST interval. It rose to \$147.40/MWh in the 1730EST interval, \$1152.67/MWh in the 1800EST interval, fell to \$515.36/MWh in the 1830EST interval, \$121.60/MWh in the 1900EST interval, \$113.00/MWh in the 1930EST interval before dropping to \$85.40/MWh in the 2000EST interval.

Top temperature of 7 degrees: Hobart's temperature range was 2-7 degrees, with the minimum down 2 degrees on a cold Sunday and the top temperature down 4 degrees.

Reference: National Price for Tasmania for one day on Monday, 6 June in Price/Demand section of Erisk Net - Realtime NEM Data. <http://www.erisk.net>

Friday, 3 June: Tas top price of \$332.54/MWh in six spikes

Tasmania recorded spikes of between \$104.93-\$33254/MWh in six 30-minute trading intervals during the morning of Friday, 3 June.

Cold in Hobart: The spikes occurred on a day when capital Hobart's temperature range was between 3-13 degrees.

How prices moved: The price rose from \$69.49/MWh in the 0730EST interval to \$106.79/MWh in the 0800EST interval. Prices in the following intervals were \$323.97/MWh in the 0830EST interval, \$323.95/MWh in the 0900EST interval, \$332.54/MWh in the 0930EST interval, \$118.48/MWh in the

Competition and Consumer Commission, half are as a direct result of people taking advantage of our Leniency Policy.

Policy philosophy: "The philosophy behind it is very simple – it makes cartel lawbreakers and their executives an offer to cease the unlawful conduct and report it to the Commission. In return they receive a clear and certain offer of leniency. Their evidence then exposes others involved who will be investigated and, if the evidence permits, brought before the courts. But only if they were the first to expose the cartel, or the first to come forward once the ACCC began its investigations.

Key conduct areas: "The focus in Part IV matters remains, as always, on areas of high economic and consumer detriment. That conduct includes:

- cartels - price fixing, bid rigging, market sharing;
- resale price maintenance;
- clear or blatant misuse of market power involving large powerful corporations;
- horizontal or vertical arrangements where there is significant impact on the competitive process; and
- secondary boycotts involving conduct with clear detriment.

Acceptance from courts: "While those companies that are penalised may regard this as unfair, the courts are showing acceptance

of the principle that those who are the first to expose a cartel deserve more lenient treatment," he concluded.

Reference: David Smith, Commissioner, Australian Competition and Consumer Commission, (ACCC), "The Regulator's approach to compliance: Crackdown, Confrontation or Compliance Culture", 26 May 2005.

S&P/ASX Utilities Index up about 10pc in the year to date, versus a 3 per cent rise in the broader market

The float of Hong Kong-based Cheung Kong Infrastructure's Australian assets were thought to be worth more than \$6 billion in enterprise value (including a lot of debt), putting it in the same league as a Singapore Power deal. The portfolio included electricity networks in South Australia (ETSA) and Victoria (CitiPower and Powercor). The plan was either to float these assets alone or potentially include the two toll roads it controls in Australia.

International Power approached: There has also been talk that the British utility International Power has been approached about selling its Australian assets, which include interests in the Hazelwood and Loy Yang B power stations in Victoria.

Worst start to new financial year in decade: Dun and Bradstreet's quarterly Business

Expectations survey of more than 1200 business owners and executives found that plans to boost prices - particularly among retailers - have receded as a third of the traders suffer a slowdown in consumer spending.

Vic, SA players OK Snowy Hydro Tumut bid to compete with NSW but only if changes fix loop-constraints muddle

A group of seven NEM players, representing most of Victoria and South Australia, told the ACCC the Snowy Hydro CSP/CSC trial, and the CRA proposal from which it was derived, was designed to deal with the distortion of competition that occurs when an intra-regional transmission constraint leads to a value in dispatch for a scheduled plant which is materially different from the value expressed through the region-based market settlement process.

Fix mis-pricing for Tumut: This leads to a distortion of the bid or offer formation process by market participants: the Snowy Hydro derogation only addresses the mis-pricing which occurs for Tumut generation.

What the code said: The seven listed a second cause of distortion of competition in the Snowy region from the market settlement process. This happened as while "The Code

implicitly assumes that virtually every inter-connector flow will result in a positive settlement residue, since the means to deal with negative residues are suitable only for occasional and trivial deficits they are based on artificially constraining flow or mis-pricing to avoid the negative residues".

What really happens: "Experience has shown that the negative settlement residues that occur in the Snowy region are significant and they will persist, as they arise from the physical nature of the transmission network which includes a constraint within a loop.

The muddle of the NEM: "As a consequence the market settlement process, which compels NEMMCO to avoid material negative settlement residues on inter-connectors, creates in the Snowy region inefficient pricing for Murray generation, distortion of efficient dispatch and a reduction in generator competition.

So please fix it all: "We therefore do not support the implementation of the changes proposed by Snowy Hydro to address the shortcomings in the Snowy region at the Tumut node, unless changes are made and all the competition issues that arise at the Snowy region's inter-connectors are addressed at least on an interim basis. The group reiterates its position that support for the derogation is conditional on resolving the issue of negative residue management on the Victoria to Snowy link for both southward and northward flows".

Reference: Loy Yang Marketing Management Company Pty Ltd.; Southern Hydro Pty Ltd.; Yallourn Energy Pty Ltd.; International Power (Hazelwood, Synergen,

Pelican Point, Loy Yang B and Valley Power); NRG Flinders Pty Ltd.; SPI Electricity Pty Ltd.; Hydro Tasmania, 12 May 2005. If you have any questions in relation to this proposal, please call Roger Oakley on 03 9612 2211. Ken Thompson, General Manager, Loy Yang Marketing Management Company Pty Ltd.; Carlo Botto, Marketing Director, Yallourn Energy Pty Ltd.; Ben Skinner, Regulatory Manager Wholesale, Markets SPI Electricity Pty Ltd.; David Bowker, Manager Regulatory Affairs, Hydro Tasmania; Robert Jackson, Manager Market Development & Regulation Southern Hydro Pty Ltd.; Stephen Orr, Commercial Director, International Power; Reza Evans, Manager Regulation & Market Development, NRG Flinders.

NEMMCO calculates loss factors for 2005/6 using forward-looking methodology: includes VTNs and Tasmania

NEMMCO has used the forward-looking loss factors methodology to calculate loss factors for 2005/06 for all regions in the NEM. The region boundaries, intra-regional transmission loss factors and inter-regional loss factor equations to apply for the 2005/06 financial year are provided in the document *List of Region Boundaries and Marginal Loss Factors for the 2005/06 Financial Year*.

Tasmanian factors included: NEMMCO has included in this document the Tasmanian loss factors and regional boundary in preparation for Tasmania joining the NEM in May 2005.

Loss factors for VTNs: The relevant jurisdictional regulators have approved the use

of three virtual transmission nodes (VTN) in New South Wales and one in South Australia. NEMMCO has calculated the loss factors for these VTNs and values are also published in the document.

Updates to document: Version 2.1 of this document contains the following changes: Basslink loss equation updated using the latest loss model that will be implemented in NEMDE; included relevant Distribution Loss Factors (DLF) for embedded generators.

Reference: NEMMCO, 27 May 2005. **Contact:** Bandu Gamage, email: bandu_gamage@nemmco.com.au

Forced electricity outages like 'sickies': problem is to tell if party truthfully cannot function or has ulterior motive

¶ "Sick days" might constitute the analogue of forced outages, independent expert Roam Consulting said in its draft report to the NEMMCO on recommended payments for 37 directions in South Australia and Queensland between December 2004 and April 2005.

Discussion on fair payment principles: Discussing the principles underpinning a fair payment price in the draft report, Roam Consulting said the difficulty in either case was telling whether the party had told truthfully it could not function, or whether it had an ulterior motive.

Assumption of honesty: Because of such difficulties it was a satisfactory resolution to assume the honesty of the parties involved.

Congestion not a capacity issue:

Congestion as experienced by the National Electricity Market (NEM) in these scenarios was not really a capacity issue.

