

our network



Objective:

Loyal, highly satisfied customers

Strategy:

Excel in reliability, performance delivery and product merit

Communities below reliability standard:

2008/2009	target:	result:
SAIDI	10/101	29
SAIFI	4/101	6

System Average Interruption Duration Index – SAIDI:

2007/2008 result:	188
2008/2009 target:	175.7
2008/2009 result:	183

System Average Interruption Frequency Index – SAIFI:

2007/2008 result:	1.78
2008/2009 target:	1
2008/2009 result:	1.55

We place as much emphasis on understanding and meeting our customers' expectations as we do on world-class asset management.

Our biggest challenge is to deliver on our regulatory promise and to ensure that all the work we proposed in the current Pricing Determination is completed on time and to budget.

A snapshot of our network in 2008/2009

- We managed an asset base comprising high and low voltage overhead powerlines, underground cables, distribution substations, street lights and poles worth \$1.090 billion.
- We connected 3860 new customers during the year.
- Our customers experienced, on average, 1.55 power outages over the year, accounting for an average of 183 minutes without electricity supply.
- Our Fault Centre took 86,691 calls from customers experiencing power interruptions and despatched our crews to 33,971 jobs.
- We invested \$6.2 million in regional communities to improve customers' reliability experience.
- We spent \$129.7 million on major capital investment, to replace ageing assets and cater for increasing load growth.

A key to *Balanced Scorecard* indicators is on pages 144-145.



A condemned pole is replaced at Boyer, north of Hobart, in March 2009.

The SAIDI performance of 183 minutes (excluding Major Event Days) is an improvement on the previous year's performance of 192 minutes. This improvement can be attributed to the relatively mild weather during the majority of the year. It was achieved despite an increase in planned interruptions compared to the previous year.

Our SAIFI trend continued to improve and our result of 1.55 is the best recorded to date (see Figure 17). The reliability improvement strategies we've put in place and the milder weather mentioned above were contributing factors.

There were three Major Event Days on which significant storm activity occurred. A Major Event Day is a day when, due to circumstances beyond our control, the SAIDI exceeds a threshold set by the Tasmanian Economic Regulator. The removal of Major Event Days from reliability data provides an indication of network performance under 'normal' operating conditions.

- We spent \$10.3 million inspecting and maintaining our poles, to protect the safety of our system and our customers, up from \$7.1 million in 2007/2008.

Supply reliability performance improves

We use two primary indices to assess the performance of our distribution system. The System Average Interruption Frequency Index (SAIFI) measures the average number of interruptions that our customers experience due to supply interruptions. The System Average Interruption Duration Index (SAIDI) measures the average 'time off' that our customers experience due to supply interruptions.

We use these measures to establish an aspirational target at an overall State level and to enable us to meet targets set for us by the Tasmanian Economic Regulator to improve our performance in specific communities.

We also use a capacity index so that we can measure when and where our system capacity is overloaded.

Figure 16 SAIDI - Total Time Out per Customer per Year In Minutes Excluding Major Event Days

