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Strategic Assessment of the Tamar Valley Power Station

February 2013

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Executive Summary

On 15 May 2012, the Tasmanian Government released its *Energy for the Future* policy statement which summarised the Government's electricity reforms. As part of the reforms, the Government announced that an assessment of the Tamar Valley Power Station (TVPS) assets would be obtained and where the strategic value of state ownership of the assets, or parts of the assets, exceeds a sale value, those assets will be transferred to Hydro Tasmania.

In particular, unless the assessment indicates that there are strong reasons not to, the TVPS will be transferred from Aurora to Hydro Tasmania, which will operate the power station under a regulated wholesale market regime.

The purpose of the assessment is to inform a sale of the assets and contracts to the private sector or alternatively transfer them to Hydro Tasmania.

The two primary factors for consideration are:

- the likely sale value of the TVPS assets and the potential to attract a buyer; and
- any energy supply and security considerations.

The key findings of the strategic assessment are that:

- the operating costs of the TVPS are greater than the revenues that are available to it under prevailing market conditions and the power station therefore has a negative value in either public or private, third party ownership;
- a sale to a third party, which required the assets to remain in situ, would be unlikely without the Government providing some form of additional revenue stream to support its operation;
- if it was possible to secure a third party purchaser, the purchaser would most likely decommission and relocate the asset to another region of the NEM;
- there is limited flexibility to improve the financial performance of the TVPS under the AETV's current take or pay gas arrangements, which do not expire until the end of 2017;
- the existence of the TVPS asset, particularly the CCGT, does provide an additional layer of energy supply security; and
- there is no clear monetary value that can be placed on the energy security benefit to the State that the TVPS provides and therefore there is little justification for providing a taxpayer funded subsidy to a private third party to operate the TVPS as a base load generator on this basis.

It is therefore recommended that:

- the AETV assets be transferred to Hydro Tasmania; and

- Treasury and Hydro Tasmania should continue to undertake further analysis to settle on the valuations of the AETV assets and assess in more detail the financial impact of the transfer on Hydro Tasmania's business, including what, if any, support should be provided to minimise any adverse impact from the transfer of the assets, and the form that this support should take.

Introduction

On 15 May 2012, the Tasmanian Government released its *Energy for the Future* policy statement, in response to the recommendations made by the Electricity Supply Industry Expert Panel in its Report to the Tasmanian Parliament.

Energy for the Future sets out an extensive reform package for the Tasmanian electricity supply industry, which includes the sale of Aurora Energy's customer base to new, private sector retailers, the introduction of full retail contestability and the merger of Aurora Energy and Transend Networks' network functions into a single, integrated transmission and distribution business.

The Expert Panel had considered the financial position of the TVPS as part of its review of the industry and found that the TVPS was not financially sustainable due to its current high cost base relative to prevailing market prices. The Panel recommended that the Government put in place measures to put the TVPS on a sustainable footing, prior to it being sold to the private sector.

In response, the Tasmanian Government announced that an assessment of the TVPS assets would be obtained and where the strategic value of state ownership of the assets, or parts of the assets, exceeds a sale value, those assets will be transferred to Hydro Tasmania. The Government's in-principle position is that the assets should be transferred to Hydro Tasmania.

In undertaking the assessment, Principle 2 of the Expected Outcomes from *Energy for the Future* needs to be taken account. The Principle is that there should be lower risks for taxpayers and electricity retailers from the operations of the Tasmanian market, with Action 2.2 stating, in part:

"Unless an assessment indicates that there are strong reasons not to, the Tamar Valley Power Station will be transferred from Aurora to Hydro Tasmania, which will operate TVPS under a regulated wholesale market regime. Some peripheral assets may also be transferred to Hydro Tasmania or sold to the private sector."

The assessment focuses on high-level strategic and valuation considerations associated with the TVPS assets. Key inputs to the assessment include modelling and valuation work and an energy security assessment. Energy Consultant, Sinclair Knight Merz (SKM), was engaged to provide third party verification of the key assumptions, primary methodologies and basis for conclusions used in the modelling work and energy security assessment.

Acquisition and Asset Description

In undertaking a strategic assessment of the TVPS assets, it is necessary to consider that context in which the State acquired the assets and to clearly define the assets which are being considered.

Acquisition of the Tamar Valley Power Station

The Tasmanian Government directed Aurora Energy to acquire the partially-built TVPS from Babcock and Brown Power (BBP) in 2008, after BBP encountered financial difficulties which resulted in there being a significant risk that the project would not be completed. The Government's decision was in response to concerns that either significant delays to the completion of the project or its non-completion could result in an inability to meet Tasmanian energy requirements in the short to medium term.

At the time of acquisition, Tasmania was experiencing a severe drought, with hydro storages falling to as low as 16 per cent. While Basslink and the Bell Bay Power Station were both available to assist in meeting demand at this time, there was considerable concern over the ability of the Bell Bay Power Station to continue operating for prolonged periods and the reliability of Basslink had yet to proven to a satisfactory level. Given this, there were concerns that under a multiple contingency scenario, the State could face an energy shortage. The Government determined that the severe consequences for the Tasmanian economy of a potential energy supply shortage required that it intervene to ensure the timely completion of the Tamar Valley Power Station.

