

AN OVERVIEW OF PROPOSED MARKET AND REGULATORY ARRANGEMENTS

Legislation covering the Northern Territory electricity supply industry is being amended to reform the market structure and regulatory arrangements applying to the industry.

The reforms will put downward pressure on power costs both by:

- wherever possible, allowing competition (or contestability—the threat of competition); and
- where monopoly remains, strengthening regulation to simulate competitive outcomes.

The main reform features are outlined below.

A. Key Features of Revised ‘Market Structure’

1. Contestable Sector

The Power and Water Authority’s (PAWA) effective monopoly over the supply of electricity to final consumers in the Northern Territory is to cease, and competition among generators and retailers is to be phased-in:

- by allowing certain customers to choose their power supplier;
- by licensing new suppliers to enter the market; and
- by facilitating access to PAWA’s transmission and distribution networks—involving the poles and wires used to transport electricity from generators to final customers—which will remain a monopoly function.

1.1 Contestable customer arrangements

To introduce competition into the Northern Territory electricity supply industry, certain customer classes are to become ‘contestable’—free to choose their supplier, whether PAWA or third-party power producers or retailers to be licensed to trade in electricity.

The largest commercial customers (annual consumption of 4 gigawatt-hours (GWh) or more at a single site) are to become contestable first. The planned timetable for contestability to be gradually extended to lower commercial loads is as follows:

date for introduction of competition	customer load level	approx. no. of additional customers	examples of customer types
1 April 2000	>4GWh	30	large hotels; defence bases
1 October 2000	3 to 4 GWh	15	large supermarkets; large manufacturing operations
1 April 2001	2 to 3 GWh	20	medium hotels; medium supermarkets; 24hr government operations
1 April 2002	750 MWh to 2 GWh	120	smaller hotels & motels; smaller supermarkets; food

			wholesalers and cold stores
--	--	--	-----------------------------

For up to two years from their eligibility date, contestable customers who prefer to opt for price certainty may remain on their existing supply arrangements and tariff schedule with PAWA.

Pending a review, it is not proposed that customers with annual consumption levels below 750 megawatt-hours (MWh) would become contestable. This will limit the number of contestable customers to under 200.

While the network component of prices paid by contestable customers will be regulated, the energy and retailer components will be left to market forces, and no longer subject to government control. In exchange, customers ('the market') will exert pressure on suppliers (especially PAWA) to minimise costs through their ability to switch to lower cost suppliers.

The contestable business activities of PAWA (retail and generation) will be 'ring-fenced' from its monopoly businesses (networks and franchise markets), to ensure that they gain no advantage—or cross subsidies—from the ongoing monopoly activities.

Connection of contestable customers to the power system will require a 'smart' (time of use) meter, to monitor energy imports and exports by third-party users as well as for the billing of end-use customers. Given the small size of the NT electricity market, the ownership of these smart meters will be vested with the network provider to which the customer is connected (to allow switching of customers between suppliers without the need to duplicate meters).

1.2 Third-party generators and retailers

New entrants will be able to undertake the two contestable activities involved in the supply of electricity, namely:

- retail: trading in electricity (that is, the purchase of electricity from generators for the purpose of supplying end-use customers); and
- generation: production of electricity, for sale either to retailers or to other licensed generators.

The small size of our market means that it is not feasible to establish a wholesale electricity pool in the Territory like that now operating in the national electricity market (NEM) in south-eastern Australia. Instead, new entrants into the market (whether they be third-party generators and/or retailers) are to be obliged to:

- arrange supply directly with contracted (and contestable) end-use customers—termed 'bilateral contracting';
- supply all the power needs of individual contracted customers under normal circumstances (with 'partial contracting' not permitted);
- dispatch only the amount being drawn by their customers as a group from the network at any one time (adjusted for network losses between the generator and its customers), unless the independent generator can negotiate to sell any excess power that it sends out to other generators;
- contract with other generators to provide and sell power ('standby power') whenever the power sent out by the independent generator is insufficient to meet the aggregate needs of their contracted customers (either because of breakdown/maintenance of the independent's generating unit or because the demand of contracted customers exceeds maximum output); and

- arrange for billing of customers.

The dispatch and system control ('power system controller') function presently undertaken within PAWA Generation—which is essential to ensuring the power system as a whole (generators and networks together) produces and delivers the quantities of power required by all customers—is to be transferred to PAWA Networks.

Customer contestability and bilateral contracting will require the power system controller to:

- monitor the output of third-party generators and the demand of those generators' customers at half-hourly intervals or less;
- call up agreed standby generation ('standby power') to fill gaps between the power required and provided; and
- provide for minor (within set tolerance limits) and, where standby power is not available, major (outside set limits) differences in output ('out-of-balance energy') to be either dispatched or absorbed by PAWA Generation.