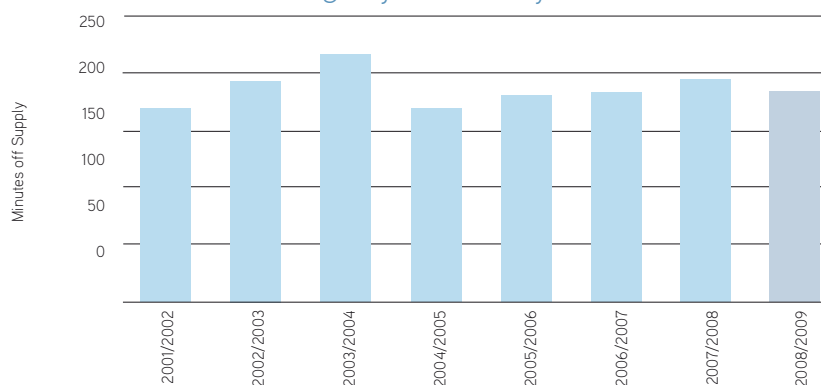
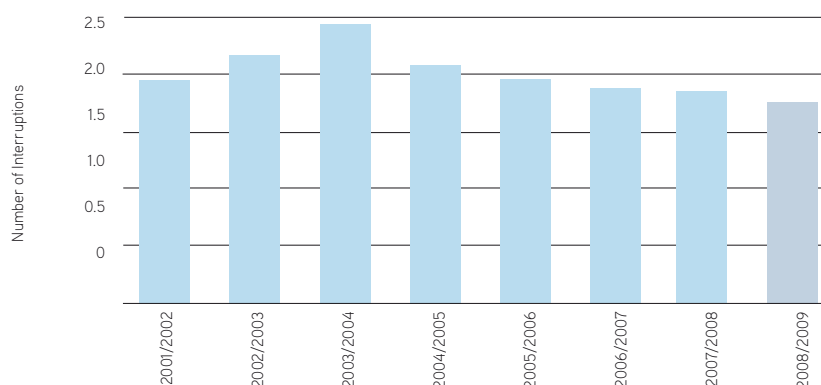


Figure 17 SAIFI - Total Number of Supply Interruptions per Customer Excluding Major Event Days



'TRIP' delivers reliability against performance standards

Performance standards introduced by the Tasmanian Economic Regulator in January 2008 recognise communities as the basis for measuring, reporting and improving reliability. The standards enable Aurora to direct its efforts to communities that need it most, using our Targeted Reliability Improvement Program (TRIP). The projects proposed under TRIP are designed to deliver the reliability performance required under the new standards by 30 June 2012.

This year we set reliability targets to meet customer and community expectations in the following areas: Sheffield, Derby-Ringarooma, Bicheno-Coles Bay, Swansea-Pirates Bay-Nubeena, Ulverstone, George Town, Dilston-Windemere, Turners Beach, Somerset-Wynyard, the Forestier Peninsula and St Helens. In total, we spent \$6.2 million.

In 2009/2010 we have committed to spend a further \$6 million at Port Sorell, Burnie-Penguin, the mid Tamar Valley area, Winnaleah, Lewisham-Dodges Ferry, the Cradle-Coast region and at Queenstown.

Guaranteed Service Level scheme payments increase

Our Customer Charter, placed prominently on our website and also provided in hard copy form to all new customers, explicitly states that while we will try our hardest, we cannot guarantee 100 per cent reliability, 100 per cent of the time.

However, we do administer a Guaranteed Service Level scheme (GSL) under which automatic payments are made to customers if they experience lengthy or multiple outages. In 2008/2009, 6,127 affected customers received \$541,760 in GSL payments, up from \$442,240 in the previous year. The performance standards and details of the GSL scheme are published on www.auroraenergy.com.au.

Asset-related complaints to the

Ombudsman's Office remained stable at 83 for 2008/2009, compared to 90 in the previous year. The introduction of an acknowledgment letter sent within three working days of receipt of a claim has

resulted in fewer customer telephone calls and improved customer satisfaction. More information on customer satisfaction is on page 31.



An Aurora crew repairs a pole damaged by lightning near Wynyard in April 2009.

ICS system worked well

Our Incident Control System was invoked on three occasions this year and proved beneficial to both our employees and our customers. While there are no planned changes to the system, each event provides a learning opportunity for the next.

On 22 January 2009, our infrastructure across a large part of the State was battered by a combination of high winds and fire, just one day after a total fire ban was issued. We lost supply on 22 feeders, affecting 27,000 customers at the height of the storm. Our Fault Centre logged 1100 jobs for our field crews and took 5500 calls from customers. Less than 24 hours later, the number of outstanding jobs had been reduced to 350.

A severe storm front crossed the north-west and north of the State on the morning of 14 March, with lightning hitting many transformers and feeder lines. Nearly 2300 calls came into our Fault Centre and crews dealt with 369 jobs.

Wind and lightning storms hit the north-west, north, central and east coasts with no prior warning at 6am on 15 April. They brought down 120 bays of feeder lines and service wires and destroyed 27 poles and 18 transformers. Thirty thousand customers were without power, but by 5pm that night, 90 per cent of lost supplies had been restored.

