



New South Wales
TREASURY

Wholesale and Retail Trading in the National Electricity Market:

A Risk Management Proposal for New South Wales' Electricity Businesses

Further Consultation Paper

Office of Financial Management

Research &
Information Paper

PREFACE

Treasury has released this Further Consultation Paper to provide specific detail on the proposal outlined in the earlier NSW Government Discussion Paper, *A Risk Management Proposal for New South Wales' Electricity Businesses*, December 2001.

The Risk Management Proposal involves separating the financially high-risk task of wholesale electricity trading from the task of producing and delivering reliable and affordable electricity to families and businesses. The private sector would take on the role, 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 the majority of customers.

The purpose of this Further Consultation Paper is to provide more information about the structure and operation of key elements of the proposal, and to address a number of issues raised in response to the Discussion Paper.

In some instances there may be more than one option for dealing with a particular issue. In these cases the options are presented, and their relative merits discussed. The Government is interested in receiving comment from interested parties on their assessment of these options.

The release of this Further Consultation Paper does not indicate that the NSW Government has decided to implement the Risk Management Proposal. However, the Government has decided to continue the consultation process to support its future decision making. Interested parties are invited to assist by responding to the specific issues and options raised in this paper within the timetable outlined in the introduction.

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Secretary
NSW Treasury
May 2004

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<p>General inquiries concerning this document should be initially directed to: Energy Policy and Implementation Branch (Tel: 9228 4937, or e-mail: RMP@mail.treasury.nsw.gov.au) of NSW Treasury. This publication can be accessed from the Treasury's Office of Financial Management Internet site [http://www.treasury.nsw.gov.au/].</p>
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EXECUTIVE SUMMARY

Risk has always been a key feature of any electricity industry. Under the former vertically and horizontally integrated Government-owned structure that existed in New South Wales (NSW) for 50 years, risk was entirely borne by taxpayers and electricity consumers, who are, for all intents and purposes, the same. The costs of managing these risks were reflected in inefficiently high electricity prices being charged to NSW customers. These high prices stifled economic and employment growth.

The key purpose of the recent electricity reforms in NSW was to expose these risks and create competitive markets where risk can be more efficiently valued, allocated and managed. The reforms have achieved complex pricing behaviour and more volatile, but substantially lower, prices.

This complexity and volatility is not a consequence of the reform process itself. Rather, it is a reflection of the complex nature of the power system and the large number of interacting fundamental price drivers.

THE PROPOSAL

The risk management proposal detailed in this Further Consultation Paper aims to shift the highly competitive and risky activity of power trading to the private sector.

The proposal implies a change in focus on the part of the State-owned electricity businesses away from high-risk *financial* trading activities towards the *physical* operation of generation units and the *physical* supply of customers.

Unlike the existing model where the State-owned businesses compete and trade between themselves, and with businesses owned by the private sector or other State Governments, the trading rights corresponding to the physical activities of the businesses would be allocated to separate private sector entities. In exchange for these trading rights, private sector traders would pay the Government a fixed fee, agreed up-front, over the life of a contract of around five years.

The fees that private sector traders would be willing to pay would reflect the margins they could expect to earn from exercising the trading rights. The fees would not be linked to the private sector's actual trading performance. This ensures that the proposal will quarantine the Government from the risks of public entities operating in a fiercely competitive and risky market.

To ensure that risks are properly allocated and the interests of taxpayers are protected, the Government would specify the terms and conditions of the trading contracts. The contracts would be administered by the relevant business, but the electricity business would not be allowed to negotiate changes to the contract, since this may have the effect of undermining the Government's risk management aims. The Government could not unilaterally alter a contract in force, as this would present an unacceptable risk to private sector participants.

The key elements of the proposed arrangements between the State-owned generators and retailers, and private sector traders were described in the earlier Discussion Paper, and are summarised below. The transmission and distribution sectors would be entirely unaffected by the proposed arrangements.

GENERATOR TRADING MODEL

For each State-owned 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 State-owned generator would be traded in the National Electricity Market (NEM). The Government's starting point is that it would tender out three *generation trader* contracts to be linked to the capacity of the three existing generation companies. The proposal has sufficient flexibility to allow for more than three trading contracts, possibly for specific power stations, while retaining three generation companies to manage the physical assets in each generation portfolio.

Each *generation trader* would determine the output of the State-owned generator through their bids to the National Electricity Market Management Company (NEMMCO), just as, at present, the bids of the Government traders determine the output of the power stations. The *generation trader* would not be directly involved in the operation of the power stations.

All decisions regarding the management of the power station would continue to be made by the State-owned 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 that the *generation trader's* market bids do not compromise the integrity of the plant.

In effect the trading contract replicates the arm's length arrangements that now exist within State-owned generators, where market bids made by 'in-house' trading teams determine when and how much the power stations operate. These trading teams are already located in Sydney or Newcastle – physically separate from the power stations whose output they are trading.

Rather than the counter-party to this arrangement being a business unit within the State-owned generator, the counter-party will be a private sector *generation trader*. However, the proposal provides for one key difference to the existing arrangements. Under no circumstances would the State-owned generator take responsibility for any trading losses of the *generation trader*.

Each *generation trader's* contract would cover the capacity of a State-owned generator. The power stations would be operated, maintained and managed by the State-owned generators' own employees. All employees involved in operating and maintaining power stations would remain employees of each State-owned business doing exactly what they are now.

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

The Government will not permit the generation contracts to be renegotiated during the term of the contract to ensure that the risk management characteristics of the proposal are preserved. The Government will also not allow the risk management proposal to be used to re-integrate the NSW generators to reduce competition.

RETAIL TRADING MODEL

The retail trading contract would reflect the same key objectives as the generation trading contract. The aim is to develop a model that eliminates as much market risk as possible for taxpayers and preserves competition for the benefit of customers. This implies a change in focus for the State-owned retailers, away from retail marketing and financial trading activities and towards the supply of regulated services for small retail customers.

In the Discussion Paper published in December 2001, a generic version of the retail risk management proposal was described. The purpose was to introduce the concept of a *retail trader*, which is an uncommon but not unprecedented arrangement.

The original retail model described in the Discussion Paper separates the electricity businesses' wholesale trading operations from the core task of supplying customers. The model is based on a private sector trader acting as a State-owned retailer's wholesale trading arm. This model would replicate, via an arms-length contractual arrangement, the processes that already exist within the State-owned businesses.

Under the original retail model, private traders would bid for the trading rights to supply the *negotiated* customer load of each State-owned retailer across the National Electricity Market (NEM). The trading contract would give a *retail trader* the exclusive right and the obligation, to *fully* supply the State-owned retailer with wholesale power at a price determined from time to time by the trader, just as occurs presently within the State-owned retail businesses.

In discussions, some commentators raised concerns about the need for detailed and complex retail trading contracts to clarify the roles and responsibilities of contract counterparties. This Further Consultation Paper presents a modification of the original retail model – the Agency Contract (AC) model – that resolves these issues. Under the AC model, responsibility for servicing and supplying *customers on negotiated retail contracts* would transfer from the *State-owned retailer* to a private *retail manager*. As a starting point, the proposal involves the appointment of four *retail managers* to manage the negotiated retail customer accounts of the NSW State-owned retailers – EnergyAustralia, Integral Energy, Country Energy and Australian Inland. The Government would ensure that the proposal is designed in a way that maintains a competitive retail market in NSW.

