# 7 BEYOND THE NATIONAL ELECTRICITY MARKET


Two jurisdictions have electricity markets that are not interconnected with the National Electricity Market: Western Australia and the Northern Territory. Western Australia has recently introduced a number of electricity market initiatives, including a new wholesale market. The Northern Territory has introduced electricity reforms, but at present there is no competition in generation or retail markets.

# 7 BEYOND THE NATIONAL ELECTRICITY MARKET

## 7.1 Western Australia

Western Australia's electricity market is thousands of kilometres away from the National Electricity Market (NEM), which extends through eastern and southern Australia. There is neither physical interconnection nor governance linkages between the two markets.

With a customer base spread over a third of the national landmass, Western Australia's electricity industry faces some unique challenges. State-wide, around 60 per cent of installed generation capacity is fuelled by natural gas, 35 per cent by coal and 2 per cent by oil. Gas is used in base load cogeneration plants and peaking units. There has been growth in electricity generation from renewable sources, of which more than half consists of wind, with hydro and biomass comprising the balance. Renewable sources fuelled about 4 per cent of generation in 2006–07. Electricity generated from renewable energy has increased six-fold since 2003.[1]

The Western Australian Government has set a target of 6 per cent of electricity to be sourced from renewable energy by 2010. The planned development of the WA Biomass Plant in 2009–10 is expected to lift the share of renewable energy production over this target.

### 7.1.1 The networks

Reflecting Western Australia's geography, industry and demographics, the state's electricity infrastructure consists of several distinct systems (see figure 7.1):

- the South West Interconnected System (SWIS)
- the North West Interconnected System (NWIS)
- 29 regional, non-interconnected power systems.

The largest network, the SWIS, serves Perth and other major population centres in the south-west of the state, while the NWIS serves towns and the mining and resource industries in the north-west of the state.

1 Sustainable Energy Development Office (WA), Renewable energy, fact sheet, 2008.

### The South West Interconnected System

The SWIS is the major interconnected electricity network in Western Australia, supplying the bulk of the south-west region. It extends to Kalbarri in the north, Albany in the south, and Kalgoorlie in the east. The network supplies 840 000 retail customers with 6000 kilometres of transmission lines and 64 000 kilometres of distribution lines. It comprises 4200 megawatts (MW) of installed generation capacity, of which about 75 per cent is owned by the state utility, Verve Energy. The remaining 25 per cent is privately owned, but the energy is principally dedicated to resource projects. Verve Energy's share of installed generation will fall to 66 per cent in 2008–09 as its program of retiring old plant continues.

The principal base load generators are located near Collie, about 200 kilometres south of Perth, near the state's only coal mining facilities. The majority of principal peak load (open cycle gas turbine) generators are located near the Dampier to Bunbury natural gas pipeline north of Perth. There are also plants at Kemerton and Kalgoorlie, and a large mixed fuel generation station at Kwinana, south of Perth. A 320 MW combined cycle gas turbine station is under construction at Kwinana to supply power from late 2008. Most independent power producers with plants connected to the SWIS use gas as their primary fuel (see table 7.1).[2]

Western Australia introduced a wholesale electricity market in the SWIS in September 2006 (see section 7.1.3).

Table 7.1 Installed generation capacity in the South West Interconnected System by fuel source, 2008

| FUEL SOURCE | TOTAL GENERATION CAPACITY (%) |
|---|---|
| Open cycle gas turbine | 40 |
| Coal fired | 38 |
| Gas cogeneration | 12 |
| Combined cycle gas turbine | 5 |
| Renewable | 5 |

Source: IMO.

### The North West Interconnected System

The NWIS operates in the north-west of the state and centres around the industrial towns of Karratha and Port Hedland and resource centres. The network is significantly smaller than the SWIS and its purpose is to supply the resource industry's operations and associated townships in the area.

The NWIS has a generation capacity of 400 MW. The plants are mainly fuelled by natural gas, some of which is shipped on the Pilbara Energy Pipeline, which runs from Karratha to Port Hedland.

Horizon Power is responsible for the transmission, distribution, and retailing of electricity to customers through the NWIS. Horizon purchases power from private generators in the region and sells it to residential and commercial customers. Private generators serve the major resource companies in the Pilbara. These include Hamersley Iron's 120 MW generation plant at Dampier, Robe River's 105 MW plant at Cape Lambert and Alinta's 105 MW plant at Port Hedland.

Due to the small scale of this system, the NWIS will not see a wholesale market introduced in the manner of the SWIS in the foreseeable future.

2 Griffin Power is currently constructing two coal base load plants near Collie in the south-west of the state.

Figure 7.1

**Electricity infrastructure map—Western Australia**


Source: Economic Regulation Authority (Western Australia).

**Regional non-interconnected systems**

Further small, non-interconnected distribution systems operate around towns in rural and remote areas beyond the SWIS and NWIS networks.[3] Horizon Power operates the 29 distribution systems located in these regions, but independent generators supply much of the electricity.

