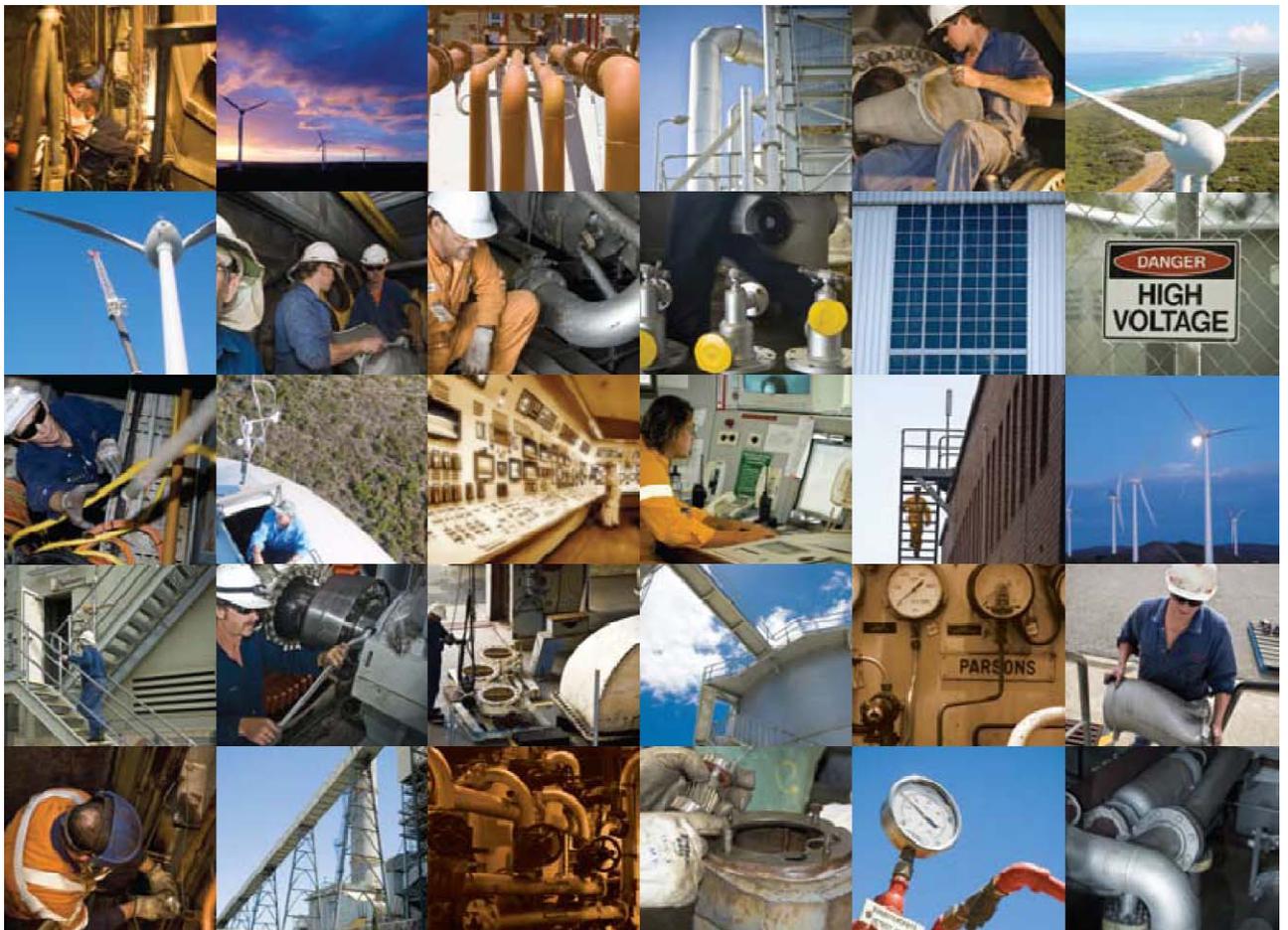


Verve Energy Review

August 2009



Deloitte.

 Oakley Greenwood

The Hon Peter Collier
Minister for Energy
11th Floor, Dumas House
2 Havelock Street
West Perth WA 6005

25 August 2009

Dear Minister,

Verve Energy Review

Earlier this year you requested a review regarding Verve Energy's financial situation and outlook. This review has now been completed and is attached. The report considers the reasons for Verve's historical financial performance, its current outlook and options for addressing a number of identified issues with respect to the structure of the market and government owned entities that service the South West Interconnected System.

This review has been conducted with the detailed consultation of Verve Energy, Synergy and other relevant government entities and departments. All of the consulted parties have been supportive and constructive with respect to the provision of information and the review process in general.

The review and attached report was completed with the assistance of Deloitte-management consultants, and Oakley Greenwood-energy market specialists. I thank them for their support in assisting in this review.

Yours sincerely



Peter Oates
Consultant

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1 Introduction

In 1997, the Western Australian Government commenced a process of introducing competition into the domestic energy sector. Alinta was sold and a timetable was established for large electricity customers to become contestable.

Prior to April 2006, the electricity industry in Western Australia was dominated by Western Power Corporation, an integrated State owned generation, transmission, distribution and retailing business. On 1 April 2006 Western Power Corporation was disaggregated into four separate State owned entities: Western Power (transmission and distribution in the South West Interconnected System (SWIS)); Verve Energy (Verve) (the generation company); Synergy (the retail company) and; Horizon Power (servicing the non interconnected / non-SWIS parts of Western Australia). At the same time a wholesale energy market managed by the Independent Market Operator (IMO) was established.

Prior to disaggregation Western Power Corporation was profitable and paid significant dividends and taxes to the State. Since disaggregation the combined profitability of the four new entities has fallen sharply. Verve in particular has incurred very significant losses – estimated to total \$454m over the period 1 July 2006 to 30 June 2009.

As a consequence of these results serious concerns were raised about the financial outlook for Verve, its ability to play a key role in supporting the reliability of electricity generation in the State, and the outlook for the State's significant investment in the utility.

The Minister of Energy for Western Australia initiated this review to report on the causes of Verve's current financial position and performance, and present options which might improve Verve's financial outlook and enable it to continue as a viable long term market participant making an appropriate contribution to the reliability of the SWIS.

2 Executive Summary

2.1 Introduction

The reforms implemented in 2006 were based on the premise that electricity prices in Western Australia were higher than the Eastern States. The main objective of the reforms was “to achieve, where practicable, sustainable lower electricity prices for all customers...”¹. Prior to the disaggregation of Western Power in 2006, tariffs had remained virtually unchanged for residential customers for 15 years. Despite this the integrated utility remained profitable.

Since disaggregation the combined profitability of the new separate State owned networks, generation and retail entities has fallen sharply. The primary cause is that, until recently, electricity tariffs still remained fixed while the entities faced significant increases in the cost of fuel, maintenance, labour and services. Additional reasons for the deterioration of these results predominantly relate to the financial performance of Verve which has experienced a range of issues examined in this report.

2.2 Key findings

Verve has suffered significant financial losses over the last three years

Since disaggregation Verve has incurred these losses estimated at \$454m. The cash flow shortfalls, resulting from these losses, have been funded by the State through increased debt that has resulted in Verve’s gearing² increase from 60% to 80% between 2006 and 2009.

In addition to the impact of low fixed tariffs, this loss is a result of significant maintenance and other costs associated with rectifying plant, increasing networks charges, market mechanisms which penalise rather than reward Verve for the role it plays in managing residual risk in the market, deficiencies in the Vesting Contract and increased interest costs on rising debt levels. In addition to the significant direct unplanned expenditure on maintenance activities, Verve was required to deal with unexpected forced outages and emergency situations. This involved deferring the retirement date of the Kwinana B power station, recommissioning Muja AB in response to the Varanus Island gas plant explosion (after having previously run this plant down consistent with its retirement plan) and operating expensive liquid burning plant.

Verve’s forecasts suggest the future will be better

With recent tariff increases and the new special State subsidy which in aggregate aim to bring total revenue to cost reflective levels and the commencement of more attractive coal supply contracts, Verve is forecasting pre-tax profits of \$49m in FY2010, \$161m in FY2011 and \$175m in FY2012. Incorporated in these forecasts are subsidy payments of \$244m in FY2010; \$116m in FY2011, and; \$1m in FY2012. These forecasts reflect interim network access charges approved by the Department of Treasury and Finance for budget purposes. In mid July 2009 the Economic Regulation Authority (ERA) released its Draft Decision on Western Power’s Proposed Access Arrangement Revisions. Due to the operation of the netback provisions in the Vesting Contract, the ERA draft decision (if implemented) would reduce Verve’s pre-tax profits by approximately \$250m over the next three years unless either the future tariff glide path and/or the subsidy were increased accordingly.

Competition has increased since disaggregation

Since the Western Australian Wholesale Electricity Market (WEM) was initiated in 2006, competition has progressively emerged with approximately 60% of the market now open to competition. Verve’s share of total installed capacity has fallen from 93% in 2006 to 70% today, and is expected to be 58% by 2013. Synergy’s share of the contestable market has fallen from approximately 90% in 2006 to

¹ The final report of the Electricity Reform Task Force: *Electricity Reform in Western Australia, ‘A Framework for the Future’*.

² Gearing defined as total debt / total capital, where total capital is defined as the book value of interest bearing debt plus the book value of equity.

66% today, and is expected to be 44% of the growing market by 2013. However there remain some material impediments to the more active development of competition.

New private sector generation investment has been secured

Since 2006 the bulk of new generation investment has been provided by the private sector. Approximately 35% (estimated at \$1b) is private risk investment which has no connection to the State and approximately 65% has been procured by Synergy under long term supply contracts.

Significant further investment is required over the next 10 years

The bulk of generation investment required to 2013 is either installed or committed. From 2014 to 2028 it is estimated that growth and replacement plant costing in excess of \$10b will be required.

Climate change and gas prices are a major and imminent challenge

Climate change initiatives are a critical and pressing issue facing the industry which could potentially impact the viability of some of Verve's plant and Synergy's contracted generation, and poses significant challenges to the system as a whole. Options to adopt intermittent renewable energy sources to meet proposed Mandatory Renewable Energy Targets (RET) and to deal with the Carbon Pollution Reduction Scheme (CPRS) are made more complex because of the relatively high price of Western Australian gas. The various State and private entities in the sector are currently pursuing different and uncoordinated strategies.

The approach to wind generation in the SWIS needs careful consideration

Under the current market arrangements the contribution of wind generation to peak capacity is much less than the capacity for which it is accredited. As such, there are potentially inefficient pricing signals which may drive inefficient investment. Much of the cost of providing additional fossil fuel capacity to cover the variability of wind, and the obligation to balance its impact on the system, rests with Verve, for which it is compensated at less than commercial rates.

There are no easy funding options for investment in the short to medium term

The combination of uncertainty about the impact and operation of the new climate change regime and the global financial crisis will potentially constrain the availability of new private risk capital in the short to medium term, requiring the State to sponsor new investment into the system. At the same time the State itself is facing lower levels of revenue growth and higher levels of debt than expected before the global financial crisis started.

As a market participant the State is exposed to competitive risk

The emergence of competition significantly changes the risk profile for participants in a market. Consistent with the intent of the reform program, competition has gradually been emerging in the sector and currently 60% of the sector is contestable, with the private sector progressively building its market share. As a consequence the risk to the State (as the owner of Verve and Synergy) has also increased to the extent that the combination of the capacity Verve's generation assets and Synergy's long term electricity supply contracts with private sector generators exceed the size of the currently protected franchise market sector. The inevitable consequence of competition means that both of these entities now face price and volume risk in the contestable market. This will increase significantly if and when Full Retail Contestability (FRC) is introduced.

The market rules have significant shortcomings

A number of weaknesses in the design of the WEM need to be resolved to better support future reliability, efficiency and competition. These changes are high priority, but their urgency is even greater given the impact of climate change initiatives on the sector. These changes are required regardless of the future structure and operational form of the State sector.

The Vesting Contract has many issues which impact Verve and the sector

The Vesting Contract is a complicated document. Its administration is difficult and combined with its netback provisions causes Verve difficulty in developing accurate forecasts. The displacement schedule, which requires the displacement of Verve's contracts to below the level of legacy customers

on protected tariffs, is creating unnecessary risk for Verve and Synergy. There are a number of other issues with the contract which cause distortions in the financial flows between Verve and Synergy, drive uneconomic investment decisions including potential overcapacity in the market, and partial stranding of State assets. Significant corrective work has already been completed through the Office of Energy in this respect.

The system is now 10% over capacity

In the near future the SWIS will have capacity at least 10% in excess of the IMO's capacity target. This represents a significant over-investment in the system. Though temporary, under the current arrangements, the financial impact of this will be disproportionately borne by Verve.

Part of the reason for this is over capacity is a recent downgrade in the market demand forecasts – in part due to a delay in the commissioning of a major industrial project. Other potential contributing factors are likely to include the rapid displacement schedule in the Vesting Contract, a lack of commercial coordination between participants to trade contract capacity for mutual advantage, and the start of a shift in plant technology in response to the Commonwealth Renewable Energy Target.

Low tariffs have contributed to losses and represent a barrier to competition

Electricity tariffs remained virtually unchanged for 15 years prior to disaggregation and despite recent increases they remain below cost reflective levels. The resulting subsidy by the State also currently applies to a significant part of the contestable market and represents a barrier to competition. Another issue is the lack of “time of use” based charges in the contestable tariff and domestic consumer markets. These types of tariffs would help manage the demand peaks in the system which give rise to significant additional capital and operating costs. Appropriate pricing for these peaks should ultimately lead to lower electricity costs.

To date reliability measures have worked. There are threats going forward.

The existing capacity credit arrangements provide a means for capacity to enter the market to a minimum level as defined by the IMO. However, incentives and accreditation processes to ensure generation plant has adequate operational reliability and back up fuel need to be strengthened.

Current arrangements rely exclusively on Verve to provide most of the day to day operational services to run the electricity system, however this is not practicable going forward due to its falling share of the growing system. A broader group of generators will need to contribute to reliability in the future.

2.3 The case for change

There is a clear case for change:

- The cost efficient delivery of reliability is under threat and will become increasingly difficult if current arrangements are not revised.
- Barriers to competition still exist and this continues to expose the State to market and financial risk.
- Climate change, the availability of gas at economic prices, the impact of the global financial crisis on capital markets and the State budget are major new challenges for the industry. The State requires a unified strategy to guide the sector, its regulators, and its State owned enterprises.
- Verve needs to be able to compete effectively and support the development of the sector.
- There are problems with the WEM design which impact competition, cost efficiency and investment.
- The Vesting Contract is very complex and has issues which can distort financial flows between the State owned entities, contribute to potentially anomalous investment decisions and cause difficulties in financial management. The displacement schedule creates unnecessary risks to Verve, Synergy and the State.

- The current arrangements have contributed to a situation where in the near future the SWIS will have capacity at least 10% in excess of the IMO's capacity target.
- There is a need to clarify and revise regulatory and market arrangements to achieve an appropriate balance between the limitations on the market power of Verve and Synergy, and financial risk to the State at a time when it has growing investment obligations in the current global credit environment.

2.4 Recommendations

Tariffs and charges need to be set to commercial levels

Tariffs in the contestable sector should be increased to cost reflective levels as soon as possible to remove this barrier to competition. It is assumed that FRC for smaller customer loads <50MWh pa is deferred for the time being to allow the industry to focus on the more immediate priorities identified in this review. It is recommended that the timing be reconsidered following the implementation of the recommendations. 'Time of use' charges facilitated through the introduction of smart meters should be considered in both the contestable tariff sector and the domestic tariff market. This will support better demand management around the high load periods and should ultimately contribute to reduced capital and operating costs and lower electricity prices. An urgent priority is the metering (or possible profiling) of customers which have migrated from the protection of tariffs.

Reliability arrangements needs to be enhanced

A series of changes are required to the WEM to enable the market to better support reliability. These include increasing the certainty of attracting new capacity, increasing the reliability signals in the market itself, drawing all generators into providing balancing services and where applicable ancillary services.

System management's responsibility and authority for reliability and security should be affirmed, enhanced and appropriately funded, in particular for the management of emergency situations.

A whole of sector strategy incorporating climate change is urgently needed

A well developed whole of sector vision and strategy is urgently needed to provide a consistent base from which rules, regulations and policy guidance to the State enterprises can be developed. Climate change, the availability of gas at economic prices and the impact of the global financial crisis on capital markets are major and new challenges for the industry.

It is recommended that the State develop an updated and unified policy and strategy to guide the sector, its regulators and its State owned enterprises through this challenging and uncertain period.