A new subsidiary of Aurora Energy – Aurora Energy Tamar Valley Pty Ltd (AETV) – was created to complete construction and operate the TVPS. At the time of acquisition, the Government stated that its intention was to divest the TVPS to the private sector after a period of approximately three to five years or once the station had been completed and operating commercially in the market for a period of time.

Current Asset Portfolio

The AETV asset portfolio comprises a suite of physical and financial assets. The TVPS Combined Cycle Gas Turbine (CCGT) and associated peaking plant were the subject of the original acquisition from BBP. As part of the transaction, Aurora Energy also acquired gas supply and commodity contracts sufficient to supply the CCGT and peakers under BBP's implied operating model for the power station. These contracts were 'carved out' from a wider package of gas commodity and transport agreements that were in place in a related Babcock and Brown entity.

Aurora Energy subsequently purchased from BBP this broader package of contracts, which included significantly greater quantities of gas commodity and pipeline capacity, as well as a number of related wholesale gas supply contracts with large customers and dispatch rights over a Victorian power station.

There is a high degree of interdependency between the assets, with all assets either directly or indirectly relying on the 'head' gas commodity and transportation contracts with ESSO/BHP and Jemena/TGP, which have significant take or pay exposures and do not expire until the end of 2017. Aurora operates the assets as a portfolio in order to manage this gas contract exposure.

The AETV assets can be classed into the following two categories:

- the primary 208 MW CCGT; and
- peripheral assets including physical assets and gas supply and other contracts related to the operation of the TVPS:

The 208 MW CCGT is the largest asset in the AETV portfolio. It is designed to run as a base load plant due to slow start up times, which makes it unsuitable to respond to high price market events. Completed in 2009, the CCGT is in good operational condition and maintains high levels of availability. Aurora Energy, under a tolling agreement with its AETV subsidiary, currently uses the capacity of the TVPS (in conjunction with some generation from its peaking plant) to physically back around half of its non-contestable customer load, as well as a portion of its contestable customer contracts.

The peripheral assets include:

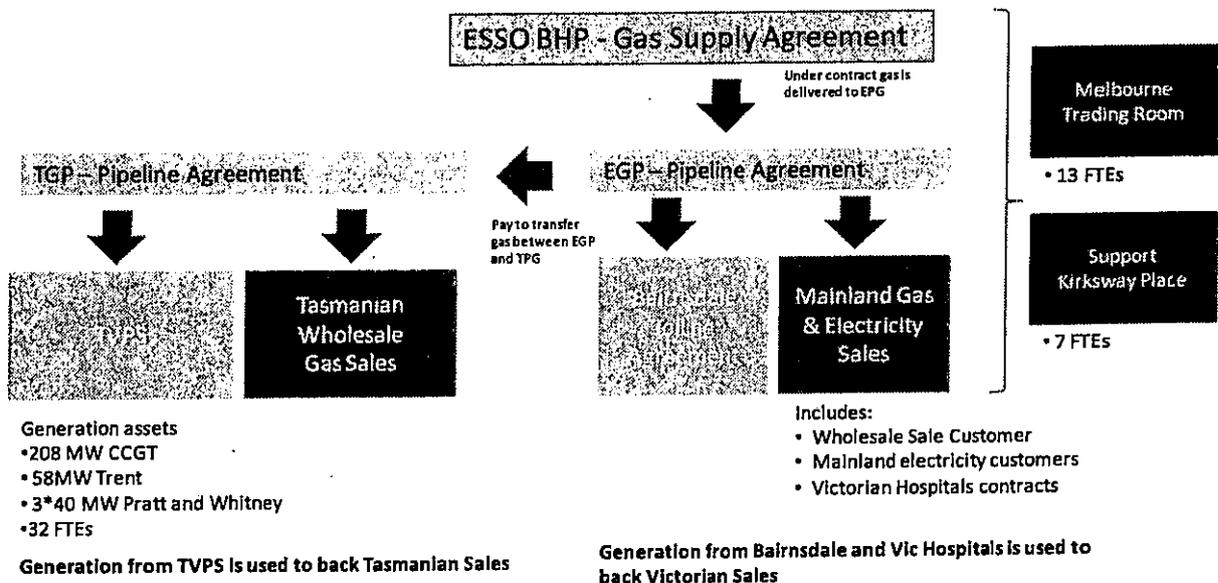
- *Peaking Plant* – This plant is designed to start up quickly and operate for short periods in response to high price events. The plant includes a 60 MW Rolls Royce Open Cycle Gas Turbine (OCGT) that was commissioned in 2009 and three 40 MW Pratt and Whitney 'FT8' Gas turbines, which formed part of the old Bell Bay Power Station and were refurbished as part of the TVPS project. Both the Rolls Royce and FT8 turbines run infrequently, with the FT8s the least utilised due to their higher running costs and unreliability when compared to the OCGT.
- *Gas Supply and Transportation Contracts* - AETV primarily sources its gas under a contract with ESSO/BHP with minimum 'take or pay' provisions, which expires on 31 December 2017. AETV also has two gas transportation contracts with the Tasmanian Gas Pipeline (TGP) until 31 December 2017. These contracts incur high fixed costs that are payable under the terms of the contract irrespective of whether the pipeline capacity is utilised. The transportation contracts are used to supply the TVPS and peaking plant and AETV's wholesale gas sales to other Tasmanian customers. AETV also has contracts with Jemena to transport gas through the Eastern Gas Pipeline (EGP) on mainland Australia to the Bairnsdale Power Station and to transfer gas between the EGP and the TGP.
- *Bairnsdale Tolling Agreement* - This is a long-term contract that provides Aurora Energy with trading rights over the 80 MW Bairnsdale Power Station located in Eastern Victoria. Under the terms of the agreement, Aurora pays an annual tolling fee and is required to supply gas to the power station in return for control over its generation