A new function in the Fault Centre's outage management system can interpret the most likely cause of system failure from customer calls. The Fault Centre is also trialling a new system that dispatches fault calls directly to the field crews' tough books.

Cambridge substation caters for huge load growth

The \$13.1 million Cambridge substation provides an excellent example of effective project management and a partnership approach between Network and Network Services divisions and contractor, Tenix Alliance Pty Ltd.

Part of the Hobart Eastern Shore upgrade, the 33/11kV zone substation caters for a huge commercial load growth in the Cambridge Park retail precinct. It also boosts supply capacity and reliability for residential and commercial customers (including the Hobart International Airport), at Seven Mile Beach, Acton and Cambridge as it takes over some load from the Bellerive zone substation and Transend's Rokeby terminal substation.

Network Services' Project Manager, **Craig Wilson**, oversaw planning and



Graduate Engineer Ewan Sherman (left) and Project Manager Craig Wilson, inside the Cambridge substation.

construction over an 18-month period.

The commissioning process, overseen by the first Graduate Engineer to take on this role, **Ewan Sherman**, went smoothly and was finalised to budget and on time in April 2009.

There was a diverse team involved throughout the project, including Tenix,

subcontractors, ground services, cable jointers and testers, overhead and live-line crews, operations and traffic control.

The experience will prove invaluable when two additional zone substations are constructed and added to the system in the Howrah and Rosny areas in 2011 and 2012 respectively.

Customers central to network vision

Our network business has a strong commitment to servicing its Tasmanian residential and business customers. This customer-centric culture was highlighted in depth in the September 2008 edition of the Customer Service Institute of Australia magazine.

We engage with customers on its services, upcoming works and safety information through a variety of channels including direct mail, newspaper advertisements, the Aurora website, personal visits to community meetings, groups and clubs, at Agfest and Home Ideas Centres. This is in addition to our day-to-day operations.

This year we revamped our Wired Up newsletter and introduced bi-annual

information nights, which help keep electrical contractors up-to-date with Aurora standards on service and installation rules. In April 2009, a record 630 electrical contractors attended information nights and feedback from the sessions has been very positive.

Network's Market Services group now manages all electrical work requests. It despatches them to Network Services' regional Customer Connections teams. The move to a one-stop-shop model has improved customer connection times.

It is essential that new customers installing irrigation systems or other large loads are supplied with the appropriate sized transformer to meet their needs and know how to operate large machinery correctly. This reduces load issues, voltage complaints and the risk of supply problems for neighbouring customers. Network's Customer Supply Team works closely with customers and our design team on these issues.

Network's Commercial Services Team has developed a process to facilitate the connection of large customers and embedded generation to the distribution network.

The service includes technical and commercial advice on the delivery of supply to customer loads exceeding 1MW and all connections of embedded generation in accordance with national regulatory requirements. Enhancements to the connection contributions policy and the technical guidelines have allowed greater emphasis on development of the distribution system to meet customers' requirements.

Many of the embedded generation connection enquiries and applications have been a challenge to Aurora and its customers. We are confident that improvements to the process will facilitate commercial and technical arrangements that satisfy all parties.



An upgrade completed at Hamilton in March 2009 at a cost of \$540,000 is improving supply reliability to customers in the area.

Substantial program of major upgrades continued

Despite the global financial crisis, customer-generated, maintenance and capital building work remains at a historically high level and exceeded our budget levels this year.

We are part-way through a significant \$588 million program of work that commenced following the Distribution Pricing Determination in 2007. The Regulator granted us funding to upgrade our infrastructure and cater for new growth over the next five years. Details of significant work completed and planned are opposite.

Resourcing challenges addressed

The appointment of Jemena Pty Ltd to assist with designing and building our network will ensure we can achieve the substantial program of work. Formerly Agility Services, Jemena already undertakes gas and electrical work in the State and is looking to expand its local workforce. It plans to utilise available local subcontractors and will also be involved in undertaking substation work for Transend.