To these ends:

- the power system controller will be required to ensure that dispatch and system control services are provided (and seen to be provided) in the interests of all participants in the market;
- dispatch will be based upon rules agreed between generators and designed to provide clear signals and incentives for generators to maximise their availability and improve their operational efficiency;
- while PAWA Generation will not be obligated to offer supply of standby power, it will be expected to do so wherever warranted on commercial terms and conditions, with all standby generation prices being a matter for negotiation between the parties involved;
- if a third-party network user's energy usage for any half-hour period is shown to have been out of balance, the power system controller is to be empowered to impose charges on the generator responsible for that imbalance in order to reimburse PAWA Generation for supplying the balancing amount of electricity;
- such out-of-balance energy prices will be in accordance with a tariff schedule published annually by PAWA Generation, with prices for within-tolerance and outside-tolerance out-of-balance energy being set at levels to encourage 'load following' by third-party generators and to ensure the concerted targeting of zero net interchange of energy with PAWA Generation; and
- the cost of dispatch and system control is to be paid for on an equitable basis by all system users.

1.3 Network access arrangements

The provision and operation of the system of poles and wires involved in the transportation of electricity from generators to customers (or 'loads') in a geographical area—the electricity network—is to remain a monopoly function. Electricity networks are 'natural' monopolies in that they involve facilities which cannot be economically duplicated. For contestable customers located in Darwin, for example, third-party use of PAWA's networks is therefore an essential prerequisite for introducing contestability into the retail end of the NT electricity market.

To this end:

- network licences will grant the right to operate a network system (irrespective of the voltage involved) within a specified geographical area or zone for the purpose of transporting electricity;
- new players in the retail sector will be permitted to use PAWA's wires once they enter into an access agreement and pay the regulated network charges;
- PAWA Networks will be obligated to use all reasonable endeavours to accommodate the requirements of those seeking access to the electricity network, and to provide access to available spare network capacity and new capacity on a non-discriminatory basis between network users or potential users—network access will be regulated by introduction of a formal 'Access Code' (see section 3.2 below);
- PAWA Networks will be 'ring-fenced' from the rest of PAWA, and required to keep separate accounts and records; and
- access will be granted to PAWA's Darwin, Katherine, Tennant Creek and Alice Springs networks as and when required by the location of contestable customers.

2. Non-Contestable Sector

2.1 Non-contestable customer arrangements

Customers not to be (or not yet) classed as contestable—called 'non-contestable customers'—will continue to be bound to PAWA.

In all key respects, the 'market structure' arrangements applying to these non-contestable customers is to remain unchanged from those currently applying, involving PAWA as the monopoly supplier to such customers.

B Key Features of Proposed Regulatory Arrangements

Implementation of the revised 'market structure' arrangements outlined above cannot ensure, in all instances, the market outcomes or performance desired by the Government on behalf of end-use power customers. Some ongoing intervention in the market will also be necessary in areas of persistent/natural monopoly or where competition is weak.

Specific regulatory functions are to be assigned to a nominated 'Regulatory Minister', to ensure continuing Government control over regulatory policy making.

Regulatory administration within government is to be strengthened by the creation of a Utilities Commission to administer certain economic regulation functions at arm's length from the Government and in ways that provide independent and authoritative advice on matters such as pricing, network access, service quality and security of supply.

Key features of the Utilities Commission are to be:

- a broad objective of protecting consumers and promoting competition;
- administrative independence from Government in areas where the Commission's determinations or approvals impact directly upon contestable customers;
- powers for the regulation of relevant prices and price setting mechanisms as specified in industry-specific legislation;

- powers for regulation of market conduct; and
- powers to issue guidelines and require information.

The monitoring and enforcement of safety standards, and the establishment and enforcement of safety-related standards for electrical equipment, is to continue to be the responsibility of the ‘Electricity Safety Regulator’ now located in the Department of Industries and Business.

To engender the confidence of new and potential entrants into contestable sectors of the power market and of contestable customers themselves:

- regulatory *transparency* will be achieved principally by *codifying* the regulatory principles and framework (in the main by the drafting of an Access Code); and
- regulatory *independence* will be achieved principally by ensuring that regulation of all prices affecting contestable sectors of the electricity industry is undertaken independently of PWA and at arm’s length from the Government—this will be achieved, in the main, by separating policy making and administrative functions, with the Government retaining responsibility for regulatory policy and so establishing the broad regulatory principles and framework to be implemented, and the Utilities Commission as an independent regulator being charged with the administration of such principles and frameworks.

Compliance costs are to be minimised (so that regulation of monopoly elements of the industry will be ‘light-handed’) by:

- providing an unambiguous framework which maximises the scope for commercially negotiated outcomes;
- assuring clear and consistent information disclosure to regulatory authorities;
- developing industry self-regulation particularly in relation to technical standards; and
- avoiding onerous restrictions or reporting requirements on industry participants.