output (subject to some limitations). Energy produced is used by Aurora to back its mainland retail customer sales.

- **Victorian Hospitals Cogeneration Contracts** - This is an agreement between Aurora Energy and the Victorian Health Minister under which Aurora operates co-generation plant located on on-site at five Victorian hospitals. Aurora has subcontracted the plant operation to Transfield. Aurora supplies gas, electricity and steam to the hospitals, mainly during peak periods. Aurora can also export energy in excess of the hospitals' demand to use for physically backing its mainland customer contracts when market prices are high.
- **Wholesale Gas Contracts** - AETV has a number of wholesale gas contracts in place with gas retailers in Tasmania and Victoria (Aurora, TasGas and Lumo) for residential supply and with large end users. Major customers include Grange Resources, Pacific Aluminium and Victorian hospitals.

The peripheral assets provide flexibility to the CCGT when it is operating as a merchant plant.

The diagram below shows the interdependent relationship between the AETV assets.



Methodology

The aim of the strategic assessment is to determine whether the Government would realise significantly greater value from divestment of the TVPS assets to the private sector than the potential strategic benefits of operating the assets as part of Hydro Tasmania's broader generation portfolio.

Accordingly the assessment needs to address two key issues. That is:

- what is the likely sale value of the TVPS assets and is it possible to attract a buyer; and
- what, if any, energy supply and security considerations warrant the retention of the TVPS assets in State ownership.

In order to properly address these issues, consideration must be given to the following:

- the electricity demand/supply balance in the State and the likely future situation;
- the operating cost structure of the TVPS compared with other sources of generation;
- whether revenues earned by the TVPS exceeds or is likely to exceed its operating costs; and
- is there justification for the Government to subsidise the operation of the TVPS if it is deemed that it does provide an energy security benefit.

Two separate studies have been undertaken to assist in the assessment. Firstly, financial valuations of the TVPS were undertaken to assess the impact of the TVPS assets:

- when integrated into its broader hydro and wind generation portfolio; and
- the potential value to a third party.

A separate valuation of the other AETV assets was not undertaken as these are largely vanilla in nature and were considered to have similar value in the hands of either Hydro Tasmania or a third party. Further, both the valuations of the TVPS and other AETV assets were reviewed by SKM test the reasonableness and accuracy of assumptions used.

Secondly, the Department of Infrastructure, Energy and Resources considered the current and potential future role of the TVPS in providing energy security to the State. The analysis focused on the ability of existing generation in the State (excluding thermal generation of the TVPS or the peaking plant) to meet current and future forecast electricity demand under a range of credible, low probability/high impact scenarios. The energy security analysis was also independently reviewed by SKM.

Value and Potential for Divestment

In assessing the TVPS for acquisition, potential purchasers would need to be satisfied that:

- there is sufficient demand for the output of the plant so that it could be run as a base load generator;
- the operating cost structure of the plant is sufficiently low, compared with other sources of generation, including Basslink imports, to ensure that it will be scheduled to operate in the market;
- revenues earned by the TVPS exceeds or is likely to exceed its operating costs; and
- the Government would subsidise the operation of the TVPS if it is deemed to provide an energy security benefit but is not economically viable as an independent generator.

