

Electricity Supply Industry Expert Panel

Independent Review of the Tasmanian Electricity Sector

Issues Paper

24 June 2011

Issues Paper

Electricity Industry Panel - Secretariat

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Foreword

In October 2010, the Tasmanian Parliament passed the *Electricity Supply Industry Expert Panel Act 2010* to establish an independent expert panel (the Panel) to conduct a review into, and provide guidance to Parliament on, the current position and future development of Tasmania's electricity industry (the Review). The Panel has taken a consultative approach to the Review:¹

- On 17 December 2010, the Panel released a draft Statement of Approach, explaining its interpretation of the Terms of Reference and explaining how it intended to approach the Review. The Panel sought submissions and feedback on the draft Statement of Approach, specifically on how the Panel had interpreted its mission in relation to the Terms of Reference. The Panel's paper '*Response to Statement of Approach*', released on 6 April 2011, summarises the main themes and issues that were raised by stakeholders and the Panel's response to them.
- On 15 April 2011, the Panel released three Discussion Papers intended to foster a shared understanding of the electricity industry past and present, as a precursor to considering the industry's future. These Papers are 'The Evolution of Tasmania's Energy Sector', 'Tasmania's Energy Sector – an Overview' and 'Tasmania's Electricity Pricing Trends'. While intended to be primarily factual, where possible the Discussion Papers sought to initiate public discussion. The Panel has subsequently received submissions from a number of stakeholders on matters identified in these papers.
- To further encourage public discussion on issues in Tasmania's energy sector, the Panel held Community Hearings in Hobart on 19 April 2011 and in Launceston on 20 April 2011. The Community Hearings formed a key part of the Panel's evidence gathering processes and were designed to provide interested members of the community with an opportunity to raise and discuss issues directly with the Panel members in an open and transparent way.

¹ All papers released by the Panel and submissions from stakeholders deemed non-confidential by the stakeholder are available on the Panel's website <u>www.electricity.tas.gov.au</u>.

• The Panel has released a paper '*Community Hearings: Summary of Proceedings*' which provides a high level overview of the matters raised by Participants in both sessions and explains the Panel's general views and responses, including how various matters will figure in the Panel's deliberations as the Review progresses.

While the Panel has actively sought out the opinions of interested parties, as this provides key contextual information and an understanding of why parties hold particular views, the Panel's approach to the Review is to put substantially more weight on, and be more persuaded by, facts and evidence. Given the context of the Review, the Panel is convinced that its work must be founded on solid empirical evidence if it is to achieve the joint objectives of explaining Tasmania's current energy circumstances and developing well grounded recommendations for reform.

Shortly, the Panel will begin to develop its recommendations for the future development of Tasmania's electricity industry. The Panel encourages stakeholders to make submissions, or provide evidence on, the matters set out in this paper by 12 August 2011.

John Pierce Chairman Electricity Supply Industry Expert Panel

Summary of Key Issues

A wide range of matters has been brought to the attention of the Panel through its consultation processes. Distilling these matters to their fundamental drivers, the Panel has identified the central issue as being the degree of confidence that stakeholders can have that the energy sector delivers efficient outcomes on a consistent basis. In the context of the Panel's Terms of Reference, the Panel considers that the key issues are:

- In light of the hydrological risk that Tasmania faces from its reliance on hydro-generation and variable rainfall, key investments have been made over the past decade that increase the State's energy supply security. While the market provides a source of funds to meet the cost of these investments, two primary issues are:
 - Whether any additional 'insurance' premiums have been required to fund the investments; and if so
 - How the cost of these premiums are allocated between customer groups given that all customers benefit from improved reliability of supply.
- 2. How the potentially competing requirements of public sector finances, the financial sustainability of the State Owned Energy Businesses (SOEBs), electricity prices and service outcomes for customers are reconciled.
- 3. The extent to which the wholesale energy market is delivering efficient outcomes in the contract, spot and associated markets, and the extent to which the existing wholesale electricity market supports or hinders the development of retail competition.
- 4. The conditions that would need to be satisfied for retail competition to be effective at the small business and household level.
- 5. Whether increased network costs represent value for money and the extent to which customers recognise they are getting a change in service in return for their increased costs.
- 6. How Government has made major decisions that impact on the energy sector and how transparency might be improved and accountability for outcomes enhanced.

A summary of specific issues on which the Panel is seeking comment throughout the Issues Paper is included below:

1. Introduction and Objectives of the Issues Paper

Since the mid-1990's, successive Tasmanian Governments have undertaken significant reforms of the energy sector aimed at diversifying Tasmania's energy options.³ A primary policy driver of this reform was to introduce greater competition into the Tasmanian electricity market to drive greater customer choice and competitive price outcomes for Tasmanian businesses and households. In line with the direction taken by other governments through the Council of Australian Governments (COAG) processes, it has also involved a shift towards national regulation and standard setting.

Today, the electricity sector may appear significantly more complex than it was in the past, in that it comprises both physical and financial markets which, although operating separately, are interlinked. The market is also subject to external influences, some of which are outside market participants' or the Tasmanian Government's control that impact on outcomes for customers and the electricity businesses themselves. In turn, electricity sector outcomes can influence or impact on broader Government or community objectives in relation to matters such as the cost of living and the State's economic competitiveness.

The Tasmanian Government also has the role of shareholder of the SOEBs on behalf of the Tasmanian community, creating a need to reconcile outcomes between taxpayers, through SOEB financial returns and/or improved business value; and outcomes for Tasmanian electricity customers.

In this environment, it is important to clearly propose an electricity supply industry objective and desired outcomes against which observed outcomes will be tested.

The Panel is proposing the following energy supply industry objective by which the status-quo and potential reforms will be measured:

'To promote a safe, secure, reliable, efficient and sustainable electricity supply industry, capable of providing electricity services at efficient prices to Tasmanian households and businesses, over the long term.'

The electricity sector's complexity and the Panel's proposed objective and desired outcomes are illustrated in Appendix 1: 'Tasmanian jurisdiction electricity supply industry market environment'.

³ In April 2011, the Panel released a Discussion Paper – 'The Evolution of Tasmania's Energy Sector' that sets out in detail the successive Tasmanian Government energy policy platforms since the mid-1990s, under which Tasmania's energy sector has experienced major structural, regulatory and investment changes.

Any gap between observed outcomes and the proposed desired outcomes will identify issues that may require a policy response from Government. The identification and analysis of some issues requires access to information that is not in the public domain and which the Panel has been provided under its Act. While the Panel continues to use its information gathering powers to obtain this information, it welcomes submissions from interested parties on a confidential basis if necessary, that assist in identifying, scoping and addressing issues.

In accordance with its Terms of Reference, and with the assistance of industry specialists, the Panel has commenced a detailed examination of:

- The efficiency and effectiveness of the SOEBs (Terms of Reference No 1). The Panel has engaged Wilson Cook to assist with this part of the work program.
- The financial position of the SOEBs (Terms of Reference No 4). The Panel has engaged Ernst & Young to assist with this part of the work program.
- Economic modelling and analysis of the market based retail and wholesale energy sectors to examine the effectiveness of the current market architecture in driving efficient outcomes. By establishing an economic base case, potential, reform scenarios can then be tested against the status quo to establish evidence of the broad nature of outcomes that could be expected from potential reform paths. The Panel has engaged Frontier Economics to assist with this part of the work program.

The purpose of this Issues Paper is to focus attention on the primary issues for the Review and to gather from interested parties supplementary information to inform the Panel's work. While a broad range of issues has been raised, it is the intent of the Panel to focus on only those issues it considers germane to its Terms of Reference, directly or resulting from of core underlying issues.

Distilling these matters to their fundamental drivers, the Panel has identified the central issue as being the degree of confidence that stakeholders can have that the energy sector delivers efficient outcomes on a consistent basis. Key issues for the Panel to form a view on are:

- The extent to which the competitive market sectors generation and retail are delivering least cost and cost effective outcomes.
- The extent to which the regulated sectors (transmission, distribution and retail for non-contestable customers) are delivering least cost and cost-reflective outcomes.
- The extent to which key investment decisions have been made on the basis of market signals, or through decisions of Government, and have delivered appropriate or efficient outcomes for Tasmanians.

Central to the Tasmanian Government's reform of the electricity sector was the transition to a national market based framework structured through effective competition in the generation and retail markets and economic regulation of the natural monopolies comprising the transmission and distribution networks.



Figure 1 – The National Electricity Market Framework

The Panel has further identified five underlying perspectives which contribute to the degree of confidence stakeholders have in the extent to which efficient outcomes are being delivered in the energy sector. These are:

- 1. The nature of incentives in the current energy sector architecture⁴ that influence observed outcomes, including the reconciliation of outcomes for electricity consumers and the community.⁵
- 2. The extension of retail contestability to residential electricity customers.⁶
- 3. The value creation, benefit and cost allocation arising from key decisions. Many of the long-held issues pertaining to Basslink, and more recently the Tamar Valley Power Station (TVPS), are of this nature. The impact of the Australian Government's carbon pricing scheme on Tasmanian electricity customers is also an issue that impacts on business value.

⁴ Energy sector architecture includes the physical market attributes (including structure), governance and policy; and the regulatory framework.

⁵ The community are the ultimate beneficiaries of contributions to the State Budget from SOEBs and improvements in the equity value of SOEBs.

⁶ Legislation has been introduced to Parliament by the Tasmanian Liberal Party to implement FRC. This legislation has been referred to the Panel for consideration.

- 4. The transparency and accountability of Government decision making, administering the SOEB Shareholder role, and the role of Shareholders and the broader accountability framework in driving SOEB performance.
- 5. The financial performance of the SOEBs and their contributions to the State Budget.

Sections 2 to 5 of this Paper will consider each of these in turn.

In addition to the Panel's proposed desired electricity sector outcomes identified in Appendix 1, the Tasmanian Government has a number of objectives related to, and/or influenced by, electricity sector outcomes. Broadly, these relate to:

- The impact that electricity prices have on the cost of living in Tasmania and the Tasmanian economy's competitive advantage, nationally and internationally.
- As Shareholder of SOEBs the Tasmanian Government, on behalf of the Tasmanian community has an interest in maintaining the financial sustainability and value of these businesses. This includes ensuring the SOEBs maintain appropriate capital structures, maintain industry consistent dividend policy; and approve major capital expenditure where appropriate, particularly where it relates to non-core business development.
- Through the payment of dividends, guarantee fees and income tax equivalents, the SOEBs provide financial returns to taxpayers that contribute to funding a broad range of policy objectives unrelated to the energy sector, such as health and education.
- The Tasmanian Government has a policy making role in the electricity regulatory framework.⁷
- The Tasmanian Government has continued to place a high priority on maintaining energy security in the context of an energy-constrained hydrogeneration system that is subject to hydrological risk. This objective has been a dominant driver of energy policy.

There are often tensions between these objectives that need to be reconciled. This is particularly the case where the operation of the energy market departs from those that might be delivered by an efficiently operating market.

⁷ For example, establishing the methodology for determining the energy allowance for non-contestable customers and setting the 101 communities distribution network standards.

Often this tension is between efficient outcomes in the energy sector, the Tasmanian economy and the State's fiscal position (through value or returns in the SOEBs). A fundamental issue is to clearly identify the framework in which the reconciliation of the tensions between competing objectives is undertaken.

The Panel considers that the electricity industry will make the best contribution to the growth and development of Tasmania and to the economic welfare of Tasmanian's if it is operated on the most economically efficient basis possible. It follows that the financial outcomes form the operations of the SOEBs and their implications for public sector finances should flow from and complement the pursuit of economically efficient electricity outcomes.

Accordingly, the way the SOEBs are governed needs to compliment the market and regulatory incentives that impact on the businesses so as to drive continuous productivity improvement in their operations and performance.

2. Influence of Electricity Sector Architecture

This section of the Issues Paper considers the extent to which incentives in the current electricity sector architecture, including trade-offs between the competing interests of Tasmanian electricity customers and taxpayers, influence observed outcomes.