Congestion does not mean new generation:

High prices were used to signal new investment being necessary in the NEM, but congestion did not mean new generation investment was appropriate, so this further dissuaded offering too high a price for compensation.

Reference: Draft report by Roam Consulting Pty Ltd to National Electricity Market Management Company (NEMMCO) on compensation for 33 directions in South Australia between 17 December 2004 and 19 April 2005 and four directions in Queensland between 8-19 January 2005. 1 June 2005. Phone (07) 3371 2644. Fax (07) 3371 0880. NEMMCO address: Level 12, 15 William Street, Melbourne. Vic. 3000. Phone: (03) 9648 8777. Fax: (03) 9648 8778. <http://www.roamconsulting.com.au> <http://www.nemmco.com.au>

ESCOSA approves 58.8MW SA Clements Gap wind farm

The Essential Service Commission of South Australia (ESCOSA) has issued an electricity generation licence to Pacific Hydro Clements Gap Pty Ltd (PHCG) to operate the Clements Gap wind farm, which will have a maximum installed capacity of 58.8MW.

In Port Pirie region: The Clements Gap wind farm is on a 10-kilometre stretch of the Barunga Ranges in the Port Pirie region, about 15km north east of Redhill and 15km south west of Crystal Brook. It will be connected to a substation which was connected to ElectraNet's 132kV transmission line that runs from Port Pirie to Hummocks.

Ownership details: PHCG was a wholly owned subsidiary of Energy Pacific (Vic) Pty Ltd, which was a wholly owned subsidiary of Pacific Hydro Limited.

History of application: PHCG applied for a licence in August 2004 and ESCOSA undertook a public consultation process in September 2004. In October 2004, ESCOSA approved a licence to PHCG subject to it entering into a transmission connection agreement with ElectraNet. That condition had now been satisfied.

Paper soon on other wind applications:

ESCOSA said that in regard to other generation licence applications by wind farm developments that were being assessed, it intended to release a paper soon setting out a proposed approach to the issue of such licences.

Reference: Notification by the Essential Services Commission of South Australia (ESCOSA) of issue of electricity generation licence to Pacific Hydro Clements Gap Pty Ltd for Clements Gap wind farm. 7 June 2005. Address: 8th floor, 50 Pirie Street, Adelaide. SA. 5000. GPO Box 2605, Adelaide. SA. 5001. Phone: (08) 8463 4444. Fax (08) 8463 4449. <http://www.escosa.sa.gov.au>

NSW: British wind power group RES Southern Cross applies to DIPNR to build 69 wind turbines near Taralga

British-based wind power company RES Southern Cross has submitted an application to build 69 wind turbines near Taralga on the Southern Tablelands to the NSW Department of Infrastructure, Planning and Natural Resources, reported *The Land* (14/4/2005, p. 29)

Draft DCP: Company spokesperson, Colin Leibman, said the draft development control plan (DCP) for Upper Lachlan (which covered Taralga), for example, had provisions that had no scientific basis. These included a requirement that wind turbines be no closer than 1500 metres to a property boundary where there was a dwelling or potential for a dwelling. "The 1500-metre limit is not related to any science," he said.

Vestas to release 100 metre, 3MW blades this year and 120m, 4.5MW machines by 2007 despite tech concerns

Wind turbine manufacturer Vestas performed well this year, reported *The Economist* (9/4/2005, p. 53).

New 3MW blades: The takeover of rival NEG-Micon cost it 115m euros but brought with it blade technology, already proving its worth as rotor and turbine sizes grow to shrink costs. Until now, a three-bladed rotor of 80 metres diameter (260 feet) driving a 2 megawatt (MW) turbine has been typical. This year Vestas hoped to deliver 100 metre, 3MW machines, and 120 metre, 4.5MW ones by 2007.

Solid orders from China: It has also won solid orders, not least its first from China, potentially a huge market if the Chinese Government really meant what it said about renewable energy. Still, things did go wrong. Why? One reason lay at Vestas's own door. The machines it set up in 2002 at Horns Reef, a stormy site off Denmark's west coast, could not stand the conditions, and had to be removed last year for repair.

Australian Wind Energy Association plan for compo for neighbouring properties as rural turbine support down

15 Rural communities were increasingly critical of wind energy developers, with accusations of poor planning and little consultation becoming common, reported *The Land* (14/4/2005, p. 29).

Best practice guidelines: A spokesperson for the Australian Wind Energy Association (AWEA), Yolande Strengers, said all members

of the association were expected to comply with the industry's best practice guidelines. "We would like to see councils talking to developers when developing their plans," she said.

New issues paper: The Association was about to release an issues paper on landscape values and siting of wind farms prepared in conjunction with the Australian Council of National Trusts, and was developing an accreditation process for wind farm developers. The issues paper was intended to lead to a guide for developers on how to assess whether a site was appropriate.

Measured development supported: "We do not propose putting them all over the countryside," Strengers said. "It is quite difficult to find suitable locations. You have to find a good wind resource and good grid connection and look at appropriate siting." She said many landholders were interested in having wind turbines on their properties because they stood to receive about \$5000 a year for each turbine.

Compensation for neighbours: However, the Association was also considering suggestions that payments for wind farm developments be spread wider to include compensation for neighbours, even though no other industry would do that.

NSW Central Tablelands residents vote overwhelmingly against proposed wind farm

Residents of Black Springs, in the Oberon Shire, at a public meeting on 1 March voted overwhelmingly against a wind farm proposed near their township, although the local council was more favourably inclined towards one in a more remote area at Paling Yards near the Abercrombie River, reported *The Land* (14/4/2005, p. 28).

Division in local community: Landholders who accepted offers to have wind farms built on their properties stood to benefit from a regular income of several thousand dollars for each tower. But others considered them a blight on the landscape and are concerned about potential noise pollution if their homestead is near the boundary of a property with towers.

NSW DIPNR to control all wind farms with over 30 towers

Proposals in NSW's Upper Lachlan for a "Crookwell 2" wind farm and one for 69 towers at Taralga were now being considered by the Department of Infrastructure Planning and Natural Resources (DIPNR), following a decision late last year by its Minister, Craig Knowles, that all wind farm developments of more than 30 towers would

be declared as "State significant", reported *The Land* (14/4/2005, p. 28).

Local councils revolt: Nevertheless, the shire this week joined the growing list of councils that have prepared a development control plan for wind power generation. Council general manager, John Bell, said the draft plan which was now on public exhibition for 60 days, was modelled on those developed by Oberon and Goulburn-Mulwaree Councils.

Expert moots NEM switch to nodal marginal pricing

The three primary electricity market design structures were uniform marginal pricing (UMP), nodal marginal pricing (NMP) and zonal marginal pricing (ZMP), independent expert, Roam Consulting, said in its draft report to the National Electricity Market Management Company (NEMMCO) on recommended payments for 37 directions in South Australia and Queensland between December and April.

What was looked at: Roam Consulting said the Code required the independent expert to consider other relevant pricing methodologies. Its investigation traversed other electricity markets including PJM (the world's largest competitive wholesale electricity market operating in Delaware, Illinois, Kentucky, Michigan, New Jersey, North Carolina, Ohio, Pennsylvania, Virginia, West Virginia and the District of Columbia), NETA (the New

Electricity Trading Arrangements in the United Kingdom), Ontario, Sweden and Norway.

Contractual arrangements examined: It also looked at relevant contractual arrangements which specified the price for such services, like RMR (reliability must run) contracts. In examining other pricing methodologies, it looked particularly at how such methodologies compensated "constrained on" generators.

Analysis of three primary structures: Roam Consulting said the features and operational advantages/disadvantages of the three primary electricity market design structures were:

- **Uniform marginal pricing (UMP):** This featured the same price everywhere in the whole control region. The operational advantages/disadvantages were that this was unrealistic due to ignoring limitations of the transmission system. This structure was used in the United Kingdom, Alberta, Ontario, Sweden and Finland.
- **Nodal marginal pricing (NEM):** This featured a different price at every node. The advantages/disadvantages were that it adhered to transmission system realities. It fitted best with economic theory of determining price and averting issues of market failure. This structure was used in Chile, Argentina, Peru, Bolivia, California, New Zealand, PJM, New York, and New England.
- **Zonal marginal pricing (ZMP):** This featured a UMP within each of several zones (groups of nodes). The operational

advantages/disadvantages were that it was more realistic and consistent with economic and engineering theory than UMP. However, it retained some of the problems experienced by UMP and was therefore often considered less optimal than NMP. This structure was used in Norway, Australia, Texas and Denmark.

