

Western Australia's Electricity Networks

**Integrated Measures to
Improve Network Services
and Reliability**

Photo courtesy of Western Power Corporation.





Government of
**Western
Australia**

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1 Overview

The Government is implementing an integrated strategy to improve the safety, reliability and quality of power supply to Western Australian electricity customers who depend on our transmission and distribution networks.

This historic program is urgently addressing the areas of inadequate performance in the Western Australian electricity networks, which have developed over a number of years due to the regulatory and structural features of the State's electricity industry.

It is worth remembering that in 2001, network services were provided in a very different environment:

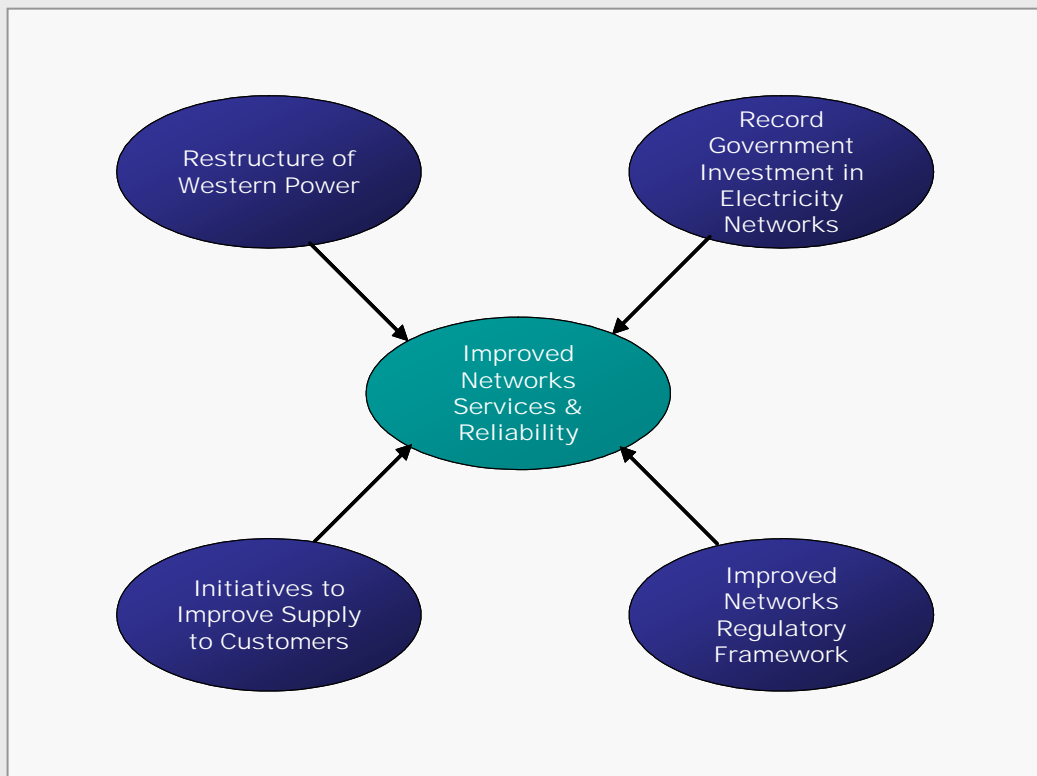
- there was no Network Access Code and no independent Regulator to consider key issues like appropriate performance standards, and ensure transparency in network expenditure and network prices;
- spending on the Networks business received lower priority than investment in other parts of Western Power's business, partly because Western Power was expected to provide all generation on the system;
- there was insufficient monitoring of network performance and the reliability and quality of supply to electricity customers; and
- electricity consumers did not benefit from a strong customer protection framework and were more reliant on the discretion of Western Power to receive fair treatment.

Significant progress has been made during the past four years, as the Government has introduced new measures to improve network performance and customer service:

- a new Electricity Networks Access Code is in place and the independent Economic Regulation Authority will review the first Network Access Arrangement later in 2005;
- the Government approved a record four-year expenditure program to improve network services in the 2004/05 State Budget released last year;
- the Western Australian Code of Conduct for the Supply of Electricity to Small Use Customers was established in 2004, addressing unacceptable behaviour by electricity companies;
- licensing of Western Australian electricity providers took effect on 1 January 2005, placing technical and financial obligations on electricity companies; and
- a Customer Transfer Code has been established to support the transfer between retailers of more than 12,500 customers who could choose their electricity supplier from 1 January 2005.