Perhaps the most discussed outcome observed by all electricity customers is prices. However, the Panel is also interested in other outcomes, such as security of supply and reliability, and the relationships between these outcomes and prices.

Two essential questions are:

- 1. Are customers paying for services at prices that are consistent with what would be expected in an efficiently operation electricity sector; and
- 2. Are customers receiving services that are consistent with what would be expected in an efficiently operation electricity sector (i.e. not paying for services that are not highly valued)?

There are three distinct customer groups in the Tasmanian NEM region. How each customer group considers price and non-price outcomes currently delivered by the sector will vary by where it sits within the current electricity sector 'architecture'.

Based on the Panel's interaction with customers and research that it has undertaken, Table 1 below, illustrates how each customer group may consider outcomes.

Customer	Retail ⁹	Wholesale Energy	Networks
Major Industrial (MI) Customers	 Contestable since 1 July 2006. Wholesale energy arrangements have been negotiated with Hydro 	 Have very large and flat energy loads. Individually material to the State's energy supply 	 Direct connection to transmission network – do not incur distribution charges.
Four large customers. Approximately 50 % of the load.	 Tasmania and transferred to customer's retailer of choice. Retail arrangements developed after wholesale arrangements. Retailers have not negotiated wholesale backing – this has been done directly by the customers. New entry retailers have indicated a preference to service this customer group. It is anticipated that retail competition has had little impact on energy prices for MI customers. The greatest influence is the tension between the purchasing power of the customers and the 	 / demand balance and an integral physical component of the Tasmanian electricity grid. o Directly negotiate wholesale energy contracting arrangements with Hydro Tasmania and transferred to retailer selected by the customer. o Customers participate in Basslink System Protection Scheme (SPS), which generates business value. o Discussions with MI customers and Hydro 	 Some MIs own their own connection infrastructure which also reduces transmission charges. Discussions with MI customers suggest considerable concern with rate of transmission price increases with perceived little or no direct correlative service improvement.

Table 1 - Characteristics of customer groups⁸

⁸ Customer numbers and demand is discussed in the Panel's paper '*Tasmania's Energy Sector – An Overview*'

⁹ Details of the Tasmanian Government's Contestability Timetable, including customer characteristics by tranche, is illustrated in Table 2 in section 3.1 of this paper.

Customer	Retail ⁹	Wholesale Energy	Networks
	alternative options for the generation that is available in the NEM. • Costs associated with the Australian Government's Renewable Energy Target Policy are introducing material price increases to this group. ¹⁰ • Customers tend to have preferences for longer-term contracts and are therefore, in the market from time-to-time.	Tasmania suggest that robust commercial negotiations with Hydro Tasmania have delivered commercially acceptable outcomes for both the customer and Hydro Tasmania.	
Contestable	 Progressively contestable see section 3.1. 	 Typically have much smaller loads than MI 	 Incur transmission and distribution charges –
Customers	 Customers tend to seek competing offers from retailers 	customers with higher degrees of	these are not affected
Commercial/Industrial	rather than negotiating direct	volatility/peakiness, which impacts on	 Distribution charges are 'postage stamped'
Customers	arrangements with generators.	wholesale costs. • Retailers secure	priced in accordance with Government
Approximately 45,000	within the market – currently 2 active retailers competing for	wholesale energy arrangements with	policy requirements.
connections. Approximately 20 % of the	the bulk of customer numbers.	generators to underpin	determines distribution
load.	Australian Government's Renewable Energy Target Policy	o The effectiveness of wholesale market	through the 101
	are introducing material price	competition for these	 The rate of increase in network related costs is
		investigated by the	an issue for this
	- Driging grangements including		
Customers	determined under the	arrangements driven by regulatory arrangements.	distribution charges – these are not affected
Approximately 227,000	 Regulated retail costs have remained relatively low given 	market outcomes.	 Distribution charges are 'postage stamped'
residential connections.	arrangements associated with	wholesale allowance has	priced in accordance
Approximately 20 % of the load.	costs under FRC are less clear.	materially higher than	policy requirements.
	Aurora Energy.	marker prices.	determines distribution
	Australian Government's		through the 101
	are introducing material price		o The rate of increase in
			an issue for this

¹⁰ For example, one MI customer has advised Panel of a stepped \$1.2 million increase in REC costs in the past year.

¹¹ Confidential discussions with several contestable customers.

¹² For example, see the Energy Users Association of Autralia submission to the Panel.

¹³ OTTER Media release 10 June 2011 notes that the TER approved an 11 per cent increase in Aurora Energy's regulated charges, 2.5 per cent higher than the 2010 Price Determination estimate. Additional REC costs constitute around 20 per cent of the additional price increase (the largest driver was an under recovery of network costs in the preceding year).

Relative contribution of component costs to price increases

In recent years, the price of electricity for all users has increased significantly.¹⁴ All components of the supply chain have contributed to these price increases, but not in equal proportions and not necessarily in the same proportions across pricing outcomes for each of the customer groups.

To demonstrate trends for **non-contestable customers**, Figure 2 below illustrates the changes in components which make up Aurora Energy's Notional Maximum Revenue for regulated tariff customers between 2003 and 2011.





For **non-contestable customers**, higher allowances for the cost of wholesale energy have been the single largest driver of tariff price increases, contributing around 40 per cent of the total increase. Costs associated with 'transporting' electricity through the transmission and distribution networks each contributed around 25 per cent to tariff price increases. Retail costs, which comprise less than 10 per cent of electricity tariffs, have accounted for around 10 per cent of price increases. Proportionately, transmission costs have escalated at the greatest rate of all components of the supply chain.

Information for **contestable customer** pricing is not readily available in the public domain and the Panel is particularly interested in submissions from contestable customers on pricing outcomes experienced since becoming contestable.

¹⁴ In April 2011, the Panel released a Discussion Paper '*Tasmania's Electricity Pricing Trends'* that examines in detail how non-contestable prices in Tasmania have changed since 2000 and the drivers behind those changes.

 $^{^{\}rm 15}$ $\,$ Data sourced from the Tasmanian Economic Regulator.

The Panel is seeking comments on:

- For contestable customers, how has the move to contestability impacted on electricity purchasing decisions, for example:
 - Changes in pricing levels, and how each part of the supply change is contributing to those changes.
 - o Pricing predictability.
 - o Contract duration.
 - o Spot market exposures.
- What have been the implications of these changes for business decisions?

Structure of electricity tariffs for non-contestable customers

A number of stakeholders have raised issues with the current structure of electricity tariffs for Tasmanian households and smaller business customers.¹⁶ A major theme is that tariffs have a relatively high fixed charge component. From a customer perspective, the current balance between fixed and consumption based charges is held to limit the control over energy costs, which in turn creates a barrier to achieving broader Government policy objectives in relation to the cost of living. TasCOSS notes that "the structure of residential electricity tariffs which, with their relatively high daily standing charges, make it difficult for households to make savings in electricity costs by reducing their usage".

Currently, the fixed daily charge is around \$1 per day, which is equivalent to the cost of around 4KWh of electricity.¹⁷ Over one-third of all residential customers receive the Tasmanian Government's electricity concession, which is also around \$1 per day.

The Panel is seeking comments on:

- Whether it is the principle of a fixed daily charge or its level that is the major issue.
- The impact of the current tariff structure on demand management, energy efficiency and affordability.

¹⁶ TasCOSS submission dated 7 February 2011 and reference to the joint TasCoss-Anglicare publication 'Making electricity affordable – a four point plan'. A number of participants at the Panel's Community Hearings also raised tariff structure matters.

¹⁷ This is equivalent to running a mid-sized electric heater for one hour.

The existence, nature and extent of cross subsidies between large and small electricity users in Tasmania

The issue of cross-subsidies in the energy market has been raised from various perspectives, including:

- The relative prices paid by large and small electricity users.
- The 'foregone' opportunity value of electricity sales to large/major industrial customers, arising from the view that Hydro Tasmania could earn higher revenues by selling electricity into the NEM rather than selling to major industrial users at current contracted rates.
- The extent to which contestable and non-contestable customers are contributing to Hydro Tasmania's cost of Basslink and Aurora Energy's cost of the Tamar Valley Power Station (TVPS).
- Postage stamp pricing of distribution costs for small business and residential customers.

Differential pricing between customer groups does not necessarily imply or reveal cross subsidies. Indeed, the economic concept of a cross-subsidy does not relate to differences in prices between customers, rather, it relates to differences between the costs of supplying a customer and the prices paid by that customer.

- A customer group cross-subsidises other customers if it faces prices which exceed its standalone costs (i.e. all of the costs that would be incurred to supply just that customer group).
- Similarly, a customer is considered to be cross-subsidised if it does not cover the incremental costs of supplying it, that is, the costs that would arise only due to that customer's consumption (the concept of marginal cost).

In an economic sense, differential prices for customers between these two ranges are not considered cross-subsidies. Within these two ranges there are a number of possible outcomes.

The Panel is seeking comments on:

• What examples of cross-subsidies do stakeholders think exist in the market and how do they arise?

2.1. The Effectiveness of the Retail Market

As part of the adoption of NEM arrangements in Tasmania, the Tasmanian Government has introduced retail competition under a phased approach, similar to that undertaken in other NEM jurisdictions. The Tasmanian Government's timetable for the roll-out of customer contestability is illustrated in Table 2 below.

	Date	Annual Energy Consumption (GWh/yr)	Indicated spend per annum	Number of Installations	Indicative type of customers
Tranche 1	1 July 2006	≥ 20 GWh/yr	\$1 million+	19	Mineral processors/heavy manufacturing plants
Tranche 2	1 July 2007	≥ 4 GWh/yr	\$250,000+	46	Food processing plants and multi-story office complexes
Tranche 3	1 July 2008	≥ 0.75 GWh/yr	\$75,000+	330	Supermarkets, engineering workshops and smaller commercial complexes
Tranche 4	1 July 2009	≥0.15 GWh/yr	\$25,000+	1660	Fast food restaurants, service stations and large offices
Tranche 5a	1 July 2011	> 0.05 GWh/yr	\$10,000+	3460	Small business customers
Trance 5b	TBD	<0.05 GWh/y		227,000	Households and small business

Table 2 - Tasmanian	Government's Contestability	J Timetable ¹⁸

A key policy objective of market reform was the introduction of greater competition in the retail market to provide greater customer choice for retail services and to encourage competition on the basis of price.

2.1.1. Has a competitive retail market emerged for contestable customers?

Currently, there are five licensed retailers in Tasmania.¹⁹ Of these AGL, Country Energy and TRUenergy have advised the licensing authority that they do not currently intend offering market contracts to contestable customers who use less than 4 GWh per annum – that is they are commercially focused on tranche 1 and 2 customers. ERM Power Retail and Aurora Energy are the only active market participants in the bulk of the contestable market. The Panel understands that the current business focus of ERM Power Retail is on commercial and industrial customers, in Tasmania and nationally, and that it is not active in the residential market nationally.²⁰

As the incumbent retailer, Aurora Energy remains the dominant retailer in the Tasmanian NEM region and is now an integrated retailer, distributor and generator. With customer tranches 1 to 4 now contestable, Aurora Energy has indicated that it has retained 85 per cent of contestable customers.²¹

¹⁸ Aurora Energy Annual Report 2009-10 page 26.

¹⁹ AGL Sales Pty Ltd, Aurora Energy, Country Energy, ERM Power Retail and TRUenergy.

²⁰ ERM Power Retail website and a presentation given by ERM Power at the Australian Energy Users Association Tasmanian Conference 29 March 2011.

²¹ Aurora Energy media release 8 February 2011.