This will involve:

- Undertaking a detailed examination of gas availability and price, the availability of investment capital, the status, timing and cost of generation technologies to address climate change and the impact of renewable energy sources, in particular intermittent generation, on the sector and the impact on network requirements.
- Assessing the likely impact of development options on the system as a whole and on the various market participants including the State owned enterprises.
- Reviewing the current guidance and directions to industry through regulations, market rules, licences and funding arrangements to ensure that in aggregate they are likely to deliver an efficient outcome for the State.

This will provide the State with a basis for deciding on the most appropriate way forward for the sector, revising market mechanisms as necessary and providing policy direction to Verve, Synergy and Western Power with respect to their roles and constraints as appropriate.

This is urgently required, needs very strong coordination and leadership, and should involve broad industry involvement and consultation.

Market design issues need to be addressed

The market rules need to be revised with particular emphasis on the acquisition of new capacity, the capacity deficiency penalties, broader participation in the balancing market, the provision of ancillary services and the provisions relating to pricing in the STEM and balancing markets.

The development of a detailed proposal is recommended. Implementation may require sponsorship at a high level to execute this change in an acceptable timeframe.

Contract arrangements between Verve and Synergy require urgent revision

The displacement schedule

The displacement arrangements should be amended such that Verve's supply to Synergy is contracted without prescribed displacement to the extent of Synergy's price protected market (customers <50MWh pa on tariffs and contestable customers on subsidised tariffs). In addition, measures should be implemented to ensure Verve's cost efficiency is maintained at optimal levels to service this market. Adoption of this recommendation would materially reduce the risks for both Verve and Synergy and would also remove a potential cause of over-supply in the system.

If and when the Government decide to pursue FRC, the Vesting Contract would drop away depending on the extent to which price protection remains and both Verve and Synergy would be required to compete for market share. If price protection were to be removed gradually, then the Vesting Contract displacement could be phased down to align with the volume of energy consumed by price protected customers.

Netback provisions

Options include fixing the various issues in the terms of the Vesting Contract, or replacing it with a bilateral contract. Ultimately a bilateral contract arrangement is preferred because of the financial management and accountability issues caused by the netback mechanism in the Vesting Contract. However, until the overall adequacy of the special State subsidy has been tested, the netback mechanism in the Vesting Contract will direct any shortfall to Verve rather than Synergy. Verve has greater capacity to absorb such an impact in the event that the new subsidy mechanism needs refining.

While the netback mechanism remains in place, processes should be established whereby Synergy and Western Power provide timely monthly financial information and forecast information to Verve, which relate specifically to any expected variances in netback costs to Verve as a result of current operations or expected trends.

Other issues

Other issues with the contract also need to be rectified. These include the balancing hedge arrangements, the options for additional energy and the way in which the arrangements when combined with the WEM Market Rules associated with capacity refunds impact Verve.

Strong central program oversight is required to drive reform

The changes required to improve the industry are wide ranging and significant. They involve the development and implementation of policy and strategy, the enhancement of market and systems management arrangements and changes to the contractual relationships between Verve and Synergy and potentially others. The recommendations are interrelated and these dependencies will need to be very carefully identified and managed.

There are also many stakeholders in the industry including multiple State and private sector participants, the IMO, the ERA, the Office of Energy and various other industry and consumer stakeholders. The impacts on these parties will vary but their input and active participation and support will be required to varying degrees.

Given the overarching and interdependent nature of the suite of measures which constitute the solution and the multitude of stakeholders involved, it is critical that strong and visible central leadership is provided to the program. It is recommended that this program be directed by the Minister of Energy as the party ultimately responsible for the performance of the sector, supported by the resources

necessary to develop, coordinate and execute a coherent plan. If this is not very tightly planned and managed there is a significant risk of failure.

2.5 Structural options

The fundamental issues, challenges and uncertainties identified under the terms of reference can be resolved by implementing the recommendations outlined previously. This review also considered the merits of adjusting structures as a solution to the sector's challenges. In principle Verve and Synergy can be restructured as a single merged entity, remain separate or can be reorganised into separate vertically integrated entities or 'gen-tailers'.

The concept of creating a number of State owned gen-tailers would involve significant restructuring and change. For the present this review is focussed on the current priorities including market redesign and the response to climate change. Consequently further analysis has been focussed on the other two options.

Structure and operational form need to be considered in the context of a more fundamental policy decision on the type of market environment which the State wants in the future – either a more 'directed' model or a more 'competitive' model. The choice of model is a key State policy question and this review can only seek to articulate the broad options and their potential impacts.

A directed model generally requires significant Government involvement in investment, planning and operations, including the configuration and timing of new plant investments. While this approach provides greater input into the direction of the industry, it generally means that the State will need to accept more of the risk associated with the investments made. A merger is more consistent with this model as its pricing and volume risk can be managed more effectively if the entity has a direct route to market through its own retail clients.

A competitive model emphasises competition and private sector risk participation in the fuel, wholesale generation and retail elements of the supply chain in order to drive efficiency. Retention of separate entities is more consistent with this model. It does not give the State the same level of control over system configuration or day to day operations although it still has an important but less direct role. The State provides the legislative and regulatory framework and has backstop powers in an emergency. The model requires reliable and efficient access to private sector risk capital and well designed market mechanisms, which drive efficient investment decisions intended to deliver an optimised configuration. The level of State risk associated with long term obligations is generally less with this model.

Internationally there are examples of both models working and both can provide reliability and cost effective electricity supply. In the case of Western Australia it is really a decision between two hybrid options at different points on this scale, given that for the foreseeable future the State will own the largest participants in both the generation and retail sectors, and a fully directed model is no longer possible as 60% of demand is contestable and it is not realistic for this to be reversed.

Option 1: Retain separate entities

Under this option Verve and Synergy would remain separate and all of the solutions to the current challenges outlined previously would remain the same. Initially Synergy would remain the largest retailer and Verve would remain the largest generator within its capacity cap.

The key element which differentiates this option from a merger is the ability of the current structure to support competition in both the retail and wholesale markets. If designed, implemented and managed carefully, it should provide a clearer pathway for the further evolution of the competitive model which has been gradually occurring over the last few years. This includes the ongoing application of competitive pressure to both Verve and Synergy. Further, a dedicated retailer will have an incentive to minimise its cost structure and maintain a sharp customer focus because its core business and survival depend on it.

If the market mechanisms are refined as recommended, and once the State's response to the climate change challenge is determined, the State will be in a position to provide appropriate policy direction to both entities and any strategic misalignment can be minimised.

A key medium to long term benefit of this option is the potential for increased private sector risk investment in retail and generation. To date Synergy has procured a significant portion of new generation capital (65% of new generation since 2006) through long term contracts. Synergy's ability to do this as a State enterprise gives it a competitive advantage in the retail market, though it does not undermine its ability to facilitate a level of wholesale competition. Retail competition and private risk investment can be encouraged through the application of competitive neutrality constraints on Synergy and Verve, particularly once the capital markets return to more normal conditions. There is clearly a current need for a State entity to be an investor to backstop the private sector and step in if sufficient supply does not emerge and these entities can be directed to provide that solution when required.

As this option gives the State less direct control over decision making it is a critical condition that the various shortcomings in the market rules and the Vesting Contract are resolved as a matter of priority, and the solutions are effectively implemented and rigorously overseen on an ongoing basis. This is not without risk. As with any market it will require future policy and operational commitment, and will need to be carefully managed.

Option 2: Merger

Under this option the merged entity would be the largest business in the SWIS and WEM. The solutions to the current challenges outlined above would remain the same except that the Vesting Contract would not be required, although an appropriate transfer pricing regime would be needed for price protected customers to ensure transparency.

This option would automatically resolve the matter of the displacement of State assets and reduces the associated risk of over-investment in the system – though it would not impact the risk of third party generators creating excess system capacity. Aggregation of the balance sheets would reduce the potential impact of any adverse retail competition trends on the State retailer because it would be directly linked to a much larger balance sheet with greater shareholder equity. A merged entity would automatically have a full view of its financial position and outlook through the elimination of the Vesting Contract with its netback provisions.

Once established the entity would continue retail and generation operations, and would compete in the market up to its generation capacity cap, though it would be free to continue retail competition above this threshold unless artificially constrained. The merged entity would secure generation capacity in the event that private sector risk capital is not forthcoming.

There would be some savings associated with the amalgamation of support functions estimated at \$5m per year. There may also be some benefits available through the operational optimisation of the merged entity's expanded generation portfolio which would comprise Verve's assets and Synergy's contracted generation.

Other retailers in the market are currently relatively small but developing. Verve has been selling electricity to these retailers in competition with Synergy and this has supported the development of retail competition. Further activity of this nature between the merged entity and private retailers would be expected to largely cease. The possibility of Synergy contesting Verve against private sector generation when plant is retired under the suggested revised displacement arrangements would also effectively cease – although under the suggested revisions to the schedule the level of wholesale tendering would be much lower for the next few years, limited largely to the incremental growth in the total market.

Synergy currently has long term contracts with other generators and Verve currently has long term contracts with other retailers. This introduces a potentially significant distortion into the operation of the competitive market because the merged entity would effectively be dealing with its own competitors. It also gives rise to a need to implement processes and systems to ensure that sensitive

competitor information is not passed between the entity's generation staff and its retail staff. Due diligence on such contracts and specific legal advice would be required to clarify this matter.

Competitors who have entered the market since reform may claim they have done so with a long term intent to grow their position in competition with the State entities and others. The actual and/or perceived reduction in retail and wholesale competition will likely result in criticism from the private sector – both from aspiring generators and retailers and from some customers and the organisations which represent them. There is a risk that this change in the model will be seen as a sovereign risk matter.

Without substantive constraints it is likely that over time the level of private risk investment in the sector will be lower. The generation business already has a capacity constraint but the retail business has no market share constraints. The competitive and private risk investment impact of a merger could potentially be mitigated to an extent, if specific measures were taken to further constrain its dominance and to proactively support the aggregation of viable loads such that the private sector can assemble bankable projects for viable scale plant in the small Western Australian system.

Summary

The main issues which differentiate the two structural options are longer term system-wide cost efficiency and the level of support provided by the State to the industry, especially in the medium to long term, as the system grows and significant further capital investment is required. The key issue for the State to consider is the degree of direct control it wants over future investment decisions and operations across the sector.

It is often argued that cost efficiency in generation and retail operations is best promoted by competition. The argument has merit if the market promotes genuine competition – although in theory a well run monopoly or dominant provider can achieve high levels of operating efficiency if subject to very effective regulation supported by strong performance management frameworks. Though a merged entity would be protected with respect to the franchise market, it would still face a degree of competition in the contestable sector (forecasted to represent 64% of SWIS energy by 2014) where a limited number of new entrants have emerged.

It is considered that a merger will ultimately give the State greater control over the industry, although it would generally be expected to reduce competition and result in a greater level of State sponsorship and risk capital support.

Retaining separate entities and adopting policies which promote increased retail competition while maintaining an environment where wholesale competition is becoming effective should, in the medium term at least, provide for an ongoing reduction in the level of State sponsorship and risk capital support – while providing a security mechanism for procuring capacity in the currently constrained capital market.

In the short term both options will likely have a similar level of cost effectiveness given that the plant is already installed. Implementing the various recommendations outlined above should increase the effectiveness of the market and bring about a more efficient system than currently in place.

3 Terms of Reference and Approach

The Minister of Energy for Western Australia initiated this review to report on the causes of Verve's current financial position and performance and present options which might improve Verve's financial outlook and enable it to continue as a viable long term market participant making an appropriate contribution to the reliability of the SWIS.

The terms of reference and subsequent discussions with key stakeholders confirmed the following key objectives for the electricity industry in Western Australia:

- A safe working environment.
- A reliable supply of electricity, which is critical for the future development of the State.
- An effective market that allows new participants to enter with the objective of achieving financing and operational efficiency, and competitive, cost effective electricity pricing.
- Longer term minimisation of State debt and other long term financial commitments by the State, in order to limit potential encumbrances on the State's infrastructure investment capacity and credit rating.

The specific areas of focus included:

- Review of Verve's financial position, financial results and financial outlook. Identification of the underlying reasons for its poor performance.
- Review of the Vesting Contract.
- Identification of options to deal with Verve's financial situation including consideration of a merger with Synergy.
- Assessment of the potential impact of such changes in terms of the financial viability and risk to the State owned entities, market competition and dynamics, cost efficiency, system reliability, perceptions of sovereign risk and the longer term impact of the sector as a whole on the State's debt and credit rating.
- Identification of the adequacy of the market design to address the Government's objectives.
- Identification of the steps to progress implementation.

The approach adopted involved the examination of Verve and Synergy's information, examination of documentation pertaining to the design and operation of the market, extensive discussions with Verve and Synergy executives and a range of other key stakeholders and identification and assessment of issues and options for resolution. Input was received from the Chamber of Minerals and Energy and the Chamber of Commerce and Industry.

Verve, Synergy and the other organisations from which views and information was sought in the conduct of this review, have been frank, cooperative and forthcoming with all requests.

The historical results and forecasts presented in this report, and the underlying assumptions used to derive them, have not been subject to independent audit verification as part of this review. The information presented was provided by the various entities as noted throughout the report.

4 Key priorities

Minimising the cost of electricity and ensuring reliable supply is fundamental to State development and in particular, Western Australia's export industry sector. Maintaining the State's debt at manageable levels with a high credit rating is also important for future infrastructure development and the maintenance of reasonable State taxes and charges.

4.1 Reliability

There are a range of elements which impact the reliability of an electricity system. These include:

- Sufficient generation capacity at the necessary design specifications available as required. This needs future capacity requirements to be forecast and identified, appropriate design rules and specifications and, in a competitive market, appropriate commercial rules and incentives implemented through an effective market framework. Government funding or sponsorship is a potential back-up or safety net where economic circumstances may impede capacity investment from time to time. One way for this capacity to be maintained and delivered is for a Government to maintain an active role in the system as one of the competing generators and/or retailers.
- Adequate fuel availability (with sufficient backup in the event of supply disruption) supported by market regulation, appropriate incentives and arrangements for backup fuel coordination.
- Effective network operations, transmission availability and transmission investment supported by a transparent regulatory regime and adequate investment funding.
- System wide maintenance planning and coordination to required standards, overseen by a competent system management function.
- Effective arrangements for load balancing and ancillary services. The most efficient and reliable way to provide these services should ensure that all generators face similar incentives to provide them. In competitive systems it becomes increasingly difficult, costly and increasingly impractical for a single generation company to provide all or most of these services as its total share of system capacity falls.
- Emergency response strategy. In a competitive system this needs to be driven firstly by market mechanisms, then by the system management which needs to be able to draw on all of the resources in the system, supported by appropriate market mechanisms/regulatory framework/contractual arrangements – and emergency funding as required.

4.2 Competition and cost efficiency

Cost efficiency is generally achieved through competition across the supply chain with competition in the provision of capital, competition in investment, competition between fuels, competition in the wholesale market and competition between retailers.

Various market models exist. To be efficient they need an effective framework, well designed market rules and regulations and strong incentives and sanctions to drive competitive behaviour, transparency and effective market oversight.

Government participation can co-exist with effective competition as long as there are arrangements in place to ensure competitive neutrality and, in the event that during a period of transition to a competitive model a State owned entity has a dominant position, some constraints are applied to enable new entrants to enter the market.

Where competition is not employed to drive efficiency, other measures are required, for example, management processes, benchmarking or through some form of regulatory regime.

4.3 Protection of the State's credit rating

There are substantial risks involved in participating in an electricity market. Generation is capital intensive and long term as are most fuel supply arrangements. Participants are exposed to the day to day risks inherent in any market situation, as well as to industry specific risks associated with changes in fuel prices and technology in an environment where a large proportion of the electricity off-take agreements are relatively short term in nature.

Within a fully regulated industry these risks are managed by ultimately passing them through to customers or taxpayers. However in a competitive market, these risks must be made visible and passed through to investors. In a hybrid market with Governments and private participants, Governments are exposed as market participants and passing risk through to customers is not possible. The scale of these risks can be very substantial, as market prices can move with technology, fuel prices, regulation and the supply demand balance. Both Verve and Synergy hold substantial long term positions and are therefore vulnerable to market moves in a way quite different to when the sector was owned by Government.

