



**A Risk Management Proposal for  
New South Wales' Electricity Businesses**

*Discussion Paper*

December 2001

## *Table of contents*

---

<i>Section</i>	<i>Page</i>
<b>1. Summary.....</b>	<b>1</b>
<b>2. NSW and the National Electricity Market.....</b>	<b>3</b>
2.1. Competing in a volatile market.....	3
2.2. Revenue .....	4
2.3. Policy and regulation.....	4
<b>3. A risk management approach.....</b>	<b>5</b>
3.1. Overview.....	5
3.2. Generators .....	5
3.3. Retailers .....	7
<b>4. What stays the same?.....</b>	<b>9</b>
<b>5. Implementing this proposal .....</b>	<b>10</b>
<b>6. Responding to this proposal .....</b>	<b>10</b>

## **1. Summary**

From a financial perspective, Australia's national electricity market is one of the riskiest markets in the world.

The wholesale market price of electricity can rise or fall by 10,000 per cent within half an hour. No other commodity trades with such price volatility.

NSW taxpayers own seven electricity generators and retailers that trade wholesale electricity every half-hour of every day. This trading activity can expose NSW taxpayers to grave financial risks.

The electricity industry has provided relatively stable returns to the Government in the past three years, returning around \$650 million annually in dividends and tax equivalent payments.

However, as long as the industry continues to trade wholesale electricity there is a risk that its returns could fall unexpectedly.

For private electricity companies a fall in earnings affects shareholders and bankers. In the public sector, where the Government uses the industry's profit to fund its spending program, a fall in earnings means less money is available for hospitals, schools and roads.

One way to reduce this financial risk would be to sell some or all of the State's electricity businesses to private investors. This was previously proposed by the Government but met with overwhelming community opposition.

The Government accepts the community's rejection of the sale of electricity assets.

The question then becomes how to reduce the financial risk to taxpayers inherent in wholesale trading while keeping the electricity industry firmly in public hands?

Some would say the answer is to abolish wholesale trading, withdraw from the national electricity market and reinstate a monopoly to produce and sell electricity.

That would cost businesses and families dearly. Replacing an electricity monopoly with a number of competitors has already saved the State's electricity consumers more than fifteen hundred million dollars (\$1,500 million) since 1995.

And if a monopoly makes bad investment decisions, as the NSW industry did in the 1980s, it inevitably passes the costs back on to consumers and taxpayers.

A competitive, volatile market is not a problem in itself. Competition means that NSW consumers now enjoy lower wholesale electricity prices than they did in 1995 – prices amongst the lowest in Australia and the world.

This paper proposes a new approach to managing the risk of wholesale trading for taxpayers, while preserving the benefits for consumers.

The proposal involves separating the minor, but high-risk task of wholesale electricity trading, from the major task of producing and delivering electricity to families and businesses.

The private sector could take on the job, and the risk, of trading wholesale electricity. The Government would continue to own and operate its power stations, transmission and distribution lines, and retail electricity to customers.

There would be no impact on families and small businesses. They would deal with the same Government-owned electricity supplier in exactly the same way they do now – no change to bills, repairs, customer service or anything else.

Whether the proposal is implemented or not, retail electricity prices for families and small businesses would remain stable.

Families and small businesses would retain a right to electricity supply from their current Government-owned retailer, at independently regulated prices, as well as the option to choose their electricity retailer from January 2002.

There would be no impact on the 13,000 or so public servants working in the electricity industry. Around 200 executives currently involved in trading wholesale electricity may seek to join private trading teams, or remain with their current employer.

Taxpayers would exchange the risk, and volatility of earnings from wholesale electricity trading with secure, predictable payments from private organisations in return for the right to buy and sell wholesale electricity.

The proposal would lock in stable revenues to fund government services.

Private sector organisations would bid for the right to trade the output of the power stations and purchase on behalf of retailers for anywhere between three and five years. This would allow the arrangements to be reviewed, reformed or reversed if they prove to be unsatisfactory.

The Government would set a reserve price for the trading rights to cover the costs of electricity production and delivery and to ensure that the public sector's anticipated earnings from trading, adjusted for the reduction in risk, are met. The private sector participants would be responsible for earning their own profit margins.

The current level of competition in the electricity market would be maintained.

This proposal keeps the electricity industry in public hands but shifts the financial risk of trading electricity in the national electricity market to the private sector.

The major elements of the proposal are explained in this paper.