Many commentators, including the TER²², have drawn clear linkages between competition in the retail and wholesale markets, concluding that effective competition in the wholesale market is a precondition to achieving the full benefits of competition at the retail level.²³

By contrast, Hydro Tasmania raises the view that "*retail competition is not a means* by which retailers act as a proxy for competition between wholesale suppliers. In the NEM, retailers provide valuable services in their own right. These include customer services, wholesale risk management and price competition on matters such as retail costs and margin".²⁴

The Panel is seeking comments on:

- The importance of diversity in managing wholesale energy risk and the extent to which it drives competitive behaviour in the retail sector.
- The ability of a retailer to contract with parties that have generation located in other NEM regions.
- The effectiveness of retail participation and competition for larger commercial and industrial customers (Tranche 1 and 2) what level of competition exists between the 5 licensed retailers and how has it changed since contestability has been introduced?
- The effectiveness of retail competition for smaller commercial, industrial and business customers with the two existing active retailers have contestable customers observed strong competition on a consistent basis?
- The potential barriers to effective retail competition in Tasmania, including:
 - The attractiveness of the retail market, particularly size and nature. When considering FRC, does the fact that over one-third of residences are concession customer impact on the attractiveness of entry?
 - The extent to which Aurora Energy, as the incumbent retailer, has superior market information on eligible customers as contestability rolls out?
 - The impact of the recent vertical integration of Aurora Energy as a 'gentailer' – has this had an impact on the perceptions of its competitive position in Tasmania?
 - The extent to which the commercial structure of Aurora Energy as an integrated retail and distribution entity is a material barrier to new entry, such as through access to information from its distribution business or it ability to absorb thinner retail margins supported by the cash generated by its distribution business.

²² Public Benefit Assessment for Electricity Retail Competition in Tasmania, Final Report, July 2008

²³ Clearly effective competition between retailers is also critical.

²⁴ Hydro Tasmania submission to the Panel dated 6 May 2011.

- Do all retailers face similar risks or does size pose a greater degree of transparency in the wholesale market?
- Is there a difference in the cost to serve Tasmanian customers in relation to customers in other NEM jurisdictions?
- What is the relative importance of wholesale market issues compared with other barriers to entry?

2.1.2. What are the expectations of Full Retail Contestability?

The current debate around FRC suggests that many in the community do not believe that for non-contestable customers the regulatory framework delivers price outcomes as well or better than could be expected from a competitive retail market in the Tasmanian context.

It is noteworthy that some of the primary drivers of higher delivered electricity costs are unrelated to competition at the retail level - network costs (both distribution and transmission) and the pass-through of increasing Renewable Energy Certificate (REC) costs arising from the Australian Government's renewable energy target policy. Changes in the structure of the retail market will not have any impact on these cost drivers.

This raises the question, in what ways is FRC expected to be better for customers than the current regulated arrangements?

Generally, competition in electricity retailing is expected to place downwards pressures on retail costs – both costs to serve and retail margins. The regulatory framework implemented by the TER has the same objectives. However, the real source of competitive advantage amongst retailers is the way in which they contract in the wholesale energy market to manage risk.

The Panel is seeking comments on:

• In what ways has the regulatory framework delivered retail costs that are higher than would be delivered by a fully competitive retail market in Tasmania?

The recent developments in the NEM suggest that important sources of competitive advantage in electricity retailing relate to:

- wholesale market risk management arrangements, which has driven considerable vertical integration between generators and retailers; and
- the achievement of scale economies, which has been the primary driver of aggregation in the NEM.²⁵

Effective competition in the retail sector provides strong incentives for these efficiencies to be passed through to customers in the form of lower prices. There may be other important expected outcomes from retail contestability – for example, innovative products in the form of different pricing structures and better customer services. It is unclear to the Panel, the degree to which these sorts of developments have already emerged in the contestable market sector in Tasmania.

The Panel is seeking comments on:

- The experience of contestable customers during the roll-out of retail contestability and outcomes of alternate retail options. What changes have customers observed?
- What customer outcomes have influenced contestable customers switching retailers?

It is likely that retail contestability will have material financial implications for Aurora Energy's retail business. In examining the public benefits of FRC in 2008, the TER was unable to come to a definitive view on those financial implications, as they depend on the rate of losses Aurora Energy faces in terms of customer numbers, as well as its ability to manage costs in light of customer loss.²⁶

The gains for electricity customers from FRC²⁷, in the form of lower prices, better service or improved products, may well, therefore, come at the expense of the business value of Aurora Energy. Given that the community owns Aurora Energy, what should be the response to potential value implications on Aurora Energy from the introduction of FRC?

²⁵ The generally accepted 'minimum scale' for electricity retailers has increased significantly over the past decade.

²⁶ The TER concluded that the introduction of FRC resulted in a potential loss of revenue to Aurora Retail in the range \$26.6 million to \$49.7 million over the period 2010-11 to 2016-17, assuming losses of 20 per cent of tranche 5 customers in the first year and a further 5 per cent per annum thereafter. The TER also highlighted that the altered market circumstances of FRC would introduce additional financial risks to Aurora, which would likely require that increased allowances be included in regulated retail prices to compensate for this risk. If customer loss was relatively low, this could provide a temporary windfall gain between regulatory periods.

²⁷ FRC would make residential customers contestable. Residential customers (ie the community) are also the owners of Aurora Energy, and for this group of electricity customers, gains from lower electricity prices may well be offset by losses in ownership value of Aurora Energy.

As noted in Chapter 1, the Panel is of the view that the electricity industry will make the best contribution to the growth and development of Tasmania and to the economic welfare of Tasmanians if it is operated on the most economically efficient basis possible.

There may be other important expected outcomes from retail contestability – for example, innovative products in the form of different pricing structures and better customer services. It is unclear to the Panel, the degree to which these sorts of developments have already emerged in the contestable market sector in Tasmania.

The Panel is seeking comments on:

- The experience of contestable customers during the roll out of retail contestability and outcomes of alternate retail options. What changes have customers observed?
- What customer outcomes have influenced contestable customers switching retailers?
- Stakeholders' views on the proposition that weighting that should be placed on potential value implications on Aurora Energy's retail business from the introduction of FRC, rather than on outcomes for customers.

2.1.3. The Tasmanian Government's role in the roll out of retail contestability.

The Tasmanian Government has facilitated the roll out of retail contestability by providing a framework for market competition and the *Electricity Supply Industry (Contestable Customer) Regulations 2005.* However, shortcomings in customer education and the availability of information as a part of the roll out of retail contestability have been raised as a matter that may be impeding the full customer benefits of competition.²⁸

While it could be expected that larger more well resourced customers are able to access the necessary information to make purchasing choices, for smaller customers and households there does not appear to be a readily available source of information on products and services that best suit their needs and the changes in terms and conditions that come with marked-based products. This lack of information may prohibit switching away from the incumbent retailer.

²⁸ Goanna Energy Consulting Pty Ltd submission to the Panel – Consumer advocacy panel project 'Issues Facing Tasmania's newly contestable electricity customers' January 2010.

For example, it has been argued that existing network pricing arrangements could provide key pricing signals that could improve network utilisation and lower network costs, but there is an absence of education and incentives to utilise this flexibility.²⁹

The Panel is seeking comments on:

- How can the ability of customers to participate in the market be improved through the way information is provided?
- Whether it is the role of the Government or the market to provide information for customers to make informed electricity purchasing decisions?
- What forms of improved customer-related information could increase the overall effectiveness of retail contestability (e.g. Understanding of network prices, the ability to compare offers)?

2.2. Effectiveness of the Wholesale Electricity Market

Consistent with the development of the retail market, the introduction of greater competition in the wholesale energy market was a key policy objective of the Tasmanian Government's electricity supply industry market reform.

In 2001, the Tasmanian Government considered that its wholesale market architecture would provide the basis for the evolution of competitive forces within the Tasmanian wholesale market that would coincide with the gradual opening up of the retail market.³⁰

In understanding wholesale energy market outcomes, there are two key questions from the Panel's perspective, namely:

- 1. The extent to which wholesale market outcomes are consistent with the objectives of:
 - Supplying electricity services at least cost (productive efficiency);
 - Prices that reflect efficient supply costs (allocative efficiency); and
 - Efficient and timely long term infrastructure investments and the development of improved products and services to best meet the preferences and needs of Tasmanian energy users (dynamic efficiency).
- 2. The degree of confidence that industry participants, policy makers and customers have that the wholesale market will deliver efficient outcomes routinely?

²⁹ Paul Fulton, Community Hearings.

³⁰ Authorisation of Tasmania's NEM Entry Arrangements – Enhancements to Tasmania's Energy Reform Framework, Department of Treasury and Finance, June 2001.

From submissions made to the Panel it is clear that there are divergent views on how well the wholesale energy market is delivering efficient outcomes, and varying levels of confidence amongst market participants that efficient outcomes are being delivered routinely.

Aurora Energy has commented that:

"It is Aurora's view that the operation of the wholesale energy market in Tasmania is the key issue that needs to be addressed by the Panel. It is important to be clear that the issue relates to the market structure and not any particular entity".³¹

By contrast, Hydro Tasmania has commented that:

"...the discussion papers replay hackneyed and unsubstantiated commentary on wholesale competition issues, which ignore material aspects of the Tasmanian electricity supply dynamic."³²

The Panel's is very keen to examine the specific market circumstances that prevail in the Tasmanian wholesale energy market in order to critically examine the effectiveness of the market. In doing so, the Panel agrees with Hydro Tasmania's observation that *"competition is a means to an end. That end is efficient price outcomes for customers ... not measures of intermediate competition."³³ However, there remains the question of whether the development of stronger competition in the Tasmanian wholesale market would be feasible; and if so, whether that would be a cost effective means of obtaining more efficient cost/price outcomes for Tasmanian electricity users.*

2.2.1. Current wholesale market structure

Currently, predominant generation capacity in the Tasmanian NEM region comprises Hydro Tasmania (both hydro-electricity and wind), Aurora Energy's TVPS and Basslink.

- Hydro Tasmania has hydro generation capacity of 2280 MW, with a sustainable output of around 8700GWh (around 1000 MW_{average})³⁴ together with wind generation capacity of 140 MW (50 MW_{average}), with the latter being non-scheduled (meaning that its output is scheduled by AEMO through competitive bids).
- Aurora Energy's TVPS has generation capacity of 380 MW (203 base load and 178 MW peaking).

³¹ Aurora Energy submission to the Panel dated 6 May, page 1.

³² Hydro Tasmania submission to the Panel dated 6 May, page 1.

³³ ibid.

³⁴ See the Panel's Discussion Paper '*Tasmania's Energy Sector - an Overview'* Chapter 4 for more information on capacity and the concept of hydro-electricity being energy constrained.

• Basslink has a southward flow capacity of 480 MW.³⁵

Figure 3 below illustrates installed supply capability of each of the above generation capacity, and the actual output for the 2010-11 year. This figure is illustrative only, and the data for actual output has been annualised.



Figure 3 - Installed generation capacity compared to actual output 2010-11

In this context, most of the physical supply developments as anticipated in the market architecture in 2001 are now in place.³⁶

Through its initial investigations, the Panel is able to make the following observations in relation to the physical operation of the Tasmanian generation sector:

• The combined capacity of Basslink and on-island gas generation is seldom more than Tasmanian load³⁷, meaning that Hydro Tasmania is generally required to be dispatched to meet load, which gives it the capacity to be the marginal bidder, and, therefore, the capability of setting Tasmanian spot prices without competitive threat.³⁸ The extent to which it is able, or chooses, to exploit this position is a key issue that the Panel is seeking to understand.

³⁵ See the Panel's Discussion Paper '*Tasmania's Energy Sector - an Overview*' Chapter 4 for more information on the operation of Basslink.

³⁶ Basslink's import capability is now 60 per cent higher than anticipated in 2001. Large scale gas-fired generation was anticipated to be owned and operated by a third party, but is now with the incumbent retailer, Aurora Energy, and the development of third-party wind farms has yet to occur. The import IRR sell-down arrangements appear not to have worked as anticipated and the auction arrangements, which were aimed at opening up contracting opportunities across Basslink, have been abandoned.

³⁷ For example, during the 2010-11 financial year (until 8 May 2011), the minimum Tasmanian load was 776MW, and for only 1.3 per cent of the time was demand below 860MW (the combined capacity of Basslink and the AETV, including peakers). The combined capacity of the TVPS CCGT and Basslink is 690MW. The average load in Tasmania over the period was 1140MW and a maximum of around 1700MW.

