

MCE Reforms not working, big energy users 'forgotten party'

1 Citing massive increases in electricity network charges across Australia to meet \$110m/year subsidy for peak summer system loads on very hot days, Peter Dobney, chair, Energy Users Association of Australia (EUAA), at the EUAA Annual Conference Queensland September 2004, said large energy users were the forgotten party in energy market development. "Our views and opinions must be voiced and acknowledged rather than ignored," he said.

Users blame "Dodgy transmission valuations by State Governments" for 20pc price-rise

Large energy user's interests were being ignored and the risks and costs were increasing", Peter Dobney, chair, Energy Users Association of Australia (EUAA), said. He blamed "Dodgy transmission valuations by State Governments" which had lead to a 20pc price-rise. One example was the massive increase in Tasmanian tariffs due to the Tasmanian Government inflating the value of transmission line easements and other assets. On top of that the "National Gas Access Code was now a National Joke"; and the market was dominated by a coven of big gas firms in cosy intimacy with planners.

"MCE Reforms had their own agenda": "I am not convinced that from a large energy users' perspective the MCE Reforms are paying adequate attention to these key issues:

- gas transmission access arrangements;
- electricity transmission and distribution regulation;
- electricity markets - still distorted by artificial measures such as ETEF in NSW.

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cont. page 3

contents

- 3 Huge increases in electricity network charges across Aus to meet \$110m/year subsidy for peak summer system loads
- 4 Regulator too light-handed on tariff changes, say users
- 4 Weird facts about Moomba explosion: "No justice" say users; big monopolies rule, aided by State Governments
- 4 Tas Govt inflation of transmission line easement values boosted tariffs: EUAA
- 5 Gas Access Code a joke: EUAA
- 5 National peak demand to 30GW in Feb, up 4pc (1.2GW) on previous year
- 6 US and Aus pander to energy giants when simple, available technologies could reduce emissions by up to 30pc
- 6 Qld population to grow by a massive 1.7 million in 25 years: Bigger than Vic
- 6 Brisbane summer days with temps over 35C projected to increase to 3 to 6 days by 2030 & 4 to 35 days by 2070

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

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week in brief

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2

30,000MW peak demand: National peak demand reached almost 30,000MW in February, representing an increase of more than 1,200MW or 4 per cent compared to the previous summer.

Electricity prices up briefly: Electricity prices rose slightly through Thursday and Friday before falling steadily through all days to Sunday 19th September where they hit \$23.62-\$28.82/MWh.

20-30pc demand reduction possible: National energy consumption could be reduced by 20-30 per cent with current, commercially available technologies, found a new energy efficiency report.

20pc energy price hike fears: Major energy users feared a 20 per cent hike in energy prices over the next eight years as peak demand grew unchecked by a user-pays policy.

French sustainability discussion: The Energy Users Association of Australia get close and friendly with the French Association for Science and Technology to participate in discussions on the global challenge of developing policies and programs for a more sustainable electricity future.

Minerals & energy export boost: The value of Australia's minerals and energy exports was forecast to rise by 23 per cent to \$65.1 billion in 2004-05.

Howard bookies's favourite: Bookmakers said Howard was the favourite to win the election, paying \$1.33 for a \$1 investment, compared with Latham's \$3.

Qld population explosion: The Queensland population was forecast to grow a massive 1.7 million in 25 years, overtaking Victoria.

China bid for Pechiney lease: China's largest alumina refiner, Aluminium Corp of China (Chalco), was to lead a consortium of alumina producers to bid for the former Pechiney lease.

Qld cyclones to get faster: There was an emerging consensus that maximum tropical cyclone wind speeds in Qld were likely to increase by 5-10 per cent by some time after 2050.

Brisbane days to get hotter: Brisbane summer days with temperatures over 35C were projected to increase in frequency by 2070.

Mean temps to increase: By 2030, annual mean Qld temperatures were projected to increase by 0.3 to 2.0 degrees Celsius above 1990 values.

Qld demand rise warning: CSIRO warned that temperature rises in Qld could cause a 1-4% rise in average demand and 1.5-7pc in peak demand by 2050.

SE Qld grassfires: Grassfires fuelled by tinder-dry conditions and high winds flared across SE Qld on 12 September.

Qld rainfall to remain constant: Qld yearly rainfall was likely to remain about the same but CSIRO has forecast more storms and frequent heavy rain.

GHG to determine Qld climate: Global greenhouse emissions would determine the extent of Qld temperature rises, as the state gets hotter said a CSIRO report.

Vic rejects poor prepayment meters: Energy retailers have rejected imposing prepayment meters on Victoria's financially vulnerable customers.

Vic distributors deny peak info: Victorian distributors refused to supply peak load consumer behaviour to State planner, VENCORP.

VENCORP demand forecasts miss AC: In response to queries, VENCORP replied that its demand forecasts did not assume an air conditioning (market) penetration rate

VENCORP defends summer forecast: VENCORP defended its 2005 summer peak demand forecast as TXU complained of the high costs of NEMMCO reserve levels.

Move Vic smelters to China? If the costs of carbon credits rose many times the \$10 a tonne of carbon target, it would be cheaper to close down Victoria's aluminium plants in Geelong and Portland, according to Robert Gottlieb.

WA forecasts 11pc rainfall increase: A WA scenario used for climate change research indicates a possible further decrease in rainfall of up to 11 per cent in the middle of this century.

\$700 SA solar hot water rebate: Statistic that suggest heating of water in South Australian homes alone accounts for about 35 per cent of household energy use, have prompted the SA Government to offer a \$700 rebate for solar hot water.

Solar hot water ETSA impact: The future rate of take-up of solar hot water heating could affect sales of ETSA Utilities, the Electricity Supply Industry Planning Council (ESIPC) said.

Mitsubishi closure ETSA sale impact: The expected closure of Mitsubishi Motor's engine fabrication plant at Lonsdale by the end of the year was likely to result in sales by ETSA Utilities declining by 11.6 gigawatt hours.