## 2. NSW and the National Electricity Market

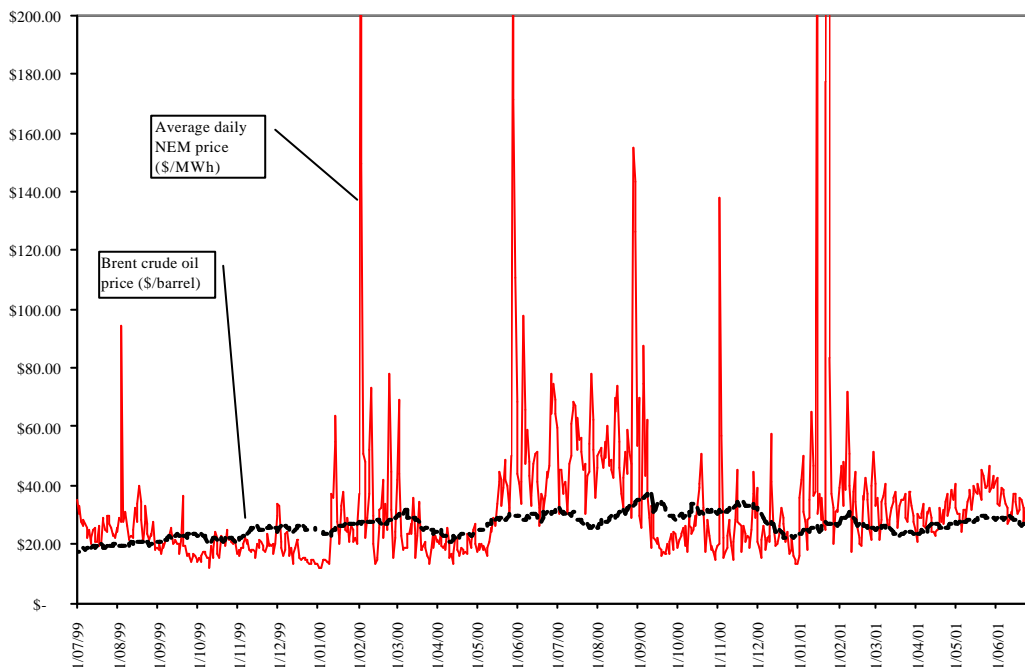
### 2.1. Competing in a volatile market

NSW owns a large portfolio of electricity businesses involved in generation, transmission, distribution and retailing.

These businesses compete against each other in the national electricity market (NEM). They also compete against large private companies like AGL, the privatised businesses of Victoria and South Australia, and Queensland's Government-owned businesses.

These businesses operate in the most volatile commodity market in the world, where prices from day to day may vary by more than 100 times from the average price. To put this in perspective, the NEM pool price is around ten times more volatile than the crude oil price, which is a widely regarded as 'volatile.' (see Figure 1).

**Figure 1: Comparison of daily average NSW pool prices and crude oil price**



## **2.2. Revenue**

The earnings of the NSW electricity industry are returned to the State Budget and used to help fund hospitals, schools and other Government services.

In 2001-01 the electricity industry provided some \$670 million in dividends and tax equivalent payments. This is more than half of all the revenue provided by all Government-owned businesses.

Any risk to the future earnings of the NSW electricity industry is a risk to an important source of funds for vital government services.

This proposal to manage financial trading risks would replace an unpredictable revenue stream with a secure, predictable level of returns. These returns would be obtained by tendering to the private sector the wholesale trading functions of electricity generators and retailers for periods of anywhere between three and five years.

## **2.3. Policy and regulation**

The NSW Government's priorities for the electricity sector are to provide families with a safe, reliable supply of electricity at affordable prices, provide the business sector with reliable and internationally competitive energy supply, and to reduce the environmental effects of electricity use.

Irrespective of any decisions as far as wholesale electricity trading are concerned, the Government will retain its responsibility for making and implementing policy. In particular, the Government has devoted enormous resources over the years to provide carefully designed arrangements to protect customers in the competitive energy market.

These consumer protections will always be a central feature of NSW's electricity supply arrangements.

The Government's role is not confined to ensuring customers have maximum choice and protection where it is required. The Government must also protect the safety of the community and the environment. This proposal will not affect the Government's job of developing and implementing policies to do this.

## **3. A risk management approach**

### **3.1. Overview**

The NSW Government is proposing a new way of managing the risk inherent in trading wholesale electricity. The proposal is similar to arrangements already operating in the private sector in Australia and in other countries.

The proposal essentially involves tendering to the private sector the electricity trading functions of the Government-owned electricity generation and retail businesses. The private sector traders would pay the Government a fee, agreed up-front, in return for trading rights over the life of a three to five year contract.

The fees that private sector traders would be willing to pay would relate to the revenues they could expect to earn from acquiring and exercising trading rights. However, the fees would not be linked to the private sector's actual trading performance.

If they lose money, they still have to pay the government the agreed fee. Conversely, if they can produce a profitable trading result, then the profit is theirs to keep.