The essential elements of the regulatory and policy arrangements being put in place to support the revised ‘market structure’ are as follows.

3. Contestable Sector

3.1 Licences to supply

Licences to be issued under a new *Electricity Act* are to be the principal regulatory instrument used in the contestable sector of the industry.

Separate licences will be issued for each of the three main activities involved in the supply of electricity, namely:

- generation: the right to produce and generate electricity, either for sale to other licensed generators or retailers, and the right to supply or be supplied by other licensed generators;
- network: the right to operate the network system (irrespective of the voltage involved) within a specified geographical area or zone for the purpose of transporting electricity; and
- retail: the right to trade in electricity (that is, to purchase and re-sell), and to supply electricity to final customers.

The network licences will not distinguish between transmission (high voltage) and distribution (low voltage). Rather, a network licence will grant an exclusive right to operate the network

system (irrespective of the voltage involved) within a specified geographical area or zone. Any new networks to be constructed, in whole or in part, *outside* such franchise areas would require the issuing of a new licence.

Some retail licences will be issued with an obligation to supply non-contestable customers in a defined geographical area as well as contestable customers anywhere in the Territory. Other retail licences will be issued only granting the right to supply contestable customers anywhere in the Territory, and so will imply no obligation to supply any customer.

Licences will only be issued to applicants meeting certain safety, prudential and capability conditions. All licences issued will require industry participants:

- to comply with certain technical codes—dealing predominantly with technical and service delivery requirements applicable to metering, connection to networks, system control and security, and with the technical and economic terms of supply and sale to non-contestable customers;
- to ‘ring-fence’ their monopoly from their contestable activities, for regulatory and accounting purposes; and
- to submit, where applicable, to price regulation.

The Utilities Commission is to be responsible for:

- the issuing of licences to retailers, generators and network providers;
- the monitoring of performance against licence conditions;
- investigating complaints from consumers and competitors against the conduct of licensed operators in the NT electricity supply industry; and
- enforcing penalties for failure to meet licence conditions.

3.2 Network ‘Access Code’

New players in the retail sector will be able to use PAWA’s wires by entering into an access agreement and paying the regulated network charges. These network access arrangements are to be fostered by a Network Access Code, to be administered by the Utilities Commission.

In particular, the key elements of the Access Code are to be identical in substance to those in the NEM access code, specifically:

- the obligations to be met by the network provider, notably:
 - to use all reasonable endeavours to accommodate the requirements of those seeking access to the electricity network; and
 - to maintain network capacity sufficient to meet existing demand or to meet growth in demand, provided the investment involved is commercially viable;
- the obligations to be met by network users under any access agreement (or award);
- the processes to be followed by all parties in negotiating and concluding access agreements;
- the procedures to be followed for resolution of any access dispute, including through independent arbitration; and
- the regulation of network prices, aimed at preventing monopoly rent extraction by network providers and promoting competition in upstream and downstream markets and in a way that achieves reasonable certainty and consistency over time.

To qualify for access, a network user will need to comply with requirements of a Technical Code to be issued by PAWA and with other terms and conditions of the user's access agreement negotiated with PAWA Networks (which may include capital contributions as necessary to ensure the commercial viability of associated network investments by PAWA).

The Utilities Commission is to be charged with:

- monitoring network operators' and network users' compliance with the Network Access Code;
- registering access agreements; and
- conciliating and arranging arbitration in any access disputes.

3.3 Regulation of network (access) prices paid by network users

Electricity networks are natural monopolies, and so the prices paid for access to such networks (both connection and transportation) must be regulated.

Under the Network Access Code, the prices that network providers charge retailers, generators or individual contestable customers for use of the network are to be regulated by:

- determining an annual cap or limit on PAWA Network's total revenue, sufficient to enable an efficient supplier of regulated services to raise sufficient revenue to meet its operating costs, to finance necessary new investment and to provide an adequate return on past investment efficiently undertaken; and
- within limits imposed by the revenue cap, ensuring that (maximum) network tariffs are structured so as to be cost-reflective and non-discriminatory.

The tariffs and charges to apply to a network user's connection to and use of the electricity network are to be matters for commercial negotiation between the network user and PAWA Networks:

- within limits set for PAWA Networks by the annual revenue cap; and
- subject to maximum levels ('reference tariffs') approved by the Utilities Commission.

PAWA Networks will annually publish a schedule of reference tariffs, which will be:

- the maximum tariffs applying to reference (or standard) network access services; and
- the reference point for use in establishing the maximum tariffs to apply to new or non-standard network access services.