Reference: Draft report by Roam Consulting Pty Ltd to National Electricity Market Management Company (NEMMCO) on compensation for 33 directions in South Australia between 17 December 2004 and 19 April 2005 and four directions in Queensland between 8-19 January 2005. 1 June 2005. Address: Suite 3, Level 4, 49 Sherwood Road, Toowong. Qld. 4066. Phone (07) 3371 2644. Fax (07) 3371 0880. NEMMCO address: Level 12, 15 William Street, Melbourne. Vic. 3000. Phone: (03) 9648 8777. Fax: (03) 9648 8778. <http://www.roamconsulting.com.au> <http://www.nemmco.com.au>

Qld, WA and NT higher growth rate: March quarter growth negative in Vic, NSW, ACT

The national accounts show a deepening split between south eastern Australia and the rest of the continent, with the resource-rich states leaving the rest behind, according to *The Sydney Morning Herald* (2/6/2005, p. 9).

Qld, WA and NT of higher growth rates: Growth was 6 per cent or higher over the year in Queensland, Western Australia and the Northern Territory but just 1.7 per cent in Victoria and 2.5 per cent in NSW and the ACT.

In the March quarter, growth was negative in Victoria, NSW and the ACT.

Economic drivers away from NSW and Vic:

"It shows you how the economic drivers are shifting towards the resource-intensive states and away from the high-population states, NSW and Victoria," said a Macquarie Bank economist, Roland Randall.