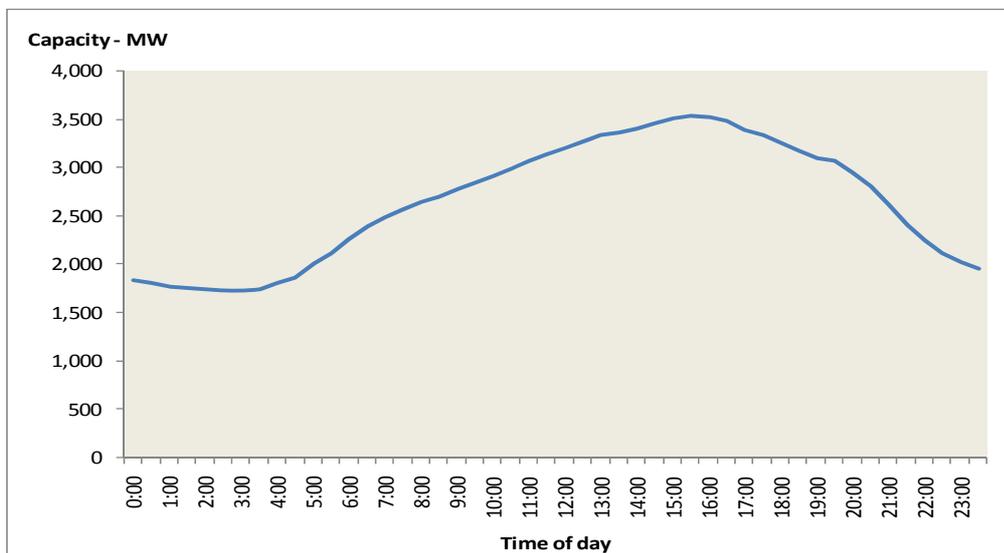
To minimise new Government commitments and therefore exposure, it is necessary to provide a well designed and effective market environment which is consistent, stable, fair and transparent. It is important that State owned entities are not afforded undue protection, are competitively neutral and, where associated with a protected part of the market, the rules and policies are consistent and well communicated with constraints designed to promote private entry.

4.4 Return on investment

Risk means that there is no guarantee of profitability but, if the market is well designed and effective mechanisms are in place, investors (including Government investors) should expect commercial risk based returns over time.

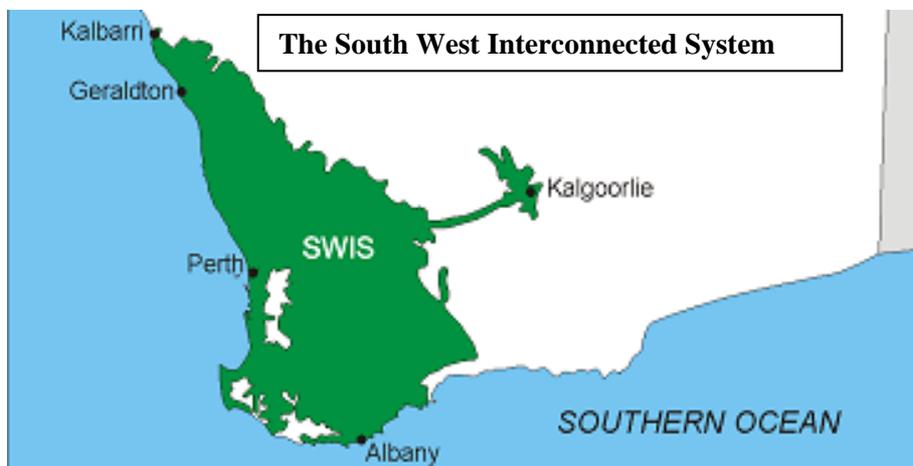
5 The South West Interconnected System

The SWIS is small and isolated and has total sent out electricity estimated at 15,000 GWh annually with installed capacity of 4,700 MW - compared to the National Electricity Market (NEM) which operates across the Eastern States of Australia and has installed capacity of approximately 42,000 MW. The SWIS is characterised by sharp peaks in the average daily load profile. The amplitude of the daily load profile has been increasing in recent years due largely to the increased use of domestic air conditioning. The fluctuations are higher than in some other systems because of the high penetration of air conditioning associated with Western Australia's hot summer. Conversely, the overnight load is typically between 1,400 and 1,500 MW representing approximately 40% of the summer peak and as little as 30% of the installed system capacity. This relatively low overnight load limits the amount of base load capacity that can be economically installed in the SWIS.



Source: IMO – Half hourly trading-interval data analysed across 1 July 2008 to 16 June 2009.

Because the SWIS is relatively small and peaky, plant outages or investment in the wrong mix of plant can potentially have serious impact on system efficiency and reliability. Systems efficiency, individual plant reliability, fully costed investment decision making encompassing the impact on the system as a whole, and effective contingency planning, are critical to both reliability and cost efficiency.



6 Evolution of the Western Australian Electricity Market

6.1 Background and objectives

The disaggregation of Western Power was part of a broad reform program which sought to develop a more competitive electricity industry in Western Australia. To facilitate this, market mechanisms and infrastructure were also established in 2006 (including the WEM).

The expectation was that by opening the SWIS to more competition this would:

- Progressively attract new private sector retail and generation participants.
- Result in competition between these new participants and the newly disaggregated State entities which would deliver lower electricity prices to consumers.
- Reduce the impact on the total debt and credit rating of the State by relieving the State of the need to be the dominant provider of finance for generation.

The WEM commenced operation in September 2006, following the disaggregation of Western Power and the establishment of the IMO.

6.2 Market arrangements

The WEM is known as a capacity market as it transacts capacity and energy separately. Capacity markets provide for explicit management of the level of installed capacity in a power system and set a price for capacity independent of the energy. Energy is predominantly transacted through bilateral contracts agreed between buyers and sellers subject to retailers meeting capacity obligations requiring that they pay for a share of generating capacity calculated to ensure the total capacity on the power system is sufficient to meet reliability standards.

As part of the transition to a competitive market, Verve and Synergy were assigned a form of bilateral contract, the Vesting Contract. The pricing of this contract operates on a principle known as 'Netback' whereby Verve is paid the residual funds after Synergy has collected its tariff income from customers, paid network charges and retained its 'efficient' operating costs plus an allowed margin.

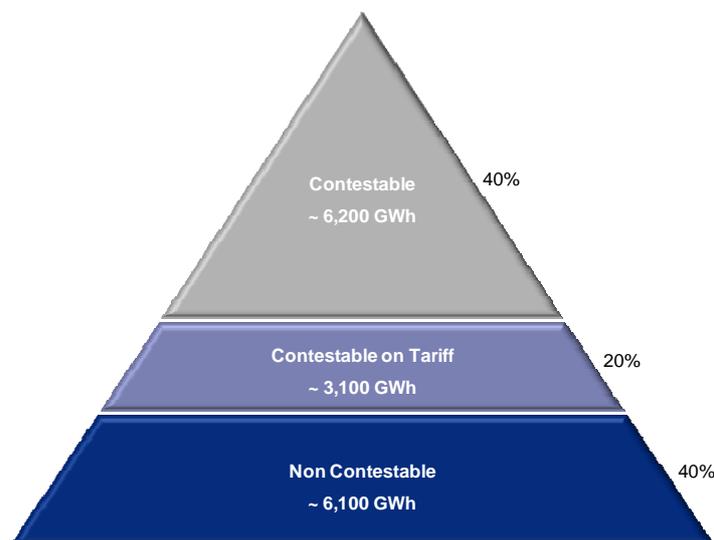
6.3 Constraints

Recognising that at disaggregation Verve and Synergy had dominant market positions, measures were taken to encourage private sector participation and investment:

- Verve has a capacity cap of 3,000MW imposed which allows other generators to enter the market. This means that Verve will progressively represent a decreasing proportion of total generation in Western Australia.
- Verve was obliged to undertake system-wide load balancing functions and provide ancillary services, and unofficially is required to be the supplier of last resort.
- Synergy was exposed to retail competition in the contestable market and was required not to invest in generation.
- Synergy had a mix of displacement obligations and options. It was required to have a mix of tenders and commercial negotiations to secure contracts following displacement. Where tenders were held it was obliged to follow Government tendering processes with associated probity auditing. A schedule guiding the rate of displacement is provided in the Vesting Contract between Verve and Synergy, clarified by a directive issued by the Minister for Energy in 2006.

6.4 Market segments

The following schematic depicts the key segments of the market as at 2009.



Approximately 40% of the market is non-contestable. This is known as the 'Franchise Market' and includes predominantly residential customers and small businesses with loads <50MWh p.a.

Approximately 60% of the market is contestable (i.e. >50MWh p.a.). Within that segment, customers with annual loads between 50MWh and 160MWh (approximately 20% of the total market) have access to tariffs and have generally remained on tariffs due to the lower than commercial pricing they represent.

Approximately 40% of the total market (loads >160MWh p.a.) does not have access to tariffs.

6.5 Tariffs

Electricity tariffs are set by the State and remained almost static for 15 years prior to disaggregation and for 3 years since, during which time the cost structure of the entire electricity supply chain has increased significantly. As a consequence they are currently well below cost reflective levels.

This situation has resulted in only limited migration of contestable tariff customers away from tariffs and onto direct bilateral contracts with competing retailers. It is effectively a subsidy which in recent years has been fully borne by Verve. It is also a barrier to competition in the market.

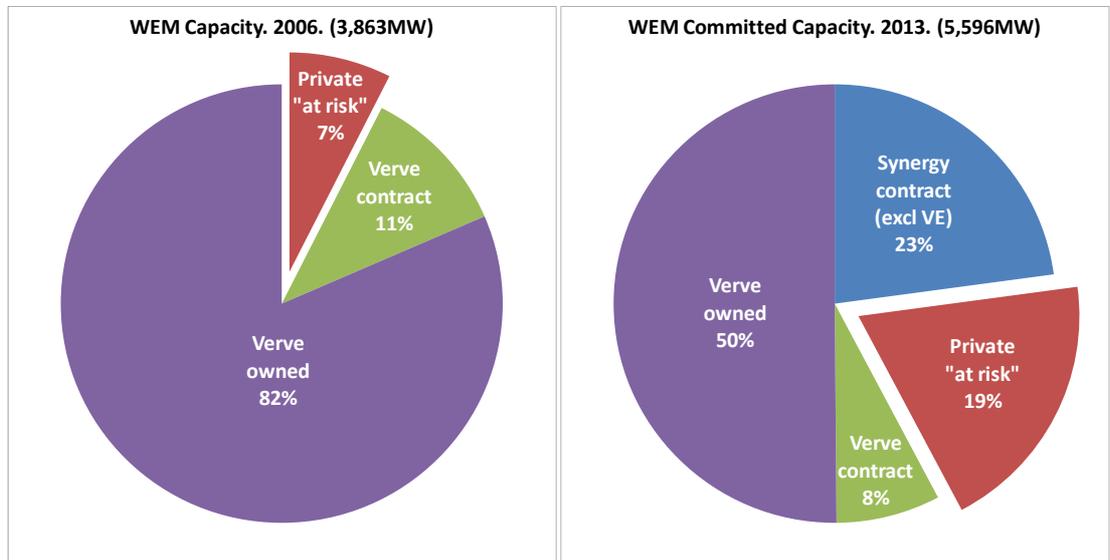
The State recently increased tariffs, although they are still well short of cost reflective levels. It has also introduced a special State subsidy which is paid to Synergy and is designed to compensate Verve (flowing back through the netback mechanism in the Vesting Contract) for the gap between the economic cost of generation and the approved tariff levels. In FY2010 this subsidy will amount to \$244m. This subsidy is expected to progressively reduce over a period of 3 years as tariffs are raised to cost reflective levels.

Another issue in Western Australia is the lack of 'time of use' based charges in the contestable tariff and domestic consumer markets. This would help manage the high demand peaks in the system which give rise to significant additional capital and operating costs and will ultimately increase prices to consumers if tariffs are set to cost reflective levels in the future.

6.6 Recent growth and investment trends

Despite some of the barriers to competition, the changes in the global gas market and some aspects of the market itself, there has been a significant increase in private sector involvement in both generation and retail since disaggregation.

The following diagrams contrast the total generation capacity in 2006 with the projected capacity in 2013 based on new plant built to date and new plant contracted and committed to be built by 2013. Over this period Verve's total capacity has been largely static (within its 3,000MW cap), while total system growth has been met from a combination of generation contracted through long term energy supply contracts to Synergy and additional 'at risk' private sector investment which is not associated with either of the State owned enterprises (comprising a combination of bilateral contracts with commercial and industrial customers, and private sector retail to the contestable market through entities such as Alinta).



It is estimated that the increase in private risk capital from 7% of system capacity to 19% of system capacity represents an investment between 2006 and 2013 of approximately \$1 billion.

As a result it is forecast that Verve's share of total generation capacity will fall from 93% in 2006 to 71% by 2009, and that its share of total electricity sales (by volume) will have declined to 58% by 2013.

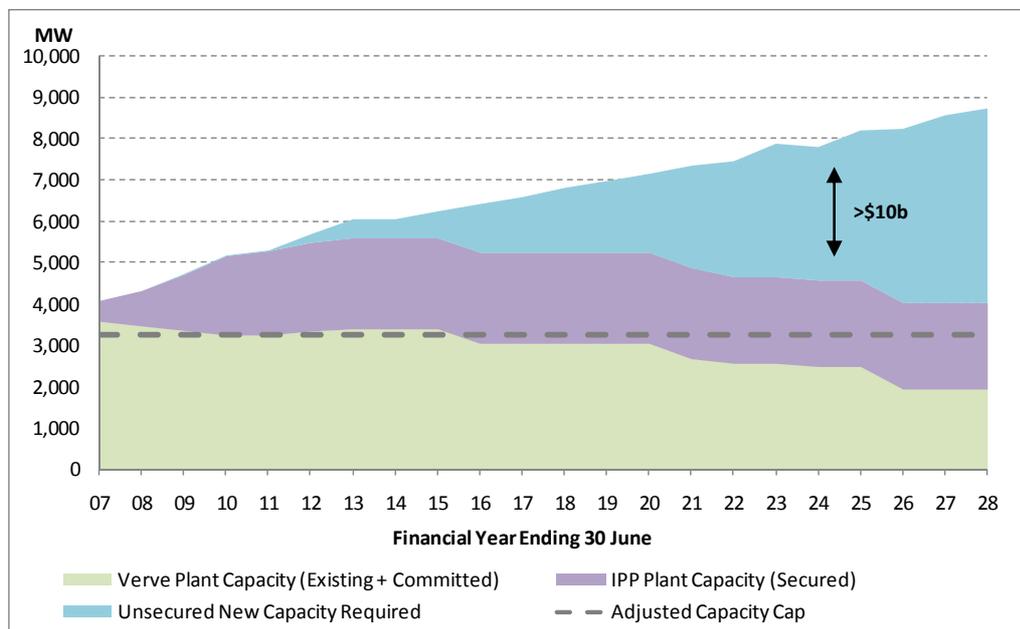
Synergy's share of the contestable market (consumers >50MWh pa) has fallen from approximately 90% in 2006 to 66% today and is expected to be 44% of the growing market by 2013.

6.7 Longer term growth trends and investment requirements

The following graph shows the capacity growth required in the system to meet current market growth estimates to 2028. It also shows Verve's current capacity cap of 3000MW, Verve's capacity assuming that plant is retired and not replaced, the capacity of other generators already operating or committed, and in blue at the top, the required new capacity to cater for both growth and the replacement of retiring plant.

It is estimated that the total investment to be secured for new plant between 2014 and 2028 is in excess of \$10 billion.

SWIS Capacity Requirements Forecast



6.8 Summary

Since the reforms were implemented there has been considerable private sector investment with most new capacity being constructed and operated by the private sector: 65% of which is contracted to Synergy under long term electricity supply contracts and 35% of which is private sector at risk capital.

It is expected that by 2014, Verve's share of market sales will fall to about 55% while Synergy's share of the contestable market will fall to 44%.

It is estimated that the non-contestable franchise market will represent only 36% of the market by 2014 and therefore 64% of all loads will be subject to competition. If the State continues to increase tariffs to cost reflective levels it is expected that remaining contestable tariff customers will migrate off tariffs and contest their loads in the market. This will naturally expose Verve and Synergy to increasing competitive pressure.

It is clear that the reforms have resulted in progress towards their objectives. Private sector risk investment is occurring, retail competition is emerging and although long term electricity supply contracts with Synergy represent a commitment by the State, the proportion of capacity and energy secured through this approach has been subject to wholesale competition – including competition between the private sector and Verve.

7 Critical External Issues Facing the Industry

7.1 The impact of climate change and constraints in the gas market

Climate change represents a very significant and imminent strategic issue for the Western Australian electricity industry.

The key mechanisms being used by the Federal Government in response to climate change are CPRS (legislation introduced into parliament on 14 May 2009) and RET. The CPRS approach involves incentives to reduce emissions through an emissions trading scheme. RET sets renewable targets of 20% by 2020. These targets can be met by installing the required amount of renewable energy generation, or supplemented by purchasing Renewable Energy Credits (RECs) in the national market.