The establishment of reference tariffs is to be primarily the responsibility of PAWA Networks through a process overseen by the Utilities Commission.

3.4 Regulation of out-of-balance energy prices paid by network users

The Utilities Commission is also to be responsible for regulating the (wholesale) energy prices charged by PAWA Generation for out-of-balance energy provided when keeping the power system in balance. Such prices are to be established within the following framework:

- out-of-balance sell prices are to be at levels which will avoid the situation where an independent generator would prefer to opt to purchase out-of-balance energy from PAWA Generation instead of generating the required energy itself;

- out-of-balance buy prices are to be at levels which will avoid the situation where an independent generator would prefer to opt to sell out-of-balance energy to PAWA Generation instead of refraining from generating excess energy itself; and
- prices on out-of-balance energy sales and purchases which are outside a permitted tolerance limit¹ are to be at levels relative to those within the limit that ensure an independent generator will take all measures reasonably available to it to prevent sales or purchases of energy outside the tolerance limit.

3.5 Oversight of network and generation capacity planning

As it will no longer be appropriate for PAWA to perform such functions, the effective coordination of supply and demand of the entire market and the assessment of future power system requirements will be transferred to the Utilities Commission. The Commission will be responsible for:

- gathering, collating and assessing information, including from all licensed operators (generators and network providers), on capacity plans and expected market demand growth;
- sharing such information among industry participants in ways that protect commercially-sensitive information; and
- providing timely advice to the Government on possible areas of emerging capacity shortfalls, and options for addressing such shortfalls.

4. Non-Contestable Sector

4.1 Regulation of retail prices

Retail prices paid by non-contestable customers are to continue to be regulated by the Government, with only retail prices paid by contestable customers being left to the ‘market’.

The Government is to retain responsibility for setting retail power prices for non-contestable customers (that is, residential and small to medium-sized commercial customers). In future, however, the Government will formulate its pricing policies for non-contestable customers in terms of ‘price paths’, being pre-announced medium-term specifications of the future course of maximum retail prices.

The Government’s regulation of the prices to be paid by non-contestable customers will be codified in an ‘electricity pricing order’ issued by the Regulatory Minister.

Price paths will be set or adjusted following advice from the Utilities Commission. This price-path approach will both:

- ensure that the benefits of efficiency improvements are ultimately passed on to final customers; and
- motivate suppliers to deliver greater efficiencies over the long term than would otherwise be the case, by permitting them to retain, for a period, a proportion of any efficiency gains in excess of set benchmarks (or to absorb any under-performance).

¹ The permitted tolerance limit will be a set limit on the mismatch between the transfer of electrical energy into and out of the electricity network, after account is taken of energy losses expected in the conveyance of that electricity.

For residential customers, the Government will set the maximum permitted year-to-year movement in the standard tariff, by prescribing the X factor to be used in CPI-X escalation arrangements at the commencement of each regulatory control period following advice from the Utilities Commission. The Government's commitment to uniform residential power prices across the Territory will be made binding through the imposition of licence conditions on PAWA as the retailer to non-contestable customers.

For commercial non-contestable customers, the Government will set the maximum permitted year-to-year movement in *average* prices, by prescribing the X factor to be used in the CPI-X escalation formula. Within such limits established by the Government, this will permit PAWA to adjust tariffs between commercial customer groups so long as tariffs are structured in an equitable and cost-reflective manner. Within the revenue cap set by the Government, individual tariff schedules will be approved by the Utilities Commission.

To prevent unacceptable price shocks to particular end-use customer groups from any tariff re-balancing permitted within the Government's average price paths, the Government's electricity pricing order may establish 'side-constraints' on individual retail prices so as limit annual movements in retail tariffs for particular groups (sector/region) of end-use customers.

These price regulation arrangements will be subject to review by the Government after three years, with a view to the Government deciding whether any changes need apply during the subsequent five year regulatory control period.

4.2 Regulation of service standards

Licence conditions are to include the requirement that, with respect to non-contestable customers, the quality (in terms of frequency and voltage) and reliability (in terms of the frequency and duration of outages) of supply must be maintained at least equal to current/existing standards. Over time, the Utilities Commission is to recommend to the Government where improved service standards for quality and reliability should be delivered by the regulated suppliers in return for the revenue streams they are allowed under the price controls.

The Utilities Commission is also to be responsible for monitoring and publishing suppliers' actual performance against service standards sanctioned by the Government and the customer charters devised by the suppliers. Under-performance could attract significant penalties.

The Utilities Commission will therefore take administrative responsibility for:

- in consultation with industry and consumer representatives, codifying minimum standards and conditions of service and supply;
- monitoring the performance of PAWA in supplying non-contestable customers against standards of service set by the Government; and
- enforcing penalties for failure to meet licence conditions.