ETSA 1.8pc distribution growth forecast: Total customer sales by South Australia's distribution network service provider (DNSP), ETSA Utilities, was forecast to grow by an average 1.8 per cent a year between 2003/04-2009/10.

SA power price rise forecast: Retail electricity prices in South Australia were forecast to be \$2 a megawatt hour (MWh) higher by 2010 with sales about 1 per cent lower than otherwise.

CBD efficiency-driven cost savings: CBD Energy has achieved 33 per cent cost savings for power consumers through efficiency increases.

Wild NSW storm: Nursing homes had to be evacuated, houses were flooded and roof tiles were cracked by 4cm hail stones as a wild storm hit NSW on Sept 18.

World needs 40pc more energy: The world would require about 40 per cent more energy by 2020 said ExxonMobil which predicted that oil & gas would meet 60 per cent of new demand.

Oil price control action needed: America and its allies must move to control the oil price through the deployment of strategic reserves, expansion of production, and the control of motor vehicles.

Oil demand exceeds spare capacity: OPEC had spare capacity of less than a million barrels a day, just a fraction of the global demand for oil. Oil closed at \$US45.59 on Sept 17.

Ivan cuts oil production: Hurricane Ivan cut US oil production while oil demand growth continued.

Ivan hits Jamaican aluminium: Hurricane Ivan forced Alumina and Alcoa to declare force majeure at the Jamalco refinery in Jamaica.

Mah-jong demand side: Chinese power firms have invited residents outdoors to play mah-jong and watch movies in air cooled by nature to lure people from their appliance-filled homes.

Iron ore price rise forecast: Australia-Japan iron ore talks were expected to produce a 20 per cent price rise forecast on China's demand boom.

70pc engine efficiency improvements: Advances in fuel and engine technologies could drive up to a 70 per cent improvement in light duty vehicle efficiency by 2030, according to Exxon Mobil.

Market report for Monday, 20 September: Prices down 9-12pc to \$25.06-\$27.13/MWh range on stronger demand.

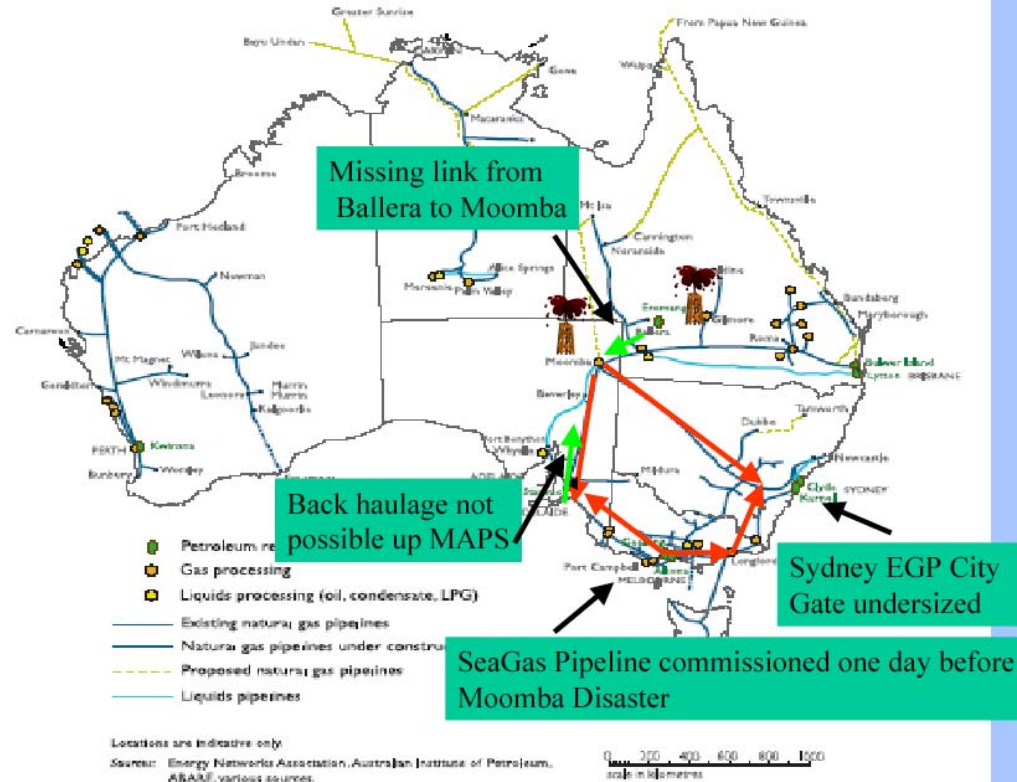
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Huge increases in electricity network charges across Aus to meet \$110m/year subsidy for peak summer system loads

Australian business' faced massive increases in electricity network charges right across Australia to meet subsidised peak summer system loads, said Peter Dobney, chair, EUAA at the EUAA Annual Conference Queensland, September 2004.

Dobney explains how it works: Dobney said the reasons behind these increases were the large capital expenditure required to meet peak summer system loads. Dobney said this was due to a massive requirement for the replacement of aging assets, and systemic inefficiencies and regulatory gaming.

The NSW example: Dobney said in the 2003 NSW Distribution Price Review that Integral Energy reported summer peak demand was driven by domestic aircon, with at least 70pc of load growth attributable to domestic aircon. This was very temperature sensitive – ie load only appeared at temperatures over 30 degrees C and the load was only there for a few hours a year. He said therefore it was impossible to collect adequate revenue from single rate energy-only tariff. Dobney said the cross subsidy to residential consumers with aircon was \$80, or \$110m/year. This represented \$15 -



What's wrong with gas transmission rules: Dobney said users had lost faith in the administration of gas regulation. The Moomba Gas Crisis on January 1st highlighted a number of problems:

- undersized city gate from EGP into the Sydney gas distribution system;
- load curtailment schedule for Sydney's major gas customers needs reviewing;
- inability for gas to be back-hauled up the Moomba to Adelaide Pipeline from Adelaide to the northern suburbs; and
- no gas interconnection from Bulimba to Moomba (approx 200km) to allow gas to flow from Qld into SA.