Qualifying renewable energy includes wind power, wave power, biomass, geothermal, solar, solar hot water and hydro. If Western Australia is to achieve the target by generating 20% from renewable sources within the SWIS then much of this would need to come from wind generation. Wind is intermittent and cannot account for more than a relatively small share of an electricity supply system's capacity without fossil fuel back up.

The relative cost of producing RECs between states is likely to differ. Cross border procurement of RECs and cross border investment in renewable projects will be a continuing feature of future compliance as businesses endeavour to diversify their risk and minimise overall cost.

Traditional coal powered plant generates the highest emissions within the power sector. Such plant forms a significant part of the current generation capacity in Western Australia. Clean coal technology, incorporating carbon capture and storage is unlikely to be a medium term option. Gas has significantly lower emissions and is also a more practical option for dealing with the system challenges associated with the intermittent nature of key renewable energy sources such as wind.

Western Australia faces a particular challenge with respect to securing significant volumes of economically viable gas to achieve reduced emissions and/or to accommodate significant intermittent loads. Of equal importance are issues in the gas supply system which pose challenges to securing cost effective fuel to support increased levels of peaking generation. Gas/coal competition is less effective because most Western Australian gas is able to be exported as liquefied natural gas and consequently is subject to global energy pricing. Coal on the other hand is basically stranded in Western Australia with its biggest market being the electricity sector (and predominantly Verve - which has attractive long term coal contracts). As a consequence, even taking into account the currently mooted (but not finalised) initial carbon prices, gas is competitive for peaking but not for intermediate or base load duty against coal in the Western Australian sector.

The economics associated with climate change, in an industry which requires significant capital investment in long term assets, are complex and exacerbated by uncertainty about how the scheme will ultimately work in practice and how carbon and renewable energy credits will be priced in the future. There is significant financial and technology risk associated with further investment in traditional plant (such as coal) in an environment where the current local economics support such investment – but may not in the future depending on global energy prices and the future evolution of the carbon regime. There are many issues associated with funding of the acquisition of permits, risk management and credit which require substantial new thinking and change.

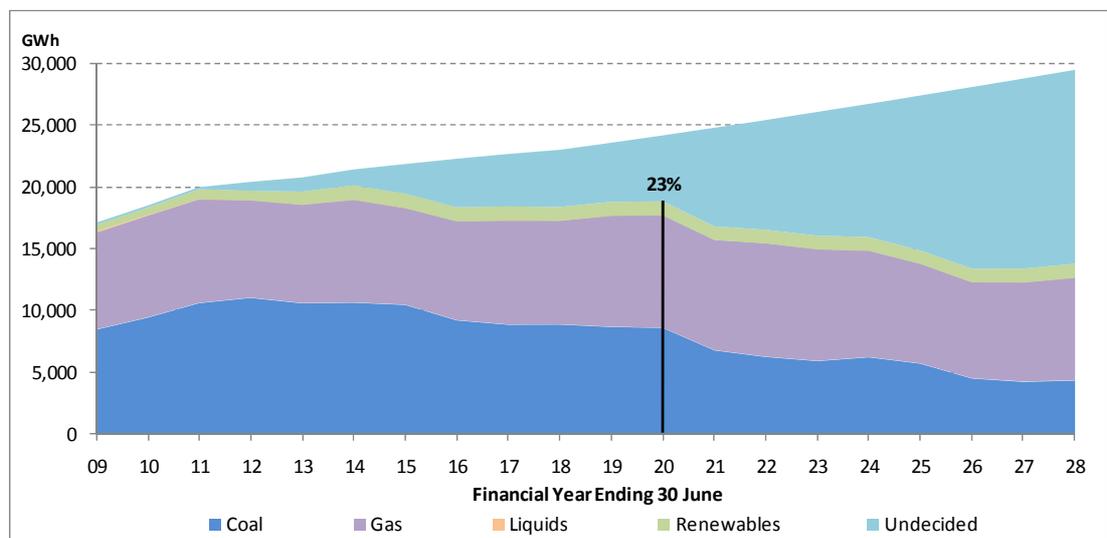
There is currently no definitive policy or strategy dealing with how the electricity and gas sectors in Western Australia might respond to these challenges and move pro-actively forward in a carbon constrained market with the relative fuel cost issues which currently prevail. As a consequence there is also ambiguity about the future potential stranding impact this might have on parts of the Verve generation fleet, associated impacts on the transmission network and associated future investment requirements in the medium to long term.

As a result there is currently no basis for the State (as the owner) to provide clear policy directives to guide the planning and behaviour of its State owned enterprises or regulatory bodies. Not surprisingly there are currently different views and plans at the entity level. For example Synergy sees a substantial role for wind generation within the SWIS in order to comply with renewable and climate change initiatives, whereas Verve has placed more emphasis on its understanding of the technical limitations of the SWIS network to accept intermittent generation.

Of potentially even greater importance is the fact that weaknesses which have been identified in the WEM will be exacerbated by the impact of changes introduced by climate change initiatives, with the result that reliability and efficiency would become increasingly compromised.

The following graph shows projected generation output in the SWIS based on existing energy sources. Excluding any early plant retirement driven by climate change issues, the blue wedge at the top shows the volume of new generation required. New plant is forecast to produce 23% of supply by 2020, and at present there is no consensus about the mix of energy sources which optimise the entire SWIS fleet in terms of compliance with legislation, electricity costs, fuel security, reliability and the protection of the State’s investments.

SWIS generation by fuel source



The significant level of new investment involved, the long lead times required to bring new capacity into the system, the potential impact of bringing inappropriate capacity into the system and the relatively short timeframe involved in achieving targets by 2020 emphasise the critical importance of resolving this issue.

7.2 Access to investment capital

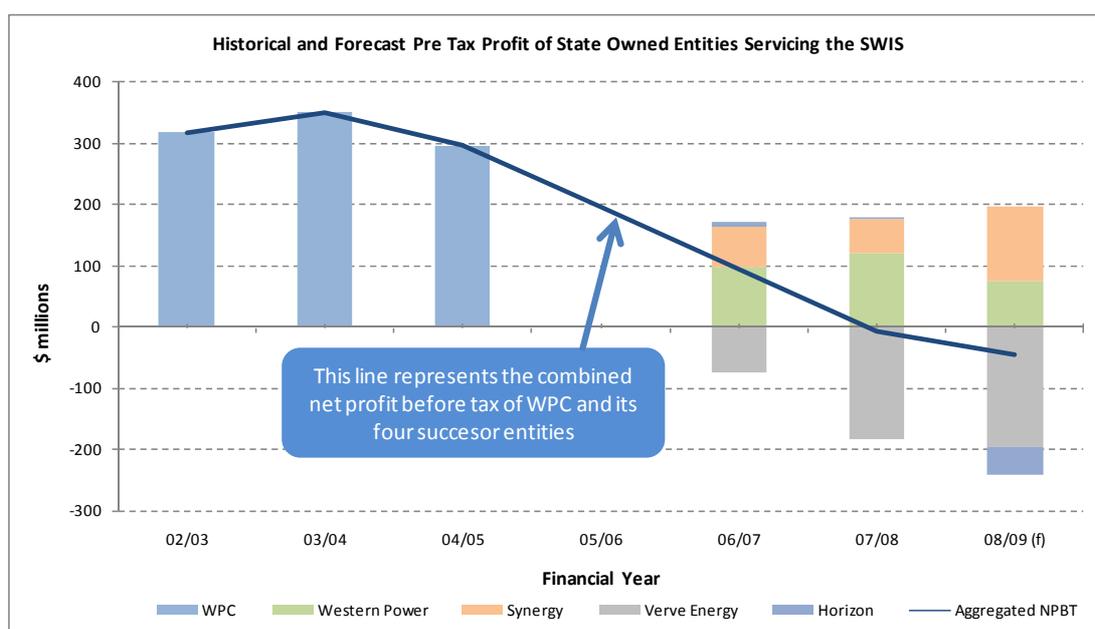
The global financial crisis has limited the amount of private sector equity and debt capital in most markets. While it is reported that the economic crisis may have reached the bottom of the cycle and there are signs of recovery ahead, this issue is having an impact on the availability of investment risk capital in the electricity sector. At present the issue is further exacerbated by uncertainty about how CPRS, RET and associated technology trends, will impact market economics and the viability of different types of plant in the future.

Over time it is expected this situation will be resolved by the markets. It is not clear how long this will take. This increases the likelihood that, at least in the short term, some ongoing level of State support for investment may be required.

At the same time the State itself has an incentive to support further competitive private sector risk investment in the electricity generation and retail sectors. While Western Australia has a strong credit rating, the global financial crisis has certainly had an impact on projected State debt levels and revenues at a time when there are significant commitments for State infrastructure development. It is estimated that from 2013 to 2028 at least \$10b will be required for new generation investment, however this estimate does not take into account any significant reconfiguration or early retirement of current plant as a result of the response to the climate change challenge.

8 Financial Performance of the State Owned Electricity Enterprises

In aggregate the returns to the State as the owner of the State electricity sector have fallen sharply since 2004. The following table shows the historical profit results, contrasting Western Power Corporation (FY2003 – FY2005) to the estimated results of Synergy, Verve, Western Power and Horizon Power from FY2007 – FY2009.

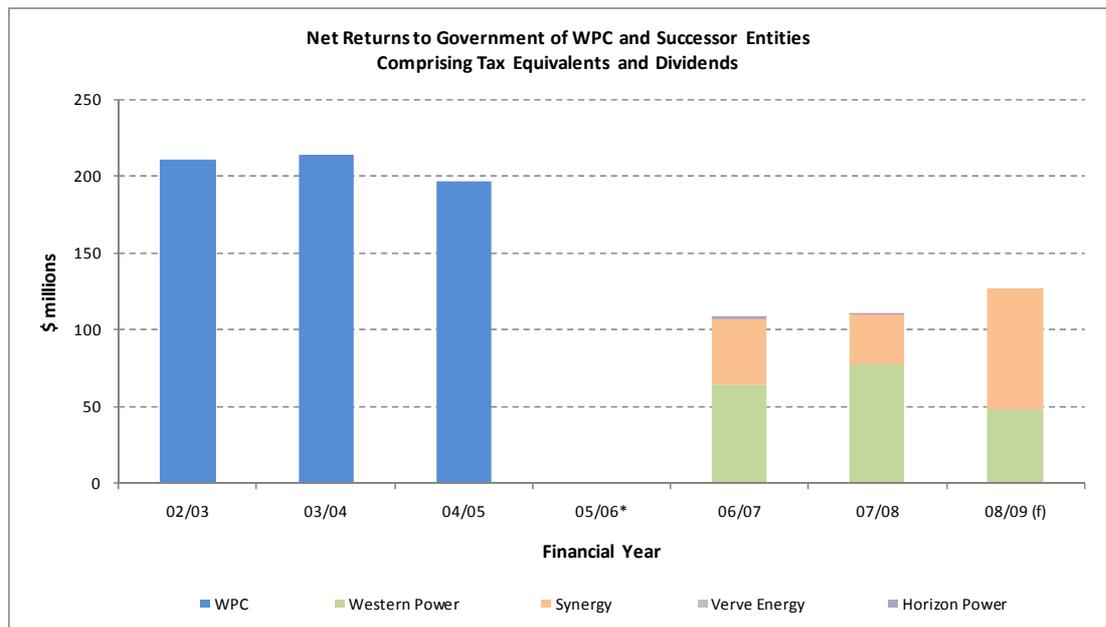


While the primary focus of this review is on Verve it is clear that there has been a dramatic decrease in overall performance. The key reasons include:

- Increasing costs, including fuel costs, particularly through increased exposure to liquids, while tariffs have remained static.
- Increasingly inefficient use of plant driven by a combination of forced outages and the impact of new generation.
- Significant increases in maintenance costs in both Western Power and particularly Verve.
- Costs associated with servicing increasing debt associated with Western Power's significant networks investment program.
- Increased overheads due to the necessary replication of support functions which were previously undertaken as a shared service in Western Power Corporation within each new entity.
- Unquantifiable impacts associated with shortcomings in rules and market arrangements which cause cost impacts on Verve Energy.

Analysis shows that of the three new entities, Verve is incurring significant losses. The bulk of this relates to a combination of forced outages and unplanned maintenance and the fact that a portion of the increases in Western Power's cost structure are passed back to Verve through the netback mechanism in the Vesting Contract. The netback mechanism also means Verve absorbs almost the entire variance between electricity tariffs and increasing costs across the supply chain.

The following graph shows the returns to the State in the form of dividends and tax equivalent payments over the same period.



* The returns to Government for the 05/06 year have been omitted as the results for WPC reflect only the 9 months to 30 April 2006.

It should be noted that while Synergy, Western Power and Horizon Power have made payments since disaggregation, Verve has incurred losses of approximately \$450m. The net asset value of the State's investment in Verve has declined significantly as its net asset position has deteriorated as a result of asset depreciation and the accumulation of debt to fund losses. This situation means that virtually all of the payments received by the State from the group since disaggregation are offset by the reduction in the net asset value of Verve.

9 Synergy

9.1 Role and activities

Synergy is the largest electricity retailer in the SWIS. It currently has 66% of the contestable market and is the sole supplier of the non-contestable franchise market.

Synergy is required under the terms of the Vesting Contract and an associated directive from the Minister for Energy (2006), to 'displace' specified amounts of the Vesting Contract capacity each year and seek replacement capacity under commercial tender. It also has options to displace at its choice. It has been following these directives and has completed three tender processes and one negotiated displacement to date. Two of the tender processes (Supply Procurement 08 and 09) are still being assessed and no contracts for these have yet been awarded.

These processes have been run in accordance with the Vesting Contract, Ministerial Directive and established procurement guidelines and subject to probity auditor involvement. This competitive process has brought competitive tension to procurement.

As a result of this process and other activities to defend and build its retail market share consistent with its mandate, Synergy has entered into long term electricity supply contracts for coal, gas, wind and biomass generation with various private sector organisations since 2006. While the contracts are not formally guaranteed by the State, Synergy as a State owned enterprise effectively has State backing and it is therefore considered that these contracts effectively represent a commitment by the State. Their execution has been subject to ministerial approval.

Synergy has advised that their experience dealing with aspiring generation investors with the market in its current stage of evolution, has been that long term contracts have been required in order to secure financing. We understand that the contracts make the generator responsible for operational risk, while market risk is effectively allocated to Synergy. To the extent that these contracts are unable to be protected against Synergy's legacy customer market, as the conditions change and the market becomes more competitive, the State will have some exposure to competitive price and volume risk in the event that competitive cost structures fall relative to these contracts. This will increase significantly if and when FRC is introduced.

Consistent with the intent of the RET legislation which places the compliance obligations on the retailer, Synergy is actively working with a number of potential providers of various renewable energy sources and is contemplating entering into long term contracts in relation to a new wind farm. Synergy is also supporting the development of a tree sequestration project to generate carbon credits.

Synergy has also entered the contestable gas retail market and now has a significant market presence.

Synergy has also suggested that it could provide gas aggregation for electricity generation – with generation being provided by private sector toll generators using gas supplied by Synergy. Discussions with Synergy indicate that given the current relative cost of gas versus coal in the SWIS, it is unlikely that significant amounts of gas generation would prove economically feasible until the end of the next decade.

Gas is clearly a potentially important part of the sector's response to the climate change challenge. It is suggested that options for gas should be comprehensively examined as part of the development of a Government policy and strategy dealing with how the electricity sector as a whole should respond to a carbon constrained market with the relative fuel cost issues which currently prevail and which may prevail in the forecast period.

9.2 Financial summary

Synergy has operated profitably since it was established. Over the three year period from 1 July 2006 to 30 June 2009 it is forecast that Synergy will exceed its earnings before tax targets by \$145m compared to the SDP 06/07 budget which was established when Synergy started business.

It is estimated that \$31m of this is attributable to Vesting Contract interpretations and \$56 m is attributable to Capacity Credit Refunds (IMO market rule) and are a direct unbudgeted cost to Verve. This occurs automatically as a result of unexpected anomalies in the relevant rules and does not involve intervention by Synergy.

Synergy is forecasting profitable operations over the next four years. Their SDP budget forecasts show profit before tax of \$111m in 2010; \$138m in 2011; \$121m in 2012 and \$158m in 2013.

Although the netback mechanism in the Vesting Contract generally passes costs back to Verve, it caps the amount relating to retail operations to competitive retailer levels. This cap is set at \$75 per customer from FY2010.