EWN publishing

Constraint Library Changes Report for the week 6-12 June 2005

<p>06/06/2005: Modified Constraint Set(s) and Constraint Equation(s) Constraint Set: T-CS-TX3_RI_TRIP Constraint Equation: T>CS_TX3_RI_TRIP, T>CS_TX3_RI_TRIP_PM Reason: Updated descriptions</p>
<p>07/06/2005: Marked for Archival Constraint Set(s) and Constraint Equation(s) @ER134<=1750, @ER134<=1900, @H14CAP+H18CB875, @H4_120+H4_50+H9_50, @H4+H5+H9_50CAPS, @H678+ GEN=850, @H-NIL, @HV_0050A, @HW12678ETC, @HWPS_1_2_4, @I*HV-1250, @I*HV1330, @I*HV>1400, @I*HV>1600, @I-SVML_070, @I-VH_0050_DS, @I-VH_0100_DS, @I-VH_0150_DS, @I-VH_0200_DS, @I-VH_0500_DS, @I-VH_0500_DS1, @I-VH_0500_DS, @I-VH_0600_DS, @I-VH_0700, @I-VH_0750_DS, @I-VH_0800_DS, @I-VH_0850_DS, @I-VS=230, @I-VS=260, @I-VS=290, @I-VS=320, @I-VS=350, @I-VS=380, @I-VS=410, @I-VS=440, @I-VS=470, @I-VS=500, @JEEERALANG_PLUS, @JLG_MW_BDL_HZ, @LADBROKEGROVE=0, @LV080704, @LV25LIM, @LV25LIM1, @LV25LIM2, @LV25LIM3, @LV6_4000, @LYA1_NC, @LYB750, @MBTS_310, @N-LDTW_84, @N-LDTW_84, @N-NIL_94Y, @OAKY73100S, @Q_CN_QCVL_116, @Q_CN_QCVL_128, @Q_CN_QCVL_155, @Q_CN_QCVL_65, @Q_COLL>=150, @Q_GLD>=800, @Q_GPS>=1000, @Q_GPS>=900, @QBGH1+QBGH2>=30, @Q-CN_QCVL_080, @Q-CN_QCVL_100, @Q-CN_QCVL_120, @Q-CN_QCVL_80, @Q-CV_CB4212, @Q-CV_CB4222, @Q-CV_CB4252, @Q-H9+H14+H4_CP, @Q-H9+H14+H4+T155_CP, @QNDL_130, @QNDLQNG, @QNIDLNVE, @QNIQNG300, @Q-TS_MSP_7243, @S_PLN=5, @SA_22APRIL04, @SBKB2_GENXFMR, @SBKE_GENXFMR, @SH_GEN_08 Constraint Equation: @_SHYDR=298, @BARCADDINE_40MW, @BDL01, @BDL02, @BW1, @CALBC<900, @COLL=>145, @COLL=>150, @DRYCK1+2<=0, @DRYCK3=0, @ER134<=1750, @ER134<=1900, @HV_0050A, @HW12678ETC, @HWPS_1_2_4, @I*HV-1100, @I*HV-1250, @I*HV-1330, @I*HV>1400, @I*HV>1600, @I*HV-1800, @I-VS_500, @JEEERALANG_PLUS, @JLG_MW_BDL_HZ, @LADBROKEGROVE=0, @LV080704, @LV25LIM, @LV25LIM1, @LV25LIM2, @LV25LIM3, @LV6_4000, @LYA1_NC, @LYB750, @LYGS, @MBTS_310, @OAKYGT73100S, @Q_CN_QCVL_080, Reason: Old Ad-Hoc constraints marked for archival</p>
<p>07/06/2005: Modified Constraint Set(s) and Constraint Equation(s) Constraint Set: N-LDNC_81 Constraint Equation: N>N-81__1T, Q>N-81__1T (Opt.3 pair) Reason: More restrictive enforcement of Op.Limit is required</p>
<p>07/06/2005: Marked for Archival Constraint Set(s) and Constraint Equation(s) Constraint Set: Q_GC77494 Constraint Equation: I>D000NQDL, I>D000QNIDL, N>N-LTWG_1, Q_N_H36H4S, Q_N_NIL_N1, Q_N_NIL_N2, Q_QNISTB01, Q*8813_BKPC_BK1QPW, Q*BLCC_704, Q*BLCC704S, Q*GC_H4CB8052_OR_062, Q*GC_H4MU275KVTXCB, Q*QNIKBKM, Q*QNIKBKM1, Q*QNICLTR, Q*QNICLTR1, Q*QNIWOPW, Q*QNIWOPW1, Q*TR_BKBM, Q*TR_BKBM1, Q*TR_CLTR, Q*TR_CLTR1, Q*TR_WOPW, Q*TR_WOPW1, Q*TWPM_BMTX_829_MR50C, Q_QNI004A1, Q_QNI004A2, Q_QNI004EM, Q_QNI005, Q_QNI005A1, Q_QNI005A2, Q_QNI005EM, Q_QNI006, Q_QNI006A1, Q_QNI006A2, Q_QNI006EM, Q_QNI006T6, Q_QNI007, Q_QNI007A1, Q_QNI007A2, Q_QNI007EM, Q_QNI010, Q_QNI011, Q_QNI051, Q_Q-TRNCS, Q_TBL6QG, Q_TBL6QNI, Q_TV_CB72632, Q>CCMD7193_530, Q>Q-TRNEX1, Q>Q-TRNEXC, QCVL>=40, Q_QB21CN2A, S:KHSI, S>V_BNMG, S>V_HVMG, S>V_MGSE, S>VML_NIL2, V:S_PPT, V>SMLNIL12 Reason: Constraint sets/equations previously marked for archival added to the archive</p>
<p>07/06/2005: Marked for Archival Constraint Equation(s) Constraint Equation: Q_0100, Q_0101, Q_0500, Q_0501, ..., Q_0514, Q_0515, Q_0525, Q_0533, Q_0533A1, Q_0533A2, Q_0533EM, Q_0534, Q_0534A1, Q_0534A2, Q_0534EM, Q_0535, Q_0535A1, Q_0535A2, Q_0535B, Q_0535EM, Q_0535TBL6, Q_0536, Q_0536A1, Q_0536A2, Q_0536EM, Q_0540, Q_0550, Q_0551, Q>0700, Q>0701, ..., Q>0798, Q>0799, Q>0859, Q>0872A, Q>0873, Q>0874, Q>0874A Reason: Constraint equations previously marked for archival added to the archive</p>
<p>07/06/2005: Modified Constraint Equation(s) Constraint Equation: T:T_NIL_2 Reason: Omit pre-dispatch constraint, no longer required</p>
<p>07/06/2005: Marked for Archival Constraint Equation(s) H1T110, Q>Q-H1T111, Q>Q-H1T112, Q>Q-H1T113, Q>Q-H1T114, Q>Q-H1T115, Q>Q-H1T116, Q>Q-H1T117, Q>Q-H1T118, Q>Q-H1T119, Q>Q-H1T120, Q>Q-H1T201, Q>Q-H1T202, Q>Q-H1T203, Q>Q-H1T204, Q>Q-H1T205, Q>Q-H1T206, Q>Q-H1T207, Q>Q-H1T208, Q>Q-H1T209, Q>Q-H1T210, Q>Q-H1T211, Q>Q-H1T212, Q>Q-H1T213, Q>Q-H1T214, Q>Q-H1T215, Q>Q-H1T216, Q>Q-H1T217, Q>Q-H1T218, Q>Q-H1T219, Q>Q-H1T220, QGLD1<=205, QGLD1<=210, QGLD1<=220, QGLD1<=230, QGLD1<=240, QGLD1<=250, QGLD1<=260, QGLD1<=270, QGLD1<=280, QGLD1<=290, QGLD1<=300, QGLD1<=310, QGLD1<=320, QGLD1<=330, QGLD1<=340, QGLD1<=350, QGLD1<=360, QGLD1<=370, QGLD1<=380, QGLD1<=390, QGLD1<=400, QGLD1<=410, QGLD1<=420, QGLD1<=430, QGLD1<=440, QGLD1<=450, QGLD1<=460, QGLD1<=470, QGLD1<=480, QGLD1<=490, QGLD1<=500, QGLD1<=510, QGLD1<=520, QGLD1<=530, QGLD1<=540, QGLD1<=550, QGLD1<=560, QGLD1<=570, QGLD1<=580, QGLD1<=590, QGLD1<=600, QGLD1<=610, QGLD1<=620, QGLD1<=630, QGLD1<=640, QGLD1<=650, QGLD1<=660, 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QGLD1<=6080, QGLD1<=6090, QGLD1<=6100, QGLD1<=6110, QGLD1<=6120, QGLD1<=6130, QGLD1<=6140, QGLD1<=6150, QGLD1<=6160, QGLD1<=6170, QGLD1<=6180, QGLD1<=6190, QGLD1<=6200, QGLD1<=6210, QGLD1<=6220, QGLD1<=6230, QGLD1<=6240, QGLD1<=6250, QGLD1<=6260, QGLD1<=6270, QGLD1<=6280, QGLD1<=6290, QGLD1<=6300, QGLD1<=6310, QGLD1<=6320, QGLD1<=6330, QGLD1<=6340, QGLD1<=6350, QGLD1<=6360, QGLD1<=6370, QGLD1<=6380, QGLD1<=6390, QGLD1<=6400, QGLD1<=6410, QGLD1<=6420, QGLD1<=6430, QGLD1<=6440, QGLD1<=6450, QGLD1<=6460, QGLD1<=6470, QGLD1<=6480, QGLD1<=6490, QGLD1<=6500, QGLD1<=6510, QGLD1<=6520, QGLD1<=6530, QGLD1<=6540, QGLD1<=6550, QGLD1<=6560, QGLD1<=6570, QGLD1<=6580, QGLD1<=6590, QGLD1<=6600, QGLD1<=6610, QGLD1<=6620, QGLD1<=6630, QGLD1<=6640, QGLD1<=6650, QGLD1<=6660, QGLD1<=6670, QGLD1<=6680, QGLD1<=6690, QGLD1<=6700, QGLD1<=6710, QGLD1<=6720, QGLD1<=6730, QGLD1<=6740, QGLD1<=6750, QGLD1<=6760, QGLD1<=6770, QGLD1<=6780, QGLD1<=6790, QGLD1<=6800, QGLD1<=6810, QGLD1<=6820, QGLD1<=6830, QGLD1<=6840, QGLD1<=6850, QGLD1<=6860, QGLD1<=6870, QGLD1<=6880, QGLD1<=6890, QGLD1<=6900, QGLD1<=6910, QGLD1<=6920, QGLD1<=6930, QGLD1<=6940, QGLD1<=6950, QGLD1<=6960, QGLD1<=6970, QGLD1<=6980, QGLD1<=6990, QGLD1<=7000, QGLD1<=7010, QGLD1<=7020, QGLD1<=7030, QGLD1<=7040, QGLD1<=7050, QGLD1<=7060, QGLD1<=7070, QGLD1<=7080, QGLD1<=7090, QGLD1<=7100, QGLD1<=7110, QGLD1<=7120, QGLD1<=7130, QGLD1<=7140, QGLD1<=7150, QGLD1<=7160, QGLD1<=7170, QGLD1<=7180, QGLD1<=7190, QGLD1<=7200, QGLD1<=7210, QGLD1<=7220, QGLD1<=7230, QGLD1<=7240, QGLD1<=7250, QGLD1<=7260, QGLD1<=7270, QGLD1<=7280, QGLD1<=7290, QGLD1<=7300, QGLD1<=7310, QGLD1<=7320, QGLD1<=7330, QGLD1<=7340, QGLD1<=7350, QGLD1<=7360, QGLD1<=7370, QGLD1<=7380, QGLD1<=7390, QGLD1<=7400, QGLD1<=7410, QGLD1<=7420, QGLD1<=7430, QGLD1<=7440, QGLD1<=7450, QGLD1<=7460, QGLD1<=7470, QGLD1<=7480, QGLD1<=7490, QGLD1<=7500, QGLD1<=7510, QGLD1<=7520, QGLD1<=7530, QGLD1<=7540, QGLD1<=7550, QGLD1<=7560, QGLD1<=7570, QGLD1<=7580, QGLD1<=7590, QGLD1<=7600, QGLD1<=7610, QGLD1<=7620, QGLD1<=7630, QGLD1<=7640, QGLD1<=7650, QGLD1<=7660, QGLD1<=7670, QGLD1<=7680, QGLD1<=7690, QGLD1<=7700, QGLD1<=7710, QGLD1<=7720, QGLD1<=7730, QGLD1<=7740, QGLD1<=7750, QGLD1<=7760, QGLD1<=7770, QGLD1<=7780, QGLD1<=7790, QGLD1<=7800, QGLD1<=7810, QGLD1<=7820, QGLD1<=7830, QGLD1<=7840, QGLD1<=7850, Q</p>

