

Hydro's Energy Supplies

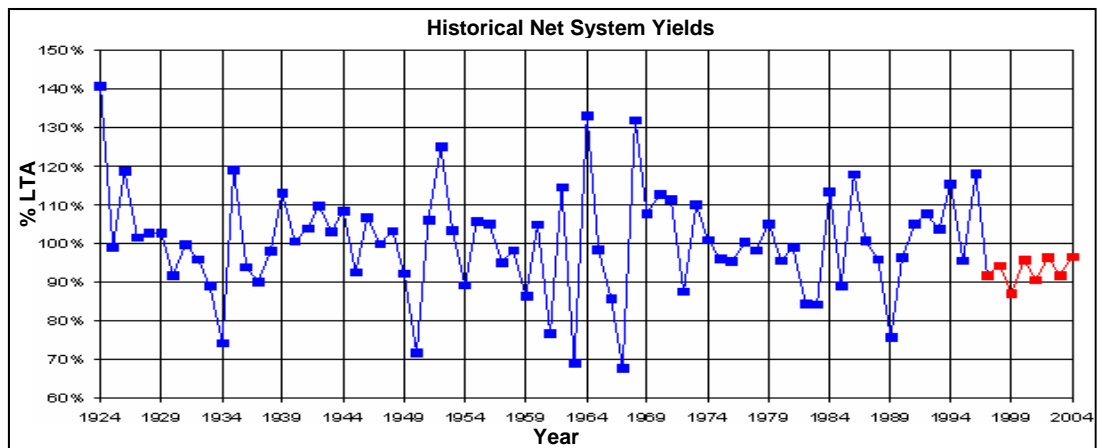
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Water reserves

Recent falls in Hydro Tasmania's stored water reserves are due to the below average rainfall trend Tasmania has experienced over the past eight years. During this time, water inflows into Hydro Tasmania catchment areas have been 5% to 10% below the long-term average (LTA) (see chart below). Low rainfall, and increased demand over the same period, has meant long term storages have been drawn upon and as such, overall water levels have declined. Since November 1997, levels at Great Lake have fallen from 78% full to 15% full, and levels at Lake Gordon have fallen from 94% full to 25% full. The previous 12 months to July 2005 saw consistently below average monthly rainfalls. The September rainfall forecast from the Bureau of Meteorology predicts a dry spring, with the chances of above median rainfall between 30% and 40% across most of Tasmania. As at 12 September 2005 overall water storages were at 33.6%.

The chart below represents total state wide annual yields for the past 80 years (assuming today's capacity) as a percentage of long term average yields.



Prudent water management

Hydro Tasmania's Ministerial Charter obliges it to adopt a strategy of 'prudent water management in a manner consistent with the advised long run energy capability'. In the period prior to the commissioning of Basslink, the principal focus is managing water storage levels to meet demands. Following the commissioning of Basslink, Hydro Tasmania will not have the sole responsibility to meet Tasmanian demand. Storage levels will vary, depending on season, water values and market prices.

Water shortage actions

During May, when water levels in the Northern Headwater storages were acutely low, Hydro Tasmania responded by:

- turning off major pumps (such as the Arthurs Lake pump, which uses 7 MW of energy);
- cancelling non-essential outages;
- operating one unit of Bell Bay power station;
- negotiating with major user Norske Skog (who reduced its load by 15 MW. To compensate the company, Hydro Tasmania bought back that energy under a commercial arrangement); and
- activating supplementary generation plans.

Supplementary generation

Initial supplementary generation plans involved the purchase of 60 x 1 MW diesel generators. However, due to escalating diesel prices, Hydro Tasmania will now install 3 x 35 MW gas turbines at Bell Bay, at a capital cost of \$37m, to be commissioned by February 2006. This will increase Bell Bay's capacity from 240 MW to just under 350 MW and will ensure that should Tasmania experience another two to three month dry spell prior to Basslink, there will be sufficient capacity to generate electricity to meet demand.

Increasing the generating capacity of Bell Bay will allow additional generation to build up hydro storages, with those additional reserves being available to cover a later shutdown of Bell Bay for its conversion to combined cycle turbines, which are more efficient and reliable than the current gas turbines.

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Energy Ombudsman Update

The new Energy Ombudsman, Mr Simon Allston, commenced 22 August 2005.

Mr Ray McKendrick, Director, Energy Investigations, commenced in June 2005.

Gas entities under the *Gas Act 2000* came under the jurisdiction of the Energy Ombudsman 1 June 2005 (Powerco Tasmania, Aurora Energy and Option One).

The Energy Ombudsman's Annual Report is available at www.energyombudsman.tas.gov.au. One issue emerging from the Annual Report is the delay in new Aurora Energy connections. In 2004-05, 55 complaints relating to new connections were recorded. The Energy Regulator has requested a copy of Aurora's review on the issue.