Now, in 2005, the Government's final stages of electricity reform will continue to address the key issues which currently impact on network performance:

1. The restructure of Western Power to provide a greater focus on network investment and service standards;
2. An historic \$2.23 billion network expenditure program over the next four years to provide the new Networks Corporation with the funds needed to meet customer expectations, particularly in those areas which currently suffer from poor performance;
3. The implementation of new regulatory measures applying to the Networks Corporation, including independent assessment of network performance benchmarks and service standards and minimum standards through a Reliability and Quality Code; and
4. The establishment of initiatives to improve supply to customers including a new customer protection framework and measures to ensure adequate generation capacity.



2 Reliability and the Restructure of Western Power

Western Power is currently one of the few fully integrated electricity businesses in Australia. Structural change is needed to improve its customer focus and accountability.

The separation of Western Power into four businesses of Generation, Networks, Retail and Regional Power is essential to ensure the full benefits of reform can be achieved.

The creation of four new power businesses, including a dedicated Networks business, is fundamental to the strategy to improve network services.

For network customers, the benefits of the restructure will include:

- an increased focus on network performance, reliability and safety through the establishment of a separate Networks Corporation; and
- an increased emphasis on service delivery outside the South West Interconnected System through the establishment of a separate Regional Power Corporation.

2.1 Networks Corporation

The creation of a separate Networks Corporation will provide, for the first time, a Corporation with a clear corporate focus on the effective operation and development of the transmission and distribution networks.

Currently, the Networks Business Unit within Western Power must compete for both capital funding and management attention with the wider priorities of Western Power, such as generation and retailing activities. It is essential that network services have the full attention of a dedicated Board of Directors, Chief Executive and senior management team, rather than being one of a number of priorities. This is clearly justified by the need for significant investment and operational improvements to enhance network service delivery.

The restructure of Western Power will make the Board of Directors clearly accountable to Government and electricity customers for the performance of the new Corporation, including the efficient and effective operation of networks under the new regulatory arrangements.

The establishment of the Networks Corporation will not only provide clearer corporate focus and accountability, it will also increase the Government funding available for network infrastructure investment. The four-way restructure will permit greater private sector investment in the capital-intensive generation sector. This in turn will free up Government funding to support the development of network infrastructure.

2.2 Regional Power Corporation

A separate Regional Power Corporation will be more responsive to customers in regional Western Australia.

The Regional Power Corporation will supply customers in the North West Interconnected System and the Non-Interconnected Systems.

Western Power is already preparing for this new Corporation. The Regional Power Corporation will have a more devolved management structure. Six new positions created in Carnarvon, Broome, Kununurra and Esperance will have a direct customer focus. They will be supported by a senior manager in Karratha.

Electricity customers in regional areas will experience greater accessibility to their electricity supplier and the Regional Power Corporation will have better insight into customer requirements by being closer to its customers.

The Regional Power Corporation will provide retail and network services, with generation predominantly sourced from private generators under long-term contracts. This reflects the small scale of electricity supply in areas outside the South West Interconnected System.

The financial viability of the supply of electricity to customers outside the South West Interconnected System at the uniform tariff will continue to be preserved. The Regional Power Corporation will be subsidised by a transparent subsidy from customers in the South West Interconnected System. This funding transfer will be protected through the Tariff Equalisation Fund.