For example, during the 2010-11 financial year (until 8 May 2011), the minimum output from Hydro Tasmania's hydro-electricity assets was 235MW, and for 95 per cent of this period, Hydro Tasmania's dispatch was greater than 380MW. The average spot price during periods where Hydro Tasmania's dispatch was 380MW or less was \$24.60, indicating that high price events are not correlated with simple withholding of Hydro Tasmania's capacity. There were 36 half-hour periods where the Tasmania output was 656MW, and a minimum output of 409MW.

 Aurora Energy has secured significant gas commitments in relation to the TVPS, which provide it with strong incentives to bid to run the CCGT unit.³⁹ Such a strategy would create a (roughly) 210MW volume decrease for Basslink and Hydro Tasmania to service, and leaves a significant residual demand where competitive forces may be relatively weak, at least up to the point that would trigger generation by the TVPS peaking plant, which have relatively high operating costs.⁴⁰

There are very strong relationships between the spot and contract markets in the electricity sector. Perceptions of financial (price and volume) risk in the spot market drives both generators and retailers to enter into financial contracts, which then present strong drivers for spot market behaviour, particularly for generators in their bidding behaviour. Accordingly, it is very difficult to draw any clear conclusions from spot market outcomes in isolation from an understanding of underlying contractual positions.⁴¹

Hydro Tasmania contends "there is no problem with wholesale competition in Tasmania".⁴² To demonstrate this, Hydro Tasmania has provided the Panel with data on spot price outcomes, by quarter and annually, for the Tasmanian and Victorian regions.⁴³ This is summarised in Figure 3 below, which shows the percentage price differences between the two regions.

³⁹ For example, during the 2010-11 financial year (until 8 May 2011), the TVPS CCGT unit operated at 200MW or greater for 52 per cent of the time. Interestingly, the average spot price when the power station operated at 200MW or greater over that period was \$36.44, substantially below the short run marginal cost of generation from that facility.

⁴⁰ The AETV peaking plant were dispatched in 4 per cent of trading interval during 2010-11 financial year (until 8 May 2011).

⁴¹ For example, generators will tend to bid low to ensure dispatch for volumes under swap contracts. Where generators are under-contracted, there is an incentive to bid prices up, and similarly, where generators are over contracted, there is an incentive to keep prices low. Where load is covered by market caps, there is little incentive for a generator to price above the cap (other than to extract value on any uncontracted load). This is further explored in Appendix 2.

⁴² Hydro Tasmania submission to the Panel 6 May 2011, page 3.



Figure 4 - Tasmanian and Victorian Region Spot Price Outcomes, 2006-2010

The Panel is seeking comments on:

• What does the history of spot market prices demonstrate about the effectiveness of competition in the Tasmanian spot market?

Hydro Tasmania has highlighted to the Panel a number of competitive influences in the Tasmanian wholesale market, including:

- The small number of MI customers that have material purchasing power, given the size of their loads and materiality to the supply/demand balance.
- The ability of MI customers (in particular) to respond to short-term pricing signals in the spot market by reducing demand.
- The energy constrained nature of the hydro-electric system (a finite water resource), coupled with the environmental flow requirements, gives rise to constraints on Hydro Tasmania's production decisions.
- Hydro Tasmania's strong internal pressures to maintain a high level of contract cover means that the incentive to seek strategic opportunities in the spot market is substantially diminished.

It has been put to the Panel that the very small number of participants in the wholesale market, relative to the situation in other NEM regions, makes it possible for Hydro Tasmania to observe the net exposures to the spot price of both rival generators and retailers in the Tasmanian region. Given Hydro Tasmania's capability of influencing Tasmanian spot prices, participants have argued that the risks of participating in the Tasmanian wholesale region are relatively high by comparison with elsewhere in the NEM, and that this may pose a barrier to entry.

The Panel is seeking comments on:

- What aspects of the Tasmanian market architecture and/or underlying features create sustained and transparent competitive influences in the wholesale market?
- Are there material barriers to entry arising from the wholesale sector architecture of the Tasmanian generation sector?
- When contract levels are high⁴⁴, i.e. a large proportion of the total load is subject to wholesale contracts, what is the material impact of a high-priced event in the spot market?
- Does Hydro Tasmania have the capacity to raise or lower spot prices based on its knowledge of the contract positions of its counter-parties and is there evidence that such a capacity has been exercised?
- How transparent is the underlying position of wholesale market participants in Tasmania, and does this pose a material barrier to entry in either generation or retailing?

2.2.2. Wholesale Energy Contract Market

The evidence provided to the Panel by some of the major participants in the Tasmanian electricity industry (retailers and large customers) indicates the perception that the risks of participating in the Tasmanian spot market are high by comparison with other NEM regions, and this increases the commercial appetite for contracting and minimising spot market exposures. Hydro Tasmania has explained to the Panel some of its internal drivers to achieve a high level of contract cover.

A key question, therefore, is **how effective is the Tasmanian contract market** – what are the competitive tensions that exist within it, and are contracting arrangements efficient (e.g. in allocating risks), with prices that are cost-reflective?

⁴⁴ It is noted that unless load-following or whole-of-meter contracts are used, there will always be a risk of 'unders' and 'overs', as it is very rare for actual demand to match contracted levels. Therefore, even where contract levels are relatively high, there will tend to be some spot market exposure for most market participants.

Hydro Tasmania contends:

"A further factor which demonstrates that there is no wholesale competition problem, either per se, or, as a barrier to new entrant retailers, is Hydro Tasmania stands ready to contract with all comers to Tasmanian load. As a result, any retailer or contestable customer in Tasmanian has access to efficiently priced electricity." ⁴⁵

By contrast, Aurora Energy stated:

"While there are a wide variety of financial instruments available in the NEM to protect generators and retailers from movements in the spot price of electricity, Aurora's experience in Tasmania is that there is no competitive market for these products, given the current structure and operation of the market and the dominance of the incumbent generator in both the spot and contract wholesale markets."⁴⁶

The Panel has taken evidence from major participants in the Tasmanian electricity industry which, in summary, suggests that 'all paths lead to Hydro Tasmania' and that if large customers/retailers want contract cover in Tasmania, they have little choice but to approach Hydro Tasmania – either for a Tasmanian contract, or interregional price risk arrangements if they seek to contract with an interstate generator.⁴⁷

- Participants have indicated that on occasions where they have sought to enter into interregional contracts, the combined cost of the underlying hedge coupled with the cost of interregional price risk arrangements leaves them with no incentive other than to purchase a Tasmanian contract with Hydro Tasmania.
- Some MI customers suggested that the range of contractual arrangements available in Tasmania is more limited than in other NEM regions, and the arrangements have atypical risk allocation mechanisms, compared to those in other NEM regions, that pass risks to the customer.

⁴⁵ Hydro Tasmania submission to the Panel dated 6 May 2011, page 6.

⁴⁶ Aurora Energy submission to the Panel dated 6 May 2011, page 4.

⁴⁷ The capacity available from the TVPS is predominantly used by Aurora Energy to hedge non-contestable customers.

The Panel is seeking comments on:

- How contestable, efficient and effective is the market for wholesale contracts in Tasmania?
- How are wholesale contract prices, and other terms and conditions, struck?
- What is the relative negotiating position of the parties and do contract terms broadly reflect contract terms, such as premiums relative to the spot market, available in other NEM regions?
- What is nature and extent of differences in wholesale contract in Tasmania, and what drives those differences?
- Does a high level of contract cover represent an optimal risk management position for market participants, and what is the impact of higher insurance levels on end customer prices, noting that insurance is not costless?

2.2.3. Establishing a Benchmark to Evaluate Outcomes

A key matter in analysing the current performance of the Tasmanian wholesale energy market is the predominance of the hydro-generation system and the absence of a clearly defined and transparent means of identifying water values against which spot and contract prices can be examined.

This is important because market behaviour should be examined relative to appropriate benchmarks. For example:

- The decision of any hydro generator to withhold capacity at a point in time so
 that the water might be used at a future point in time when market prices are
 higher, reflecting that more costly generation is required to meet load
 requirements, may be the most efficient use of the water resource. While on
 the other hand;
- It could represent strategic bidding behaviour by withholding capacity to drive higher spot prices.

Developing an understanding of water values is important in making the distinction between the two. The Panel has obtained confidential information from Hydro Tasmania relating to its water valuation methodology and will be using this information to inform its understanding of spot and contract market pricing in the Tasmanian region.

Hydro Tasmania has proposed that a reasonable comparator for judging the effectiveness of the wholesale market is to compare spot and contract prices with the costs of new capacity or long run marginal cost. Hydro Tasmania contends that Tasmanian spot prices have consistently come in below this mark and have been

across a similar range to Victorian spot prices since NEM arrangements commenced in Tasmania. Hydro Tasmania also contends that its flat swap prices are also below the same conceptual benchmark and are consistent with prevailing spot market and contract market prices across the NEM.⁴⁸

The Panel is seeking comments on:

• The validity and usefulness of a new entrant LRMC pricing indicator as a measure of the effectiveness of the wholesale energy market in Tasmania.

2.2.4. Application of the NEM arrangements in the Tasmanian context

Another important matter in considering the effectiveness of the wholesale market is the application of the standard NEM market arrangements in the context of Tasmania's underlying wholesale market architecture.

For example, in examining the cause of high spot prices in Tasmania, the AER has commented on the ability of Hydro Tasmania to withdraw its non-scheduled generation, which appears as step increase in demand, coupled with rebidding its scheduled generation to achieve large increases in spot prices.

This behaviour is not against NEM rules, but the intended concept of non-scheduled generation is that generation is classified as non-scheduled because it is immaterial to determining the supply/demand balance at a point in time. This is clearly not the case on all occasions in relation to Hydro Tasmania's non-scheduled generation.

There are also questions regarding the potential consequences of applying the standard NEM arrangements in Tasmanian in light of the large changes in supply that can arise in Tasmania as a result of hydrological risk.

Hydro Tasmania observed that it is "concerned that the NEM pricing model may not provide an adequate signal for the efficient new entry in the Tasmanian situation."⁴⁹

In Hydro Tasmania's view the absence of a capacity payment mechanism and the operation of an energy-only market does not adequately support new entry in the context of Hydro Tasmania's ability to operate profitably below the price required to support new entry.

⁴⁸ Hydro Tasmania submission to the Panel dated 6 May 2011, page 4.

The Panel is seeking comments on:

- How have the application of the NEM rules in Tasmanian created value opportunities? For example:
 - In shaping the bid stack where along the supply curve is competition strongest and weakest?
 - How can non-scheduled generation materially shift supply and demand balance and therefore move prices?
- Are there other aspects of the 'standard' NEM model that appear inconsistent with the underlying market architecture in the Tasmanian region and evidence to support this view?
- Is there a need for something to support the standard NEM arrangements to deal with specific Tasmanian circumstances?

2.2.5. Latent market power

While the Panel's work program will examine market outcomes for evidence of strategic bidding in the Tasmanian region, the Panel is mindful that market power need not be actually exercised to have a material impact on the operation of the market. Indeed, the existence of 'latent' market power⁵⁰ is potentially more problematic than the misuse of outright market power because the causes and impacts of latent market power are less readily observable. The technical and allocative efficiency implications may be relatively contained, but the dynamic efficiency implications could be material.

As a general proposition, possession of the capacity to materially influence market prices and the occasional demonstration of that capacity can be sufficient to deter entry and competitive responses by actual and potential rivals and to encourage compliant responses by counter parties in contract negotiations.

For example, it has been argued that the configuration of the TVPS, particularly the installation of the open-cycle Rolls-Royce unit, reflects a desire by developers to internally manage the costs of outages of the CCGT, rather than being exposed to the spot market or seeking alternative contractual cover in the Tasmanian region.

⁵⁰ Latent market power is market power that is held, but not exercised.

The Panel is seeking comments on:

- Is there any evidence of latent market power in the Tasmanian wholesale market, and what are its consequences?
- Stakeholder views on whether latent market power may be exercised at some point in the future.