The cost to industry was considerable, he said - the usual "Soft Targets" are left to pick up the costs, and "No-one has been made accountable, and the SA Government inquiry has gone to ground".

Hollow laugh over "alternative path": "The Energy Minister then overturned an NCC recommendation and decided that part of the Moomba to Sydney pipeline should not be covered by the Code as an 'alternative path'. "Moomba to Sydney via Adelaide, Melbourne, Longford and Horsley Park is not really competition is it? He argued "haulage costs would make the gas prohibitive".

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\$20/MWh in NSW, he said, and similar situations existed in Vic, Qld and SA.

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Regulator too light-handed on tariff changes, say users

“Transmission regulation by the ACCC has been a failure because large energy users have little say and yet pick up the bill ... of increases in electricity transmission prices of 20pc and more”. Peter Dobney, chair of EUAA said at the Energy Users Association of Australia (EUAA) Annual Conference in Queensland on September 2004. Dobney said the regulator was too light-handed on tariff changes and there were hardly any customer impact assessments (only average tariff changes):

- the regulator had to accept jurisdiction's valuation of assets;
- asset values were inflated by excessive easement valuations;
- inflated rates of return were then applied to these dodgy valuations;
- pricing was not cost-reflective (although the Electricity Code required it to be so).

Transmission rules wrong: The Code was at fault, he said due to “Postage Stamp” pricing

and a pattern of anytime energy charges rather than capacity charges. He said this discriminated against large customers with good load profiles.

The subsidised winners: Dobney said the system now supported residential customers with poor load profiles; that was domestic air-conditioning users.

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Weird facts about Moomba explosion: “No justice” say users; big monopolies rule, aided by State Governments

Peter Dobney, chair EUAA speaking at the Energy Users Association of Australia (EUAA) Annual Conference, Queensland September 2004, said, during the Moomba gas crisis,

- when almost no gas was flowing to Sydney down the MSP;
- APJ the pipeline owner still received 10pc of their revenue;
- Force Majeure was not declared on the MSP and so Sydney gas customers picked up the bill!

Dobney said the EUAA had challenged the Minister's decision on the MSP in the Australian Competition Tribunal, but was thrown out due to lack of standing. Dobney said they illustrated a major flaw in the system - which was “users don't have the same standing as pipeline owners, and individual energy users don't have the same funds available as monopoly businesses do to fight such cases and face huge costs if they do”.

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Tasmanian Govt inflation of transmission line easement values boosted tariffs: EUAA

Peter Dobney, chair, EUAA at the Energy Users Association of Australia (EUAA), Annual Conference, Queensland September 2004, said in the ACCC's Revenue Determination for Transend – Tasmania's Electricity Transmission Company – the ACCC had allowed Transend a 25pc increase in revenue cap for the next 5 years and back-dated to the 1st January 2004. For the period 1st January 2004 - 30th June 2004 this amounted to \$100.2m/yr (pro rata). For the period 1 July 2004 - 30th June 2005 a further increase to \$106.73m/yr has been authorised.

The reason why: He said the massive increase in transmission use of system (TUoS) was due to “the Tasmanian Government inflating the value of transmission line easements and other assets”.

How they do it in the Apple Isle: He said the Transend Cost Allocation based on its Pricing Policy was due for review in November 2000, but there was “no sign of any new pricing policy on their web site yet”.

Conflicts of interest: Disputes were resolved by negotiation with Transend (according to their pricing policy) or through the dispute resolution provisions of the Tasmanian Electricity Code. Dobney said these issues were raised with both Transend and the Tasmanian regulator, but not addressed.

ACCC revenue cap for transend and average cost to supply transmission services in Tasmania resulted in massive price increases:

	2002-02	2003-04	2004-05	2005-05	2005-07	2007-08	2008-09
Transend Revenue (\$M/yr)	\$80	\$100	\$106	\$113	\$121	\$129	\$137
Energy supplied (MWh/yr)	10435000	10435000	10435000	10435000	10435000	10435000	10435000
Increase	-	25%	6%	7%	7%	7%	6%

Transmission prices for several Tasmanian industrial sites with different load factors compared with Transend system load factor:

	Annual Usage GWh/yr	Average Demand MW	Max Demand MW	System Capacity MW	Load factor %	2003	2004
Transend	10435.00	1150.00	1650.00	2,500	0.46	\$7.67	\$9.58
Mill #1	102.00	11.70	13.80	NA	0.85	\$9.98	\$13.71
Mill #2	144.00	16.50	22.70	NA	0.73	\$8.52	\$11.71
Pump house	3.50	0.41	1.02	NA	0.4	\$32.99	\$37.76

Queensland Distribution Charges are not Cost Reflective for Large Customers:

Charges	Powerlink Capacity Based Transmission Tariff	Powerlink Usage Based Transmission Tariff	Energex Distribution Tariff
Fixed (\$/Month)	0.00%	0.00%	76.03%
Volume (\$/MWh)	14.82%	81.19%	15.26%
Capacity (\$/MW/Month)	85.18%	18.81%	8.72%

Forward Electricity prices do not reflect market physical conditions:

NEMMCO Forecast of Low Reserve Conditions	2006/07 Forward Flat Contract Prices (\$/MWh)
Victoria LRC 2006/07	\$33.30
NSW LRC 2008/09	\$36.35
Queensland LRC 2009/10	\$36.50

Gas Access Code a joke: EUAA

Peter Dobney, chair, EUAA, speaking at the EUAA Annual Conference, Queensland, September 2004, said the “National Gas Access Code was now a National Joke” and the transmission System Development for both gas and electricity had not kept pace with customer demands. Poor planning meant gas pipelines were duplicated in some areas and interconnections were inadequate and inflexible.

And wait, there’s more: The ACCC’s Regulatory Test had failed electricity consumers, electricity transmission and distribution pricing was not cost reflective and, in the case of Distribution was largely determined by State Governments. Electricity markets were illiquid and prices did not reflect generating capacity/reserves, he said.