3 Record Government Investment in Electricity Networks

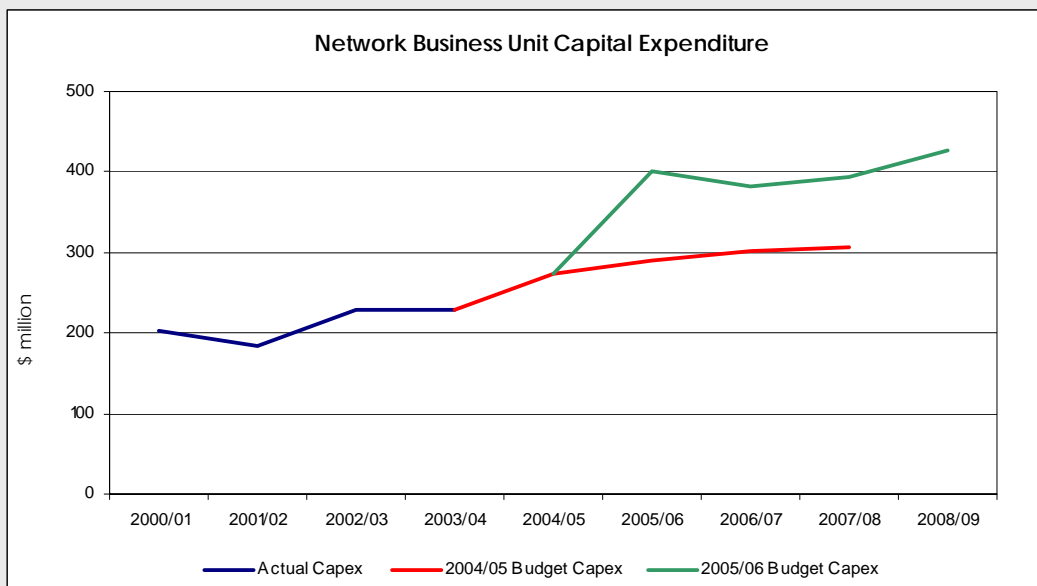
The Government is undertaking an unprecedented investment program in the electricity networks infrastructure in Western Australia.

It has approved a **\$2.23 billion** expenditure program in the South West Interconnected System over the next four years. This includes capital expenditure of \$1,603 million and operating expenditure of \$625 million to:

- urgently improve the safety of electricity networks in the South West Interconnected System;

- develop the transmission and distribution infrastructure required to support the State's fast-growing economy and new residential development; and
- identify and target reliability 'blackspots' where network service problems must be addressed as a priority.

This program is over \$400 million higher than the record \$1.8 billion capital and operating expenditure program announced in the 2004/05 Budget. It reflects the Government's commitment to the investment required to address customer reliability problems.



The Government also continues to implement the \$48 million four-year *Rural Power Improvement Program* that is improving power supplies to the worst affected rural areas on the South West Interconnected System.

The table below summarises the four-year capital expenditure program by region. Approximately 55% of operating expenditure will be spent in country areas over the four-year period.

Table 1: Networks Capital Expenditure

	2005/6	2006/7	2007/8	2008/9
Metropolitan	262.2	273.3	239.9	218.3
South Country	93.1	62.7	65.6	117.3
North Country	41.3	43.3	84.9	85.9
Goldfields	3.8	2.8	3.3	5.2
Total	400.4m	382.1m	393.7m	426.8m

3.1 Improving the Safety of the Electricity Network

In the 2005/06 State Budget, the Government has approved additional operating expenditure of over \$70 million over the four-year period to target reductions in bushfire risk, pole maintenance and environmental compliance.

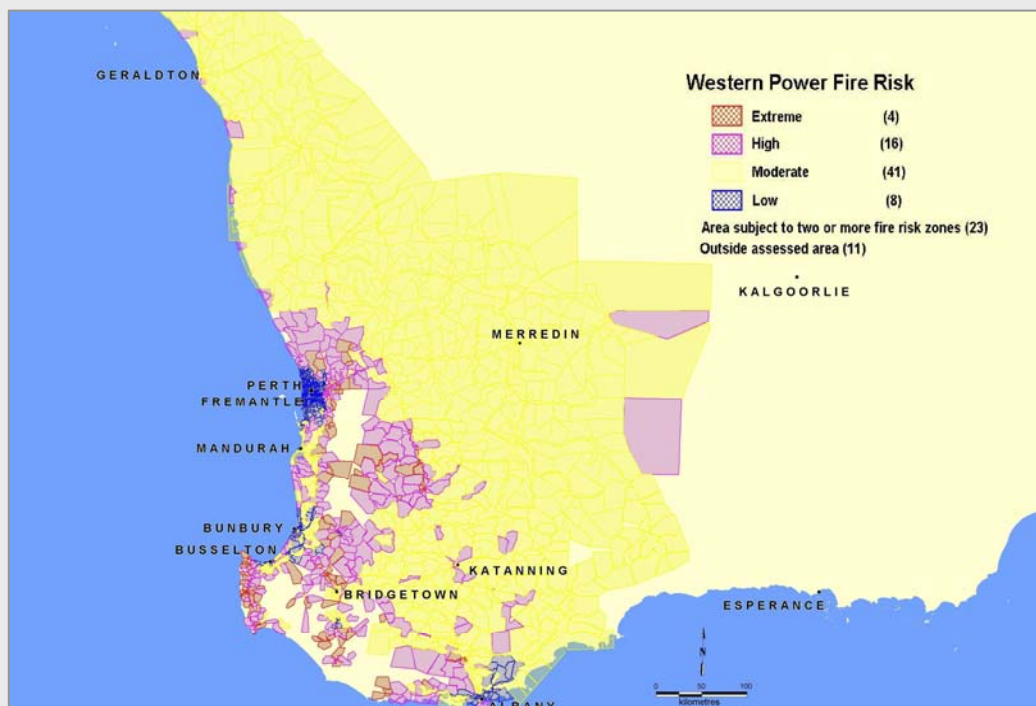
This maintenance program will include a further \$40 million to reduce bushfire risk over the next four years, with a significant boost to vegetation maintenance and silicone coating of insulators to reduce the risk of pole-top fires.