<p>07/06/2005: Marked for Archival Constraint Equation(s) Constraint Equation: CHI_QSWBE, CHI_QSWCD Reason: Old CHIMERA equations for de-registered units marked for archival</p>
<p>07/06/2005: Marked for Archival Constraint Equation(s) Constraint Equation: F_HNQ+LREG_0150, F_HNQ+LREG_0160, F_HNQ+LREG_0180, F_HNQ+LREG_0200, F_HNQ+RREG_0150, F_HNQ+RREG_0160, F_HNQ+RREG_0180, F_HNQ+RREG_0200, F_HVS+LREG_0150, F_HVS+LREG_0160, F_HVS+LREG_0180, F_HVS+LREG_0200, F_HVS+RREG_0150, F_HVS+RREG_0160, F_HVS+RREG_0180, F_HVS+RREG_0200, F_NQ+LREG_0150, F_NQ+LREG_0160, F_NQ+LREG_0180, F_NQ+LREG_0200, F_NQ+RREG_0150, F_NQ+RREG_0160, F_NQ+RREG_0180, F_NQ+RREG_0200, F_VS+LREG_0150, F_VS+LREG_0160, F_VS+LREG_0180, F_VS+LREG_0200, F_VS+RREG_0150, F_VS+RREG_0160, F_VS+RREG_0180, F_VS+RREG_0200 Reason: Constraints superseded by new constraints</p>
<p>08/06/2005: Modified Constraint Equation(s) Constraint Equation: T>T_NIL_110_8, T>T_NIL_110_8_PM Reason: Change confidence level offset increasing the limit when line rating > 71 MVA</p>
<p>08/06/2005: Marked for Archival Constraint Set(s) and Constraint Equation(s) Constraint Set: N*NORTH_MW Constraint Equation: N:HV-NO_MW Reason: Constraints no longer required</p>
<p>08/06/2005: Marked for Archival Constraint Equation(s) Constraint Equation: Q>0857b, Q>0858c, Q>0872a, Q>0873a, Q>0874a, Q>0882a, QfQ_0_L5, QfQ_0_L6, QfQ_0_L60, QfQ_200R60 Reason: Constraints superseded by new constraints</p>
<p>08/06/2005: Marked for Archival Constraint Set(s) and Constraint Equation(s) Constraint Set: F-Q-BCBR_ONE, F-Q-BR_TX, F-I_MPP_MG_N-2, F-S-PATB, F-S-SETB, F-S-TB_CB6536 Constraint Equation: F_N+Q_BCBR_L5, F_N+Q_BCBR_L6, F_N+Q_BCBR_L60, F_N+Q_BCBR_R5, F_N+Q_BCBR_R6, F_N+Q_BCBR_R60, F_Q+N_BCBR_L5, F_Q+N_BCBR_L6, F_Q+N_BCBR_L60, F_Q+N_BCBR_R5, F_Q+N_BCBR_R6, F_Q+N_BCBR_R60, F_Q+Q_BCBR_L5, F_Q+Q_BCBR_L6, F_Q+Q_BCBR_L60, F_Q+Q_BCBR_R5, F_Q+Q_BCBR_R6, F_Q+Q_BCBR_R60, F_I+MPP_MG_R5_N-2, F_I+MPP_MG_R60_N-2, F_I+MPP_MG_R6_N-2, F_S+S_PATB_L5, F_S+S_PATB_L6, F_S+S_PATB_L60, F_S+V_PATB_L5, F_S+V_PATB_L6, F_S+V_PATB_L60, F_V+S_PATB_L5, F_V+S_PATB_L6, F_V+S_PATB_L60, F_V+S_PATB_R5, F_V+S_PATB_R6, F_V+S_PATB_R60, F_S+S_SETB_L5, F_S+S_SETB_L6, F_S+S_SETB_L60, F_S+V_SETB_L5, F_S+V_SETB_L6, F_S+V_SETB_L60, F_V+S_SETB_L5, F_V+S_SETB_L6, F_V+S_SETB_L60, F_V+S_SETB_R5, F_V+S_SETB_R6, F_V+S_SETB_R60, F_S+S_TB_CB6536_L5, F_S+S_TB_CB6536_L6, F_S+S_TB_CB6536_L60, F_S+V_TB_CB6536_L5, F_S+V_TB_CB6536_L6, F_S+V_TB_CB6536_L60, F_V+S_TB_CB6536_L5, F_V+S_TB_CB6536_L6, F_V+S_TB_CB6536_L60, F_V+S_TB_CB6536_R5, F_V+S_TB_CB6536_R6, F_V+S_TB_CB6536_R60 Reason: Constraints superseded by new constraints</p>
<p>09/06/2005: New Constraint Set(s) and Constraint Equation(s) Constraint Set: T-HA_TX Constraint Equation: T>T_HA_TX Reason: Required for planned outage</p>
<p>09/06/2005: Modified Constraint Set(s) and Constraint Equation(s) Constraint Set: T-HA_TX Constraint Equation: T_TR_30 Reason: Updated based on advice from TNSP</p>
<p>10/06/2005: Marked for Archival Constraint Set(s) and Constraint Equation(s) Constraint Set: N-NIL_SUM, V-QNI_P, V-QNI_R, V-QNI_Y1_P Constraint Equation: H>N_SUMMER Reason: Constraints superseded by new constraints</p>
<p>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</p>

Transmission Outage Start Date 14 - 20 June 2005

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Station Name	Equipment Name	Equipment Type	KV	Start Time	Status	Constraint Set ID
Mt. England 275kV	Mt England Loganlea 8813 275kV LINE	line	275	2005/06/15 06:30:00	STLTP	Q-8813_TR
Mt. England 275kV	Mt England Loganlea 8813 275kV LINE	line	275	2005/06/15 06:30:00	STLTP	Q-TR_OFFSET_-80
Stanwell 275kV	h29_stan.fdr 8482 cb	cb	275	2005/06/15 06:30:00	PDLTP	
Wagga 330kV	Wagga Yanco 994 132kV LINE	line	132	2005/06/15 07:00:00	PDLTP	N-X5_TRIP
Gladstone 275kV	h7_glad.fdr 8142 cb	cb	275	2005/06/15 07:00:00	PDLTP	
George Town	GeorgeTown A 220kV BUS	bus	220	2005/06/15 07:00:00	STLTP	F-T-GT_TX
George Town	GeorgeTown A 220kV BUS	bus	220	2005/06/15 07:00:00	STLTP	T-GT_TX2
George Town	GeorgeTown 2 220/110kV XFMR	xfmr2	220/110	2005/06/15 07:00:00	STLTP	F-T-GT_TX
George Town	GeorgeTown 2 220/110kV XFMR	xfmr2	220/110	2005/06/15 07:00:00	STLTP	T-GT_TX2
Hadspen	Hadspen GeorgeTown 1 220kV LINE	line	220	2005/06/15 07:00:00	STLTP	T-HAGT
Moorabool 500kV	Moorabool 220kV REACT	react	220	2005/06/15 07:30:00	PDLTP	
Playford A + B Ps 275kV	PLAY BL1 275kV CB	cb	275	2005/06/15 08:00:00	PDLTP	
Hadspen	Hadspen A 220kV BUS	bus	220	2005/06/15 08:00:00	STLTP	T-HAPM_220
Palmerston	Palmerston Hadspen 1 220kV LINE	line	220	2005/06/15 08:00:00	STLTP	T-HAPM_220
Alcoa/portland 500kV	Alc/prtInd Heywood 1 500kV LINE	line	500	2005/06/15 08:00:00	STLTP	F-I_TL_0600
Alcoa/portland 500kV	Alc/prtInd Heywood 1 500kV LINE	line	500	2005/06/15 08:00:00	STLTP	V*HYBT
Richmond 220kV	Richmond B2 220/66kV XFMR	xfmr2	220/66	2005/06/15 08:00:00	PDLTP	
Magill 275kV	Magill 2 275/66/11kV XFMR	xfmr3	275/66/11	2005/06/15 08:30:00	PDLTP	
Para 275kV	PARA 6120 132kV CB	cb	132	2005/06/15 08:30:00	PDLTP	
Keilor 500kV	Keilor Sydenham 500kV LINE	line	500	2005/06/15 08:30:00	STLTP	
Chalumbin 275kV	Chalumbin 1 288/138/19kV XFMR	xfmr3	288/138/19	2005/06/15 09:00:00	PDLTP	
Keith 132kV	KEITH 6110 132kV CB	cb	132	2005/06/15 09:00:00	PDLTP	S-KHTB_1
Keith 132kV	KEITH 6111 132kV CB	cb	132	2005/06/15 09:00:00	PDLTP	S-KHTB_1
Tailem Bend 275kV	T_BEND 6122 132kV CB	cb	132	2005/06/15 09:00:00	PDLTP	S-KHTB_1
Tailem Bend 275kV	T_BEND 6123 132kV CB	cb	132	2005/06/15 09:00:00	PDLTP	S-KHTB_1
Tailem Bend 275kV	Tailem_Bnd Keith 1 132kV LINE	line	132	2005/06/15 09:00:00	PDLTP	S-KHTB_1
John Lysaght Aust. 220kV	JLysaght Tyabb 1 220kV LINE	line	220	2005/06/15 09:00:00	PDLTP	
Stanwell 275kV	h29_stan.cplr 5042 cb	cb	275	2005/06/15 09:30:00	PDLTP	
Mobilong 132kV	MOBILO 6080 132kV CB	cb	132	2005/06/15 09:30:00	PDLTP	
Bulli Creek 330kV	r3_bulli. React 99012/1 cb	cb	330	2005/06/15 10:30:00	PDLTP	
Stanwell 275kV	h29_stan.fdr 8622 cb	cb	275	2005/06/15 13:00:00	PDLTP	
Cranbourne 220kV	Cranbourne 220/66/11kV XFMR	xfmr3	220/66/11	2005/06/16 06:30:00	STLTP	
Wagga 330kV	Wagga Yanco 994 132kV LINE	line	132	2005/06/16 07:00:00	STLTP	N-X5_TRIP
Gladstone 275kV	h7_glad.fdr 8142 cb	cb	275	2005/06/16 07:00:00	STLTP	
George Town	GeorgeTown A 220kV BUS	bus	220	2005/06/16 07:00:00	STLTP	F-T-GT_TX
George Town	GeorgeTown A 220kV BUS	bus	220	2005/06/16 07:00:00	STLTP	T-GT_TX3
George Town	GeorgeTown 3 220/110kV XFMR	xfmr2	220/110	2005/06/16 07:00:00	STLTP	F-T-GT_TX
George Town	GeorgeTown 3 220/110kV XFMR	xfmr2	220/110	2005/06/16 07:00:00	STLTP	T-GT_TX3
Hadspen	Hadspen GeorgeTown 2 220kV LINE	line	220	2005/06/16 07:00:00	STLTP	T-HAGT
Loy Yang Ps 500kV	Loy Yng PS 3 gen xfmr 2 bus 500kV	cb	500	2005/06/16 07:00:00	STLTP	