Synergy has been undertaking a business transformation program to improve their systems and processes and reduce their total cost to serve to competitive levels. In FY2010, Synergy is forecasting a reduction in its normalised cost to serve of 8% to \$95 per customer – excluding non-business as usual activities such as one-off costs associated with the implementation of new customer systems. Synergy's cost reduction program is targeting a cost to serve of \$79 by FY2014. Its current forecasts fall short of this target with a forecast cost to serve in FY2014 of \$85. Synergy has advised that they continue to instigate cost reduction activities to achieve their \$79 internal target.

10 Verve

10.1 Underlying causes of losses incurred

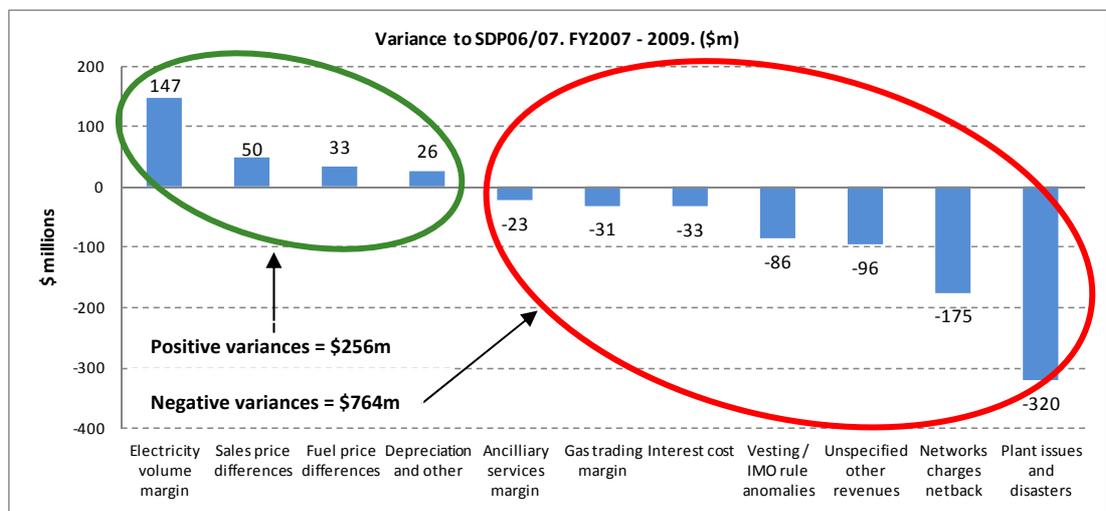
There has been significant speculation about the significant losses incurred since the disaggregation of Western Power Corporation. The following table compares the actual results for FY2007 and FY2008 and the forecast result for FY2009 to the SDP 06/07 budget which was established when Verve started business. In aggregate Verve has lost \$454m before tax, which is \$508m less than the \$54m profit originally forecast for the period.

These losses and the resulting cash flow shortfalls have been funded by the State through increased debt that has seen Verve's gearing³ increase from 60% to 80% between 2006 and 2009.

Net Profit Before Tax \$m

	FY 2007	FY 2008	FY 2009	Total
SDP2006/7 Forecast	30	13	11	54
Actual Result	-75	-184	-195	-454
Variance	-105	-197	-206	-508

The following chart identifies the key categories of issues underlying the variance:



Verve sold a greater volume of electricity than forecast leading to positive electricity volume margins. It also benefited from positive sales price variances resulting from a slightly different mix of vesting versus non Vesting Contract sales than anticipated. The price of fuel was also marginally better than forecast. These positive variances (including depreciation and other) amounted to \$256m.

Offsetting these positive variances were a number of large negative variances totalling \$764m.

The largest category causing a variance of \$320m relates to the condition of Verve's plant and unexpected extraordinary events:

³ Gearing defined as total debt / total capital, where total capital is defined as the book value of interest bearing debt plus the book value of equity.

- Plant reliability issues. Verve has suffered a number of unexpected forced outages. Verve also undertook additional unplanned preventative maintenance on other plant in order to increase the reliability of the plant fleet it inherited from Western Power at disaggregation. In addition to the significant direct unplanned expenditure on maintenance activities, Verve had to incur additional costs for the unexpected forced outages. This involved deferring the retirement of the Kwinana B power station beyond its planned retirement date, recommissioning Muja AB in response to the Varanus Island gas plant explosion (after having previously run this plant down consistent with its retirement plan) and deploying expensive liquid burning plant. These plant issues were not anticipated and the potential impact was not reflected in the forecasts.
- The impact of the Varanus Island incident. The loss of a significant amount of gas from the fuel supply chain required Verve to operate expensive liquid burning plant. Verve was not compensated for this 'supplier of last resort' activity.

These issues caused major variances in the following cost categories: fuel mix (\$177m due predominantly to burning a much larger proportion of distillate than expected); materials (\$30m); labour (\$44m); and services (\$56m).

In addition there were a number of other significant variances which impacted Verve:

- Network access charges from Western Power were \$175m higher than forecast. This impacts Verve through the netback mechanism in the Vesting Contract.
- Anomalies in the terms of the Vesting Contract and the IMO rules cost \$37m and \$49m respectively. This was not anticipated. Much of the corresponding revenue went to Synergy (although this was not initiated by Synergy).
- A budgeted but unspecified 'Rate of Return' target of \$96m which was not explained to Verve management at disaggregation or achieved. This was originally budgeted by Verve as unspecified other revenues.
- Increased interest costs of \$33m relating to increasing debt used to fund losses.
- A shortfall in the expected gas trading margin of \$31m due to market conditions.

Even excluding these variances it is notable that the original three year profit target of \$54m for a capital intensive business with total assets of almost \$2b is a very low return to the shareholder. It does not provide the utility with the ability to retire debt, or to reserve for internal equity contributions towards the replacement of its plant at the end of its useful life.

The key issue underlying this situation is the fact that tariffs remained virtually static for 15 years prior to disaggregation and for 3 years since while all cost elements have been subject to varying levels of inflation. Tariff revenue comprises the largest portion of Verve's revenue and tariffs have clearly not been cost reflective in recent years.

It should be noted that these variances are those which are evident from the accounts and do not fully track the restrictive requirements which apply to Verve in the WEM. The variances from its balancing role and the limitations on it for providing these services at a commercial rate are not reflected in the above figures.

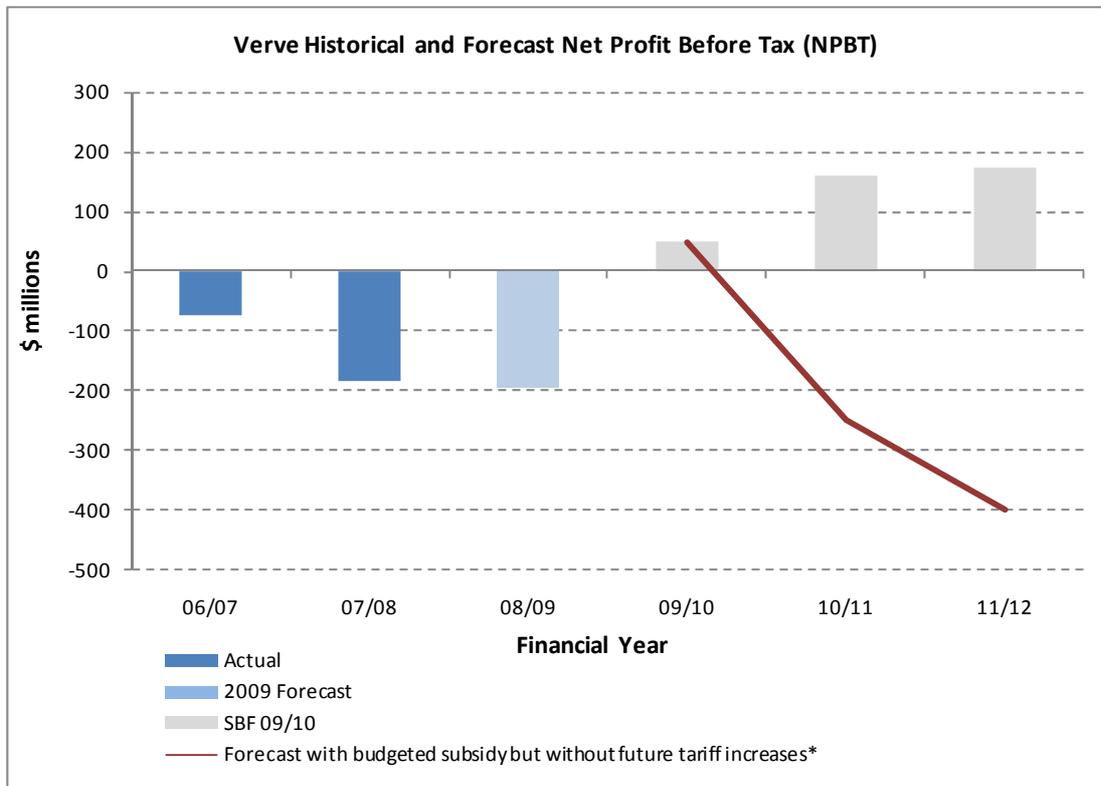
10.2 Financial outlook

Verve's financial forecasts beyond 30 June 2009 anticipate a significant turnaround from the losses observed in the period since disaggregation. The following chart shows Verve's historical and forecast pre-tax profitability, as well as its outlook in the absence of the budgeted State subsidy and future tariff increases. Key reasons for this significant projected improvement include:

- Assumed tariff increases implemented by the State.
- The approved payment of a special State subsidy to cover the shortfall between cost reflective tariffs and an approved tariff glide path. The subsidies are expected to amount to: \$244m in FY2010; \$116m in FY2011; and \$1m in FY2012.

- A transition to significantly more favourable coal contracts.

Maintenance requirements have been estimated and are now considered by Verve to be properly budgeted. Extraordinary events such as the Varanus Island incident are not anticipated.



* Forecasts without the future tariff increases are based on an assumption that the original netback calculation is applied (i.e. without the Electricity Retail Market Review (ERMR) changes that are assumed in the current budgets). In the absence of cost reflective tariffs and/or a subsidy, the ERMR recommendations are not realistically applicable and would result in substantially greater losses in the future non tariff increase scenarios.

Impact and risks of future tariff increases

The tariff increase assumptions applied in the budgets were directed by the Department of Treasury and Finance and apply progressively over the period of the forecast. If the future tariff increases do not occur and the special subsidy is maintained only at the levels outlined above, Verve would incur losses of approximately \$250m in FY2011 and \$400m in FY2012. This assumes the netback mechanism is maintained. The FY2010 result is unaffected as the tariff increases assumed in FY2010 have already been approved and implemented.

Impact of network access charges

The current forecasts of both Verve and Synergy reflect the interim network access charge increases approved by the Department of Treasury and Finance for budget purposes. On Thursday 16 July 2009, the ERA released its draft decision on Western Power's Proposed Access Arrangement Revisions. While the profile of increases varies from that budgeted (slightly less in earlier years and more in later years), the cumulative impact of the draft decision over the next three years (FY2010 to FY2012) would result in significantly higher network charges than those currently budgeted.

Detailed modelling of the impact of these increases on Synergy and Verve had not been completed as at the completion of this review. However it is estimated that should the draft decision be approved and implemented, increased network access charges totalling approximately \$250m would flow through to Verve through the Vesting Contract netback mechanism over this three year period. This would reduce Verve's net profit before tax accordingly unless either the future tariff glide path and/or the subsidy are increased accordingly.

At the time of writing the Department of Treasury and Finance had not determined whether the capital funding to Western Power implicit in the draft decision would be approved.

Impact of revised IMO forecasts

The IMO recently released its 2009 Statement of Opportunities. The finalised forecasts represented a reduction in reserve capacity requirements from its previous forecasts, upon which Synergy's and Verve's budgets are based. Due to the nature of the Vesting Contract, Verve is disproportionately exposed to reductions in system demand and as such its current forecasts may overestimate the volume of energy it will sell over the forecast period. Further detail regarding this matter is provided at sections 10.4 and 10.5.

10.3 Special obligations

At disaggregation Verve represented 93% of the SWIS installed capacity and was obliged to undertake system-wide ancillary services and load balancing – which requires it to adjust generation on its plant to follow changes in customer demand and the generation capacity of all other generating companies. Currently Verve represents 71% of installed capacity.

Based on new generation plant committed to entering the SWIS, Verve will represent only 58% by 2013 and if the 3,000MW capacity cap remains in effect this share of total capacity will continue to fall.

10.4 The risk of displacement

The State has a significant investment in the largest generation business in Western Australia and has, over the last 3 years, made considerable further investment in remediating plant problems as well as recently committing to the refurbishment of Muja A/B and the procurement of new replacement gas plant.

Competitively negotiated contracts with contestable customers are entered into voluntarily by the retailer, and it is assumed that contracts are finalised on the basis that the retailer earns a margin after taking into account the cost of contracting that capacity and energy with a generator. For customers where the retailer does not control the price, for example, franchise customers or potentially contestable customers who have elected to remain on tariffs, the retailer would be subject to unmanageable risks if it were unable to supply these customers at a price which secured it a margin sufficient to at least cover its benchmark margin.

The role of a Vesting Contract is to largely eliminate the price and volume risks for the retailer. These legacy customers would normally be contracted with the legacy generation at a price broadly reflecting a competitively determined price, with this price passed through to customers through cost reflective tariffs.

Any variation from these arrangements would introduce unmanageable risks for the retailer.

Some of these risks were recognised at disaggregation, and the netback arrangement was established to protect Synergy. However this merely shifted the risk to Verve. The magnitude of the risk was increased significantly by requiring the Vesting Contract to be displaced below the volume of the price protected market, with additional options for further displacement. This introduces the following risks:

For Verve:

- For much of the displacement volume, Synergy is required to recontract using competitive tender, leaving Verve with price and volume risk.
- Volume risk arises from the limitations on Verve being able to contract the displaced volume elsewhere. Uncontracted generation may not be financially attractive to retain in service.
- Price risk arises from Verve having to meet the market price, possibly in a situation where there is oversupply arising from the new generation which has been contracted by Synergy.

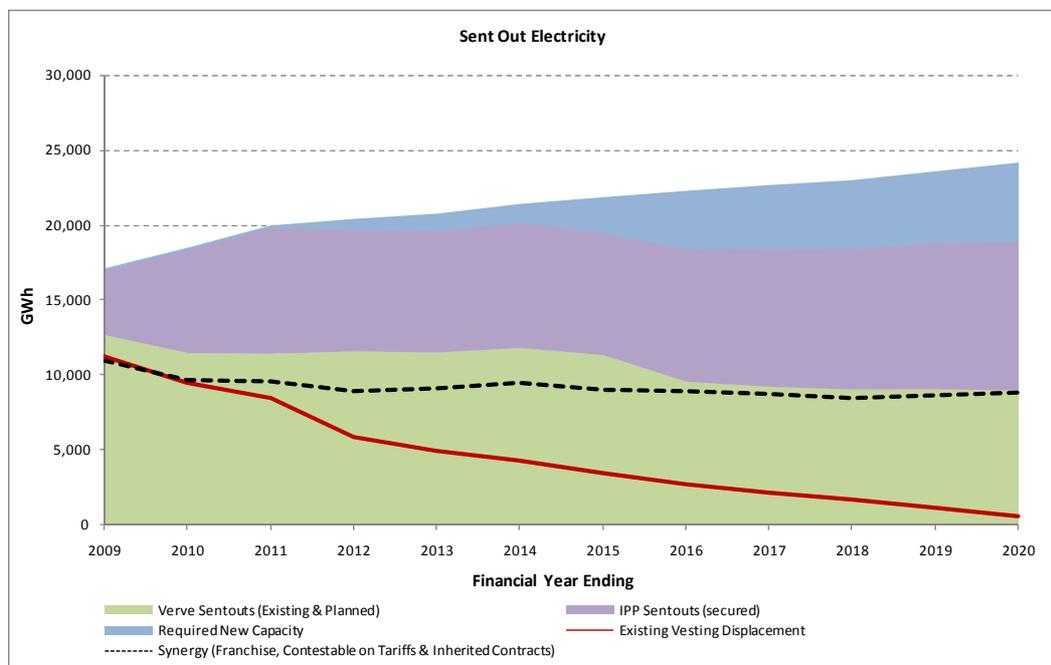
For Synergy:

- Price and volume risk emerge where it enters into long term contracts and subsequently faces competition (for example through the increasing of contestable tariffs to cost reflective levels, or the introduction of FRC).
- Volume risk, if it cannot acquire sufficient customers to match its generation portfolio, or its generation portfolio loses market share if circumstances change.
- Price risk, if prices move adversely against its contracted generation.

For the State

- The potential for losses in either or both of Synergy and Verve.
- The risk of entering into long term obligations which might have the potential to impact on the State's credit position.

The current displacement schedule is reflected in the following graph.