The Networks Corporation will also be increasing other aspects of its preventative maintenance program, including:

- routine maintenance of power pole bases, particularly inspection of wood condition and chemical treatment of wood rot or termite infestation; and
- additional pole-top inspections and patrols of overhead lines.

This additional operating expenditure will allow the Networks Corporation to improve safety in the high and extreme fire zones in the South West Interconnected System, which include approximately 300,000 customers.

High and Extreme Fire Zones in the SWIS



This program is expected to:

- prevent any vegetation initiated fires within two years in these zones; and
- reduce the number of pole-top fires by 15% in these zones over the planning cycle.

As part of the significant increase in Networks capital expenditure, Western Power will commit an additional \$52 million over the next four years to the replacement of overhead service wires connecting 161,000 houses and small businesses.

This program is being urgently undertaken to address the safety of these connections. All compromised units will be replaced by December 2006. By the end of the program in 2012, the connections to 300,000 houses and small businesses throughout the South West Interconnected System will have been replaced at a total cost of \$105 million.

3.2 Reinforcing and Developing the Electricity Network

The Government has approved a record increase to capital expenditure on transmission and distribution networks, recognising the need to improve network performance and meet customer expectations. A total capital program of \$1.6 billion will be delivered over the next four years. Indeed, the capital expenditure on the network in 2005/06 alone will be \$400 million, approximately double the capital expenditure in 2000/01.

The capital expenditure program is supporting the growth of the electricity network, including an additional \$210 million for the connection of new domestic and commercial customers and new electricity generators.

The South West Interconnected System continues to experience high rates of residential sub-division, which in turn drives commercial and industrial development.

Continuing to meet this growth requires sustained investment in network capacity, particularly as the increasing use of domestic air-conditioners and new technology creates extra demands on the network and an increased need for reliability and quality of supply.

However, the Networks investment program will not only keep pace with growth, it will also improve the reliability of supply. The total program includes an additional \$88 million to reduce average transformer loadings at metropolitan substations which will improve overall system reliability.

Due to the significant growth in suburban demand in recent years, the loading of these bulk supply substations has risen and now increases the risk of customer outages. By installing reinforcement plant earlier, this new program will significantly reduce average transformer loading and provide a safety margin to reduce the risk of loss of supply.

The outcome will be a network which is not only larger but is operated to provide improved reliability performance. Together with additional network operating expenditure, the capital expenditure program will:

- achieve an average 25% improvement in the reliability of electricity supply over the next four years benefiting all customers;
- eliminate 90% of all outages caused by the failure of overloaded transformers in the distribution system; and
- on average, provide an additional 140,000 customers with an acceptable standard of reliability. The metropolitan and country areas that will benefit include areas such as Wanneroo, Riverton, North Beach, Collier, Mount Barker, Picton, Boulder, Albany and Capel.

3.3 Network 'Blackspot' Program

As part of this expenditure program, the Networks Corporation will introduce a new performance improvement strategy to directly target the worst performing lines in country and metropolitan areas.

This program will target the 20 worst performing feeders across the State each year for special attention, with \$15.2 million allocated in 2005/06. The action taken will include additional maintenance, undergrounding or replacement of lines and other solutions. Additional inspections will also be undertaken as required.