Significant Incidents

Significant incidents causing loss of power to consumers are closely monitored by the Energy Regulator. Detailed incident reports on the causes of major outages and the consequential actions taken by electricity entities are available from www.energyregulator.tas.gov.au.

Recent reports

On 3 August 2005, both 220 kV transmission lines from Sheffield to George Town tripped as a result of a lightning strike, interrupting supply to Comalco, Temco, Norske Skog, and to customers supplied by Wesley Vale, Railton and Port Latta substations. The total load lost was 450 MW. Lines were restored within 5 minutes and disconnected loads were restored within 2 hours.

On 19 February 2005, supply to Devonport, Railton, Wesley Vale and Ulverstone was interrupted due to an unexpected protection operation at the Sheffield substation. Supply was restored within an hour. The total load lost was 86 MW.

On 3 February 2005, two events caused a loss of supply to Comalco and other major industrial users. The initial interruption to supply was due to a fault on one of the George Town to Comalco 220 kV transmission lines. The second event was caused as a result of the response to the initial event. The total load lost was 346.4 MW.

Electricity Supply Emergency Management Scheme

Electricity emergencies

The two types of electricity emergencies that could arise are extended drought (with shortages of water for electricity generation) and the failure of critical infrastructure (transmission lines, substations, distribution lines, transformers).

Extended drought

Prior to the commissioning of Basslink, the scale of response by Hydro Tasmania to extended drought escalates as follows:

- operation of one, then both, 120 MW gas fired unit(s) at Bell Bay power station;
- additional generation, such as diesel or gas fired generation;
- commercial arrangements for reduction of industrial load;
- voluntary reduction in load for commercial and residential users; and
- rationing of consumers as a last resort.

Equipment failure

Equipment failure can involve network failure (resulting in total loss of supply or limited capacity to supply, which tends to be regional or local) and generator failure (where load is greater than generation capacity, which tends to have wide spread impact).

Most emergencies are short lived and covered by operational responses in accordance with established protocols that are intended to share the burden fairly amongst customers. 'Under frequency load shedding' mainly affects major customers and involves the automatic shedding of large blocks of load to stabilise the system. 'Rotational load shedding' between customers may occur during extended incidents, taking into account critical services. The objective of load shedding is to steady the system for rapid and orderly restoration of normal supply to all electricity users.

Co-ordinating electricity system emergency responses is the responsibility of the Tasmanian Responsible Officer (CEO, Transend Networks Pty Ltd). The Jurisdictional System Security Co-ordinator (Deputy Secretary of DIER) is responsible for advising the Minister of the need for Government intervention. The Electricity Co-ordination Advisory Committee is responsible for advising the Minister of arrangements for enduring emergency events and overseeing the development, maintenance and operation of the Tasmanian Electricity Emergency Management Plan for major incidents.

Natural Gas Retail Prices

Gas consumption

Gas consumption differs throughout Australia depending on climatic conditions, the maturity of the gas industry and the price of gas. Primary uses of gas for residential customers include hot water, heating and cooking appliances. Commercially, natural gas replaces the need for other fuels such as LPG, diesel and coal.

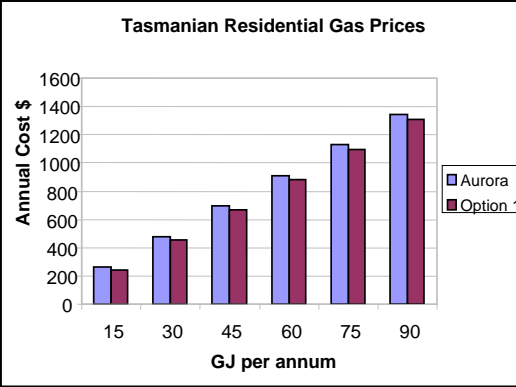
Gas prices

The three main elements of retail gas prices are the costs of extracting and treating natural gas, transmission and distribution network charges and retail margin.

In Tasmania, distribution charges account for approximately 48% of the retail price, gas supply costs 19%, retail margin 18% and transmission charges 15%. The transmission component appears to be higher for supply in Tasmania than on the mainland.

The tariffs for both Tasmanian gas retailers, Aurora Energy and Option One, are similar, offering residential gas supply at a fixed charge of approximately \$0.07 to \$0.12 per day and energy at a charge of approximately \$15.71 to \$15.90 per GJ.

One GJ is the equivalent of 277.78 kilowatt hours (kWh). As a general rule there is an 80% conversion of gas to useful energy.



AER and AEMC

In 2003, Commonwealth, State and Territory Governments agreed to establish a new regulatory framework for the energy sector. As a result, the Australian Energy Market Commission (AEMC) and the Australian Energy Regulator (AER) were established. Both the AEMC and the AER commenced operation 1 July 2005.