In summary, the Panel is of the view that the absence of observable regular strategic behaviour in the wholesale market does not, of itself, indicate that there are no shortcomings in the current market architecture. To the extent that the market architecture creates the opportunity and incentive for participants to engage in strategic behaviour, alternative arrangements should be examined. The key issue is the degree of confidence that market participants have that market outcomes will routinely and by default, reflect economically efficient outcomes.

2.3. Wholesale Energy Allowance for Non-contestable Customers

Whether or not the wholesale market is delivering efficient outcomes, its performance does not, under current regulatory arrangements, have a bearing on the prices paid by non-contestable customers.

The wholesale energy allowance for non-contestable customers is determined under the *Electricity Supply Industry (Price Control) Regulations 2003* (the PCR). The PCR require that the wholesale energy allowance for non-contestable customers must be more than or equal to the long-run marginal cost (LRMC) of electricity generation by a notional electricity generator to supply electricity to non-contestable customers on mainland Tasmania.⁵¹

The Panel is of the view that LRMC can be an appropriate methodology for determining the regulated energy allowance;⁵² however, the way in which it is calculated and applied will determine the level of appropriateness.⁵³

 ⁵¹ Amendments were made to the PRC in June 2010 to require this outcome. For the previous regulatory period, the Tasmanian Government specified the wholesale energy allowance that the TER was required to adopt in setting prices for non-contestable customers.
 ⁵² For example, see Turvey, R (1971) *Economic analysis and public enterprises*, Allen and Unwin, and Littlechild, S (1970) "Marginal cost pricing and joint cost', *The Economic Journal*, vol. 80, June 1970

⁵³ The concept of linking wholesale energy allowances to a LRMC methodology is used in other jurisdictions, however the context in which those prices are applied are substantially different, particularly the ability of competition to drive out any additional value contained in the regulated outcome – see the Panel's Discussion Paper 'Tasmania's Electricity Pricing Trends', April 2011 for more information.

There have been several changes in the way in which a LRMC methodology has been applied in setting the energy cost allowance in retail electricity tariffs between Price Determinations, as a result of changes in the PCR. For example:

- In 1999, the TER had wide discretion in determining the energy cost allowance, but in 2007 the Tasmanian Government specified the level; and in 2010, the TER determined the value of the LRMC under very specific controls set out in the PCR.
- In 2007, the LRMC benchmark considered a new entrant generator in the NEM, whereas the 2010 requirement was for the benchmark of the LRMC of a notional electricity generator to supply electricity to non-contestable customers on mainland Tasmania.
- In the 1999 methodology, the TER considered the sources of load growth, finding that it was predominantly created by major industrial users, and accordingly applied a discount in the application of LRMC for noncontestable customers. The implication of the 2010 framework is that noncontestable customers should be 'allocated' 100 per cent of the costs of new entry generation and on the basis that new capacity was required immediately.

Other facts that could be included in the application of the methodology, but do not appear to have been taken into account, are:

- The extent to which the costs associated with the existing predominant hydro generation system, with historical 'sunk' costs, are considered when calculating the energy allowance for non-contestable customers compared to the assumption that a new entrant generator is required to supply the non-contestable load.
- The consideration of the current supply/demand balance in Tasmania, which shows that new entry is not required to meet Tasmanian demand (assuming typical inflows into the hydro system) for a considerable period under realistic load growth scenarios.⁵⁴ In this context, some form of discounting could reasonably have applied to current prices, and a path towards new entrant pricing implemented.

To illustrate the divergence between the regulated outcomes and expected market outcomes, the Table 3 below sets out the annual energy allowance based, which were based on a LRMC basis, and the alternative market cost estimate that was also calculated in the same determination.

⁵⁴ See the Panel's 'Tasmania's Energy Sector – an Overview' Discussion Paper, Chapter 4 for more information.

	2007 Determination			2010 Determination			
	2007-08 \$MW/h	2008-09 \$/MWh	2009-10 \$/MWh	2010-11 \$/MWh	2011-12 \$/MWh	2012-13 \$/MWh	
Allowance (based on LRMC)	60.00	62.50	63.00	73.50	73.16	74.33	
Market cost estimate ^a	44.49 - 45.36	43.33 - 44.84	59.72 – 62.58	66.23	65.13	66.04	
% difference	34.8 - 32.3	44.3 - 39.4	0.5 - 0.3	11	12.4	12.6	

Table 3 - Comparison of the annual energy allowance and estimated market prices

Source: 2007-10 allowance data from OTTER 2007 Electricity Pricing Investigation Final Report (page 298) and market estimate from Department of Treasury and Finance Regulatory Impact Statement July 2007 (page 32) and 2010-13 data from OTTER 2010 Retail Price Determination Final Report (page 32).

Note a: This is not the actual spot or contract price for that period, rather the estimate of market cost contained in the determination.

In its submission to the Panel dated 6 May 2011, Hydro Tasmania notes that "the NEM market price for the non-contestable load structure is less than the new entrant LRMC calculated by IES. Further, Hydro Tasmania can profitably hedge the non-contestable load at that market price, indicating that it is more cost effective than a new entrant" (emphasis added).

Hydro Tasmania's submission suggests that there is a difference between current market prices and the wholesale allowance, which creates a 'value wedge' that is funded by non-contestable customers and captured by, or shared between, Hydro Tasmania and Aurora Energy.

- To the extent that Hydro Tasmania is able to contract with Aurora Energy for the non-contestable load at above market prices, it captures some of the value.
- The balance of the value will be captured by Aurora Energy and be applied to the higher costs of running the TVPS⁵⁵, used to offset higher-than-allowed retail costs, or deliver higher profitability. The evidence gathered by the Panel suggests that the value is currently 'applied' to the TVPS.

Hydro Tasmania⁵⁶ notes that "*in addition to competition in retail services, FRC provides an additional competitive benefit by enabling customers to access* **wholesale market prices rather than the new entrant prices** used in setting regulated tariffs. This combination of inputs provides ample opportunity for customers to gain benefits from FRC without any change to the existing wholesale arrangements" (emphasis added).

⁵⁵ It is noted that in 2007, the TVPS was not in existence, so the 'value' could not have been applied to it.

⁵⁶ Hydro Tasmania submission to the Panel dated 6 May 2011, page 7.

The Panel is seeking comments on:

- How prescriptive should the regulatory arrangements for determining prices be?
- What is the appropriate role of Government in establishing the framework for the regulator, given it multiple interests in the sector?
- The use and application of the existing form of LRMC methodology in determining the wholesale energy allowance for non-contestable customers.
- How efficient and effective are the current regulatory arrangements in determining efficient energy price outcomes for non-contestable customers?
- What alternative arrangements for setting the energy supply cost allowance might be more appropriate than those currently specified in the current Price Control Regulations?

2.4. Transmission and Distribution Network Regulatory Outcomes

The transmission and distribution regulatory frameworks are important drivers of electricity price increases.

2.4.1. Impact of the National Regulatory Framework

On 10 June 2011, the Australian Energy Market Commission (AEMC) released a report prepared for the Ministerial Council on Energy (MCE) on trends in residential electricity pricing movements over the next three years.⁵⁷

- Nationally, residential electricity prices are forecast to increase by 30 per cent in nominal terms. Distribution services are expected to contribute 41 per cent and transmission services 8 per cent of the total national price increase.
- Tasmanian residential electricity prices are forecast to increase by 25 per cent in nominal terms. Distribution costs, due to increasing demand, replacement of aging assets and higher reliability standards, are expected to contribute 22 per cent to the forecast price increases. Transmission costs are expected to contribute 7 per cent to forecast price increases.

⁵⁷ Future Possible Retail Electricity Price Movements: 1 July 2010 to 30 June 2013

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From an energy users perspective, the Energy Users Association of Australia (EUAA) noted that "based on what we have observed, we are very disturbed that the current regulatory framework for network regulation under the NEM has fundamental flaws that are combining to allow network prices to etch [sic] up unreasonably, the entrench inefficiencies in the network businesses, to provide them with inappropriately high rates of return, to encourage 'gold plating', to disadvantage the regulator and to encourage regulatory gaming." The impact of this is estimated by the EUAA such that "by 2015, Tasmania's transmission charges will have increased by 109% over their level 10 years earlier. This is completely out of proportion and we believe reflects poorly on the regulatory regime and Transend itself."⁵⁸

The Panel notes that there is considerable debate regarding the effectiveness of the national network pricing regulatory arrangements. The Australian Energy Regulator (AER) is currently undertaking an internal review of the national network regulatory frameworks and is expected to submit rule changes to the AEMC later in the year. In view of these national processes, the Panel is not seeking to investigate or address these issues as part of its Review, rather the more productive use of resources is to understand the Tasmanian-related issues that relate to network pricing that may either be addressed independently and/or inform the national discussion.

As a general observation, there is a business trade-off between costs (capital investment and operating expenditure) and service reliability.

It has been argued that the incentives to meet service reliability standards drive behaviour that leads to capital investment (and, therefore, higher prices) as a risk mitigation strategy.

2.4.2. Efficiency of the Tasmanian network businesses

As part of its Terms of Reference, the Panel has engaged industry specialists to undertake a review of the operational efficiency and effectiveness of the SOEBs. The Panel is also investigating the operational and financial efficiencies of further integration between the transmission and distribution businesses.⁵⁹

The Panel has been provided with direct views of customers regarding the efficiency and effectiveness of the delivery of capital programs by Transend Networks suggesting that there is a lack of incentives for driving least-cost approaches to project delivery.⁶⁰

⁵⁸ Energy Users Association of Australia submission to the Panel dated 20 April 2011.

⁵⁹ Operational efficiencies arising from asset ownership between Aurora Energy and Transend Networks has been flagged in submissions and at the Community Hearings by several parties.

⁶⁰ In one example, for a major industrial customer, works required in a switchyard were priced by Transend Networks at over three times the cost actually incurred by the customers, which adopted to complete the works itself.

The Panel is seeking comments on:

- The experiences of customers regarding the efficiency and effectiveness of Tasmania's network businesses in the delivery of capital programs.
- What can be done to reduce network costs to customers while maintaining appropriate reliability and safety standards?

2.4.3. Consequences of changes in the electricity system on network investment

Transend Networks agrees with the Panel's observation that the total cost of transmission is expected to increase at a faster rate than the average growth rate in peak demand or energy consumption and noted that the "*strong scale economies in transmission (and the resulting 'lumpy' nature of transmission augmentation investment) can result in a divergence between volume growth and average costs*".⁶¹ To illustrate this point, Transend Networks provided the example of the Waddamana-Lindisfarne 220kv line investment as being the first new injection point into Hobart in 35 years. This type of large investment requires significant capital expenditure and therefore revenue requirements.

Transend Networks also noted that some transmission costs are not necessarily driven by energy consumption or peak demand. "*For example, operating and capital expenditure unrelated to volume growth is required to provide a safe and reliable network that complies with the mandatory network performance requirements specified in Schedule 5.1 of the NEM Rules.*"⁶²

The Panel understands that substantial changes in the operation of the Tasmanian electricity system have arisen with interconnection to Victoria. What is less clear are the cost implications to customers as a result. The Panel also understands that a range of technical performance standards that were considered appropriate under prior Tasmanian arrangements were revised in order to meet NEM requirements. For example, the security and reliability philosophy adopted for the NEM is oriented to the performance of a generating system that is capacity constrained, consistent with the mainland system. The Tasmanian hydro-generation system is energy constrained and the nature of the constraints is variable depending on hydrological conditions.

The Panel's interactions with large customers has highlighted a concern that in the move towards national consistency in the regulatory arrangements, the focus has been lost on the local imperative, and as a result, sub-optimal outcomes are emerging, particularly in relation to the price-quality trade-off.

In this regard, the Panel wishes to understand the implications on costs to customers of both physical interconnection with the NEM; and the adoption of NEM arrangements in Tasmania, including NEM-related standards.

⁶¹ Transend Networks submission to the Panel dated 29 May 2011.

⁶² Ibid.

The Panel is seeking comments on:

- The extent to which the NEM arrangements and/or jurisdictional changes have required additional network investment and/or direct customer costs to increase?
- The consequences, including costs, for the transmission network arising from physical interconnection and how these costs are distributed to customers?
- How are customers benefitting through the current NEM arrangements by comparison with previous arrangements?