Electricity Demand/Supply Balance

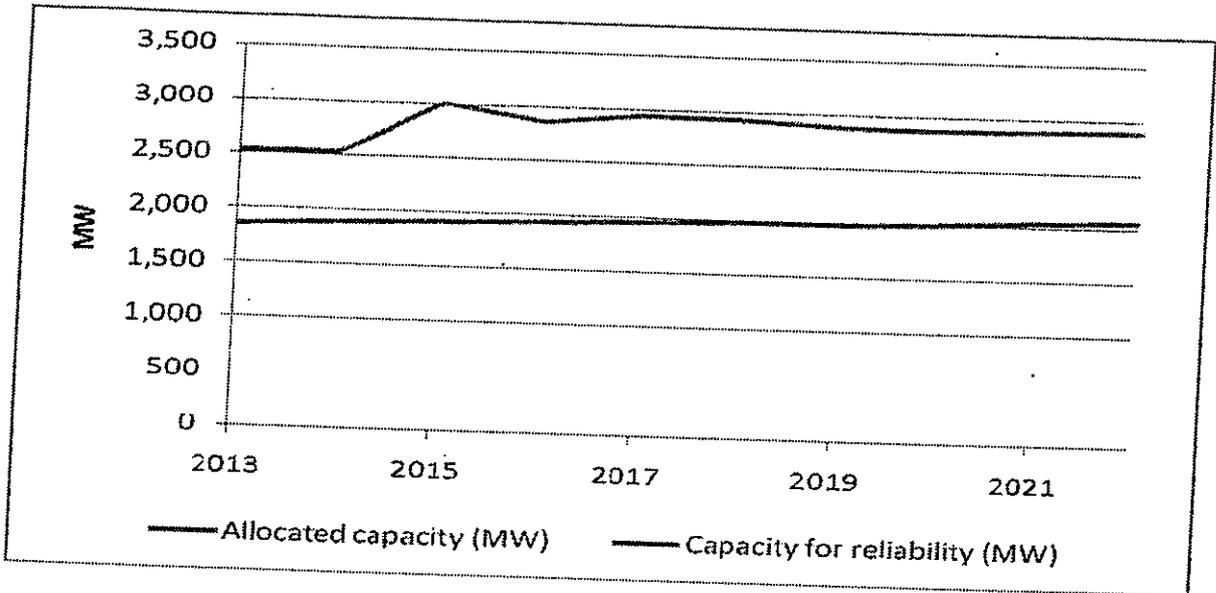
Tasmania currently faces an overcapacity in generation in relation to its ability to meet peak demand. The total available supply of electricity – and the diversity of sources from which that electricity can be generated - has increased, particularly with wind farm developments. Tasmania's current generation capacity by type of generation is shown below:

Generator Type	Capacity (MW)	Percentage
Hydro Turbine	2284.8	80.24%
Natural Gas Turbine	391.0	13.73%
Landfill Gas Turbine	4.9	0.17%
Wind Turbine	140.3	4.93%
Solar PV	12.6	0.44%
Sewerage Gas	0.1	0.00%
Coal Turbine	1.7	0.06%
Steam Turbine -Waste Gases	12.0	0.42%
Total	2847.4	

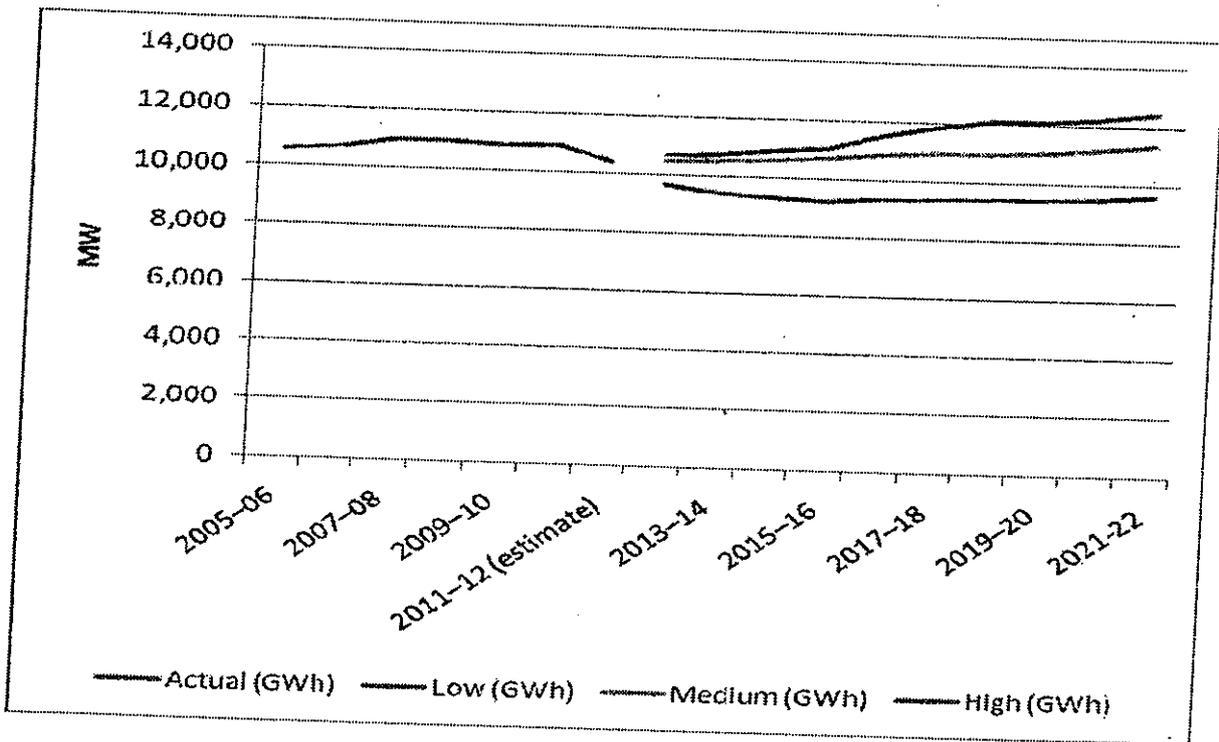
It should be noted that the above does not include the impact of the Musselroe wind farm, which, with a capacity of 168 MW, is due to be commissioned during 2013.