Source: Verve Energy, Synergy

The green shaded area shows forecast generation volume assuming that Verve's current plant operates for the rest of its useful life without replacement. The black dotted line shows the volume of the price protected customers - i.e. the franchise market plus a number of special supply contracts with customers which are covered by the Vesting Contract. The area above the black dotted line then represents the portion of Verve's forecast energy production which is currently contracted to Synergy and other retailers.

The red line reflects the rate, going forward, at which Synergy is obliged to contest Verve's plant against other generators in the market.

If this displacement schedule were to be pursued, major new risks would be added to both Verve and Synergy for no material purpose.

Three displacement tenders and one negotiated contract based on the existing displacement schedule have been run by Synergy since 2006. Verve lost the first tender process (SP07) and has yet to be advised of its success or otherwise of the second (SP08) and third (SP09) ones. Tenders for SP09 were only recently submitted. Verve is also displaced by the NewGen Combined Cycle Gas Turbine (CCGT) (310MW) that was negotiated by Western Power pre-disaggregation and now contracted to

Synergy and by NewGen Neerabup Open Cycle Gas Turbine (OCGT) (320MW) negotiated by Synergy as additional displacement.

Because of the lead time involved in constructing new generation, the impact of the displacement tenders lost by Verve is not reflected in the historical financial results. Although Verve report that it has managed to resell most of the electricity displaced to date, there is concern that when combined with increasing intermittent generation in the SWIS, the residual base load demand may become increasingly 'peaky' having a detrimental impact on the operating profile of Verve's plant.

This means that displaced capacity potentially has a greater negative impact on Verve than just the potential volume or price risk. Verve's plant is relatively fixed and reconfiguration options are not without limits. Verve's 'fixed' plant portfolio therefore becomes less optimised to its share of the market as the proportion of base load decreases. As Verve supplies its increasingly 'peaky' demand, its plant utilisation decreases. Some of this impact is evident in Verve's forecast dispatch modelling, however Verve believe this currently underestimates the full impact and the underlying assumptions need to be revised.

10.5 The risk of excess capacity

The rapid displacement schedule gives rise to a risk of excess system capacity in the event that Verve are unsuccessful in a tender, particularly where the rate of displacement tendering exceeds system-wide growth. This compounds the effects on Verve described above because the Vesting Contract effectively pushes Verve up the merit order relative to bilaterally contracted generators with minimum take or pay type mechanisms. As a result Verve bears much of the impact of overcapacity.

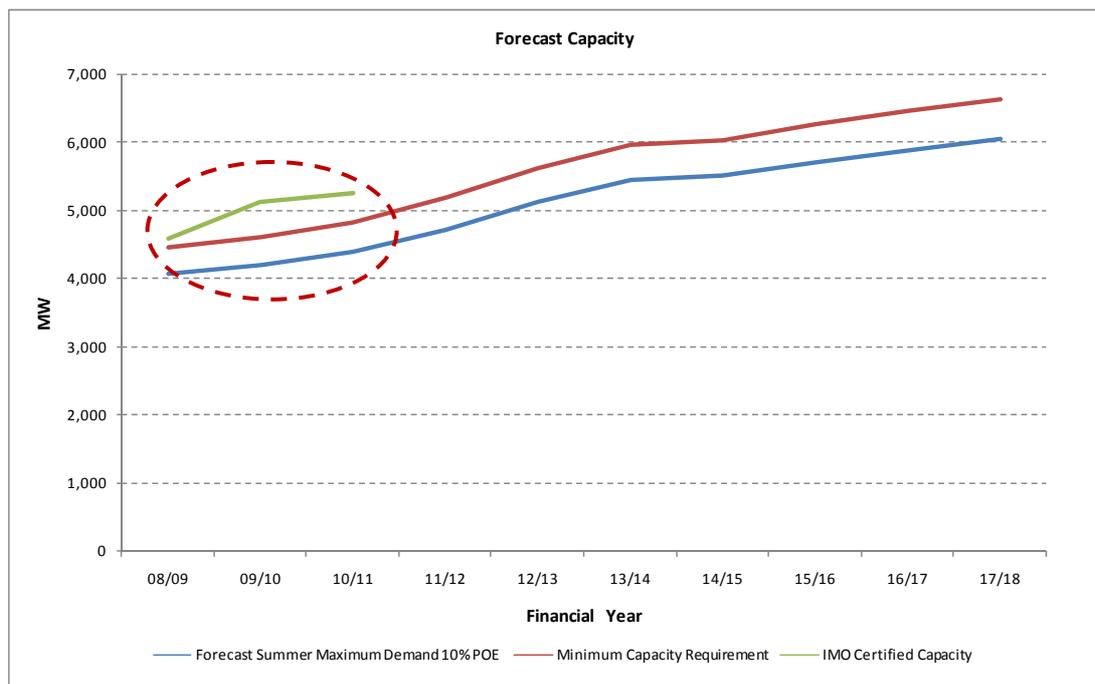
For example Verve has advised that:

- NewGen Kwinana's CCGT (320MW) is identical in design to Verve's Cockburn power station (except for size, 240MW). Currently however, NewGen's plant is providing base load and intermediate energy, displacing Verve's base load plant, including Verve's identical Cockburn plant which only ran for 10 days in July 2009 despite being Verve's most efficient plant.
- Griffin Energy's Bluewaters 1 plant is 227MW, contracted mainly (160MW) to Boddington gold mine, with the remainder contracted to Synergy and others, effectively displacing Verve's base load. The Boddington gold mine load has been delayed and as such Bluewaters 1 is supplying base load energy into the market, temporarily displacing Verve to a greater degree than anticipated.
- Bluewaters 2 is contracted entirely to Synergy and is expected to have a much greater impact on Verve when it comes online later this year, displacing Verve by its entire 227MW of base load energy.

When Bluewaters 2 comes online and combines with base load supply from Bluewaters 1 and NewGen, Verve expects to have its Cockburn power station on reserve shutdown for most of the year and at least one unit of Muja C cycling down or off. These new displacing plants are expected to represent a significant contribution to the SWIS overnight load which is approximately 1,500MW.

These impacts have not arisen because the Vesting Contract has been displaced below the volume of the price protected customers. The Vesting Contract is now reasonably well matched in aggregate with the legacy customers. They have arisen because the oversupply has impacted on Verve, leaving it less contracted, thus moving its plant up the merit order where its plant is exposed to a lower duty cycle.

The IMO's current Capacity Target for FY2010 is 4,623MW against current committed capacity of 5,136MW. This suggests over capacity of over 500MW (>10%) compared to the IMO target. It is recognised that investment in generation is lumpy in that economies of scale define a minimum commercially viable size for new generation plant. Hence to avoid the aggregate capacity falling below the IMO's minimum level it will in practice always be above the minimum. However the announced capacity over the next few years will be more than the size of typical new units and prima facie supports an assessment of over-investment. With further growth in the system this should be a temporary situation if measures are put in place to reduce the risk of over investment going forward.



Source: IMO Statement of Opportunities, July 2009 and summaries of capacity credit assignments

In the chart above the blue line represents the IMO's current summer maximum demand forecasts with expected (i.e. mid case) economic growth (10% probability of exceeding scenario⁴). The red line represents the Minimum Capacity Requirement associated with that forecast. The green line represents the actual capacity accredited by the IMO for each forecast year for which the accreditation process has been completed.

The gap between the minimum capacity requirement (red line) and accredited capacity (green line) represents the forecast over capacity of the SWIS. This gap is 513MW in FY10 and 423MW in FY11. A simple analysis focussing on the excess system investment in FY10 demonstrates the potential cost of capital impact of this situation on one or more participants in the system. Assuming that the lumpy nature of generation investment can normally lead to capacity of up to 250MW in excess of the minimum capacity requirement, the 513MW of apparent excess capacity in FY10 represents real over-investment of 263MW. Assuming measures are applied to reduce the risk of further over investment, normal system growth would be expected to absorb the excess capacity within two years. On this basis the pre-tax cost of the excess capital deployed in FY10 over this period is estimated at between \$60m and \$75m⁵.

⁴ IMO Statement of Opportunities, July 2009

⁵ Based on \$1.6m (low case) to \$2.0m (high case) per MW installed capacity at a pre-tax cost of capital of 12.2%

The specific rationale for each investment decision in the SWIS has not been assessed and hence it is not possible to be definitive about the reasons for this situation, in particular the level to which displacement has contributed. One potential reason could be changes in the IMO demand forecasts. They were recently downgraded, due in part to a delay in the start up of the Boddington gold mine. This highlights the difficulty of forecasting and assessing the most efficient mix of generation technology in a system the size of the SWIS. It should be noted however that with respect to the new plant which is contributing to the expected excess capacity in FY10 / FY11, the IMO forecasts that would have been current at the time that the investment decisions were made were lower than the most recent forecasts which underpin the red line in the graph.

Other potential reasons for the apparent overcapacity include the rapid displacement schedule in the Vesting Contract, lack of commercial coordination between participants to trade contract capacity for mutual advantage and the start of a shift in plant technology in response to the Commonwealth Renewable Energy Target.

11 The Wholesale Market

While a detailed review of the wholesale market was outside the scope of this review, many of the issues which have been considered (reliability, efficiency and Verve's financial performance) are affected by the detailed provisions of the Market Rules and the Vesting Contract. Review and commentary on the market issues has been completed to the extent needed to address the terms of reference. This has identified that the wholesale electricity market has some weaknesses and gaps which:

- Limit the allocation of risk to participants other than Verve.
- Lead to some inefficiency in the delivery of reliability, potentially in all phases of the market from investment to operations.
- May not necessarily lead to the timely addition of capacity in part because the price of new capacity is capped under the rules.

There are significant deficiencies in the current market arrangements which were designed to support the efficient investment in capacity and its availability when required under stress conditions. These include:

- The market has no safety valve which ensures new capacity is delivered in a timely way. The price of new capacity is capped, and without the actions of Synergy and Verve new capacity may not have been delivered. These arrangements need to be revised.
- The capacity deficiency penalties are very smoothed and only provide a general, not a specific incentive to have capacity available.
- The 'spot' market (STEM and balancing combined) provides little incentive to invest in operational reliability (e.g. liquid fuel backup).

With respect to efficient operations there are a range of significant issues. In summary:

- Capacity deficiency penalties provide a capped incentive for generators to make plant available when required, which limits the steps that they would be prepared to undertake to have plant available when required. Well functioning deficiency penalties influence:
 - The detailed design of generation plant, for example the level of redundancy in critical internal pumps, control systems and instrumentation.
 - Maintenance resourcing and strategies, for example breakdown via a preventative, prioritisation and scheduling timing.
 - Management preparedness and technical flexibility to respond to changing external circumstances, for example to defer or cancel maintenance that leads to a temporary partial reduction in capacity.
- Only Verve provides balancing and ancillary services and this is increasingly inefficient and costly. Verve is currently expected to respond to changing levels of demand, for example if weather forecasts change, changing capability of all other participants' plant due to breakdown or fuel restrictions (linked to the limited incentives noted above) and to high and low extremes of demand. This obligation is not sustainable in the medium term.

On a day to day basis, managing low demand is potentially more difficult than managing high demand. This is likely to become more difficult over time as additional plant comes online. In particular, increasing levels of intermittent (wind) generation exacerbate the management of low demand conditions and can cause an impact on cost, and potentially short term (next day) reliability, by forcing shutdown and restart of generation plant.

Verve has already needed to operate plant in this way, but market arrangements do not allow it to communicate the associated costs to the market or receive cost reflective compensation.

- The arrangements for emergencies and back-up fuel response need to be significantly amended to spread responsibility to all generators in the market with additional coordination of system management. Currently there are inadequate mechanisms to compensate generators for these services.

It is inevitable that generation plant breakdown and/or extreme demands may at times overlap. The market reserve margin administered by the IMO is designed to provide a high level of assurance that there will be sufficient capacity to meet demand. However there will of necessity be times when reserves are almost fully utilised and need to be closely managed. The market provides for system management to declare an emergency condition for those situations.

Improved capacity incentives will reduce the probability of emergency conditions occurring. However if it is needed, the current arrangements do not adequately compensate the parties and system management does not have rights of access to all information it may need.

Wind generation warrants specific mention. It is credited with its average annual capacity which is typically 35-40% of its installed nameplate capacity. When calculating the system reserve margin, the IMO is considering accounting for the capacity from wind generation at a level consistent with its contribution to capacity at times of system peak, which can vary for each site but is often less than 10% of installed capacity. Since the contribution of wind generation to peak capacity is much less than the capacity for which it is accredited, there are inefficient pricing signals which affect wind generation potentially driving inefficient investment in wind generation in Western Australia to the detriment of other renewable generation in Western Australia or elsewhere.

In addition to the system having to provide additional capacity to cover wind plant when wind levels are low, the variability of wind generation is balanced by Verve in the balancing market at a price often below the short run marginal cost of its generation - and below the commercial value of such services. The result of these arrangements is that wind generation is effectively subsidised. While this facilitates development of renewable resources within the State it does have a cost which needs to be recognised and recovered. Under the current arrangements much of that cost is being carried by Verve and ultimately wholesale customers and the State.

With the impact of climate change, these concerns are likely to be exacerbated as development of intermittent and other non-traditional generation is likely to accelerate and major shifts in the role of high emission coal plant may lead to changes in performance and plant reliability. Addressing these gaps and weaknesses is a priority irrespective of the other policy choices which the Government decides to pursue.

12 The Case for Change

It is clear from the analysis of Verve's losses over the last three years that the fundamental cause has not been the market reform or the behaviour of other entities in the market. It is the result of uneconomic tariff levels, the need to rectify plant, the Varanus Island gas plant explosion, increasing network costs, transfers of profit to Synergy resulting from anomalies in the Vesting Contract and the market rules which require services from Verve on uncommercial terms and interest on debt used to fund the operating losses.

It is also clear that the market has developed with gradual though slow penetration by new retailers and most new generation installed or committed by private sector investors – 35% of which (approximately \$1bn) has been in the form of private risk capital not associated with the State either through Synergy or Verve.

However there are serious issues emerging:

- The effects of past displacement are not yet fully understood although current arrangements have contributed to a situation where in the near future the SWIS will have capacity at least 10% in excess of the IMO's capacity target. Major and unnecessary financial risks to Verve, Synergy and the State could result if the current displacement schedule is pursued in the future.
- The Vesting Contract is very complex and has issues which can distort financial flows between the State owned entities, contribute to potentially anomalous investment decisions and cause difficulties in financial management.
- Verve has been the supplier of residual risk services to the market under uncommercial terms. The task is growing as Verve becomes relatively smaller and climate change initiatives increase the requirement for such services.
- The market design needs to be revised to strengthen its support for the efficient delivery of reliability.
- The industry (including its supervisory bodies) is not well prepared for the very material likely impacts of climate change initiatives and there is a lack of a cohesive approach and significant differences in strategy.

These significant issues now need to be addressed in order to ensure that the Western Australian electricity sector is able to develop further, support State development through the provision of a reliable and cost efficient electricity supply and reduce the risk of Verve or Synergy incurring future losses.

Cost efficient delivery of reliability is under threat and will become increasingly difficult if arrangements are not revised

The reliability arrangements with respect to the capacity market, the capacity deficiency penalties, system load balancing, the provision of ancillary services, fuel and system back-up and emergency response have worked to date. However, there are significant deficiencies in these arrangements and there has been a cost penalty to Verve. Relying on Verve and Synergy to provide this support to the system is not viable in the future and unless addressed will lead to increased costs and greater risk to system reliability.

Barriers to competition still exist and this continues to expose the State to risk

Despite recent increases tariffs remain below cost reflective levels. The new subsidy arrangement provides a mechanism by which Synergy and Verve will be compensated however until such time as the tariffs themselves reach cost reflective levels there is a barrier to private retailers competing in the contestable tariff market which currently comprises 20% of the total market by volume.

In addition Synergy remains the largest retailer, though its market share is falling gradually. Synergy is backed by the State and has been entering into long term electricity supply agreements with generators. Its ability to do this has been a solution to procuring capacity for the system. It does

however provide Synergy with an advantage against other retailers and potentially strengthens its dominant position in the market.

Synergy does face risks associated with such generation supply contracts given its customer contracts typically have durations of one to three years, and this residual risk reverts to the State. Likewise investments in new Verve plant and major extensions to the life of its existing plant carry the same risk. This results in the State continuing to underwrite much of the new generation capacity in Western Australia in one form or another. As the conditions change and the market becomes more competitive with time and perhaps with the introduction of FRC, the State will have some exposure to competitive price and volume risk in the event that competitive cost structures fall relative to the commitments being made now.

These barriers to competition, especially combined with the potential results of a rapid displacement schedule between Verve and Synergy, do not eliminate wholesale and retail competition but they do limit the progress towards a competitive market.

