

Australian Greenhouse Office and NEMMCO plan untendered monopoly wind forecast business for wind power gen

1 The increased proliferation of wind energy had resulted in a specific project to develop a means of forecasting wind generation to meet power system and market operations needs, the National Electricity Market Management Company (NEMMCO) said in its draft Statement of Corporate Intent (SCI) and annual budget for 2005/06.

Forecasting times: NEMMCO said the time frames for its forecasting responsibilities were:

- five minutes for dispatch;
- one-two days for predispatch;
- seven days for short-term projected assessment of system adequacy (ST PASA); and
- two years for medium term projected assessment of system adequacy (MT PASA).

Nonscheduled generation: In each case, NEMMCO's published forecast represented the generation that was expected to be required from scheduled generators, and must therefore take into account anticipated nonscheduled generation such as wind farm contributions.

Potential for significant error: Such contributions were highly variable and weather dependent, making them a potential source of significant error. As a result of the Australian Government's Energy *White Paper*, "the Australian Greenhouse Office (AGO) was now administering a separate program for development of a centralised wind generation forecasting facility to meet the needs of all Australian electricity market operators."

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opinion



Big hairy audacious wind forecast monopoly

Should NEMMCO monopolise wind forecasts? It contradicts core market and policy principles. Maybe NEMMCO thinks no one else is smart enough to do this Very Special Work. With the friendly persuasion of the Australian Greenhouse Office, NEMMCO now appears to propose to allocate itself a new matey monopoly; this one, over wind forecasts.

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The market needs wind forecasts. Rules say, wind gets first go at the grid. But how to forecast what's coming? Its doable, that's for sure; with forecasts available for 7-km grid areas, in almost real-time. Its possible to convert those forecasts to web-based 5 min and sub-five minute pre-dispatch NEM forecasts -

for any area. Any smart web wizard can do it; (without a NEMMCO committee to supervise).

Global weather models now enable local weather forecasts. You usually need a Cray computer or a grid of smaller computers to handle the processing power for the wholesale side. That's the main cost.

Look a little closer and there's competition between two Commonwealth government departments - CSIRO Atmospheric Physics and the Bureau of Meteorology (BOM), for forecast services to NEMMCO. Naturally the two, and NEMMCO - also like to control retail, too.

CSIRO and BOM share the same Cray computer, paid for by the tax payer, from

the Federal Budget. Look wider still; and each country and many university meteorology offices can provide global forecast models. So, it makes sense, for NEMMCO to tender.

CSIRO won the America's Cup for the Swiss team in Auckland harbour - from the New Zealanders - with its made-in-Australia CSIRO wind forecasts.

CSIRO had to go overseas to compete. CSIRO succeeded overseas. The Swiss and CSIRO; while, booed in Auckland, were later, garlanded with flowers in Geneva. That's competition at work; global competition.

CSIRO can compete overseas. So, why not make it compete here, too. BOM already appears to own the NEMMCO pre-dispatch forecast supply monopoly. CSIRO would like that business, too, and perhaps, do it better. But somehow, culturally, NEMMCO pre-dispatch forecasts remain a BOM monopoly.

So, CSIRO Atmospheric Physics - that clever mob - which lately arranged for 25pc more fuel for Snowy Hydro with cloud seeding - winkled its way into NEMMCO wind forecasts by the back door, via the Greenhouse Office.

And thus, two government departments; CSIRO and BOM, seem set to provide weather forecasts to NEMMCO on an untendered, monopoly basis.

But; Why-O-Why- should the two get supply monopolies, at all? Do they need protection? They get cash direct from the Budget.

CSIRO's big hairy audacious goals and its *Energy Flagship* may gain from a wind forecast monopoly. That's the new

CSIRO. It wants to make money, and still get cash from the Budget.

We say - let BOM and CSIRO compete with the world; we don't need parallel electricity forecast monopolies within NEMMCO from two government departments.

NEMMCO needs wind forecasts; perhaps, NEMMCO thinks individual wind farm-owners won't do it right. If so, let NEMMCO specify standards. Then, let it tender separately for wholesale weather data, and, windfarms, commission retail delivery.

Let CSIRO, BOM and others compete to provide wholesale data; and then let wind-farms commission competitive retail web developers to deliver the data to the NEMMCO standards

Otherwise; soon, CSIRO and NEMMCO - funded by the Greenhouse Office; will pop up as Australia's regulated wind forecast monopolist, with control over wholesale and retail wind forecasts.

They would get contracts in perpetuity, ruled by public servants. (It's similar to the BOM deal - BOM already supplies pre-dispatch forecasts, with no competition pressure).

The new audacious CSIRO wants scores on the energy board. But if CSIRO can create competitive wind forecasts in New Zealand and win yachting prizes for the Swiss, CSIRO does not need to own a NEMMCO wind forecast monopoly for all Australian wind farms.

It's too hairy and too audacious. All NEMMCO has to do is to specify the rules. Let the market do the rest.

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Centralised system: “The AGO had asked NEMMCO to advise how it would manage the delivery of a centralised system if asked to do so on the AGO’s behalf. NEMMCO would work with the AGO to determine if it were feasible and appropriate to develop and operate this facility.”

Reference: Draft Statement of Corporate Intent and annual budget for 2005/06 for National Electricity Market Management Company (NEMMCO). 12 April 2005. Address: Level 12, 15 William Street, Melbourne. Vic. 3000. Phone: (03) 9648 8777. Fax: (03) 9648 8778. <http://www.nemmco.com.au>

Fuel from the sky: NSW cloud seeding reverses Snowy water decline: snow levels up 25pc

A snow seeding project in the Kosciusko National Park has increased snow levels by up to 25 per cent, according to the NSW Government, reported *The Daily Telegraph* (8/4/2005 p. 6). Samples were analysed in the United States to determine if the increase was a result of the cloud seeding trial or a natural occurrence such as a frontal system. The trial, conducted by Snowy Hydro, was designed to create snowfall within a 1000 square kilometre area in the Kosciuszko National Park.

Silver iodide forms clouds: Cloud seeding involved dispersing small amounts of silver iodide into clouds passing over the Snowy Mountains to increase snowfall.

Top price for NEM week 10-16 April 2005: Angaston Power at \$47.84/MWh

SA			
Generator	Income (\$)	Output (MWh)	Av Price (/MWh)
North'n Power	\$1,416,894	44,137	\$32.10
Ladbroke	\$380,797	11,943	\$31.89
Osborne	\$814,313	25,012	\$32.56
Pelican Pt	\$1,509,307	45,322	\$33.30
Torrens Is. B	\$1,627,872	46,772	\$34.80
Vic->SA	\$1,194,512	36,744	\$32.51
MLink->SA	\$92,806	2,949	\$31.48
Torrens Is. A	\$289,921	7,470	\$38.81
Mintaro	-	-	-
Dry Creek	-	-	-
Playford	\$780,090	24,012	\$32.49
Snuggery	\$5,755	180	\$31.93
Pt Lincoln	-	-	-
Quarantine	\$20,430	586	\$34.87
Angaston Power	\$821	17	\$47.84
Hallett Power	\$1,387	36	-

VIC			
Generator	Income (\$)	Output (MWh)	Av Price (/MWh)
Loy Yang A	\$10,238,700	351,256	\$29.15
Loy Yang B	\$2,494,800	85,683	\$29.12
Hazelwood	\$5,607,911	193,480	\$28.98
Yallourn	\$6,367,862	219,958	\$28.95
Anglesea	-	-	-
Energy Brix	\$514,016	17,674	\$29.08
Newport	\$1,107,501	31,104	\$35.61
MLink->Vic	\$10,360	372	\$27.88
SA->Vic	\$1,973	86	\$22.98
Snowy->Vic	\$2,218,598	67,387	\$32.92
Jeeralang	\$23,787	674	\$35.31
West Kiewa	\$102,000	2,743	\$37.19
Bairnsdale	\$11,317	398	\$28.44
Dartmouth	\$21,446	732	\$29.30
Eildon	\$199,073	5,673	\$35.09
Hume Vic	\$53,991	1,802	\$29.96
McKay Power	\$230,182	5,997	\$38.38
Clover	-	-	-
Valley Power	\$19,176	522	\$36.71
Rubicon	-	-	-
Somerton Power	-	-	-
Sunshine Energy	-	-	-
Longford	-	-	-
Tramway Road	-	-	-
Toora Wind Farm	-	-	-