The *retail manager* would undertake various functions on behalf of the State-owned retailer, including billing, accounts management, customer enquiry services and the management of hedge contracts for those retail customers on negotiated contracts. The negotiated customer would remain legally contracted to the State-owned retailer for the period of the existing contract. The trader contract would place obligations on the *retail manager* to deliver supply to existing negotiated retail customers in accordance with the terms and conditions of the contract that the State-owned retailer agreed with the retail customer.

The AC model would prohibit the State-owned retailer from entering into further contracts with customers under negotiated supply arrangements, at least for the term of the retail contract. The State-owned retailer would continue to provide sales, marketing, billing and other customer services to small retail customers on regulated, standard form contracts. The Electricity Tariff Equalisation Fund (ETEF) would be retained to manage wholesale price risk for this group of small retail customers. Employees involved in operating each distribution/retailing business would remain employees of the State-owned business.

There would be no change in the ownership or structure of NSW distributors/retailers. A State-owned retailer would also remain the retailer of last resort in each supply district, again underpinned by the ETEF arrangement.

ABOUT THIS FURTHER CONSULTATION PAPER

The Further Consultation Paper discusses specific key elements of the proposed generator and retail contracts, respectively, as well as aspects that are common to both:

GENERAL ISSUES

Section 2 focuses on a range of issues that are generic to both generation and retail:

- ***Credit risks***: The risk management proposal supports a wide range of options for enhancing the Government's management of credit risks that have been successfully implemented overseas and in Australia.
- ***Management of hedging contracts***: All State-owned electricity businesses hold a large suite of existing hedge contracts. There are various ways of transferring responsibility for managing these risks to the private sector traders.
- ***Duration of contracts***: In terms of the generation model, a three to five-year contract would provide both Government and private traders with the benefits of a medium-term planning horizon, without unnecessarily restricting the NSW Government's flexibility.
- ***Contracting with customers***: This section focuses on the preferred approach for ensuring that continuity of contracting is assured for customers under a variety of circumstances.

GENERATION

Section 3 outlines key aspects of the *generation trader* contracts and examines specific issues that have been raised to date as part of the Government's consultation process:

- ***Ancillary services***: Given the interdependence in practice of providing energy and ancillary services, ancillary services should form part of the trading rights under the generation contracts.
- ***Management of fuel***: It is proposed that the generator contract would allocate responsibility for managing existing generator coal contracts and fuel needs to the generator trader, but that the State-owned generators would continue contracting with coal companies for longer-term supplies.

RETAIL

Section 4 outlines the agency contract model in greater detail and addresses the following specific issues:

- ***Greenhouse issues***: In the context of the NSW Government's greenhouse benchmark scheme, the *retail manager* contract would place the greenhouse benchmark obligation on the private *retail manager*.

- ***Demand side management:*** The *retail manager* contract could be structured to accommodate demand side management measures, such as load control.
- ***Management of other business activities:*** The proposal involves a transfer of responsibility for negotiated gas contracts from the State-owned retailer to the private *retail manager*. Arrangements for managing existing power purchase agreements would be reviewed on a case-by-case basis.

1. INTRODUCTION

The NSW Government has proposed a new approach to managing the financial risks associated with the wholesale electricity trading activities of NSW electricity businesses (the “risk management proposal”). The proposal was described in broad terms in a Discussion Paper published in December 2001.¹

The proposal was a novel response to a simple fact – from a financial perspective, Australia’s NEM is one of the riskiest commodity markets in the world. The NSW Government remains attracted to this risk management proposal, as it would leave nearly all aspects of NSW electricity businesses unchanged while addressing its key risk-related concerns.

NSW taxpayers own seven electricity generators and retailers that trade wholesale electricity every half-hour of every day, exposing NSW taxpayers to financial risks.

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 – and prices are among the lowest in the world. The risk management proposal seeks to maintain the competitive processes that have brought these benefits.

1.1 THE PROPOSAL

The risk management proposal involves separating the financially high-risk task of wholesale electricity trading, from the major task of producing and delivering reliable and affordable electricity to families and businesses. The private sector would take on the job, and the risk, of trading wholesale electricity. The Government, through its electricity businesses, would continue to own and operate its power stations, transmission and distribution lines, and retail electricity to the majority of customers.

The proposal would involve little or no impact on the 10,000 or more employees working in the electricity industry, and on the way the businesses currently operate. The State’s electricity assets would remain in public ownership. The Government would have exactly the same job of protecting customers, the community and the environment, and would continue to discharge its current policy responsibilities.

The only change under the proposal is the management of electricity trading activities, where the majority of the financial risks in the electricity sector reside. Taxpayers would exchange the risk and volatility of earnings from wholesale electricity trading for secure, predictable payments from private organisations, which in return would acquire the right to buy and sell wholesale electricity. The proposal would lock in stable revenues to fund government services.

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. Private sector participants would be

¹ ‘A Risk Management Proposal for New South Wales Electricity Businesses’, December 2001 (<http://www.treasury.nsw.gov.au/energy/pdf/riskman.pdf>).

responsible for earning their own profit margins, after paying NSW electricity businesses fees under contract for the trading rights.

Under no circumstances would the Government take responsibility for any trading losses of a private sector participant. If the private trader defaults, the trading rights would be returned to the generator and the Government would immediately contract out these trading rights to another, more capable party.

1.2 CONTEXT

It should be noted that the exposure of taxpayers to electricity market risk has increased since the release of the Discussion Paper in December 2001.

1.2.1 Full retail competition

From January 2002 every customer in NSW and Victorian electricity and gas markets has had the right to accept a negotiated energy supply contract. In NSW, small business and household consumers have the option of negotiating competitive supply arrangements in preference to regulated arrangements supported by the Electricity Tariff Equalisation Fund (ETEF).

The ETEF was established to create a measure of protection for the State-owned retailers, in managing their exposure to the competitive wholesale market. As customers enter into negotiated supply contracts over time, the volume of electricity covered by the ETEF arrangement will diminish.

However, a key feature of the risk management proposal would be the retention of the ETEF to support an ongoing regulated electricity price alternative for families and small businesses.

1.2.2 Doubling of the wholesale price cap

On 1 April 2002 the National Electricity Code Administrator (NECA) doubled the maximum cap on the wholesale electricity spot price from \$5,000 to \$10,000 per megawatt hour (MWh). Since then, wholesale market clearing prices in NSW have exceeded the previous \$5,000/MWh cap six times with a maximum price of just over \$8,000/MWh against an annual average price of around \$40/MWh.

1.2.3 Enforcement of greenhouse benchmarks

The NSW Government has recently made a range of amendments to its greenhouse benchmark scheme. From 1 January 2003, licensed NSW electricity retailers that fail to meet legislated greenhouse gas emission reduction benchmarks will incur financial penalties. While this is expected to effect a substantial reduction in the State's greenhouse gas emissions, it will introduce a new level of complexity and risk to wholesale electricity purchasing for retailers.

1.3 NEW INVESTMENT IN GENERATION

To ensure the long-term adequacy of the power system to meet the State's electricity needs, the NSW Government has adopted a strategy comprising both demand side approaches (eg. initiatives directed at reducing the level of household energy consumption) and supply side approaches (eg. options for providing additional generation capacity at the appropriate time).