### 7.1.2 Electricity market reform

In 1993, when Australian governments decided to create a national electricity market, it was impractical for Western Australia to join. Geography dictated that its networks could not be physically interconnected with the other states.

Consistent with the eastern and southern states, Western Australia's electricity industry was historically dominated by a single, vertically integrated utility under government ownership. Western Australia retained this structure for almost a decade longer than other jurisdictions. The lack of competition, in combination with relatively high generation costs (due to relatively expensive coal sources and the remoteness of major gas fields), led to high electricity prices.

The Western Australian Government began implementing a series of electricity reforms in 2003. The central reform was the disaggregation of the electricity utility Western Power Corporation into four separate, state-owned entities in April 2006. The entities are:

- Verve Energy—generation
- Western Power—transmission and distribution networks
- Synergy—retail
- Horizon Power—regional supply.

Other key reforms included:

- establishing, in 2006, a wholesale electricity market (see section 7.1.3)
- establishing, in 2004, an electricity networks access code for access to transmission and distribution networks (see section 7.1.4)
- extending, in 2005, the retail contestability threshold to all customers using more than 50 megawatt hours (MWh) per year (see section 7.1.5)
- implementing consumer protection measures, including a network reliability and quality of supply code and an energy ombudsman scheme (see section 7.1.5).

### 7.1.3 Wholesale electricity market

In September 2006, Western Australia launched a wholesale electricity market in the SWIS. Energy trading is facilitated through a combination of bilateral contracts, a day-ahead short-term energy market (STEM) and a balancing market. The wholesale market was designed to suit Western Australian conditions at that time and differs considerably from the NEM.

The rule development body and market operator is the Independent Market Operator (IMO), a government entity established in 2004.[4] The IMO has no commercial interest in the market and no connection with any market participant, including Western Power.

The physical system operator, System Management, is a ring-fenced entity within Western Power tasked with maintaining safe, secure and reliable operation of the power system. It is responsible for the operation and control of generator facilities, transmission and distribution networks, and large customer retailer supply management.

3 The networks are located in such areas as Broome, Gascoyne Junction, Menzies, Camballin, Halls Creek, Mount Magnet, Carnarvon, Hopetoun, Norseman, Cue, Kununurra, Nullagine, Denham, Lake Argyle Village, Sandstone, Derby, Laverton, Wiluna, Esperance, Leonora, Wittenoom, Exmouth, Marble Bar, Wyndham, Fitzroy Crossing, Meekatharra and Yalgoo.

4 Information on the market can be found on the IMO website (http://www.imowa.com.au).

Western Power

Table 7.2 **Participants in Western Australia's wholesale electricity market**

| PARTICIPANT | GENERATORS | | CUSTOMERS | |
|---|---|---|---|---|
| | 2006 | 2008 | 2006 | 2008 |
| Alcoa | ■ | ■ | ■ | ■ |
| Alinta Sales Pty Ltd | ■ | ■ | ■ | ■ |
| Barrick (Kanowna) Limited | | | ■ | ■ |
| Bioenergy Limited | | ■ | | |
| EDWF Manager Pty Ltd | ■ | ■ | | |
| Eneabba Gas Limited | | ■ | | |
| Enebba Energy Pty Ltd | | ■ | | |
| Goldfields Power Pty Ltd | ■ | ■ | | |
| Griffin Power Pty Ltd | | ■ | | ■ |
| Landfill Gas and Power Pty Ltd | ■ | ■ | ■ | ■ |
| Mount Herron Engineering Pty Ltd | ■ | ■ | | |
| Namarkkon Pty Ltd | | ■ | | |
| NewGen Power Kwinana Pty Ltd | | ■ | | |
| Newmont Power Pty Ltd | | | ■ | ■ |
| Perth Energy Pty Ltd | ■ | ■ | ■ | ■ |
| Premier Power Sales Pty Ltd | | | ■ | ■ |
| Southern Cross Energy | ■ | ■ | ■ | ■ |
| South West Cogeneration Joint Venture | | ■ | | |
| Synergy | | | ■ | ■ |
| TransAlta Energy (Australia) | | | | ■ |
| Transfield Services Kemerton Pty Ltd | | ■ | | |
| Verve Energy | ■ | ■ | ■ | ■ |
| Walkaway Wind Power Pty Ltd | | ■ | | |
| Waste Gas Resources Pty Ltd | ■ | ■ | | |
| Water Corporation | | | ■ | ■ |
| Worsley Alumina | | ■ | | |