The key elements of proposed arrangements between the Government-owned generators and retailers, and private sector traders, are described below.

It is important to note that the transmission and distribution sectors would be totally unaffected by the proposed arrangements.

### **3.2. Generators**

There would be no change in the ownership or structure of generators. The Government would continue to own three separate generation businesses (Macquarie Generation, Delta Electricity and Eraring Energy), which in turn would own and remain responsible for the operation of their power stations.

Under the proposed trading arrangements all employees involved in operating and maintaining power stations would remain employees of each Government-owned business.

For each Government generator a separate contract would be established entitling a private sector *generation trader* to the exclusive right to determine when and how the capacity of each Government generator would be traded in the NEM.

Each *generation trader* would determine the output of the Government generator through their bids to the National Electricity Market Management Company (NEMMCO). However the *generation trader* would not be directly involved in the operation of the power stations – this would remain the job of the employees of the government generators.

In effect the contract replicates the arm's length arrangements that now exist within Government generators, where market bids made by 'in-house' trading teams determine

when and how much the power stations operate. Most of these trading teams are already located in Sydney – nowhere near the power stations whose output they are trading.

Under the proposal, rather than the counter-party to this arrangement being a business unit within the Government generator, the counter-party will be a private sector *generation trader*.

Each *generation trader's* contract would cover the capacity of a Government generator. The power stations would be operated, maintained and managed by the Government generators' own employees.

The terms and conditions of the contracts would be specified centrally by the Government. This is important to ensure that the Government's risks are properly managed. The Government generator and the *generation trader* would not be able to renegotiate their contract. Changes to the contract would be specified centrally by the Government to ensure taxpayer risks continue to be managed.

In effect each Government generator would become an asset operator and manager, and a contract administrator. The *generation trader* would be entitled to all revenues earned from their trading activities after they have paid the Government the agreed fee. They would also bear any losses they might incur as a result of their trading decisions.

All decisions regarding the management of the power station would continue to be made by the Government generator, including decisions regarding employees. Maintenance of the power station would be co-ordinated via the terms and conditions of the contract, which would be established to ensure that the current level of system reliability is maintained. The contract would also govern the way in which the power station is operated to ensure the *generation trader's* market bids do not compromise the integrity of the plant.

There would be a competitive tender to determine who would win each right to act as a *generation trader* with the exclusive right to bid a Government generator's capacity into the NEM. These rights would be granted for a fixed period of between three and five years.

These relatively short contract periods provide the Government with a great deal of flexibility. The Government would have the option of refining the contracts in the light of experience or changing market circumstances. The Government can ensure that *generation traders* do not capture all the benefit of a market that is more buoyant than expected. While shorter-term contracts mean that the Government is not entirely divorced from the risks of the market place, this approach has the potential to ensure far better management of taxpayer's risk than current arrangements.

There would be no risk to the continuity of electricity supply arising from the proposed arrangements. If, for whatever reason, a *generation trader* defaults on the fees owing to a Government generator, and the matter cannot be resolved, the trading rights would revert back to the Government generator. The Government generator would trade its capacity until the contract is allocated to another *generation trader*, or a resolution to the contract problem is implemented.

### **3.3. Retailers**

There would be no change in the ownership or structure of distributor/retailers. The Government would continue to own four separate and competing distributor/retailers (EnergyAustralia, Integral Energy, Country Energy and Australia Inland Energy and Water).

All employees involved in operating each distribution/retailing business would remain employees of their Government-owned businesses.

There would be a competitive tender to determine who would win the right to act as the *retail trader* for each Government retailer. A separate contract would be established that entitled the successful private sector tenderer the exclusive right, and obligation, to supply the contestable energy needs of each separate Government retailer.

The *retail trader* would be obliged to offer the Government retailer an *energy price* for its contestable customers. The *energy price* would vary over time according to market conditions. Each Government retailer would purchase its electricity exclusively from their *retail trader* at the *energy price*. This arrangement effectively replicates the existing practice where the trading teams of the Government retailers provide an energy price (or transfer price) to their sales staff to offer to customers.

The Government retailer would remain responsible for supplying franchise customers under the Electricity Tariff Equalisation Fund (ETEF) arrangements. The ETEF ensures that the Government retailer bears no trading risks, and earns a regulated margin for supplying regulated prices. Currently, around half the NSW load and about 98 per cent of customers are managed under regulated arrangements with their existing Government retailers. The *retail trader* contract would cover the contestable customer loads of each retailer.

Under the proposed arrangements the *retail trader* assumes all financial and energy trading risks. Competition among retailers will limit the transfer price that the *retail trader* can pass on to its Government retailer. If the transfer price is too high relative to the price offered by other traders to other retailers, or too high relative to the prices available from interstate retailers, then the retailer will lose market share, which in turn reduces the ability of the *retail trader* to recover their costs of acquiring the trading rights. If it costs the *retail trader* more to buy the electricity for their Government retailer's load than they can sell it for to the Government retailer then this is a cost that the *retail trader* must bear.