NSW			
Generator	Income (\$)	Output (MWh)	Av Price (/MWh)
Bayswater	\$9,125,218	325,327	\$28.05
Liddell	\$5,881,134	206,904	\$28.42
Mt Piper	\$3,834,021	134,292	\$28.55
Wallerawang	\$2,852,650	100,636	\$28.35
Vales Point	\$3,895,810	136,246	\$28.59
Munmorah	\$902,693	30,933	\$29.18
Eraring	\$6,464,627	221,386	\$29.20
Redbank	-	-	-
Smithfield	\$588,978	20,432	\$28.83
Snowy->NSW	\$2,540,030	79,533	\$31.94
Shoalhaven	\$153,152	6,198	\$24.71
Hunter Valley	\$1,021	31	\$33.26
Hume Hydro	\$52,511	1,894	\$27.73
Blowering	\$15,587	566	\$27.52
Northern Gas	-	-	-
Burrinjuck	-	-	-
Brown Mountain	-	-	-
Keepit	-	-	-
Broken Hill	-	-	-
Ergon Energy	-	-	-
Pindari Hydro	-	-	-
DL Q->N	\$268,445	9,815	\$27.35
QLD->NSW	\$3,372,490	122,845	\$27.45
West Nowra	-	-	-

QLD			
Generator	Income (\$)	Output (MWh)	Av Price (/MWh)
Tarong	\$6,641,562	289,022	\$22.98
Millmerran	\$2,883,294	125,719	\$22.93
Swanbank	\$994,762	39,530	\$25.16
Stanwell	\$4,303,929	183,982	\$23.39
Callide B	\$2,606,486	110,779	\$23.53
Callide Power	\$3,251,681	135,778	\$23.95
Gladstone	\$3,698,972	151,347	\$24.44
Collinsville	\$289,643	12,022	\$24.09
Swanbank C, D, E	\$746,428	30,394	\$24.56
Barcardine	\$8,416	327	\$25.74
Callide A	-	-	-
Kareeya	\$79,859	3,087	\$25.87
Barron Gorge	\$63,000	2,316	\$27.20
Mt Stuart	-	-	-
Wivenhoe	\$169,813	9,278	\$18.30
Townsville	\$684,754	29,920	\$22.89
Mackay	\$87	3	\$26.06
Roma	-	-	-
Oakey	-	-	-
DL N->Q	-	-	-
NSW->QLD	-	-	-
Rocky Point	-	-	-
Tableland	-	-	-

Second seasons starts June: Releasing the results, Primary Industries Minister, Ian Macdonald, said the second season of cloud seeding would start around June.

Babcock & Brown Redbank Power Station near bust: Standard & Poors downgrades

Ratings agency Standard & Poors said Redbank Power Station required an immediate equity injection to part fund its capital expenditure to resolve its technical issues, according to Anthony Hughes in *The Australian Financial Review* (11/4/2005, p.18). Babcock & Brown's Prime portfolio is a 50 per cent interest in the Redbank Power Station, a 145MW waste coal tailings-fired power station in the Hunter Valley that was completed in 2001.

Coal tailings supply problems: Hughes said: "The problems appears to relate to the supply of coal tailings, which must make up 50 per cent of total consumption (the tailings would otherwise be a waste product) under the development consent.

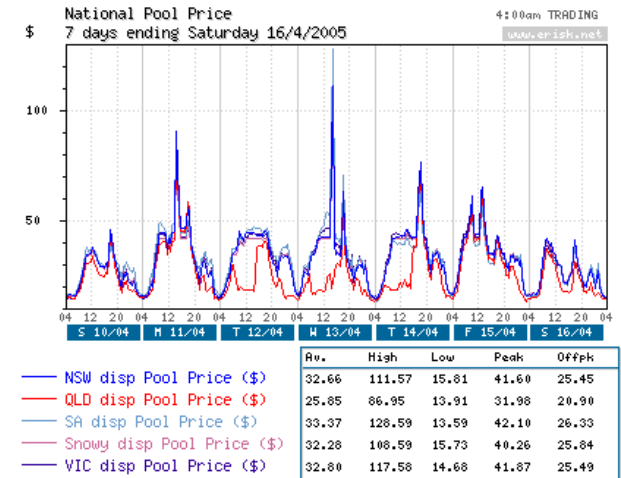
Excessive high-ash coal used: "The excessive use of high-ash coal as the back-up fuel has exacerbated the wear and tear on a number of plant components, thereby further increasing costs and more importantly, identified design problems with the boiler refractory will dictate a major capital expenditure in the next three month".

the week in detail

• **NSW:** Average price \$27.93/MWh, up 42 per cent on the \$19.65/MWh of the previous week, down 22 per cent on the spike-affected \$35.95/MWh of the comparable week last year; maximum price \$101.18/MWh for the 30-minute trading interval ended 1830EST on Sunday. Average demand 8237MW, up 4.5 per cent on the previous week, up 6.2 per cent on a year ago; maximum demand 9871MW in the 1900EST interval on Monday, up 1.6 per cent on the 9717MW of the previous week. Snowy-NSW exports averaged 463MW, up 110.0 per cent on average exports of 221MW the previous week;

• **Victoria:** Average price \$29.23/MWh, up 42 per cent on the \$20.62/MWh of the previous week, down 18 per cent on the spike-affected \$35.79/MWh of the comparable week last year; maximum price \$114.99/MWh for the 30-minute trading interval ended 0830EST on Tuesday. Average demand 5543MW, up 2.6 per cent on the previous week, up 6.8 per cent on a year ago; maximum demand 6603MW for the 1430EST interval on Friday, down 4.7 per cent on the 6926MW of the previous week. Victorian imports from Snowy averaged 317MW, up 51.0 per cent on average imports of 210MW the previous week;

• **South Australia:** Average price \$32.14/MWh, down 17 per cent on the spike-affected \$38.71/MWh the previous week, down 14 per cent on the spike-affected average of \$37.43/MWh of the comparable week last year; maximum price \$123.87/MWh for the 30-minute trading interval ended 0830EST on Tuesday. Average demand 1453MW, down 3.8 per cent on the previous week, up 6.2 per cent on a year ago; maximum demand 1928MW for the 1530EST interval on Friday, down 16.1 per cent on the 2299MW of the



previous week. Vic-SA flow averaged 217MW, down 3.1 per cent on the 224MW the previous week; Murraylink net flow averaged 14.16MW west, down from 101MW west the previous week; and

• **Queensland:** Average price \$23.20/MWh, up 43 per cent on the \$16.62/MWh the previous week, down 27 per cent on the spike-affected \$31.98/MWh of the comparable week last year; maximum price \$95.06/MWh for the trading interval ended 1830EST on Sunday. Average demand 5782MW, up 4.5 per cent on the previous week, up 8.2 per cent on a year ago; maximum demand 6928MW for the 1830EST interval on Thursday, up 4.1 per cent on the 6656MW the previous week. QNI flow averaged 729MW south, down 3.7 per cent on the 757MW south the previous week. Directlink averaged 57.78MW south, up on the 34.15MW south the previous week.

Technical problems: S&P cited "various technical problems that continue to affect the project".

Redbank \$170m enterprise value: Babcock & Brown (B&B)'s Prime Infrastructure portfolio stake in Redbank Power Station was listed as having an enterprise value of \$170 million. The other shareholders in the Redbank asset included B&B directly (30 per cent) and its own clients.

Electricity policy should encourage highly efficient plants, retire old plants, use CO2 dumps, says Pew Centre

Greater attention was needed to create better climate change policy, according to a speech by Eileen Claussen, president of the Pew Centre on Global Climate Change, delivered at the COAL21 conference in Sydney (5/4/2005).

Objectives: Claussen said: "In the electricity sector, we need policies and incentives that will result in: companies building the best, most efficient plants they can; retiring old, inefficient plants as expeditiously as possible; and capturing and storing the carbon stream.

Brits lead on policy: "We also need national energy policies like the British example - policies that balance our desire for security, growth and affordability with the need to build a diverse portfolio of climate-friendly technologies.

Adaptation the key: "Last but not least, we need to pay attention to adaptation. Because, even with an ambitious strategy to reduce emissions, we're already committed to future changes in the global climate that will pose serious challenges to our natural ecosystems and resources, our economies, and human health.

Climate change is here: "The recent report from the Arctic Climate Impact Assessment made it crystal clear: climate change is happening now. And the nations of the world need to be ready to adapt," she added.

Reference: Address by Eileen Claussen at the COAL21 Annual Conference held in Sydney. Contact: COAL21 Secretariat, Level 3 MTAA House, 39 Brisbane Avenue Barton Australian Capital Territory 2600. Postal Address: PO BOX 9115 Deakin ACT 2600. Phone: (02) 6273 6044. Facsimile: (02) 6273 6060. Email: info@coal21.com.au <http://www.coal21.com.au>

Potential for 1000MW extra of wind generation, mainly in SA, by 2006, says NEMMCO

Up to 1000 megawatts of wind generation, potentially by 2006, had been foreshadowed, the National Electricity Market Management Company (NEMMCO) said in its draft Statement of Corporate Intent (SCI) and annual budget for 2005/06.

Wind impact minimal so far: NEMMCO said most of the proposed wind generation was in

South Australia. The impact of the small number of wind farms in the National Electricity Market (NEM) had been minimal up to date.

New challenges: However, the proposed developments would pose new challenges for power system and market operations, and new obligations for project developers were likely to result.

Technical advice provided: The jurisdictions had asked NEMMCO to convene an industry advisory group to identify the policy level issues that needed to be addressed. NEMMCO had provided technical advice to the jurisdictional Wind Energy Policy Working Group, and it would now await policy guidance that was likely to result in rule changes.