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National peak demand to 30GW in February, up 4pc (1.2GW) on previous year

National peak demand reached almost 30,000MW in February. This represents an increase of more than 1,200MW or 4 per cent compared to the previous summer, according to a draft of the NEMMCO Reliability Panel’s annual report for 2003/04.

Summer demand up 5pc pa: Record demands of around 12,470MW, 8,580MW and 7,920MW occurred throughout the year in New South Wales, Victoria and Queensland respectively. Peak demand has grown by almost 4,500MW or 18 per cent since 1999-2000 with annual growth averaging around 2 per cent in winter and 5 per cent in summer.

Weather warmer but steady: Maximum temperatures over the same period have tended to be just above average with the exception of the mild summer of 2001-02. Scheduled capacity over the same time has risen by more than 4,300MW with additional increases from smaller unscheduled plant.

Source: Reliability Panel, Draft annual report, 2003-04, September 2004, National Electricity Code Administrator Limited.

US and Aus pander to energy giants when simple, available technologies could reduce emissions by up to 30pc

6

There had been success in locking away carbon dioxide, wrote Ian Howarth in *The Australian Financial Review* (20/9/2004, p. 68), but conservationists said there was a simpler way.

US and Aus pander to energy giants: "They argue that governments, particularly in Australia and the United States, two of the world's biggest CO2 producers, are simply

pandering to the powerful energy lobby and are not doing enough to reduce power consumption," Howarth wrote.

Energy consumption can be reduced: "Julie-Anne Richards, coordinator of the Climate Action Network of Australia told *The Australian Financial Review* that simple and commercially available technologies can be applied today to reduce Australia's greenhouse emissions by 20 per cent to 30 per cent. She says the Federal Government's National Framework on Energy Efficiency discussion paper revealed that "energy consumption in the manufacturing, commercial and residential sectors can be reduced by 20-30 per cent with current, commercially available technologies with an average payback of four years".

Up to 9000 jobs created: "Also, up to 9000 jobs will be created by accelerating investment in energy efficiency, she says. Requiring all new homes in Queensland to have a solar hot water service will eliminate the need for the Kogan Creek (coal-fired) power station, Richards says."

Queensland population to grow by a massive 1.7 million in 25 years: Bigger than Vic

More than \$200 billion worth of development proposed for Queensland over the next three decades will profoundly change the perception of the local property market, according to research

carried out by Jones Lang LaSalle and published in *The Courier Mail* (10/9/2004, p. 42).

That SE corridor: JLL Research associate director Nerida Conisbee said in the next 25 years Queensland would experience massive growth as the population grew by 1.7 million. The increase, taking the state's population from 3.6 million to 5.3 million will be focused in southeast Queensland as people moved in mainly from interstate with the remainder international migrants. Conisbee said this growth would fuel more than 550,000 new dwellings, 3.2 million m² of retail floorspace and more than 1 million m² of office space.

Shift in national balance: JLL (Qld) managing director Stephen Conry said the research showed that in less than 50 years Queensland would overtake Victoria as the second largest state. "While commentary and speculation on Queensland overtaking Victoria has been around for years, the facts are that the prospects for Queensland growth being dominant and sustainable has really gained traction and investors, residents and governments should take note," Conry said.

Brisbane summer days with temps over 35C projected to increase to 3 to 6 days by 2030 & 4 to 35 days by 2070

The CSIRO Division of Atmospheric Research was commissioned by the Queensland Government to investigate

the climate's response to increasing concentrations of greenhouse gases in the atmosphere, according to a government statement (13/9/2004). Management of the project has been the responsibility of Natural Resource Sciences (NRSc) within Natural Resources and Minerals, with funds provided by a range of state agencies and Government owned corporations.

Report into impact of temperature, rainfall:

The report summarised the extent of potential changes in temperature and rainfall in Queensland as well as analysing potential impacts on water quality in Moreton Bay and water availability in the Burnett River.

Summary of major changes: Projected climate changes for Queensland could be summarized as follows:

- by 2030, annual mean temperatures were projected to increase by 0.3 to 2.0 degrees Celsius above 1990 values. Much larger ranges are projected for 2070, with increases from 0.8C to 6.0C. For Brisbane, annual mean temperature may increase from 20C to between 20.3C and 22C in 2030 and to between 20.8C and 26C by 2070;
- in Brisbane, the number of summer days with temperatures over 35C was projected to increase from its present average of 3 days to 3-6 days by 2030 and 4-35 days by 2070;
- annual rainfall over Queensland was projected to decline over most of the state,

although projections of rainfall change are less certain than for temperature;

- soil moisture was expected to decrease over most of Queensland due to increased temperatures and declines in annual rainfall. This decrease was most pronounced in the far interior;
- maximum tropical cyclone wind speeds were likely to increase by 5 to 10 per cent by 2050. This would be accompanied by increases of 20 to 30 per cent in peak tropical cyclone precipitation rates. However, little change was expected in the regions of tropical cyclone formation, and there is no evidence that tropical cyclones travel further south.

Energy retailers reject imposing prepayment meters on Victoria's financially vulnerable customers

The Energy Retailers Association of Australia (ERAA) has agreed with consumer groups that vulnerable customers need to be protected, in a statement released by the ERAA (17/9/2004).

Pre-payment meters not on cards: ERAA executive director, Deane Russell, said there has never been any suggestion that vulnerable customers should be offered prepayment meters anywhere in Australia, and especially in

Victoria. "Energy Retailers have been working with the Victorian Energy Minister to further improve the current policies of supporting vulnerable customers," Russell said.

Retailers assist customers: "Retailers across Australia are delivering assistance to customers experiencing difficulty in paying their energy account through a wide variety of practices and policies," Russell said. Practices adopted by retailers include procedures that better identify those customers experiencing financial hardship, the implementation of flexible and affordable payment plans and even the provision of financial counselling and energy efficiency advice.

Reference: ERAA. 17 September 2004. Deane Russell, Executive Director Energy Retailers Association of Australia. Mobile: 0419 444 112.