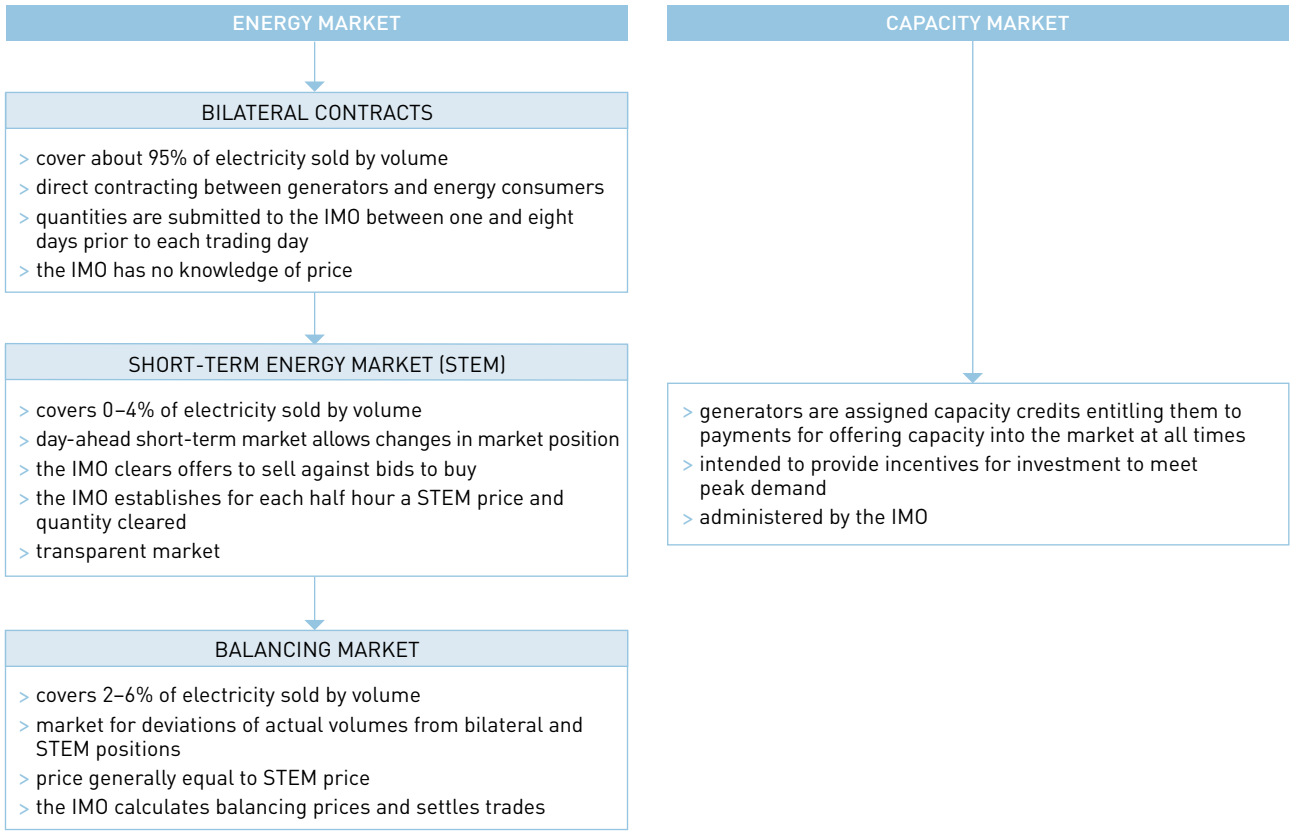
Source: Economic Regulation Authority (Western Australia).

State-owned corporations will continue to dominate the market for some time for the following reasons:

- Verve Energy owns about 75 per cent of installed generation capacity in the SWIS. This will fall to 66 per cent in 2008–09. The government expects that Verve's market share will continue to fall in subsequent years with the phasing out of transitional vesting contracts implemented with the disaggregation of Western Power.[5]
- Western Power owns the bulk of the transmission and distribution systems.
- Until full retail contestability is introduced, Synergy will serve all customers using less than 50 MWh per year, including small business and residential consumers. At this stage, Western Australia has not determined a date to introduce full retail contestability. Most contestable customers still have access to gazetted tariffs, which in the current environment of rising electricity costs reduce the incentive to switch to another supplier.

5 The vesting contracts relate to the wholesale supply of electricity by Verve Energy to Synergy, the government-owned retailer. The arrangements were intended to ensure that Synergy could meet the sales obligations that it inherited from Western Power, and initially covered a substantial proportion of wholesale supply in the SWIS. The arrangements will be phased out as competition is introduced.

Figure 7.2
**Western Australian wholesale electricity market**




Source: Independent Market Operator (Western Australia).

However, the extent of dominance by state-owned energy corporations may reduce over time with new market entry and greater interaction between state-owned corporations and independent power producers. In particular:

- The Western Australian Government has placed a 3000 MW cap on Verve Energy's ability to invest in new generation plant to allow independent generators to increase their market share over time.
- Synergy is not permitted to own or control generation plant until the Western Australian Government is satisfied that new market entry has occurred. It is also required to conduct regular displacement tenders of energy currently sourced under transitional vesting arrangements.