AEMC

The AEMC is a national body established under the *Australian Energy Market Commission Establishment Act 2004 (South Australia)*. The AEMC reports directly to the Ministerial Council on Energy and is responsible for rule-making and market development in the National Electricity Market (NEM) and, over time, the gas market. The main source of the AEMC's statutory powers comes from National Electricity Law (NEL), which is applied as law in each participating jurisdiction of the NEM. The National Electricity Rules (Rules) are made under NEL and replace the National Electricity Code, which was previously administered by the National Electricity Code Administrator (NECA).

AER

The AER is a national body established as a constituent of the ACCC under Part IIIA of the *Trade Practices Act 1974 (Commonwealth)*. The AER is responsible for enforcement of the Rules, as well as economic regulation in energy markets. The AER initially assumes responsibility for electricity transmission regulatory, monitoring and enforcement functions, which were previously conferred on NECA and the ACCC. In future, the AER plans to assume responsibility for other functions such as the regulation of electricity distribution and retail businesses (other than retail pricing) in accordance with an agreed regulatory framework, and regulation of the gas industry.

The extent of the exact division of responsibilities between State Regulators and the AER is still unclear as the arrangements that will be implemented are still subject to discussion between Governments.

Tasmanian Gas Rollout by Powerco

Who are Powerco

Powerco Limited (Powerco) is New Zealand's second largest electricity and gas distribution company. Powerco is a wholly owned subsidiary of Prime Infrastructure, which is a wholly owned subsidiary of Babcock and Brown Infrastructure - a company listed on both the Australian and New Zealand Stock Exchanges.

Powerco's wholly owned subsidiaries include:

- Powerco Australia Group P/L - Powerco's Australian holding company;
- Powerco Tasmania P/L - asset owner and manager for gas distribution and other energy related infrastructure;
- Powerco Energy Services P/L - construction project and operational manager; and
- Option One P/L - licensed gas retailer in Tasmania.

Physical industry structure

The structure of the physical gas industry begins with the separation of natural gas from petroleum. Tasmania is supplied from the Longford (Victoria) gas plant, treating gas from the Gippsland Basin fields. Alinta Energy (Alinta) owns the transmission pipeline bringing natural gas from Longford to Tasmania. Natural gas flows through the transmission system to the distribution system, where it is then retailed to industrial, commercial and residential customers.

The construction of the distribution system by Powerco has so far progressed in two stages. Stage 1, which is now complete, involved the construction of 100 km of pipe and 8 offtake facilities to connect Alinta's transmission pipeline to key industrial and commercial customers. These include Zinifex, Cripps Nubake, Simplot, Lactos and Bonlac.

Stage 2 of the project, which commenced in March 2005, involves the construction of 600 km of polyethelene pipe and ancillary equipment to service a total of 11 zones in Hobart, Launceston, Devonport and Burnie. The initial target is for Stage 2 to pass 9 000 residential properties and small commercial premises by mid-October 2005 (which Powerco is on target to achieve) and 38 700 by June 2007. Powerco plans to offer early connection incentives for customers with an average load of 20 gigajoules (GJ) or more per annum (20 GJ per annum of natural gas is roughly equal to 5 500 kilowatt hours of electricity, or an annual cost of approximately \$320).

Much of the Stage 2 infrastructure will be constructed by directional drilling, as illustrated by this photograph.

Directional drilling avoids the need to significantly disturb ground surface.



Retail market structure

Tasmanian customers with a load of less than 5 terajoules per annum (residential and most commercial premises) can choose to contract with either of the two Tasmanian gas retailers Option One or Aurora Energy. Customers with a load exceeding 5 terajoules per annum (factories and industrial plants) are able to contract directly with Powerco for distribution services and with a retail supplier for transmission, gas supply and retail services.

Looking to the future

Powerco will be looking to source competitively priced gas, investigate gas-fired generation and co-generation opportunities as well as non-gas (ceramic fuel cells) and infrastructure opportunities. In Tasmania, Powerco will look at the future extension of the natural gas distribution network into additional urban and residential areas.

Licences Update

Gas

The Director of Gas has varied Powerco Tasmania's distribution construction licence, authorising variations to the gas networks in Wynyard, Burnie and Hobart.

The Director of Gas has transferred the gas retail licence held by Powerco Energy Services Pty Ltd to Option One Pty Ltd.

Electricity

The Regulator is considering two generation licence applications.

Woolnorth Studland Bay Wind Farm P/L (a wholly owned subsidiary of Hydro Tasmania) has applied for a generation licence for a proposed wind farm generation facility at Studland Bay, near Smithton.