Victorian distributors refuse to supply peak load consumer behaviour to state planner

The Responses to Questions to the Victorian Electricity Annual Planning Report, Public Forum, 12 August 2004, shows during 2004 VENCORP sought unsuccessfully to obtain from Victorian distributors (DBs), load traces of customers with site demand exceeding 1MW, aggregated by ASIC class to preserve confidentiality. VENCORP anticipates that this more detailed information may lead to improved MD forecasts. VENCORP will continue to seek this type of information from DBs.

VENCorp models air con loads on its own: During 2004 VENCORP retained a consultant to identify causal relationships between house building shells, occupant activity, weather parameters and daily MD.

What VENCORP needs to know: VENCORP said "Occupant activity analysis may identify human behavioural (psychological) responses to weather forecasts and actual weather. This more detailed modelling of building shell cooling load impacts from temperature, solar radiation, wind speed and direction and humidity will enhance our understanding of air conditioning-related electricity demand mechanisms", it said.

VENCorp predicts 7pc Vic wind at peak load in summer, on high temperature days in Vic: Generally a strong north wind

According to VENCORP, on high temperature days in Victoria there is generally a strong north wind, but there was so far very little data from actual wind farm production. Charts showed very high variability in the wind farm outputs at the half hour system maximum demands.

VENCorp sticks to 7 per cent: "Our conclusion is therefore that the figure of 7 per cent represents a reasonable and prudent position given the available data but VENCORP

will review this information on an annual basis".

Source: Electricity Annual Planning Report, Public Forum, 12 August 2004, Responses to Questions.

VENCorp's demand forecasts queried: air con assumptions

Further questions about the method of forecasting Victorian demand for electricity during summer emerged at the public forum for Electricity Annual Planning in Melbourne. Marianni Lourey, of the Essential Services Commission, asked VENCORP what penetration rate of air conditioning was assumed in the demand forecasts.

Market penetration not the best measure: VENCORP replied that its demand forecasts do not assume an air conditioning (market) penetration rate. VENCORP considers the most useful definition of this penetration is the ratio of the number of installed units to the number of residences in Victoria, which increases where residences have multiple units installed. However this does not reflect trends in output capacity or efficiency of units installed, which also contribute to peak electricity demand.

Air conditioner purchases modelled: While confidential data procured by VENCORP's demand forecasting consultant could be used to estimate this penetration now, future levels are not modelled or assumed. Rather, modelling forecasts Victorian air conditioner unit yearly purchases (in MW input power) as a

function of:

- weighted average of recent summers' Melbourne CBD average temperatures;
- building activity;
- retail turnover; and
- estimated replacement costs of air conditioner stocks.

Installed base incremented: These purchases increment previous aggregate air conditioner input power (akin to stocks) and the new aggregate is input to a model of air conditioner peak electricity demand variation with Melbourne CBD temperature. Ongoing monitoring of Victorian air conditioner purchases and temperature sensitive summer electricity demand allows these models to be reviewed and adjusted.

Is there an upper limit? Lourey also asked: What saturation rate of air conditioning was assumed in the demand forecasts? When was it assumed that this saturation rate would be reached?

VENCorp cannot see one: Following on from the previous answer, no air conditioning saturation rate or date is assumed. Air conditioning "saturation" may best be conceptualised as the condition where a fixed (over time) air conditioning peak demand to floor area ratio is reached for each category of (new and existing) premises. This envisages no additional air conditioning demand for existing premises, and a fixed average air conditioning level per unit floor space at new premises.

Airconditioning will track new buildings: Air conditioning demand growth would then track building growth. Forecasts now assume a slowly decreasing rate of air conditioning load growth, but do not predict saturation within ten years. There is no firm basis for predicting saturation while growth rate in both numbers of units and unit capacity remains strong.

Formulae refined by feedback: It also needs to be recognised that VENCORP's forecasts are based on prevailing electricity supply and pricing conditions. The steadily reducing load factor impact of forecast temperature sensitive MID component growth may lead to changes in these conditions, possibly affecting air conditioning saturation level and timing, and requiring revised forecast growth rates.

Source: Electricity Annual Planning Report, Public Forum, 12 August 2004, Responses to Questions.

Hot water takes 35 per cent of domestic energy in SA: Govt offers \$700 solar rebate

Environmentally friendly energy-making processes were once regarded as too expensive, but are now becoming competitive, according to *The Advertiser* (8/9/2004 p. 62). Now the government is coming to the party with a \$700 rebate for solar hot water, the paper reported.

35pc of domestic demand is for hot water: The heating of water in South Australian

homes alone accounts for about 35 per cent of household energy use. It is an obvious target for change. A solar water heating system can meet up to 80 percent of the hot water needs of an average family home.

Electricity creates related emissions: While natural gas heated water accounts for the largest share of water heating, energy consumption via electricity contributes about 72 per cent of greenhouse gas emissions related to hot water heating. SA can reduce both the amount of energy used and greenhouse emissions by using more efficient water heaters.

\$700 rebate for solar heating: The State Government's solar hot water rebate scheme has been introduced to promote sustainability and reduce greenhouse gas emissions. The scheme began on July 1, 2001 and provides for rebates of up to \$700 on the cost of a new solar hot water system.

Take-up of solar hot water heating may affect ETSA Utilities income if RECs rise or building standards change

The future rate of take-up of solar hot water heating could affect sales of ETSA Utilities, South Australia's distribution network service provider (DNSP), the Electricity Supply Industry Planning Council (ESIPC) said in a report.

Certain take-up estimated: In a report to the Essential Services Commission of South Australia (ESCOSA) on sales forecasts by tariff category for the period from 2005/06-2009/10, ESIPC said the National Institute of Economic and Industry Research (NIEIR) forecasts allowed for a certain take-up rate under existing policies.

What could affect take-up: However, it was possible that this could be accelerated if the price of solar hot water units fell substantially in response to a broadening of their eligibility for renewable energy certificates (RECs), or if South Australia were to adopt building standards that required solar water heating units in new houses.

Effect of efficiency measures: The overall effect of the various efficiency measures allowed for in the forecasts was summarised in the following table.