It is expected that by 2009–10, Verve Energy's share of generation capacity will fall to around 60 per cent of generation capacity, with three new participants acquiring significant generation capacity (NewGen Power, Griffin Power and Alcoa).[6] Table 7.2, which sets out market participants in 2006 and 2008, indicates the extent of new entry since the market began.

### Differences between the Western Australian electricity market and the National Electricity Market

Figure 7.2 illustrates the key elements of the Western Australian Wholesale Market in the SWIS. There are three main differences between the market design for the SWIS and the NEM:

- gross pool versus net pool
- capacity market arrangements
- ancillary services.

6 Economic Regulation Authority, *Annual wholesale electricity market report for the Minister for Energy*, 2007 (p. 11).

### *Gross pool versus net pool*

The NEM is a gross pool in which the sale of all wholesale electricity occurs in a spot market. NEM participants also enter into formal hedge contracts to manage spot market risk. In contrast, energy in the SWIS is mainly traded through bilateral contracts outside the pool. These may be entered into years, weeks or days prior to supply. Before the trading day, generators must inform the IMO of the quantity of energy to be sold under bilateral contracts and to whom it will be sold so the IMO can schedule that supply.

In the lead-up to dispatch, System Management issues instructions to ensure that supply equals demand in real-time. Rather than being dispatched on a least-cost basis, dispatch mainly reflects the contract positions of participants. Generators submit daily resource plans that inform the IMO of how their facilities will be used to meet their contract positions. Generators are obliged to follow these plans, unless they are superseded by dispatch instructions. Verve Energy's facilities are scheduled around the resource plans of other generators. If it appears that supply will not equal demand, the IMO will schedule Verve Energy generation first, and then issue dispatch instructions to other market participants as necessary.

Beyond bilateral contracts, the STEM and a balancing market are used to trade wholesale electricity (see figure 7.2). The STEM supports bilateral trades by allowing market participants to trade around their net contract positions a day before energy is delivered. If, for example, a generator does not have sufficient capacity to meet its contracted position, it can bid to purchase energy in the STEM. Participation in the STEM is optional. Participating generators must offer generation plant at short run marginal cost. Each morning, market participants may submit to the IMO bids to purchase energy and/or offers to supply energy.[7] The IMO then runs an auction, in which it takes a neutral position to determine a single price for each trading interval of the day.

A market participant's actual supply or consumption of electricity during a trading interval may deviate from their net contract position (the sum of their bilateral position and STEM trades) due to unexpected deviations in demand and unplanned plant outages. The shortfall or surplus is traded on the balancing market. The IMO calculates balancing prices, which for Verve Energy plant are generally equal to the short run marginal cost of the last unit dispatched. Any independent power producer plant dispatched for balancing or ancillary service provision is 'paid as bid'.

### *Capacity market arrangements*

The SWIS market includes both an energy market (the STEM) and a capacity market (see figure 7.2). The capacity market is intended to provide incentives for investment in generation to meet peak demand. In particular, it is intended that the capacity market will provide sufficient revenue for investment without the market experiencing high and volatile energy prices.

The IMO administers a reserve capacity mechanism to ensure that there is adequate installed capacity to meet demand. The IMO determines how much capacity is required to meet peak demand each year and allocates the costs of obtaining the necessary capacity to buyers —mostly retailers. Generators are assigned capacity credits, which entitle them to payments for offering their capacity into the market at all times. Payments of $10 625 per MW of capacity per month were provided for the period from the start of the market to 1 October 2008. For the twelve months from 1 October 2008, generators will receive $8152 per MW of capacity per month. These amounts are intended to cover the fixed costs of an open cycle peaking gas turbine and will partially cover the capital costs of base load units.

In the NEM there is no capacity market. Instead, generators are paid only for energy sent out, and a high price cap provides incentives to invest in generation and establish demand side responses. The provision of capacity payments means that wholesale spot energy

7 In order to receive reserve capacity payments, generators must offer all registered capacity into the STEM.

Table 7.3 **New entrants in the South West Interconnected System—generation and retail**

| PARTICIPANT | INVESTMENT |
|---|---|
| Alinta Sales | > 80 MW wind farm at Walkaway opened in late 2005<br>> 130 MW cogeneration plant opened in April 2006<br>> 130 MW cogeneration plant commissioned in February 2007<br>> 350 MW open cycle plant under construction for end 2007 |
| Stanwell/Griffin | > 80 MW wind farm at Emu Downs opened October 2006 |
| NewGen Power Kwinana | > 320 MW Kwinana combined cycle plant under construction for end 2008 |
| Griffin Power | > 200 MW Bluewaters 1 coal fired plant under construction for end 2008<br>> 200 MW Bluewaters 2 plant under construction for end 2009<br>> 330 MW gas-fired plant near Neerabup proposed for 2010–11 |
| Perth Energy | > Combined cycle gas plant under consideration |
| Eneabba Gas | > 168 MW Centauri 1 gas-fired plant near Eneabba due to begin operation in 2009 |
| Western Australian Biomass | > 40 MW boiler/steam turbine power station fired by biomass to begin operation in 2009–10 |
| Western Energy | > 80 MW Kwinana combined cycle gas-fired plant due for 2010 |
| Aviva | > 400 MW Coolimba coal-fired plant near Eneabba due for 2012 |
| Premier Power Sales | > New retailer |