Detailed modelling: In the meantime, NEMMCO planned to carry out detailed technical modelling to determine any changed operating strategies that needed to be introduced as the amount of wind generation increased.

Reference: Draft Statement of Corporate Intent and annual budget for 2005/06 for National Electricity Market Management Company (NEMMCO). 12 April 2005. Address: Level 12, 15 William Street, Melbourne. Vic. 3000. Phone: (03) 9648 8777. Fax: (03) 9648 8778. <http://www.nemmco.com.au>

CS Energy's \$1.1 billion Kogan Creek power station to use 2.8mt of coal per year: operation in September 2007

The \$1.1 billion Kogan Creek power station, operated by Queensland Government-owned corporation CS Energy, will consume an estimated 2.8 mega tonnes (Mt) of coal per year, with the electricity generated to be sold both in Queensland and interstate, according to the *Queensland Government Mining Journal* (March 2005).

2004 commitment: In May 2004, the Queensland Government, through its 100 per cent owned corporation, CS Energy Ltd, committed to proceed to construction of the power project, located southeast of Chinchilla in southern Queensland.

Mine-mouth station: The project comprised an integrated mine-mouth power station with a single 750 megawatt (MW) coal-fired unit that will be supplied by coal from a new open-cut mine to be established on the adjacent Kogan Creek coal deposits, that were also controlled by CS Energy Ltd.

Siemens/Hitachi consortium: The power station will be constructed by a consortium of Siemens/Hitachi over a 39-month period, under a fixed-price contract with CS Energy, for commercial operation in September 2007. Coal was expected to be required for station commissioning in late 2006 or early 2007.

Reference: Queensland Government Mining Journal, March 2005. Bureau of Mining and Petroleum report. NR&M Information Centre. Address: Level 2 Mineral House, 41 George Street, Brisbane, Queensland 4000. Phone: (07) 3237 1434.

NEMMCO advises owner of Snuggery gas-fired plant that compo will be paid for five SA directions on 24, 29, 30 March

The National Electricity Market Management Company (NEMMCO) has advised participants (Synergen Power Pty Ltd, operator of Snuggery power station) that the five directions it issued on 24, 29 and 30 March attract compensation under the National Electricity Code.

Directions lasted a total of nearly 20 hours: The five directions on the three days lasted for a total of 19 hours 48 minutes. Compensation will have to include the generation time as well as start-up costs.

Same advice for other seven directions: NEMMCO gave the same advice for the other seven directions issued earlier in March relating to network problems in South Australia's southeast 132kV network.

Compensation provided for by code: In all 12 cases involving the southeast network, NEMMCO said compensation would be determined under the Code provisions. These require NEMMCO to appoint an independent expert to determine the fair price for the directions.

Independent expert to set fair payment: NEMMCO has said it had appointed the independent expert. When the independent expert's fair payment price was published, NEMMCO would use this fair payment price to calculate the amount of compensation for each direction.

More than 30 hours plant time: The 12 directions to Synergen Power in March involved starting up the plant 12 times and running at least one unit for a total exceeding 30 hours.

Reference: Report by National Electricity Market Management Company (NEMMCO) on "Directions in South Australia Region 24,29 and 30 March 2005". 6 April 2005. Address: Level 12, 15 William Street, Melbourne. Vic. 3000

SA directions solution: ETSA Utilities seeks public input on adequacy of Mt Gambier to Penola 33kV supply network

South Australia's major electricity supplier, ETSA Utilities, was soliciting proposals from customers and interested parties on the future adequacy of the Mt Gambier to Penola 33kV supply network, according to an ETSA Utilities statement (5/4/2005).

Ownership: ETSA Utilities was the partnership of Cheung Kong Infrastructure Holdings Ltd (CKI) and Hong Kong Electric

International Ltd (HEI). It was a privately owned company that had a 200 year lease for the development, design, construction, operation, and maintenance of the South Australian electricity distribution network.

Distribution responsibilities: ETSA Utilities was South Australia's principal Distribution Network Service Provider (DNSP), and was responsible for the distribution of electricity to all distribution grid connected customers within the state under a regulatory framework. ETSA Utilities designed, installed, upgraded, repaired and maintained the 'poles and wires' which made up the distribution network carrying the electrical energy to South Australian homes and businesses.

Reference: ETSA Utilities Request for Proposals RFP 003/05, Projected Distribution Network Constraint: Electricity Supply to the Mount Gambier to Penola 33kV Supply Network. Internet: http://www.etsautilities.com.au/news_6.asp

SA directions solution: ETSA tenders for network support to the Mount Gambier to Penola 33kV supply network

ETSA Utilities said it would publicly announce the outcomes of their evaluation process. This announcement would include the total annualised cost to ETSA Utilities of the recommended option(s).

Public information: All details of proposals including cost information would be treated as public information unless clearly noted otherwise in writing by the proponent.

Indemnifying against liabilities: As part of any contractual arrangement or service agreement ETSA Utilities entered into for the provision of network support services, ETSA Utilities would require the contracting party to indemnify ETSA Utilities against any and all liabilities, including claims, losses, actions or proceedings it or a third party may suffer should the contracting party fail to deliver the support services in accordance with ETSA Utilities requirements and any applicable laws - including those governing the timeliness and the standard of services.

Inclusive of interim period: This would also apply for any claims or losses that would apply during an interim period; for example, when customers have lost supply when a generator is running up prior to supplying load, or when switching is being undertaken on the distribution network.

Reference: ETSA Utilities Request for Proposals RFP 003/05, Projected Distribution Network Constraint: Electricity Supply to the Mount Gambier to Penola 33kV Supply Network. Website: http://www.etsautilities.com.au/news_6.asp

Actual opex of TNSPs down 1.9pc in 2003/04 on forecasts, with actual capex lagging 26pc below: ACCC report

Actual operating expenditure (opex) by the major transmission network services providers (TNSPs) in the National Electricity Market (NEM) in 2003/04 were 1.9 per cent below forecasts, while actual capital expenditure (capex) was 26.0 per cent under forecasts, the Australian Competition and Consumer Commission (ACCC) said.

Overall view of variances: In its second regulatory report on "*Transmission network service providers electricity regulatory report for 2003/04*", the ACCC said summary figures were presented to provide an overall view of the average level of variances from revenue cap decisions.

Regional factors can affect results: However, individual TNSP variances might differ markedly from the average due to the influence of regional factors, and should therefore be assessed in that context.

Figures should be looked at over 5 years: These individual variations were not a regulatory issue provided they did not constitute systemic under- or over-spending, and should be examined over the full five-year period of the revenue cap.

Summary of 2003/04 performance: The summary of the financial performance of the TNSPs for 2003/04 was shown in the following table:

Category	Actual (\$m)	Forecast (\$m)	Variance (\$m)	Variance (per cent)
Maximum allowable revenue (MAR)	1305.5	1292.2	13.3	1
Opex	328.9	335.5	-6.6	-1.9
Capex	571.8	773	-201.2	-26

Source: 2003/04 Regulatory Accounts and ACCC revenue cap decisions.

Reference: Second regulatory report by the Australian Competition and Consumer Commission (ACCC) on "Transmission network service providers electricity regulatory report for 2003/04". 8 April 2005. Address: 470 Northbourne Avenue, Dickson, ACT 2602; PO Box 1199, Dickson, ACT 2602. Phone: (02) 6243 1111. Fax: (02) 6243 1123. <http://www.accc.gov.au> Phone: (03) 9648 8777. Fax: (03) 9648 8778. <http://www.nemmco.com.au>

SPI PowerNet's regulated revenue from service and network fees \$271.5 million

Victoria's 6500 kilometres of transmission lines was built around a 500kV backbone, the Australian Competition and Consumer Commission (ACCC) said in an electricity regulatory report.

Details of TNSPs: In a section providing details of transmission network service providers in "Transmission network service providers electricity regulatory report for 2003/04", the ACCC said the network ran from the major generating source in the Latrobe Valley, through Melbourne and across the southern part of the state to Heywood near the South Australian border.

44 switching and transformation facilities:

The privately owned SPI PowerNet owned, operated and maintained more than 6500km of lines as well as 44 switching and transformation facilities throughout Victoria.

RAB valued at \$1.8 billion: SPI PowerNet's average regulatory asset base (RAB) was valued at \$1.8 billion and its regulated revenue from service and network fees was \$271.5 million.

Increase in summer demand: Summer demand peaked at more than 8500MW, which was an increase on the previous year's figure of 8203MW in accordance with the adoption of a new measurement approach to recording total transmission - energy "sent out" (energy consumed minus the energy consumed by the generators themselves). SPI PowerNet reported 45,006 gigawatt hours (GWh). The figure from the previous period of 48,124GWh was derived differently. Using the same method of calculation the equivalent figure for 2003/04 was 49,111GWh.