In its first year, this program will provide significant improvements to reliability in over 120 country areas and more than 77 metropolitan suburbs.

The 2005/06 program will provide direct benefits to over 60,000 customers including in areas served by:

- country feeders, such as Australind, Bunbury, Augusta, Margaret River, Dandaragan, Toodyay, Willyung, Brookton and Eneabba; and
- metropolitan feeders such as Rockingham, Canning Vale, Thornlie, Midland, Balcatta, Mandurah, Bassendean, Morley and Chidlow.

A full list of the areas impacted by this program in 2005/06 is listed at **Appendix 1**.

Broughton Way – A Case Study

Worst performing feeders will be measured and identified using Western Power's reliability indicators.

Once a poor performing feeder has been identified, Western Power will develop tailored strategies and action plans to address the key factors causing reliability issues.

Faults will be grouped into seven categories representing the major issues impacting on feeder reliability: vandalism, maintenance, car accidents, wild life, pollution, vegetation and conductor clashing. Faults will then be analysed in detail to identify trends in terms of which faults are primarily responsible for ongoing poor reliability at a particular period in time (summer, winter etc).

Broughton Way feeder (Rockingham substation) was the worst performing metropolitan feeder as measured by the overall reliability (duration) indicator in 2004.

The key issues identified as being responsible for poor performance of the Broughton Way feeder were vandalism, maintenance, pollution and vegetation. The recommended strategies to improve the reliability of the feeder include:

- undergrounding cable and equipment (subject to cost) to address both vandalism and vegetation issues;
- increased feeder patrols to examine asset condition and implement corrective action;
- installing or improving street lighting to deter vandalism;
- siliconging of pole insulators and installation of high pollution insulators; and
- vegetation patrol and maintenance.

The public can play an important role in assisting Western Power to identify existing or potential problems with its feeders. This includes reporting instances of vandalism or trees that are too close to power lines or identifying problems with power pole visibility that may result in car accidents.

3.4 Rural Power Improvement Program

The Government is also continuing to implement the \$48 million four-year *Rural Power Improvement Program*, which is jointly funded by the Government and Western Power. This program will improve reliability for approximately 43,000 rural customers by reducing the frequency and duration of outages.

Phase 1 of the program commenced in August 2004 and includes installing reclosers, section switches and remote communications equipment on key distribution lines. This equipment allows faults to be isolated so that fewer customers will be affected and because the location of faults can be pinpointed more rapidly, they can be repaired more quickly. Distribution line upgrades will also be undertaken to reduce the susceptibility of the line to faults.

Phase 2 of the program includes works to be undertaken in 2005/06 and 2006/07 and concentrates on upgrading specific unreliable rural lines to improve supply reliability, and provide additional capacity and backup capability to the areas they serve. Projects to be undertaken in 2005/06 will improve reliability to customers in areas such as Dongara, Kalbarri, Merredin, Dandaragan, Watheroo, Narrogin and Collie.

3.5 Country Capital Expenditure

Of the \$400 million capital expenditure program in 2005/06, approximately one third (or \$138 million) will be spent in the North Country, South Country or Goldfields regions of the South West Interconnected System.

This expenditure will support improvements to networks infrastructure in country areas including capacity improvements at Geraldton, Narrogin, Katanning, Kalgoorlie, Bunbury, Picton, Busselton, Augusta and Margaret River.

Some of the major distribution projects to be delivered in 2005/06 include:

- a new 53km extension of the Narngulu West feeder to provide a second feeder supply into the Dongara area;
- a new metropolitan feeder from the Mandurah substation to supply growing loads in the Dawesville and Port Bouvard areas;
- a voltage regulator installed on the Denmark feeder to increase supply capacity to Walpole; and
- a voltage regulator installed on the Nungarin feeder to increase supply capacity in the areas from Nungarin to Beacon.

Capital expenditure of \$190 million will occur in 2005/06 on the transmission network in the South West Interconnected System to increase the capability and reliability of high voltage lines, terminal stations and substations. This is almost three times the transmission network expenditure of \$66 million approved in 2000/01.

This allocation will enable the continuation of major transmission works including:

- network connections and reinforcements associated with new generating plant at Kemerton and Pinjarra;
- the 330 kilovolt line from Southern Terminal to Cannington;
- the 132 kilovolt line from Muja to Bridgetown and Manjimup; and
- the 132 kilovolt line from Pinjar to Cataby and Eneabba.