Effect	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10
Forgone sales	133GWh	242GWh	278 GWh	344GWh	431GWh	497GWh	567GWh

Reference: Report to the Essential Services Commission of South Australia (ESCOSA) on "Sales forecasts by tariff category for South Australia's electricity distribution network for the period 2005/06-2009/10" by Electricity Supply Industry Planning Council (ESIPC). 14 September 2004. 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>

Mitsubishi SA plant closure estimated to cut ETSA Utilities electricity sales by 11.6GWh

The expected closure of Mitsubishi Motor's engine fabrication plant at Lonsdale by the end of the year was likely to result in sales by ETSA Utilities declining by 11.6 gigawatt hours (GWh) from 40.2GWh in 2003/04 to 28.6GWh in 2004/05, the Electricity Supply Industry Planning Council (ESIPC) said in a report.

20 per cent down in 2003/04: In a report to the Essential Services Commission of South Australia (ESCOSA) on sales forecasts by tariff category for the period from 2005/06-2009/10, ESIPC said sales to Mitsubishi in the three years before 2003/04 were about 20 per cent higher than 40.2GWh, with the decline in 2003-04 reflecting reduced exports from the plant.

Important sales source: ESIPC said the Lonsdale engine plant represented an important source of sales for ETSA Utilities. Mitsubishi Management had advised that the Lonsdale plant comprised two key facilities, one being an iron foundry which produced engine blocks and exhaust manifolds, and the other being an aluminium die-casting, machining and engine assembly facility. The former was the more energy intensive facility due to the operation of several arc furnaces, accounting for 70-75 per cent of total electricity consumption at the site during the past six months.

Nearly 2000 jobs under threat: Information published recently by the Adelaide University Centre for Labour Research suggested that some 650 jobs might be lost at the Lonsdale site, and that another 1300 jobs might be under threat through flow-on effects, primarily in property and business services, trade and motor vehicle parts and related manufacturing.

Assistance packages: The State and Federal Governments had announced industry assistance packages totalling \$55 million which would be used for employment and training support services and to attract replacement industry(s) to the state. The Centre for Labour Research had suggested that these new activities might include extra Navy shipbuilding contracts, increased public infrastructure projects, including a light rail system for metropolitan Adelaide, and increased public housing. It was also possible that another vehicle manufacturer would take over the site.

Interplay of factors: The ultimate effect on ETSA Utilities' electricity sales would depend on the interplay of all these factors, none of which could be predicted with any certainty. The industry restructuring package was likely to give priority to preserving jobs and the skill base in Adelaide's southern suburbs, rather than limiting the options to finding a new operator to continue using the facilities at Lonsdale in the same way that they were used now.

Limiting flow-on effects: Such an outcome might see the Lonsdale site continue operations in some form and limit any flow-on effects to other parts of the economy.

Sales forecasts not adjusted: ESIPC said it considered there was insufficient information available to predict the final outcome and it has therefore not adjusted the sales forecasts from those presented in the 2004 annual planning review (APR) The industry assistance package would almost certainly result in some form of replacement industry(ies) and there might be limited, if any, flow-on effects. The precise nature of the replacement would determine the outcome in terms of electricity demand.

Reference: Report to the Essential Services Commission of South Australia (ESCOSA) on "Sales forecasts by tariff category for South Australia's electricity distribution network for the period 2005/06-2009/10" by Electricity Supply Industry Planning Council (ESIPC). 14 September 2004. 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>

Total ETSA electricity sales to grow 1.8pc a year between 2003/04-2009/10: ESIPC

Total customer sales by South Australia's distribution network service provider (DNSP), ETSA Utilities, was forecast to grow by an average 1.8 per cent a year between 2003/04-2009/10, the Electricity Supply Industry Planning Council (ESIPC) said in a report.

Down 0.8 per cent: In a report to the Essential Services Commission of South Australia (ESCOSA) on sales forecasts by

tariff category for the period from 2005/06-2009/10, ESIPC said this was down from an annual average of 2.6 per cent between 1995/96-2003/04.

Factors affecting sales growth: Residential sales growth during recent years reflected several offsetting influences:

- strong dwelling construction activity and continuing high sales of air-conditioning equipment;
- temperature effects on electricity sales, particularly in 2000/01 and 2001/02; and
- the ongoing impact of real electricity price increases of some 30 per cent between 2000 and 2004.

Subdued outlook for next few years: ESIPC said the outlook for residential sales during the next few years remained subdued. Dwelling construction activity was expected to weaken during 2005 and 2006 and this downward influence on sales would be reinforced by the on-going impact of the price increases.

Recovery in 2007 likely: A recovery in new dwelling construction by 2007 was expected to result in some rebound in residential sales growth by this time. The impact of the price increases was also expected to taper off by 2007, although equipment choice in water and space heating could still be affected.

Robust commercial sales: Commercial sales were expected to remain relatively robust, with growth around the 2.5-3.0 per cent during the

next few years. Growth in commercial sales was supported by continued growth in air-conditioning load, expansions in retail floor space and further growth across other tertiary sectors of the South Australian economy.

Effect of Mobil refinery closure: Industrial sales growth had been relatively subdued during the last four years, reflecting in part closure of the Mobil Oil refinery. Overall growth was expected to remain subdued through to 2006/07, with stronger growth by 2007 and 2008 as domestic final demand strengthened with a recovery in new dwelling construction.

Reference: Report to the Essential Services Commission of South Australia (ESCOSA) on "Sales forecasts by tariff category for South Australia's electricity distribution network for the period 2005/06-2009/10" by Electricity Supply Industry Planning Council (ESIPC). 14 September 2004. 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>

SA retail electricity prices to be \$2/MWh higher, sales lower by 2010, ESIPC forecast

Retail electricity prices in South Australia were assumed to be \$2 a megawatt hour (MWh) higher by 2010 with sales about 1 per cent lower than otherwise (equivalent to around 117 gigawatt hours a year), the Electricity Supply Industry Planning Council (ESIPC) said in a report.