Reference: Second regulatory report by the Australian Competition and Consumer Commission (ACCC) on "Transmission network service providers electricity regulatory report for 2003/04". 8 April 2005. Address: 470 Northbourne Avenue, Dickson, ACT. 2602. PO Box 1199, Dickson, ACT. 2602. Phone: (02) 6243 1111. Fax: (02) 6243 1123. <http://www.accc.gov.au>

Governors of four western US states agree to \$20bn plan for 12,000MW of new gen from coal-fired ICGG plants, wind

Governors of California, Nevada, Utah and Wyoming had agreed to a \$20 billion plan for a 2100 kilometre Frontier Line to connect new generating plants in Wyoming with the fast-growing electricity markets in Utah, Nevada and California, reported *Reuters*.

What the plan involves: The plan, involving the building of new power stations, transmission lines and plants was spurring debate about how to build one of the largest clean energy projects in the United States.

Intense competition likely: The plan was enticing US and European electricity developers to consider investment. *Reuters* quoted companies such as General Electric Co.'s GE Energy unit, and FPL Group Inc.'s FPL Energy as saying the project was likely to trigger intense competition to build and operate "clean" coal-fired power plants, wind power turbines, transmission cables and other power equipment.

Still on drawing board: The project was still on the drawing board and details were scarce, but the aim was to deliver 12,000 new megawatts (MW) of electricity to the western grid, with half generated by a new emissions-

reducing technology for coal-fired plants called integrated gasification combined cycle (IGCC), and half by wind turbines.

22.6 per cent of California's capacity: The 12,000MW extra generation proposed represents 22.6 per cent of California's installed generating capacity of 53,800MW.

2011 target date: Officials said they were forming a committee to develop feasibility and financing plans. Third-party developers would build the system, which could be operating by 2011, with California its biggest customer.

Record demand in California: Demand for electricity in California set record highs seven times last year, peaking at nearly 46,000MW on 8 September. The state was forced to order blackouts during its energy emergency in 2000/01.

Reference: Digest of latest news reported on website of Climate Change Secretariat of United Nations Framework on Climate Change Control (UNFCCC). 11 April. Address: PO Box 260 124, D-53153 Bonn, Germany. Phone: : (49-228) 815-1005, Fax: (49-228) 815-1999. Email: press@unfccc.int http://www.unfccc.int

NEMMCO to lift total 2005/06 fees by \$800,000 (1.3pc) to \$62.58m, but entry of Tas means cost per MWh drops

The National Electricity Market Management Company (NEMMCO) will increase fees to recover its costs by

\$800,000 (1.3 per cent) to \$62.58 million in 2005/06, compared to \$61.78 million in 2004/05.

Extra costs incorporated: In the executive summary of its draft Statement of Corporate Intent (SCI) and annual budget for 2005/06, NEMMCO said the 2005/06 budget incorporated costs associated with:

- the retail harmonisation project;
- development of a new fee structure;
- costs associated with Tasmania entering the National Electricity Market (NEM); and
- a general contingency, which were additional costs above those allowed for in 2004/2005.

Entry of Tasmanian participants: NEMMCO said that taking into account the entry of Tasmanian participants, the fee revenue for 2005/2006 effectively translated to participants paying 34 cents per megawatt hour (MWh) for the coming period compared to 35 cents/MWh last year.

\$4 million in excess revenue to be returned: Further, unlike in previous years, there would be no over/under recovery of fees to be applied to the required fee revenue. Rather, about \$4 million of excess fee revenue would be returned to participants and would be facilitated through the settlement statement process before 30 June 2005.

FRC services fees to go down: NEMMCO said fees for full retail competition (FRC)

services for the next financial year, based on operational expenditure of \$14.09 million and establishment costs of \$2.62 million, would be \$16.71 million, or 9.1 cents/MWh, compared to a budgeted \$16.59 million in 2004/2005.

Reference: Draft Statement of Corporate Intent and annual budget for 2005/06 for National Electricity Market Management Company (NEMMCO). 12 April 2005. Address: Level 12, 15 William Street, Melbourne. Vic. 3000. Phone: (03) 9648 8777. Fax: (03) 9648 8778. http://www.nemmco.com.au

Construction begins on NEMMCO's new high-security Sydney control centre, with May 2006 completion target

Construction of a new high-security control centre in Sydney began in April, the National Electricity Market Management Company (NEMMCO) said in its draft Statement of Corporate Intent (SCI) and annual budget for 2005/06.

Relocation to start in June 2006: In the executive summary of the SCI, NEMMCO said the facility was expected to be completed by May 2006. Relocation was expected to occur progressively from June 2006.

Design completed in March: The detailed design of the new centre was completed in March 2005.

Bi-monthly reports to board: NEMMCO said it established a steering committee to

coordinate and monitor the development of the new centre. This committee reported to the NEMMCO board bi-monthly.

Staff input: A staff consultative committee was also established to facilitate staff input into the project.

Reference: Draft Statement of Corporate Intent and annual budget for 2005/06 for National Electricity Market Management Company (NEMMCO). 12 April 2005. Address: Level 12, 15 William Street, Melbourne. Vic. 3000. Phone: (03) 9648 8777. Fax: (03) 9648 8778. <http://www.nemmco.com.au>

ElectraNet makes net profit of \$4.6m on SA transmission network in 2003/04 compared to \$16.4m loss previous year

The privately owned ElectraNet, the South Australian transmission network service provider (TNSP), achieved a 9.7 per cent return on assets in 2003/04, up from 8.6 per cent in 2003/03, the Australian Competition and Consumer Commission (ACCC) said in an electricity regulatory report.

Financial indicators for each TNSP: In the report on *Transmission network service providers electricity regulatory report for 2003/04*, the ACCC provided financial indicators for each of the TNSPs.

\$82 million earnings: These indicators showed that ElectraNet's earnings before interest and taxes (EBIT) for prescribed

services (PS) was \$82.0 million in 2003/04, up from \$70.7 million in 2002/03. Net profit after taxes (NPAT) was \$4.6 million in 2003/04 compared to a loss of \$16.4 million in 2003/03.

No dividends reported: The ACCC said ElectraNet did not report any dividends. The return on equity this year was positive, reflecting the positive bottom line profit.

Opex ratios decrease: ElectraNet's operating expenditure (opex) ratios decreased over the last financial year. Opex was down from \$7550/km to \$6660/km, and opex/RAB (regulatory asset base) was down from 5.1 per cent to 4.4 per cent.

Large variance in capex on forecasts: The ACCC said ElectraNet's performance against its revenue cap shows a large variance from forecast capex, with capital roll-ins about 50 per cent lower than expected for the year.

Comparison of performances: The following table showed ElectraNet's financial performance for 2003/04 and 2002/03:

Indicator	2003/04		2002/03	
	Actual (\$m)	Forecast (\$m)	Actual (\$m)	Forecast (\$m)
Maximum allowance revenue (MAR)	\$156.50	\$154.00	\$150.20	\$148.00
Capital expenditure (capex)	\$33.70	\$68.20	\$34.40	\$35.50
Operating expenditure	\$37.2*	\$47.10	\$42.2**	\$42.50

*Includes grid support of \$3.7 million. ** Includes grid support of \$4.4 million for 2002/03.

Reference: Second regulatory report by the Australian Competition and Consumer Commission (ACCC) on "Transmission network service providers electricity regulatory report for 2003/04". 8 April 2005. Address: 470 Northbourne Avenue, Dickson. ACT. 2602. PO Box 1199, Dickson, ACT. 2602. Phone: (02) 6243 1111. Fax: (02) 6243 1123. <http://www.accc.gov.au>

ElectraNet, Powerlink, SPI PowerNet, Transend, TransGrid and VENCORP results

The ACCC's second electricity regulatory report, which released on 8 April 2005, covers the financial and operational performance of transmission network service providers in the National Electricity Market. The report details the performance of ElectraNet, Powerlink, SPI PowerNet, Transend, TransGrid and VENCORP for the 2003-04 reporting year.

ACCC figures show: The revenue of transmission network service providers (TNSPs) in the National Electricity Market (NEM) for 2003/04 for prescribed services totalled \$1305.5 million with \$647.8m EBIT.

VENCORP non-profit business: The Victorian Energy Networks Corporation (VENCORP) was not included in this aggregate figure as it was a non-profit business that operated on a full-cost recovery figure.

2003/04 financial performance: A table in the report showed the aggregate TNSP financial performance for 2003/04 as being:

Category	2003/04 (\$m)
Transmission revue	\$1305.5
Operating expenditure (opex)	\$325.4
Depreciation	\$337.9
Earnings before interest and tax (EBIT)	\$647.8
Interest paid	\$339.0m
Tax	\$93.2m
Net profit after taxes	\$264.1
Dividends	\$166.1

Reference: Second regulatory report by the Australian Competition and Consumer Commission (ACCC) on "Transmission network service providers electricity regulatory report for 2003/04". 8 April 2005. Address: PO Box 1199, Dickson, ACT. 2602. Phone: (02) 6243 1111. Fax: (02) 6243 1123

Qld's mighty Powerlink: a govt-owned monopoly corp with 11,600km of transmission lines: \$383.7m cashflow pa

The transmission network of Powerlink, the Queensland transmission network service provider (TNSP), stretched more than 1700 kilometres from the far north of the state to the major load centre in the southeast corner, the Australian Competition and Consumer Commission (ACCC) said in an electricity regulatory report.