Excluding the TVPS, Tasmania's on-island installed capacity is just over 2 450 MW. Peak on-island demand is in the order of 1 700 to 1 800 MW. Therefore almost 30 per cent of the total on-island non TVPS capacity would need to be unavailable during peak demand to result in under capacity of the system to meet demand.

Forecasts by the Australian Energy Market Operator show that there is adequate generation capacity to meet Tasmania's forecast peak winter demand beyond 2022 as shown below:



It should also be noted that demand growth is in fact much lower than previously forecast in recent years:



This has reduced the likely need for any future generation capacity in Tasmania and indeed reduces the pressure on the existing generation to meet demand.

While Tasmania has sufficient capacity to meet demand, it is the system's ability to supply energy which is the critical factor in a predominately hydro generation based system. Tasmania's current total annual energy consumption is around 11 TWh per annum, of which on average 8.7 TWh is met with hydro generation and 1 TWh is met with wind generation and other sources. Therefore, there is notionally around 1.3 TWh per annum that needs to be supplied from non hydro and wind sources to meet Tasmania's energy needs. This can be provided through Basslink imports and the TVPS.

Position of the TVPS in the Generator Bid Stack

In the National Electricity Market, generators bid capacity from their plant into the market, and electricity is dispatched by the market operator in ascending order of the price of that generation until demand and supply are balanced at any given time. The price received by all generators in a region is the price of the last MW of electricity that is required in order to meet demand.

In addition, the availability of import capacity over Basslink links the marginal cost of electricity in Tasmania to that in Victoria and therefore the TVPS competes directly with mainland electricity sources, less losses associated with exporting or importing over the link. The average price of electricity imported over Basslink is around \$46 per MWh.

The current short-run marginal cost of generating electricity using the TVPS is around \$55 per MWh, (excluding interest costs and a return on capital) and the long-run marginal cost is around \$100 MWh if the plant is run on minimal stable load or \$60 MWh if run at full output. The LRMC of the TVPS is significantly higher than the above figures if allowances are made for the need to service debt and earn a reasonable return on capital, which would be a key consideration for potential purchasers.

Given this, any additional generation capacity required to balance Tasmanian demand can be sourced much more cheaply by importing over Basslink than from operating the TVPS. Therefore in order to cover its costs, the TVPS would need to be bid into the market at a price which is higher than what would generally be available through Basslink imports.

Financial Performance of the TVPS

The financial valuation was focussed on the core TVPS asset, the CCGT, rather than the peripheral assets, as it is the CCGT which has been acknowledged as the key driver for the financial performance of the TVPS. The peripheral assets have value irrespective of whether they are bundled with the CCGT or not and can be easily divested separately from the CCGT if necessary.

The TVPS produces expensive energy relative to that which can be sourced from other generation. The Expert Panel noted that the power station's underlying financial performance is weak, based on the gap between potential energy revenue at current market prices and operating costs.

The financial sustainability of the TVPS has been underpinned by a 'tolling agreement' between Aurora Energy and AETV under which Aurora pays AETV a fixed fee that largely covers the operating costs of the TVPS in return for dispatch rights over its generating output. This provides a high degree of revenue certainty for the AETV sufficient to cover its operating costs and shifts market exposure to the parent company.

More recently, the ability for Aurora to cover the costs of its tolling agreement with AETV has been reduced due to changes to the wholesale energy component of regulated retail prices. This in turn has reduced the commercial viability of the TVPS.

The financial outlook for the TVPS could improve if Tasmania's forecast energy demand were to increase significantly, to the point where demand could no longer be met by a combination of other on-island generation and Basslink imports. However, as indicated earlier, this is unlikely to occur in the short to medium term.

Other options for improving the financial performance of the TVPS are limited by its current gas supply and transport contracts, which result in high fixed costs irrespective of whether or not the power station is generating.

These contracts are in place until the end of 2017, after which there may be some opportunities to reduce the station's operating costs through more favourable gas supply arrangements which better reflect the plant's operating regime.

Given prevailing market and operating conditions, such as good storage levels, Basslink remaining available and operating reliably, and prevailing Victorian spot prices, it would be difficult for the TVPS to operate profitably given the revenues currently available to the TVPS are not sufficient to cover its various gas, operating and capital costs.

Energy Security Payment

The TVPS was acquired on the basis of the need to ensure security of supply at a time when hydro storages were at a critical level due to prolonged low inflows over a number of years, concerns about the reliability of thermal generation at the old Bell Bay Power Station and the yet to be proven reliability of Basslink.