Effect of greenhouse policies: In a report to the Essential Services Commission of South Australia (ESCOSA) on sales forecasts by tariff category for the period from 2005/06-2009/10, ESIPC said electricity sales forecasts allowed for the effects of various greenhouse gas abatement policies and energy efficiency measures implemented by the Federal and State Governments.

Higher costs: In particular, the forecasts recognised that higher costs were likely to be associated with growing volumes of renewable energy such as that produced by wind farms.

Impact on customers: Federal and state measures such as the energy efficiency best practice program, the minimum energy performance Standards, the national appliance and equipment efficiency program and the greenhouse challenge program were forecast to have a significant impact on customer sales. In addition to these policies, the South Australian Government had set targets to reduce energy consumption in government occupied buildings by 15 per cent from 2000-01 levels by 2010.

Effect of reaching target: The government's energy use annual report for 2002-03 indicates that, if this target were achieved, annual electricity sales might be some 33GWh lower than otherwise by 2010, with smaller reductions applying in earlier years.

Reference: Report to the Essential Services Commission of South Australia (ESCOSA) on "Sales forecasts by tariff category for South Australia's electricity distribution network for the period 2005/

06-2009/10" by Electricity Supply Industry Planning Council (ESIPC). 14 September 2004. 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>

Ten changes appear in South Australian market-behaviour as electricity prices rise

Electricity costs had risen as private enterprise power firms have invested in expensive infrastructure, according to *The Advertiser* (8/9/2004, p. 16). Rising cost has increased awareness of the need to reduce energy use and has had a positive impact on the environment:

- commercial and domestic consumers sought the best arrangements for purchasing power to minimise both cost and use;
- generating firms sought cheaper production costs;
- private users pursued alternate power sources;
- wind turbines had appeared along the South Australian coastline;
- commercial and domestic buildings were crowned with solar panels or solar hot water tubes;
- insulation became a priority in commercial and domestic buildings;

- architects have accepted that positioning of new buildings is critical to catch winter sun while avoiding summer sunshine;
- deciduous trees were planted to provide summer shade while letting in winter sun;
- fluorescent globes, virtually unobtainable a decade ago and until recently prohibitively expensive, were commonly used in the workplace and private homes; and
- efficiency and economy of air-conditioners and heaters was now a prime consideration. New efforts to control demand have emerged. Limiting use and turning off an air-conditioner for 15 minutes every hour, even on hot days, would have little impact on room temperatures but help cut energy drain.

CBD Energy achieves 33pc cost savings for large power users: efficiency increases

CBD Energy's Power Factor Correction products and services have achieved very significant energy cost savings - of up to 33 per cent - for its many customers, and resulted in the deferral of substantial distribution system upgrading for the electricity suppliers, said CEO Wayne Rudland, in a statement released by CBD Energy (20/9/2004). This, in turn, has resulted in benefits to the community by limiting retail electricity price

risers and avoiding unnecessary construction on increased distribution capacity, according to the statement.

Benefits of Power Factor Correction: Other positives of CBD Energy's Power Factor Correction products and services have included:

- a reduction in energy losses in distribution networks and in customer's own circuits;
- reduced customer maintenance and longer machinery life; and
- consequent deferred network disruption due to upgrades.

Increased efficiency reduces costs: Rudland added that "CBD Energy has found that its customers who are large users of electricity are saving up to one third of their energy costs by cost effectively reducing their consumption through improved energy efficiency, minimising energy use and enabling sustainability through technology, resource management and engineering best practice. These annual savings over time have a significant impact on company bottom lines."

Reference: CBD Energy. 20 September 2004. For further information, or to arrange an interview please contact: Lisa Taylor - 02 4981 7892 or 0401 046 527. Email: info@cbdenergy.com.au

World will require about 40pc more energy by 2020: ExxonMobil predicts oil & gas to meet 60pc of new demand

By 2020, the world would require about 40 per cent more energy than today. By then the world's consumption was likely to approach 300 million barrels of oil-equivalent energy every single day, according to ExxonMobil.

Oil & gas most economical: The company expected that 60 per cent of this 2020 demand would continue to come from oil and gas as these primary sources of energy were available in sufficient quantity to meet the world's growth and were, at the same time, the most economical.

Demand to grow despite new efficiencies: Sizable increases in energy demand were projected despite likely continued improvements in energy efficiency. In total, the company expected these efficiencies to be about 1 per cent per year, because of improved vehicles, power plants, construction standards and other actions. If gains were achieved at only half this rate, the world would consume about 30 million additional barrels of oil-equivalent energy per day, close to the amount used by western Europe today.

Portfolio of energy options: Meeting higher energy demands would require a portfolio of energy options including oil, gas, coal, nuclear, hydro, biomass, solar and wind.

America and allies must move to control oil price: Deploy strategic reserves, expand production, control vehicles

America and its allies must move decisively on energy, according to an editorial in *The Economist* (14/9/2004, p. 65).

Strategic reserves could reverse price: Sales from their strategic reserves, which totalled about 1.3 billion barrels (including 700m in the United States), would reverse the recent price increases for at least a while and demonstrate a willingness to counter OPEC.

Longer term measures: For the longer run, America must:

- expand production (including in Alaska); and
- increase conservation (especially for motor vehicles).

Bipartisan approach to energy tax needed: Democrats and Republicans must together take the political heat of establishing a gasoline, carbon or energy tax that would limit consumption, help protect the environment and reduce the need for future military interventions abroad.

Major importers need to bargain: The most effective "jobs program" for any American administration and the world as a whole,

however, would be an initiative to align the global oil price with levels that would result from market forces. America should therefore seek agreement among importing countries (including China, India and other large developing importers as well as industrialised members of the international Energy Agency) to offer the producers an agreement to stabilise prices within a fairly wide range centred at about \$US20 per barrel.

Use reserves to manipulate price: Consumers would buy for their reserves to avoid declines below the floor of the range and sell from those reserves to preserve its ceiling.

Maintaining global growth: A sustained cut of \$US20 per barrel in the world price could add a full percentage point to annual global growth for at least several years.

Avoiding price spikes: The resultant stabilisation of price swings would avoid the periodic spikes (in both directions) that tended to trigger huge economic disruption.