96 substations: In a section providing details of transmission network service providers in the report on *Transmission network service providers electricity regulatory report for 2003/04*, the ACCC said Powerlink was a government-owned corporation that operated close to 11,600km of transmission lines and 96 substations throughout Queensland.

Generators long distances from load: Major generators were located at considerable distances from the load centres when compared to other regions in the NEM. Distances, therefore, played a large part in determining costs of transmission in Queensland.

Network charges of \$383.7m this year:

Powerlink had an average regulatory asset base (RAB) for this year of \$2.6 billion and regulated network charges of \$383.7 million.

Rapid load growth: The network continued to experience rapid load growth demand and in 2003/04 had a maximum demand for electricity of 7934MW (which was 12 per cent higher than the maximum demand in the previous period).

6 per cent rise in power transmitted: Total electricity transmitted for the year was 45,625 gigawatt hours (GWh), an increase of 6 per cent.

Reference: Second regulatory report by the Australian Competition and Consumer Commission (ACCC) on "Transmission network service providers electricity regulatory report for 2003/04". 8 April 2005. Address: 470 Northbourne Avenue, Dickson, ACT. 2602. PO Box 1199, Dickson, ACT. 2602. Phone: (02) 6243 1111. Fax: (02) 6243 1123. <http://www.accc.gov.au>

ACCC slams EnergyAustralia's "unsatisfactory stance" on transmission revenue and expenditure details secrecy

The Australian Competition and Consumer Commission (ACCC) has criticised the unsatisfactory stance of second-string NSW transmission network service provider (TNSP), EnergyAustralia, for refusing to consent to allow its revenue and

expenditure details to be disclosed in its TNSP regulatory report for 2003/04.

Cause for concern: The ACCC said EnergyAustralia's stance was a cause for concern. Accordingly it would pursue a rules change with the Australian Energy Market Commission (AEMC).

Details for other TNSPs: The ACCC report, covering the financial and operational performance of TNSPs in the National Electricity Market (NEM), details the performance of ElectraNet, Powerlink, SPI PowerNet, Transend, TransGrid and VENCORP for the 2003/04 reporting year.

Details not included in report: The ACCC regulated the transmission revenues of EnergyAustralia in 2003/04. However, as EnergyAustralia did not provide consent to disclose its details, they were not included in the report.

Benefits of public information: The ACCC said its view was that the significant benefits in publishing this information included:

- facilitating informed public input into future decisions by the ACCC;
- allowing public scrutiny of performance against revenue caps; and
- greater transparency of the regulatory process.

Confidentiality considered: In publishing the report, the ACCC took into account confidentiality considerations and comments from the transmission networks.

Transparency boost: "The networks provide information to the ACCC annually which the ACCC believes should be published for the public benefit as it will increase transparency about their performance", said ACCC Commissioner Ed Willett.

Performance trends identified: "The continuation of this reporting through this and future reports will aid this transparency by having a set of data available from which performance trends will be identifiable.

Revenue and expenditure: "This report focuses on the revenue and expenditure performance of the networks. For example, information is presented on their profitability and investment outcomes, comparing actual capital and operating and maintenance expenditure with the forecasts contained in the original revenue cap decisions.

Forecast and actual figure discrepancy: "Ongoing reporting will assist the ACCC in identifying any areas of divergence between forecast and actual figures and determining the reasons for these differences", he added.

Reference: Second regulatory report by the Australian Competition and Consumer Commission (ACCC) on "Transmission network service providers electricity regulatory report for 2003/04". 8 April 2005. Address: 470 Northbourne Avenue, Dickson, ACT. 2602. PO Box 1199, Dickson, ACT. 2602. Phone: (02) 6243 1111. Fax: (02) 6243 1123. <http://www.accc.gov.au>

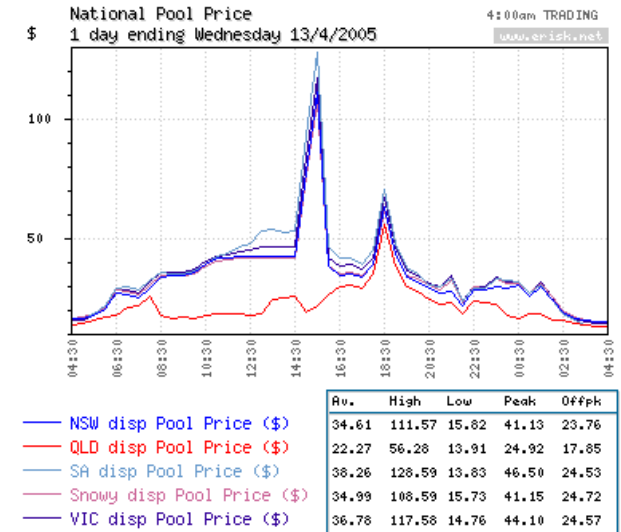
Orchestrated campaign to disguise misleading quotes on the returns of energy business assets: user lobby

Regulators were not the "villains", but the electricity industry had portrayed regulators as "villains" for awarding low returns and limiting companies' capital investment, which was part of an orchestrated campaign to disguise consistently misleading quotes on the returns of these businesses' assets. This argument was made in an article by Bob Lim, adviser to the Energy Markets Reform Forum, and David Headberry, adviser to the Electricity Consumers Coalition, in *The Australian Financial Review* (12/4/2005, p. 63).

Misleading returns: According to Lim and Headberry: "The regulators have been identified as the villains for awarding low returns and limiting the amount of capital expenditure for investment in their regulatory decisions. We believed the facts needed to be presented rather than continue with what were becoming orchestrated claims of regulatory interference in essential services. The returns on assets consistently quoted by regulated businesses were misleading.

TransGrid decision: "For example, in the recent Australian Competition and Consumer Commission (ACCC) draft decision for the regulated return for NSW electricity transmission company TransGrid, the nominal

weighted average cost of capital (WACC) on the regulated assets was calculated by the ACCC at 8.8 per cent, but the headline return most often quoted was the pre-tax real WACC of 6.75 per cent. As many people didn't understand the derivation of either of these figures, the ACCC has calculated that they are equivalent to an earnings before interest and tax over assets ratio of some 11 per cent".



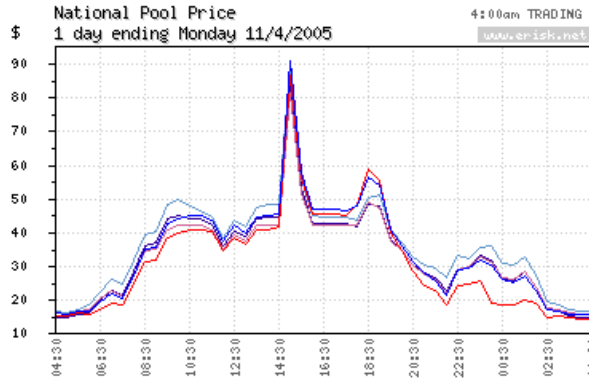
Wednesday, 13 April: mid-afternoon spikes between \$108.59-128.59/MWh in NSW, Victoria, SA and Snowy

Spikes of between \$108.59-\$128.59/MWh occurred in the 30-minute trading interval ended 1530EST in NSW, Victoria, SA and Snowy on 13 April.

Temperatures up in Adelaide, Melbourne:

South Australia had the highest spike of \$128.59/MWh followed by Victoria with \$117.58/MWh. The top temperature in Adelaide was 31 degrees (up 1C) and in Melbourne was 29 degrees (up 6C).