The ability of the risk management proposal to support demand side management is covered in section 4.3.3 of this paper.

On the supply side, NSW currently has excess generation capacity. This situation will change over time as demand for electricity increases. The NSW Government faces a difficult decision in whether to permit its electricity businesses to develop the next major increment to capacity or whether to actively encourage the private sector to build the next major power station in NSW.

The Government could slowly and progressively eliminate the electricity market risk that it is exposed to by not expanding its interest in the power sector. However, to ensure reliability of supply, the private sector would need to develop any new power stations.

While this approach would ultimately eliminate one part of the State's electricity market risk, restrictions on the businesses developing any new power stations may weaken the commercial position of the State-owned electricity businesses. Investing in new generation plant may be a legitimate commercial strategy for the existing State-owned businesses if it improves their current market position or if the existing generation businesses are able to expand capacity in the most cost-effective manner.

Nevertheless, given its experience, the Government remains deeply concerned about the involvement of State-owned electricity businesses in the development of new plant in the risky NEM environment. The NSW Government considers that the development of new power generation facilities in NSW is most appropriately undertaken by the private sector. This is consistent with the Government's intention to develop and encourage effective competition in the NSW generation sector. Increased diversification of ownership of power generation in NSW should encourage the expansion of the State's energy services sector, facilitate innovation in the types of generation capacity developed, and contribute to the deepening of the NEM.

As a consequence, the Government has taken steps to actively encourage the private sector to develop new generation plant. A key aspect of this initiative is the preparation of a detailed NSW based Statement of System Opportunities (SoSO). This plan is intended to complement NEMMCO's wider and more general Statement of Opportunities. More specifically, the NSW SoSO is intended to provide detailed information about when and what type of new capacity is required in NSW to meet the reliability criteria under a wide range of supply and demand conditions.

Another key achievement is the sale by the Government of NSW of the Tallawarra power station site on the NSW south coast to TXU, an international energy company, in early 2003. The Tallawarra site is located near gas supplies, has a potential source of cooling water and transmission infrastructure. It has the potential to provide up to 400 megawatts (MW) of new capacity to meet new growth in electricity demand. Based on current expectations of market growth, this could be required as early as 2008.

These initiatives, combined with the risk management proposal, will significantly reduce the entry barriers perceived by the private sector, including concerns on the part of potential private sector entrants that:

- Government traders do not face strict commercial objectives and that this presents unmanageable risks for new investors; and

- Government traders have access to excess capacity that could be traded.

The risk management proposal would address both of these issues:

- by replacing Government traders with private sector traders who unambiguously face commercial incentives; and
- by addressing concerns about the insufficient use of excess generation capacity.

1.4 CONSULTATION

The Government has undertaken substantial consultation on the risk management proposal, as described in the Discussion Paper published in December 2001. The Government indicated that its decision to proceed further with the proposal would take into account the responses of the managers of the State-owned electricity businesses, employees and their representatives, regulators, environmental and consumer groups, and potential private sector participants.

On balance, the response to the risk management proposal has been positive and encouraging.

In general, respondents have remarked that the details of the electricity trading risk management contracts will be key to ensuring that both the Government's objectives and private sector expectations are met. Interested parties have strongly encouraged the development of a more detailed proposal, and in many cases have recommended that further consultation occur. In some cases, refinements to the proposal as described in the Discussion Paper have been suggested.

The Government subsequently significantly extended the consultation and proposal development period from that anticipated at the time when the Discussion Paper was published. This Further Consultation Paper represents the next stage in the process, summarising the status of the discussion and highlighting those areas where further consultation may be required.

1.5 NEXT STEPS

The Government expects to continue broad consultation on the risk management proposal over the next few months.

Should the Government decide to implement the proposal, it would then determine an indicative implementation timetable. A similar implementation process to that described in the Discussion Paper would be envisaged, including a formal Expression of Interest process.

The NSW Government invites comments and questions in response to this Further Consultation Paper. These should be in writing and should be submitted by Friday 30 July 2004. Comments and questions can be submitted to:

Energy Policy and Implementation Branch
NSW Treasury
Level 25, Governor Macquarie Tower
1 Farrer Place
SYDNEY NSW 2000

or emailed to: RMP@mail.treasury.nsw.gov.au

2. GENERAL ISSUES

The issues discussed in the following are relevant to both the generation and the retail trading model. They relate to the management of counterparty credit risks, how generators' and retailers' existing financial contracts should be incorporated in this proposal, the duration of the contractual relationship and how trading rights should be sold to ensure value for money for NSW taxpayers.

2.1 CREDIT RISKS

Credit risks associated with private traders are likely to be one of the most significant issues that will need to be managed by the Government as part of the proposal. From the Government's perspective, credit risk relates to the likelihood that contract counter-parties are unable to meet their contractual obligations, if a counter-party becomes insolvent and the contract is not entirely secured. In this event, Government may be out-of-pocket, either because its electricity business earns a lower profit, or even because Government may have to underwrite contract payments that would have otherwise been offset by the counter-party.

2.1.1 *Status quo*

At present, the NSW Government:

- has specified certain risk management policies that must be followed by all State-owned electricity businesses;²
- is protected to some degree by the fact that a significant proportion of the contracts that the State-owned electricity businesses have signed are with other NSW State-owned electricity businesses; and
- is further protected to some degree by the fact that the State-owned businesses have signed contracts with a relatively large number of counter-parties. This diversity reduces the risk that the failure of a single counter-party will threaten the commercial viability of a particular State-owned business.³

2.1.2 *Credit risk under the risk management proposal*

The aim of the risk management proposal is to reduce the NSW Government's exposure to wholesale market risks. The Government will be especially concerned that private traders are both technically competent and have strong financial backing to ensure that they can satisfy their obligations under the trading contracts.

Given that each State-owned business would contract with one private trader, rather than with a multitude of counter-parties, it may be considered that this will concentrate the State-owned businesses' counter-party risk. However, concentration of counter-parties does not necessarily increase the extent of the State's credit risk. What is more important is the nature

² New South Wales Treasury, Office of Financial Management, "Energy Trading Policy for Generators", October 1999, and "Energy Trading Policy for Retailers", October 1999.

³ However, an event in the NEM that causes one business to fail may well precipitate the failure of other businesses.

of the creditworthiness of the private traders, compared to those of the existing contract counter-parties, and how well these risks are managed.

Under the existing arrangements, the Government cannot be completely aware of the full extent of its credit risk, since it does not collect detailed data on each and every transaction of its generators and retailers. At the very least, and as part of the development of the proposal, the Government will be able to assess the nature and extent of its credit risk and take actions to manage that risk.

Generators

NSW State-owned generators currently hold a large number of contracts, including those with fuel suppliers, works and services contractors, equipment suppliers and pool hedging contracts. Under the risk management proposal, generators would remain responsible for managing their power stations. That is, any contracts they hold with equipment suppliers, or works and services contracts would remain in place, as would the associated credit risk.