Work is progressing and the partnership will deliver significantly larger volumes of work in the next financial year. The partnership with a national subcontractor also gives our business better access to wider national resources if required.

Right: Devonport live-lineworker, Mark McGuire.

Below: Safe working practice is paramount during all field operations.



Figure 18

Upgrades Completed or Under Way:

Location	Upgrade Type	Timing	Reason	Cost
Hobart Eastern Shore	Cambridge zone substation	Completed April 2009	Increases capacity	\$13.1m
	New feeder from Geilston Bay zone substation	Completed early 2008/2009	Increases capacity	\$350,000
Hobart Western Shore	Brighton transport hub	Under way	Customer-driven development, increases capacity and improves reliability	
Kingborough	Electrona	Completed early in the year	Increases capacity	\$400,000
	New feeder at Blackmans Bay	Completed in April 2009	Increases capacity	\$270,000
Greater Launceston	Work associated with the submarine cable and feeder from the George Town substation	Completed	Increases capacity	\$800,000
Burnie and Devonport	New feeder from Burnie to Ridgley	Completed in June 2009	Improves reliability by removing load	\$535,000
North-East	Feeder upgrade at Pipers River	Completed early in 2008/2009	Improves reliability	\$150,000
	Staged augmentation of the Pipers River Single Wire Earth Return system (SWER)	Under way with completion expected in 2012	Increases capacity	\$550,000
	Staged augmentation of Sheepwash SWER system	Under way with completion expected in 2011	Increases capacity	\$450,000
Southern Midlands	Hamilton area	Completed early in 2008/2009	11kV to 22kV conversion to increase capacity	\$540,000
	Melton Mowbray	Stage one under way, with completion in 2010/2011.		\$400,000 (concept cost)

Figure 19

Proposed Upgrades:

Location	Upgrade Type	Timing	Reason	Cost
Hobart Eastern Shore	Two new zone substations at Howrah and Rosny	2011/2012	Increases capacity	Concept costs indicate each substation will cost \$15M.
	Installation of a 33kV switching station at the Bellerive zone substation	Prior to 2012	Improves system security	\$800,000
Hobart Central	Introduction of loop automation system into Hobart CBD	Analysis and design 2009/2010 and construction 2010-2012.	Improves reliability	\$1M (concept cost)
	Two new feeders from West Hobart zone substation to western end of CBD	2009/2010	Increases capacity and improves reliability	\$500,000
Hobart Western Shore	Reconfiguration of networks that supply Royal Hobart Hospital (RHH) and Calvary Hospital (CH)	Prior to 2012	Improves system security	\$400,000 for (RHH) and \$150,000 concept cost for (CH)
	Reinforcements planned for Salamanca wharf area from East and West Hobart zone substations	2010/2011	Increases capacity	\$500,000
	New feeders near Collinsvale and South Hobart	At the commissioning stage, with completion expected in 2009/2010	Increases capacity and improves reliability	\$570,000 in total
Kingborough	New zone substation constructed near Kingston	Prior to winter 2012	Increases capacity	\$15M
Greater Launceston	Feeder tail connection work for proposed Ravenswood Transend substation	Prior to 2012	Increases capacity and improves reliability	\$8.5M (concept cost)
	22kV distribution and augmentation program	2009-2011	Increases capacity	\$1.5M
Burnie and Devonport	New 22kV injection point at Wesley Vale	Planning to commence 2009/2010	Increases capacity and improves reliability	NA
	Extension and augmentation of system between Burnie and Wynyard	2009/2010	Increases capacity and improves reliability	\$453,000
Southern Midlands	Gretna	Three stages 2009-2012	11kV to 22kV conversion to improve capacity	\$300,000 in total
	Westerway	Completed 2009/2010, with further work planned for 2011/2012		\$2.9M and \$400,000
	Replacement of Wayatinah substation	2009/2010		Asset replacement due to age and condition
Meander Valley	Replacement of New Norfolk substation	2010/2011		\$3M
	Feeder augmentation to Westbury (customer-driven development)	2009/2010	Increases capacity and improves reliability	\$2M