Reference: National Price details for one day for NSW, Victoria, South Australia and Snowy for Wednesday, 13 April in Price/Demand section of Erisk Net - Realtime NEM Data. <http://www.erisk.net>



— NSW disp Pool Price (\$)
 — QLD disp Pool Price (\$)
 — SA disp Pool Price (\$)
 — Snowy disp Pool Price (\$)
 — VIC disp Pool Price (\$)

Rv.	High	Low	Peak	04:30
NSW	91.09	15.81	42.53	22.03
QLD	86.95	14.42	39.99	18.42
SA	90.25	16.53	43.77	25.00
Snowy	81.59	15.87	39.49	22.54
VIC	85.03	14.97	40.72	22.25

Monday, 11 April: prices up 14-26pc to \$31.90-\$36.73/MWh range on easing demand: eighth SA direction for month

NEMMCO issued a direction to a South Australian Code participant lasting seven hours 27 minutes from 1828EST

Constraint Library Changes Report for the week 4 - 10 April 2005

<p>6/04/2005: Modified Constraint Set(s) and Constraint Equation(s) Constraint Set: N-AR_TX Constraint Equation: N>Q_AR_TX Reason: Required for planned outage</p>
<p>6/04/2005: New Constraint Set(s) and Constraint Equation(s) Constraint Set: N-X_CB5042_CB5242 Constraint Equation: N_X_CB5042_CB5242 Reason: Required for planned outage</p>
<p>7/04/2005: New Constraint Set(s) and Constraint Equation(s) Constraint Set: Q-GC_H51CB8052 Constraint Equation: Q^GC_H51CB8052 Reason: Planned H51SWE 275kV CB outage by Powerlink</p>
<p>8/04/2005: Modified Constraint Set(s) Constraint Set: N-LOTG, N-YS_TX, N-YS_TX1, N-YS_TX2 Reason: Fix minor error</p>
<p>8/04/2005: New Constraint Set(s) and Constraint Equation(s) Constraint Set: S-PA_EAST_BUS Constraint Equation: S>V_PA_EAST_BUS, V>S_PA_EAST_BUS Reason: Required for planned outage</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.nemco.com.au/powersystemops/3709.htm) for more information on Generic Constraints. Refer also to the Constraint Naming Guidelines: http://www.nemco.com.au/dispatchandpricing/200-0062.htm and the Network and FCAS constraint formulation policy: http://www.nemco.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 15 - 20 April 2005

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Station Name	Equipment Name	Equipment Type	KV	Start Time	Status	Constraint Set ID
Braemar 330kV/275kV	r2_brae. Cap 5822 cb	cb	275	2005/04/15 16:00:00	PTP	
Lower Tumut	051 Lower Tumut-Wagga CB 0512A	cb	330	2005/04/16 07:15:00	PTP	
Anglesea Ps 220kV	Anglese PS 1 220kV BUS	bus	220	2005/04/16 09:15:00	PTP	
Loganlea 275kV	h22_logn. Cap 4852 cb	cb	110	2005/04/16 18:00:00	PTP	Q-SEQ_50MVAR_CAP
Loganlea 275kV	h22_logn. Cap 4852 cb	cb	110	2005/04/16 18:00:00	PTP	Q-TR_OFFSET_-100
Loganlea 275kV	h22_logn. Cap 4852 cb	cb	110	2005/04/16 18:00:00	PTP	Q-TR_OFFSET_-50
Lismore 330kV	Lismore 330kV	station		2005/04/16 22:28:00	PTP	N*DL_ETSOS
Avon 330kV	Avon 330kV 330kV BUS	bus	330	2005/04/18 06:00:00	PTP	N-AVDT_10
Avon 330kV	Avon 330kV 330kV BUS	bus	330	2005/04/18 06:00:00	PTP	N-AVKC_37
Avon 330kV	Avon 330kV 330kV BUS	bus	330	2005/04/18 06:00:00	PTP	N-AVMN_16
Avon 330kV	Avon 330kV 372 330kV CB	cb	330	2005/04/18 06:00:00	PDLTP	N-AVKC_37
Keilor 500kV	Keilor Sydenham 500kV LINE	line	500	2005/04/18 06:09:00	PTP	
Rowville 220kV	Rowwill220 Yallrn PS 7 220kV LINE	line	220	2005/04/18 06:15:00	PTR	
George Town	GeorgeTown 2 220/110kV XFMR	xfmr2	220/110	2005/04/18 07:00:00	PTP	
Bayswater 330kV	Bayswtr330 312 330kV CB	cb	330	2005/04/18 07:47:00	PTP	
Horsham 220kV	Horsham 220kV SVC	svc	220	2005/04/18 08:00:00	PTP	
Avon 330kV	Avon 330kV 330kV BUS	bus	330	2005/04/19 06:00:00	PDLTP	N-AVDT_10
Avon 330kV	Avon 330kV 330kV BUS	bus	330	2005/04/19 06:00:00	PDLTP	N-AVKC_37
Avon 330kV	Avon 330kV 330kV BUS	bus	330	2005/04/19 06:00:00	PDLTP	N-AVMN_16
Wagga 330kV	Wagga Yanco 994 132kV LINE	line	132	2005/04/19 06:00:00	PDLTP	N-X5_TRIP
Cranbourne 220kV	Cranbourne E Rowville 1 220kV LINE	line	220	2005/04/19 06:00:00	PDLTP	
Cranbourne 220kV	Cranbourne Tyabb 1 220kV LINE	line	220	2005/04/19 06:00:00	PDLTP	
Rowville 220kV	Rowwill220 Yallrn PS 7 220kV LINE	line	220	2005/04/19 06:15:00	PDLTP	
Sydney South 330kV	Sydney S 1 330kV REACT	react	330	2005/04/19 06:30:00	PDLTP	
Brunswick 220kV	Brunswick Thomastown 1 220kV LINE	line	220	2005/04/19 06:30:00	PTP	
Kemps Creek 500kV	Kemps Ck 3 525/345/34kV XFMR	xfmr3	525/345/34	2005/04/19 07:00:00	PDLTP	N-KCTX_ONE_15M
Sydney South 330kV	Sydney S 412B 330kV CB	cb	330	2005/04/19 07:00:00	PDLTP	
Upper Tumut	Upr Tumut Yass 330kV 02 330kV LINE	line	330	2005/04/19 07:00:00	PDLTP	I-UTYS_02
Gladstone 275kV	h7_glad.cplr 5072 cb	cb	275	2005/04/19 07:00:00	PDLTP	
George Town	GeorgeTown Comalco 4 220kV LINE	line	220	2005/04/19 07:00:00	RESUBMIT	
George Town	GeorgeTown 2 220/110kV XFMR	xfmr2	220/110	2005/04/19 07:00:00	PDLTP	
Ballarat 220kV	Ballart220 2 220kV BUS	bus	220	2005/04/19 07:00:00	PDLTP	V-BAML_2
Ballarat 220kV	Ballart220 2 220kV BUS	bus	220	2005/04/19 07:00:00	PDLTP	V-ML_SLOW_RUNBACK
Dederang 330kV	Dederang 1 330kV BUS	bus	330	2005/04/19 07:00:00	PDLTP	V-DBUSS_L
Dederang 330kV	Dederang 1 330kV BUS	bus	330	2005/04/19 07:00:00	PDLTP	V-DBUSS_T
Keilor 500kV	Keilor W Melbourn 2 220kV LINE	line	220	2005/04/19 07:00:00	PDLTP	

on Monday, 11 April to 0155EST on Tuesday, 12 April to enable it to maintain the power system security in the state's south-east 132kV network in a secure operating state.

Eighth SA direction this month: Generation data showed it was the Synergen Power Pty Ltd Snuggery power station which operated in the 30-minute intervals ended 1830EST Monday to 0230EST Tuesday. This was the eighth direction NEMMCO issued this month to maintain the South Australian power system in a secure operating state. The other seven were on 1 April, 2 April, 5 April, 6 April, 8 April, 9 April, and 10 April.

Outage of the Templestowe static var: Constraint set ID V-2RP_R was invoked by NEMMCO at 0120EST on Monday, 11 April, because of transfer limit reductions on the Victoria-Snowy and Victoria-South Australia Heywood interconnectors resulting from an outage of the Templestowe static var compensator (SVC) in Victoria. It was revoked 8 hours 15 minutes later at 0935EST Monday when the SCV returned to service.