4 Improved Networks Regulatory Framework

The new Networks Corporation will be subject to a rigorous new regulatory framework under the *Electricity Networks Access Code 2004*. This Code will be administered by the Economic Regulation Authority, which will determine appropriate performance benchmarks and take these into account in approving funding requirements of the Networks Corporation.

The Access Code will be complemented by the Network Reliability and Quality Code, currently being developed by Government, which will provide further certainty for customers by guaranteeing minimum standards of reliability and quality for network services. The new electricity licensing regime provides for the monitoring and enforcement of the Network Reliability and Quality Code's provisions.

4.1 Electricity Networks Access Code 2004

The Western Australian Electricity Networks Access Code came into effect on 30 November 2004, after 12 months of public consultation and intensive development by the Government, Western Power and industry.

The Access Code governs the commercial arrangements, including service standards, contractual terms and conditions and transport charges, that will apply to users of electricity on the South West Interconnected System. It is possible for other networks to become covered by the Code if it is in the public interest.

The Code provides the key means by which network service standard benchmarks will be determined and enforced. The Networks Corporation will be required to specify, monitor and achieve particular standards of service as it operates the network.

4.1.1 Service Standards

The Networks Corporation is required to submit an Access Arrangement for the services that it will provide through the South West Interconnected System. This Access Arrangement must specify a service standard benchmark and a standard access contract for each reference service that is being offered.

Both the service standard benchmarks and the standard access contract must be reasonable and sufficiently detailed to allow electricity users to form an opinion on the value for money that each reference service represents.

The Economic Regulation Authority will undertake a comprehensive review and approval process, and all of the Networks Corporation's proposals will be subject to a transparent public consultation process. This process ensures that interested parties, including regional stakeholders, will have at least two opportunities to provide submissions on the proposed service standards and the standard access contract. Such submissions will be published and taken into account by the Economic Regulation Authority in its decision-making.

Additionally, the Networks Corporation must include a service standards adjustment mechanism in its proposed Access Arrangement. This is a new mechanism that provides stronger accountability on the Networks Corporation to ensure its expenditure has actually delivered the service standards which were expected.

4.1.2 Monitoring of Performance

The Access Code places an obligation on the Economic Regulation Authority to monitor the service provider's performance with respect to its approved service standards and to publish a report on actual performance against benchmarks on an annual basis (Chapter 11).

The Government has ensured the Access Code will provide strong information gathering powers to the Economic Regulation Authority to allow it to carry out this obligation. This includes the power to compel the service provider to provide information in a form and format that the Authority requires.

The Code also provides a process by which the Authority may advertise for submissions from network customers regarding the Networks Corporation's performance against the approved service standard benchmarks.

4.1.3 Extensions and Expansions

The Networks Corporation will be required to fund augmentations of the network where it is economically viable to do so. The Access Code clearly prescribes the test that must be satisfied for determining the feasibility of a particular augmentation. As part of its Access Arrangement, the Networks Corporation must propose a Capital Contributions Policy, setting out the terms and conditions under which a prospective user may be required to make a capital contribution to fund a network extension or expansion.

The Access Code sets out a series of principles that must be reflected in the Networks Corporation's Capital Contributions Policy, including a requirement that it should strike a balance between the interests of the contributing user, other users (including future users) and consumers. The Capital Contributions Policy must not act as a barrier to the entry of new market participants.

The Access Code includes a model Capital Contributions Policy that provides additional guidance to the Economic Regulation Authority and Western Power on issues such as:

- fair treatment of the first and subsequent users of a connection. For instance, rebates should be provided to the first user where appropriate to ensure that it is not subsidising subsequent users; and
- the manner in which Capital Contribution payments may be made, including a provision for periodic financial payments and payments 'in kind'.

4.2 Reliability and Quality Code

A Network Reliability and Quality Code is being developed by the Office of Energy and will be established by the end of 2005. This Reliability and Quality Code will complement the service standard provisions contained in the Access Code and provide a safety net that specifies customer-focused minimum standards for quality and reliability for all of Western Power's small customers (ie. consuming less than 160 megawatt hours per annum).