Source: IMO, Office of Energy (WA).

prices in Western Australia are unlikely to need to peak as high as NEM prices to stimulate investment. The Market Rules specify that the maximum STEM price is adjusted periodically to reflect CPI changes.[8] For the year from 1 October 2006 to 30 September 2007, the STEM price cap was $159.84 per MWh. For the year from 1 November 2007 to 1 October 2008, the cap is $206 per MWh. This price is based on the marginal cost of an open cycle gas turbine using natural gas as fuel. In comparison, the NEM operates with a $10 000 per MWh price cap.[9]

The IMO determines annual reserve capacity requirements and releases an annual statement of opportunities report that covers a period of 10 years, the first having been released in 2005. Western Australia's Economic Regulation Authority (ERA) approves the maximum reserve capacity price and the energy price caps in the short-term market that are proposed by the IMO.

### *Ancillary services*

There are eight frequency control ancillary services spot markets in the NEM in which participants may bid to provide services. Network control ancillary services are procured through long-term contracts. In contrast, there are no spot markets for ancillary services in the SWIS. System Management determines ancillary services requirements and procures them from Western Power or other participants under contract arrangements.

### *Energy market outcomes*

While it is too early to assess the outcomes of the Western Australian energy market, a number of developments can be observed. The number of market participants is increasing, with new retailers and generators entering the market. Table 7.3 shows that Premier Power has entered the retail market and that a number of generators have been built recently or are planned for the near future.

There has been strong interest in investing in the energy market, including in renewable energy. In total, the number of generators has risen from 10 to 22 since the market began. The number of retailers has risen from 11 to 14. More varied plant sizes, technologies and fuel types are being encouraged, as are cost-efficient plant upgrades. Another outcome has been the introduction of more cost-reflective prices in the STEM, which recognise the cost of energy during system peaks and

8 The Market Rules can be found on the IMO website (http://www.imowa.com.au).

9 Information on price caps can be found on the IMO website (http://www.imowa.com.au).

short-term pressures such as fuel shortages and strong demand. However, there is less cost reflectivity in the retail market, where transitional vesting arrangements and gazetted tariffs apply.[10] To address the lack of cost reflectivity and transparency, the Western Australian Government announced in April 2008 a $780 million subsidy payment to Verve Energy over three years.[11]

The volume of energy traded in the STEM and the balancing markets has ranged from about 4.5 to 6.5 per cent of total sales, although unpublished data since late 2007 suggest it has frequently dropped below 1 per cent (see figure 7.3).

There was relatively strong trading activity in the STEM at the commencement of the market, which later declined as the market evolved. Recently, STEM trades have risen again, largely between generators seeking access to lower cost plant.

On most days the number of market participants placing STEM bids fluctuates between four and seven. Given the limited number of participants, the STEM is relatively active despite the limited quantities traded. While Verve Energy accounts for a majority of capacity in the market, figure 7.4 shows that other participants have been active in the STEM. In contrast, the level of competition in the bilateral contract market is difficult to gauge because such contracts are confidential.

The ERA has stated it is not aware of outcomes in the STEM that indicate market power is an issue. However, it has raised concerns about:

- the appropriateness of the investment signals provided by the market
- the appropriateness of the timing of the reserve capacity mechanism and whether this can create barriers to investment for facilities with long lead times
- whether the timing of planned network outages impacts on the effectiveness of the market
- whether there are barriers to the participation of consumers in demand-side management programs.[12]

According to the IMO, there have been five STEM suspensions since the market commenced. Settlement processes and participant understanding of the market systems and rules has been improving.[13]

**Price outcomes**

Price outcomes in the STEM and balancing markets provide transparent price signals on the cost of electricity. The mean peak STEM price from the commencement of the market until 31 July 2007 was $68.90 per MWh, while the mean off-peak price was $32.30 per MWh.[14] Figure 7.5 shows the weighted average weekly STEM prices from the commencement of the market to the end of February 2008. The early high prices were due to fuel restrictions and low generator availability. The price peaks in 2007 reflect high demand periods and fuel shortages.[15]