Station Name	Equipment Name	Equipment Type	KV	Start Time	Status	Constraint Set ID
Bayswater 330kV	Bayswtr330 5022 330kV CB	cb	330	2005/04/19 07:15:00	PDLT	
Liddell Ps 330kV	Liddell PS Newcastle 81 330kV LINE	line	330	2005/04/19 07:15:00	PDLT	N-LDNC_81
Anglesea Ps 220kV	Anglese PS 1 220kV BUS	bus	220	2005/04/19 07:15:00	STLT	
Sydney West 330kV	Sydney W 3 132kV CAP	cap	132	2005/04/19 07:30:00	PDLT	
Hazelwood Ps 220kV	Hazelwd PS 2 5 bus tie 220kV	cb	220	2005/04/19 07:30:00	PDLT	
Liapootah	Liapootah A 220kV BUS	bus	220	2005/04/19 08:00:00	PDLT	
Kerang 220kV	Kerang 2 220kV BUS	bus	220	2005/04/19 08:00:00	PDLT	
Canberra 330kV	Canberra 5102 330kV CB	cb	330	2005/04/19 09:00:00	PDLT	
South Pine 275kV	h2_spine.cplr 5032 cb	cb	275	2005/04/19 09:00:00	PDLT	
Sydney North 330kV	Sydney N 2 132kV CAP	cap	132	2005/04/19 10:00:00	PDLT	
Bayswater 330kV	Bayswtr330 5022 330kV CB	cb	330	2005/04/20 06:00:00	STLT	N-BWLD_ONE
Wagga 330kV	Wagga Yanco 994 132kV LINE	line	132	2005/04/20 06:00:00	STLT	N-X5_TRIP
Rowville 220kV	Rowvill220 Yallrn PS 7 220kV LINE	line	220	2005/04/20 06:15:00	STLT	
Kemps Creek 500kV	Kemps Ck 3 525/345/34kV XFMR	xfmr3	525/345/34	2005/04/20 07:00:00	STLT	N-KCTX_ONE_15M
Sydney South 330kV	Sydney S 412B 330kV CB	cb	330	2005/04/20 07:00:00	STLT	
Gladstone 275kV	h7_glad.cplr 5082 cb	cb	275	2005/04/20 07:00:00	STLT	
Ballarat 220kV	Ballart220 2 220kV BUS	bus	220	2005/04/20 07:00:00	STLT	V-BAML_2
Ballarat 220kV	Ballart220 2 220kV BUS	bus	220	2005/04/20 07:00:00	STLT	V-ML_SLOW_RUNBACK
Dederang 330kV	Dederang 1 330kV BUS	bus	330	2005/04/20 07:00:00	STLT	V-DBUSS_L
Dederang 330kV	Dederang 1 330kV BUS	bus	330	2005/04/20 07:00:00	STLT	V-DBUSS_T
Keilor 500kV	Keilor W Melbourn 2 220kV LINE	line	220	2005/04/20 07:00:00	STLT	
Anglesea Ps 220kV	Anglese PS 1 220kV BUS	bus	220	2005/04/20 07:15:00	STLT	
New Norfolk	NewNorfolk B 110kV BUS	bus	110	2005/04/20 08:00:00	STLT	
New Norfolk	NewNorfolk Boyer 1 110kV LINE	line	110	2005/04/20 08:00:00	STLT	
Kerang 220kV	Kerang 2 235/66/22kV XFMR	xfmr3	235/66/22	2005/04/20 08:00:00	STLT	
Para 275kV	PARA 6514 275kV CB	cb	275	2005/04/20 08:30:00	STLT	
Middle Ridge 275kV	Middle Rdg 1 110kV CAP	cap	110	2005/04/20 09:00:00	STLT	Q-H14MR_50MVAR_CAP
Middle Ridge 275kV	Middle Rdg 1 110kV CAP	cap	110	2005/04/20 09:00:00	STLT	Q-TR_OFFSET_-30
Tailem Bend 275kV	Tailem_Bnd 64 275kV CAP	cap	275	2005/04/20 09:30:00	STLT	S-TB_CP
Sheffield	Sheffield A 110kV BUS	bus	110	2005/04/20 10:00:00	STLT	
Sheffield	Sheffield WesleyVale 1 110kV LINE	line	110	2005/04/20 10:00:00	STLT	
Bayswater 330kV	Bayswtr330 332 330kV CB	cb	330	2005/04/20 12:30:00	STLT	N-BWLD_ONE
Lower Tumut	Lwr Tumut A2 330kV BUS	bus	330	2005/04/20 15:00:00	STLT	
Liddell Ps 330kV	Liddell PS Bayswtr330 33 330kV LINE	line	330	2005/04/20 18:30:00	STLT	

Transmission Outage End Date 15 - 20 April 2005

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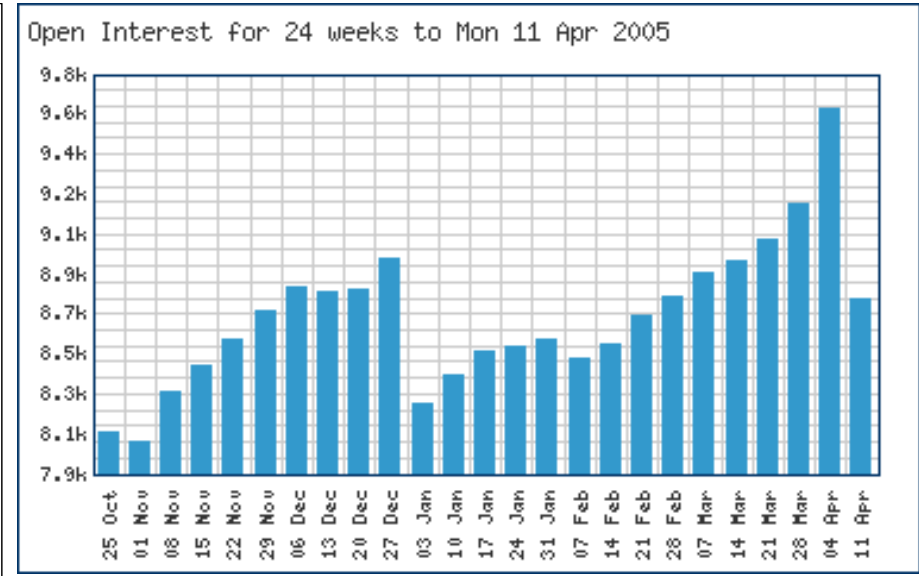
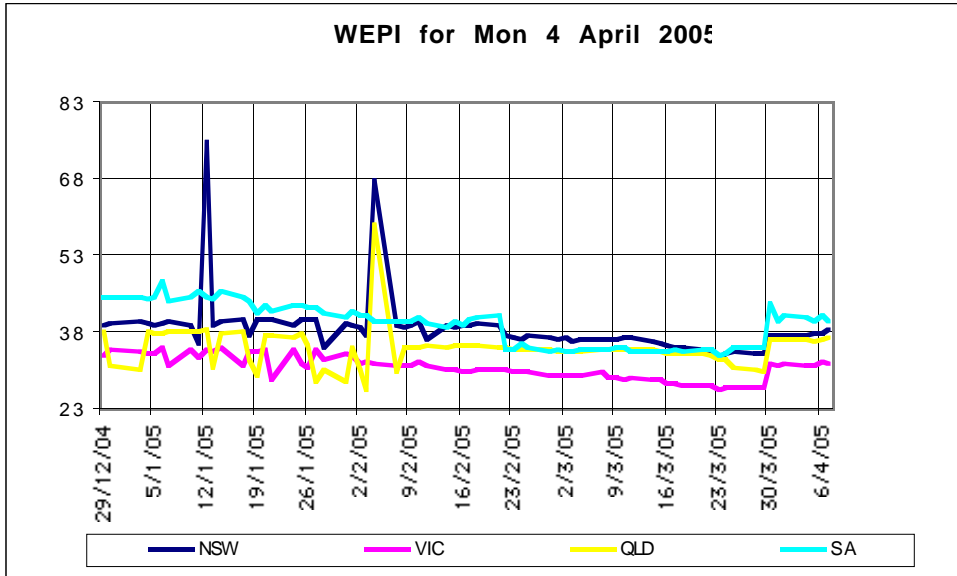
Station Name	Equipment Name	Equipment Type	KV	End Time	Status	Constraint Set ID
Lismore 330kV	Lismore 330kV	station		2005/04/18 17:00:00	PTP	N*DL_ETSOS
Avon 330kV	Avon 330kV 330kV BUS	bus	330	2005/04/18 18:00:00	PTP	N-AVDT_10
Avon 330kV	Avon 330kV 330kV BUS	bus	330	2005/04/18 18:00:00	PTP	N-AVKC_37
Avon 330kV	Avon 330kV 330kV BUS	bus	330	2005/04/18 18:00:00	PTP	N-AVMN_16
George Town	GeorgeTown 2 220/110kV XFMR	xfmr2	220/110	2005/04/18 18:00:00	PTP	
Rowville 220kV	Rowvill220 Yallrn PS 7 220kV LINE	line	220	2005/04/18 18:30:00	PTR	
Keilor 500kV	Keilor Sydenham 500kV LINE	line	500	2005/04/18 19:00:00	PTP	
Sydney North 330kV	Sydney N 2 132kV CAP	cap	132	2005/04/19 14:00:00	PDLTP	
South Pine 275kV	h2_spine.cplr 5032 cb	cb	275	2005/04/19 14:00:00	PDLTP	
Sydney South 330kV	Sydney S 1 330kV REACT	react	330	2005/04/19 15:00:00	PDLTP	
Liddell Ps 330kV	Liddell PS Newcastle 81 330kV LINE	line	330	2005/04/19 15:30:00	PDLTP	N-LDNC_81
Sydney West 330kV	Sydney W 3 132kV CAP	cap	132	2005/04/19 15:30:00	PDLTP	
Bayswater 330kV	Bayswtr330 5022 330kV CB	cb	330	2005/04/19 16:00:00	PDLTP	
Canberra 330kV	Canberra 5102 330kV CB	cb	330	2005/04/19 16:00:00	PDLTP	
Kemps Creek 500kV	Kemps Ck 3 525/345/34kV XFMR	xfmr3	525/345/34	2005/04/19 16:00:00	PDLTP	N-KCTX_ONE_15M
Sydney South 330kV	Sydney S 412B 330kV CB	cb	330	2005/04/19 16:00:00	PDLTP	
Wagga 330kV	Wagga Yanco 994 132kV LINE	line	132	2005/04/19 16:00:00	PDLTP	N-X5_TRIP
Liapootah	Liapootah A 220kV BUS	bus	220	2005/04/19 16:00:00	PDLTP	
Kerang 220kV	Kerang 2 220kV BUS	bus	220	2005/04/19 16:00:00	PDLTP	
George Town	GeorgeTown Comalco 4 220kV LINE	line	220	2005/04/19 16:20:00	RESUBMIT	
Brunswick 220kV	Brunswick Thomastown 1 220kV LINE	line	220	2005/04/19 16:30:00	PTP	
Keilor 500kV	Keilor W Melbourn 2 220kV LINE	line	220	2005/04/19 16:30:00	PDLTP	
Gladstone 275kV	h7_glad.cplr 5072 cb	cb	275	2005/04/19 17:00:00	PDLTP	
Loganlea 275kV	h22_logn. Cap 4852 cb	cb	110	2005/04/19 17:00:00	PTP	Q-SEQ_50MVAR_CAP
Loganlea 275kV	h22_logn. Cap 4852 cb	cb	110	2005/04/19 17:00:00	PTP	Q-TR_OFFSET_-100
Loganlea 275kV	h22_logn. Cap 4852 cb	cb	110	2005/04/19 17:00:00	PTP	Q-TR_OFFSET_-50
Middle Ridge 275kV	Middle Rdg 2 110kV CAP	cap	110	2005/04/19 17:00:00	PTP	Q-H14MR_50MVAR_CAP
Middle Ridge 275kV	Middle Rdg 2 110kV CAP	cap	110	2005/04/19 17:00:00	PTP	Q-TR_OFFSET_-100
Middle Ridge 275kV	Middle Rdg 2 110kV CAP	cap	110	2005/04/19 17:00:00	PTP	Q-TR_OFFSET_-30
Middle Ridge 275kV	Middle Rdg 2 110kV CAP	cap	110	2005/04/19 17:00:00	PTP	Q-TR_OFFSET_-50
Middle Ridge 275kV	Middle Rdg 2 110kV CAP	cap	110	2005/04/19 17:00:00	PTP	Q-TR_OFFSET_-60
Middle Ridge 275kV	Middle Rdg 2 110kV CAP	cap	110	2005/04/19 17:00:00	PTP	Q-TR_OFFSET_-80