At the time, the Government did not consider it was necessary or desirable to support the acquisition with an ongoing annual energy security payment from the Consolidated Fund to ensure that the TVPS remained available in the event that it was needed.

Since that time, little has changed in regard to the contingency events which could result in an inability to meet on-island energy requirements. As noted earlier, there is sufficient capacity in terms of both availability of generation to meet peak demand and, with Basslink imports, meet on-island energy requirements under normal conditions. This suggests that there is little justification for the Government to subsidise any potential purchaser the difference between the cost of operating the TVPS and the revenues it can earn in the market.

In any event, any security payment would need to be based on a fixed amount to ensure the availability of the plant if it was needed. Depending on the operating model adopted by a potential purchaser, this may or may not be sufficient to ensure the profitability of the TVPS.

Potential for Divestment

Without actually testing the value of the TVPS in the market by calling for expressions of interest, it would ordinarily be instructive to consider the values achieved from recent divestments of similar assets. However, there are no readily identifiable comparative

transactions with the sale of gas turbine capacity in the NEM against which a potential sale value for the TVPS might be derived.

Any potential private sector buyer would most likely only consider purchasing the TVPS in order to decommission and relocate the asset to another region of the NEM. This view was supported by SKM who noted:

"In regards to the TVPS, based on the negative earnings before interest, taxes and depreciation, and the consequential low market value of the of the TVPS and the likelihood that it would remain challenging to achieve revenue in excess of avoidable operating costs post 2017 due to the energy surplus in Tasmania and the NEM more generally, it is unlikely that any party would be willing to purchase the TVPS and operate it in situ."

However, such a sale proposition, at a value which would be acceptable to the Government, is highly unlikely as:

- the value that an acquiring party would be willing to pay for the asset would be capped at the cost of building a Greenfield gas generation plant, less expenses incurred to relocate the plant;
- forecast operating losses for the TVPS until 2017 and high-level analysis of relocation and new entrant costs indicates that this would result in a sale value that is insufficient to cover the majority of outstanding debt relating to the asset;
- the latest Electricity Statement of Opportunity published by the Australian Energy Market Operator forecasts that, due to a softening of demand, no additional investment is required in new generation capacity in most regions of the NEM until at least 2020. This indicates that prices will remain below that required to make investment in additional gas-fired generation attractive for the foreseeable future;
- the State would be considered a 'stressed buyer'; and
- uncertainty around the future of carbon pricing arrangements, which currently makes gas fired generation more price competitive with coal, but if reduced or removed would reduce the value of the TVPS.

Energy Supply and Security Considerations

A key consideration in determining the broader strategic value of the TVPS to the State is the role it plays in providing energy supply security in support of the Tasmanian community and economy. This is particularly relevant given that the Government's original decision to direct Aurora to acquire the TVPS was based on its assessment of the strategic value of avoiding the low risk but potentially catastrophic (economically and socially) impact risk of electricity rationing in the State in the event that on-island demand could not be met by a combination of on-island generation and Basslink.

Tasmania has traditionally been dependent on hydro generation to meet its electricity needs. Currently hydro generation accounts for around 80 per cent of total Tasmanian generation. As a result, Tasmania's electricity security continues to be intrinsically tied to prevailing hydrological conditions. Any sustained periods of low rainfall can substantially reduce the ability of hydro generation to meet the demands of households, industry and the economy more generally.

The consequences of a lack of sufficient energy to meet demand are significant. The loss of electricity supply can have a significant economic impact on the community as well as impacting on public health and safety. While placing a dollar value on the loss of energy is very difficult, it is worth noting that the Australian Energy Market Commission recently reported that the value New South Wales customers place on reliability is \$94 990 per MWh, which is over four times the current market price cap of \$12 500 per MWh.

A number of years of drought in the late 1960s led to the inability of the Tasmanian hydro system at the time to meet demand and consequently prompted a period of rotational load shedding. The economic effects of electricity rationing were profound and long-term. As well as the direct negative effect on production, rationing affected investment in the State in response to the perception of risk by investors associated with an insecure electricity supply. As a result, all successive Tasmanian Governments since this time have recognised the potentially devastating impact of power shortages and have prioritised energy security as the key driver of energy policy and infrastructure investment projects.

Improving energy security during times of drought led to the construction of the oil-fired Bell Bay Power Station in 1971. For much of the next 30 year period the power station sat idle because inflows into the hydro scheme, combined with long term storages, were more than adequate to meet on-island demand. However, there were several periods of drought where the Bell Bay Power Station was called into service to reduce the demand on the hydro schemes at those times, as intended. As the cost of running the oil-fired Bell Bay Power Station was significant, the need to run the plant in times of drought had a dramatic negative impact on the then Hydro-Electric Commission's financial position.

With the last major hydro scheme being completed in the early 1990s and with overall demand increasing over the ensuing decade, the ability of the hydro schemes to meet the total requirements for electricity in a reliable way began to decline. This was exacerbated during the period 2005 to 2008 by another prolonged drought.