### 7.1.4 Network access

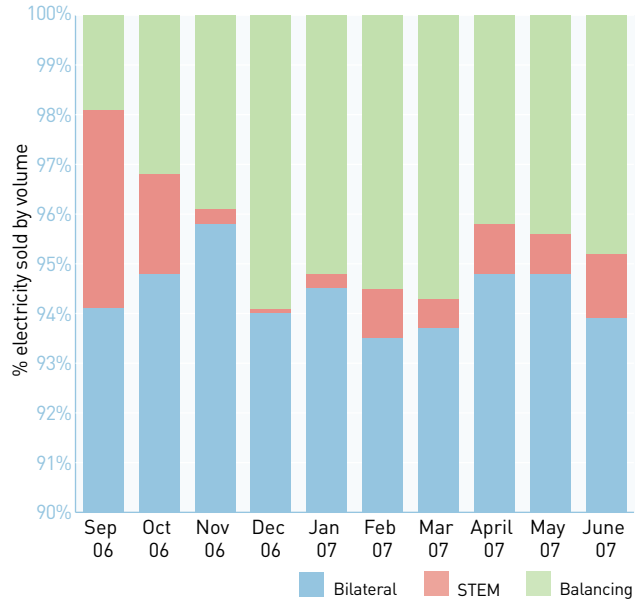
In 2004, Western Australia implemented the Electricity Networks Access Code for access to transmission and distribution network services. At present, the Code only covers Western Power's networks within the SWIS, but other networks may be covered in the future if they meet the access regime's coverage tests. In July 2006, the Commonwealth Treasurer certified the Code as an effective access regime under the *Trade Practices Act 1974*.

The ERA administers the Code, which prescribes commercial arrangements, including access charges that electricity generators and retailers must pay to use Western Power's networks. The regulatory framework sets out criteria for the ERA's acceptance or rejection of an access arrangement proposed by the service provider.

10 See also section 7.1.5.
11 Alan Carpenter, Premier, Ministerial Media Statement, *State Government to phase in electricity price increases*, 4 April 2008.
12 Economic Regulation Authority, *Annual wholesale electricity market report for the Minister for Energy*, 2007, p.viii.
13 Independent Market Operator, *Western Australian Electricity Market*, presentation by Bill Truscott, 24 September, 2007.
14 Economic Regulation Authority, *Annual wholesale electricity market report for the Minister for Energy*, 2007, p. 12.
15 Independent Market Operator, *Western Australian electricity market*, presentation by Bill Truscott, 24 September, 2007.

Figure 7.3

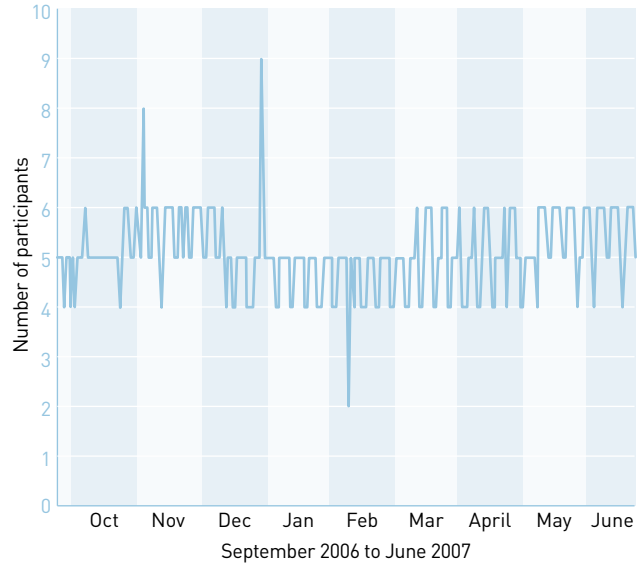
**Composition of electricity trading in the South West Interconnected System**




Source: IMO.

Figure 7.4

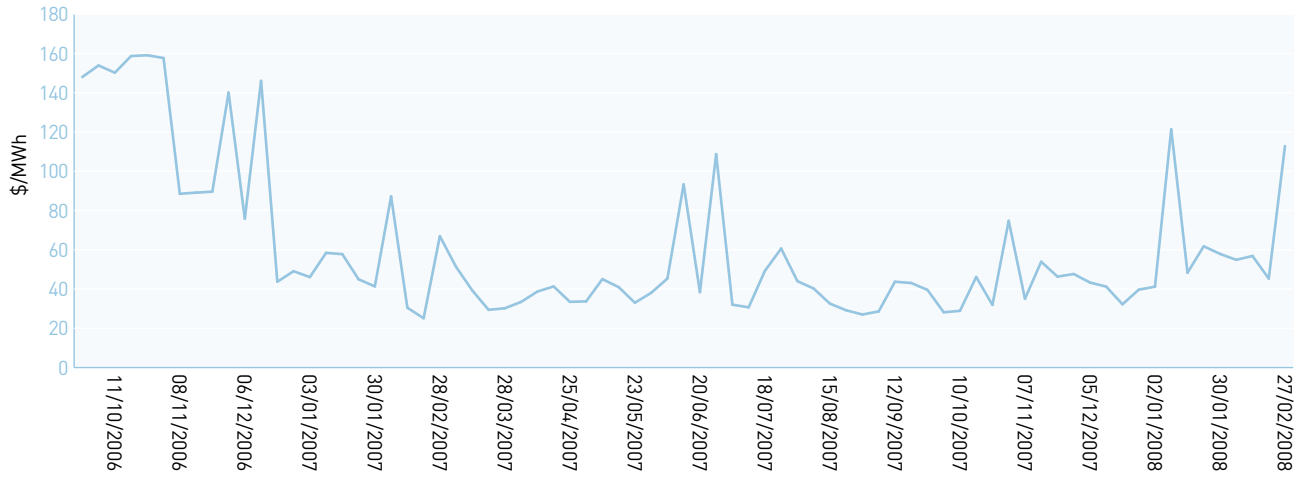
**Number of active participants in short-term energy market auctions**




Source: IMO.