Station Name	Equipment Name	Equipment Type	KV	Start Time	Status	Constraint Set ID
Rowville 220kV	Rowville tsts In 4 bus	cb	220	2005/06/16 07:00:00	STLTP	
Kerang 220kV	Kerang 2 235/66/22kV XFMR	xfmr3	235/66/22	2005/06/16 07:29:00	STLTP	
Mt. England 275kV	Mt England Blackwall 802 275kV LINE	line	275	2005/06/16 07:30:00	STLTP	Q-TR_OFFSET_-100
Mt. England 275kV	Mt England Blackwall 802 275kV LINE	line	275	2005/06/16 07:30:00	STLTP	Q-TR_OFFSET_-70
Hazelwood 500kV	Hazelwood smts 2 In 2 bus	cb	500	2005/06/16 07:30:00	STLTP	
Moorabool 500kV	Moorabool 220kV REACT	react	220	2005/06/16 07:30:00	STLTP	
Newcastle 330kV	Newcastle 1 132kV CAP	cap	132	2005/06/16 08:00:00	STLTP	
Hadspen	Hadspen B 220kV BUS	bus	220	2005/06/16 08:00:00	STLTP	
Poatina	Poatina Palmerston 5 220kV LINE	line	220	2005/06/16 09:00:00	SUBMIT	
Gladstone 275kV	h7_glad.cplr 5052 cb	cb	275	2005/06/16 09:30:00	STLTP	
Eraring 500kV	Eraring500 Vineyard 25 330kV LINE	line	330	2005/06/17 03:00:00	STLTP	N-ERVY_25
Wagga 330kV	Wagga Yanco 994 132kV LINE	line	132	2005/06/17 07:00:00	STLTP	N-X5_TRIP
Woolooga 275kV	Woolooga 2 132kV CAP	cap	132	2005/06/17 07:00:00	MTLTP	Q-H5WO_50MVAR_CAP
Sydney West 330kV	Sydney W 1 132kV CAP	cap	132	2005/06/17 07:30:00	STLTP	
Moorabool 500kV	Moorabool 220kV REACT	react	220	2005/06/17 07:30:00	STLTP	
Loy Yang Ps 500kV	Loy Yng PS 3 gen xfmr 1 bus 500kV	cb	500	2005/06/17 08:00:00	STLTP	
Liverpool 330kV	Liverpool 122B 330kV CB	cb	330	2005/06/17 10:00:00	STLTP	
Eraring 500kV	Eraring500 Vineyard 25 330kV LINE	line	330	2005/06/18 03:00:00	STLTP	N-ERVY_25
Keilor 500kV	Keilor A2 500/220kV XFMR	xfmr2	500/220	2005/06/18 06:30:00	SUBMIT	
Chalumbin 275kV	Chalumbin 5032 275kV CB	cb	275	2005/06/18 07:00:00	SUBMIT	Q-FNQ_120
Chalumbin 275kV	Chalumbin 857 275kV REACT	react	275	2005/06/18 07:00:00	SUBMIT	Q-FNQ_120
Middle Ridge 275kV	h14_mrdg.fdr 7122 cb	cb	110	2005/06/18 07:00:00	MTLTP	
Middle Ridge 275kV	Middle Rdg Warwick 736 110kV LINE	line	110	2005/06/18 07:00:00	MTLTP	
Ross 275kV	Ross 275kV Chalumbin 857 275kV LINE	line	275	2005/06/18 07:00:00	SUBMIT	Q-FNQ_120
Brooklyn 220kV	Brooklyn Altona220 220kV LINE	line	220	2005/06/18 07:00:00	SUBMIT	
Belmont 275kV	Belmont 6 110kV BUS	bus	110	2005/06/18 07:30:00	MTLTP	Q-SEQ_50MVAR_CAP
Belmont 275kV	Belmont 1 110kV CAP	cap	110	2005/06/18 07:30:00	MTLTP	Q-SEQ_50MVAR_CAP
Sheffield	Sheffield S 220kV BUS	bus	220	2005/06/18 09:00:00	MTLTP	T-SH_TX
Sheffield	Sheffield 1 220/110kV XFMR	xfmr2	220/110	2005/06/18 09:00:00	MTLTP	T-SH_TX
Blackwall 275kV	Blackwall SwanBk B 8819 275kV LINE	line	275	2005/06/18 10:00:00	MTLTP	Q-BKSB_8819
Keilor 500kV	Keilor A2 500/220kV XFMR	xfmr2	500/220	2005/06/19 06:30:00	SUBMIT	
Brooklyn 220kV	Brooklyn Altona220 220kV LINE	line	220	2005/06/19 07:00:00	SUBMIT	
Blackwall 275kV	Blackwall SwanBk B 8819 275kV LINE	line	275	2005/06/19 08:00:00	MTLTP	Q-BKSB_8819
Sheffield	Sheffield A 110kV BUS	bus	110	2005/06/19 09:00:00	MTLTP	T-SH_TX
Sheffield	Sheffield 2 220/110kV XFMR	xfmr2	220/110	2005/06/19 09:00:00	MTLTP	T-SH_TX
Vineyard 330kV	Vineyard Sydney W 29 330kV LINE	line	330	2005/06/20 06:00:00	STLTP	N-SWVY_29
Kareeya Ps 132kV	Kareeya PS Cardwell-T 7135/2 132kV LINE	line	132	2005/06/20 07:00:00	MTLTP	Q-IHKA7135
Torrens A Ps 275kV	Trrens_A_PS Magill 275kV LINE	line	275	2005/06/20 07:30:00	MTLTP	S-TIMG
Wagga 330kV	Wagga Yanco 994 132kV LINE	line	132	2005/06/20 08:00:00	STLTP	N-X5_TRIP
Playford A + B Ps 275kV	Playfod_PS STIE 275/132kV XFMR	xfmr2	275/132	2005/06/20 09:00:00	MTLTP	
Kareeya Ps 132kV	kar_h_ps.fdr 71352 cb	cb	132	2005/06/20 10:00:00	MTLTP	
Kareeya Ps 132kV	Kareeya PS Cardwell-T 7135/2 132kV LINE	line	132	2005/06/20 10:00:00	MTLTP	
Para 275kV	Para 275kV Magill 275kV LINE	line	275	2005/06/20 10:30:00	MTLTP	
Townsville 132kV	Townsvlle-Tully-Cardwll 7134 132kV LINE	tline	132	2005/06/20 12:00:00	MTLTP	Q-TVU7134