Customers will not experience any change in service, and they will continue receiving bills from their existing supplier, unless they choose to change their retailer. The Government retailer would be permitted to sell the energy it buys from the *retail trader* at any price it chooses. There would still be a risk that a Government retailer could enter into loss making contracts with customers, but this risk becomes more manageable for the Government because of the transparency of the *energy price*.

It is possible that a *retail trader* may also own a competing retailing business. To protect the interests of the Government retailer, and to align the incentives of *retail trader* and Government retailer, the *retail trader* will have a contractual obligation to ensure that it does not sell power to itself at a price any lower than the *energy price*

offered to the Government retailer they also supply. The proposed arrangements will need to be supported by effective auditing of the *retail trader* accounts to ensure the retail trader is pricing fairly to the Government retailer. The auditing methods, including the data to be supplied by the *retail trader*, will be set out in the *retail trader* contract.

The Government retailer would remain responsible for all other customers services including sales and marketing, billing, call centre services, and other customer services, which includes almost all of a Government retailer's employees, other than those few employees now directly involved in trading.

The terms and conditions of each *retail trader* contract would be specified centrally by the Government. A Government retailer and a *retail trader* would not be able to renegotiate the *retail trader* contract. Changes to the contract would be specified centrally by the Government to ensure taxpayer risks continue to be managed.

If the *retail trader* becomes insolvent, or does not pay the fees owing to the Government retailer for the right to provide all of that retailer's contestable electricity needs, and if this cannot be resolved within the terms of the contract, the trading rights would revert back to the Government retailer which would then trade in the market until the contract is allocated to another *retail trader*. This means that possible default by the *retail trader* cannot threaten the provision of electricity to customers.

## **4. What stays the same?**

The proposal leaves nearly all aspects of NSW electricity businesses unchanged.

The Government will have the same job of protecting customers, the community and the environment, and will continue to discharge its current policy responsibilities.

The Government-owned businesses would continue to employ all people involved in operating power stations, the transmission and distribution system, and the vast majority of retailing services.

The State, through its Government-owned businesses, would retain ownership of all electricity assets including power stations, the transmission and distribution system and most retailing infrastructure.

The only thing that changes is the management of electricity trading activities, where the majority of the financial risks in the electricity sector reside.

In a practical sense, this would not significantly change to the way the businesses currently operate. As noted above the Government generators and Government retailers have already internally separated their trading operations. For example, two of the three generators have physically located their trading operations in Sydney, completely separate from the power stations. The Government's proposal simply involves contracting out these already separated activities that employ a small number of mostly contracted staff.

The proposal involves little disruption to the operation or management of the power industry.

Customers would not experience any change to their services as a consequence of this proposal as it does not change the ownership of the companies they deal with. If anything, customers can expect an improvement of service standards and price competition with the introduction of full retail competition from January 2002.

The fundamental aim of the proposal is to protect taxpayers against financial risk. The proposal would secure a major source of stable income for public services.

## **5. Implementing this proposal**

Following a consultation process that would aim to test the effectiveness of the proposed arrangements in meeting the Government's policy objectives, the Government would release a detailed Expression of Interest to the private sector.

The Expression of Interest would aim to gauge interest in the proposed arrangements and to determine the nature of any changes that would increase the commercial attractiveness of the arrangements, without threatening the achievement of the Government's policy objectives.

The Expression of Interest would include Term Sheets describing the key features of a trading contract, a description of the institutional arrangements including the rights and obligations of the generation and retail traders, the roles and responsibilities of the businesses, the Government, and dispute resolution arrangements.

Assuming that the private sector supports the key features of the proposed approach as described in the Expression of Interest, the Government would form an advisory team to develop a detailed Information Memorandum. The Information Memorandum would form the basis of a process to tender the trading rights of the Government-owned generators and retailers.

The Information Memorandum would incorporate the final contracts for both generators and retailers and the details of supporting institutional arrangements. The Information Memorandum could be prepared for release in May 2002, so that the new arrangements could commence from July 2002 onwards.

At the same time that the Information Memorandum is being prepared it will be necessary to develop the mechanisms for allocating the contracts to generation and retail traders. At this stage it is proposed that this be done by way of a competitive auction.

## **6. Responding to this proposal**

The NSW Government invites comments and questions in response to this Discussion Paper. These can be posted to:

A Risk Management Proposal for NSW's Electricity Businesses  
c/- NSW Treasury  
Level 25, Governor Macquarie Tower  
1 Farrer Place  
SYDNEY NSW 2000