2.4.4. Tasmanian Government service standards and policy objectives

The AEMC's report notes that some states, including Tasmania, have recently adopted higher reliability standards for their network businesses which have required further capital investment to ensure these standards can be met.

Reliability targets are set for Aurora Energy in the *Tasmanian Electricity Code* (TEC). Prior to December 2007, these targets were specified in three customer categories and Aurora Energy was required to use reasonable endeavours to ensure that no more than 5 per cent of feeders in each category fell below the lower bounds. From January 2008, the TEC was changed to set overall targets and individual community targets for five customer categories as shown in Table 4. A total of 101 communities have been identified and each is within one of the five categories. Aurora Energy is required to meet these targets by the end of the present regulatory period.

	Frequency (average nun interruptior	y Standard nber of supply 1s per year)	Duration Standard (average time without electricity in a year measured in minutes)		
	For the	For the For each		For each	
	category	community	category	community	
Critical Infrastructure	0.2	0.2	30	30	
High Density	1	2	60	120	
Commercial					
Urban and Regional Centres	2	4	120	240	
Higher Density Rural	4	6	480	600	
Lower Density Rural	6	8	600	720	

Table 4 - TEC Reliability Targets from 1 January 200863

Aurora Energy noted that "The previous pricing determination by the TER saw significant increases in both capital and operating expenditure to ensure the performance of the distribution network was in keeping with the State's economic growth and in order to meet more stringent reliability and safety standards".

⁶³ Source: OTTER Tasmanian Energy Supply Industry Performance Report 2009-10

However, Aurora Energy now considers that "*investment in the network is now at an appropriate level and consolidation in expenditure can occur.*"⁶⁴

While many of the drivers of network investment are directed at NEM requirements, the EUAA has noted the role of the Tasmanian Government is such that "*while much network regulation is now a national responsibility under National Electricity Law and Rules (NEL and NER) administered by the AER... ownership, licensing, technical standards and planning issues remains in Tasmanian Government hands.*"⁶⁵

The Panel is seeking comments on:

- When reliability standards are being proposed, how are pricing consequences considered?
- Do customers recognise changes in service quality have pricing implications and how could the link between prices and standards be made more transparent?
- The affordability for Tasmanian customers of the improved reliability standards imposed by the '101 communities' policy.

⁶⁴ Aurora Energy's submission to the Panel dated 6 May 2011

⁶⁵ Electricity Users Association of Australia submission to the Panel dated 10 February 2011.

3. Value creation, benefit and cost allocation of major investment and policy decisions

A number of the matters raised in submissions to the Panel, and in the wider public debate, have at their origins concerns about the alignment, or otherwise, of value and costs – which parties are deriving benefits from major investment decisions, who is bearing the costs and do the benefits outweigh the costs?

The purpose of this section of the Issues Paper is to present three examples of the way in which this theme plays out in the Tasmanian energy market through Basslink, the TVPS and the proposed introduction of the Australian Government's carbon pricing scheme.

3.1. Basslink

Basslink provides value for both Hydro Tasmania, as the commercial counter-party to the Basslink Services Agreement (BSA), and to the Tasmanian electricity consumers and the Tasmanian economy more broadly in relation to supply reliability.

The magnitude of the BSA annual facility fee, whether this represents a commercial undertaking by Hydro Tasmania and if not, how that cost is allocated amongst Hydro Tasmania's customer base, are key questions that have been in the public domain for some time. A particular question is whether, and to what extent, noncontestable customers are contributing to meeting Hydro Tasmania's cost of Basslink.

The Panel has engaged financial consultants Ernst & Young to review the financial performance of the SOEB and to understand value and cost drivers within the businesses. Hydro Tasmania's commercial operation of Basslink will form part of this review. However, it is not the intention of the Panel to form a judgement on whether Hydro Tasmania's arrangements under the BSA are a sound financial decision.⁶⁶

3.1.1. The benefits of Basslink to Hydro Tasmania

For Hydro Tasmania, Basslink is able to:

• Provide price opportunity to arbitrage differences in peak and off-peak electricity and in seasonal differences between the Tasmanian and other NEM regions through the flexibility of the hydro-generation system.

⁶⁶ The Panel is investigating the business case developed for Hydro Tasmania's decision to contract with National Grid to secure the project and the process utilised by the Tasmanian Government to facilitate the project. Given the commercial arrangements for Basslink have a minimum 25 year life it is not possible to draw definitive conclusions on the commerciality of the transaction only 5 years into the arrangement. Nonetheless, the Panel is exploring how the components of the business case have developed to date.

- Mitigate the financial risk associated with a major energy customer ceasing operations in Tasmania by having an alternative market for its output.
- Provide an opportunity to maximise trading revenue in the Tasmanian NEM region.
- Provide a means for greater water utilisation.
- Improve the negotiating position for Hydro Tasmania in contract negotiations with large customers, to provide greater confidence that market-based prices are achieved.
- Avoid the cost of thermal generation support during periods of low water inflow.

Hydro Tasmania has publicly stated that the full facility fee for Basslink for the 2009-10 financial year was \$84.9 million.⁶⁷ What is less clear is the value of the benefits that Hydro Tasmania derives from having Basslink in place. Interested parties tend to focus on the arbitrage and trading benefits and compare this with the facility fee. As noted above, this captures only part of the financial benefits to Hydro Tasmania.

For the 2009-10 financial year Hydro Tasmania has publicly advised:68

- Basslink trading net export income was around \$32.5 million.
- Basslink trading net import income was around \$26 million.
- Utilisation of 'spill' water was valued at \$15 million (it is not clear if this is included in net export income).
- Saving on running of the gas Bell Bay Power Station units valued at \$25 million.

The Panel is seeking further information from Hydro Tasmania regarding the sources of value from having Basslink in place.

3.1.2. The benefits of Basslink to Tasmanian electricity customers

For Tasmanian electricity consumers, Basslink is able to:

- Provide access to electricity at prices determined competitively in the NEM.
- Improve the security of electricity supply and reducing the exposure to drought conditions in Tasmania.

⁶⁷ Hydro Tasmania Government Business Scrutiny 30 November 2010 – Hansard.

Only contestable customers can currently benefit from competitive electricity prices resulting from Tasmania's participation in the NEM. For non-contestable customers, there is no correlation between the regulated energy allowance, which is set at higher, new entrant prices; and market prices. The extent to which contestable customers are benefiting from competitive wholesale energy prices is a matter that the Panel is investigating (refer section 3.2).

All Tasmanian electricity customers benefit from the electricity supply security benefits of Basslink. Basslink was used extensively through the 2006 to 2008 drought as a supply option. Between 1 January 2007 and 31 December 2009, net flows into Tasmania from Basslink were 3890 GWh⁶⁹, which is equivalent to a 150 MW generator running 24 hours a day continuously over this period.

The Panel is seeking comments on:

• The extent to which the anticipated benefits of Basslink to Tasmanian electricity customers are being delivered and the value placed on those benefits by customers.

3.2. Tamar Valley Power Station (TVPS)

In August 2008, the Tasmanian Government announced the acquisition of the TVPS, principally on the basis of security of energy supply for the State in light of the prolonged period of below average rainfall. The Government argued that *"electricity rationing would destroy the community's confidence and the strong economy that Tasmanian's have worked so hard to achieve over the past decade."*⁷⁰ *Public ownership was to be a temporary arrangement, with the intent of privatising the TVPS at some time in the future.*

The Tasmanian Government directed Aurora Energy to purchase the partially constructed power station, complete construction and operate it on a commercial basis. Following commissioning, Aurora Energy realised that revenues available from the market would not be sufficient to operate the TVPS on a commercial basis. At the Government Business Scrutiny hearing on 2 December 2010 Aurora Energy CEO Dr Peter Davis advised that "the main issue was that customers were not paying enough to cover the running costs of the TVPS."⁷¹

⁶⁹ Southward flows totalled 5239 GWh and northward flows totalled 1260 GWh (source www.basslink.com.au).

⁷⁰ Ministerial Statement 19 August 2008 - Hansard.

⁷¹ Hansard.

In June 2010, amendments to the PCR, which govern the setting of non-contestable electricity prices, were introduced into Parliament to ensure that the regulated tariffs enabled Aurora Energy to recover all of the costs of its energy purchased, including that supplied by the TVPS.⁷² The linkage between higher costs to non-contestable customers and the TVPS was noted in Parliament.⁷³

From the Panel's investigations, the capacity of the TVPS is largely utilised by Aurora Energy to meet its non-contestable load given the value that is included in the wholesale energy allowance and its relativity to market prices.

These arrangements have enabled Aurora Energy to preserve the value of the TVPS in its accounts. This view is supported by:

- The Tasmanian Auditor General's comments that the combination of Aurora Energy's re-negotiated agreement with Hydro Tasmania and improved price determination avoided the impairment of the TVPS asset value.⁷⁴
- The Aurora Energy 2009-10 financial statements.⁷⁵
- At the Government Business Scrutiny hearing on 2 December 2010 where Dr Davis advised that "the power station was not impaired, so it does generate sufficient revenues to justify its asset value on the balance sheet."

In the Panel's view, the acquisition of the TVPS was on the basis of hydrological risk management, yet the market mechanism that provides the funding of generation has not yielded sufficient value to support the cost of the TVPS. This is partly a function of the return to more typical inflows and the softening of electricity prices in the NEM more broadly. The result of this was that prices for non-contestable customers, through the regulatory framework, have been increased to preserve the viability of the TVPS. Essentially, non-contestable customers appear to be funding the 'insurance premium' being the difference between the market-related value of the TVPS and its full costs, yet the facility provides risk mitigation for all electricity users. If FRC had been implemented, an alternative funding mechanism would have been required.

It is also notable that a consequence of the pricing framework for non-contestable customers, the value of the TVPS in Aurora Energy's accounts have been able to be preserved.

⁷² Tasmanian Government ministerial statement 'Tasmanian Energy System' 16 June 2010 – Hansard.

⁷³ Kim Booth MP read into Hansard a copy of a letter dated 14 June 2010 that the Tasmanian Greens had sent to the Government in response to the Government's intended amendments to the Price Control Regulations. The Tasmanian Greens advised that 'we are aware that the Government is proposing to introduce regulations that direct the Economic Regulator to take account of the increased energy generation costs to Aurora Energy of the AETV, which in our opinion will inevitably result in an increase in regulated energy tariffs over the next year.' Hansard 30 September 2010.

⁷⁴ Report of the Auditor General Volume 3: Government Businesses, State-owned Companies and Superannuation Funds 2009-10.

⁷⁵ Note 34 to Aurora Energy's 2009-10 financial statements.

The Panel is seeking comments on:

- If a primary role of the TVPS is hydrological risk management, how should the full costs of the TVPS should be funded over time?
- Stakeholder views on the trade off between the preservation of value of the TVPS asset and non-contestable customer prices.

3.3. Carbon Pricing

At this time, the future pricing of carbon remains unclear. The Australian Government has announced a framework to implement a price on carbon emissions. The two-stage plan for a carbon price mechanism will start with a fixed price period for three to five years before transitioning to an emissions trading scheme. The Government proposes that the carbon price commences on 1 July 2012, subject to the ability to negotiate agreement with a majority in both houses of Parliament and pass legislation this year.⁷⁶

At this time the price has not been set but various proposals have been discussed. Even once these arrangements have been decided, there is additional uncertainty, given the Federal Opposition's position of opposing a direct price on carbon and preference for direct measures to reduce carbon emissions. The Federal Opposition has announced that it will oppose the introduction of a carbon pricing mechanism while in opposition and rescind it if returned to Government.⁷⁷

Hydro Tasmania is the largest renewable energy generator in Australia – its hydro and wind generation capacity comprises 86.5 per cent of Tasmania's on-island generation.

A price on carbon will increase the relative costs of carbon emitting generators and consequently, the average market price of all electricity (see Figure 4). There are wide views about the magnitude of the increase in electricity prices, depending on the details of the carbon pricing model adopted.