Transmission Outage End Date 14 - 20 June 2005

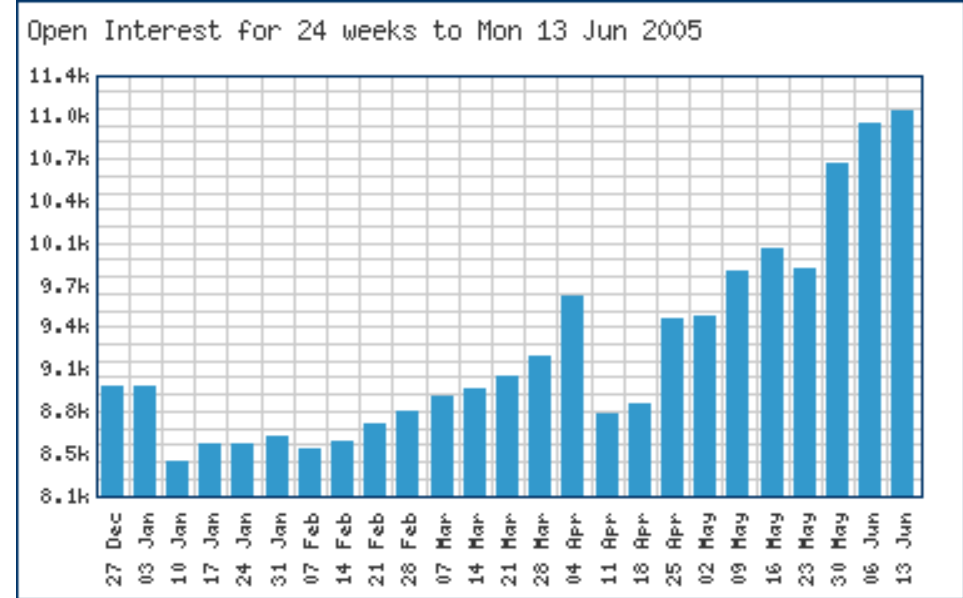
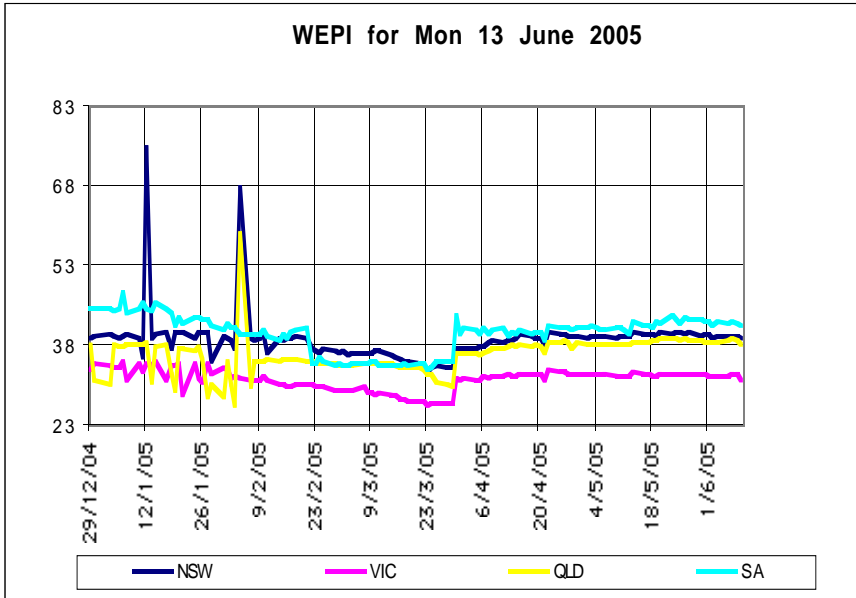
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Station Name	Equipment Name	Equipment Type	KV	End Time	Status	Constraint Set ID
John Lysaght Aust. 220kV	JLysaght Tyabb 1 220kV LINE	line	220	2005/06/15 09:15:00	PDLTP	
Stanwell 275kV	h29_stan.fdr 8482 cb	cb	275	2005/06/15 09:30:00	PDLTP	
Stanwell 275kV	h29_stan.cplr 5042 cb	cb	275	2005/06/15 12:30:00	PDLTP	
Bulli Creek 330kV	r3_bulli. React 99012/1 cb	cb	330	2005/06/15 13:00:00	PDLTP	
Wagga 330kV	Wagga Yanco 994 132kV LINE	line	132	2005/06/15 16:00:00	PDLTP	N-X5_TRIP
Mt. England 275kV	Mt England Loganlea 8813 275kV LINE	line	275	2005/06/15 16:00:00	STLTP	Q-8813_TR
Mt. England 275kV	Mt England Loganlea 8813 275kV LINE	line	275	2005/06/15 16:00:00	STLTP	Q-TR_OFFSET_-80
Stanwell 275kV	h29_stan.fdr 8622 cb	cb	275	2005/06/15 16:00:00	PDLTP	
Rowville 220kV	Rowville tsts In/ypts 6 line	cb	220	2005/06/15 16:00:00	PTP	
Keith 132kV	KEITH 6110 132kV CB	cb	132	2005/06/15 16:30:00	PDLTP	S-KHTB_1
Keith 132kV	KEITH 6111 132kV CB	cb	132	2005/06/15 16:30:00	PDLTP	S-KHTB_1
Tailem Bend 275kV	T_BEND 6122 132kV CB	cb	132	2005/06/15 16:30:00	PDLTP	S-KHTB_1
Tailem Bend 275kV	T_BEND 6123 132kV CB	cb	132	2005/06/15 16:30:00	PDLTP	S-KHTB_1
Tailem Bend 275kV	Tailem_Bnd Keith 1 132kV LINE	line	132	2005/06/15 16:30:00	PDLTP	S-KHTB_1
Hadspen	Hadspen A 220kV BUS	bus	220	2005/06/15 16:30:00	STLTP	T-HAPM_220
Palmerston	Palmerston Hadspen 1 220kV LINE	line	220	2005/06/15 16:30:00	STLTP	T-HAPM_220
Keilor 500kV	Keilor Sydenham 500kV LINE	line	500	2005/06/15 16:30:00	STLTP	
Moorabool 500kV	Moorabool 220kV REACT	react	220	2005/06/15 16:30:00	PDLTP	
Chalumbin 275kV	Chalumbin 1 288/138/19kV XFMR	xfmr3	288/138/19	2005/06/15 17:00:00	PDLTP	
Gladstone 275kV	h7_glad.fdr 8142 cb	cb	275	2005/06/15 17:00:00	PDLTP	
George Town	GeorgeTown A 220kV BUS	bus	220	2005/06/15 18:00:00	STLTP	F-T-GT_TX
George Town	GeorgeTown A 220kV BUS	bus	220	2005/06/15 18:00:00	STLTP	T-GT_TX2
George Town	GeorgeTown 2 220/110kV XFMR	xfmr2	220/110	2005/06/15 18:00:00	STLTP	F-T-GT_TX
George Town	GeorgeTown 2 220/110kV XFMR	xfmr2	220/110	2005/06/15 18:00:00	STLTP	T-GT_TX2
Hadspen	Hadspen GeorgeTown 1 220kV LINE	line	220	2005/06/15 18:00:00	STLTP	T-HAGT
Hazelwood 500kV	Hazelwood smts 2 In 2 bus	cb	500	2005/06/16 12:00:00	STLTP	
Gladstone 275kV	h7_glad.cplr 5052 cb	cb	275	2005/06/16 12:30:00	STLTP	
Newcastle 330kV	Newcastle 1 132kV CAP	cap	132	2005/06/16 15:00:00	STLTP	
Loy Yang Ps 500kV	Loy Yng PS 3 gen xfmr 2 bus 500kV	cb	500	2005/06/16 15:00:00	STLTP	
Wagga 330kV	Wagga Yanco 994 132kV LINE	line	132	2005/06/16 16:00:00	STLTP	N-X5_TRIP
Hadspen	Hadspen B 220kV BUS	bus	220	2005/06/16 16:30:00	STLTP	
Moorabool 500kV	Moorabool 220kV REACT	react	220	2005/06/16 16:30:00	STLTP	
Cranbourne 220kV	Cranbourne 220/66/11kV XFMR	xfmr3	220/66/11	2005/06/16 16:45:00	STLTP	
Gladstone 275kV	h7_glad.fdr 8142 cb	cb	275	2005/06/16 17:00:00	STLTP	
Mt. England 275kV	Mt England Blackwall 802 275kV LINE	line	275	2005/06/16 17:00:00	STLTP	Q-TR_OFFSET_-100
Mt. England 275kV	Mt England Blackwall 802 275kV LINE	line	275	2005/06/16 17:00:00	STLTP	Q-TR_OFFSET_-70
Kerang 220kV	Kerang 2 235/66/22kV XFMR	xfmr3	235/66/22	2005/06/16 17:00:00	STLTP	
Richmond 220kV	Richmond B2 220/66kV XFMR	xfmr2	220/66	2005/06/16 17:00:00	PDLTP	
George Town	GeorgeTown A 220kV BUS	bus	220	2005/06/16 18:00:00	STLTP	F-T-GT_TX
George Town	GeorgeTown A 220kV BUS	bus	220	2005/06/16 18:00:00	STLTP	T-GT_TX3