The converted gas-fired Bell Bay Power Station was subsequently required to run on a near-continuous basis for some years in order to provide energy security support. Improving energy security during times of drought was also one of the key drivers for connecting Tasmania via Basslink. The importance of such support being available was clearly demonstrated in practice soon after, when in 2008 Basslink imported continuously including during peak, high-priced periods. The effect of the need to run the Bell Bay Power Station and importing over Basslink was a considerable cost to Hydro Tasmania.

Despite one of the longest and most severe droughts in recorded Tasmanian history, a repeat of the load shedding in the 1960s was avoided due to the Bell Bay Power Station and Basslink providing sufficient energy security support. In the end, the TVPS was not required to assist with avoiding energy shortages in 2009 or 2010, as inflows returned to more normal levels.

With higher than average rainfall in recent years and the new wind and gas developments coming on line, in combination with reduced economic activity since the global financial crises, the state is now in an over-supply situation.

In this context, it is important to understand what role, if any, the TVPS currently plays in managing energy security risk in Tasmania and how this has changed since the time the power station was acquired by the State.

Tasmania's annual electricity requirement for 2013-14 is forecast to be 10 572 GWh. Current annual growth projections see this figure growing by around one per cent per annum, with the forecast requirement reaching 11 000 GWh by 2021-22.

Assuming average hydrological inflows of 8 700 GWh, and wind generation of 465 GWh (based on the average over past three years), current on-island generation - excluding that from gas powered generators and small scale embedded generators - is 9 165 GWh.

The difference between 2013-14 forecast energy demand and available on-island generation, is 1,407 GWh. This is equivalent to a continuous 160 MW, which is well below Basslink's 480 MW continuous import capacity. Given this, the on-island energy requirements should be easily met without the TVPS under normal system availability in the short term. By 2021-22 the difference between on-island generation and demand is forecast to be a continuous 210 MW, which still remains well within the capabilities of Basslink.

The commissioning of the Musselroe wind farm, with a capacity of 168 MW, will provide further support to energy security.

Based on current expectations of future electricity needs, average hydrological inflows and the continued availability of Basslink, a reasonable level of electricity supply security can be expected for the next decade or more, even where the TVPS is not operating or available.

However, the above calculations are based on an average scenario in that it is assumed that the sources of generation are operational and available at any given time. True energy

security ultimately depends on the system's ability to respond to all reasonably plausible or foreseeable risks in order to maintain supply and avoid shortfalls.

Accordingly, scenario analysis has been conducted to test the ability of existing generation (excluding the TVPS) to meet peak demand and energy requirements under a range of credible contingencies. The scenarios were chosen to represent the largest plausible events which could impact on the Tasmanian electricity network in the three areas of interconnection, transmission and on-island generation. The scenarios included:

- annual hydrological inflows equivalent to those experienced during the worst of the 2005-2008 drought (7000 GWh);
- failure of Basslink which renders it out of service for a period of sixty days;
- major power station failure;
- major failure in the transmission network; or
- late winter rains after a dry summer, leading to depleted reserves in Hydro Tasmania's medium and long-term storages.

The results of the scenario analysis indicate that there should be sufficient energy supply available to meet annual energy requirements without the need for the TVPS.

However, the analysis only considered individual scenarios and did not consider multiple contingency events. It would be easy to visualise an event, such as a prolonged failure of Basslink at a time when storages are low. This would be similar to the event in 2006 prior to Basslink commissioning, when energy security was supported by the continued operation of the Bell Bay Power Station. In addition, a catastrophic failure of Basslink, such as multiple cable breaks or the loss of two transformers, could render it out of service for a period in excess of sixty days.

It is impossible to accurately forecast future energy security issues, because at any time a set of material events can rapidly change the situation such as a prolonged drought combined with a major or catastrophic failure of Basslink or the loss of major on-island generation facility for an extended period of time. Such a scenario would require the utilisation of the auxiliary generation support such as the TVPS.

It is highly unlikely that the TVPS assets will be required to run regularly for energy security purposes. Therefore it is difficult to calculate an "insurance value" in monetary terms for its availability. However, the existence of the asset, particularly the CCGT, does provide an additional layer of energy supply security. Given the significant negative impact on the Tasmanian economy of electricity rationing, it is desirable to retain this additional level of security.

Conclusions and Recommendations

As previously indicated, the Government has indicated that unless there are strong reasons not to do so, the TVPS will be transferred from Aurora to Hydro Tasmania.

From the discussion above, the following has been established:

- the operating costs of the TVPS are greater than the revenues that are available to it under prevailing market conditions and the power station therefore has a negative value in either public or private, third party ownership;
- a sale to a third party, which required the assets to remain in situ, would be unlikely without the Government providing some form of additional revenue stream to support its operation;
- if it was possible to secure a third party purchaser, the purchaser would most likely decommission and relocate the asset to another region of the NEM;
- there is limited flexibility to improve the financial performance of the TVPS under the AETV's current take or pay gas arrangements, which do not expire until the end of 2017;
- the existence of the TVPS asset, particularly the CCGT, does provide an additional layer of energy supply security; and
- there is no clear monetary value that can be placed on the energy security benefit to the State that the TVPS provides and therefore there is little justification for providing a taxpayer funded subsidy to a private third party to operate the TVPS as a base load generator on this basis.