The nature and extent of any compensation measures implemented by the Australian Government will be important in determining the overall impact of Tasmanian electricity customers, nothing that this may vary by customer type.

To the extent that a carbon price will increase the average market price of energy, there may be a substantial value gain to Hydro Tasmania as its cost structure will not be materially impacted by carbon pricing. This is illustrated in Figure 4 below.

⁷⁶ http://www.alp.org.au/agenda/environment/carbon-price-mechanism/

⁷⁷ "Our position on this [carbon pricing legislation] is the same as our position on the mining tax - we will oppose it in opposition, we will rescind it in government," Tony Abbot, 28 February 2011.



Figure 5 - Possible implications of a price on carbon - a simplified example

Discussion: In the NEM, the marginal generator sets the market price that all generators receive in the trading period. With the introduction of a price on carbon emissions, the operating costs of generators will increase, depending on the level of carbon intensity in their production. Depending on the magnitude of the carbon price, there could be changes in the merit order of dispatch. As hydro and wind-based electricity contains no material carbon-related costs, their cost profile will not change, and the full market impact on prices may appear as higher returns to asset owners (depending on the design of the scheme).

An important issue for the Tasmanian community is the potential utilisation of any additional value, should a carbon pricing arrangement be implemented that generates significant additional value to Hydro Tasmania's business. It could be retained within Hydro Tasmania to fund business development and expansion opportunities or returned to taxpayers through dividends for wider use through the Budget process.

The Panel is seeking comments on:

• In the event that a carbon pricing mechanism delivers significant increase in the value of Hydro Tasmania, how ought that additional value be utilised?

4. Governance

It its submission to the Panel's Statement of Approach, the National Generator's Forum observed that the Panel should examine "the extent to which Tasmanian governance arrangements support successful operation of the market. For a market to be successful, it is important for Governments to set up frameworks and governance arrangements and then to let the market work. In this context, the panel should investigate the effectiveness of the existing Governance regime." ⁷⁸

A related issue is the practical operation of the governance arrangements by which the Government, on behalf of the Tasmanian community, exercises control and oversight of the SOEBs in a Shareholder role.

4.1. Transparency and accountability in decision making

A central feature of a market-based framework is the role of the market in allocating resources and informing investment decisions. A notable feature of the development of the Tasmanian electricity generation market is that the Government has continued to make investment decisions, with a primary focus on risk management.

Under the dual shareholder model, the Treasurer and Minister for Energy are the Shareholder Ministers for each of the electricity entities and accountable for the financial performance of the electricity portfolio. More widely,

- The Minister for Energy is responsible for energy policy and individual business outcomes.
- The Treasurer is responsible for administering the economic regulatory framework for the sector, including determining mechanisms for setting prices such as the wholesale energy price.

There is no formal or transparent protocol as to how objectives are balanced and how priorities between these objectives will be determined.

The '*Tasmanian Government Businesses – Governance Guide*' identifies the role of the Portfolio Department, in this case the Department of Infrastructure, Energy and Resources (DIER), for portfolio issues with Treasury providing advice on the governance framework and the general financial performance of the businesses.

• Treasury has historically retained responsibility for the facilitation of major energy portfolio decisions such as Basslink, adoption of NEM arrangements and the acquisition of the Tamar Valley Power Station.

⁷⁸ National Generators Forum submission to the Panel dated 10 February 2011.

• The Panel is currently investigating these key decisions. This will include gaining an understanding to what degree these decisions were made in liaison with the Portfolio Department specifically, and key stakeholders more generally.

From the Panel's investigations to date, it appears that while considerable effort has been expended on the investment decisions and immediate implementation matters, there appears to have been less effort on reviewing whether the expected outcomes are being achieved.

Ultimately, the SOEBs are responsible to the Shareholder Ministers, who are accountable to Parliament. The SOEBs are themselves directly responsible to Parliament for performance outcomes through the annual Government Business Scrutiny Review process. The effectiveness of this broader accountability framework in driving business performance is somewhat limited by:

- The availability of information beyond that contained in the annual report to Members of Parliament responsible for scrutinising business performance.
- The complexity of the electricity market and the depth of industry knowledge required to effectively scrutinise the performance of the SOEBs.

The Panel is seeking comments on:

- What could be done to improve transparency and accountability of decision making in the future, while recognising the need for appropriate protection of commercial interests?
- What application of private sector continuous disclosure arrangements could be applied to the SOEBs, given community ownership of the businesses?

4.2. Tension between outcomes for electricity customers and taxpayers

The SOEBs represent the State's largest public business assets and the financial returns provided by the SOEBs are a significant source of revenue for the Budget (refer to section 6)

By virtue of their respective governance legislation, SOEBs are expected to act commercially under the direction of an independent Board of Directors.

However, within this requirement to operate in a commercial manner, Government businesses, to various degrees, are also expected to contribute to one or more of the following broader public benefits:⁷⁹

⁷⁹ Tasmanian Government Businesses – Governance Framework Guide October 2008, page 3.

- Development of key projects that are strategically important to the State's future.
- Delivery of key government social and economic objectives.
- Delivery of services that would not otherwise be provided by the private sector operating commercially, including services funded by a community service obligation or activity.
- Provision of stable financial returns to Government on an annual basis.

Because of these competing objectives there is often tension between the financial performance of the SOEBs and outcomes for Tasmanian electricity customers and returns to the Tasmanian community through the Budget.

As noted in Chapter 1, the Panel is of the view that the electricity industry will make the best contribution to the growth and development of Tasmania and to the economic welfare of Tasmanians if it is operated on the most economically efficient basis possible.

The Panel is seeking comments on:

- How stakeholders view the competing objectives commercial and broader Government policy objectives of SOEBs.
- How stakeholders view the impact of competing objectives on SOEB performance and electricity market outcomes.
- Comments on the Panel's view that compromising efficient electricity sector outcomes to achieve financial outcomes for the SOEBs or the taxpayers would not be in the community's best long-term interest.

4.3. Role of Shareholders in Driving Business Performance

It is the role of the Shareholder Ministers to assess and monitor business financial and operational performance and ensure that the objectives of each business are consistent with the Government's overall energy policy framework and objectives.

The role of the economic regulatory framework for the SOEBs is to ensure that the absence of competitive forces does not lead to miss-uses of market power – that the worst aspects of the absence of competition are avoided. The regulatory framework will only partly drive effectiveness in the regulated businesses, and there is a role for shareholders, through Boards, to provide additional impetus for efficiency. Commentators such as the Energy Users Association of Australia have reported on the relative productivity performance of publicly-owned electricity entities.⁸⁰

The Panel is seeking comments on:

- The role of Shareholder Ministers in driving business performance both financial and operational.
- The role of Shareholder Ministers in driving business efficiencies to improve electricity prices for Tasmanian customers.

⁸⁰ Energy Users Association of Australia submission to the Panel dated 10 February 2011. For example see 'Australia's rising electricity prices and declining productivity: the contribution of electricity distributors' Bruce Mountain May 2011.

5. SOEB Financial Outcomes

The SOEBs are very significant in relation to Tasmanian public sector finances. From the perspective of the General Government sector, its equity investment in the electricity entities totals \$3.23 billion, which constitutes around 17 per cent of its total assets.⁸¹ In relation to the State Government-owned business portfolio, the electricity entities comprise around 70 per cent of the equity holdings.⁸²

As at 30 June 2010, the taxpayers equity within the businesses was distributed as follows:

- Hydro Tasmania \$1 882 million (64 per cent of total taxpayer equity in the electricity sector);
- Transend Networks \$564 million (around 19 per cent of total equity in the sector);
- Aurora Energy \$496 million (around 17 per cent of total equity in the sector).

Given the materiality of the investments in the electricity sector, the overall financial position of the electricity portfolio is a key consideration for rating agencies in determining the Tasmanian Government's credit rating, which is generally accepted as an important driver of business confidence.

The financial performance of these entities is also material from the perspective of the State Budget.

- For 2011-12, total dividends from all State Government-owned entities is expected to be \$110 million, with the three electricity entities contributing three-quarters of this, some \$83.4 million.⁸³
- A further \$105 million is provided through the payment of income tax equivalent payments (ITEs)^{84,} which represents 90 per cent of total ITE payments from the Government business sector in 2011-12.
- The contribution of the SOEBs by way of dividends and tax equivalent payments⁸⁵ is expected to represent around 10 per cent of total own-source revenue in 2011-12.

⁸¹ Estimate as at 30 June 2012, Budget Paper 1 2011-12, Chapter 7.

⁸² Estimate as at 30 June 2012, Budget Paper 1 2011-12, Chapter 7. Excludes the equity in the Tasmanian water and sewerage companies, which are included in the Public Non-Financial Corporations Sector by the ABS.

⁸³ It is interesting to note that in the 2011-12 Budget, through policy decisions of the State Government to change the dividend payout ratios for the SOEBs, the Government was able to draw an additional \$26.5 m into the State Budget for 2011-12, with a total of \$114 m additional revenue over the 2011-14 by comparison with the 2010-11 Budget estimate. A higher dividend payout ratio is an equity withdrawal from the electricity entities, which will have an impact on their capital programs and/or debt levels.

⁸⁴ ITEs are payments of income tax to the State Government that would otherwise flow to the Australian Government if the entities were taxable under Commonwealth taxation. They are imposed to ensure competitive neutrality between publicly and privately-owned commercial entities.

• Over the 2011-15 Budget period, it is expected that the electricity portfolio will return a total of \$797 million to the State Budget in the form of dividends, tax equivalent and rate equivalent payments.⁸⁶

The primary driver of government business annual returns to the Budget is the financial performance of the SOEBs. Higher financial performance will provide greater capacity for the payment of dividends, and higher ITEs. It is important to note that both forms of returns are a distribution of the profit earned by the businesses, not drivers of prices.⁸⁷

Various commentators have made observations regarding the financial performance of the SOEBs, typically suggesting underperformance relative to their private sector peers. The Auditor General's 2010 performance report on the Government business sector found that the electricity entities were underperforming, relative to the benchmarks he established in relation to financial returns in 2009-10.

Benchmark	Benchmark	Hydro Tasmania	Aurora Energy	Transend Networks
Dividend to equity	6%	0.6%	0.8%	2.4%
Total returns to equity		0.9%	2.1%	4.3%

The Panel is currently undertaking a detailed study of the financial performance of the SOEBs, which will examine the broad business drivers over recent years and their current financial position, and provide further illumination of reasons that underlie the current level of performance of the sector. While the Panel intends releasing a discussion paper on these matters in August 2011, it is nonetheless interested in stakeholder views at this time regarding the general financial performance of the SOEB portfolio.

Ultimately, the Tasmanian community bears the risk and earns the rewards from the performance of the Tasmanian electricity entities, and therefore, has a material interest in their financial performance.

⁸⁵ Rates equivalent payments are made by Hydro Tasmania to the State Government on land owned by the Corporation that is not subject to local government rates. It is another element of competitive neutrality.

⁸⁶ Table 5.10, Budget Paper 1, 2011-12 State Budget

⁸⁷ Changes in dividend policy will have an impact on the capital structure of the entities, which will have an impact on interest costs. For the regulated network businesses, the actual capital structure of the entities is disregarded in the setting of prices, as the assumed level of gearing is prescribed under the regulatory arrangements. The actual level of gearing will impact on the rates of return earned by those businesses, but not the quantum of funds generated. For the market-related aspects of the sector, to the extent that the SOEBs are price takers (ie the market framework is effective), dividend payout ratios will, similarly, have no impact on electricity prices, through the pass through of higher interest costs. It is only where the SOEBs are price setters that dividend payments could have any bearing on electricity prices.

Unlike private shareholders, who are readily able to change their level of investment, the Tasmanian community is a captive business owner of the SOEBs. This may have a bearing on the appetite of the 'owner' for these businesses to take on risk, particularly through expansion of activities into non-core areas and/or outside Tasmania. It may also have a bearing on the views regarding the balance between annual returns by way of dividends and capital growth – the former being more readily accessible to provide a tangible return to the community. It may also have a legitimate bearing on the nature of scrutiny, accountability and transparency that is called for in relation to the financial performance of these businesses.