AGL Energy Services P/L (a wholly owned subsidiary of The Australian Gas Light Company) has applied for a generation licence for two proposed landfill gas fuelled generation facilities at McRobies Gully, Hobart and Jackson Street, Glenorchy.

For further information on licences and applications visit www.energyregulator.tas.gov.au.

Aurora Energy Hardship Policy and Late Payment Fee

Hardship policy update

Aurora Energy (Aurora) has now completed one full month of processing payments to emergency relief agencies and financial counsellors to assist its customers experiencing difficulties in meeting electricity expenses. In July 2005, 86 payments were processed at a cost to Aurora of \$9 736.

Late payment fee update

Aurora initiated its late payment fee scheme in April 2005. The fee will be waived for customers incurring the fee for the first time, however any subsequent late payments will incur the fee. As at 23 August 2005, the fee had been applied to 17 residential customer accounts and 66 business customer accounts.

Aurora Energy June 2005 Quarterly Performance Report

RETAIL

Call centre performance

Calls received increased from 72 386 to 74 917. Colder months typically see a greater number of enquiries relating to higher accounts. 48% of calls related to account matters and 36% to connection enquiries. Average wait time improved from 44 seconds the previous quarter to 37 seconds, still falling short of the target of 20 seconds. Calls answered within 20 seconds met the 80% target, an improvement on last quarter by 4%.

Complaint handling

The number of complaints received (including in relation to distribution) reached just over 700, a 17% increase from last quarter. Of these complaints, 45% related to supply issues, 13% to provision issues (connection, disconnection, reconnection, poles and wires, street lighting) and 12% to billing issues.

Disconnections

There were 405 disconnections in the quarter, an increase from 288 the previous quarter. 70 customers left without notice, compared to 81 the previous quarter. During the quarter Aurora issued 232 700 bills, 53 800 reminders and 13 100 disconnection warnings.

Payment plans

At quarter's end, there were 2 028 active payment plans, averaging a debt of \$372. The quarter saw 958 plans created, 209 plans cancelled, 122 plans completed and 724 defaulted plans, each increasing from the previous quarter. Aurora acknowledges that the number of defaulted plans is a concern and is working closely with customers on payment plans.

Debt repayment

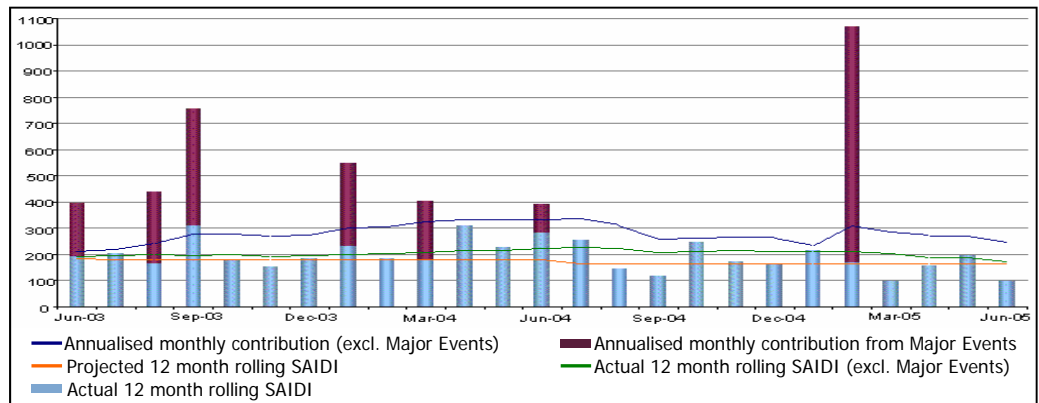
64% of residential customers and 56% of businesses paid on time in the quarter. Nearly 5 100 customers, or 2.1%, were repaying a debt. 639 customers owed greater than \$500, a decrease from 678 last quarter.

DISTRIBUTION

Overall performance

Average state wide performance improved due to calmer weather and no major event days. SAIDI (system average interruption duration index) was 244 minutes, down from 283 last quarter. SAIFI (system average interruption frequency index) was 2.25, down from 2.63 last quarter. CAIDI (customer average interruption duration index) was 108 minutes.

The graph below represents actual SAIDI compared to target SAIDI. The impact of the February 2005 storms is still affecting overall SAIDI levels.



Reliability improvement strategy

The reliability improvement strategy is designed to improve the performance and fault response times of 21 poorly performing feeders. Aurora anticipates a 50 minute reduction in SAIDI and a 0.45 interruption reduction in SAIFI by 2008. Seven major projects are involved, two of which are complete.

GSL scheme

Last financial year 9 431 total payments were made amounting to \$754 480. Customers connected to an additional 260 transformers are eligible for payment, but payments are yet to be finalised. Aurora made payments to 17 390 customers for the February 2005 storms.