Station Name	Equipment Name	Equipment Type	KV	End Time	Status	Constraint Set ID
George Town	GeorgeTown 3 220/110kV XFMR	xfmr2	220/110	2005/06/16 18:00:00	STLTP	F-T-GT_TX
George Town	GeorgeTown 3 220/110kV XFMR	xfmr2	220/110	2005/06/16 18:00:00	STLTP	T-GT_TX3
Hadspen	Hadspen GeorgeTown 2 220kV LINE	line	220	2005/06/16 18:00:00	STLTP	T-HAGT
Eraring 500kV	Eraring500 Vineyard 25 330kV LINE	line	330	2005/06/17 04:00:00	STLTP	N-ERVY_25
Woolooga 275kV	Woolooga 2 132kV CAP	cap	132	2005/06/17 12:00:00	MTLTP	Q-H5WO_50MVAR_CAP
South Morang 500kV	S Morang 1 500kV BUS	bus	500	2005/06/17 13:00:00	PTP	
Liverpool 330kV	Liverpool 122B 330kV CB	cb	330	2005/06/17 14:00:00	STLTP	
Para 275kV	PARA 6120 132kV CB	cb	132	2005/06/17 15:30:00	PDLTP	
Sydney West 330kV	Sydney W 1 132kV CAP	cap	132	2005/06/17 16:00:00	STLTP	
Wagga 330kV	Wagga Yanco 994 132kV LINE	line	132	2005/06/17 16:00:00	STLTP	N-X5_TRIP
Mobilong 132kV	MOBILO 6080 132kV CB	cb	132	2005/06/17 16:00:00	PDLTP	
Playford A + B Ps 275kV	PLAY BL1 275kV CB	cb	275	2005/06/17 16:00:00	PDLTP	
Loy Yang Ps 500kV	Loy Yng PS 3 gen xfmr 1 bus 500kV	cb	500	2005/06/17 16:00:00	STLTP	
Moorabool 500kV	Moorabool 220kV REACT	react	220	2005/06/17 16:30:00	STLTP	
Rowville 220kV	Rowville tsts In 4 bus	cb	220	2005/06/17 17:00:00	STLTP	
South Morang 500kV	S Morang syts 1 In 1 bus	cb	500	2005/06/17 17:00:00	PTP	
Eraring 500kV	Eraring500 Vineyard 25 330kV LINE	line	330	2005/06/18 04:00:00	STLTP	N-ERVY_25
Sheffield	Sheffield S 220kV BUS	bus	220	2005/06/18 16:00:00	MTLTP	T-SH_TX
Sheffield	Sheffield 1 220/110kV XFMR	xfmr2	220/110	2005/06/18 16:00:00	MTLTP	T-SH_TX
Brooklyn 220kV	Brooklyn Altona220 220kV LINE	line	220	2005/06/18 16:00:00	SUBMIT	
Blackwall 275kV	Blackwall SwanBk B 8819 275kV LINE	line	275	2005/06/18 17:00:00	MTLTP	Q-BKSB_8819
Middle Ridge 275kV	Middle Rdg 3 275/110kV XFMR	xfmr2	275/110	2005/06/18 17:00:00	PTP	
Keilor 500kV	Keilor A2 500/220kV XFMR	xfmr2	500/220	2005/06/18 17:30:00	SUBMIT	
Sheffield	Sheffield A 110kV BUS	bus	110	2005/06/19 16:00:00	MTLTP	T-SH_TX
Sheffield	Sheffield 2 220/110kV XFMR	xfmr2	220/110	2005/06/19 16:00:00	MTLTP	T-SH_TX
Brooklyn 220kV	Brooklyn Altona220 220kV LINE	line	220	2005/06/19 16:00:00	SUBMIT	
Blackwall 275kV	Blackwall SwanBk B 8819 275kV LINE	line	275	2005/06/19 17:00:00	MTLTP	Q-BKSB_8819
Chalumbin 275kV	Chalumbin 5032 275kV CB	cb	275	2005/06/19 17:00:00	SUBMIT	Q-FNQ_120
Chalumbin 275kV	Chalumbin 857 275kV REACT	react	275	2005/06/19 17:00:00	SUBMIT	Q-FNQ_120
Middle Ridge 275kV	h14_mrdg.fdr 7122 cb	cb	110	2005/06/19 17:00:00	MTLTP	
Middle Ridge 275kV	Middle Rdg Warwick 736 110kV LINE	line	110	2005/06/19 17:00:00	MTLTP	
Ross 275kV	Ross 275kV Chalumbin 857 275kV LINE	line	275	2005/06/19 17:00:00	SUBMIT	Q-FNQ_120
Keilor 500kV	Keilor A2 500/220kV XFMR	xfmr2	500/220	2005/06/19 17:30:00	SUBMIT	
Torrens A Ps 275kV	Trrns_A_PS Magill 275kV LINE	line	275	2005/06/20 09:30:00	MTLTP	S-TIMG
Para 275kV	Para 275kV Magill 275kV LINE	line	275	2005/06/20 12:30:00	MTLTP	
Wagga 330kV	Wagga Yanco 994 132kV LINE	line	132	2005/06/20 16:00:00	STLTP	N-X5_TRIP
Vineyard 330kV	Vineyard Sydney W 29 330kV LINE	line	330	2005/06/20 16:30:00	STLTP	N-SWVY_29
Kareeya Ps 132kV	kar_h_ps.fdr 71352 cb	cb	132	2005/06/20 17:00:00	MTLTP	
Kareeya Ps 132kV	Kareeya PS Cardwell-T 7135/2 132kV LINE	line	132	2005/06/20 17:00:00	MTLTP	
Townsville 132kV	Townsville-Tully-Cardwll 7134 132kV LINE	tline	132	2005/06/20 17:00:00	MTLTP	Q-TVTVU7134

D-cypha Weekly Report



Trading Summary for week ending 13 June 2005

- Futures contracts traded this week = 310
 - Base = 275
 - Peak = 35
 - Caps = 0
- Options contracts traded this week = 0
- Volume of EFP trades this week = 0
- Volume of BTF trades this week = 0
- Total MWh traded this week = 636,570

- Futures & Options contracts traded to date = 32,498
- Open Interest (including Caps & Options) as at COB Monday 13/06/05 = 11,227 lots

Highlights

- Consistent Cap quotes in VIC and SA
- Interest in NSW Cal Strip Options
- Record Open Interest = 11,227 lots

Monthly Volume

- Average daily volume FY04-05 = 51

- June 2005 volume to date = 416 / average daily volume = 52
- May 2005 total volume = 2,835 lots / average daily volume = 129
- April 2005 total volume = 1,392 lots / average daily volume = 70

Activity

- Volume on the bid/offer as at 4.30pm 10/06/05 = 1106 lots.
- Brokers with active orders this week include: Credit Suisse, FIMAT, ICAP, JP Morgan and LQuay