Under the Reliability and Quality Code, transmission and distribution licence holders will be obliged to:

- take action to correct supply that fails to meet standards;
- spend funds to prevent recurring breaches of reliability standards; and
- make service standard payments to affected customers in certain circumstances.

As part of this initiative, the Government is already introducing a new requirement that Western Power Networks make an \$80 payment to eligible customers who, through no fault of their own, suffer a continuous interruption exceeding 12 hours. This scheme will commence on 1 July 2005 and will apply to all households and businesses connected to a Western Power network with an average load of less than 5.7 kilowatts (or consuming less than 50 megawatt hours per annum).

In addition to recognising the impact of outages on customers, this payment will also provide an incentive for improved performance by the Networks Corporation and Regional Power Corporation.

Once the Reliability and Quality Code is in place, significant measures will apply to ensure the accountability of the network service provider, including:

- the Network Reliability and Quality Code will be independently administered by the Economic Regulation Authority;
- significant enforcement measures including fines of up to \$100,000 for failure to comply with the Code or ultimately, the cancellation of the network service provider's licence;
- strengthened public reporting requirements, so that transmission and distribution licence holders will be made accountable for failure to meet minimum standards. This reporting must be provided in a user friendly format; and
- lastly, the Networks Corporation will remain subject to Ministerial direction, if required.

Through the two Codes, the Access Code and the Reliability and Quality Code, the Government has established a clear regulatory framework which will ensure the Networks Corporation is directly accountable for its service to customers.

5 Other Initiatives to Improve Supply to Customers

The Government is moving forward on a number of initiatives to improve supply to customers. These include stronger measures to ensure generation adequacy in the future and the establishment of a customer protection framework.

5.1 Generation Adequacy

It is critical for electricity customers and the power industry to ensure that sufficient generation capacity is established in time to meet future demand.

Under the Government's reform to the electricity market, there will be a more certain mechanism for ensuring generation capacity is available at the appropriate time. In the future, the Independent Market Operator will have the key responsibility for ensuring adequate generation or demand side capacity is secured for the South West Interconnected System.

This mechanism will take the key forecasting and procurement decisions out of the hands of just one market participant, Western Power, and put it in the hands of an independent authority with clear accountability for ensuring system capacity.

The Independent Market Operator will operate a Reserve Capacity Mechanism, which will require retailers to either secure their share of reserve capacity under a bilateral contract with an electricity generator or to purchase it from the Independent Market Operator.

The Independent Market Operator will forecast the capacity required for each year against reserve margin criteria. It will require that there is sufficient capacity to meet the forecast peak load, even assuming extreme weather conditions and that the largest unit on the system is unavailable.



Photo courtesy of Western Power

The Reserve Capacity Mechanism is based on the trade of 'capacity credits' between those supplying capacity to the market and those using it. Each year, the Independent Market Operator will allocate the total capacity obligation between retailers and large loads in proportion to their contribution to the system peak demand in the previous year. This provides a commercial basis for capacity procurement.

If there is a need for additional capacity, the Independent Market Operator will undertake an auction process to ensure the required generation is delivered.

To ensure the State's needs are met in the short term, while the wholesale market is getting established, Western Power has recently procured an additional 240 megawatts of peaking plant under a power purchase agreement and is currently procuring additional baseload capacity (300-330 megawatts) to replace plant that is due for retirement over the next three years.

5.2 Customer Protection Framework

Customer service standards in the supply of electricity in Western Australia have traditionally lagged behind those in the eastern States. Prior to the passage of the Government's electricity reform legislation in 2004, there was limited scope to establish effective network and retail service standards for electricity customers.

The Government has initiated a range of new network and retail customer service standards aimed at delivering better service to residential and small business customers. The Government's customer protection framework includes:

- a Code of Conduct for the Supply of Electricity to Small Use Customers that regulates the behaviour of network operators and electricity retailers by specifying what behaviour is acceptable and providing the ability for customers to receive compensation payments for breaches of the Code;
- regulations to ensure that residential and small business customers can be connected to a distribution network at the least cost to the customer, and within a specified time period, if the customer is located within a specified distance to an existing distribution network;
- an independent Energy Ombudsman to provide residential and small business electricity customers with access to a mechanism for resolving disputes with network operators and electricity retailers at no cost to the customer;
- a standard contract that will specify the price and other terms and conditions for the supply of electricity by Western Power to its tariff customers ;and
- a licensing regime that requires generators, network operators and retailers to hold a licence issued by the Economic Regulation Authority. Failure to comply with a licence condition (including compliance with the Code of Conduct and participation in the Ombudsman scheme) can attract a penalty of up to \$100,000 and ultimately licence cancellation.