Crude oil for October delivery: Rising \$US1.71, or 3.9 per cent, closing at \$US45.59 in New York on 17 September

The Organisation of Petroleum Exporting Countries (OPEC), the producer of last resort, has spare capacity of less than a million barrels a day. This is just a fraction of

the global demand for oil, which is about 82 million barrels a day. Crude oil for October delivery rose \$US1.71, or 3.9 per cent, to close at \$US45.59 a barrel in New York on Friday (17 September), according to *The Australian Financial Review* (20/9/2004).

Fourth oil shock of the world: The crude oil price is now more than 60 per cent higher over the past year, although it is down from its August 20 record high of almost \$US50 a barrel. The world is now suffering its fourth oil shock and oil is trading at its highest level yet.

Oil reserves: Saudi Arabia is sitting on the largest reserves of 270 billion barrels. Iraq is second at 120 billion and that is with poor prospecting to date. The US itself has reserves of 22 billion barrels, Venezuela 48 billion, Russia 54 billion, the United Arab Emirates 63 billion and Kuwait 99 billion barrels.

OPEC's production quota: The 1 million barrel increase in OPEC's production quota last Wednesday (15 September) to 27 million a day from 1 November did nothing to dampen the price rise. OPEC is already producing more than 28 million barrels a day, well above even its new quota and its highest level for 25 years.

Hurricane Ivan cuts US oil production while oil demand growth continues: \$US44.70 in Asia, up more than \$US2

The oil market moved higher on 15 September as Iraq spun out of control, hurricane Ivan moved towards oil production platforms in the Gulf of Mexico, and demand for the fuel continued to grow while spare global oil capacity shrank. Oil was trading in Asia at \$US44.70 a barrel, up more than \$US2 a barrel over the past two trading days, according to *The Australian Financial Review* (16/9/2004, p. 26).

Below record \$US49.40: The price is still below the record of \$US49.40 a barrel, hit about a month ago, but the oil market continues to be an obstacle to economic growth and a concern of world equity markets.

US cuts oil production for Hurricane Ivan: US oil production was reduced by about 1 million barrels a day, or 61 per cent of the Gulf of Mexico's output, according to the US Minerals Management Service, as platforms were shut down in preparation for the arrival of Ivan.

\$US15-20 higher than 2003 and 2002 prices: The Gulf receives more than half the oil imports of the US and hosts 50 per cent of the country's refining capacity. The oil market is now almost \$US15 a barrel higher than its 2003 average price and \$US20 a barrel higher than its average 2001 price.

Fallout shelters, casual dress & free movies: China tries anything to cut power demand

Across China, electricity plants cannot keep up with demand, generators are hot sellers and brownouts are endemic, according to *The Sydney Morning Herald* (18/9/2004, p. 16). It has been a brutal summer, with temperatures in the south often nudging 40, putting an enormous strain on the electricity grid.

Innovative attempts to cut power use: The shortages have spurred a host of innovations, from the clever to the absurd. Others have competed to seed clouds in hopes of cooling down the land and reducing the use of air-conditioners. The eastern city of Hangzhou opened caves built as fallout shelters, inviting residents to descend and play mah-jong in air cooled by nature. Power companies have offered free outdoor movies to lure people from their appliance-filled homes. And Beijing has gone casual, advising people to shun their hot Western suits in favour of short sleeves.

Endemic structural problems: As the first hint of cooler weather hit China's smog-shrouded cities, energy planners were trying to take their first deep breath in months. But structural problems after decades of central planning, bad energy forecasting and ravenous demand guarantee years of problems ahead.

Fuel & engine technology advances could boost light duty vehicle efficiency 70pc: Emissions cuts possible now

Advances in fuel and engine technologies could drive up to a 70 per cent improvement in light duty vehicle efficiency by 2030, according to Exxon Mobil Corporation's Fuels Development and Policy Planning manager, Buford Lewis.

Reliance on petrol and diesel continues: Lewis, who was speaking at a World Energy Congress forum on clean energy for transport, said road transport vehicles would continue to depend primarily on petrol and diesel through to 2030 even as alternate fuels, such as bio-fuels, entered the market.

Demand to increase: "Demand for petrol and diesel in Asia Pacific in 2030 is forecast to be over twice what it is today due to a rapidly expanding road transport fleet. At the same time demand in North America and Europe could possibly be lower than today due to improvements in fuel efficiency as a result of technology and consumer trends," Lewis said.

Emissions reductions possible right now: "It is important to recognise that improvements in vehicle efficiency are available today to reduce greenhouse gas emissions as well as to save energy, and advanced technology promises more benefits. Compared with

today's conventional petrol engine, diesel vehicles already offer significant efficiency improvements. Also, significant reductions in diesel smoke and emissions could be possible using emerging homogeneous charge compression ignition ("HCCI") technology.

Hybrids an attractive technology: "Petrol-electric hybrid technology, currently being introduced in many markets around the world, also provides an attractive option for increasing fuel efficiency and reducing greenhouse gas emissions in the medium term.

But consumers and govt policies play role: "However, changes in transportation are inherently complex because of factors including the interplay between available vehicle technologies in the existing and replacement fleets, and government policies in areas such as energy diversity and environmental impact. Consumer choice, vehicle turnover rate and relative costs are also significant factors in determining the rate by which new technologies are introduced.

65pc reduced emissions possible: "Ultimately, advanced internal combustion engines combined with an electric motor in a hybrid configuration have the potential to deliver over 65 per cent lower greenhouse gas emissions than today's petrol vehicles. Defining the vehicle and fuel characteristics needed to meet the 'ultimate' is a primary R&D focus."

Hydrogen cars still face big hurdles:

Concurring with the conclusions of a recent study by the National Academy of Sciences in America, Lewis said hydrogen vehicles would continue to face significant technological and economic barriers that would prevent the widespread adoption of hydrogen over the next two to three decades.

Reference: ExxonMobil Australia Pty Ltd, on 7 September 2004. **Media Contact:** Tony Cudmore, on 0408 467 692.