In effect, this would also apply to the management of fuel and hedging contracts described in subsequent sections of this paper. NSW State-owned generators would remain responsible for making payments under *existing* coal and pool hedging contracts. These contracts would be offset by corresponding “mirror” contracts between the State-owned generator and the *generation trader*. As far as pre-existing contracts entered into by State-owned businesses are concerned, the Government has the option of passing the risk of counter-party insolvency to the *generation trader*, or leaving it with the business, and hence with the State.

Retailers

Currently retailers have many contracts, including those with works and services suppliers, equipment suppliers, electricity and gas customers, as well as pool hedging contracts. Under the Agency Contract (AC) retail model, State-owned retailers would continue to be responsible for sales and marketing functions, customer information systems, billing, metering and call centre operations for more than 90 per cent of customers. This would mean that counter-party risk for works and services, equipment suppliers and customer default risks would also continue to remain with the State-owned retailer.

The AC retail model would allocate responsibility for managing existing pool hedging contracts for negotiated retail customers to the private *retail manager*. As is proposed for *existing* contracts held by NSW generators, State-owned retailers would also remain responsible for making payments under *existing* pool hedging contracts, and these contracts would be offset by duplicate “mirror” contracts between the State-owned retailer and the *retail manager*. It is again possible to pass this counter-party failure risk through to the private *retail manager* or to leave the responsibility with the State-owned retailer where it currently resides.

In terms of the supply contracts with negotiated retail customers, the private *retail manager* would have a contractual obligation to provide an agency service that ensured that the terms and conditions of the existing contracts that the State-owned retailer has with negotiated retail customers were maintained.

2.1.3 *Trader default risks*

Under the risk management proposal, the key risk is that the private trader may default on the terms of its contract with the State-owned generation or retail business. Such a default event may place the following payments to the Government businesses at risk:

- **Generation contract:** Credit risks arise in respect of the fees that the *generation trader* would pay the State-owned generator in return for acquiring the trading rights and for the operation of the power station:
 - **Options fee:** The *generation trader* would pay the generator a fixed fee – for instance on a monthly basis – in return for the right to trade the power station output. If a trader became insolvent, this source of Government revenue would be at risk.
 - **Energy and other payments:** The *generation trader* would also pay the generator (pre-defined) energy payments for each MWh dispatched, to cover the costs of plant operations.
- **Retail contract:** The option fee that the *retail manager* would pay the State-owned retailer in return for acquiring trading rights may also be at risk, although it is expected that lesser sums of money would be involved (that could take the form of a single upfront payment).

Management of credit risk

A broad range of options is available for enhancing the Government's credit risk management under the risk management proposal. Government can manage its credit risk exposure by any one or combination of the following methods:

- **Structure of fee payments:** Require payment of an up-front fixed fee covering part of the anticipated stream of variable payments over the life of the trading contract;
- **Guarantees/financial securities:** Require the private trader to maintain bank guarantees or other financial securities of a very high quality over the duration of the trading contract;
- **Collateral/performance assurances:** Ongoing maintenance of minimum collateral requirements reflecting the potential exposure of any of the State-owned businesses to the private trader;
- **Credit rating requirements:** Require private traders to achieve and maintain a minimum credit rating throughout the duration of the trading contract and requesting additional credit assurances in the event that a private trader's credit standing is in doubt;
- **Termination provisions:** Enable the State-owned business to declare a default event under a range of clearly defined circumstances that are considered to place the viability of the trading arrangement at risk. Termination provisions in the trading contract would specify:

- the circumstances that would constitute a default event, such as a change in credit rating, delays in payments or a breach of market rules;
- the rights of the non-defaulting party (the State-owned generator or retailer), including termination rights and payment obligations;
- the calculation of liquidated damages resulting from a default event; and
- the procedures that must be applied in the event that a private trader defaults.

In any case, if the trader defaults on their contract with the State-owned business, the service contract would oblige the trader to hand the trading rights back to the Government, which would then find a more creditworthy counterparty.

2.2 MANAGEMENT OF HEDGING CONTRACTS

A key aspect of the proper functioning of the NEM is the efficient operation of the financial hedging market. Financial hedges struck against wholesale pool prices provide a valuable tool for managing the volatility of spot prices for generators and retailers, and underpin investment in new generation and demand side management options. Financial hedges provide the basis for sellers (generators and retailers) to tailor products and prices to customer requirements to ensure that risk is borne by those in a position to best manage it and efficiency is maximised.

Financial hedging contracts are generally struck between generators and retailers. Intermediaries only form a very small part of the financial hedging market. There are a number of issues that need to be considered in relation to the treatment of these contracts, which are discussed below.

2.2.1 *Management of existing contracts*

All NSW Government generators and retailers have a large suite – in the hundreds or even thousands – of hedging contracts. These include contracts between the NSW State-owned generators and retailers, and with external parties, including private electricity companies, electricity businesses owned by other state governments, as well as a range of intermediaries.

A financial hedging contract is a legally binding instrument. The NSW Government is committed to ensuring that its businesses honour all of their contracts. It is important to develop an arrangement that allows existing contracts to be honoured, while minimising the risks associated with these contracts. These twin aims can be achieved, but there are practical difficulties to be overcome.

The most straightforward approach to managing the risks of the existing hedging contracts would be to tender out the full suite of contracts with the trading rights. Private traders would assume responsibility for making and receiving payments arising from the operation of the contracts. However, practical difficulties arise with this approach:

- ***Due diligence requirements:*** Potential private sector bidders would need to assess the terms and condition of the contracts to determine their worth. Most, contracts contain confidentiality clauses that prevent the businesses from revealing the contracts without the prior consent of the counter-party. While contracts usually provide that

this consent cannot be unreasonably withheld, the large number of contracts implies that this process could be costly and time consuming.

- **Transfer restrictions:** The financial hedging contracts also contain terms that restrict the transfer of contracts to other parties. Again, while consent to a transfer typically may not be unreasonably withheld, the large number of contracts and involvement of multiple third parties would complicate the process of novating all hedging contracts to the private trader.
- **Credit concerns:** Most contracts will require the counter-party to maintain a minimum credit rating. By virtue of their shareholder, NSW generating businesses enjoy a good credit rating, most likely one that is superior to that of most non-Government-owned electricity businesses. Therefore, it is unlikely that the counterparties will consent to a transfer of contracts to new counterparties without concessions on the part of the NSW Government.

On the generation side, these issues could be managed using the following approaches, individually or in combination:

- **Duplicate “mirror” contracts:** A suite of duplicate contracts that reflect the terms and conditions (and therefore risks) of the original contracts could be struck between the private trader and the State-owned retailer/generator. Since the trader’s contractual obligation would relate to the duplicate contract with the State-owned generator/retailer, and not to the contract between the generator/retailer and existing counter-parties, the counter-parties’ consent to a novation of the contract would not be required. This approach would mean that the State-owned generator/retailer effectively provided a settlement function for the private trader and did not bear the risk of the contract.
- **Private trader agent:** If the private trader were appointed as the agent for the State-owned generator, it would manage the settlement of existing hedge contracts until their expiry. While the State-owned generator would remain the legally and financially liable counterparty to the existing contracts, the trading contract would specify the obligations of the private trader and arrangements for dealing with non-compliance.

Section 4 outlines the proposed arrangements for managing the existing suite of hedging contracts held by the State-owned retailers.