The State requires a unified vision for the sector and a strategy to guide the industry through the climate change minefield

Climate change, the availability of gas at economic prices and the impact of the global financial crisis on capital markets and the State budget are major challenges for the industry. The State requires a unified strategy to guide the sector, its regulators, and its State owned enterprises.

Energy supply and security is a crucial enabler for state development. There are financial and resource constraints on this development and many interactions between its different parts, for example all generation requires network access, fuel supply and associated services and resources such as water and labour. However, climate change and renewable policies, the current international credit situation, the outlook for gas price and availability, resource sector expansion and state funding priorities and limitations combine to produce a very uncertain environment.

In more stable circumstances it is a relatively straightforward matter to develop a view of the generation and network investments needed to achieve objectives for cost effectiveness and reliability. In current circumstances quite different development scenarios may emerge depending on assumptions about each of these factors, and some have significant consequences for the sector and State assets.

In this rapidly changing industry environment, the existing rules, regulations and practices designed to coordinate and guide development and provide policy direction to State owned entities urgently need to be reviewed. The changes may well constitute a paradigm shift in areas such as new generation and networks investment, the retirement and utilisation of existing plant and gas procurement and storage (as significant gas will be required for peaking generation). There are also major new risks associated with the trading of carbon and RECs, potentially affecting the equity requirements and credit standing of entities in the sector.

Currently there is no clear and unified state electricity industry policy or development strategy. There are multiple State and private sector participants, as well as the IMO, the ERA, the Office of Energy and various industry stakeholders. Each have their own views and constitute part of the solution but there is a lack of clarity at a strategic and policy level. An example of a result of this situation is the fact that currently there are different views driving different strategies at both Synergy and Verve and this combined with deficiencies in the market rules, with respect to the acquisition of renewable energy capacity, gives rise to the risk of inefficient investment decisions.

A well developed whole of sector vision and strategy is urgently needed to provide a consistent base from which rules, regulations and policy guidance to the State enterprises can be developed. This needs very strong coordination and leadership and broad industry involvement and consultation.

Verve Energy needs an even playing field if it is to compete effectively and support the development of the sector

While Verve's current financial forecasts suggest that, with its maintenance backlog largely cleared and tariff increases and the special State subsidy now in place, it will be in a position to operate profitably, there remain a number of issues which impact its ability to compete profitably in the market and threaten the value of the State's investment in the enterprise.

The matter of the rapid nature of the displacement schedule between Verve and Synergy is a threat, particularly given current issues in the design of the capacity and balancing markets with respect to wind generation, differences in the views of Verve and Synergy regarding the response to climate change and the current lack of a State strategy to deal with the interrelated impacts of climate change and economic gas availability in the electricity sector. This gives rise to risks of sub-optimal investment, asset stranding, over-capacity, reduced cost effectiveness and unnecessary damage to the value of the State's investment in Verve.

It is not viable for Verve to ensure reliability in the system in the future. However it will still play a significant role. Currently it is not properly compensated for the various services it provides which reduces its profitability, the value of the State's investment and its ability to compete more effectively by reserving capital towards the part funding of the replacement of its assets in the future.

Other than displacement, there are anomalous financial outcomes arising from the Vesting Contract. These include: the operation of the balancing hedge, the terms of additional energy procurement, the treatment of capacity refunds and the operation of the netback mechanism. If uncorrected these will continue to have an impact on Verve's performance. In addition the complicated nature of the Vesting Contract combined with its netback provisions causes Verve difficulty in understanding its financial position and developing accurate forecasts.

Finally if Verve is to compete effectively in the market and maximise the natural value of its existing assets and fuel contracts it needs at least to be able to develop new generation on a competitively neutral footing. If Verve believe there is value in spending capital to refurbish its existing plant, there needs to be a mechanism for this to be accomplished. As a transitional measure the Government could encourage Verve to enter into joint ventures in preference to sole development.

There are concerns with the WEM design which impact the competition, cost efficiency and investment efficiency

There are a number of material concerns about important aspects of the design and structure of the WEM. The key concerns are:

- Drawing all generators and Demand Side Management (DSM) into the provision of balancing and ancillary services rather than having these services provided by Verve alone.
- Increasing the signals and incentives to provide and operate to deliver reliability efficiently in the market itself.
- Improving the arrangements associated with emergencies, by improving the operation of market signals and strengthening the role of System Management.
- More accurately recognising the capacity associated with wind generation.
- Better providing for the attraction of new capacity.

The need for these changes is increased because of the challenges and uncertainties associated with climate change and its potential impact on the industry.

13 Recommended Solutions

13.1 The challenge

The review has identified a number of major challenges. Irrespective of which path is chosen, some 60% of the electricity market is exposed to competition. The State owned entities face increasing risks and challenges. The market framework which has been established has provided an initial foundation, but has been shown to require substantial change.

Overlaid on this are entirely new challenges particularly from climate change initiatives. These will lead to major changes in the way in which electricity systems are configured. It is not certain how these changes will develop, but it is likely that wind generation will increase, coal fired generation will be increasingly costly and gas prices will rise. Electricity networks are likely to change, with generation coming from new technologies and locations. Gas supply and transport will need to at least support demand from peaking generation. There are also major new risks associated with the trading of carbon and RECs.

Together these factors give rise to an unusually difficult and risky environment for investors and for Governments which regulate markets, operate their own commercial entities and set policy.

A central role for Government is to ensure that market frameworks and regulation provide the basis for efficient investment. At least some of these frameworks and regulations need to be revised. Coordination of policy and strategic direction is also a clear responsibility of Government.

The solutions to dealing with most of the challenges facing the sector are clear. They involve the establishment of a clear strategy, revisions to the market rules, revisions to the contractual relationship between Synergy and Verve and the clarification of policy with respect to tariffs/FRC and the roles of Verve and Synergy.

The matter of structure was also considered – specifically with respect to a merger between Synergy and Verve. However the initiatives required are largely independent of structure, other than the Vesting Contract. For this reason these initiatives are dealt with first.

13.2 Tariffs and charges need to be set to commercial levels

For an electricity sector to function efficiently decisions about generation should reflect the marginal change in cost. For the industry to be sustainable in its own right revenues should be cost reflective.

It is recommended that tariffs in the contestable tariff sector >50MWh p.a. be increased to cost reflective levels as soon as possible. This will lower the special State subsidy and also promote retail competition in this significant part of the market constituting 20% of the total market.

It is assumed that FRC for smaller customer loads <50MWh pa is deferred for the time being to allow the industry to focus on the more immediate priorities identified in this review. It is recommended that the timing be reconsidered following the implementation of the recommendations.

To ensure transparency and efficiency in the price protected segment, there are three key requirements:

- The price in the Vesting Contract needs to reflect the 'competitive' wholesale price of electricity, benchmarked through a regulatory process (Verve should not just be reimbursed its costs).
- Synergy's allowed margin should be benchmarked against best practice retail costs, and not just reimbursed its costs. This principle is already established.
- Network charges should be determined by regulatory process (as they are) and be passed through to customers.

'Time of use' charges facilitated through the introduction of smart meters should be accelerated in the contestable tariff sector and introduced over time in the domestic tariff market. This will support better demand management around the high load periods and should ultimately contribute to reduced capital and operating costs and lower electricity prices.

13.3 Contract arrangements between Verve and Synergy require urgent revision

The key principle which needs to drive the Vesting Contract is to manage the price and volume risk associated with non-competitive customers. For competitive customers, the risks are managed by market arrangements entered into freely by customers, retailers and generators. For non-competitive customers (customers <50MWh p.a. on tariffs and contestable customers on subsidised tariffs), Synergy provides supply at prices outside its control, so it needs an instrument to manage the risks associated with these customers. Verve is the natural party to manage this risk. For any other party to be involved merely increases risks to Verve, Synergy and the State for no purpose.

In several respects the Vesting contract and the associated displacement schedule do not comply with these principles. There is no necessary match between the non-competitive legacy customer demand and the volume of the Vesting Contract, indeed the contract displaces volume aggressively below the level of legacy customer demand from 2010. The matching of the legacy customer volume and the Vesting Contract needs to be enshrined in the contract.

There are also a number of other features of the contract which cause problems. These are the balancing hedge arrangements, the options for additional energy and the way in which the arrangements when combined with the WEM Market Rules associated with capacity refunds impact Verve. These give rise to potentially distorted financial outcomes between Synergy and Verve. The netback arrangements are also problematic for several reasons set out below.

The Displacement schedule needs to be revised

It is recommended that the displacement schedule be revised such that the demand of the legacy customers matches the Vesting Contract volumes.

If this recommendation is adopted, then the final framing of the contract will determine whether the matching is highly accurate or approximate for individual time intervals. Currently measurement of the quantum of legacy customer demand is not accurate, as some competitive customers do not have interval metering. Deeming or metering of these customers may therefore be required.

As the volume of legacy customers changes, the volumes in the Vesting Contract would be adjusted accordingly.

If and when the Government decides to pursue FRC, the Vesting Contract would drop away, depending on the extent to which price protection remains, and both Verve and Synergy would both be required to compete for market share. If price protection were to be removed gradually, then the Vesting Contract displacement could be phased down to align with the volume of energy consumed by price protected customers.

Adoption of this recommendation would materially reduce the risks for both Verve and Synergy. Synergy would be 'guaranteed' its margin with a low risk profile for customers for which it has no control of price. Synergy would not be driven to re-tender current supply arrangements for the legacy customer part of its portfolio and would therefore not be driven to assume long term risk in the event that Verve were to be displaced by another generator secured through a long term electricity supply contract. Verve would not be subject to the risk of displacement thus avoiding the attendant risks of finding an alternative route to market or having its assets stranded. This would also remove a potential cause of over-supply in the system.

To the extent that the recommended approach provides protection to Verve for its supply to legacy customers, it is important that Verve remain cost efficient. The current netback arrangement provides strong incentives to promote efficiency because every cent that Verve saves increases Verve's

profitability. The same would apply in the event that netback were removed as Verve would be paid a benchmark competitive price rather than a 'cost plus' price, and the benchmark price should be established by the ERA.

Unfair provisions need to be corrected

There are several provisions which potentially distort financial outcomes between Synergy and Verve.

As presently formulated, the balancing hedge arrangements allow for hedging of customer demand for customers which are not legacy customers. This arrangement should be changed so that only legacy customer demand is protected under these arrangements.

The current contract gives Synergy the option to acquire additional energy to supply contestable customers. This arrangement should be changed so that additional energy cannot be acquired for this purpose.

Through a combination of the WEM rules and the Vesting Contract, Synergy can receive payment for capacity refunds from Verve even though Verve still supply required volumes. This goes beyond providing price protection for legacy customers and requires correction.

Netback provisions require revision

Netback is more problematic. It reduces accountability, as all residual risk from network charges and tariffs flows through to Verve. Even the Government subsidy, while mitigating the exposure does not remove the risk. Ideally Verve would be paid a benchmarked competitive price for the Vesting Contract and Synergy would receive a largely risk free margin based on benchmarked retailer costs. The approved network costs would be passed through to customers. Any legitimate shortfall would be made up by the Government subsidy. In the real world not all these conditions may apply.

Netback also poses problems for the management of the finances of Verve. Netback cash flows are only known and finalised with a substantial lag, impacting Verve's ability to monitor its results, understand its financial position and develop forecasts.

Netback can also pass some cash flows which are unrelated to the hedging of legacy customer demand. This needs to be corrected.

Our preference therefore would be to remove netback, but only after it is clear that the required mechanisms are working properly. The key reason for this recommendation is that the elimination of the netback mechanism will expose Synergy to significant risk in the event that the new special State subsidy proves to be inadequate or there are unexpected variations in networks charges. The subsidy mechanism is new and there may be unexpected teething problems with it. Based on the forecasts for the next 12 months and beyond, and considering the balance sheets of the two organisations, Verve is in a stronger position than Synergy to absorb the impact of any modest shortfall in the subsidy.

While the netback mechanism remains in place, processes should be established whereby Synergy and Western Power provide timely monthly financial information and forecast information to Verve which relate specifically to any expected variances in netback costs to Verve as a result of current operations or expected trends.

In the immediate term amendments are required to ensure the timely pass through to Verve of increased cash flows received by Synergy from increased tariffs and the special State subsidy. Without this change, Verve's profitability will immediately reflect the positive change in revenues, but the associated cash flows will lag significantly and Verve will remain dependent on increased debt to fund a large working capital shortfall.

Other terms of the contract need to be amended

When the contract was originally struck, it was intended to be only medium term in duration and expire once FRC was commenced. As the expected duration of the contract has extended, a number of terms of the contract will need to be updated to accommodate longer term requirements. For this review we have not necessarily identified all such issues. However some changes are required, for example the price should be reset using benchmarking to a competitive price.

13.4 A whole of sector strategy incorporating climate change is urgently needed

A well developed whole of sector vision and strategy is urgently needed to provide a consistent base from which rules, regulations and policy guidance to the State enterprises can be developed. Climate change, the availability of gas at economic prices and the impact of the global financial crisis on capital markets and the State budget are major and new challenges for the industry. There are multiple State and private sector participants, as well as the IMO, the ERA, the Office of Energy and various industry stakeholders. Each have their own views and constitute part of the solution but there is a lack of clarity at a strategic and policy level.

It is recommended that the State develop an updated and unified policy and strategy to guide the sector, its regulators and its State owned enterprises through this challenging and uncertain period.

This is urgently required, needs very strong coordination and leadership and should involve broad industry involvement and consultation.

It needs to incorporate a detailed review to determine the most appropriate way for the sector to respond to the CPRS and RET schemes. This needs to consider:

- The likely gas supply arrangements to support the reliability and security of supply in the electricity system, both in terms of quantity and timing required to meet likely peaking demands.
- Issues in gas supply, including storage and potential means to secure gas at more competitive prices.
- Scenarios relating to the status, timing and cost of generation technologies to address climate change. Different transmission scenarios might also be considered.
- The likely range of impacts on electricity supply and demand including the impact of renewable energy and the pricing of carbon and the impact on networks.
- The suitability of the commercial and market arrangements in electricity and gas to meet the expected challenges. This would need to include electricity market, gas market arrangements and network pricing and augmentation strategies.
- The requirements of State entities to meet the expected challenges.
- Organisational arrangements proposed to meet the plan.

Various scenarios need to be considered ranging from the maintenance of the current largely coal fired base load generation environment, to an environment with significantly increased utilisation of gas and full compliance with renewable energy targets within the SWIS. The full implications in terms of operating costs, new capital expenditure, the stranding or early retirement of current plant and ultimately the impact on the price of electricity need to be modelled and evaluated. The impact on the value of the State's investment in both Verve and Synergy also needs to be evaluated under all scenarios.

This will provide the State with a basis for deciding on the most appropriate way forward for the sector, revising market mechanisms as necessary, and providing policy direction to Verve and Synergy with respect to their role and constraints, and to put in oversight mechanisms to enable a rapid response as circumstances change.

In stable circumstances it is a relatively straightforward matter to develop a view of generation and network developments needed to achieve objectives for cost effectiveness and reliability. However, climate change and renewable policies, the current international credit situation, the outlook for gas price and availability, resource sector expansion and state funding priorities and limitations combine to produce a very uncertain environment. Quite different development scenarios emerge depending on assumptions about each of these, some with significant consequences for the sector and State assets.

It is appropriate that the State develop coordinated policies and priorities for certain key issues – for example: the level of funding provided to, and the level of risk taken by, State owned entities; transmission priorities in a capital constrained environment; etc. Funding for transmission is a key issue because it involves potentially large investments which can facilitate or inhibit developments across all resources in a geographical region.

In the absence of guidance or direction, all parties, public and private, will make decisions based on the prevailing rules and regulations.

13.5 Market design issues need to be addressed

A series of issues have been identified with the market arrangements. It is proposed that the market design be reviewed with a view to:

- Increasing the certainty that new capacity will be presented to the market when required.
- Defining the incentives in the market designed to improve the efficiency with which reliable capacity is made available.
- Opening up the market to all generators and DSM, to improve the efficiency and spread the load currently carried by Verve.
- Improving the mechanisms to enable a better response to emergency situations.

This will involve changes to the market rules and there may be some resistance. To be effective this process may need to be driven more directly than as provided under the current rule change process. Implementation may require sponsorship at a high level to implement this change in an acceptable timeframe.

13.6 The question of structure needs to be resolved

The underlying policy question

The following three structural options were considered:

- Merger of Verve and Synergy
- Retention of the existing structure
- Reorganisation into two or more vertically integrated entities, by dividing generation and customers between them.