The Panel is seeking comments on:

- How the Tasmanian community, as the ultimate owner of the SOEBs:
- Views the additional risk associated with SOEBs expansion into non core activities and/or operations outside Tasmania.
- Views the trade-off between capital growth and the SOEBs and the return of dividends.
- The broad financial performance of the SOEB portfolio does the community receive a reasonable return for its investment in the portfolio, and what could be done to improve it?

Appendix 1:

Tasmanian jurisdiction electricity supply industry market environment



Appendix 2:

Interactions between the spot and contract markets The purpose of this Appendix is to provide a simplified example of the interactions between the spot and contract market.

In the NEM, there is a wide variety of risk management instruments employed by generators and retailers to manage spot market risks. Two common types of contracts are two-way hedges and caps.

- A two-way hedge (or swap contract) involves the parties swapping the variable spot price in return for a fixed price. When the spot price is above the agreed contract price (the strike price), the generator effectively returns the difference between the spot price and the strike price, and when the spot price is below the strike price, the retailer pays to the generator the difference. This way, both parties 'see' the strike price in relation to the contracted volume.
- A cap contract is akin to an insurance policy, whereby a retailer pays to a generator a premium (typically a per MW per period fee) in return for protection from spot prices higher than the agreed cap price. The retailer remains exposed to movements in spot prices below the cap price.



These contracts are illustrated in the diagram below.

To examine the interaction between the spot and contract market, this illustration assumes a single generator and a single retailer in the market, and that two contractual arrangements are entered into:

- a hedge contract for 100MW with strike price of \$45/MW; and
- a 20MW cap with a strike price of \$300.

The table below examines the various outcomes that arise when spot prices vary around the contract price, and the actual volume demanded from the market (from the retailer's customers) vary from contracted levels.

Price Outcome						
Actual Volume		30	45	200	380	Discussion
100MW	Spot	3000	4500	20000	38000	When the actual volume is exactly
	Swap	1500	0	-15500	-33500	covered by the swap contract, there is no incentive for the Generator to price
	Cap	0	0	0	-1600	in any manner, except below the cap
	Total	4500	4500	4500	2900	price. Both the generator and retailer effectively 'see' the contract price.
90 MW	Spot	2700	4050	18000	34200	When the generator is 'over -
	Swap	1500	0	-15500	-33500	the spot price below the swap price.
	Сар	0	0	0	-1600	In general, spot prices will be low in
	Total	4200	4050	2500	-900	situations where generators are over- contracted.
110 MW	Spot	3300	4950	22000	41800	When the generator is 'under-
	Swap	1500	0	-15500	-33500	keep spot prices high, as volume over
	Сар	0	0	0	-1600	the swap contract amount receives
	Total	4800	4950	6500	6700	the spot price. Spot prices will be generally high where generators are under-contracted. The effect of the cap is to limit the exposure of the retailer to very high prices (there is no incentive for the generator to price in excess of the cap price, as the difference is returned to the retailer.
130 MW	Spot	3900	5850	26000	49400	In this circumstance, the retailer has no
	Swap	1500	0	-15500	-33500	covered by the swap and 20MW is
	Сар	0	0	0	-1600	covered by the cap). In this
	Total	5400	5850	10500	14300	generator to price up to the market ceiling, as it receives that price on the marginal 10MW, the cap price for 20MW and the swap price for 100MW

As discussed in the table, the levels and types of contracts that apply around spot market outcomes, and the relativities between contracted volumes and actual demand, can have a material impact on bidding incentives for generators. This is a standard feature of the NEM, and is not particular to Tasmania.

Where there is effective competition in the generation sector, there will be competitive influences on spot pricing decisions. Where multiple generators compete for dispatch along the supply curve, there are strong incentives for each to bid at the short-run marginal cost for uncontracted load, as bidding higher levels risks being displaced by a rival bid. Where the threat of displacement is low/nonexistent, the generator is free to bid above short-run marginal cost, driving up spot prices where there is an incentive to do so. Appendix 3:

Consolidated list of questions

1. Retail Sector

- For contestable customers, how has the move to contestability impacted on electricity purchasing decisions, for example:
 - Changes in pricing levels, and how each part of the supply change is contributing to those changes.
 - Pricing predictability.
 - o Contract duration.
 - Spot market exposures.
- What have been the implications of these changes for business decisions?
- The importance of diversity in managing wholesale energy risk and the extent to which it drives competitive behaviour in the retail sector.
- The ability of a retailer to contract with parties that have generation located in other NEM regions.
- The effectiveness of retail participation and competition for larger commercial and industrial customers (Tranche 1 and 2) what level of competition exists between the 5 licensed retailers and how has it changed since contestability has been introduced?
- The effectiveness of retail competition for smaller commercial, industrial and business customers with the two existing active retailers have contestable customers observed strong competition on a consistent basis?
- The potential barriers to effective retail competition in Tasmania, including:
 - The attractiveness of the retail market, particularly size and nature. When considering FRC, does the fact that over one-third of residences are concession customer impact on the attractiveness of entry?
 - The extent to which Aurora Energy, as the incumbent retailer, has superior market information on eligible customers as contestability rolls out?
 - The impact of the recent vertical integration of Aurora Energy as a 'gentailer' – has this had an impact on the perceptions of its competitive position in Tasmania?
 - The extent to which the commercial structure of Aurora Energy as an integrated retail and distribution entity is a material barrier to new entry, such as through access to information from its distribution business or it ability to absorb thinner retail margins supported by the cash generated by its distribution business.
 - Do all retailers face similar risks or does size pose a greater degree of transparency in the wholesale market?

- Is there a difference in the cost to serve Tasmanian customers in relation to customers in other NEM jurisdictions?
- What is the relative importance of wholesale market issues compared with other barriers to entry?
- In what ways has the regulatory framework delivered retail costs that are higher than would be delivered by a fully competitive retail market in Tasmania?
- The experience of contestable customers during the roll-out of retail contestability and outcomes of alternate retail options. What changes have customers observed?
- What customer outcomes have influenced contestable customers switching retailers?
- The experience of contestable customers during the roll out of retail contestability and outcomes of alternate retail options. What changes have customers observed?
- What customer outcomes have influenced contestable customers switching retailers?
- Stakeholders' views on the proposition that weighting that should be placed on potential value implications on Aurora Energy's retail business from the introduction of FRC, rather than on outcomes for customers.
- How can the ability of customers to participate in the market be improved through the way information is provided?
- Whether it is the role of the Government or the market to provide information for customers to make informed electricity purchasing decisions?
- What forms of improved customer-related information could increase the overall effectiveness of retail contestability (e.g. Understanding of network prices, the ability to compare offers)?

2. Pricing

- Whether it is the principle of a fixed daily charge or its level that is the major issue.
- The impact of the current tariff structure on demand management, energy efficiency and affordability.
- What examples of cross-subsidies do stakeholders think exist in the market and how do they arise?

3. Wholesale

• What does the history of spot market prices demonstrate about the effectiveness of competition in the Tasmanian spot market?

- What aspects of the Tasmanian market architecture and/or underlying features create sustained and transparent competitive influences in the wholesale market?
- Are there material barriers to entry arising from the wholesale sector architecture of the Tasmanian generation sector?
- When contract levels are high⁸⁸, i.e. a large proportion of the total load is subject to wholesale contracts, what is the material impact of a high-priced event in the spot market?
- Does Hydro Tasmania have the capacity to raise or lower spot prices based on its knowledge of the contract positions of its counter-parties and is there evidence that such a capacity has been exercised?
- How transparent is the underlying position of wholesale market participants in Tasmania, and does this pose a material barrier to entry in either generation or retailing?
- How contestable, efficient and effective is the market for wholesale contracts in Tasmania?
- How are wholesale contract prices, and other terms and conditions, struck?
- What is the relative negotiating position of the parties and do contract terms broadly reflect contract terms, such as premiums relative to the spot market, available in other NEM regions?
- What is nature and extent of differences in wholesale contract in Tasmania, and what drives those differences?
- Does a high level of contract cover represent an optimal risk management position for market participants, and what is the impact of higher insurance levels on end customer prices, noting that insurance is not costless?
- The validity and usefulness of a new entrant LRMC pricing indicator as a measure of the effectiveness of the wholesale energy market in Tasmania.
- How have the application of the NEM rules in Tasmanian created value opportunities? For example:
 - In shaping the bid stack where along the supply curve is competition strongest and weakest?
 - How can non-scheduled generation materially shift supply and demand balance and therefore move prices?
- Are there other aspects of the 'standard' NEM model that appear inconsistent with the underlying market architecture in the Tasmanian region and evidence to support this view?

⁸⁸ It is noted that unless load-following or whole-of-meter contracts are used, there will always be a risk of 'unders' and 'overs', as it is very rare for actual demand to match contracted levels. Therefore, even where contract levels are relatively high, there will tend to be some spot market exposure for most market participants.

- Is there a need for something to support the standard NEM arrangements to deal with specific Tasmanian circumstances?
- Is there any evidence of latent market power in the Tasmanian wholesale market, and what are its consequences?
- Stakeholder views on whether latent market power may be exercised at some point in the future.

4. Wholesale Pricing for Non-Contestable Customers

- How prescriptive should the regulatory arrangements for determining prices be?
- What is the appropriate role of Government in establishing the framework for the regulator, given it multiple interests in the sector?
- The use and application of the existing form of LRMC methodology in determining the wholesale energy allowance for non-contestable customers.
- How efficient and effective are the current regulatory arrangements in determining efficient energy price outcomes for non-contestable customers?
- What alternative arrangements for setting the energy supply cost allowance might be more appropriate than those currently specified in the current Price Control Regulations?

5. Network Issues

- The experiences of customers regarding the efficiency and effectiveness of Tasmania's network businesses in the delivery of capital programs.
- What can be done to reduce network costs to customers while maintaining appropriate reliability and safety standards?
- The extent to which the NEM arrangements and/or jurisdictional changes have required additional network investment and/or direct customer costs to increase?
- The consequences, including costs, for the transmission network arising from physical interconnection and how these costs are distributed to customers?
- How are customers benefitting through the current NEM arrangements by comparison with previous arrangements?
- When reliability standards are being proposed, how are pricing consequences considered?
- Do customers recognise changes in service quality have pricing implications and how could the link between prices and standards be made more transparent?
- The affordability for Tasmanian customers of the improved reliability standards imposed by the '101 communities' policy.

6. Value Considerations of Major Investments

- The extent to which the anticipated benefits of Basslink to Tasmanian electricity customers are being delivered and the value placed on those benefits by customers.
- If a primary role of the TVPS is hydrological risk management, how should the full costs of the TVPS should be funded over time?
- Stakeholder views on the trade off between the preservation of value of the TVPS asset and non-contestable customer prices.
- In the event that a carbon pricing mechanism delivers significant increase in the value of Hydro Tasmania, how ought that additional value be utilised?

7. Governance

- What could be done to improve transparency and accountability of decision making in the future, while recognising the need for appropriate protection of commercial interests?
- What application of private sector continuous disclosure arrangements could be applied to the SOEBs, given community ownership of the businesses?
- How stakeholders view the competing objectives commercial and broader Government policy objectives of SOEBs.
- How stakeholders view the impact of competing objectives on SOEB performance and electricity market outcomes.
- Comments on the Panel's view that compromising efficient electricity sector outcomes to achieve financial outcomes for the SOEBs or the taxpayers would not be in the community's best long-term interest.
- The role of Shareholder Ministers in driving business performance both financial and operational.
- The role of Shareholder Ministers in driving business efficiencies to improve electricity prices for Tasmanian customers.
- How the Tasmanian community, as the ultimate owner of the SOEBs:
- Views the additional risk associated with SOEBs expansion into non core activities and/or operations outside Tasmania.
- Views the trade-off between capital growth and the SOEBs and the return of dividends.
- The broad financial performance of the SOEB portfolio does the community receive a reasonable return for its investment in the portfolio, and what could be done to improve it?