Figure 7.5

**Weighted average weekly prices—short-term energy market**




MWh, megawatt hour.

Source: IMO.

The ERA released a decision in April 2007 on Western Power's access arrangement under the Code. Western Power's access tariffs under the decision are published on the ERA website. Under the access arrangement, Western Power is required to submit to the ERA, for approval, a proposed price list (to apply for the next pricing year). The 2008–09 price list was approved on 8 May 2008.[16]

### 7.1.5 Retail arrangements

In January 2005, Western Australia extended retail contestability to electricity customers using at least 50 MWh per year. Customers below this threshold who are connected to the SWIS are served by Synergy, the state-owned energy retailer. Most customers outside the SWIS are served by Horizon Power. Currently, around 60 per cent of the Western Australian market, by volume, is contestable.[17]

The Western Australian Government has not set an implementation date for full retail contestability in electricity. The *Electricity Corporations Act 2005* requires the Minister for Energy to undertake a review in 2009 to consider a further extension of contestability. While full contestability has not commenced, there has been some degree of retailer switching by large market customers.[18]

Companies, other than Synergy, that currently offer retail electricity products in the SWIS include Alinta Sales, Griffin Power, Landfill Gas & Power, Perth Energy, Premier Power Sales and TransAlta Energy (Australia). The ERA website publishes a list of licenced retailers.

It is Western Australian government policy that all Synergy and Horizon Power customers are entitled to a uniform tariff, irrespective of their geographic location. The Western Australian Government approves the tariff and implements the scheme through a combination of statutory requirements. Regional electricity tariffs are subsidised by the Tariff Equalisation Fund, which is administered by the Office of Energy and funded by SWIS network users.

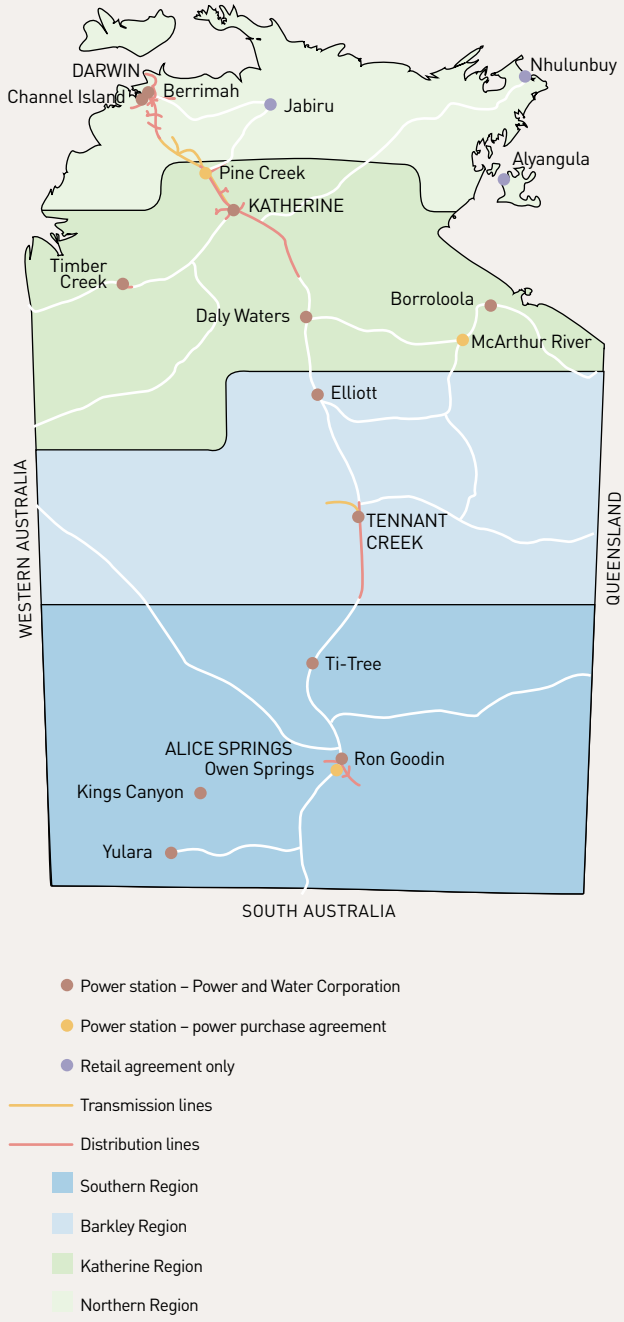
In April 2008 the Western Australian Government announced that domestic electricity charges would increase by 10 per cent in 2009–10, with further increases to be phased in over six to eight years. It rejected an Office of Energy recommendation to increase prices by 47 per cent in 2009–10 and 15 per cent the following year—in line with substantial increases in the cost of supplying electricity. The cost pressures include higher fuel prices, infrastructure upgrades, and rising labour costs. The Western Australian Government announced a $780 million subsidy to fund the shortfall between the cost of providing electricity and the prices charged to households.[19]