2.2.2 *Contracts on termination*

Any contracts that the private *generation traders* entered into while they held the trading rights of the State-owned electricity businesses would be theirs to keep. The Government would not be obliged to buy back contracts that the private traders had extended beyond the duration of the trading contracts.⁴

⁴ This is not to suggest that if the Government decided to resume the trading activities of its electricity businesses, that the businesses would be prevented from negotiating with the traders to purchase some or all of their longer term contracts.

2.3 DURATION OF CONTRACTS

A key aspect of designing the risk management proposal arrangements, particularly for the generation trading contracts, is the duration of the trading contracts.

2.3.1 *General considerations*

The duration of the trading contracts is likely to be a contentious issue, and potential private sector bidders will differ in their views on this matter. Shorter timeframes raise the following concerns:

- **Customer contracting:** A relatively short contract duration may undermine the ability of private *retail managers* to enter into long-term contracts with customers and could consequently expose customers to market risks; and
- **Transactions costs:** Potential bidders may be reluctant to participate in a tender of short-term contracts, because both the administrative (contract and transactions cost) burden and the costs associated with establishing trading facilities may not be justified by expected profits over a three to five year trading period.

Longer time frames for contracts create different issues. Long-term contracts may be considered excessively risky because of the impact of unforeseen and unpredictable events. Long-term contracts may also expose private traders to increased regulatory uncertainty (which will be reflected in the market valuation of the trading rights).⁵

2.3.2 *Shareholder considerations*

There are several reasons why the NSW Government may prefer shorter-term contracts.

Efficiency incentives

It is important that the proposed trading arrangements do not weaken the incentives on power station managers to seek efficiency gains. Managers should regularly face the discipline of the competitive market so that the shareholder can determine whether they have performed adequately.

The risk management proposal strengthens the commercial incentives on generators in two key respects:

- **Contract valuation:** Private traders will judge the cost efficiency of State-owned generators in determining how much they are willing to pay for the trading rights. In general, the more cost efficient the business relative to its competitors, the more a private trader will be willing to pay for the trading rights. Longer-term contracts tend to weaken the incentives on managers to maintain or enhance cost efficiency.

⁵ In reviewing the outcomes of the Alberta power trading rights auction, a relatively small number of participants competed for contracts, and a number of trading contracts were not sold. A NSW Treasury study found that the long lives of contracts – 20 to 25 years – caused bidders to heavily discount their contract valuations, given perceived long-term market risks and the risks of ongoing Government policy changes.

- **Performance targets:** Specific provisions in the trading contracts can further strengthen these efficiency incentives. For instance, generation trading contracts typically contain incentive clauses to ensure that plant managers appropriately manage physical operating risks. Thus the trading contract could specify a minimum number of hours that a generating unit must be available to run, to enable the private trader to trade its output. Performance above and beyond this availability target is rewarded by additional incentive payments. Conversely, if a unit is not available as much as specified in the trading contract, the State-owned generator would incur financial penalties payable to the private trader.

Flexibility for Government

The NSW Government greatly values its flexible policy position. A relatively short contract duration will enable the Government to evaluate the success of the initial trading contracts and put in place any improvements it considers necessary for any future trading contract rounds.

Risk management objectives

The objective of implementing the risk management proposal in NSW is to limit market risks to which the Government is exposed. This requires a balance to be struck – exchanging uncertain revenue streams from electricity businesses’ trading activities for a fixed fee that eliminates these risks.

A long-term contract may allow one of the contract parties to gain an inequitably large proportion of the total contract value, if material changes occur in relation to what was expected at the time that the trading contract was agreed. This can cause significant tension between the counter-parties and may even lead to the frustration of the contract. This is not a desirable outcome for Government, irrespective of whether they are the recipient or donor of these greater than expected benefits.

Shortening the term of a contract can address this problem. In the event that one contract party gains a greater than anticipated benefit than the counter-party, this situation would not persist for long enough to induce the counter-party to challenge or frustrate the contract.

However, these considerations also need to be balanced against the Government’s risk management objectives. If the Government signed very short-term contracts, it might not materially reduce its exposure to electricity market risks. The challenge will be to determine a contract term that effectively addresses electricity market risks, but at the same time limits the risk of significant differences occurring between the *ex ante* and *ex post* contract value for each counter-party.

2.3.3 Proposed approach for generation contracts

Renewing generation contracts

As a starting point, the Government is proposing generator contract terms of five years as a suggested balance of the factors outlined above.

If the Government is satisfied with the overall operation of the generation contracts and wished to continue the arrangements, it would need to re-tender the contracts well in advance of the expiry of any existing trading contracts. The Government is mindful of the need to minimise any resulting discontinuities in the contracts market. Successful bidders in the next round of trading contracts would need to begin negotiating supply arrangements with generators and customers well in advance of the expiry of the first set of contracts.

Individually or in combination, the following options may also limit the extent of disruption in the contracts market:

- ***Staggering the terms of the generation contracts:*** Private traders could be offered differentiated contract terms, for instance, four-, five- and six-year contracts. The Government could also re-tender the trading rights two or three years ahead of their expiry. In this way, there would always be trading rights held by private traders that extended for more than three or four years.
- ***Renewal options:*** The Government could issue contracts for a five-year period with a five-year renewal option. Bidders would be required to bid separate prices for the primary contract period and the option period. To ensure flexibility for the Government, the contract option could be structured so that the Government would be obliged to notify the counter-parties by the end of, say, the third year of the contract, whether or not they intended to take up the subsequent option. This approach would provide private traders with certainty as to how much capacity they would have available for the next three to eight years and provide traders with sufficient information to confidently structure their risk management and investment policies.

Resale of generation contracts

The Government will consider arrangements that provide for the resale of generation trading contracts. Key criteria to take into account will include:

- the maintenance of all credit obligations on the part of the (new) trader; and
- the integrity of the trading contracts, that is, a sale of a trading contract would *not* present an opening for renegotiation of any aspects of the trading contract.

2.4 CONTRACTING WITH CUSTOMERS

A key objective of the NSW Government for the risk management proposal is to enhance customer benefits, as well as limiting taxpayers' exposure to market risks.

It is important that the risk management proposal does not undermine customers' ability to enter into long-term supply contracts. Treasury understands that more than 90 per cent of negotiated contracts (other than existing large load contracts) are for terms of up to five years. The vast majority of these contracts are for three years or less. As a general matter, a five-year trading rights contract should therefore not undermine the ability of the industry to enter into hedging arrangements with customers.

In terms of supporting customers' ability to enter into long-term contracts, the AC model is probably more effective than the original model. The AC model transfers risk and creates value by allowing private *retail managers* to take responsibility for servicing negotiated retail

customer contracts, while services to small customers on regulated contracts would continue unchanged. The same private *retailer managers* would then be able to negotiate new supply contracts directly with negotiated retail customers when existing customer contracts expire.

2.5 POSSIBLE TENDERING ARRANGEMENTS

The Government would need to carefully develop the arrangements for conducting the tendering process to ensure that taxpayers received an appropriate return for the trading contracts. This is probably the most crucial step in the development of the proposal.

The Government would prefer to tender out generation and retail rights at the same time. This would allow private traders to bid for combinations of generation and retail trading contracts (subject to any Trade Practices Act issues). The pairing of trading contracts may allow private traders to better manage retail exposures as they would have the benefit of a physical generation hedge for all or part of that load. Other traders may only be interested in stand-alone generation or retail trading rights.