The concept of creating a number of State owned gen-tailers would involve significant restructuring and change. For the present this review is focussed on the current priorities including market redesign and the response to climate change. Consequently further analysis has been focussed on the other two options. Neither of these options will create a situation which will preclude introduction of gen-tailer(s) or similar structures through organisational or financial means in the future.

The decision to merge Synergy and Verve versus leaving them as separate entities is a key Government policy question. This review can only seek to address this question by articulating the broad options and their potential implications. There are broadly two philosophies guiding the policy decision. The choice is between a more ‘directed’ model and a more ‘competitive’ model.

A directed model generally entails significant Government involvement in investment, planning and operations, including the configuration and timing of new plant investments. While this approach provides greater input into the direction of the industry, it generally means that the State will need to accept more of the risk associated with the investments made. In a strongly directed model this involves the State ultimately underwriting much of the investment, whether it builds and operates the plant itself or gets the private sector to build and operate plant underwritten through long term supply contracts.

The merger option is more consistent with directed models and with systems where Government enterprises play a significant and continuing role. This is because generally a large scale State generation entity is used as the vehicle for much of the directed investment in the system, and its pricing and volume risk can be managed more effectively if it has a direct route to market through its own retail customers. If the investment decisions are correct and if the State enterprises are run efficiently, they can achieve good levels of cost efficiency, although the lack of vigorous competitive pressure in parts of the market which are not subject to competition (for example the franchise market) can make this difficult to achieve and strong performance management frameworks need to be established and enforced.

A competitive model emphasises competition and private sector risk participation in the fuel, wholesale generation and retail elements of the supply chain in order to drive efficiency. Retention of separate entities is more consistent with this model. It does not give the State the same level of control over system configuration or day to day operations although it still has an important but less direct role. The State provides the legislative and regulatory framework and has backstop powers in an emergency. The model requires reliable and efficient access to private sector risk capital and well designed market mechanisms, which drive efficient investment decisions intended to deliver an optimised configuration. Operational competition in both generation and retail promote cost efficiency. The level of State risk associated with long term obligations is generally less with this model. The State is only exposed to the extent that it participates directly in retail or generation operations in the market.

Internationally there are examples of both models working and both can provide reliability and cost efficiency.

A directed model relies on the State making the right investment decisions and ensuring that its dominant enterprises perform efficiently. A competitive model needs reliable and efficient access to private sector risk capital and effective wholesale and retail competition in key parts of the market. It requires ongoing and effective policy oversight of the market to ensure it is operating efficiently.

Options for Western Australia

In the case of Western Australia it is a decision between two hybrid options at different points on this scale, given that for the foreseeable future the State will own the largest participants in both the generation and retail sectors, and a fully directed model is no longer possible since 60% of demand is contestable and it is not realistic for this to be reversed.

Option 1: Retain Verve and Synergy

Under this option Verve and Synergy would remain separate and all of the solutions to the current challenges outlined in sections 13.1 to 13.5 would remain the same. Initially Synergy would remain the largest retailer and Verve would remain the largest generator within its capacity cap.

The key element which differentiates this option from a merger is the ability of the current structure to support competition in both the retail and wholesale markets. If designed, implemented and managed carefully it should provide a clearer pathway for the further evolution of the competitive model which has been gradually occurring over the last few years. This includes the ongoing application of competitive pressure to both Verve and Synergy. Further, a dedicated retailer will have an incentive to minimise its cost structure and maintain a sharp customer focus because its core business and survival depend on it.

If the market mechanisms are refined as recommended, and once the State's response to the climate change challenge is determined, the State will be in a position to provide appropriate policy direction to both entities and any strategic dysfunction can be minimised.

A key medium to long term benefit of this option is the potential for increased private sector risk investment in retail and generation. To date Synergy has procured a significant portion of new generation capital (65% of new generation since 2006) through long term contracts. Synergy's ability to do this as a State enterprise gives it a competitive advantage in the retail market, though it does not undermine its ability to facilitate a level of wholesale competition. Retail competition and private risk investment can be encouraged through the application of competitive neutrality constraints on

Synergy and Verve, particularly once the capital markets return to more normal conditions. There is clearly a need for a State entity to be an investor to backstop the private sector and step in if sufficient supply does not emerge and these entities can be directed to provide that solution when required.

As this option gives the State less direct control over decision making it is a critical condition that the various shortcomings in the market rules and the Vesting Contract are resolved as a matter of priority, and the solutions effectively implemented and rigorously overseen on an ongoing basis. This is not without risk. As with any market it will require future policy and operational commitment, and will need to be carefully managed.

Option 2: Merger

Under this option Verve and Synergy would be merged into a single gas and electricity retail and electricity generation company. It would be the largest business in the SWIS and WEM. The solutions to the current challenges outlined in sections 13.1 to 13.5 would remain the same except that the Vesting Contract would not be required, although an appropriate transfer pricing regime would be needed for price protected customers to ensure transparency.

This option would automatically resolve the matter of the displacement of State assets and reduces the associated risk of over-investment in the system – though it would not impact the risk of third party generators creating excess system capacity. Aggregation of the balance sheets would reduce the potential impact of any adverse retail competition trends on the State retailer because it would be directly linked to a much larger balance sheet with greater shareholder equity. A merged entity would automatically have a full view of its financial position and outlook through the elimination of the Vesting Contract with its netback provisions.

Once established the entity would continue retail and generation operations, and would compete in the market up to its generation capacity cap, though it would be free to continue retail competition above this threshold unless artificially constrained. The merged entity would secure generation capacity in the event that private sector risk capital is not forthcoming.

There would be some savings associated with the amalgamation of support functions. This is estimated at \$5m per year. There may also be some benefits available through the operational optimisation of the merged entity's expanded generation portfolio which would comprise Verve's assets and Synergy's contracted generation.

Other retailers in the market are currently relatively small but developing. Verve has been selling electricity to these retailers in competition with Synergy and this has supported the development of retail competition. Further activity of this nature between the merged entity and private retailers would be expected to largely cease. The possibility of Synergy contesting Verve against private sector generation when plant is retired under the suggested revised displacement arrangements would also effectively cease – although under the suggested revisions to the schedule the level of wholesale tendering would be much lower for the next few years, limited largely to the incremental growth in the total market.

Synergy currently has long term contracts with other generators and Verve currently has long term contracts with other retailers. This introduces a potentially significant distortion into the operation of the competitive market because the merged entity would effectively be dealing with its own competitors. It also gives rise to a need to implement processes and systems to ensure that sensitive competitor information is not passed between the entity's generation staff and its retail staff. Due diligence on such contracts and specific legal advice would be required to clarify this matter.

Competitors who have entered the market since reform may claim they have done so with a long term intent to grow their position in competition with the State entities and others. The actual and/or perceived reduction in retail and wholesale competition will likely result in criticism from the private sector – both from aspiring generators and retailers and from some customers and the organisations which represent them. There is a risk that this change in the model will be seen as a sovereign risk matter.

Without substantive constraints it is likely that over time the level of private risk investment in the sector will be lower. The generation business already has a capacity constraint but the retail business

has no market share constraints. The competitive and private risk investment impact of a merger could potentially be mitigated to an extent if specific measures were taken to further constrain its dominance, and to proactively support the aggregation of viable loads such that the private sector can assemble bankable projects for viable scale plant in the small Western Australian system.

Summary

The fundamental challenges and uncertainties identified under the terms of reference can be resolved by implementing the recommendations relating to the development of a strategy to respond to climate change and the gas market, adopting cost reflective tariffs in the contestable tariff sector, deferring FRC at least while these changes are made, adopting the proposed logic to the displacement schedule, making the delivery of load balancing and ancillary services a sector wide obligation with mechanisms for commercial compensation, resolving anomalies in the Vesting Contract and refining the various market rules to address barriers to cost effective competition, reliability and the attraction of capital.

The main issues which differentiate the two structural options are longer term system-wide cost efficiency and the level of support provided by the State to the industry, especially in the medium to long term as the system grows and significant further capital investment is required. The key issue for the State to consider is the degree of direct control it wants over future investment decisions and operations across the sector.

It is often argued that cost efficiency in generation and retail operations is best promoted by competition. The argument has merit if the market promotes genuine competition – although in theory a well run monopoly or dominant provider can achieve high levels of operating efficiency if subject to very effective regulation supported by strong performance management frameworks. Though a merged entity would be protected with respect to the franchise market, it would still face a degree of competition in the contestable sector (forecasted to represent 64% of the SWIS by 2014) where a limited number of new entrants have emerged.

It is considered that a merger will ultimately give the State greater control over the industry although it would generally be expected to reduce competition and result in a greater level of State sponsorship and risk capital support.

Retaining separate entities and adopting policies which promote increased retail competition while maintaining an environment where wholesale competition is becoming effective should, in the medium term at least, provide for an ongoing reduction in the level of State sponsorship and risk capital support – while providing a security mechanism for procuring capacity in the currently constrained capital market.

In the short term both will likely have a similar level of cost effectiveness given that the plant is already installed. Implementing the various recommendations outlined above should increase the effectiveness of the market and bring about a more efficient system than is currently in place today.

14 Next Steps

14.1 Program coordination and oversight

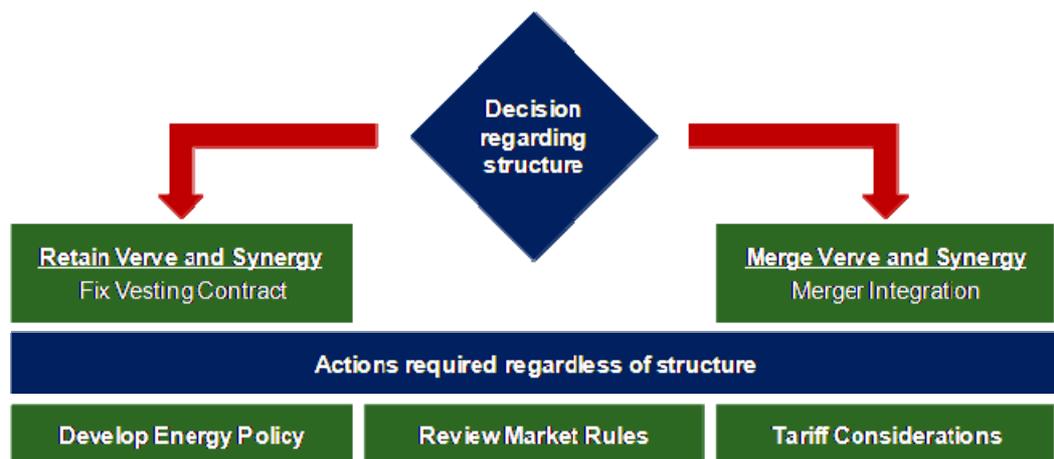
The changes required are wide ranging and significant. They require development and implementation of policy and strategy, the enhancement of market and systems management arrangements, and changes to the contractual relationships between Verve and Synergy and potentially others. The recommendations from this review are interrelated and these dependencies will need to be carefully identified and managed.

There are also many stakeholders in the industry including multiple State and private sector participants, the IMO, the ERA, the Office of Energy and various other industry and consumer stakeholders. The impacts on these parties will vary but their input and active participation support will be required.

Given the interdependent nature of the range of measures and the multitude of stakeholders involved, it is critical that strong and visible central leadership is provided to the program. It is recommended that this program be directed by the Minister of Energy as the party ultimately responsible for the performance of the sector, supported by the resources necessary to develop, coordinate and execute a coherent plan. If this is not very tightly planned and managed there is a significant risk of an inadequate outcome.

14.2 Implementation streams

The key implementation actions are set out in the diagram below. Some actions are applicable regardless of the direction chosen with respect to the structure of Verve and Synergy. Others are dependent on the chosen structure.



14.3 Decision regarding structure

A decision regarding the future structure of Verve and Synergy is not required to progress the other recommendations of the review. However a quick decision would address the current uncertainty in the market and would provide the greatest opportunity to ensure the retention of talent from the two organisations which is an important priority.

14.4 Actions specific to retaining current structure

14.4.1 Fix contractual issues between Verve and Synergy

- Suspend any further displacement tendering.
- Review the contract details including consideration of the status of the work of the Office of Energy.
- Establish guiding principles including basis of allocation of price and volume risk to each of Verve and Synergy (which will guide a decision regarding retention of netback).
- Develop revised displacement timetable and processes.
- Develop (simplified) terms of a revised contract.
- Re-run integrated business planning and budget cycles for both entities.
- Review budgets, and refine and finalise contract terms.
- Legal drafting.
- Execution of revised contract by Verve and Synergy.

14.5 Actions specific to a merger

14.5.1 Preliminary actions

- Suspend any further displacement tendering.
- Undertake a review of any legal and legislative implications of a merger.
- Establish interim governance framework to guide and protect entities during the pre-merger period.

14.5.2 Merger integration

Initiate

- Establish the governance framework including the establishment of the Steering Committee to direct the merger implementation and an Integration Program Management Office (IPMO).
- The Steering Committee and IPMO would be responsible for the development of the merger strategy and establishment of key objectives and implementation requirements.
- Because legislative change will be required to implement the merger the merger planning, design and readiness work will need to be undertaken prior to the legal integration of the entities. As such clear direction from the Minister both entities will be required with respect to their roles in the planning and design work, and other relevant elements of their operations prior to integration.

Planning and design

- Develop a detailed integration program, including detailed plans with respect to:
 - Legal entity structure
 - Transition of existing contract relationships
 - Transfer of assets and undertakings
 - Organisation structure and workforce transition
 - Location and facilities

- Communications
- Day one readiness
- Design of post integration business processes and systems, and assessment of risk and controls.

Integration

- Integration implementation activity can commence immediately after the legislative amendments are in place.

14.6 Actions required regardless of structure

14.6.1 Strategic plan with focus on response to climate change initiatives

Develop a strategic plan for the sector with a focus on changes required to respond to the challenge of climate change and to promote a consistent response through coordinated policy direction to the principle State Government stakeholders. Key steps include:

- Review of current policies and analysis. Review all relevant studies undertaken to date on relevant elements of climate change, renewable energy, and gas availability and pricing as it relates to the future of the electricity industry in WA. Review current strategies and policies of each of the key industry stakeholders identified.
- Project likely scenarios for the development of electricity supply and demand, considering the development of renewable generation, gas for intermediate and peaking duty, coal and new generation technologies such as geothermal and CCS.
 - Undertake modelling to demonstrate the impact of each scenario on electricity generation and network costs, future generation and network investment profiles, the viability of current plant, electricity prices, and economic development.
 - Evaluate the robustness of the current business models of Verve and Synergy under the range of scenarios.
 - Evaluate the impact on the value of the State’s investment in its existing enterprises operating in the SWIS and the impact on future State budgets and State debt, depending on the extent of State involvement in supporting contracts with new generation.
- Evaluate current electricity supply and demand policies and arrangements. Market design would be included in the strategy and it has a separate but coordinated work-stream. Organisational arrangements would also need to be part of the strategy, as would be the strategic focus and responsibilities of each of the government entities.
- Evaluate current gas supply arrangements with a particular focus on the commercial and market arrangements for delivery of gas volumes and ability to meet peaking requirements. Consideration would be given to the effect of the Domestic Gas Reservation Policy. The Evans and Peck report has detailed technical alternatives for providing gas security and flexibility, while the focus of this work would be on the commercial and market arrangements and whether there are appropriate signals for supply flexibility and storage required to support likely electricity generation scenarios.
- Develop and evaluate alternative renewable energy supply options. This would include consideration of renewable technologies including wind generation, solar PV, etc. The costs and risks of different development strategies would be analysed. Organisational responsibilities would also be analysed and proposed.
- Review network pricing and augmentation strategies. This would entail analysing likely supply scenarios and whether existing policies and pricing arrangements are appropriate or require change. Changes where indicated would be proposed.
- Review organisational arrangements and their suitability to meet the deliverables of the plan.

- Finalise the strategic plan with integrated policies, organisation, responsibilities and implementation.

Significant consultation will be required with key stakeholders at key points throughout this process.

14.6.2 Review of market rules

Undertake a detailed review of the current market arrangements with a specific focus on the interactions between generators, networks and demand from investment through to second by second operation. This will address relevant market rules, and if required relevant legislation and regulations. Organisational issues would be addressed in the strategic planning work. Key steps include:

- Develop a functional specification of the end point design based on the current capacity market concept.
- Conduct a gap analysis between the functional specification and the existing market arrangements.
- Develop detailed changes identified by the gap analysis.
- Legal drafting.
- Approval and implementation.

Significant consultation will be required with key stakeholders at key points throughout this process.

14.6.3 Consideration of tariffs

Consider tariff structure options that could mitigate the States exposure to future State subsidies while driving electricity consumption behaviour in a way that mitigates the impacts of climate change in the SWIS.