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Station Name	Equipment Name	Equipment Type	KV	End Time	Status	Constraint Set ID
Tarong North Ps	Trng N PS 1 295/20kV XFMR	xfmr2	295/20	2005/04/19 17:00:00	PTP	
Anglesea Ps 220kV	Anglese PS 1 220kV BUS	bus	220	2005/04/19 17:00:00	STLTP	
Ballarat 220kV	Ballart220 2 220kV BUS	bus	220	2005/04/19 17:00:00	PDLTP	V-BAML_2
Ballarat 220kV	Ballart220 2 220kV BUS	bus	220	2005/04/19 17:00:00	PDLTP	V-ML_SLOW_RUNBACK
Dederang 330kV	Dederang 1 330kV BUS	bus	330	2005/04/19 17:00:00	PDLTP	V-DBUSS_L
Dederang 330kV	Dederang 1 330kV BUS	bus	330	2005/04/19 17:00:00	PDLTP	V-DBUSS_T
George Town	GeorgeTown 2 220/110kV XFMR	xfmr2	220/110	2005/04/19 18:00:00	PDLTP	
Cranbourne 220kV	Cranbourne E Rowville 1 220kV LINE	line	220	2005/04/19 18:00:00	PDLTP	
Cranbourne 220kV	Cranbourne Tyabb 1 220kV LINE	line	220	2005/04/19 18:00:00	PDLTP	
Rowville 220kV	Rowvill220 Yallrn PS 7 220kV LINE	line	220	2005/04/19 18:30:00	PDLTP	
Avon 330kV	Avon 330kV 330kV BUS	bus	330	2005/04/19 19:00:00	PDLTP	N-AVDT_10
Avon 330kV	Avon 330kV 330kV BUS	bus	330	2005/04/19 19:00:00	PDLTP	N-AVKC_37
Avon 330kV	Avon 330kV 330kV BUS	bus	330	2005/04/19 19:00:00	PDLTP	N-AVMN_16
Tailem Bend 275kV	Tailem_Bnd 64 275kV CAP	cap	275	2005/04/20 10:15:00	STLTP	S-TB_CP
Bayswater 330kV	Bayswtr330 332 330kV CB	cb	330	2005/04/20 13:30:00	STLTP	N-BWLD_ONE
Middle Ridge 275kV	Middle Rdg 1 110kV CAP	cap	110	2005/04/20 14:00:00	STLTP	Q-H14MR_50MVAR_CAP
Middle Ridge 275kV	Middle Rdg 1 110kV CAP	cap	110	2005/04/20 14:00:00	STLTP	Q-TR_OFFSET_-30
Sheffield	Sheffield A 110kV BUS	bus	110	2005/04/20 14:00:00	STLTP	
Sheffield	Sheffield WesleyVale 1 110kV LINE	line	110	2005/04/20 14:00:00	STLTP	
Shepparton 220kV	Shepparton 3a/3b 66kV cap bank	cb	66	2005/04/20 14:30:00	PTP	
Lower Tumut	Lwr Tumut A2 330kV BUS	bus	330	2005/04/20 15:30:00	STLTP	
Para 275kV	PARA 6514 275kV CB	cb	275	2005/04/20 15:30:00	STLTP	
Kemps Creek 500kV	Kemps Ck 3 525/345/34kV XFMR	xfmr3	525/345/34	2005/04/20 16:00:00	STLTP	N-KCTX_ONE_15M
Sydney South 330kV	Sydney S 412B 330kV CB	cb	330	2005/04/20 16:00:00	STLTP	
Wagga 330kV	Wagga Yanco 994 132kV LINE	line	132	2005/04/20 16:00:00	STLTP	N-X5_TRIP
New Norfolk	NewNorfolk B 110kV BUS	bus	110	2005/04/20 16:00:00	STLTP	
New Norfolk	NewNorfolk Boyer 1 110kV LINE	line	110	2005/04/20 16:00:00	STLTP	
Kerang 220kV	Kerang 2 235/66/22kV XFMR	xfmr3	235/66/22	2005/04/20 16:00:00	STLTP	
Keilor 500kV	Keilor W Melbourn 2 220kV LINE	line	220	2005/04/20 16:30:00	STLTP	
Braemar 330kV/275kV	r2_brae. Cap 5822 cb	cb	275	2005/04/20 17:00:00	PTP	
Gladstone 275kV	h7_glad.cplr 5082 cb	cb	275	2005/04/20 17:00:00	STLTP	
Anglesea Ps 220kV	Anglese PS 1 220kV BUS	bus	220	2005/04/20 17:00:00	STLTP	
Ballarat 220kV	Ballart220 2 220kV BUS	bus	220	2005/04/20 17:00:00	STLTP	V-BAML_2
Ballarat 220kV	Ballart220 2 220kV BUS	bus	220	2005/04/20 17:00:00	STLTP	V-ML_SLOW_RUNBACK
Dederang 330kV	Dederang 1 330kV BUS	bus	330	2005/04/20 17:00:00	STLTP	V-DBUSS_L
Dederang 330kV	Dederang 1 330kV BUS	bus	330	2005/04/20 17:00:00	STLTP	V-DBUSS_T
Avon 330kV	Avon 330kV 372 330kV CB	cb	330	2005/04/20 18:00:00	PDLTP	N-AVKC_37
Upper Tumut	Upr Tumut Yass 330kV 02 330kV LINE	line	330	2005/04/20 18:00:00	PDLTP	I-UTYS_02
Rowville 220kV	Rowvill220 Yallrn PS 7 220kV LINE	line	220	2005/04/20 18:30:00	STLTP	
Bayswater 330kV	Bayswtr330 5022 330kV CB	cb	330	2005/04/20 19:00:00	STLTP	N-BWLD_ONE
Liddell Ps 330kV	Liddell PS Bayswtr330 33 330kV LINE	line	330	2005/04/20 19:00:00	STLTP	
Para 275kV	Para 275kV 2 275kV SVC	svc	275	2005/04/20 19:00:00	PTP	I-VS_180
Para 275kV	Para 275kV 2 275kV SVC	svc	275	2005/04/20 19:00:00	PTP	S-PA_VC_1

D-cypha Weekly Report

EWN Publishing



Trading Summary for week ending 11/04/05

- Futures contracts traded this week = 270
 - Base = 270
 - Peak = 0
 - Caps = 0
- Options contracts traded this week = 0
- Volume of EFP trades this week = 0
- Volume of BTF trades this week = 110
- Total MWh traded this week = 592,560

- Futures & Options contracts traded to date = 28,345
- Open Interest as at COB Monday 11/04/05 = 8,822 lots.

Average volume

- Average daily volume FY04-05 = 41
- April 2005 average daily volume = 70
- March 2005 average daily volume = 64
- February 2005 average daily volume = 42

Activity

- Volume on the bid/offer as at 2.30pm 11/04/05 = 1300 lots.
- Brokers with active orders this week include: CSFB, FIMAT, ICAP, JP Morgan, Man Financial and UBS.
- Bids and offers have been consistently quoted across all four states in Quarterly and Cal/Fin Year Strip Products.

Source: d-Cypha.