A simultaneous, combinatorial auction may provide the best format for maximising contract fees. A similar process has been used in many countries, including Australia, over recent years to auction off spectrum licences. This auction format allows eligible traders to bid for various trading contracts, separately or in combination, and to observe the value that other traders place on those contracts. To remain eligible throughout the iterative bidding process, traders would have to continue to participate in the bidding process until the auction concludes.

However, the sale of spectrum licenses has not been without notable failures. Bidders will always seek to exploit possible loopholes or failings in the auction design. Hence, there is a clear need for a comprehensive and robust auction development process.

Irrespective of the sale format, the Government would set reserve prices for all trading contracts. Reserve prices would reflect the (risk-adjusted) value of retaining the trading rights with the State-owned businesses, and represent a key condition for sale of the trading rights.

3. GENERATION

The principle features of the generation trading model are as follows:

- **Generation trader:** A private sector *generation trader* would determine how the capacity of each State-owned generator is traded in the NEM. The *generation trader* takes responsibility for market risks; and
- **State-owned generator:** Employees of State-owned generators would remain responsible for the physical operation of NSW power stations.

In effect, each State-owned generator would become an asset operator and manager, as well as 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 fees, but they would also bear any losses they might incur as a result of their trading decisions.

Under the proposed generation contract, the *generation trader* would have to make three types of payments to the State-owned generator:⁶

- a pre-agreed fixed periodic (eg. monthly) payment for access to the generation capacity;
- a periodic payment to cover the generator's costs of all coal contracts associated with a particular generation portfolio; and
- a periodic payment to cover all variable charges to compensate the generator for all other running costs of the power station. The charges would be agreed up-front and would be paid on a fee-for-service basis.

In turn, the generation contract would place certain performance obligations on power station managers. If a plant fails to generate as directed during a key point in time, the *generation trader* could face a financial loss, particularly if it has entered into financial hedges based on that anticipated load. In addition to technical operating limits, the generation contract would need to address a number of operational issues, including plant availability, plant performance and maintenance, as well as incentives and sanctions for performance and non-performance of those terms.

The design of any availability incentive regime involves explicit trade offs. If State-owned generators face weak incentives to make plant available, private traders will discount the value of those trading contracts. However, a regime that reimburses private *generation traders* for actual losses in the event of poor plant availability is likely to be unacceptable to Government, since it does not meet the objective of transferring market risk away from the Government businesses.

⁶ As an alternative to periodic payments, a portion of the *generation trader's* payments to the State-owned generator could be paid up-front to partially mitigate the credit risk issues discussed in section 2.1.

The design and structure of availability incentives, including the allocation of force majeure risks, is an important part of the risk management proposal. The objective will be to find a balance that provides value for taxpayers, incentives for efficient performance by the State-owned businesses and an appropriate degree of certainty for private *generation traders*.

3.1 ANCILLARY SERVICES

Generators and retailers now also trade in a new ancillary services market, as well as in the energy market. This new market is multi-tiered where suppliers bidding to have their ancillary services dispatched determine market price. These changes have substantially increased the complexity and risk of trading ancillary services in the NEM.

Generators provide ancillary services, such as frequency control (FCAS) as a substitute to real power. That is, a decision to supply the energy market at a particular price is dependent on the opportunity cost of supplying the FCAS market, and vice versa.

Given the interdependencies of these two markets it would be inefficient if the responsibility for trading in the energy market were separated from the responsibility for trading in the ancillary services market. Ancillary services provision has been successfully incorporated in the design of generation trading contracts in other jurisdictions. It is proposed that ancillary services trading should similarly be included as part of the risk management proposal.

3.2 MANAGEMENT OF FUEL CONTRACTS

Black coal is the primary energy source for all power generated by the NSW State-owned generators. This coal is largely supplied by private suppliers under contract terms that vary in length from relatively short-, to very long-term arrangements.

The majority of expected coal needs for each State-owned generation business are covered by supply contracts that exceed the duration of the trading contracts. At the same time, negotiations for future fuel arrangements for the respective generating portfolios would need to continue on an ongoing basis, given the long lead times required for developing coal mines and the long planning horizons that are the norm within the industry.

These medium- to longer-term arrangements contrast with ongoing purchases to meet short-term fuel requirements or take advantage of market opportunities. In the absence of the risk management proposal, the State-owned generators would, in the normal course of business, buy coal from the spot market for any remaining purchases required or arrange further contracted supplies.

There are two key ways in which NSW generators' existing contracts could be managed under the risk management proposal, which are briefly discussed below.

3.2.1 All fuel arrangements remain with the State-owned generator

Under this option the State-owned generators would use operational payments received from the *generation trader* to make payments under the existing coal contracts. A State-owned generator would then have an agency agreement with the *generation trader* to purchase any additional fuel it requires to meet its physical obligations under the trading contract.

This option presents potentially uncontrollable risks to both the generator and to the *generation trader* and is not recommended:

- **Existing contract terms:** The *generation trader* may bid the power station in a way that causes it to run at a different level than is implied in the coal contracts. To the extent that many contracts specify minimum (and maximum) off-take provision, this could leave the generator with a significant coal storage problem (or conversely shortage), or otherwise expose the generator to penalty payments.
- **Additional contract terms:** The incentives of the generator are unlikely to be aligned with the *generation trader*, where additional coal purchases are concerned. For example, a generator responsible for the physical operations and long-term maintenance of the plant is likely to want to purchase high quality – and hence costly – coal, whereas the *generation trader* would be more concerned about the short-term competitiveness of the power station and hence low cost coal.

3.2.2 *Generation trader makes incremental fuel purchases*

Under this option, the *generation trader* would be responsible for meeting the terms and conditions of the existing coal contracts and purchasing any incremental, short-term fuel requirements on their own account.

To achieve this, a series of contracts would be prepared that mirrored, in aggregate, the existing suite of coal contracts. These mirror fuel supply contracts would be struck between the generator and the *generation trader*. The *generation trader* would make payments to the State-owned generator, who would, in turn, make payments to the coal supplier. The existing contracts between the generator and the coal supplier would maintain the existing arrangements and protect the confidentiality of pre-existing generator contracts with coal suppliers.

The mirror contracts would be designed to ensure that the State-owned generator's position would be completely hedged. Irrespective of whether the power station was dispatched or not, the generator would be paid by the *generation trader* those sums owed by the generator to the coal supplier under the existing contract terms. The coal supplier would be indifferent to these arrangements, because the counter-party to their contract – the State-owned generator – remained the same.

The use of mirror contracts implies that the terms of individual contracts between coal suppliers and the State-owned generator need not be revealed to any third party. The Government would not need to gain the permission of the coal supplier to reveal the terms of coal contracts for bidder due diligence purposes (which might otherwise delay the implementation of the proposal).

Within the framework outlined above, the *generation trader* would be responsible for any incremental fuel purchases above and beyond those specified within existing fuel contracts (and the corresponding mirror contracts). The trading contract would need to set out clear quality standards for such short-term coal purchases, to mitigate the risk that the *generation trader* purchases low quality coal which compromises the operations and long-term maintenance of the plant.