Appendix 1: Network 'Blackspot' Program

Country Feeders and Areas to Benefit (2005/06 Program)

Eaton-Australind Port Kennedy Rockingham Safety Bay Waikiki Warnbro	Beenup Alexandra Bridge Augusta Deepdene Flinders Bay Forest Grove Hamelin Bay Karridale Kudardup Margaret River Molloy Island Nannup Shire Scott River Scott River East Warner Glen White Point Witchcliffe	Jurien Badgingarra Carnamah Cervantes Coomallo Hill Dandaragan Dandaragan Shire Eneabba Jurien Jurien Bay Moore River	Toodyay Bejoording Bolgart Chittering Coondle Culham Dewars Pool Gingin Hoddys Well Jennacubbine Julimar Lower Chittering Northam Nunile Red Hill Toodyay Wattening West Toodyay Wyening
Willyung Bakers Junction Borden Boxwood Hill Bremer Bay Cape Riche Cheyne Beach Dillon Bay Gairdner Gnowellen Green Range Jerramungup Kalgan Kendenup King River Kojaneerup Lower Kalgan Lower King Manypeaks Mettler	Millbrook Mount Barker Nanarup Napier Narrikup Ongerup Plantagenet Shire Porongurup Rocky Crossing South Stirling Tackenburg Two Peoples Bay Upper Kalgan Walmsley Warrenup Warriup Wellstead Willyung	Bunbury South Bunbury College Grove Dalyellup Elgin Gelorup Glen Iris Usher	Carey Park Bunbury Carey Park South Bunbury

Network 'Blackspot' Program

Country Feeders and Areas to Benefit (2005/06 Program)

Brookton		Leeman	Bunbury North
Aldersyde	Moorumbine	Eneabba	Bunbury
Beldon	Mount Kokeby	Greenhead	
Beverley	Narrogin	Leeman	
Beverley Shire	North Bannister		
Bradfords	Pingelly		
Brookton	Pingelly Shire		
Brookton Shire	Popanyinning		
Bulyee	Pumphreys Bridge		
Codjatown	Wandering		
Corrigin	Wandering Shire		
Cuballing	Westdale		
Cuballing Shire	Williams		
Dattening	Yealering		
Jelcobine	York		
Jubuk	Yornaning		
Kubbine			
Kweda			
Lomos			

Network 'Blackspot' Program

Metropolitan Feeders and Areas to Benefit (2005/06 Program)

<p>Broughton Way Port Kennedy Rockingham Safety Bay Waikiki Warnbro</p>	<p>Nicholson Road Canning Vale Huntingdale Southern River Thornlie</p>	<p>Swanview Baskerville Bellevue Brigadoon Gidgegannup Herne Hill Jane Brook Middle Swan Midland Midvale Millendon Red Hill Stratton Swan View</p>	<p>Arkana Road East Balcatta Dianella Mirrabooka Nollamara Westminster</p>
<p>Lanyon Bouvard Dawesville Erskine Falcon Halls Head Herron Lake Clifton Mandurah Wannanup</p>	<p>Thompson Baldivis Barragup Bouvard Dawesville Golden Bay Greenfields Karnup Lakelands Mandurah Meadow Springs Nambelup North Dandalup Parklands Port Kennedy Riverside Gardens Riverview Secret Harbour Serpentine Stake Hill Warnbro</p>	<p>Wanneroo Road Butler Merriwa Neerabup Nowergup Quinns Rock Ridgewood</p>	<p>Scadden Street Bassendean Bayswater Dianella Eden Hill Embleton Morley</p>

Network 'Blackspot' Program

Metropolitan Feeders and Areas to Benefit (2005/06 Program)

Chidlow	Russell Road West
Bailup	Beeliar
Chidlow	Coogee
Gidgegannup	Hamilton Hill
Mount Helena	Henderson
Sawyers Valley	Hope Valley
Stoneville	Munster
	Spearwood
	Wattleup
	Yangebup