In this context, the key decision the Government faces in this context is whether it would be logical or desirable, given the costs of acquiring and completing the TVPS are sunk costs, to now either:

- sell the TVPS for little or no value for it to be moved out of the State, hence removing the additional level of energy security insurance it does provide; or
- sell the TVPS to a private operator on the condition it is to remain in the State and provide a stream of revenue to that operator in order to support this arrangement.

While it is clear that the transfer of the AETV assets to Hydro Tasmania will have a negative financial impact on that business, it is nonetheless preferable to the options identified above given the strategic value in retaining the 'optionality' that comes with holding the assets in State ownership, given the unpredictability of energy security in the State.

Given that a divestment of the TVPS to a third party on terms the Government would find acceptable is highly unlikely, the key consideration for the Government at the current time is not whether or not the TVPS should be divested, but how to best optimise the value –

or, more likely, minimise the losses – of the TVPS and associated assets, until such time as alternative strategies, including possible divestment make economic, commercial and strategic sense.

It should be noted that there are a range of other strategic benefits associated with retaining the assets in State hands, at least in the short to medium term. In particular:

- the State retains greater flexibility and minimises potential contractual risks in terms of how it provides financial support to the TVPS under Hydro Tasmania ownership, relative to a situation where it provided such support to a private entity. This also allows the State to better manage risks associated with a potential downside event, such as a severe and prolonged drought (resulting in energy supply constraints) or the loss of a major customer (resulting in excess energy supply);
- the transfer of the TVPS to Hydro Tasmania would assist the business to better manage the optimisation of its water resources through different stages of reduced inflows or drought, relative to not having the TVPS in its portfolio. In addition, Hydro Tasmania has additional capacity in managing Basslink flows to its financial advantage;
- there are some potential opportunities to utilise the AETV asset portfolio – e.g. excess gas and generation capacity - to support Hydro Tasmania's mainland retail operations; and
- from the perspective of the Government's broader reform agenda, a future divestment following a transfer to Hydro Tasmania is more attractive than selling the asset at the current time under Aurora ownership, as it avoids complications and costs associated with a sale process which could impact on Aurora's ability to complete the range of other work necessary to facilitate the divestment of its retail book and transition to FRC.

In summary, the strategic value of the TVPS held under State ownership at this time exceeds the potential sale to a private third party, mainly because a sale on terms that would be considered acceptable to the Government is highly unlikely.

In the situation where the TVPS is transferred to Hydro Tasmania, all the AETV assets should also be retained in State hands, at least in the short term.

Considering the AETV assets as a portfolio provides greater flexibility to manage existing take or pay gas exposure relating to the TVPS' operation. Hydro Tasmania, after a period of managing these assets in the context of its broader portfolio, will be in a better position than the Government is currently, in terms of deciding which assets are valuable to its business and which might be divested.

In the context of the Government's energy reform agenda, Hydro Tasmania is responsible for:

- managing supply in the interests of the long-term energy security of the State;

- ensuring that retailers and large customers can receive the optimal mix supply and contracts to meet their needs; and
- maximising value from the sale of the State's surplus energy over Basslink.

Therefore, Hydro Tasmania is best placed to manage and operate the AETV assets and to determine how the State may derive maximum strategic and financial value from the assets. Part of this role should include working with the Government to consider the divestment of some or all of the AETV peripheral assets where the value derived from divestment can be used to defray some of the costs of operating the TVPS.

Transferring the AETV assets to Hydro Tasmania will have a financial impact on the business, due mainly to:

- the shortfall between the cost of operating the TVPS as a base load generator and the revenue that the business will receive from the sale of generating output at the regulated wholesale price, which is expected to be lower under the Government's reforms than is currently the case; and
- the impact of debt associated with the TVPS on Hydro Tasmania's balance sheet.

There are a range of strategies that could be implemented to mitigate these impacts, including:

- renegotiation of the current gas supply and transport contracts at their expiry in 2017, which will provide additional operational flexibility, including the possibility of 'mothballing' the TVPS for extended periods of time where it is not required to meet Tasmanian demand;
- a write-down in the asset value (and therefore the annual depreciation charge) to reflect the TVPS' likely future value given its current and projected operating conditions;
- the Government not transferring the debt (or the full value of the debt) to Hydro Tasmania when the assets are transferred, therefore reducing or eliminating the interest costs of servicing the debt; and/or
- as noted above, the potential divestment of some assets, following a period of time during which Hydro Tasmania can make an assessment of which assets add value to its overall portfolio and which do not.

Recommendation

It is recommended that:

- the AETV assets be transferred to Hydro Tasmania; and
- Treasury and Hydro Tasmania should continue to undertake further analysis to settle on the valuations of the AETV assets and assess in more detail the financial impact of

the transfer on Hydro Tasmania's business, including what, if any, support should be provided to minimise any adverse impact from the transfer of the assets, and the form that this support should take.