As an alternative to mirror contracts for managing existing coal contracts, the Government would also consider calculating existing contracted coal volumes in terms of electricity equivalents. The private trader would have to bid each generation portfolio to dispatch a minimum monthly volume of electricity that matches the volume of contracted coal supplies for that month.

3.2.3 *Proposed approach*

It is proposed that responsibility for short-term fuel purchases would fall to the *generator trader*, and that the *generation trader* would also remain responsible for any contracts they sign past the termination of their contract.

In terms of managing coal supplies on a medium- to long-term basis, it is proposed that State-owned generators continue contracting with coal companies for supply beyond the term of the trader contract.⁷ Leaving the generator with this responsibility is appropriate since they have an incentive to ensure that the power station operates as cost effectively as possible, since the future of the power station will be determined by whether *private traders* believe the plant is competitive.

In this respect, the role of State-owned generators would remain more or less unchanged from current arrangements, and the proposal should not affect the way the coal industry deals with the NSW power industry. In particular, given that the State-owned generators have a long-term interest in maintaining the viability of their power stations, they will still want to sign long-term coal contracts which support the long-term development of the coal industry.

⁷ The State-owned generator would have the choice of negotiating with the *generation trader* to take over any coal contracts they may have negotiated that extend beyond the termination of their trading rights.

4 RETAIL

The Government's preferred option for managing retail market risks is the Agency Contract (AC) model. This model shifts the greatest proportion of business risks to the private *retail manager*, without impacting on the overwhelming majority of customers.

4.1 CURRENT ARRANGEMENTS

Each of the three main State-owned retailers currently maintain a separate wholesale trading group that purchases power in the NEM and provides a wholesale reference price that the sales staff can offer to customers. The wholesale trading group makes decisions regarding the mix of hedged and unhedged power purchases and the nature of the hedging instruments used.

The wholesale trading group establishes a transfer price that is "charged" internally to the retailer's sales team. The form of this price varies considerably between retailers. For example, some businesses have a highly structured transfer pricing arrangement whereby a standing transfer price is established each day for a wide range of customer types, for various periods.

In turn, the retailer's sales team offers a range of "products" developed by the retailer. In general terms, products comprise a price and a service offer to the customer. A range of factors determine the price, the most significant being the wholesale transfer price and the retailer's margin. This covers the costs and risks to the retailer of organising customer supply arrangements and meeting its obligations under the customer contract.

Retailers compete on the basis of price and service. Since all retailers purchase power from the same wholesale market (the NEM) at the same market (pool) price, the only mechanism for gaining a wholesale cost advantage is through efficient contracting or efficient management of customers' loads. That is, to the extent that one retailer has purchased contracts more expensively than another retailer, the former retailer will earn a lower, and sometimes even a negative, margin, since they will not be able to pass their inefficient costs onto customers in a competitive market.

4.2 AGENCY CONTRACT MODEL

The AC model recognises the magnitude of market risks that State-owned retailers are exposed to in relation to specific customer groups.

At present, around 20,000 of the three million NSW electricity customers are "large" customers consuming more than 160MWh per annum. While these customers represent a very small proportion (less than one per cent) of overall customers, their energy consumption accounts for more than 50 per cent of NSW customers' overall use. The number of "small" retail customers (less than 160MWh per annum) on negotiated supply contracts is also increasing steadily following the introduction of retail competition for these customers in January 2001. Given that electricity purchases by NSW State-owned retailers on behalf of small customers on regulated contracts are protected through the ETEF arrangements, these negotiated retail customers account for the overwhelming proportion of market risks borne by NSW State-owned retailers.

4.2.1 Proposed approach

Under the AC model, trading arrangements would differ according to whether the customer was supplied under regulated or negotiated contract arrangements:

Negotiated (unregulated) retail customers

The State-owned retailers' negotiated supply customers would be effectively transferred to the private *retail manager* who would supply and service these customers. The retail manager would service the negotiated customer contracts as the agent of the State-owned retailer, but the State-owned retailer would remain the legal counter-party until the supply contract expired. This approach avoids the practical complexities of contract novation or reassignment, and may provide additional assurances to customers in relation to the responsibilities of the State-owned retailer. The State-owned retailer would not be permitted to enter into future negotiated supply contracts with customers, at least during the period of the retail agency contract.

To protect the interests of the customer, and the reputation of the State-owned retailer, the retail agency contract would prescribe minimum service standards. While there is a risk that the private *retail manager* may not perform to these standards and damage the State-owned retailer's reputation, such an outcome would be unlikely in practice. This is because such a private *retail manager* has a strong incentive to retain customers after their original contracts with the State-owned retailer expire. Nevertheless, the contract could contain provisions that would penalise poor quality service.

Regulated small retail customers

Under the AC model, regulated small customers would be treated as they are now. State-owned retailers would continue to purchase electricity on their behalf with wholesale price risk managed via the ETEF. Regulated customers would continue to receive all other billing, account management and customer enquiry services from the State-owned retailer. The Independent Pricing and Regulatory Tribunal (IPART) would continue to determine the level of regulated retail tariffs for small retail customers.

4.2.2 Evaluation of the agency contract model

The AC model is designed to eliminate those market risks associated with retailing electricity that NSW taxpayers are currently exposed to. The original retail model outlined in the 2001 Discussion Paper would reduce wholesale trading risks, but it would not remove the risks associated with the retailer selling at an inappropriate margin (i.e. negative) or selling other services at a loss.

If a retailer makes an error in pricing a contract for a negotiated customer, particularly a larger commercial or industrial customer, this can undermine the fortunes of the entire retail business. The AC model overcomes this risk by restricting the State-owned retailer to supplying customers that remain on standard form supply arrangements, and to acting as the retailer of last resort, where they will be protected by the ETEF arrangements.

The private *retail manager* would need to be a licensed NSW retailer before the commencement of the agency contract with the State-owned retailer. The licensing regime incorporates a range of customer protection measures that the private *retail manager* would have to comply with, including the customer code of conduct, requirements to disclose minimum billing and charging information and customer dispute resolution procedures.

4.3 GREENHOUSE ISSUES

All electricity retailers, including State-owned retailers, operating in NSW must be licensed. The Government has placed a range of obligations on retailers through their licenses. For example, the Government has recently introduced a scheme whereby retailers supplying customers and customers being supplied by other means (i.e. directly from the NEM) would be required to meet a targeted level of greenhouse gas production per capita or face a financial penalty.

4.3.1 Management of license obligations

It is important that the risk management proposal supports the recent greenhouse initiative by the NSW Government and, more generally, other State and Commonwealth Government environmental policies (eg. the Commonwealth Government’s Renewable Energy Scheme).

NSW State-owned retailers (and all other retailers) use a variety of mechanisms to secure supply and demand side options to help them meet their various greenhouse obligations. In general, securing these rights involves retailers entering into either a financial contract for supply of services or the retailer taking an equity stake in a project. Either of these approaches involves the retailers taking considerable financial, market and regulatory risks.

Under the AC model, responsibility for meeting licence obligations for negotiated retail customers would transfer to the private *retail manager* in the same way that the *retail manager* would have to meet all requirements of the customer protection regime. If the *retail manager* failed to achieve these targets, the contract would pass through the cost of the penalty incurred by the State-owned retailer. It may also be appropriate to structure the contract to charge the *retail manager* more than the penalty faced by the State-owned retailer. This “uplift” would be designed to compensate the State-owned retailer for any additional costs the retailer might incur because the *retail manager* has not complied with its contractual obligations in respect of greenhouse obligations.