In addition to the uniform tariff, Western Australia has other consumer protection measures, including:

- an independent energy ombudsman
- a code of conduct for the supply of electricity to small-use customers
- regulations to ensure that residential and small business customers can be connected to a distribution network at the least cost to the customer
- standard form contracts for small customers
- supplier of last resort arrangements.[20]

16 Chapters 4 and 5 of this report include some data on the Western Power networks.
17 Independent Market Operator, *Annual Report 2006/07*, 2007, p. 24.
18 Independent Market Operator, *Annual Report 2006/07*, 2007, p. 24.
19 Alan Carpenter, Premier, Ministerial Media Statement, *State Government to phase in electricity price increases*, 4 April 2008.
20 For further information on the electricity retail market in Western Australia, see Chapter 6 of this report.

Figure 7.6
**Northern Territory electricity system**




Source: Power and Water Corporation.

## 7.2 The Northern Territory

The Northern Territory's electricity industry is small, reflecting its population of around 215 000. There are three relatively small regulated systems,[21] of which the largest is the Darwin–Katherine system, with a capacity of around 340 MW (as at 30 June 2007) (see figure 7.6). In 2006–07, the Territory consumed around 1675 gigawatt hours of electricity. Two new generators are being constructed at Weddell, each with a capacity of 40 MW, and are expected to be operational in 2008.

The Territory uses gas-fired plants to generate public electricity, using gas sourced from the Amadeus Basin in Central Australia. However, the Amadeus fields cannot sustain increasing demand and the majority of the current contracts for gas supply are due to end in 2009. An alternative source, which will be used from 2009, is the Blacktip Field in the Joseph Bonaparte Gulf. The gas will come onshore to a processing plant near Wadeye and will then be transported by a new gas pipeline that will connect to the existing Amadeus Basin to Darwin Pipeline. It is expected that this arrangement will meet the Territory's forecast gas demand for the next 25 years.

### 7.2.1 Market arrangements

Given the scale of the Northern Territory market, it was not considered feasible to establish a wholesale electricity spot market. Rather, the Territory uses a 'bilateral contracting' system in which generators are responsible for dispatching the power their customers require.

The industry is dominated by a government-owned corporation, Power and Water, which owns the transmission and distribution networks. Currently, it is the monopoly retail provider and generator. Power and Water is also responsible for power system control. There are six independent power producers in the resource and processing sector that generate their own requirements and also generate electricity for the market under contract with Power and Water.

21 The Darwin–Katherine, Alice Springs and Tennant Creek systems.

From around 2000, the Territory Government introduced measures to open the electricity market to competition. It:

- commenced a phased introduction of retail contestability, originally scheduled for completion by April 2005 but rescheduled for April 2010
- corporatised the vertically integrated electricity supplier (Power and Water) and ring-fenced its generation, power system control, network and retail activities
- allowed new suppliers to enter the market
- established an independent regulator, the Utilities Commission, to regulate monopoly services and monitor the market
- introduced a regulated access regime for transmission and distribution services. In 2002, the Australian Government certified the regime as effective under the *Trade Practices Act 1974*. The Utilities Commission made its second five-year determination on network access arrangements (for 2004–05 to 2008–09) in 2004.

There has been one new entrant in generation and retail since the reforms—NT Power, which acquired some market share. However, NT Power withdrew from the market in September 2002 citing its inability to source ongoing gas supplies for electricity generation. In light of this, the government suspended the contestability timetable in January 2003. This effectively halted contestability at the 750 MW per year threshold until prospects for competition re-emerge. A single subsequent applicant was not granted an electricity retail licence due to the applicant's 'inability to meet reasonably foreseeable obligations for the sale of electricity'.[22] The introduction of full retail contestability is currently scheduled for April 2010.

When Power and Water reverted to a retail monopoly, the government approved prices oversight by the Utilities Commission of Power and Water's generation business for as long as the business is not subject to a tangible threat of competition. The government regulates tariffs for non-contestable customers via electricity pricing orders. The Utilities Commission regulates service standards, including standards for reliability and customer service.

22 Department of Business, Economic and Regional Development (NT Government), *The NT electricity, water and gas supply sector, fact sheet*, 2005.