State-owned retailers would remain responsible for purchasing sufficient green energy to cover their licence obligations for small retail customers on regulated arrangements. State-owned retailers currently earn a retail margin that incorporates a green allowance that covers the retailer’s obligations under the benchmark scheme. Amendments to the benchmark scheme should enable State-owned retailers to source the required greenhouse reductions either through certification or direct supply arrangements.

4.3.2 Management of existing contracts

Some State-owned retailers have already entered into substantial, long-term financial contracts to meet their legislated greenhouse obligations. These options include long-term supply arrangements for the supply of power from wind generators, natural gas, solar power units, biomass, waste coal mine gas, hydro and from landfill sites. IPART has indicated that these supply side measures account for “well over nine tenths” of emissions reductions by

NSW electricity retailers.⁸ The remainder of emission reduction was derived from demand side measures.

Inevitably these contracts will present certain market risks, such as the risk that the investments will become “stranded” with technological progress or shifts in the relative costs of key inputs (eg. fuel). As with other contractual arrangements that exist between the NSW electricity businesses and customers/suppliers, the risk management proposal would not threaten any existing agreements:

- **Supply side options:** These can be managed in the same way as other (non-green) supply side options to protect the taxpayer from any increase in market risk. That is, mirror contracts can be developed that reflect the financial obligations of the State-owned retailer with respect to the supplier of “green” energy. Where these contracts exist between a supplier and a State-owned retailer, the mirror contract can be incorporated into the retail trading contract. The *retail manager* would then, in effect, assume the financial responsibility for the “green” contract.
- **“Green” power supplies:** These would be incorporated into the wider portfolio of plant, which would be covered under the standard *generation trader* contract.

4.3.3 Demand side management

Control over load will become an increasingly important tool in the NEM as the competitive retail market matures and as pressures increase for retailers to comply with their greenhouse license obligations. Retailers are turning to load control options to assist in the management of NEM risk as other (cheaper) options are exhausted or become less financially attractive. It is important that the proposal does not undermine these incentives to seek load control options.

Current arrangements

Retailers exploit the flexibility in their customers’ demand in many ways. For example, retailers value the ability to reduce their total load in order to manage their financial exposure to high prices. Often these agreements involve discounting customer tariffs in return for the right to reduce a customer’s load for a fixed number of times within a certain period, for a certain quantity of load.

Traders use this information in the design of their hedging strategy. For example, traders can compare the option of signing an additional hedging contract, or remaining in a relatively unhedged position, but with an option to reduce load if prices spike. If, on the basis of the trader’s expectations about the likelihood of such price rises, the latter option were cheaper, the trader would value the ability to quickly reduce load to either suppress the high price (if the load reduction is large enough) or to reduce the quantity of electricity it buys at these high price times. If the trader adopts this strategy it must be confident that the customer will reduce the load in accordance with the terms and conditions of the customer contract.

⁸ IPART Licence Compliance Report 2002, p32.

Under the AC model, the *retail manager* effectively manages existing contracts on behalf of the State-owned retailer and would be obliged to meet all of the terms and conditions in those contracts, including any load control arrangements. The *retail manager* would have a commercial incentive to negotiate load control procedures in all future contracts that it agreed with any customer. In addition, one of the least-cost ways for the *retail manager* to meet the greenhouse benchmark targets recently set by the Government is by reducing customer demand. Private *retail managers* would have a strong profit motive and would seek out these low cost (demand management related) compliance options.

4.4 EXISTING POWER PPAS AND GAS BUSINESS ACTIVITIES

NSW State-owned retailers are engaged in a number of high-risk activities that may not be compatible with the types of risks that Government is prepared to bear.

4.4.1 Key issues

The State-owned retailers hold physical supply contracts with a number of generation facilities. Some of the businesses have also purchased other energy and non-energy related businesses. This includes a number of power purchasing agreements (PPAs) between NSW retailers and private generators, including:

- Burrendong with Country Energy (formerly with Advance Energy);
- Wyangla with Country Energy (formerly with Great Southern Energy);
- Copeton Dam with Country Energy (formerly with NorthPower);
- Smithfield and Tower/Appin with Integral Energy;
- Redbank with EnergyAustralia; and
- nearly all businesses hold an assortment of ‘green’ options.

In addition, some of the businesses have purchased or developed gas businesses focussing on retailing. Given that these activities take place in the context of highly competitive markets, they potentially present significant new sources of risks to the NSW Government. The nature and extent of risk are determined by the terms and conditions of the PPAs, and the structure of the gas supply contracts in respect of the gas retailing businesses.

4.4.2 Gas business risks

The NSW gas market is inherently less risky than the electricity market. To a large degree this is because wholesale purchases tend to occur on the basis of comparatively long-term contracts. This contrasts with the power industry where relatively short-term contracts are struck against volatile spot prices.

Greater stability in the gas wholesale price does not mean that gas retailing is not risky. For example, a retailer can enter into a long-term supply contract that is relatively expensive, compared to their retail competitors. Given the very small margins retailers earn, even a small difference in a retailer’s wholesale cost, or the costs of supply, can make a significant difference to a retailer’s competitive position. Under these circumstances the only way a retailer can sell its gas is by selling it at a price less than its wholesale costs, or by cutting its

margin, or both. Either way, there is a risk that a State-owned gas retailing business can lose money if their wholesale contracting is uncompetitive or if their cost of service is too high.

At present, NSW electricity retailers only have a relatively small, but growing, interest in gas. It is possible that electricity retailers everywhere will need to develop their gas retailing businesses if they want to succeed in the electricity retailing business. This is because the most successful retailers may be those that can offer both gas and electricity to small retail customers. Not only might 'dual fuel' deals be more convenient for customers, servicing both fuels may be cheaper for the retailer, if they are able to spread their fixed costs over a greater customer base.

4.4.3 Proposed approach

It is proposed that PPAs that provide the State-owned retailer with the right to trade the output of power stations be treated in the same manner as hedging contracts. That is, the PPA would remain in place between the State-owned retailer and the existing counter-party (to avoid the problems of novating the contracts), and a mirror contract would be prepared between the State-owned retailer and the *retail manager*.

In general, this contract would require the *retail manager* to make the same payments to the retailer that the retailer has to make to the PPA counter-party, so that the State-owned retailer is in a completely hedged position. The duplicate mirror contract would probably require the retailer to bid the power station according to the instructions of the *retail manager*, so that the *retail manager* can capture the value of the trading rights and manage its financial exposure.

If the PPAs are pure physical supply contracts where the State-owned retailer has little or no latitude in the way the station is dispatched, then no changes to the existing arrangements would be contemplated, since the financial risks have effectively been crystallised at the time the State-owned retailer signed the contract.

In terms of gas market risks, it is proposed that the private *retail manager* would also take on responsibility for managing existing negotiated gas retail contracts and the underlying hedge contracts that the State-owned retailers have signed to manage gas supplies. A major factor driving the move towards the joint marketing of both services is the cost savings obtained through a common accounts management and billing process. A private retailer manager should be willing to pay more for the right to manage both retail accounts reflecting the value of these cost savings.